High-Precision Solutions for

MACHINING MINIATURE PARTS

1 + 1 > 2

Member IMC Group Tungaloy

Member IMC Group NTK CUTTING TOOLS

tungaloy.com/us / ntkcuttingtools.com/us

Member IMC Group Tungaloy

Member IMC Group NTK CUTTING TOOLS

1+1>2

Welcome to the Powerhouse of Precision: Tungaloy + NTK, High-Precision Solutions for Machining Miniature Parts!

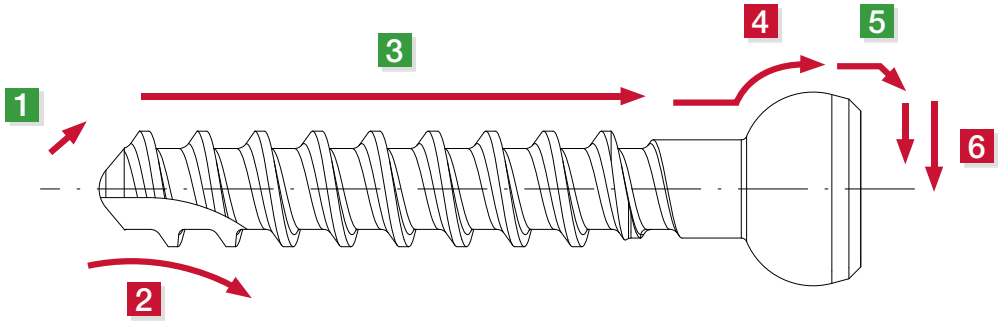
In the realm of machining excellence, precision reigns supreme. Tungaloy and NTK Tools form a union that transcends mere addition. It's an equation where 1+1>2, showcasing that the whole is truly greater than the sum of its parts.

Together, we offer a comprehensive range of solutions designed to optimize performance, enhance efficiency, and elevate the quality of precision machining to unprecedented heights.

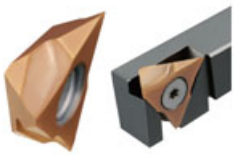
With Tungaloy and NTK,
precision isn't just a goal—it's a guarantee.

Medical INDUSTRY

Tooling example for Bone Screw



1 Front Turning



The Front Max

Holder: TFTR1214H-OH2
Insert: TFX3302MR DM4

2 Shoulder Milling

TUNGFORCE TUNGFREC

Holder: VER11AL006S05-S
Holder: HPAV06M010S05R02
Insert: AVGT060300PBER-MJ AH3225

3 Threading

Thread Whirling

Holder: TWC9C1040HP1
Insert: TW5835-HA5.0-D12 ZM3

4 Front Turning

MINIFORCE TURN
MODUMINI TURN

Holder: QC-1212X-CHP
Head: QC12-JSDJ2XR07-CHP
Insert: DXGU 220.5MFL JS SH725
(DXGU070302MFL-JS SH725)

5 Back Turning

TBP Series

Holder: TBPR12H-OH2
Insert: TBP72FR10-BM TM4

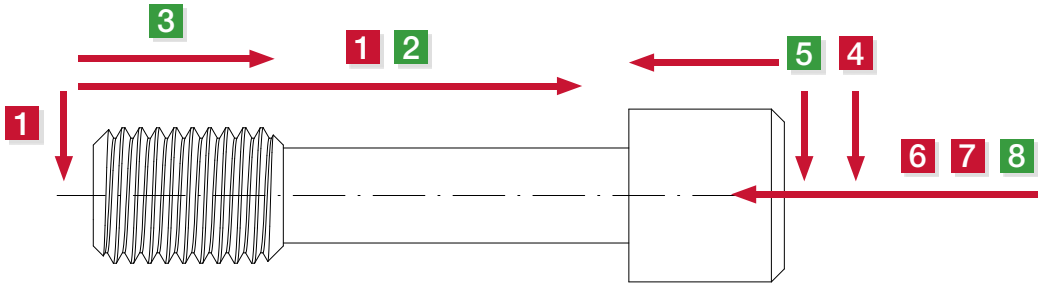
6 Parting off

DUOJUST CUT

Holder: JSXXL1212X09-CHP
Insert: JXPS12L10F SH725

Medical INDUSTRY

Tooling example for Abutment Screw



1 Front Turning

SH7025

Holder: JSCLCR0808H06
Insert: CCGT21.50.5 FN-JS SH7025
(CCGT060202FN-JS SH7025)

5 Back Machining

DS-ACH

Holder: DS-SDUL16F-11-ACH
Insert: DCGT32.504MYL DT4
(DCGT11T301MYL DT4)

2 Front Turning

CSV Series

Holder: CSVR08NC
Insert: CSVF11FRVB VM1

6 Spot Drilling

TUNGMEISTER

Holder: VER11AL006S05-S
Insert: VCP080L07.7A45-02S05 AH725

3 Threading

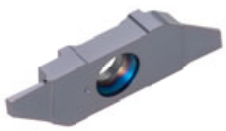
CSV Series

Holder: CSVR08NC
Insert: CSVT11FRP60-035A VM1

7 Drilling

GIGAMINIDRILL
DSM Series

Drill: DSM0150G05 YH170



4 Front Turning

DUOFORCE CUT

Holder: JSXXR0808H05
Insert: JVPN07R06F005-20 SH725

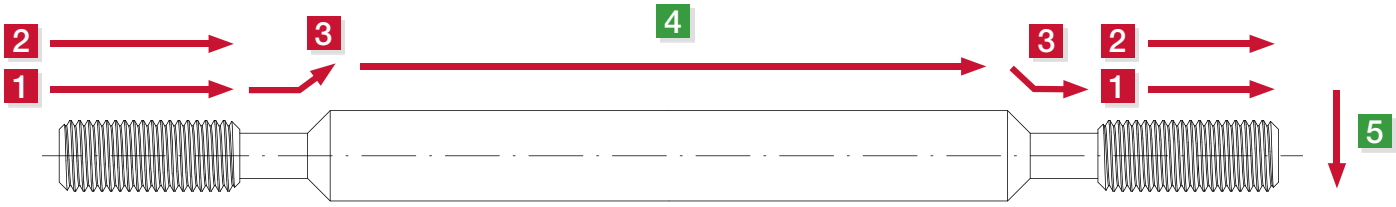
8 Socket Machining

Shaper Duo

Sleeve: HY-NBH02016G-OH
Insert bar: SSP020N1130H TM4

Miniature INDUSTRY

Tooling example for Printer Shaft



1 Front Turning

MINIFORCE TURN
MODUMINI TURN

Holder : QC-1212X-CHP
Head : QC12-JSDJ2XR07-CHP
Insert : DXGU 220.5MFL JS SH725
(DXGU070302MFL-JS SH725)

2 Threading

TETRAMINI CUT
MODUMINI TURN

Holder : QC-1212X-CHP
Head : QC12-STCR18-CHP
Insert : TCT18FR-60A-010 SH725

3 Front Turning

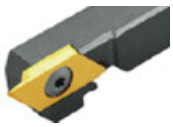
MINIFORCE TURN
MODUMINI TURN

Holder : QC-1212X-CHP
Head : QC12-JSDNXR07-CHP
Insert : DXGU 220.5MFL JS SH725
(DXGU070302MFL-JS SH725)

4 Front Turning with Vibration Cutting

TMV Chipbreaker

Holder : QC-1212X-CHP
Holder : QC12-JSDJ2CR11-CHP
Insert : DCGT32.504MRTMV TM4
(DCGT11T301MRTMV TM4)



5 Parting off

CTP Series

Holder : CTPR12H-OH2
Insert : CTP10FRN-CX

Grade 1

Insert 2

External Toolholder 3

Internal Toolholder 4

Threading Tool 5

Parting, Grooving 6

Shaper 7

Endmill 8

Drilling Tool 9

Technical Reference 10

1. Grade

Grade

Quick Guide 1-2

Coated Grade / PVD 1-3

Coated Grade / CVD 1-5

Cermet 1-5

CBN 1-6

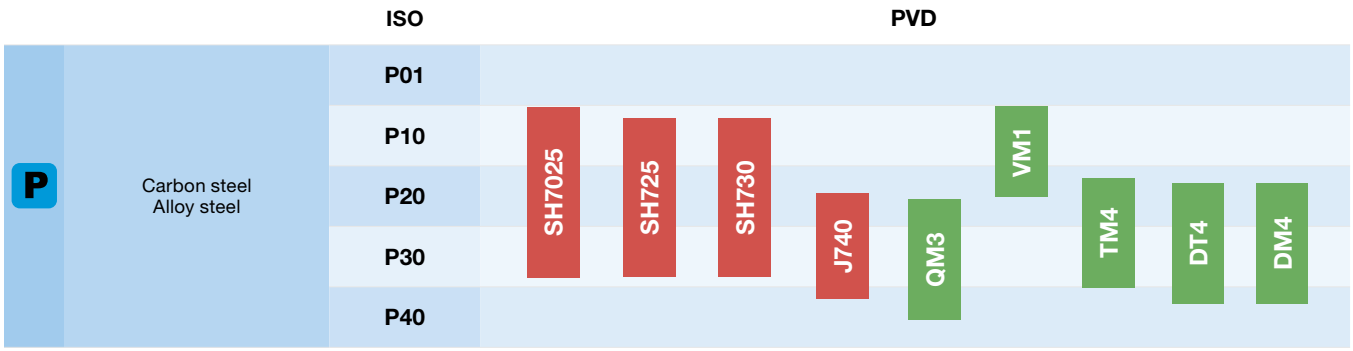
PCD 1-6

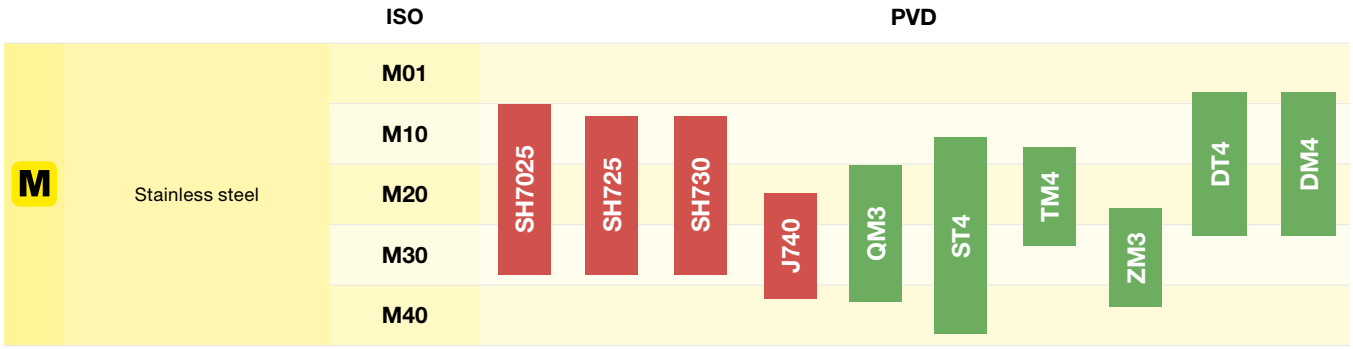
Diamond Coating 1-7

Cemented Carbide 1-7

Grade - Quick Guide

Grade selection





Grade and Chipbreaker comparison chart

P M	Coated Carbide		Chipbreaker	
	05 - 15	15 - 25	Finish	Finish to Medium
Tungaloy & NTK	SH7025 / SH725 ST4 / VM1 / DM4 / DT4	SH7025 / SH725 ST4 / QM3 / TM4 / ZM3 DM4 / DT4	JP / 01 AMX / AZ7	JS YL / AM3 / CL
Sandvik	GC1105 / GC1115	GC1125	UF	UM
Kennametal	KC5010 / KCU10	KC5025	FP	LF
Seco	CP200 / CP250	CP500	FF1	F1
ARNO	AL10 / AM5010	AL20 / AM5020 AM5025	AEC / ASF	PS / ACB / ALU
Applitec	TiALN / TiN / HTA	TiALN / TiN / HTA	FN-X8/17/25	ENP-X8/17/25
Sumitomo	AC1030U / AC520U / ACZ150	AC1030U	FC	SI SC
Mitsubishi	VP10RT / VP15TF / MC6015	VP15TF	FV / FP	LP / SV SMG
Kyocera	PR1705 / PR1725 PR1225 / PR930 / PR015S	PR1535	CF SKS	GF / GQ SK / CK
ZCC-CT	YBG102 / YBG202	YBG202	LH	USF
Korloy	PC8110 / PC5300	PC5300	FS	MS
ISCAR	IC908 / IC830 / IC1008 / IC1007	IC908 / IC830 / IC1008 / IC1007	PF	WF F1M-20P/12P
TaeguTec	TT4410	TT4430	SL-F	SM-F / SH-F

Note: The above table is selected from a publication. We have not obtained approval from each company.

PVD - Coated Grade

Grade	Coating		Applica-tion	Feature
	Main composition	Thickness / µm		
AH120	(Ti, Al)N	3	P M S	- Good balance between wear and fracture resistance - Suitable for machining steel, stainless steel, and cast iron under general cutting conditions
AH130	(Ti, Al)N	3	P M	- High chipping and fracture resistance - Designed for machining austenitic stainless steel under general cutting conditions
AH3225	(Ti, Al)SiCrN	5	P M	- Good balance between wear and fracture resistance - Suitable for steel and stainless steel
AH3135	(Ti, Al)N	4	P M	- High fracture resistance - Suitable for machining steel and stainless steel under general cutting conditions
AH6225	(Ti, Al)N	6	P M	- First recommendation PVD grade for stainless steel machining - A versatile PVD grade for excellent performance in a wide range of stainless steel applications
AH6030	(Ti, Al)N	5	M S	- High fracture resistance - Suitable for drilling stainless steel and heat-resistant alloy under general cutting conditions
AH6235	(Ti, Al)N	6	P M	- Provides high reliability in interrupted cutting with large depths of cut
AH710	(Ti, Al)N	3	P H	- High wear resistance - Suitable for finishing cast iron and high-hardened steel
AH7025	(Ti, Al)N	3.5	P M S	- Excellent wear resistance and high rigidity - First recommendation for grooving of various materials
AH725	(Ti, Al)N	2	P M S	- Good balance between wear and chipping resistance - Suitable for machining steel and stainless steel under general cutting conditions
AH750	(Ti, Al)N	3	H	- High wear resistance - Designed for milling high-hardened material
AH8005	(Al,Ti)N	3.5	M S H	- Good resistance to wear and adhesion - Excellent performance in machining heat-resistant alloy at high speed
AH8015	(Al,Ti)N	3.5	P M S H	- Good balance between wear and fracture resistance - First recommendation for machining heat-resistant alloy under general cutting conditions - First recommendation for threading
AH905	(Al, Ti)N	1.5	S	- High resistance to wear and built-up edge
AH9130	(Ti, Al)SiCrN	4.5	P M S	- High wear resistance - Designed for drilling various materials
AH9030	(Ti, Al)N	5	P	- High wear resistance - Suitable for drilling steel and cast iron at high speed
GH110	Ti(C, N, O)	3	P M N S	- High wear resistance
GH130	Ti(C, N, O)	3	P M	- High chipping and fracture resistance - Suitable for steel, stainless steel, and cast iron
GH330	Ti(C, N, O)	3	P M	- High resistance to wear and fracture - Suitable for continuous to medium interrupted cutting
GH730	Ti(C, N, O)	3	P M	- High wear resistance - Suitable for turning and grooving at low speed
J740	TiN	1	For swiss lathes	- Ultra-fine-grain cemented carbide coated with TiN-based compound

PVD - Coated Grade

Grade	Coating		Application	Feature
	Main composition	Thickness / μm		
SH7025	TiCN / (Ti,Al)N	2	P M	- First recommendation for small part machining. - Superior surface quality and process security. - High wear resistance and excellent fracture resistance.
SH725	(Ti, Al)N	2	P M	- High wear resistance - Designed for machining steel and stainless steel
SH730	(Ti, Al)N	1	P M S	- High wear resistance - Designed for machining steel, stainless steel, and difficult-to-cut material
YH170	Ti(C, N)	1.5	P M	- High resistance to wear and fracture - Designed for drilling carbon steel and stainless steel
YH180	Ti(C, N)	1.5	P M	- High wear resistance - Designed for drilling carbon steel and stainless steel
NTK650	TiAlN	3	S	- Stable machining of [Ni base alloys × small diameter parts] for all users
ST4	CrAlN	2.5	M	- First recommendation for stainless steel. - Higher hardness and oxidation resistance by unique coating technology
DM4	TiAlN	3	P M S	- Best oxidation resistance enables high temperature machining cutting such as parting and grooving.
DT4	TiAlN	1	P M S	- Combination of sharp cutting edge and excellent oxidation resistance - Best grade for difficult-to-cut materials / Titanium alloys
TM4	TiN-TiCN	1.5	P M N S	- Best grade for general purpose - Best combination of wear resistance, toughness and adhesion resistance
QM3	TiCN	3	P M	- Designed for machining carbon and alloy steels - High wear resistance
ZM3	TiN	3	P M N	- Excellent adhesion resistance - Suitable for high-precision machining of small diameter workpieces
VM1	TiCN	1	P	- First recommendation for free-cutting steel - Reducing the built up edge on the cutting edge

CVD - Coated Grade

Grade	Coating		Application	Feature
	Main composition	Thickness / µm		
T9205	Ti compound +Al2O3	18	P	- High wear resistance - Excellent performance in high-speed cutting
T9215	Ti compound +Al2O3	18	P M	- Well-balanced between wear and chipping resistance - First recommendation for steel - High versatility for a wide range of applications
T9225	Ti compound +Al2O3	18	P M	- First recommendation for roughing to medium cutting - High fracture resistance
T9235	Ti compound +Al2O3	18	P	- High fracture resistance in heavy interrupted cutting
T6215	TiCN-Al_2O_3	8	P M	- High wear resistance at medium to high speed machining - First recommendation CVD grade for stainless steel cutting
T313V	TiCN-Al_2O_3	3	Threading	- High resistance to plastic deformation

Cermet

Grade	Coating		Application	Feature
	Main composition	Thickness / µm		
NS520	Uncoated	-	P	- High wear resistance
NS9530	Uncoated	-	P	- High fracture resistance - Suitable for finishing to medium cutting of steel
AT9530	(Ti,Al)N laminated coating	3	P	- High wear resistance - First recommendation for machining alloy steel
GT9530	Ti(C, N, O)	3	P	- High wear resistance - Excellent surface quality in finishing
J9530	TiN	1	For Swiss lathes	- Suitable for small-part machining

CBN

Grade	Hardness (Hv)	T.R.S. (GPa)	Applica-tion	Feature
BXA10	3200 ~ 3400	1.00 ~ 1.10	H	- Coated CBN with excellent performance in continuous cutting with middle speed range for hardened steel
BXM10	2700 ~ 2900	0.80 ~ 0.90	H	- Coated CBN for excellent performance in high-speed continuous cutting of hardened steel
BX310	2700 ~ 2900	0.80 ~ 0.90	H	- High wear resistance - Designed for high-speed continuous cutting of hardened steel
BXA20	3300 ~ 3500	1.30 ~ 1.50	H	- Coated CBN for excellent performance in machining hardened steel
BXM20	3500 ~ 3700	1.35 ~ 1.50	H	- Coated CBN for machining hardened steel in a wide range of application area
BX360	3200 ~ 3400	1.00 ~ 1.10	H	- Suitable for general machining of hardened steel
BR35F	3100 ~ 3300	1.40 ~ 1.60	H	- Coated CBN with outstanding fracture resistance in heavy-interrupted machining of hardened steel
BX330	2800 ~ 3000	0.85 ~ 0.95	H	- Excellent sharpness - Designed for finishing hardened steel
BX470	4100 ~ 4300	1.90 ~ 2.10	Sintered metal	- Excellent sharpness - Suitable for ferrous sintered metal
BX480	4100 ~ 4300	1.90 ~ 2.10	Sintered metal	- Hardest CBN - Ideal for ferrous sintered metal - Suitable for high-speed face milling of cast iron
BX815	3000 ~ 3200	1.00 ~ 1.10	S	- High wear resistance and thermo stability - Suitable for high-speed machining of Inconel

PCD

Grade	Grain size (μm)	Hard-ness (Hv)	T.R.S. (GPa)	Appli-cation	Feature
DX110	< 1	8500	1.8	N	- Excellent sharpness for high surface quality - Suitable for finishing non-ferrous metal and nonmetal
DX120	4.5	9000	1.8	N	- Suitable for finishing non-ferrous metal and nonmetal
DX140	12.5	10000	1.7	N	- High wear resistance - Designed for machining non-ferrous metal and nonmetal
DX160	28	11000	1.6	N	- Designed for machining ceramic, cemented carbide and nonmetal
PD1	10	9500	2.0	N	- Designed for non-ferrous metal
PD2	1	8500	2.1	N	- Improved sharpness and chipping resistance

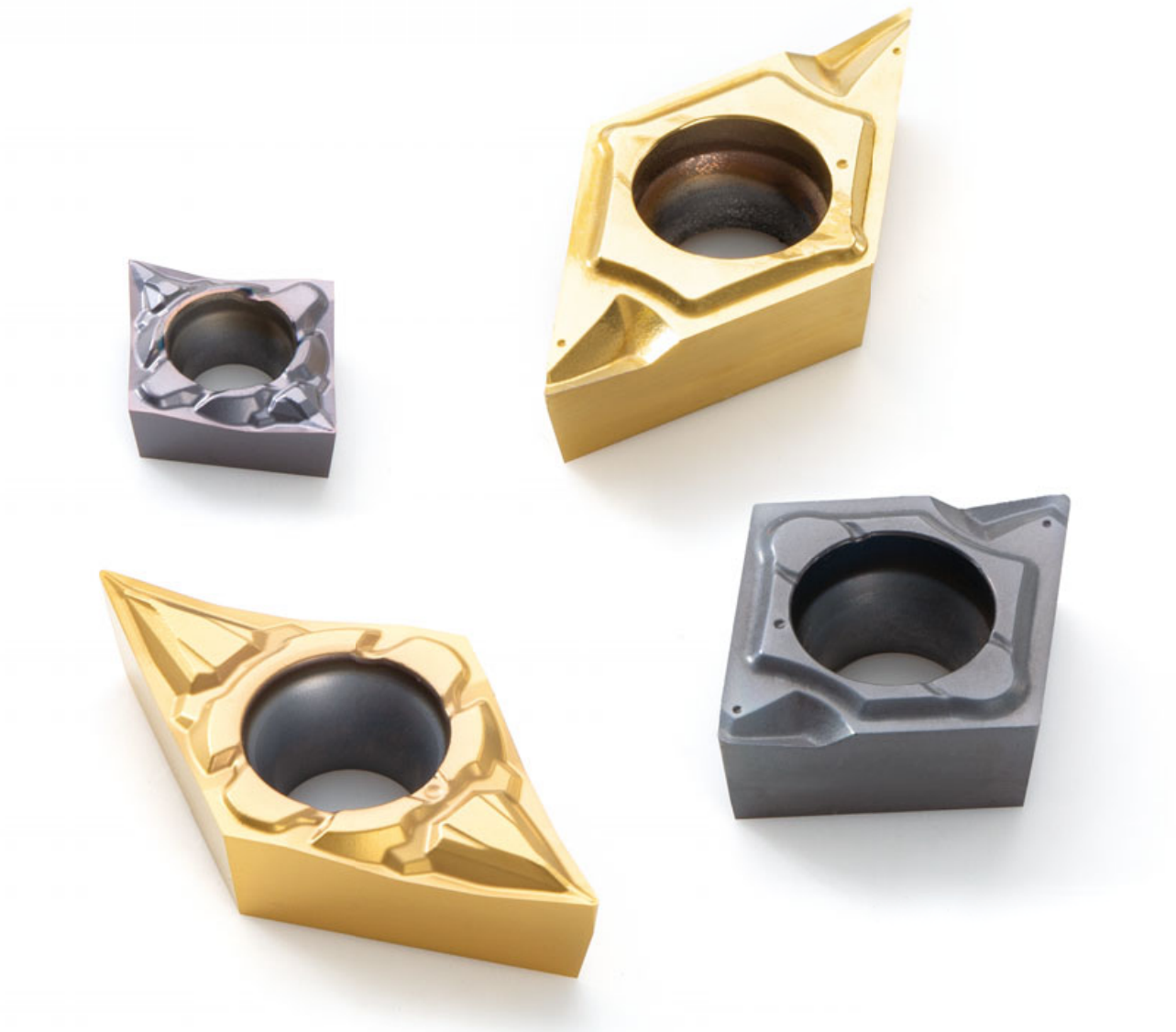
Diamond Coating

Grade	Coating		Application	Feature
	Component	Grain size(μm)		
UC1	Diamond Coating	0.1	N	- For Non-ferrous metal machining - Wear resistance is improved compared to PCD tools

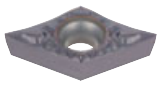
Cemented Carbide

Grade	Hardness (HRA)	T.R.S. (GPa)	Application
KS05F	93.0	2.9	S N
TH10	92.0	2.4	P M N
KS15F	91.5	3.0	N
UX30	91.1	2.3	P M
KM1	92.0	2.5	N

2. Insert



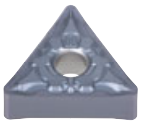
Insert



Positive type

Coated CVD/PVD, Cermet, Uncoated cemented carbide

2-11



Negative type

Coated CVD/PVD, Cermet, Uncoated cemented carbide

2-60

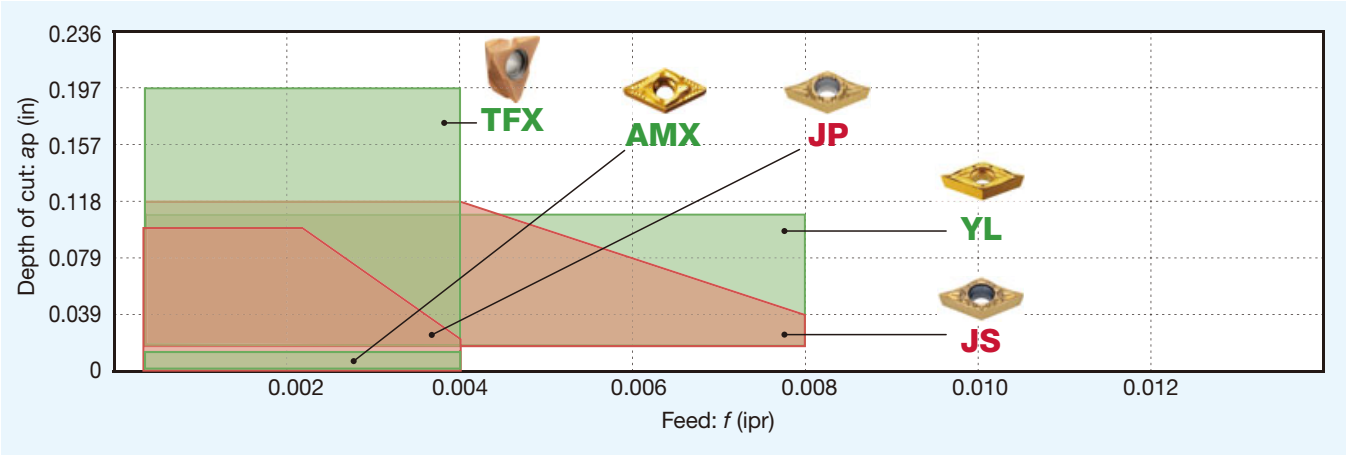
CBN / PCD Insert

CBN, PCD

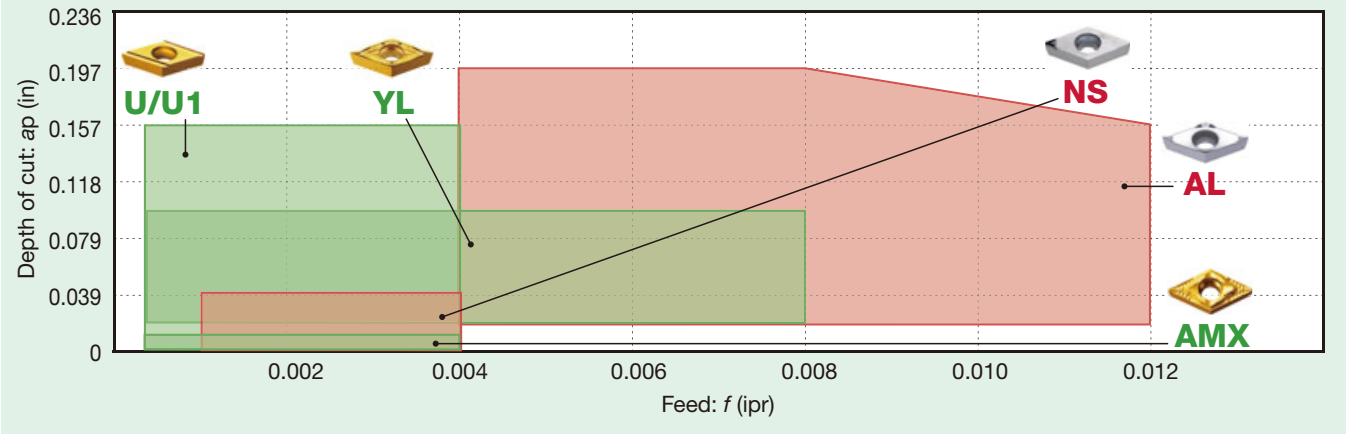
2-87

Basic chipbreaker for Miniature machining

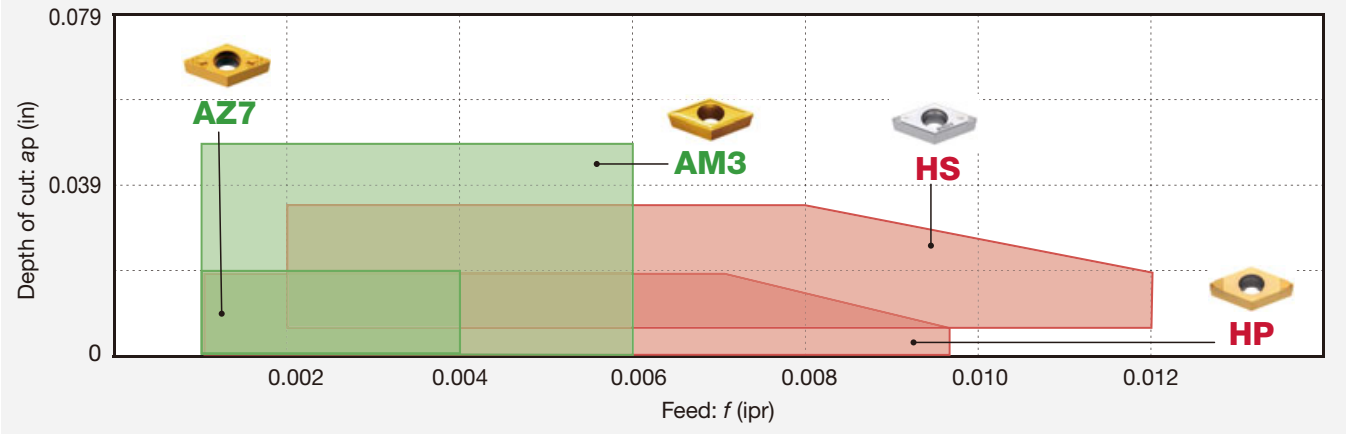
P M S



N



H



Selection system for Miniature machining

P M S

Continuous

Interrupted

	Continuous				Interrupted			
Precision finishing to Finishing [ap = ~ 0.020 in]	JP	JRP		P SH7025 / SH725 M SH7025 / SH725 S SH7025 / SH725	JP	JRP		P SH7025 / SH725 M SH7025 / SH725 S SH7025 / SH725
	AMX	YL	KHG	P QM3 M ST4 S 650 / DT4	AM3	AZ7		P QM3 M QM3 S 650 / DT4
Light cutting (ap = 0.020 ~ 0.039 in)	JS	JSS		P SH7025 / SH725 M SH7025 / SH725 S SH7025 / SH725	JS	JSS		P SH7025 / SH725 M SH7025 / SH725 S SH7025 / SH725
	YL			P QM3 M ST4 S 650 / DT4	AM3	AZ7		P QM3 M QM3 S 650 / DT4
Medium cutting (ap = 0.039 ~ 0.118 in)	JS	JTS		P SH7025 / SH725 M SH7025 / SH725 S SH7025 / SH725	JS	JTS		P SH7025 / SH725 M SH7025 / SH725 S SH7025 / SH725
	YL	CL	TFX	P QM3 M ST4 S 650 / DT4	AM3	AZ7		P QM3 M QM3 S 650 / DT4

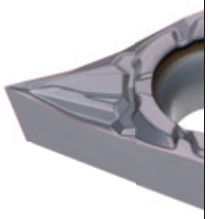
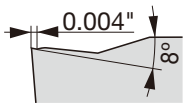
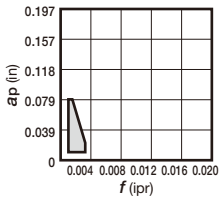
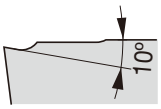
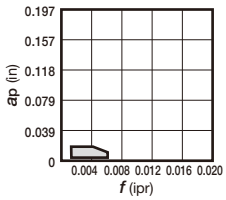
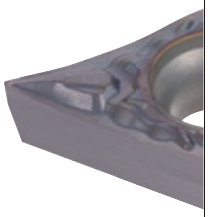
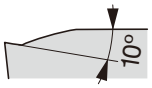
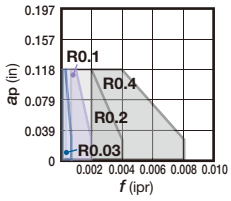
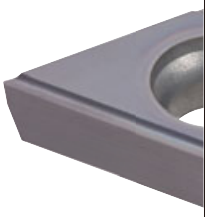
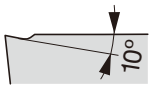
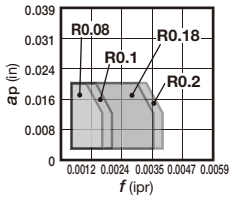
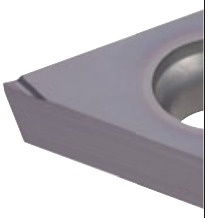
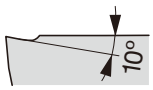
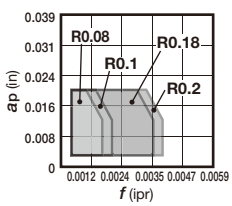
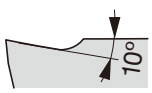
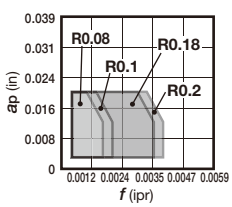
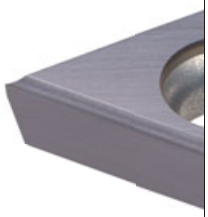
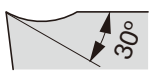
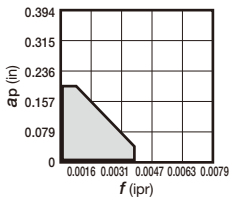
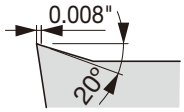
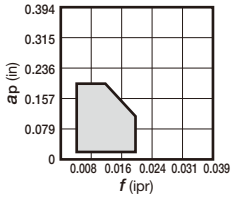
N

Light cutting (ap = ~ 0.039 in)	NS			N DX110	AL			N KS05F
	AMX	U/U1		N TM4 / ZM3	AMX	U/U1	YL	N TM4 / ZM3

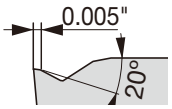
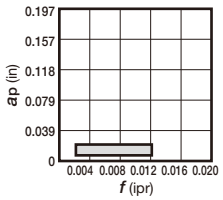
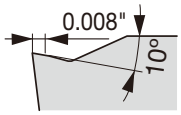
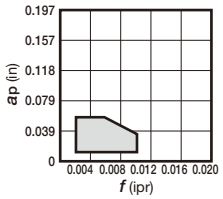
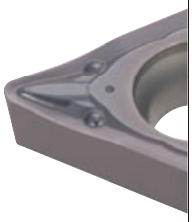
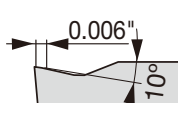
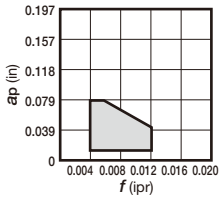
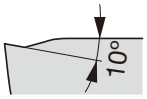
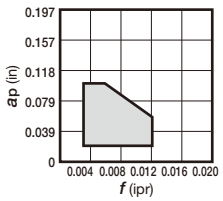
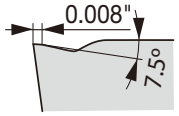
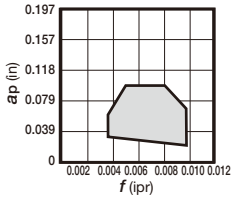
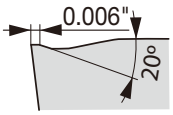
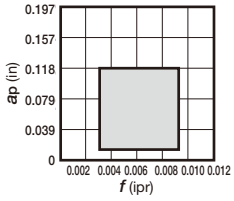
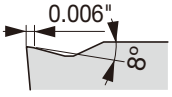
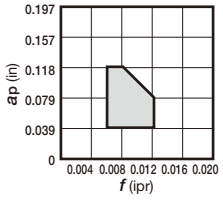
H

Light cutting (ap = ~ 0.039 in)	HP			H BXA10	HS			H BXA20
	YL			H DM4	AM3	AZ7		H QM3

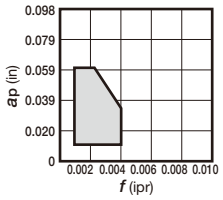
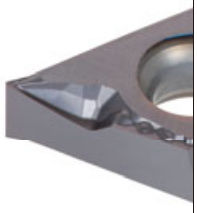
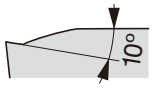
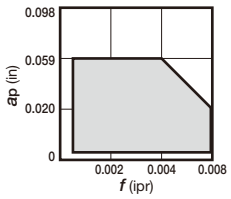
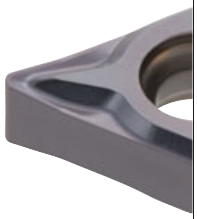
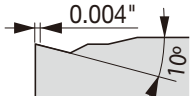
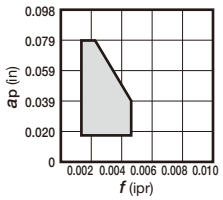
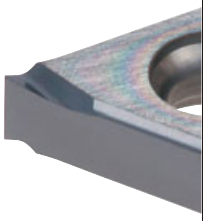
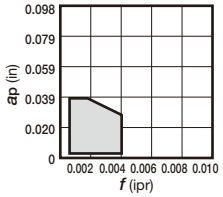
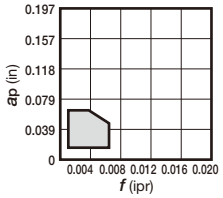
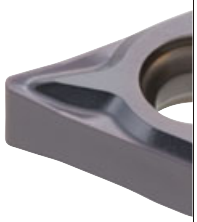
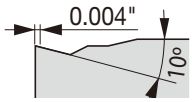
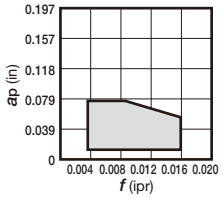
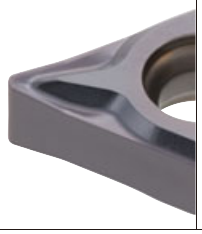
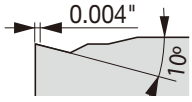
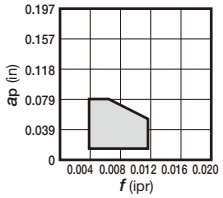
Positive Inserts - Chipbreaker Overview

Application		Type	Chipbreaker design		Applicable range
P M S	Precision finishing	**JP**			
P M S	Precision finishing	**01**			
P M S	Finishing	**JS**			
P M N S	Precision finishing	**JPP**			
P M N S	Precision finishing	**JRP**			
P M N S	Precision finishing	**JSP**			
P M N S	Light cutting	**J10**			
N	Light cutting	**AL**			

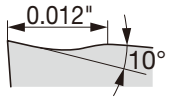
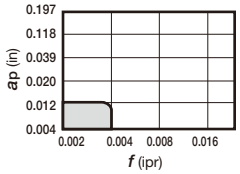
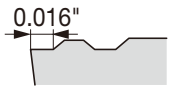
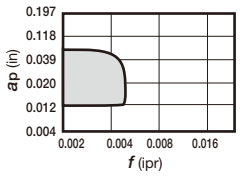
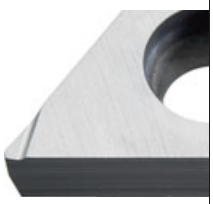
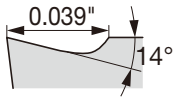
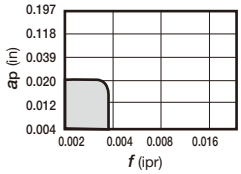
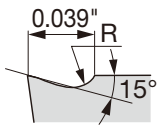
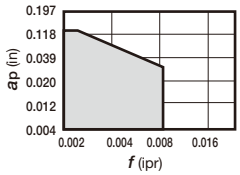
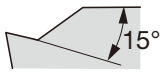
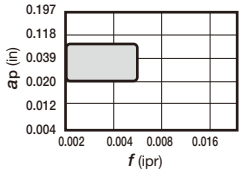
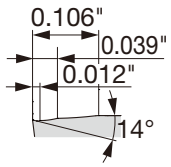
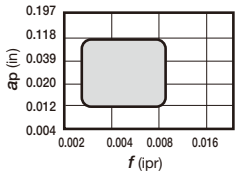
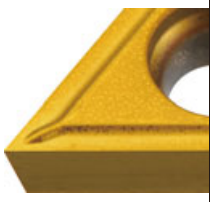
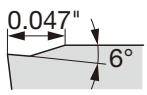
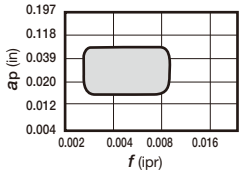
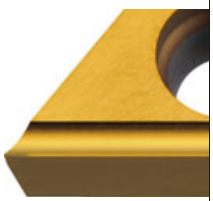
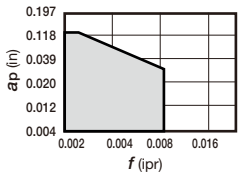
Positive Inserts - Chipbreaker Overview

Application		Type	Chipbreaker design		Applicable range
P M S	Finishing	**PSF**			
P M S	Finishing	**PF**			
P M S	Light cutting	**PSS**			
P M S	Light cutting	**PS**			
P M S	Light cutting	**TSF**			
P M S	Light cutting	**TM**			
P M S	Medium cutting	**PM**			

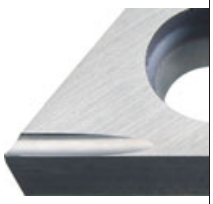
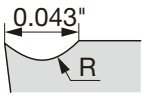
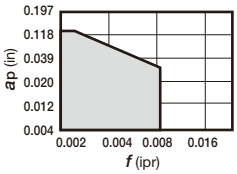
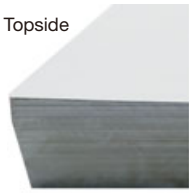
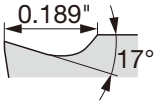
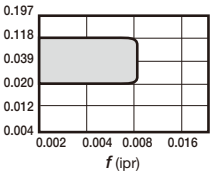
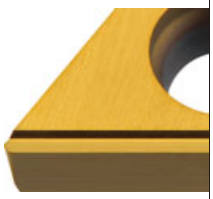
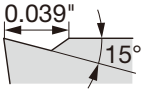
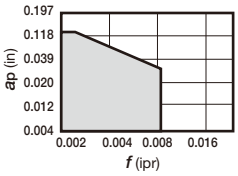
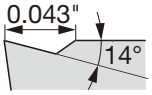
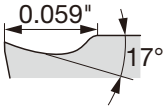
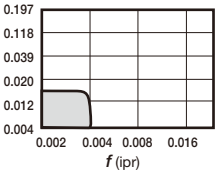
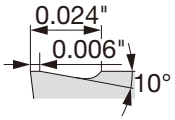
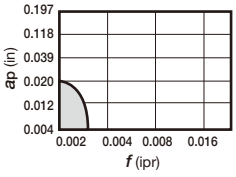
Double-sided positive inserts - Chipbreaker Overview

Application		Type	Chipbreaker design		Applicable range
P M N S	Precision finishing	**JSS**			
P M N S	Finishing	**JS**			
P M N S	Finishing	**JTS**			
P M N S	Finishing	**JRP**			
P M N S	Finishing	**SS**			
P M N S	Finishing	**TSW**			
P M N S	Finishing	**TS**			

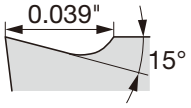
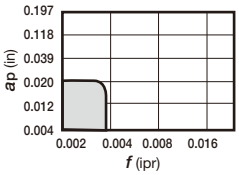
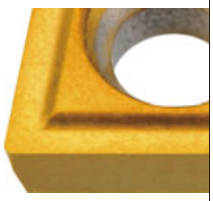
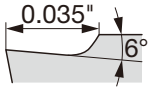
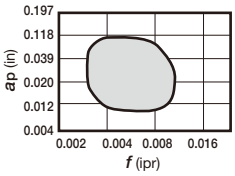
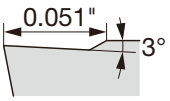
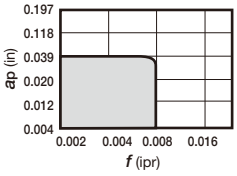
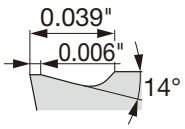
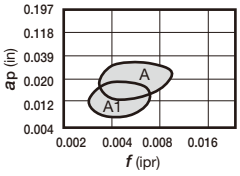
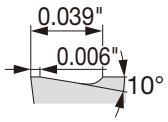
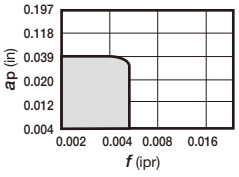
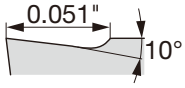
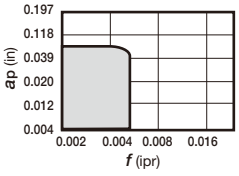
Positive Inserts - Chipbreaker Overview

Application		Type	Chipbreaker design		Applicable range
P M N S	Finishing	**AMX**			
P M N S		**AZ7**			
P M N S		**KHG**			
P M N S		**AT**			
P M N S	Light cutting	**TMV**			
P M N S		**YL**			
P M N S		**AM3**			
P M N S		**U** **U1**			

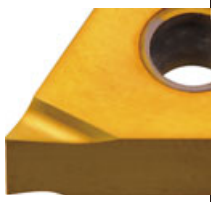
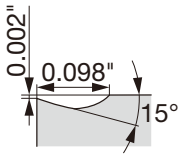
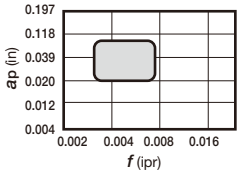
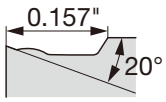
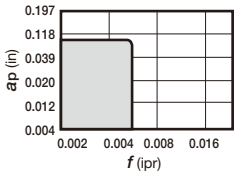
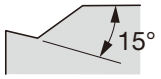
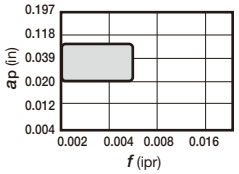
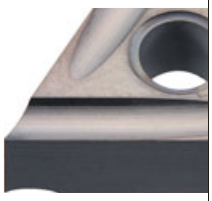
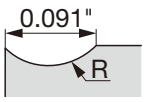
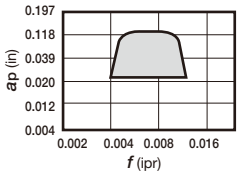
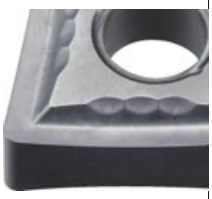
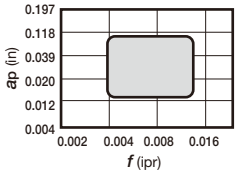
Positive Inserts - Chipbreaker Overview

Application		Type	Chipbreaker design		Applicable range
P M N S	Light cutting	**UHG**			
N		**V P H**			
P M N S	Medium cutting	**CL**			
P M N S		**S**			
P M N S		**SX**			
P M N S	Internal Finishing	**FG**			
P M N S		**B1**			

Positive Inserts - Chipbreaker Overview

Application		Type	Chipbreaker design		Applicable range
P M N S	Internal Finishing	**K**			
P M N S	Internal Medium cutting	**AM5**			
P M N S		**F1 F05**			
P M N S		**A A1**			
P M N S		**B2**			
P M N S		**B3**			

Negative Inserts - Chipbreaker Overview

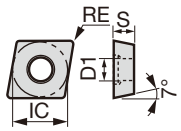
Application		Type	Chipbreaker design		Applicable range
P M N S	Finishing	D1			
P M N S	Light cutting	UL			
P M N S		TMV			
P M N S		U2			
P M N S	Medium cutting	ZP			

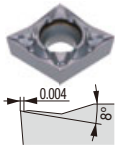
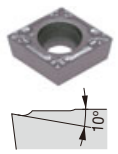
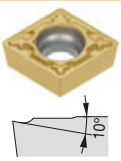
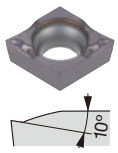
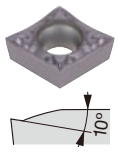
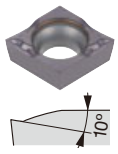
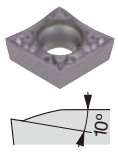
● : Continuous cutting
ȼ : Light interrupted cutting
✠ : Heavy interrupted cutting

CC

Rhombic, 80° with hole Positive 7°

P	Steel	ȼ ●ȼ ●ȼ ●ȼ ●ȼ
M	Stainless	ȼ ●ȼ ●ȼ ●ȼ ●ȼ
N	Non-ferrous	
S	Superalloy	● ●ȼ
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated AH725	SH7025	SH725	SH730	J740	Dimension (in) RE	IC	S
Precision finishing (sharp edge)	JP	CCGT 21.5V FN-JP	CCGT060200FN-JP		●	●			<0.001	0.250	0.094
		CCGT 21.50 FN-JP	CCGT060201FN-JP		●	●			<0.004	0.250	0.094
		CCGT 21.50.5 FN-JP	CCGT060202FN-JP		●	●			<0.008	0.250	0.094
		CCGT 32.5V FN-JP	CCGT09T300FN-JP		●	●			<0.002	0.375	0.156
		CCGT 32.50 FN-JP	CCGT09T301FN-JP		●	●			<0.004	0.375	0.156
		CCGT 32.50.5 FN-JP	CCGT09T302FN-JP		●	●			<0.008	0.375	0.156
	01	CCGT 21.50.5 F-01	CCGT060202F-01		●	●			<0.008	0.250	0.094
		CCGT 21.51 F-01	CCGT060204F-01		●	●			<0.016	0.250	0.094
		CCGT 32.50.5 F-01	CCGT09T302F-01		●	●			<0.008	0.375	0.156
		CCGT 32.51 F-01	CCGT09T304F-01		●	●			<0.016	0.375	0.156
Precision finishing	01	CCGT 21.50.5-01	CCGT060202-01					●	0.008	0.250	0.094
		CCGT 32.50.5-01	CCGT09T302-01					●	0.008	0.375	0.156
Finishing (sharp edge)	JS	CCGT 4.51.80 F-JS	CCGT03X101F-JS		●	●			<0.004	0.141	0.055
		CCGT 4.51.80.5 F-JS	CCGT03X102F-JS		●	●			<0.008	0.141	0.055
		CCGT 4.51.81 F-JS	CCGT03X104F-JS		●	●			<0.016	0.141	0.055
		CCGT 5.52.20 F-JS	CCGT04T101F-JS		●	●			<0.004	0.172	0.070
		CCGT 5.52.20.5 F-JS	CCGT04T102F-JS		●	●			<0.008	0.172	0.070
		CCGT 5.52.21 F-JS	CCGT04T104F-JS		●	●			<0.016	0.172	0.070
	JS	CCGT 21.5V FN-JS	CCGT060200FN-JS		●	●	●		<0.001	0.250	0.094
		CCGT 21.50 FN-JS	CCGT060201FN-JS		●	●	●		<0.004	0.250	0.094
		CCGT 21.50.5 FN-JS	CCGT060202FN-JS		●	●	●		<0.008	0.250	0.094
		CCGT 21.51 FN-JS	CCGT060204FN-JS		●	●	●		<0.016	0.250	0.094
		CCGT 32.5V FN-JS	CCGT09T300FN-JS		●	●	●		<0.001	0.375	0.156
		CCGT 32.50 FN-JS	CCGT09T301FN-JS		●	●	●		<0.004	0.375	0.156
		CCGT 32.50.5 FN-JS	CCGT09T302FN-JS		●	●	●		<0.008	0.375	0.156
		CCGT 32.51 FN-JS	CCGT09T304FN-JS		●	●	●		<0.016	0.375	0.156
Finishing	JS	CCGT 4.51.80 JS	CCGT03X101-JS				●		<0.004	0.141	0.055
		CCGT 4.51.80.5 JS	CCGT03X102-JS				●		<0.008	0.141	0.055
		CCGT 4.51.81 JS	CCGT03X104-JS				●		<0.016	0.141	0.055
		CCGT 5.52.20 JS	CCGT04T101-JS				●		<0.004	0.172	0.070
		CCGT 5.52.20.5 JS	CCGT04T102-JS				●		<0.008	0.172	0.070
		CCGT 5.52.21 JS	CCGT04T104-JS				●		<0.016	0.172	0.070
	JS	CCGT 21.50 N-JS	CCGT060201N-JS	●					0.004	0.250	0.094
		CCGT 21.50.5 N-JS	CCGT060202N-JS	●					0.008	0.250	0.094
		CCGT 21.51 N-JS	CCGT060204N-JS	●					0.016	0.250	0.094
		CCGT 32.50 N-JS	CCGT09T301N-JS	●					0.004	0.375	0.156
		CCGT 32.50.5 N-JS	CCGT09T302N-JS	●					0.008	0.375	0.156
		CCGT 32.51 N-JS	CCGT09T304N-JS	●					0.016	0.375	0.156

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

●: Line up

Reference pages: External toolholder → 3-37 -, Internal toolholder → 4-14 -

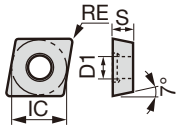
Insert POSITIVE TYPE

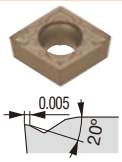
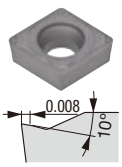
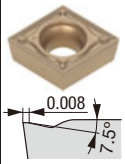
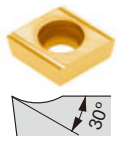
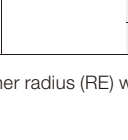
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

CC

Rhombic, 80° with hole Positive 7°

P	Steel	●ɔ	ɔ✣	ɔ			ɔ✣	ɔ	●ɔ	●ɔ	ɔ	●ɔ	●ɔ		●ɔ			●					
M	Stainless	●ɔ		●	●	ɔ	●ɔ	ɔ	●ɔ	●ɔ	ɔ	●ɔ						●					
N	Non-ferrous																	●					
S	Superalloy				●	ɔ		●															
H	Hard material																						



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	T9225	T6215	AH8005	AH8015	AH6225	AH725	SH7025	SH725	GH730	J740	Coated cermet GT9530	Cermet NS9530	Uncoated TH10	Dimension (in) RE	IC	S
Finishing	**PSF**	**CCMT 21.50.5 PSF**	**CCMT060202-PSF**							●					●	●		0.008	0.250	0.094
		CCMT 21.51 PSF	CCMT060204-PSF	●	●		●	●		●					●	●		0.016	0.250	0.094
		CCMT 32.50.5 PSF	**CCMT09T302-PSF**							●						●		0.008	0.375	0.156
		CCMT 32.51 PSF	CCMT09T304-PSF	●	●		●	●		●					●	●		0.016	0.375	0.156
		CCMT 32.52 PSF	CCMT09T308-PSF	●	●					●					●	●		0.031	0.375	0.156
	PF	**CCMT 21.50.5 PF**	**CCMT060202-PF**										●		●	●		0.008	0.250	0.094
		CCMT 21.51 PF	CCMT060204-PF						●				●		●	●		0.016	0.250	0.094
		CCMT 21.52 PF	CCMT060208-PF												●	●		0.031	0.250	0.094
		CCMT 32.50.5 PF	**CCMT09T302-PF**										●			●		0.008	0.375	0.156
		CCMT 32.51 PF	CCMT09T304-PF										●		●	●		0.016	0.375	0.156
		CCMT 32.52 PF	CCMT09T308-PF		●										●	●		0.031	0.375	0.156
	TSF	**CCMT 21.50.5 TSF**	**CCMT060202-TSF**	●	●	●		●	●							●		0.008	0.250	0.094
		CCMT 21.51 TSF	CCMT060204-TSF	●	●	●		●	●							●		0.016	0.250	0.094
		CCMT 21.52 TSF	CCMT060208-TSF	●	●	●		●	●							●		0.031	0.250	0.094
		CCMT 32.50.5 TSF	**CCMT09T302-TSF**	●	●	●		●	●							●		0.008	0.375	0.156
		CCMT 32.51 TSF	CCMT09T304-TSF	●	●	●		●	●							●		0.016	0.375	0.156
		CCMT 32.52 TSF	CCMT09T308-TSF	●	●	●		●	●							●		0.031	0.375	0.156
Finishing (sharp edge)	**J10**	**CCGT 21.5V FR-J10**	**CCGT060200FR-J10**								●	●		●			●	0.001	0.250	0.094
		CCGT 21.5V FL-J10	CCGT060200FL-J10									●		●			●	0.001	0.250	0.094
		CCGT 21.50 FR-J10	CCGT060201FR-J10								●	●		●		●	●	0.004	0.250	0.094
		CCGT 21.50 FL-J10	CCGT060201FL-J10									●		●			●	0.004	0.250	0.094
		CCGT 21.50.5 FR-J10	CCGT060202FR-J10								●	●		●		●	●	0.008	0.250	0.094
		CCGT 21.50.5 FL-J10	CCGT060202FL-J10								●	●		●		●	●	0.008	0.250	0.094
		CCGT 32.5V FR-J10	**CCGT09T300FR-J10**								●	●		●			●	0.001	0.375	0.156
		CCGT 32.5V FL-J10	CCGT09T300FL-J10									●		●			●	0.001	0.375	0.156
		CCGT 32.50 FR-J10	CCGT09T301FR-J10								●	●		●			●	0.004	0.375	0.156
		CCGT 32.50 FL-J10	CCGT09T301FL-J10									●		●			●	0.004	0.375	0.156
		CCGT 32.50.5 FR-J10	CCGT09T302FR-J10								●	●		●			●	0.008	0.375	0.156
		CCGT 32.50.5 FL-J10	CCGT09T302FL-J10								●	●		●			●	0.008	0.375	0.156
		CCGT 32.51 FR-J10	CCGT09T304FR-J10									●						0.016	0.375	0.156

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

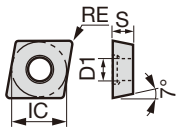
Reference pages: External toolholder → 3-37 -, Internal toolholder → 4-14 -

● : Continuous cutting
ɔ : Light interrupted cutting
✠ : Heavy interrupted cutting

CC

Rhombic, 80° with hole Positive 7°

P	Steel	●ɔ ●ɔ ●ɔ ●ɔ ● ●ɔ ●ɔ ● ɔ
M	Stainless	●ɔ ●ɔ ●ɔ ●ɔ ● ●ɔ ●ɔ ● ɔ
N	Non-ferrous	●
S	Superalloy	●ɔ ●
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated SH7205	Coated SH725	Coated SH730	Coated GH330	Coated GH110	Coated cermet GT9530	Cermet NS9530	Uncoated TH10	Uncoated UX30	Dimension (in) RE	IC	S
Finishing (sharp edge)	W08	CCGT 4.51.8V FR-W08	CCGT03X100FL-W08	●	●								0.001	0.141	0.055
		CCGT 4.51.8V FL-W08	CCGT03X100FR-W08		●								0.001	0.141	0.055
		CCGT 4.51.80 FR-W08	CCGT03X101FL-W08	●	●								0.004	0.141	0.055
		CCGT 4.51.80 FL-W08	CCGT03X101FR-W08		●								0.004	0.141	0.055
		CCGT4.51.80.5FR-W08	CCGT03X102FL-W08	●	●								0.008	0.141	0.055
		CCGT4.51.80.5FL-W08	CCGT03X102FR-W08	●	●								0.008	0.141	0.055
		CCGT 4.51.81 FR-W08	CCGT03X104FL-W08	●	●								0.016	0.141	0.055
		CCGT 4.51.81 FL-W08	CCGT03X104FR-W08	●	●								0.016	0.141	0.055
		CCGT 5.52.2V FR-W08	CCGT04T100FL-W08	●	●								0.001	0.172	0.070
		CCGT 5.52.2V FL-W08	CCGT04T100FR-W08		●								0.001	0.172	0.070
		CCGT 5.52.20 FR-W08	CCGT04T101FL-W08	●	●								0.004	0.172	0.070
		CCGT 5.52.20 FL-W08	CCGT04T101FR-W08		●								0.004	0.172	0.070
		CCGT5.52.20.5FR-W08	CCGT04T102FL-W08	●	●								0.008	0.172	0.070
		CCGT5.52.20.5FL-W08	CCGT04T102FR-W08	●	●								0.008	0.172	0.070
		CCGT 5.52.21 FR-W08	CCGT04T104FL-W08	●	●								0.016	0.172	0.070
		CCGT 5.52.21 FL-W08	CCGT04T104FR-W08	●	●								0.016	0.172	0.070
Finishing	W08	CCGT 4.51.8V R-W08	CCGT03X100R-W08			●					●		0.001	0.141	0.055
		CCGT 4.51.8V L-W08	CCGT03X100L-W08			●					●		0.001	0.141	0.055
		CCGT 4.51.80 R-W08	CCGT03X101R-W08			●					●		0.004	0.141	0.055
		CCGT 4.51.80 L-W08	CCGT03X101L-W08			●					●		0.004	0.141	0.055
		CCGT 4.51.80.5 R-W08	CCGT03X102R-W08			●					●		0.008	0.141	0.055
		CCGT 4.51.80.5 L-W08	CCGT03X102L-W08			●					●		0.008	0.141	0.055
		CCGT 4.51.81 R-W08	CCGT03X104R-W08			●					●		0.016	0.141	0.055
		CCGT 4.51.81 L-W08	CCGT03X104L-W08			●					●		0.016	0.141	0.055
		CCGT 5.52.2V R-W08	CCGT04T100R-W08			●					●		0.001	0.172	0.070
		CCGT 5.52.2V L-W08	CCGT04T100L-W08			●					●		0.001	0.172	0.070
		CCGT 5.52.20 R-W08	CCGT04T101R-W08			●					●		0.004	0.172	0.070
		CCGT 5.52.20 L-W08	CCGT04T101L-W08			●					●		0.004	0.172	0.070
		CCGT 5.52.20.5 R-W08	CCGT04T102R-W08			●					●		0.008	0.172	0.070
		CCGT 5.52.20.5 L-W08	CCGT04T102L-W08			●					●		0.008	0.172	0.070
		CCGT 5.52.21 R-W08	CCGT04T104R-W08			●					●		0.016	0.172	0.070
		CCGT 5.52.21 L-W08	CCGT04T104L-W08			●					●		0.016	0.172	0.070
	W15	CCGT 21.5V R-W15	CCGT060200R-W15								●		0.001	0.250	0.094
		CCGT 21.5V L-W15	CCGT060200L-W15							●	●		0.001	0.250	0.094
		CCGT 21.50.5 R-W15	CCGT060202R-W15							●	●		0.008	0.250	0.094
		CCGT 21.50.5 L-W15	CCGT060202L-W15						●	●	●		0.008	0.250	0.094
		CCGT 21.51 R-W15	CCGT060204R-W15				●			●	●		0.016	0.250	0.094
		CCGT 21.51 L-W15	CCGT060204L-W15				●	●	●	●	●	●	0.016	0.250	0.094

●: Line up

Reference pages: External toolholder → 3-37 -, Internal toolholder → 4-14 -

Insert POSITIVE TYPE

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

CC

Rhombic, 80° with hole Positive 7°

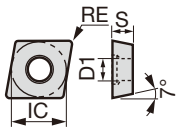
| | | |

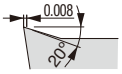
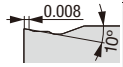
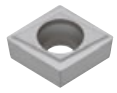
● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

CC

Rhombic, 80° with hole Positive 7°

P	Steel	●ⓒ ⓒ✣ ●ⓒ ●ⓒ ●
M	Stainless	●ⓒ ●ⓒ ●
N	Non-ferrous	● ●
S	Superalloy	●
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated SH725	Cermet NS9530	Uncoated TH10	Uncoated KS05F	Dimension (in) RE	IC	S
Finishing to light cutting for non-ferrous metal	**AL**	**CCGT060201-AL**	**CCGT060201-AL**			●			●	0.004	0.250	0.094
		**CCGT 21.50.5 AL**	CCGT060202-AL			●			●	0.008	0.250	0.094
		CCGT 21.51 AL	CCGT060204-AL						●	0.016	0.250	0.094
		CCGT 32.50.5 AL	**CCGT09T302-AL**			●			●	0.008	0.375	0.156
		CCGT 32.51 AL	CCGT09T304-AL			●			●	0.016	0.375	0.156
		CCGT 32.52 AL	CCGT09T308-AL						●	0.031	0.375	0.156
		CCGT 430.5 AL	**CCGT120402-AL**						●	0.008	0.500	0.187
		CCGT 431 AL	CCGT120404-AL						●	0.016	0.500	0.187
		CCGT 432 AL	CCGT120408-AL						●	0.031	0.500	0.187
Finishing to medium cutting	**SW**	**CCMT 21.51 SW**	**CCMT060204-SW**	●	●		●			0.016	0.250	0.094
		CCMT 21.52 SW	CCMT060208-SW	●	●		●			0.031	0.250	0.094
		CCMT 32.51 SW	**CCMT09T304-SW**	●	●		●			0.016	0.375	0.156
		CCMT 32.52 SW	CCMT09T308-SW	●	●		●			0.031	0.375	0.156
		*Wiper										
	All-round	**CCGT 21.50.5**	**CCGT060202**				●			0.008	0.250	0.094
		CCGT 21.51	CCGT060204				●			0.016	0.250	0.094
		CCGT 32.50.5	**CCGT09T302**				●			0.008	0.375	0.156
		CCGT 32.51	CCGT09T304				●			0.016	0.375	0.156
		CCGT 32.52	CCGT09T308				●			0.031	0.375	0.156
	Angular	**CCGT 21.5V R**	**CCGT060200R**					●		0.001	0.250	0.094
		CCGT 21.50.5 R	CCGT060202R					●		0.008	0.250	0.094
		CCGT 21.50.5 L	CCGT060202L					●		0.008	0.250	0.094
		CCGT 21.51 L	CCGT060204L					●		0.016	0.250	0.094
		CCGT 32.50.5 R	**CCGT09T302R**					●		0.008	0.375	0.156
		CCGT 32.50.5 L	CCGT09T302L					●		0.008	0.375	0.156
		CCGT 32.51 R	CCGT09T304R					●		0.016	0.375	0.156
		CCGT 32.51 L	CCGT09T304L					●		0.016	0.375	0.156
	23	**CCMT 21.50.5-23**	**CCMT060202-23**				●			0.008	0.250	0.094
		CCMT 21.51-23	CCMT060204-23		●		●			0.016	0.250	0.094
		CCMT 21.52-23	CCMT060208-23		●					0.031	0.250	0.094
		CCMT 32.51-23	**CCMT09T304-23**		●		●			0.016	0.375	0.156
		CCMT 32.52-23	CCMT09T308-23		●		●			0.031	0.375	0.156

* Please see Tungaloy General Catalog vol.5 **L011 - L015** about the adjustment of the machining program for rounding or taper machining by using SW/FW.
Please contact our sales representatives if you have any question.

●: Line up

Reference pages: External toolholder → 3-37 -, Internal toolholder → 4-14 -

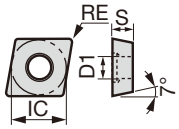
Insert POSITIVE TYPE

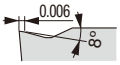
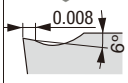
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

CC

Rhombic, 80°
with hole
Positive 7°

P	Steel	●ɔ	ɔ✣	ɔ	ɔ✣	✣	ɔ	●	●ɔ	ɔ	●	●ɔ			●ɔ						
M	Stainless	●ɔ		●	●ɔ	✣	ɔ	●	●ɔ	ɔ	●										
N	Non-ferrous																				
S	Superalloy						●	●	●ɔ		●										
H	Hard material																				



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	T9225	T6215	AH6225	AH6235	AH725	AH110	AH120	GH730	GH110	Coated cermet GT9530	Cermet NS9530	RE	IC	S
Medium cutting	**PM**	**CCMT 21.51 PM**	**CCMT060204-PM**	●	●	●	●	●	●	●	●	●		●	●	0.016	0.250	0.094
		CCMT 21.5**2 PM**	CCMT0602**08-PM**	●	●	●	●	●	●	●	●	●		●	●	0.031	0.250	0.094
		CCMT 32.51 PM	**CCMT09T304-PM**	●	●	●	●	●	●	●	●	●		●	●	0.016	0.375	0.156
		CCMT 32.5**2 PM**	CCMT09T3**08-PM**	●	●	●	●	●	●	●	●	●		●	●	0.031	0.375	0.156
		CCMT 32.5**3 PM**	CCMT09T3**12-PM**	●	●	●	●	●	●							0.047	0.375	0.156
		**CCMT 432 PM**	**CCMT120408-PM**			●	●	●	●							0.031	0.500	0.187
		CCMT 43**3 PM**	CCMT1204**12-PM**			●	●	●	●							0.047	0.500	0.187
	24	**CCMT 21.50.5-24**	**CCMT060202-24**		●										●	0.008	0.250	0.094
		CCMT 21.5**1-24**	CCMT0602**04-24**	●	●						●				●	0.016	0.250	0.094
		CCMT 21.5**2-24**	CCMT0602**08-24**	●	●		●				●				●	0.031	0.250	0.094
		CCMT 32.50.5-24	**CCMT09T302-24**		●										●	0.008	0.375	0.156
		CCMT 32.5**1-24**	CCMT09T3**04-24**	●	●						●				●	0.016	0.375	0.156
		CCMT 32.5**2-24**	CCMT09T3**08-24**	●	●		●				●				●	0.031	0.375	0.156
		CCMT 432-24	**CCMT120408-24**	●	●						●				●	0.031	0.500	0.187

● : Line up

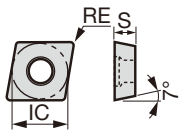
Reference pages: External toolholder → 3-37 -, Internal toolholder → 4-14 -

● : Continuous cutting
ᑕ : Light interrupted cutting
✠ : Heavy interrupted cutting

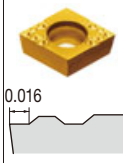
CC

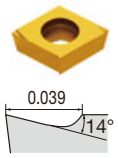
Rhombic, 80°
with hole
Positive 7°

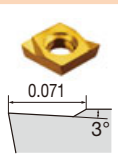
P	Steel	●ᑕ ● ●ᑕ ●ᑕ ●
M	Stainless	●ᑕ ● ● ●
N	Non-ferrous	● ●
S	Superalloy	●
H	Hard material	●ᑕ



Application	Chipbreaker	Designation Inch	Designation Metric	Coated ST4	DT4	QM3	TM4	VM1	ZM3	Dimension (in) RE	IC	S
Finishing	AZ7	CCGT21.501AZ7	CCGT060200AZ7			●				0.001	0.250	0.094
		CCGT21.504MAZ7	CCGT060201MAZ7			●				0.003	0.250	0.094
		CCGT21.508MAZ7	CCGT060202MAZ7			●				0.007	0.250	0.094
		CCGT32.501AZ7	CCGT09T300AZ7		●	●	●		●	0.001	0.375	0.156
		CCGT32.504MAZ7	CCGT09T301MAZ7		●	●	●		●	0.003	0.375	0.156
		CCGT32.508MAZ7	CCGT09T302MAZ7		●	●	●		●	0.007	0.375	0.156
		CCGT32.51MAZ7	CCGT09T304MAZ7		●	●	●		●	0.015	0.375	0.156
	KHG	CCET21.502RKHG	CCET0602005RKHG					●		0.002	0.250	0.094
		CCET21.502LKHG	CCET0602005LKHG					●		0.002	0.250	0.094
		CCET21.503RKHG	CCET0602008RKHG					●		0.003	0.250	0.094
		CCET21.503LKHG	CCET0602008LKHG					●		0.003	0.250	0.094
		CCET 21.507RKHG	CCET0602018RKHG					●		0.007	0.250	0.094
		CCET 21.507LKHG	CCET0602018LKHG					●		0.007	0.250	0.094
		CCET 21.508RKHG	CCET060202RKHG					●		0.008	0.250	0.094
		CCET 21.508LKHG	CCET060202LKHG					●		0.008	0.250	0.094
		CCET32.502RKHG	CCET09T3005RKHG				●	●		0.002	0.375	0.156
		CCET32.502LKHG	CCET09T3005LKHG					●		0.002	0.375	0.156
		CCET32.503RKHG	CCET09T3008RKHG				●	●		0.003	0.375	0.156
		CCET32.503LKHG	CCET09T3008LKHG					●		0.003	0.375	0.156
		CCET32.507RKHG	CCET09T3018RKHG				●	●		0.007	0.375	0.156
		CCET32.507LKHG	CCET09T3018LKHG					●		0.007	0.375	0.156
		CCET32.508RKHG	CCET09T302RKHG				●	●		0.008	0.375	0.156
		CCET32.508LKHG	CCET09T302LKHG					●		0.008	0.375	0.156
Internal medium cutting	F1	CCGT21.504FRF1	CCGT060201FRF1	●		●	●			0.004	0.250	0.094
		CCGT21.508FRF1	CCGT060202FRF1	●		●	●			0.008	0.250	0.094
		CCGT21.51FRF1	CCGT060204FRF1	●		●	●			0.016	0.250	0.094
		CCGT32.508FRF1	CCGT09T302FRF1	●		●	●			0.008	0.375	0.156
		CCGT32.51FRF1	CCGT09T304FRF1	●		●	●			0.016	0.375	0.156







● : Line up

Reference pages: External toolholder → 3-37 -, Internal toolholder → 4-14 -

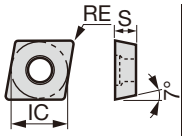
Insert POSITIVE TYPE

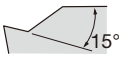
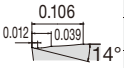
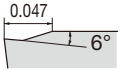
● : Continuous cutting
ɔ : Light interrupted cutting
✠ : Heavy interrupted cutting

CC

Rhombic, 80° with hole Positive 7°

P	Steel						●ɔ	●ɔ	●																
M	Stainless			●ɔ	●ɔ	●			●			●													
N	Non-ferrous								●			●													
S	Superalloy	●ɔ			●ɔ	●																			
H	Hard material				●ɔ			●ɔ																	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated 650	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	Dimension (in) RE	IC	S
Light cutting	**TMV**	**CCGT32.504MRTMV**	**CCGT09T301MRTMV**	●	●	●			●			0.003	0.375	0.156
		CCGT32.508MRTMV	CCGT09T302MRTMV	●	●	●			●			0.007	0.375	0.156
		CCGT32.51MRTMV	CCGT09T304MRTMV	●	●	●			●			0.015	0.375	0.156
														
	YL	**CCGT32.501YL**	**CCGT09T300YL**				●		●			0.001	0.375	0.156
		CCGT32.504MYL	CCGT09T301MYL	●	●	●	●	●	●			0.003	0.375	0.156
		CCGT32.508MYL	CCGT09T302MYL	●	●	●	●	●	●			0.007	0.375	0.156
		CCGT32.51MYL	CCGT09T304MYL	●	●	●	●	●	●			0.015	0.375	0.156
		CCGT32.52MYL	CCGT09T308MYL		●	●	●	●	●			0.031	0.375	0.156
	U U1	**CCGT21.501RU**	**CCGT060200RU**				●				●	0.001	0.250	0.094
		CCGT21.504RU	CCGT060201RU				●				●	0.004	0.250	0.094
		CCGT21.504LU	CCGT060201LU								●	0.004	0.250	0.094
		CCGT21.508RU	CCGT060202RU				●				●	0.008	0.250	0.094
		CCGT21.508LU	CCGT060202LU								●	0.008	0.250	0.094
		CCGT32.501RU1	**CCGT09T300RU1**				●		●		●	0.001	0.375	0.156
		CCGT32.501LU1	CCGT09T300LU1								●	0.001	0.375	0.156
		CCGT32.504RU1	CCGT09T301RU1				●		●		●	0.004	0.375	0.156
		CCGT32.504LU1	CCGT09T301LU1								●	0.004	0.375	0.156
		CCGT32.508RU1	CCGT09T302RU1				●		●		●	0.008	0.375	0.156
		CCGT32.508LU1	CCGT09T302LU1								●	0.008	0.375	0.156
		CCGT32.51RU1	CCGT09T304RU1				●		●		●	0.016	0.375	0.156
		CCGT32.51LU1	CCGT09T304LU1								●	0.016	0.375	0.156
	AM3	**CCGT21.501FNAM3**	**CCGT060200FNAM3**				●		●	●		0.001	0.250	0.094
		CCGT21.504MFNAM3	CCGT060201MFNAM3		●		●	●	●			0.003	0.250	0.094
		CCGT21.508FNAM3	CCGT060202FNAM3							●	●	0.008	0.250	0.094
		CCGT21.508MFNAM3	CCGT060202MFNAM3		●		●	●	●			0.007	0.250	0.094
		CCGT21.51FNAM3	CCGT060204FNAM3								●	0.016	0.250	0.094
		CCGT21.51MFNAM3	CCGT060204MFNAM3		●		●	●	●			0.015	0.250	0.094
		CCGT32.501FNAM3	**CCGT09T300FNAM3**				●		●	●		0.001	0.375	0.156
		CCGT32.504MFNAM3	CCGT09T301MFNAM3		●		●	●	●	●	●	0.003	0.375	0.156
		CCGT32.508FNAM3	CCGT09T302FNAM3					●		●		0.008	0.375	0.156
		CCGT32.508MFNAM3	CCGT09T302MFNAM3		●		●	●	●	●	●	0.007	0.375	0.156
		CCGT32.51FNAM3	CCGT09T304FNAM3					●		●		0.016	0.375	0.156
		CCGT32.51MFNAM3	CCGT09T304MFNAM3		●		●	●	●	●	●	0.015	0.375	0.156
		CCMT21.508FNAM3	**CCMT060202FNAM3**			●						0.008	0.250	0.094
		CCMT21.51FNAM3	CCMT060204FNAM3			●						0.016	0.250	0.094
		CCMT32.508FNAM3	**CCMT09T302FNAM3**			●						0.008	0.375	0.156
		CCMT32.51FNAM3	CCMT09T304FNAM3			●						0.016	0.375	0.156
		CCMT32.52FNAM3	CCMT09T308FNAM3			●						0.031	0.375	0.156

●: Line up

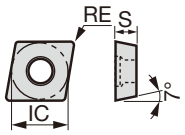
Reference pages: External toolholder → 3-37 -, Internal toolholder → 4-14 -

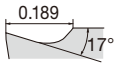
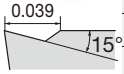
● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

CC

Rhombic, 80°
with hole
Positive 7°

P	Steel	●ⓒ ●ⓒ ●
M	Stainless	●ⓒ ●ⓒ ● ● ●
N	Non-ferrous	● ● ●
S	Superalloy	●ⓒ ●ⓒ ●
H	Hard material	●ⓒ ●ⓒ



Application	Chipbreaker	Designation Inch	Designation Metric	Coated 650	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	Uncoated KM1	Dimension (in) RE	IC	S
Medium cutting	CL	CCGT 21.504M CL	CCGT060201MCL		●	●	●	●	●				0.003	0.250	0.094
		CCGT 21.508M CL	CCGT060202MCL		●	●	●	●	●				0.007	0.250	0.094
		CCGT 32.501 CL	CCGT09T300CL				●		●				0.001	0.375	0.156
		CCGT 32.504M CL	CCGT09T301MCL	●	●	●	●	●	●				0.003	0.375	0.156
		CCGT 32.508M CL	CCGT09T302MCL	●	●	●	●	●	●				0.007	0.375	0.156
		CCGT 32.51M CL	CCGT09T304MCL	●	●	●	●	●	●				0.015	0.375	0.156
	S	CCGT21.501RS	CCGT060200RS				●			●	●		0.001	0.250	0.094
		CCGT21.501LS	CCGT060200LS							●	●		0.001	0.250	0.094
		CCGT21.504MRS	CCGT060201MRS				●	●					0.003	0.250	0.094
		CCGT21.504RS	CCGT060201RS							●	●		0.004	0.250	0.094
		CCGT21.504LS	CCGT060201LS							●	●		0.004	0.250	0.094
		CCGT21.508MRS	CCGT060202MRS				●	●					0.007	0.250	0.094
		CCGT21.508RS	CCGT060202RS							●	●		0.008	0.250	0.094
		CCGT21.508LS	CCGT060202LS							●	●		0.008	0.250	0.094
		CCGT21.51RS	CCGT060204RS										0.016	0.250	0.094
		CCGT32.501RS	CCGT09T300RS				●		●	●	●		0.001	0.375	0.156
		CCGT32.501LS	CCGT09T300LS							●			0.001	0.375	0.156
		CCGT32.504MRS	CCGT09T301MRS				●	●	●				0.003	0.375	0.156
		CCGT32.504RS	CCGT09T301RS					●		●	●		0.004	0.375	0.156
		CCGT32.504LS	CCGT09T301LS							●	●		0.004	0.375	0.156
		CCGT32.508MRS	CCGT09T302MRS				●	●	●				0.007	0.375	0.156
		CCGT32.508RS	CCGT09T302RS					●		●	●		0.008	0.375	0.156
		CCGT32.508LS	CCGT09T302LS							●			0.008	0.375	0.156
		CCGT32.51MRS	CCGT09T304MRS				●	●	●				0.015	0.375	0.156
		CCGT32.51RS	CCGT09T304RS					●					0.016	0.375	0.156
Non-ferrous	V P H	CCGW 21.501 FN	CCGW060200FN								●		0.001	0.250	0.094
		CCGW 21.501 H	CCGW060200H Ⓜ									●	0.001	0.250	0.094
		CCGW 21.504 FN	CCGW060201FN								●		0.004	0.250	0.094
		CCGW 21.504 H	CCGW060201H Ⓜ									●	0.004	0.250	0.094
		CCGW 21.508 H	CCGW060202H Ⓜ									●	0.008	0.250	0.094
		CCGW 32.500 V	CCGW09T30V Ⓜ							●			0.000	0.375	0.156
		CCGW 32.501 FN	CCGW09T300FN								●		0.001	0.375	0.156
		CCGW 32.501 H	CCGW09T300H Ⓜ									●	0.001	0.375	0.156
		CCGW 32.504 FN	CCGW09T301FN								●		0.004	0.375	0.156
		CCGW 32.504 H	CCGW09T301H Ⓜ									●	0.004	0.375	0.156
		CCGW 32.504 P	CCGW09T301P Ⓜ							●			0.004	0.375	0.156
		CCGW 32.508 H	CCGW09T302H Ⓜ									●	0.008	0.375	0.156
		CCGW 32.508M P	CCGW09T302MP				●						0.007	0.375	0.156
		CCGW 32.508 P	CCGW09T302P Ⓜ							●			0.008	0.375	0.156

● : Line up

Reference pages: External toolholder → 3-37 -, Internal toolholder → 4-14 -

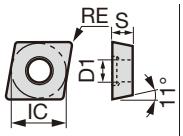
Insert POSITIVE TYPE

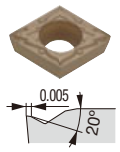
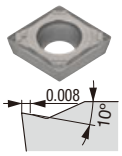
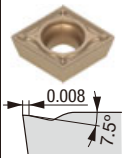
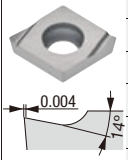
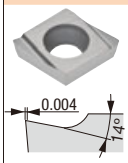
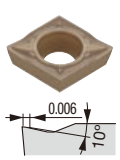
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

CP

Rhombic, 80° with hole Positive 11°

		Coated							Coated cermet	Cermet	Uncoated
P	Steel	●ɔ	ɔ✣	ɔ		ɔ✣	✣	ɔ	●ɔ	●ɔ	●
M	Stainless	●ɔ		●	ɔ	●ɔ	✣	ɔ			●
N	Non-ferrous										●
S	Superalloy				ɔ			●			
H	Hard material										



Application	Chipbreaker	Designation Inch	Designation Metric	T9215	T9225	T6215	AH8015	AH6225	AH6235	AH725	GT9530	NS9530	TH10	Dimension (in) RE	IC	S
Finishing	**PSF**	**CPMT 21.50.5 PSF**	**CPMT060202-PSF**							●				0.008	0.250	0.094
		CPMT 21.51 PSF	CPMT060204-PSF	●	●					●				0.016	0.250	0.094
		CPMT 2.51.50.5 PSF	**CPMT080202-PSF**							●				0.008	0.313	0.094
		CPMT 2.51.51 PSF	CPMT080204-PSF	●	●					●				0.016	0.313	0.094
		CPMT 320.5 PSF	**CPMT090302-PSF**							●	●	●		0.008	0.375	0.125
		CPMT 321 PSF	CPMT090304-PSF	●	●					●	●	●		0.016	0.375	0.125
		CPMT 32.50.5 PSF	**CPMT09T302-PSF**							●				0.008	0.375	0.156
		CPMT 32.51 PSF	CPMT09T304-PSF	●	●					●				0.016	0.375	0.156
	PF	**CPMT 320.5 PF**	**CPMT090302-PF**								●	●		0.008	0.375	0.125
		CPMT 321 PF	CPMT090304-PF								●	●		0.016	0.375	0.125
	TSF	**CPMT 21.50.5 TSF**	**CPMT060202-TSF**	●	●	●	●	●				●		0.008	0.250	0.094
		CPMT 21.51 TSF	CPMT060204-TSF	●	●	●	●	●				●		0.016	0.250	0.094
		CPMT 21.52 TSF	CPMT060208-TSF	●	●	●	●	●				●		0.031	0.250	0.094
		CPMT 32.50.5 TSF	**CPMT09T302-TSF**	●	●	●	●	●				●		0.008	0.375	0.156
		CPMT 32.51 TSF	CPMT09T304-TSF	●	●	●	●	●				●		0.016	0.375	0.156
		CPMT 32.52 TSF	CPMT09T308-TSF	●	●	●	●	●				●		0.031	0.375	0.156
	W15	**CPGT 730.5 L-W15**	**CPGT050202L-W15**									●		0.008	0.219	0.094
		CPGT 731 L-W15	CPGT050204L-W15									●		0.016	0.219	0.094
		CPGT 2.51.50.5 R-W15	**CPGT080202R-W15**										●	0.008	0.313	0.094
		CPGT 2.51.50.5 L-W15	CPGT080202L-W15									●	●	0.008	0.313	0.094
		CPGT 2.51.51 R-W15	CPGT080204R-W15										●	0.016	0.313	0.094
		CPGT 2.51.51 L-W15	CPGT080204L-W15									●	●	0.016	0.313	0.094
	W20	**CPGT 320.5 R-W20**	**CPGT090302R-W20**									●	●	0.008	0.375	0.125
		CPGT 320.5 L-W20	CPGT090302L-W20									●	●	0.008	0.375	0.125
		CPGT 321 R-W20	CPGT090304R-W20									●	●	0.016	0.375	0.125
		CPGT 321 L-W20	CPGT090304L-W20									●	●	0.016	0.375	0.125
Finishing to medium cutting	**PSS**	**CPMT 21.51 PSS**	**CPMT060204-PSS**	●	●					●	●	●		0.016	0.250	0.094
		**CPMT 2.51.51 PSS**	**CPMT080204-PSS**	●	●	●		●	●	●	●	●		0.016	0.313	0.094
		CPMT 2.51.52 PSS	CPMT080208-PSS	●	●	●		●	●	●	●	●		0.031	0.313	0.094
		CPMT 321 PSS	**CPMT090304-PSS**	●	●	●		●	●	●	●	●		0.016	0.375	0.125
		CPMT 322 PSS	CPMT090308-PSS	●	●	●		●	●	●	●	●		0.031	0.375	0.125
		CPMT 32.51 PSS	**CPMT09T304-PSS**	●	●					●				0.016	0.375	0.156
		CPMT 32.52 PSS	CPMT09T308-PSS	●	●					●				0.031	0.375	0.156

● : Line up

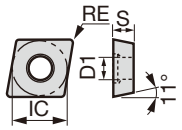
Reference pages: Internal toolholder → 4-17

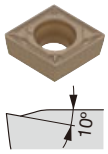
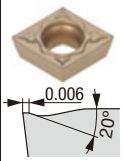
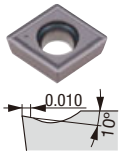
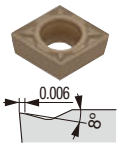
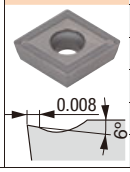
● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

CP

Rhombic, 80° with hole Positive 11°

P	Steel	●ⓒ✣ ⓒ ⓒ✣ ✣ ⓒ ●ⓒ ⓒ
M	Stainless	●ⓒ ● ● ⓒ ●ⓒ ✣ ⓒ ●ⓒ ⓒ
N	Non-ferrous	●
S	Superalloy	● ⓒ ⓒ ● ●ⓒ
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	T9225	T6215	AH8005	AH8015	AH6225	AH6235	AH905	AH725	AH120	GH730	Coated cermet GT9530	AT9530	Cermet NS9530	Uncoated TH10	Dimension (in) RE	IC	S
Finishing to medium cutting	**PS**	CPMT 21.50.5 PS	CPMT060202-PS	●	●	●	●	●	●			●	●	●			●		0.008	0.250	0.094
		CPMT 21.51 PS	CPMT060204-PS	●	●	●	●	●	●			●	●	●	●	●	●		0.016	0.250	0.094
		CPMT 21.52 PS	CPMT060208-PS	●	●	●		●	●								●		0.031	0.250	0.094
		CPMT 2.51.50.5 PS	CPMT080202-PS	●	●	●			●	●		●			●	●	●		0.008	0.313	0.094
		CPMT 2.51.51 PS	CPMT080204-PS	●	●	●			●	●		●			●	●	●		0.016	0.313	0.094
		CPMT 2.51.52 PS	CPMT080208-PS	●	●	●			●	●		●			●	●	●		0.031	0.313	0.094
		CPMT 321 PS	CPMT090304-PS	●	●	●			●	●		●			●	●	●		0.016	0.375	0.125
		CPMT 322 PS	CPMT090308-PS	●	●	●			●	●		●			●	●	●	●	0.031	0.375	0.125
		CPMT 32.50.5 PS	CPMT09T302-PS	●	●	●	●	●	●			●					●		0.008	0.375	0.156
		CPMT 32.51 PS	CPMT09T304-PS	●	●	●	●	●	●			●					●		0.016	0.375	0.156
		CPMT 32.52 PS	CPMT09T308-PS	●	●	●	●	●	●			●	●				●		0.031	0.375	0.156
	TM	CPMT 21.50.5 TM	CPMT060202-TM	●	●	●		●	●								●		0.008	0.250	0.094
		CPMT 21.51 TM	CPMT060204-TM	●	●	●		●	●								●		0.016	0.250	0.094
		CPMT 21.52 TM	CPMT060208-TM	●	●	●		●	●								●		0.031	0.250	0.094
		CPMT 32.50.5 TM	CPMT09T302-TM	●	●	●		●	●								●		0.008	0.375	0.156
		CPMT 32.51 TM	CPMT09T304-TM	●	●	●		●	●								●		0.016	0.375	0.156
		CPMT 32.52 TM	CPMT09T308-TM	●	●	●		●	●								●		0.031	0.375	0.156
	All-round	CPMT 432	CPMT120408				●	●			●								0.031	0.500	0.187
																					
Medium cutting	**PM**	CPMT 21.51 PM	CPMT060204-PM			●			●	●		●							0.016	0.250	0.094
		CPMT 21.52 PM	CPMT060208-PM		●	●			●	●		●							0.031	0.250	0.094
		CPMT 321 PM	CPMT090304-PM		●	●			●	●		●					●		0.016	0.375	0.125
		CPMT 322 PM	CPMT090308-PM		●	●			●	●		●					●		0.031	0.375	0.125
	24	CPMT 2.51.51-24	CPMT080204-24	●															0.016	0.313	0.094
		CPMT 2.51.52-24	CPMT080208-24		●														0.031	0.313	0.094
		CPMT 322-24	CPMT090308-24		●														0.031	0.375	0.125
		CPMT 432-24	CPMT120408-24														●		0.031	0.500	0.187
		CPMT 53.52-24	CPMT160508-24		●												●		0.031	0.625	0.219
		CPMT 53.53-24	CPMT160512-24														●		0.047	0.625	0.219

● : Line up

Reference pages: Internal toolholder → 4-17

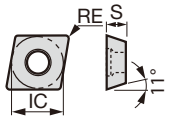
Insert POSITIVE TYPE

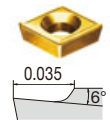
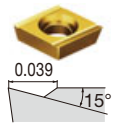
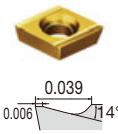
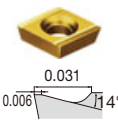
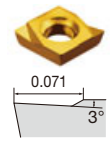
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

CP

Rhombic, 80°
with hole
Positive 11°

P	Steel	●ɔ ●ɔ
M	Stainless	●ɔ ● ●
N	Non-ferrous	● ●
S	Superalloy	
H	Hard material	●ɔ



Application	Chipbreaker	Designation Inch	Designation Metric	Coated ST4	Coated QM3	Coated TM4	Coated ZM3	Dimension (in) RE	IC	S
Light cutting	AM5	CPGH 21.508 FNAM5	CPGH060202FNAM5			●	●	0.008	0.250	0.094
		CPGP 2.51.508 FNAM5	CPGH080202FNAM5			●	●	0.008	0.313	0.094
	S	CPGP6204LS	CPGH040101LS		●	●		0.004	0.187	0.063
		CPGP6208LS	CPGH040102LS		●	●		0.008	0.187	0.063
		CPGP621LS	CPGH040104LS		●	●		0.016	0.187	0.063
		CPGH21.508LS	CPGH060202LS		●	●		0.008	0.250	0.094
		CPGH21.51LS	CPGH060204LS		●	●		0.016	0.250	0.094
	A	CPGH21.508FLA	CPGH060202FLA			●	●	0.008	0.250	0.094
		CPGH21.51FLA	CPGH060204FLA			●	●	0.016	0.250	0.094
		CPGP0308FLA	CPGH080202FLA			●	●	0.008	0.313	0.094
		CPGP031FLA	CPGH080204FLA			●	●	0.016	0.313	0.094
	A1	CPGP6208FLA1	CPGH040102FLA1			●	●	0.008	0.187	0.063
		CPGP621FLA1	CPGH040104FLA1			●	●	0.016	0.187	0.063
Internal medium cutting	F1	CPGP6204FRF1	CPGH040101FRF1	●	●	●		0.004	0.187	0.063
		CPGP6208FRF1	CPGH040102FRF1	●	●	●		0.008	0.187	0.063
		CPGP621FRF1	CPGH040104FRF1	●	●	●		0.016	0.187	0.063
		CPGH21.508FRF1	CPGH060202FRF1	●	●	●		0.008	0.250	0.094
		CPGH21.51FRF1	CPGH060204FRF1	●	●	●		0.016	0.250	0.094

● : Line up

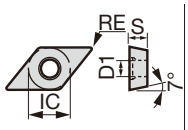
Reference pages: Internal toolholder → 4-17

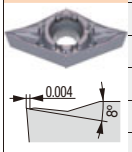
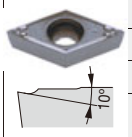
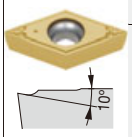
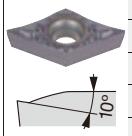
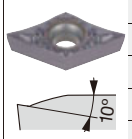
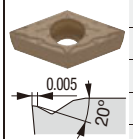
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

DC

Rhombic, 55° with hole Positive 7°

P	Steel	●ɔ ɔ✣ ɔ ●ɔ
M	Stainless	●ɔ ● ɔ ɔ ●ɔ
N	Non-ferrous	
S	Superalloy	● ɔ ɔ ● ●ɔ
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	T9225	AH8005	AH8015	AH905	AH725	SH7025	SH725	SH730	J740	Coated cermet GT9530	J9530	Cermet NS9530	Dimension (in) RE	IC	S
Precision finishing (sharp edge)	JP	DCGT 21.5V FN-JP	DCGT070200FN-JP							●	●						<0.0012	0.250	0.094
		DCGT 21.50 FN-JP	DCGT070201FN-JP							●	●						<0.004	0.250	0.094
		DCGT 21.50.5 FN-JP	DCGT070202FN-JP							●	●						<0.008	0.250	0.094
		DCGT 32.5V FN-JP	DCGT11T300FN-JP							●	●						<0.0012	0.375	0.156
		DCGT 32.50 FN-JP	DCGT11T301FN-JP							●	●						<0.004	0.375	0.156
		DCGT 32.50.5 FN-JP	DCGT11T302FN-JP							●	●						<0.008	0.375	0.156
	01	DCGT 21.50.5 F-01	DCGT070202F-01							●	●						<0.008	0.250	0.094
		DCGT 21.51 F-01	DCGT070204F-01							●	●						<0.016	0.250	0.094
		DCGT 32.50.5 F-01	DCGT11T302F-01							●	●						<0.008	0.375	0.156
		DCGT 32.51 F-01	DCGT11T304F-01							●	●						<0.016	0.375	0.156
Precision finishing	01	DCGT 21.50.5-01	DCGT070202-01										●		●		0.008	0.250	0.094
		DCGT 32.50.5 01	DCGT11T302-01										●				0.008	0.375	0.156
Finishing (sharp edge)	JS	DCGT 21.5V FN-JS	DCGT070200FN-JS							●	●	●					<0.0012	0.250	0.094
		DCGT 21.50 FN-JS	DCGT070201FN-JS							●	●	●					<0.004*	0.250	0.094
		DCGT 21.50.5 FN-JS	DCGT070202FN-JS							●	●	●					<0.008*	0.250	0.094
		DCGT 32.5V FN-JS	DCGT11T300FN-JS							●	●	●					<0.0012	0.375	0.156
		DCGT 32.50 FN-JS	DCGT11T301FN-JS							●	●	●					<0.004*	0.375	0.156
		DCGT 32.50.5 FN-JS	DCGT11T302FN-JS							●	●	●					<0.008*	0.375	0.156
		DCGT 32.51 FN-JS	DCGT11T304FN-JS							●	●	●					<0.016*	0.375	0.156
Finishing	JS	DCGT 21.50 N-JS	DCGT070201N-JS						●								0.004	0.250	0.094
		DCGT 21.50.5 N-JS	DCGT070202N-JS						●								0.008	0.250	0.094
		DCGT 32.50 N-JS	DCGT11T301N-JS						●								0.004	0.375	0.156
		DCGT 32.50.5 N-JS	DCGT11T302N-JS						●								0.008	0.375	0.156
		DCGT 32.51 N-JS	DCGT11T304N-JS						●								0.016	0.375	0.156
	PSF	DCMT 21.50.5 PSF	DCMT070202-PSF						●					●		●	0.008	0.250	0.094
		DCMT 21.51 PSF	DCMT070204-PSF	●	●				●					●		●	0.016	0.250	0.094
		DCMT 32.50.5 PSF	DCMT11T302-PSF						●					●		●	0.008	0.375	0.156
		DCMT 32.51 PSF	DCMT11T304-PSF	●	●	●	●	●	●					●		●	0.016	0.375	0.156
		DCMT 32.52 PSF	DCMT11T308-PSF	●	●	●	●	●	●								0.031	0.375	0.156

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

Reference pages: External toolholder → 3-45 -, Internal toolholder → 4-18 -

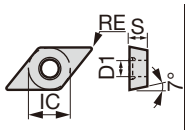
Insert POSITIVE TYPE

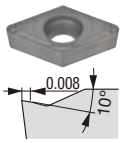
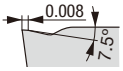
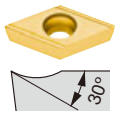
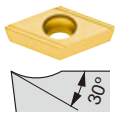
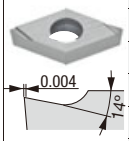
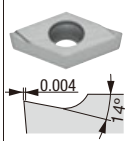
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

DC

Rhombic, 55°
with hole
Positive 7°

P	Steel	●ɔ	ɔ✣	ɔ		ɔ✣	●ɔ	●ɔ	●ɔ	ɔ	●ɔ	●ɔ	●ɔ		●ɔ				●					
M	Stainless	●ɔ		●	ɔ	●ɔ	●ɔ	●ɔ	●ɔ	ɔ	●ɔ								●					
N	Non-ferrous																		●					
S	Superalloy				ɔ																			
H	Hard material																							



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated T6215	Coated AH8015	Coated AH6225	Coated SH7025	Coated SH725	Coated J740	Coated GH730	Coated GH330	Coated cermet GT9530	Coated cermet J9530	Cermet NS9530	Uncoated TH10	Dimension (in) RE	IC	S
Finishing	PF	DCMT 21.50.5 PF	DCMT070202-PF									●		●		●		0.008	0.250	0.094
		DCMT 21.51 PF	DCMT070204-PF					●				●		●		●		0.016	0.250	0.094
		DCMT 21.52 PF	DCMT070208-PF					●						●		●		0.031	0.250	0.094
		DCMT 32.50.5 PF	DCMT11T302-PF									●		●		●		0.008	0.375	0.156
		DCMT 32.51 PF	DCMT11T304-PF									●		●		●		0.016	0.375	0.156
		DCMT 32.52 PF	DCMT11T308-PF											●				0.031	0.375	0.156
	TSF	DCMT 21.50.5 TSF	DCMT070202-TSF	●	●	●	●	●								●		0.008	0.250	0.094
		DCMT 21.51 TSF	DCMT070204-TSF	●	●	●	●	●								●		0.016	0.250	0.094
		DCMT 21.52 TSF	DCMT070208-TSF	●	●	●	●	●								●		0.031	0.250	0.094
		DCMT 32.50.5 TSF	DCMT11T302-TSF	●	●	●	●	●								●		0.008	0.375	0.156
		DCMT 32.51 TSF	DCMT11T304-TSF	●	●	●	●	●								●		0.016	0.375	0.156
		DCMT 32.52 TSF	DCMT11T308-TSF	●	●	●	●	●								●		0.031	0.375	0.156
Finishing (sharp edge)	J10	DCGT 21.5V FR-J10	DCGT070200FR-J10						●	●	●						●	0.0012	0.250	0.094
		DCGT 21.5V FL-J10	DCGT070200FL-J10							●	●						●	0.0012	0.250	0.094
		DCGT 21.50 FR-J10	DCGT070201FR-J10						●	●	●					●	●	0.004	0.250	0.094
		DCGT 21.50 FL-J10	DCGT070201FL-J10							●	●					●	●	0.004	0.250	0.094
		DCGT 21.50.5 FR-J10	DCGT070202FR-J10						●	●	●					●	●	0.008	0.250	0.094
		DCGT 21.50.5 FL-J10	DCGT070202FL-J10						●	●	●					●	●	0.008	0.250	0.094
		DCGT 21.51 FR-J10	DCGT070204FR-J10						●	●								0.016	0.250	0.094
		DCGT 21.51 FL-J10	DCGT070204FL-J10						●	●								0.016	0.250	0.094
		DCGT 32.5V FR-J10	DCGT11T300FR-J10						●	●	●						●	0.0012	0.375	0.156
		DCGT 32.5V FL-J10	DCGT11T300FL-J10							●	●						●	0.0012	0.375	0.156
		DCGT 32.50 FR-J10	DCGT11T301FR-J10						●	●	●					●	●	0.004	0.375	0.156
		DCGT 32.50 FL-J10	DCGT11T301FL-J10							●	●					●	●	0.004	0.375	0.156
		DCGT 32.50.5 FR-J10	DCGT11T302FR-J10						●	●	●					●	●	0.008	0.375	0.156
		DCGT 32.50.5 FL-J10	DCGT11T302FL-J10						●	●	●					●	●	0.008	0.375	0.156
	J10	DCGT 21.50.5 R-J10	DCGT070202R-J10												●			0.008	0.250	0.094
		DCGT 32.50.5 R-J10	DCGT11T302R-J10												●			0.008	0.375	0.156
	W10	DCGT 21.5V R-W10	DCGT070200R-W10														●	0.0012	0.250	0.094
		DCGT 21.5V L-W10	DCGT070200L-W10														●	0.0012	0.250	0.094
		DCGT 21.50.5 R-W10	DCGT070202R-W10													●	●	0.008	0.250	0.094
		DCGT 21.50.5 L-W10	DCGT070202L-W10											●		●		0.008	0.250	0.094
		DCGT 21.51 R-W10	DCGT070204R-W10										●			●	●	0.016	0.250	0.094
		DCGT 21.51 L-W10	DCGT070204L-W10										●	●		●	●	0.016	0.250	0.094
	W15	DCGT 32.50.5 R-W15	DCGT11T302R-W15													●	●	0.008	0.375	0.156
		DCGT 32.50.5 L-W15	DCGT11T302L-W15											●		●		0.008	0.375	0.156
		DCGT 32.51 R-W15	DCGT11T304R-W15													●		0.016	0.375	0.156
		DCGT 32.51 L-W15	DCGT11T304L-W15										●	●		●	●	0.016	0.375	0.156
		DCGT 32.52 R-W15	DCGT11T308R-W15													●	●	0.031	0.375	0.156
		DCGT 32.52 L-W15	DCGT11T308L-W15													●	●	0.031	0.375	0.156

● : Line up

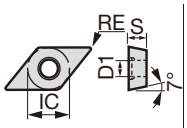
Reference pages: External toolholder → 3-45 -, Internal toolholder → 4-18 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

DC

Rhombic, 55° with hole Positive 7°

P	Steel	●ⓒ	●ⓒ
M	Stainless	●ⓒ	●ⓒ
N	Non-ferrous		
S	Superalloy		●ⓒ
H	Hard material		



Application	Chipbreaker	Designation Inch	Designation Metric	Coated SH725	Coated SH730	Dimension (in) RE	IC	S
Finishing (sharp edge)	JPP	DCET 21.5X MFR-JPP	DCET0702008MFR-JPP	●	●	<0.0031*	0.250	0.094
		DCET 21.50 MFR-JPP	DCET070201MFR-JPP	●	●	<0.004*	0.250	0.094
		DCET21.50.2 MFL-JPP	DCET070201MFL-JPP	●	●	<0.004*	0.250	0.094
		DCET21.50.5 MFR-JPP	DCET070202MFR-JPP	●	●	<0.008*	0.250	0.094
		DCET21.50.5 MFL-JPP	DCET070202MFL-JPP	●	●	<0.008*	0.250	0.094
		DCET 32.5X MFR-JPP	DCET11T3008MFR-JPP	●	●	<0.0031*	0.375	0.156
		DCET 32.50 MFR-JPP	DCET11T301MFR-JPP	●	●	<0.004*	0.375	0.156
		DCET 32.50 MFL-JPP	DCET11T301MFL-JPP	●	●	<0.004*	0.375	0.156
		DCET32.50.4 MFR-JPP	DCET11T3018MFR-JPP	●	●	<0.007*	0.375	0.156
		DCET32.50.4 MFL-JPP	DCET11T3018MFL-JPP	●		<0.007*	0.375	0.156
		DCET32.50.5 MFR-JPP	DCET11T302MFR-JPP	●	●	<0.008*	0.375	0.156
		DCET32.50.5 MFL-JPP	DCET11T302MFL-JPP	●	●	<0.008*	0.375	0.156
	JRP	DCET 21.5X MFR-JRP	DCET0702008MFR-JRP	●	●	<0.0031*	0.250	0.094
		DCET 21.50 MFR-JRP	DCET070201MFR-JRP	●	●	<0.004*	0.250	0.094
		DCET 21.50 MFL-JRP	DCET070201MFL-JRP	●		<0.004*	0.250	0.094
		DCET21.50.4 MFR-JRP	DCET070218MFR-JRP		●	<0.007*	0.250	0.094
		DCET21.50.4 MFL-JRP	DCET070218MFL-JRP	●	●	<0.007*	0.250	0.094
		DCET21.50.5 MFR-JRP	DCET070202MFR-JRP	●	●	<0.008*	0.250	0.094
		DCET21.50.5 MFL-JRP	DCET070202MFL-JRP	●	●	<0.008*	0.250	0.094
		DCET 32.5X MFR-JRP	DCET11T3008MFR-JRP	●	●	<0.0031*	0.375	0.156
		DCET 32.50 MFR-JRP	DCET11T301MFR-JRP	●	●	<0.004*	0.375	0.156
		DCET32.50.4 MFR-JRP	DCET11T3018MFR-JRP		●	<0.007*	0.375	0.156
		DCET32.50.4 MFL-JRP	DCET11T3018MFL-JRP	●		<0.007*	0.375	0.156
		DCET32.50.5 MFR-JRP	DCET11T302MFR-JRP	●	●	<0.008*	0.375	0.156
		DCET32.50.5 MFL-JRP	DCET11T302MFL-JRP	●	●	<0.008*	0.375	0.156
	JSP	DCET 21.5X MFN-JSP	DCET0702008MFN-JSP	●	●	<0.0031*	0.250	0.094
		DCET 21.50 MFN-JSP	DCET070201MFN-JSP	●	●	<0.004*	0.250	0.094
		DCET21.50.5 MFN-JSP	DCET070202MFN-JSP	●	●	<0.008*	0.250	0.094
		DCET 32.5X MFN-JSP	DCET11T3008MFN-JSP	●	●	<0.0031*	0.375	0.156
		DCET 32.50 MFN-JSP	DCET11T301MFN-JSP	●	●	<0.004*	0.375	0.156
		DCET32.50.4 MFN-JSP	DCET11T3018MFN-JSP	●	●	<0.007*	0.375	0.156
		DCET32.50.5 MFN-JSP	DCET11T302MFN-JSP	●	●	<0.008*	0.375	0.156

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

Reference pages: External toolholder → 3-45 -, Internal toolholder → 4-18 -

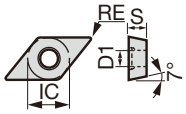
Insert POSITIVE TYPE

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

DC

Rhombic, 55°
with hole
Positive 7°

		T9215	T9225	T6215	AH8005	AH8015	AH6225	AH6235	AH905	AH725	AH120	GH730	GT9530	AT9530	NS9530	KS05F	TH10
P	Steel	●ɔ	ɔ✣	ɔ			ɔ✣	✣		ɔ	●ɔ	ɔ	●ɔ	●ɔ			●
M	Stainless	●ɔ		●	●	ɔ	●ɔ	✣		ɔ	●ɔ	ɔ					●
N	Non-ferrous															●	●
S	Superalloy				●	ɔ			ɔ	●	●ɔ					●	
H	Hard material																



Application	Chipbreaker	Designation Inch	Designation Metric	Coated										Coated cermet		Cermet	Un-coated		Dimension (in)		
				T9215	T9225	T6215	AH8005	AH8015	AH6225	AH6235	AH905	AH725	AH120	GH730	GT9530	AT9530	NS9530	KS05F	TH10	RE	IC	S
Finishing to medium cutting	**PSS**	**DCMT 21.51 PSS**	**DCMT070204-PSS**	●	●	●			●	●		●			●		●			0.016	0.250	0.094
		DCMT 21.52 PSS	DCMT070208-PSS	●	●	●			●	●		●			●		●			0.031	0.250	0.094
		DCMT 32.51 PSS	**DCMT11T304-PSS**	●	●	●	●	●	●	●	●	●			●		●			0.016	0.375	0.156
		DCMT 32.52 PSS	DCMT11T308-PSS	●	●	●	●	●	●	●	●	●			●		●			0.031	0.375	0.156
		DCMT 32.53 PSS	DCMT11T312-PSS	●	●	●	●	●	●	●	●	●								0.047	0.375	0.156
	PS	**DCMT 21.50.5 PS**	**DCMT070202-PS**	●	●	●	●	●	●	●		●	●	●	●	●	●			0.008	0.250	0.094
		DCMT 21.51 PS	DCMT070204-PS	●	●	●	●	●	●	●		●	●	●	●	●	●			0.016	0.250	0.094
		DCMT 21.52 PS	DCMT070208-PS	●	●	●	●	●	●			●		●	●	●	●			0.031	0.250	0.094
		DCMT 32.50.5 PS	**DCMT11T302-PS**	●	●	●	●	●	●	●		●	●	●	●	●	●			0.008	0.375	0.156
		DCMT 32.51 PS	DCMT11T304-PS	●	●	●	●	●	●	●	●	●	●	●	●	●	●			0.016	0.375	0.156
		DCMT 32.52 PS	DCMT11T308-PS	●	●	●	●	●	●	●	●	●	●	●	●	●	●			0.031	0.375	0.156
		DCMT 32.53 PS	DCMT11T312-PS	●	●	●	●	●	●	●	●	●								0.047	0.375	0.156
	TM	**DCMT 21.50.5 TM**	**DCMT070202-TM**	●	●	●		●	●								●			0.008	0.250	0.094
		DCMT 21.51 TM	DCMT070204-TM	●	●	●		●	●								●			0.016	0.250	0.094
		DCMT 21.52 TM	DCMT070208-TM	●	●	●		●	●								●			0.031	0.250	0.094
		DCMT 32.50.5 TM	**DCMT11T302-TM**	●	●	●		●	●								●			0.008	0.375	0.156
		DCMT 32.51 TM	DCMT11T304-TM	●	●	●		●	●								●			0.016	0.375	0.156
		DCMT 32.52 TM	DCMT11T308-TM	●	●	●		●	●								●			0.031	0.375	0.156
	CM	**DCMT 21.51 CM**	**DCMT070204-CM**																	0.016	0.250	0.094
		DCMT 21.52 CM	DCMT070208-CM																	0.031	0.250	0.094
		DCMT 32.51 CM	**DCMT11T304-CM**																	0.016	0.375	0.156
		DCMT 32.52 CM	DCMT11T308-CM																	0.031	0.375	0.156
		DCMT 32.53 CM	DCMT11T312-CM																	0.047	0.375	0.156
Finishing to medium cutting for non-ferrous alloys	**AL**	**DCGT 21.50.5 AL**	**DCGT070202-AL**															●		0.008	0.250	0.094
		DCGT 21.51 AL	DCGT070204-AL															●		0.016	0.250	0.094
		DCGT 32.50.5 AL	**DCGT11T302-AL**															●		0.008	0.375	0.156
		DCGT 32.51 AL	DCGT11T304-AL															●		0.016	0.375	0.156
		DCGT 32.52 AL	DCGT11T308-AL															●		0.031	0.375	0.156
Finishing to medium cutting	**All-round**	**DCGT 21.50.5**	**DCGT070202**														●			0.008	0.250	0.094
		DCGT 21.51	DCGT070204														●			0.016	0.250	0.094
		DCGT 32.50.5	**DCGT11T302**														●			0.008	0.375	0.156
		DCGT 32.51	DCGT11T304														●			0.016	0.375	0.156
		DCGT 32.52	DCGT11T308														●			0.031	0.375	0.156
	Angular	**DCGT 21.50.5 R**	**DCGT070202R**																●	0.008	0.250	0.094
		DCGT 21.50.5 L	DCGT070202L																●	0.008	0.250	0.094
		DCGT 21.51 R	DCGT070204R																●	0.016	0.250	0.094
		DCGT 21.51 L	DCGT070204L																●	0.016	0.250	0.094
		DCGT 32.50.5 R	**DCGT11T302R**																●	0.008	0.375	0.156
		DCGT 32.50.5 L	DCGT11T302L																●	0.008	0.375	0.156
		DCGT 32.51 R	DCGT11T304R																●	0.016	0.375	0.156
		DCGT 32.51 L	DCGT11T304L																●	0.016	0.375	0.156

● : Line up

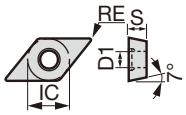
Reference pages: External toolholder → 3-45 -, Internal toolholder → 4-18 -

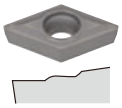
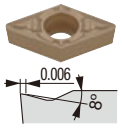
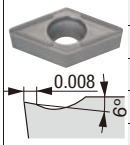
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

DC

Rhombic, 55°
with hole
Positive 7°

P	Steel	●ɔ	ɔ✣	ɔ	ɔ✣	✣	ɔ	●	●ɔ	ɔ	●	●ɔ			●ɔ			●			
M	Stainless	●ɔ		●	●ɔ	✣	ɔ	●	●ɔ	ɔ	●							●			
N	Non-ferrous																	●			
S	Superalloy						●	●	●ɔ		●										
H	Hard material																				



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	T9225	T6215	AH6225	AH6235	AH725	AH110	AH120	GH730	GH110	Coated cermet GT9530	Cermet NS9530	Uncoated TH10	Dimension (in) RE	IC	S
Finishing to medium cutting	**23**	**DCMT 21.51-23**	**DCMT070204-23**												●		0.016	0.250	0.094
		**DCMT 32.51-23**	**DCMT11T304-23**												●		0.016	0.375	0.156
		DCMT 32.52-23	DCMT11T308-23												●		0.031	0.375	0.156
Medium cutting	**PM**	**DCMT 21.51 PM**	**DCMT070204-PM**	●	●	●	●	●	●	●	●	●		●	●		0.016	0.250	0.094
		DCMT 21.52 PM	DCMT070208-PM	●	●	●	●	●	●	●	●	●		●	●		0.031	0.250	0.094
		DCMT 32.51 PM	**DCMT11T304-PM**	●	●	●	●	●	●	●	●	●		●	●		0.016	0.375	0.156
		DCMT 32.52 PM	DCMT11T308-PM	●	●	●	●	●	●	●	●	●		●	●		0.031	0.375	0.156
		DCMT 32.53 PM	DCMT11T312-PM		●	●	●	●	●								0.047	0.375	0.156
	24	**DCMT 21.50.5-24**	**DCMT070202-24**												●		0.008	0.250	0.094
		DCMT 21.51-24	DCMT070204-24	●	●						●				●		0.016	0.250	0.094
		DCMT 21.52-24	DCMT070208-24		●						●				●		0.031	0.250	0.094
		DCMT 32.50.5-24	**DCMT11T302-24**		●						●				●		0.008	0.375	0.156
		DCMT 32.51-24	DCMT11T304-24	●	●						●				●		0.016	0.375	0.156
		DCMT 32.52-24	DCMT11T308-24	●	●		●				●				●		0.031	0.375	0.156

● : Line up

Reference pages: External toolholder → 3-45 -, Internal toolholder → 4-18 -

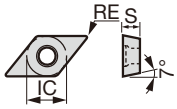
Insert POSITIVE TYPE

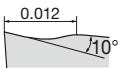
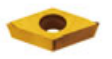
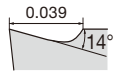
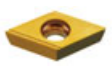
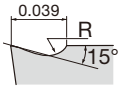
● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

DC

Rhombic, 55° with hole Positive 7°

P	Steel				◐	◐	●																		
M	Stainless	◐	◐	●		●		●																	
N	Non-ferrous					●		●																	
S	Superalloy		◐	●																					
H	Hard material		◐		◐																				



Application	Chipbreaker	Designation Inch	Designation Metric	Coated ST4	DM4	DT4	QM3	TM4	VM1	ZM3	Dimension (in) RE	IC	S
Finishing	**AMX**	**DCGT21.504MAMX**	**DCGT070201MAMX**	●	●	●		●			0.003	0.250	0.094
		DCGT21.508MAMX	DCGT070202MAMX	●	●	●		●			0.007	0.250	0.094
		DCGT21.51MAMX	DCGT070204MAMX		●	●		●			0.015	0.250	0.094
		DCGT32.504MAMX	**DCGT11T301MAMX**	●	●	●		●			0.003	0.375	0.156
		DCGT32.508MAMX	DCGT11T302MAMX	●	●	●		●			0.007	0.375	0.156
		DCGT32.51MAMX	DCGT11T304MAMX	●	●	●		●			0.015	0.375	0.156
	AZ7	**DCGT21.501AZ7**	**DCGT070200AZ7**				●				0.001	0.250	0.094
		DCGT21.504MAZ7	DCGT070201MAZ7				●				0.003	0.250	0.094
		DCGT21.508MAZ7	DCGT070202MAZ7				●				0.007	0.250	0.094
		DCGT32.501 AZ7	**DCGT11T300AZ7**			●	●	●		●	0.001	0.375	0.156
		DCGT32.504MAZ7	DCGT11T301MAZ7			●	●	●		●	0.003	0.375	0.156
		DCGT32.508MAZ7	DCGT11T302MAZ7			●	●	●		●	0.007	0.375	0.156
		DCGT32.51MAZ7	DCGT11T304MAZ7			●	●	●		●	0.015	0.375	0.156
		DCGT32.52AZ7	DCGT11T308AZ7			●	●			●	0.031	0.375	0.156
	KHG	**DCET21.502RKHG**	**DCET0702005RKHG**						●		0.002	0.250	0.094
		DCET21.502LKHG	DCET0702005LKHG						●		0.002	0.250	0.094
		DCET21.503RKHG	DCET0702008RKHG						●		0.003	0.250	0.094
		DCET21.503LKHG	DCET0702008LKHG						●		0.003	0.250	0.094
		DCET21.507RKHG	DCET0702018RKHG						●		0.007	0.250	0.094
		DCET21.507LKHG	DCET0702018LKHG						●		0.007	0.250	0.094
		DCET21.508RKHG	DCET070202RKHG						●		0.008	0.250	0.094
		DCET21.508LKHG	DCET070202LKHG						●		0.008	0.250	0.094
		DCET32.502RKHG	**DCET11T3005RKHG**					●	●		0.002	0.375	0.156
		DCET32.502LKHG	DCET11T3005LKHG						●		0.002	0.375	0.156
		DCET32.503RKHG	DCET11T3008RKHG					●	●		0.003	0.375	0.156
		DCET32.503LKHG	DCET11T3008LKHG						●		0.003	0.375	0.156
		DCET32.507RKHG	DCET11T3018RKHG					●	●		0.007	0.375	0.156
		DCET32.507LKHG	DCET11T3018LKHG						●		0.007	0.375	0.156
		DCET32.508RKHG	DCET11T302RKHG					●	●		0.008	0.375	0.156
		DCET32.508RKHG	DCET11T302LKHG						●		0.008	0.375	0.156
	AT	**DCET32.504MRAT**	**DCET11T301MRAT**					●			0.003	0.375	0.156
		DCET32.508MRAT	DCET11T302MRAT					●			0.007	0.375	0.156
													

● : Line up

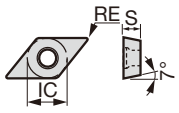
Reference pages: External toolholder → 3-45 -, Internal toolholder → 4-18 -

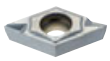
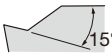
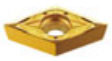
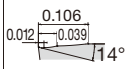
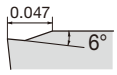
● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

DC

Rhombic, 55° with hole Positive 7°

P	Steel	●ⓒ ●ⓒ ●
M	Stainless	●ⓒ ●ⓒ ● ● ●
N	Non-ferrous	● ● ●ⓒ
S	Superalloy	●ⓒ ●ⓒ ●
H	Hard material	●ⓒ ●ⓒ



Application	Chipbreaker	Designation Inch	Designation Metric	Coated 650	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	Diamond coated UC1	Dimension (in) RE	IC	S
Light cutting	**TMV**	**DCGT32.504MRTMV**	**DCGT11T301MRTMV**	●	●	●			●				0.003	0.375	0.156
		DCGT32.508MRTMV	DCGT11T302MRTMV	●	●	●			●				0.007	0.375	0.156
		DCGT32.51MRTMV	DCGT11T304MRTMV	●	●	●			●				0.015	0.375	0.156
		DCGT32.504MRTMV-WP	**DCGT11T301MRTMV-WP**	●	●	●			●				0.003	0.375	0.156
		DCGT32.508MRTMV-WP	DCGT11T302MRTMV-WP	●	●	●			●				0.007	0.375	0.156
	YL	**DCGT21.504MYL**	**DCGT070201MYL**			●		●					0.003	0.250	0.094
		DCGT21.508MYL	DCGT070202MYL			●		●					0.007	0.250	0.094
		DCGT32.501YL	**DCGT11T300YL**				●		●				0.001	0.375	0.156
		DCGT32.504MYL	DCGT11T301MYL	●	●	●	●	●	●				0.003	0.375	0.156
		DCGT32.508MYL	DCGT11T302MYL	●	●	●	●	●	●				0.007	0.375	0.156
		DCGT32.51MYL	DCGT11T304MYL	●	●	●	●	●	●				0.015	0.375	0.156
		DCGT32.52MYL	DCGT11T308MYL		●	●	●	●	●				0.031	0.375	0.156
	U U1	**DCGT21.501RU**	**DCGT070200RU**							●	●		0.001	0.250	0.094
		DCGT21.504RU	DCGT070201RU							●	●		0.004	0.250	0.094
		DCGT21.508RU	DCGT070202RU							●	●		0.008	0.250	0.094
		DCGT21.508LU	DCGT070202LU								●		0.008	0.250	0.094
		DCGT32.501RU1	**DCGT11T300RU1**				●		●	●	●		0.001	0.375	0.156
		DCGT32.501LU1	DCGT11T300LU1								●		0.001	0.375	0.156
		DCGT32.504RU1	DCGT11T301RU1				●		●	●	●		0.004	0.375	0.156
		DCGT32.504LU1	DCGT11T301LU1								●		0.004	0.375	0.156
		DCGT32.508RU1	DCGT11T302RU1				●		●	●	●		0.008	0.375	0.156
		DCGT32.508LU1	DCGT11T302LU1								●		0.008	0.375	0.156
		DCGT32.51RU1	DCGT11T304RU1				●		●	●	●		0.016	0.375	0.156
		DCGT32.51LU1	DCGT11T304LU1								●		0.016	0.375	0.156
	AM3	**DCGT21.504FNAM3**	**DCGT070201FNAM3**							●	●		0.004	0.250	0.094
		DCGT21.508FNAM3	DCGT070202FNAM3							●	●		0.008	0.250	0.094
		DCGT21.51FNAM3	DCGT070204FNAM3							●	●		0.016	0.250	0.094
		DCGT21.501FNAM3	DCGT070200FNAM3				●		●	●	●		0.001	0.250	0.094
		DCGT21.504MFNAM3	DCGT070201MFNAM3		●		●	●	●				0.003	0.250	0.094
		DCGT21.508MFNAM3	DCGT070202MFNAM3		●		●	●	●				0.007	0.250	0.094
		DCGT21.51MFNAM3	DCGT070204MFNAM3		●		●	●	●				0.015	0.250	0.094
		DCGT32.501FNAM3	**DCGT11T300FNAM3**				●		●	●	●		0.001	0.375	0.156
		DCGT32.504MFNAM3	DCGT11T301MFNAM3	●	●		●	●	●	●	●		0.003	0.375	0.156
		DCGT32.508FNAM3	DCGT11T302FNAM3					●		●	●		0.008	0.375	0.156
		DCGT32.508MFNAM3	DCGT11T302MFNAM3	●	●		●	●	●	●	●		0.007	0.375	0.156
		DCGT32.51FNAM3	DCGT11T304FNAM3					●		●	●		0.016	0.375	0.156
		DCGT32.51MFNAM3	DCGT11T304MFNAM3	●	●		●	●	●	●	●		0.015	0.375	0.156
		DCMT21.508FNAM3	**DCMT070202FNAM3**			●							0.008	0.250	0.094
		DCMT21.51FNAM3	DCMT070204FNAM3			●							0.016	0.250	0.094
		DCMT21.504FNAM3	DCMT11T301FNAM3									●	0.004	0.375	0.156
		DCMT21.508FNAM3	DCMT11T302FNAM3			●						●	0.008	0.375	0.156
		DCMT21.51FNAM3	DCMT11T304FNAM3			●						●	0.016	0.375	0.156
		DCMT21.52FNAM3	DCMT11T308FNAM3			●							0.031	0.375	0.156

● : Line up

Reference pages: External toolholder → 3-45 -, Internal toolholder → 4-18 -

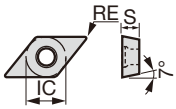
Insert POSITIVE TYPE

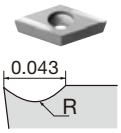
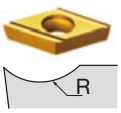
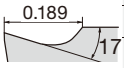
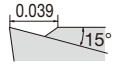
● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

DC

Rhombic, 55°
with hole
Positive 7°

P	Steel					●ⓒ	●ⓒ	●																	
M	Stainless		●ⓒ	●ⓒ	●		●		●																
N	Non-ferrous						●		●																
S	Superalloy	●ⓒ		●ⓒ	●																				
H	Hard material			●ⓒ		●ⓒ																			



Application	Chipbreaker	Designation Inch	Designation Metric	Coated 650	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	Dimension (in) RE	IC	S
Light cutting	UHG	DCET21.503UHG	DCET0702008RUHG							●		0.003	0.250	0.094
		DCET32.503UHG	DCET11T3008RUHG							●		0.003	0.375	0.156
														
	U-WP U1-WP	DCGT21.502RU-WP	DCGT0702005RU-WP					●		●	●	0.002	0.250	0.094
		DCGT21.5**06RU-WP**	DCGT0702**015RU-WP**					●			●	0.006	0.250	0.094
		DCGT32.502RU1-WP	DCGT11T3005RU1-WP					●		●	●	0.002	0.375	0.156
		DCGT32.5**06RU1-WP**	DCGT11T3**015RU1-WP**					●			●	0.006	0.375	0.156
	CL	DCGT21.504MCL	DCGT070201MCL		●	●	●	●	●			0.003	0.250	0.094
		DCGT21.5**08MCL**	DCGT0702**02MCL**		●	●	●	●	●			0.007	0.250	0.094
		DCGT21.5**1MCL**	DCGT0702**04MCL**		●	●	●	●	●			0.015	0.250	0.094
		DCGT32.504MCL	DCGT11T301MCL	●	●	●	●	●	●			0.003	0.375	0.156
		DCGT32.5**08MCL**	DCGT11T3**02MCL**	●	●	●	●	●	●			0.007	0.375	0.156
		DCGT32.5**1MCL**	DCGT11T3**04MCL**	●	●	●	●	●	●			0.015	0.375	0.156
	S	DCGT21.501RS	DCGT070200RS				●			●	●	0.001	0.250	0.094
		DCGT21.5**01LS**	DCGT0702**00LS**							●	●	0.001	0.250	0.094
		DCGT21.5**04MRS**	DCGT0702**01MRS**				●	●				0.003	0.250	0.094
		DCGT21.5**04RS**	DCGT0702**01RS**							●	●	0.004	0.250	0.094
		DCGT21.5**04LS**	DCGT0702**01LS**							●	●	0.004	0.250	0.094
		DCGT21.5**08MRS**	DCGT0702**02MRS**				●	●				0.007	0.250	0.094
		DCGT21.5**08RS**	DCGT0702**02RS**							●	●	0.008	0.250	0.094
		DCGT21.5**08LS**	DCGT0702**02LS**							●	●	0.008	0.250	0.094
		DCGT21.5**1RS**	DCGT0702**04RS**							●		0.016	0.250	0.094
		DCGT32.501RS	DCGT11T300RS				●		●	●	●	0.001	0.375	0.156
		DCGT32.5**01LS**	DCGT11T3**00LS**							●		0.001	0.375	0.156
		DCGT32.5**04MRS**	DCGT11T3**01MRS**				●	●	●			0.003	0.375	0.156
		DCGT32.5**04RS**	DCGT11T3**01RS**					●		●	●	0.004	0.375	0.156
		DCGT32.5**04LS**	DCGT11T3**01LS**							●		0.004	0.375	0.156
		DCGT32.5**08MRS**	DCGT11T3**02MRS**				●	●	●			0.007	0.375	0.156
		DCGT32.5**08RS**	DCGT11T3**02RS**					●		●	●	0.008	0.375	0.156
		DCGT32.5**08LS**	DCGT11T3**02LS**							●		0.008	0.375	0.156
		DCGT32.5**1MRS**	DCGT11T3**04MRS**				●	●	●			0.015	0.375	0.156
		DCGT32.5**1RS**	DCGT11T3**04RS**					●				0.016	0.375	0.156

● : Line up

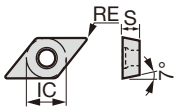
Reference pages: External toolholder → 3-45 -, Internal toolholder → 4-18 -

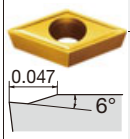
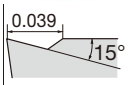
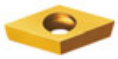
● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

DC

Rhombic, 55° with hole Positive 7°

P	Steel					●ⓒ	●																
M	Stainless		●ⓒ	●ⓒ	●			●															
N	Non-ferrous							●		●													
S	Superalloy	●ⓒ		●ⓒ	●																		
H	Hard material			●ⓒ		●ⓒ																	

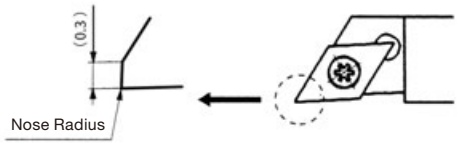


Application	Chipbreaker	Designation Inch	Designation Metric	Coated 650	ST4	DM4	DT4	QM3	VM1	ZM3	Uncoated KM1	Dimension (in) RE	IC	S
Light cutting	**AM3-WP**	**DCGT32.502AM3-WP**	**DCGT11T3005AM3-WP**	●	●	●	●	●				0.002	0.375	0.156
		DCGT32.5**06AM3-WP**	DCGT11T3**015AM3-WP**	●	●	●	●	●				0.006	0.375	0.156
	S-WP	**DCGT21.502RS-WP**	**DCGT0702005RS-WP**					●	●	●		0.002	0.250	0.094
		DCGT21.5**02LS-WP**	DCGT0702**005LS-WP**							●		0.002	0.250	0.094
		DCGT21.5**06RS-WP**	DCGT0702**015RS-WP**					●		●		0.006	0.250	0.094
		DCGT21.5**06LS-WP**	DCGT0702**015LS-WP**							●		0.006	0.250	0.094
		**DCGT32.502RS-WP**	**DCGT11T3005RS-WP**					●	●	●		0.002	0.375	0.156
		DCGT32.5**06RS-WP**	DCGT11T3**015RS-WP**					●		●		0.006	0.375	0.156
Non-ferrous	**V P H**	**DCGW 21.500V**	**DCGW07020V** Ⓜ						●			0	0.250	0.094
		DCGW21.5**01FN**	DCGW0702**00FN**							●		0.001	0.250	0.094
		DCGW21.5**01H**	DCGW0702**00H** Ⓜ								●	0.001	0.250	0.094
		DCGW21.5**04FN**	DCGW0702**01FN**							●		0.004	0.250	0.094
		DCGW21.5**04H**	DCGW0702**01H** Ⓜ								●	0.004	0.250	0.094
		DCGW21.5**08H**	DCGW0702**02H** Ⓜ								●	0.008	0.250	0.094
		DCGW32.500V	**DCGW11T30V** Ⓜ						●			0	0.375	0.156
		DCGW32.5**01FN**	DCGW11T3**00FN**							●		0.001	0.375	0.156
		DCGW32.5**01H**	DCGW11T3**00H** Ⓜ								●	0.001	0.375	0.156
		DCGW32.5**04FN**	DCGW11T3**01FN**							●		0.004	0.375	0.156
		DCGW32.5**04H**	DCGW11T3**01H** Ⓜ								●	0.004	0.375	0.156
		DCGW32.5**08H**	DCGW11T3**02H** Ⓜ								●	0.008	0.375	0.156
	H	**DCGW 21.502RH-WP**	**DCGW0702005RH-WP** Ⓜ								●	0.002	0.250	0.094
		DCGW 32.502RH-WP	**DCGW11T3005RH-WP** Ⓜ								●	0.002	0.375	0.156

● : Line up

Features of DC.T-WP insert

NTK WP style inserts have a wiper facet design.
The insert has a 0.3mm flat on the cutting edge when the insert is set into the toolholder.
The flat on the cutting edge ensures a superior surface when feed rates are increased.
WP style inserts can be used in toolholders: SDJC, CH-SDUL and DS-SDUL.



Reference pages: External toolholder → 3-45 -, Internal toolholder → 4-18 -

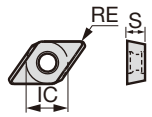
Insert POSITIVE TYPE / DOUBLE SIDED

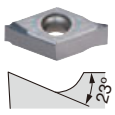
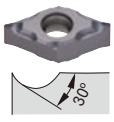
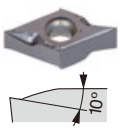
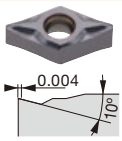
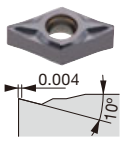
● : Continuous cutting
ɕ : Light interrupted cutting
✣ : Heavy interrupted cutting

DX

Rhombic, 55° with hole

P	Steel		ɕ	●ɕ					●ɕ					●ɕ									
M	Stainless	ɕ	ɕ	●ɕ																			
N	Non-ferrous																●						
S	Superalloy	ɕ	●														●						
H	Hard material																						



Application	Chipbreaker	Designation Inch	Designation Metric	Coated AH8015	Coated AH725	Coated SH725	Coated cermet GT9530	Cermet NS9530	Uncoated KS05F	Dimension (in) RE	IC	S
Finishing (sharp edge)	JRP	DXGU 220MFRE JRP	DXGU070301MFRE-JRP**			●				<0.004*	0.250	0.125
		DXGU 220MFLE JRP	DXGU070301MFLE-JRP**			●				<0.004*	0.250	0.125
		DXGU 220.5MFRE JRP	DXGU070302MFRE-JRP**			●				<0.008*	0.250	0.125
		DXGU 220.5MFLE JRP	DXGU070302MFLE-JRP**			●				<0.008*	0.250	0.125
	JSS	DXGU 220MFR JSS	DXGU070301MFR-JSS			●				<0.004*	0.250	0.125
		DXGU 220MFL JSS	DXGU070301MFL-JSS			●				<0.004*	0.250	0.125
		DXGU 220.5MFR JSS	DXGU070302MFR-JSS			●				<0.008*	0.250	0.125
		DXGU 220.5MFL JSS	DXGU070302MFL-JSS			●				<0.008*	0.250	0.125
Finishing	JSS	DXGU 220MR JSS	DXGU070301MR-JSS		●					<0.004*	0.250	0.125
		DXGU 220ML JSS	DXGU070301ML-JSS		●					<0.004*	0.250	0.125
		DXGU 220.5MR JSS	DXGU070302MR-JSS		●					<0.008*	0.250	0.125
		DXGU 220.5ML JSS	DXGU070302ML-JSS		●					<0.008*	0.250	0.125
	SS	DXGU 220.5R SS	DXGU070302R-SS	●	●		●	●	●	0.008	0.250	0.125
		DXGU 220.5L SS	DXGU070302L-SS	●	●		●	●	●	0.008	0.250	0.125
		DXGU 221R SS	DXGU070304R-SS	●	●		●	●	●	0.016	0.250	0.125
		DXGU 221L SS	DXGU070304L-SS	●	●		●	●	●	0.016	0.250	0.125
Light cutting (sharp edge)	JS	DXGU 220MFR JS	DXGU070301MFR-JS(1)			●				<0.004*	0.250	0.125
		DXGU 220MFL JS	DXGU070301MFL-JS(1)			●				<0.004*	0.250	0.125
		DXGU 220.5MFR JS	DXGU070302MFR-JS(1)			●				<0.008*	0.250	0.125
		DXGU 220.5MFL JS	DXGU070302MFL-JS(1)			●				<0.008*	0.250	0.125
		DXGU 221MFR JS	DXGU070304MFR-JS(1)			●				<0.016*	0.250	0.125
		DXGU 221MFL JS	DXGU070304MFL-JS(1)			●				<0.016*	0.250	0.125
	JTS	DXGU 220MFR JTS	DXGU070301MFR-JTS			●				<0.004*	0.250	0.125
		DXGU 220MFL JTS	DXGU070301MFL-JTS			●				<0.004*	0.250	0.125
		DXGU 220.5MFR JTS	DXGU070302MFR-JTS			●				<0.008*	0.250	0.125
		DXGU 220.5MFL JTS	DXGU070302MFL-JTS			●				<0.008*	0.250	0.125
Light cutting	JTS	DXGU 220MR JTS	DXGU070301MR-JTS		●					<0.004*	0.250	0.125
		DXGU 220ML JTS	DXGU070301ML-JTS		●					<0.004*	0.250	0.125
		DXGU 220.5MR JTS	DXGU070302MR-JTS		●					<0.008*	0.250	0.125
		DXGU 220.5ML JTS	DXGU070302ML-JTS		●					<0.008*	0.250	0.125

* Corner radius (RE) with a sign of inequality (<) means minus tolerance.
** For external turning applications
(1) Due to chipbreaker profile, max ap for face or ID turning is 1 mm

● : Line up

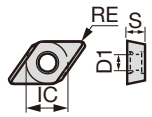
Reference pages: External toolholder → 3-74 -, Internal toolholder → 4-36 -

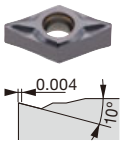
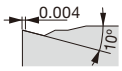
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

DX

Rhombic, 55° with hole

P	Steel	●ɔ	ɔ✣		ɔ	●ɔ			●ɔ					●ɔ									
M	Stainless	●ɔ		ɔ	ɔ	●ɔ																	
N	Non-ferrous																●						
S	Superalloy			ɔ	●												●						
H	Hard material																						



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated AH8015	Coated AH725	Coated SH725	Coated cermet GT9530	Cermet NS9530	Uncoated KS05F	Dimension (in) RE	IC	S
Finishing to medium cutting	TS	DXGU 220.5R TS	DXGU070302R-TS			●	●		●	●	●	0.008	0.250	0.125
		DXGU 220.5L TS	DXGU070302L-TS			●	●		●	●	●	0.008	0.250	0.125
		DXGU 221R TS	DXGU070304R-TS			●	●		●	●	●	0.016	0.250	0.125
		DXGU 221L TS	DXGU070304L-TS			●	●		●	●	●	0.016	0.250	0.125
		DXGU 222R TS	DXGU070308R-TS			●	●		●	●	●	0.031	0.250	0.125
		DXGU 222L TS	DXGU070308L-TS			●	●		●	●	●	0.031	0.250	0.125
	TS	DXMU 220.5R TS	DXMU070302R-TS	●	●	●	●					0.008	0.250	0.125
		DXMU 220.5L TS	DXMU070302L-TS	●	●	●	●					0.008	0.250	0.125
		DXMU 221R TS	DXMU070304R-TS	●	●	●	●					0.016	0.250	0.125
		DXMU 221L TS	DXMU070304L-TS	●	●	●	●					0.016	0.250	0.125
		DXMU 222R TS	DXMU070308R-TS	●	●	●	●					0.031	0.250	0.125
		DXMU 222L TS	DXMU070308L-TS	●	●	●	●					0.031	0.250	0.125

* Corner radius (RE) with a sign of inequality (<) means minus tolerance.
(1) Due to chipbreaker profile, max ap for face or ID turning is 0.040".

● : Line up

Reference pages: External toolholder → 3-74 -, Internal toolholder → 4-36 -

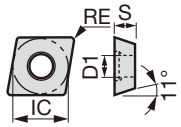
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

EP

Rhombic, 75° with hole Positive 11°

P	Steel	◐ ◐ ◐ ◐
M	Stainless	◐ ◐ ◐ ◐
N	Non-ferrous	
S	Superalloy	◐
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated SH7025	Coated SH725	Coated SH730	Coated J740	Dimension (in) RE	IC	S
Finishing (sharp edge)	JS	EPGT 4.51.80 F-JS	EPGT03X101F-JS	●	●			<0.004	0.141	0.055
		EPGT 4.51.80.5 F-JS	EPGT03X102F-JS	●	●			<0.008	0.141	0.055
		EPGT 4.51.81 F-JS	EPGT03X104F-JS	●	●			<0.016	0.141	0.055
		EPGT 520 F-JS	EPGT040101F-JS	●	●			<0.004	0.156	0.063
		EPGT 520.5 F-JS	EPGT040102F-JS	●	●			<0.008	0.156	0.063
		EPGT 521 F-JS	EPGT040104F-JS	●	●			<0.016	0.156	0.063
Finishing	JS	EPGT 4.51.80 JS	EPGT03X101-JS			●		<0.004	0.141	0.055
		EPGT 4.51.80.5 JS	EPGT03X102-JS			●		<0.008	0.141	0.055
		EPGT 4.51.81 JS	EPGT03X104-JS			●		<0.016	0.141	0.055
		EPGT 520 JS	EPGT040101-JS			●		<0.004	0.156	0.063
		EPGT 520.5 JS	EPGT040102-JS			●		<0.008	0.156	0.063
		EPGT 521 JS	EPGT040104-JS			●		<0.016	0.156	0.063
Finishing (sharp edge)	J08	EPGT 52V FL-J08	EPGT040100FL-J08		●			0.0012	0.156	0.063
		EPGT 520.5 FL-J08	EPGT040102FL-J08	●	●			0.008	0.156	0.063
		EPGT 521 FL-J08	EPGT040104FL-J08	●	●			0.016	0.156	0.063
Finishing	J08	EPGT 52V L-J08	EPGT040100L-J08			●	●	0.0012	0.156	0.063
		EPGT 520.5 L-J08	EPGT040102L-J08			●	●	0.008	0.156	0.063
		EPGT 521 L-J08	EPGT040104L-J08			●	●	0.016	0.156	0.063

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

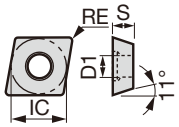
Reference pages: Internal toolholder → 4-11 -

● : Continuous cutting
ɔ : Light interrupted cutting
✠ : Heavy interrupted cutting

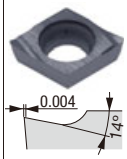
EP

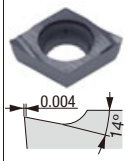
Rhombic, 75°
with hole
Positive 11°

P	Steel	●	ɔ	●	ɔ	●	ɔ					ɔ				ɔ				●	ɔ		
M	Stainless	●	ɔ	●	ɔ	●	ɔ													●	ɔ		
N	Non-ferrous																			●			
S	Superalloy	●				●	ɔ																
H	Hard material																						



Application	Chipbreaker	Designation Inch	Designation Metric	Coated GH110	Coated SH7025	Coated SH725	Coated SH730	Coated cermet GT9530	Cermet NS9530	Uncoated TH10	Uncoated UX30	Dimension (in) RE	IC	S
Finishing (sharp edge)	**W08**	**EPGT 4.51.8V FR-W08**	**EPGT03X100FL-W08**		●	●						0.0012	0.141	0.055
		EPGT 4.51.8**V FL-W08**	EPGT03X1**00FR-W08**			●						0.0012	0.141	0.055
		EPGT 4.51.8**0 FR-W08**	EPGT03X1**01FL-W08**		●	●						0.004	0.141	0.055
		EPGT 4.51.8**0 FL-W08**	EPGT03X1**01FR-W08**			●						0.004	0.141	0.055
		EPGT4.51.8**0.5FR-W08**	EPGT03X1**02FL-W08**		●	●						0.008	0.141	0.055
		EPGT4.51.8**0.5FL-W08**	EPGT03X1**02FR-W08**		●	●						0.008	0.141	0.055
		EPGT 4.51.8**1 FR-W08**	EPGT03X1**04FL-W08**		●	●						0.016	0.141	0.055
		EPGT 4.51.8**1 FL-W08**	EPGT03X1**04FR-W08**		●	●						0.016	0.141	0.055
		EPGT 52V FR-W08	**EPGT040100FL-W08**		●	●						0.0012	0.156	0.063
		EPGT 52**V FL-W08**	EPGT0401**00FR-W08**			●						0.0012	0.156	0.063
		EPGT 52**0 FR-W08**	EPGT0401**01FL-W08**		●	●						0.004	0.156	0.063
		EPGT 52**0 FL-W08**	EPGT0401**01FR-W08**			●						0.004	0.156	0.063
		EPGT 52**0.5 FR-W08**	EPGT0401**02FL-W08**		●	●						0.008	0.156	0.063
		EPGT 52**0.5 FL-W08**	EPGT0401**02FR-W08**		●	●						0.008	0.156	0.063
		EPGT 52**1 FR-W08**	EPGT0401**04FL-W08**		●	●						0.016	0.156	0.063
		EPGT 52**1 FL-W08**	EPGT0401**04FR-W08**		●	●						0.016	0.156	0.063
Finishing	**W08**	**EPGT 4.51.8V R-W08**	**EPGT03X100R-W08**				●			●		0.0012	0.141	0.055
		EPGT 4.51.8**V L-W08**	EPGT03X1**00L-W08**				●			●		0.0012	0.141	0.055
		EPGT 4.51.8**0 R-W08**	EPGT03X1**01R-W08**				●			●		0.004	0.141	0.055
		EPGT 4.51.8**0 L-W08**	EPGT03X1**01L-W08**				●			●		0.004	0.141	0.055
		EPGT 4.51.8**0.5 R-W08**	EPGT03X1**02R-W08**				●			●		0.008	0.141	0.055
		EPGT 4.51.8**0.5 L-W08**	EPGT03X1**02L-W08**				●			●		0.008	0.141	0.055
		EPGT 4.51.8**1 R-W08**	EPGT03X1**04R-W08**				●			●		0.016	0.141	0.055
		EPGT 4.51.8**1 L-W08**	EPGT03X1**04L-W08**				●			●		0.016	0.141	0.055
		EPGT 52V R-W08	**EPGT040100R-W08**				●			●		0.0012	0.156	0.063
		EPGT 52**V L-W08**	EPGT0401**00L-W08**	●			●		●	●		0.0012	0.156	0.063
		EPGT 52**0 R-W08**	EPGT0401**01R-W08**				●			●		0.004	0.156	0.063
		EPGT 52**0 L-W08**	EPGT0401**01L-W08**				●			●		0.004	0.156	0.063
		EPGT 52**0.5 R-W08**	EPGT0401**02R-W08**	●			●		●	●		0.008	0.156	0.063
		EPGT 52**0.5 L-W08**	EPGT0401**02L-W08**	●			●	●	●	●	●	0.008	0.156	0.063
		EPGT 52**1 R-W08**	EPGT0401**04R-W08**	●			●		●	●		0.016	0.156	0.063
		EPGT 52**1 L-W08**	EPGT0401**04L-W08**	●			●	●	●	●	●	0.016	0.156	0.063





● : Line up

Reference pages: Internal toolholder → 4-11 -

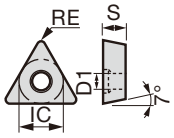
Insert POSITIVE TYPE

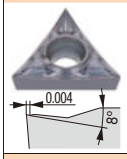
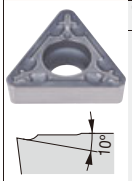
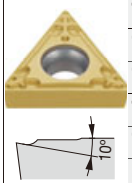
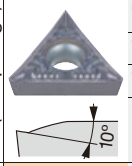
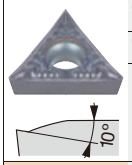
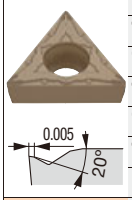
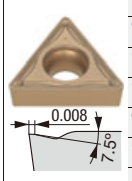
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

TC

Triangular with hole Positive 7°

P	Steel	●ɔ ɔ✣ ɔ ●ɔ ●ɔ ●ɔ ●ɔ ●ɔ ●ɔ ●ɔ ●ɔ ●ɔ ●
M	Stainless	●ɔ ɔ ●ɔ ●ɔ ●ɔ ●ɔ ●ɔ ●ɔ ●ɔ ●ɔ ●ɔ ●
N	Non-ferrous	●
S	Superalloy	ɔ ● ●ɔ ●ɔ ●ɔ
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated T6215	Coated AH8015	Coated AH6225	Coated AH725	Coated SH7025	Coated SH725	Coated SH730	Coated J740	Coated cermet GT9530	Cermet NS9530	Cermet NS520	Uncoated TH10	Dimension (in) RE	IC	S
Precision finishing (sharp edge)	JP	TCGT 21.5V FN-JP	TCGT110200FN-JP							●	●							<0.002	0.250	0.094
		TCGT 21.50 FN-JP	TCGT110201FN-JP							●	●							<0.004	0.250	0.094
		TCGT 21.50.5 FN-JP	TCGT110202FN-JP							●	●							<0.008	0.250	0.094
	01	TCGT 21.50.5 F-01	TCGT110202F-01							●	●							<0.008	0.250	0.094
		TCGT 21.51 F-01	TCGT110204F-01							●	●							<0.016	0.250	0.094
Precision finishing	01	TCGT 731-01	TCGT090204-01													●	●	0.016	0.219	0.094
		TCGT 21.50.5-01	TCGT110202-01										●					0.008	0.250	0.094
		TCGT 21.51-01	TCGT110204-01											●	●	●	●	0.016	0.250	0.094
		TCGT 21.52-01	TCGT110208-01												●			0.031	0.250	0.094
		TCGT 32.51-01	TCGT16T304-01														●	0.016	0.375	0.156
		TCGT 32.52-01	TCGT16T308-01													●	●	0.031	0.375	0.156
Finishing (sharp edge)	JS	TCGT 21.5V FN-JS	TCGT110200FN-JS							●	●	●						<0.002	0.250	0.094
		TCGT 21.50 FN-JS	TCGT110201FN-JS							●	●	●						<0.004	0.250	0.094
		TCGT 21.50.5 FN-JS	TCGT110202FN-JS							●	●	●						<0.008	0.250	0.094
		TCGT 21.51 FN-JS	TCGT110204FN-JS							●	●	●						<0.016	0.250	0.094
Finishing	JS	TCGT 21.50 N-JS	TCGT110201N-JS						●									0.004	0.250	0.094
		TCGT 21.50.5 N-JS	TCGT110202N-JS						●									0.008	0.250	0.094
		TCGT 21.51 N-JS	TCGT110204N-JS						●									0.016	0.250	0.094
	PSF	TCMT 730.5 PSF	TCMT090202-PSF				●		●									0.008	0.219	0.094
		TCMT 731 PSF	TCMT090204-PSF	●	●		●		●									0.016	0.219	0.094
		TCMT 21.50.5 PSF	TCMT110202-PSF				●		●									0.008	0.250	0.094
		TCMT 21.51 PSF	TCMT110204-PSF	●	●		●		●									0.016	0.250	0.094
		TCMT 220.5 PSF	TCMT110302-PSF				●		●									0.008	0.250	0.125
		TCMT 221 PSF	TCMT110304-PSF	●	●		●		●									0.016	0.250	0.125
		TCMT 32.51 PSF	TCMT16T304-PSF	●	●		●		●									0.016	0.375	0.156
	TSF	TCMT 21.51 TSF	TCMT110204-TSF	●	●		●											0.016	0.250	0.094
		TCMT 21.52 TSF	TCMT110208-TSF	●	●		●											0.031	0.250	0.094
		TCMT 220.5 TSF	TCMT110302-TSF	●	●	●	●	●							●			0.008	0.250	0.125
		TCMT 221 TSF	TCMT110304-TSF	●	●	●	●	●							●			0.016	0.250	0.125
		TCMT 222 TSF	TCMT110308-TSF	●	●	●	●	●							●			0.031	0.250	0.125
		TCMT 32.51 TSF	TCMT16T304-TSF	●	●		●											0.016	0.375	0.156
		TCMT 32.52 TSF	TCMT16T308-TSF	●	●		●											0.031	0.375	0.156

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

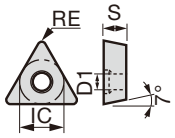
Reference pages: External toolholder → 3-71, Internal toolholder → 4-24 -

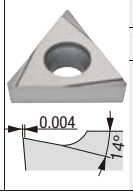
● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TC

Triangular with hole Positive 7°

P	Steel	◐ ◐ ◐ ◐ ● ● ●
M	Stainless	◐ ◐ ◐ ●
N	Non-ferrous	●
S	Superalloy	
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated SH7025	Coated SH725	Coated J740	Coated cermet J9530	Cermet NS9530	Uncoated TH10	Dimension (in) RE	IC	S
Finishing (sharp edge)	**J08**	**TCGT 63V FR-J08**	**TCGT080200FR-J08**	●	●	●			●	0.0012	0.187	0.094
		TCGT 63**V FL-J08**	TCGT080200**FL-J08**		●	●			●	0.0012	0.187	0.094
		TCGT 63**0 FR-J08**	TCGT080201**FR-J08**	●	●	●			●	0.004	0.187	0.094
		TCGT 63**0 FL-J08**	TCGT080201**FL-J08**		●	●			●	0.004	0.187	0.094
		TCGT 63**0.5 FR-J08**	TCGT080202**FR-J08**	●	●	●			●	0.008	0.187	0.094
		TCGT 63**0.5 FL-J08**	TCGT080202**FL-J08**	●	●	●			●	0.008	0.187	0.094
		TCGT 63**1 FR-J08**	TCGT080204**FR-J08**	●	●					0.016	0.187	0.094
	J10	**TCGT 21.5V FR-J10**	**TCGT110200FR-J10**	●	●	●			●	0.0012	0.250	0.094
		TCGT 21.5**V FL-J10**	TCGT110200**FL-J10**		●	●			●	0.0012	0.250	0.094
		TCGT 21.5**0 FR-J10**	TCGT110201**FR-J10**	●	●	●			●	0.004	0.250	0.094
		TCGT 21.5**0 FL-J10**	TCGT110201**FL-J10**		●	●			●	0.004	0.250	0.094
		TCGT 21.5**0.5 FR-J10**	TCGT110202**FR-J10**	●	●	●		●	●	0.008	0.250	0.094
		TCGT 21.5**0.5 FL-J10**	TCGT110202**FL-J10**	●	●	●		●	●	0.008	0.250	0.094
		TCGT 21.5**1 FR-J10**	TCGT110204**FR-J10**	●	●					0.016	0.250	0.094
		TCGT 22V FR-J10	**TCGT110300FR-J10**	●	●	●			●	0.0012	0.250	0.125
		TCGT 22**V FL-J10**	TCGT110300**FL-J10**		●	●			●	0.0012	0.250	0.125
		TCGT 22**0 FR-J10**	TCGT110301**FR-J10**	●	●	●			●	0.004	0.250	0.125
		TCGT 22**0 FL-J10**	TCGT110301**FL-J10**		●	●			●	0.004	0.250	0.125
		TCGT 22**0.5 FR-J10**	TCGT110302**FR-J10**	●	●	●		●	●	0.008	0.250	0.125
		TCGT 22**0.5 FL-J10**	TCGT110302**FL-J10**	●	●	●		●	●	0.008	0.250	0.125
Finishing	**J10**	**TCGT 220.5 R-J10**	**TCGT110302R-J10**				●			0.008	0.250	0.125
		TCGT 22**0.5 L-J10**	TCGT110302**L-J10**				●			0.008	0.250	0.125
	W15	**TCGT 32.50.5 L-W15**	**TCGT16T302L-W15**						●	0.008	0.375	0.156
		TCGT 32.5**1 L-W15**	TCGT16T3**04L-W15**					●	●	0.016	0.375	0.156
		TCGT 32.5**2 L-W15**	TCGT16T3**08L-W15**						●	0.031	0.375	0.156

● : Line up

Reference pages: External toolholder → 3-71, Internal toolholder → 4-24 -

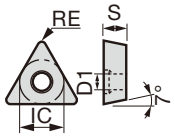
Insert POSITIVE TYPE

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

TC

Triangular with hole Positive 7°

P	Steel	●ɔ	ɔ✣	ɔ		ɔ✣	✣	ɔ	ɔ		●ɔ	●ɔ		●ɔ						
M	Stainless	●ɔ		●	ɔ	●ɔ	✣	ɔ	ɔ											
N	Non-ferrous																●			
S	Superalloy				ɔ			●									●			
H	Hard material																			



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated T6215	Coated AH8015	Coated AH6225	Coated AH6235	Coated AH725	Coated GH730	Coated cermet GT9530	Coated cermet AT9530	Cermet NS9530	Uncoated KS05F	Dimension (in) RE	IC	S
Finishing	**PSS**	**TCMT 731 PSS**	**TCMT090204-PSS**	●	●					●						0.016	0.219	0.094
		TCMT 732 PSS	TCMT090208-PSS	●	●					●						0.031	0.219	0.094
		TCMT 21.51 PSS	**TCMT110204-PSS**	●	●					●						0.016	0.250	0.094
		TCMT 21.52 PSS	TCMT110208-PSS	●	●					●						0.031	0.250	0.094
		TCMT 221 PSS	**TCMT110304-PSS**	●	●					●						0.016	0.250	0.125
		TCMT 222 PSS	TCMT110308-PSS	●	●					●						0.031	0.250	0.125
		TCMT 32.51 PSS	**TCMT16T304-PSS**	●	●					●						0.016	0.375	0.156
		TCMT 32.52 PSS	TCMT16T308-PSS	●	●					●						0.031	0.375	0.156
		TCMT 32.53 PSS	TCMT16T312-PSS	●	●					●						0.047	0.375	0.156
	PS	**TCMT 731 PS**	**TCMT090204-PS**							●						0.016	0.219	0.094
		TCMT 732 PS	TCMT090208-PS							●						0.031	0.219	0.094
		TCMT 21.50.5 PS	**TCMT110202-PS**	●	●	●		●	●	●	●	●	●	●		0.008	0.250	0.094
		TCMT 21.51 PS	TCMT110204-PS	●	●	●		●	●	●	●	●	●	●		0.016	0.250	0.094
		TCMT 21.52 PS	TCMT110208-PS	●	●	●		●	●	●	●	●	●	●		0.031	0.250	0.094
		TCMT 220.5 PS	**TCMT110302-PS**	●	●	●	●	●	●					●		0.008	0.250	0.125
		TCMT 221 PS	TCMT110304-PS	●	●	●	●	●	●					●		0.016	0.250	0.125
		TCMT 222 PS	TCMT110308-PS	●	●	●	●	●	●					●		0.031	0.250	0.125
		TCMT 32.50.5 PS	**TCMT16T302-PS**	●	●	●		●	●	●				●		0.008	0.375	0.156
		TCMT 32.51 PS	TCMT16T304-PS	●	●	●		●	●	●				●		0.016	0.375	0.156
		TCMT 32.52 PS	TCMT16T308-PS	●	●	●		●	●	●						0.031	0.375	0.156
	TM	**TCMT 21.51 TM**	**TCMT110204-TM**	●	●		●									0.016	0.250	0.094
		TCMT 21.52 TM	TCMT110208-TM	●	●		●									0.031	0.250	0.094
		TCMT 220.5 TM	**TCMT110302-TM**	●	●	●	●	●						●		0.008	0.250	0.125
		TCMT 221 TM	TCMT110304-TM	●	●	●	●	●						●		0.016	0.250	0.125
		TCMT 222 TM	TCMT110308-TM	●	●	●	●	●						●		0.031	0.250	0.125
		TCMT 32.51 TM	**TCMT16T304-TM**	●	●		●									0.016	0.375	0.156
		TCMT 32.52 TM	TCMT16T308-TM	●	●		●									0.031	0.375	0.156
Finishing to medium cutting for aluminum cutting	**AL**	**TCGT 21.50.5 AL**	**TCGT110202-AL**												●	0.008	0.250	0.094
		TCGT 21.51 AL	TCGT110204-AL												●	0.016	0.250	0.094
		TCGT 32.50.5 AL	**TCGT16T302-AL**												●	0.008	0.375	0.156
		TCGT 32.51 AL	TCGT16T304-AL												●	0.016	0.375	0.156
		TCGT 32.52 AL	TCGT16T308-AL												●	0.031	0.375	0.156

● : Line up

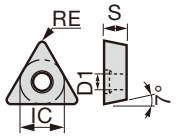
Reference pages: External toolholder → 3-71, Internal toolholder → 4-24 -

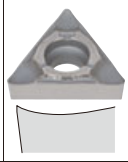
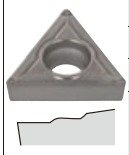
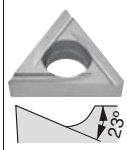
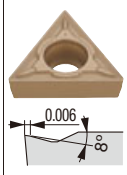
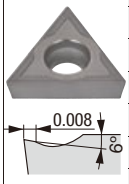
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

TC

Triangular with hole Positive 7°

P	Steel	●ɔ	ɔ✣	ɔ	ɔ✣	✣	ɔ				●ɔ			●							
M	Stainless	●ɔ		●	●ɔ	✣	ɔ							●							
N	Non-ferrous													●	●						
S	Superalloy						●								●						
H	Hard material																				



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated T6215	Coated AH6225	Coated AH6235	Coated AH725	Cermet NS9530	Uncoated TH10	Uncoated KS05F	Dimension (in) RE	IC	S
Finishing	**SS**	**TCGT 21.50.5 SS**	**TCGT110202-SS**							●			0.008	0.250	0.094
		TCGT 21.51 SS	TCGT110204-SS							●			0.016	0.250	0.094
		TCGT 21.52 SS	TCGT110208-SS							●			0.031	0.250	0.094
		TCGT 32.51 SS	**TCGT16T304-SS**							●			0.016	0.375	0.156
Finishing to medium cutting	**23**	**TCMT 731-23**	**TCMT090204-23**		●					●			0.016	0.219	0.094
		**TCMT 21.51-23**	**TCMT110204-23**							●			0.016	0.250	0.094
		TCMT 32.51-23	**TCMT16T304-23**							●			0.016	0.375	0.156
		TCMT 32.52-23	TCMT16T308-23		●								0.031	0.375	0.156
	-	**TCGT 620.5 R**	**TCGT080102R**							●	●		0.008	0.187	0.063
															
Medium cutting	**PM**	**TCMT 21.50.5 PM**	**TCMT110202-PM**			●	●	●	●				0.008	0.250	0.094
		TCMT 21.51 PM	TCMT110204-PM	●	●	●	●	●	●	●			0.016	0.250	0.094
		TCMT 21.52 PM	TCMT110208-PM	●	●	●	●	●	●	●			0.031	0.250	0.094
		TCMT 220.5 PM	**TCMT110302-PM**			●	●	●					0.008	0.250	0.125
		TCMT 221 PM	TCMT110304-PM			●	●	●					0.016	0.250	0.125
		TCMT 222 PM	TCMT110308-PM			●	●	●					0.031	0.250	0.125
		TCMT 32.51 PM	**TCMT16T304-PM**	●	●	●	●	●	●	●			0.016	0.375	0.156
		TCMT 32.52 PM	TCMT16T308-PM	●	●	●	●	●	●	●			0.031	0.375	0.156
		TCMT 32.53 PM	TCMT16T312-PM	●	●	●	●	●	●				0.047	0.375	0.156
	24	**TCMT 730.5-24**	**TCMT090202-24**							●			0.008	0.219	0.094
		TCMT 731-24	TCMT090204-24	●	●					●			0.016	0.219	0.094
		TCMT 21.50.5-24	**TCMT110202-24**							●			0.008	0.250	0.094
		TCMT 21.51-24	TCMT110204-24	●	●					●			0.016	0.250	0.094
		TCMT 21.52-24	TCMT110208-24		●								0.031	0.250	0.094
		TCMT 32.51-24	**TCMT16T304-24**	●	●					●			0.016	0.375	0.156
		TCMT 32.52-24	TCMT16T308-24	●	●				●				0.031	0.375	0.156

● : Line up

Reference pages: External toolholder → 3-71, Internal toolholder → 4-24 -

Insert POSITIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

TC

Rhombic, 60°
with hole
Positive 7°

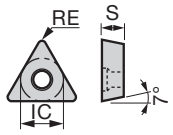
| | | |

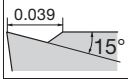
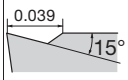
● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TC

Rhombic, 60°
with hole
Positive 7°

P	Steel	●
M	Stainless	●
N	Non-ferrous	●
S	Superalloy	
H	Hard material	

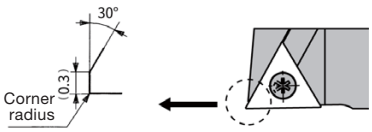


Application	Chipbreaker	Designation Inch	Designation Metric	Coated VM1	Coated ZM3	RE	IC	S
Medium cutting	S	TCGP7304RS	TCGT090201RS	●	●	0.004	0.219	0.094
		TCGP7304LS	TCGT090201LS	●		0.004	0.219	0.094
		TCGP7308RS	TCGT090202RS		●	0.008	0.219	0.094
		TCGT21.504RS	TCGT110201RS	●	●	0.004	0.250	0.094
		TCGT21.504LS	TCGT110201LS	●		0.004	0.250	0.094
	S-WP	TCGP7302RS-WP	TCGT0902005RS-WP		●	0.002	0.219	0.094
		TCGP7302LS-WP	TCGT0902005LS-WP		●	0.002	0.219	0.094
		TCGP7306RS-WP	TCGT0902015RS-WP		●	0.006	0.219	0.094
		TCGP7306LS-WP	TCGT0902015LS-WP		●	0.006	0.219	0.094
		TCGT21.502RS-WP	TCGT1102005RS-WP		●	0.002	0.250	0.094
		TCGT21.506RS-WP	TCGT1102015RS-WP		●	0.006	0.250	0.094
Non-ferrous	-	TCGD7301FN	TCGW090200FN		●	0.001	0.219	0.094
		TCGD7304FN	TCGW090201FN		●	0.004	0.219	0.094
		TCGW21.501FN	TCGW110200FN		●	0.001	0.250	0.094
		TCGW21.504FN	TCGW110201FN		●	0.004	0.250	0.094

● : Line up

Features of TCGT-WP insert

NTK WP style inserts have a wiper facet design.
The insert has a 0.3mm flat on the cutting edge when the insert is set into the toolholder.
The flat on the cutting edge ensures a superior surface when feed rates are increased.
WP style inserts can be used in toolholders: STAC



Reference pages: External toolholder → 3-71, Internal toolholder → 4-24 -

Insert POSITIVE TYPE

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

TP

Triangular with hole Positive 11°

		Coated							Coated cermet			Cermet			Uncoated	Dimension (in)		
		T9215	T9225	AH725	GH730	SH7025	SH725	SH730	GT9530	GT720		NS9530	NS520		TH10	RE	IC	S
P	Steel	●ɔ	ɔ✣	ɔ	ɔ	●ɔ	●ɔ	●ɔ	●ɔ	●ɔ		●ɔ	●ɔ		●			
M	Stainless	●ɔ		ɔ	ɔ	●ɔ	●ɔ	●ɔ							●			
N	Non-ferrous														●			
S	Superalloy			●				●ɔ										
H	Hard material																	

Application	Chipbreaker	Designation Inch	Designation Metric														RE	IC	S
Precision finishing	01	TPGT 730.5-01	TPGT090202-01							●			●				0.008	0.219	0.094
		TPGT 731-01	TPGT090204-01							●			●	●		●	0.016	0.219	0.094
		TPGT 21.50.5-01	TPGT110202-01							●			●				0.008	0.250	0.094
		TPGT 21.51-01	TPGT110204-01							●			●	●		●	0.016	0.250	0.094
		TPGT 21.52-01	TPGT110208-01										●				0.031	0.250	0.094
		TPGT 2.520.5-01	TPGT130302-01								●		●				0.008	0.313	0.125
		TPGT 2.521-01	TPGT130304-01							●			●	●		●	0.016	0.313	0.125
		TPGT 2.522-01	TPGT130308-01										●	●			0.031	0.313	0.125
		TPGT 32.51-01	TPGT16T304-01							●			●	●		●	0.016	0.375	0.156
		TPGT 32.52-01	TPGT16T308-01								●		●	●			0.031	0.375	0.156
Finishing (sharp edge)	JS	TPGT 5.520 F-JS	TPGT070101F-JS					●	●								<0.004	0.172	0.063
		TPGT 5.520.5 F-JS	TPGT070102F-JS					●	●								<0.008	0.172	0.063
		TPGT 5.521 F-JS	TPGT070104F-JS					●	●								<0.016	0.172	0.063
Finishing	JS	TPGT 5.520 JS	TPGT070101-JS						●								<0.004	0.172	0.063
		TPGT 5.520.5 JS	TPGT070102-JS						●								<0.008	0.172	0.063
		TPGT 5.521 JS	TPGT070104-JS						●								<0.016	0.172	0.063
	PSF	TPMT 730.5 PSF	TPMT090202-PSF			●							●				0.008	0.219	0.094
		TPMT 731 PSF	TPMT090204-PSF	●	●	●				●			●				0.016	0.219	0.094
		TPMT 21.50.5 PSF	TPMT110202-PSF			●				●			●				0.008	0.250	0.094
		TPMT 21.51 PSF	TPMT110204-PSF	●	●	●				●			●				0.016	0.250	0.094
		TPMT 220.5 PSF	TPMT110302-PSF			●							●				0.008	0.250	0.125
		TPMT 221 PSF	TPMT110304-PSF	●	●	●				●			●				0.016	0.250	0.125
		TPMT 2.521 PSF	TPMT130304-PSF	●	●	●											0.016	0.313	0.125
		TPMT 32.51 PSF	TPMT16T304-PSF	●	●	●											0.016	0.375	0.156
	PF	TPMT 21.51 PF	TPMT110204-PF				●			●			●				0.016	0.250	0.094
		TPMT 21.52 PF	TPMT110208-PF							●			●				0.031	0.250	0.094
		TPMT 220.5 PF	TPMT110302-PF				●						●				0.008	0.250	0.125
		TPMT 221 PF	TPMT110304-PF				●			●			●				0.016	0.250	0.125
		TPMT 2.521 PF	TPMT130304-PF							●			●				0.016	0.313	0.125
		TPMT 2.522 PF	TPMT130308-PF										●				0.031	0.313	0.125
		TPMT 32.51 PF	TPMT16T304-PF							●			●				0.016	0.375	0.156

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

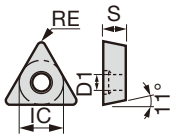
Reference pages: Internal toolholder → 4-25 -

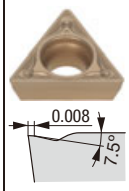
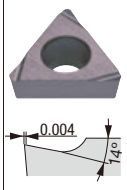
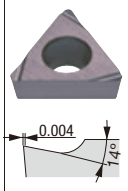
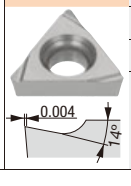
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

TP

Triangular with hole Positive 11°

P	Steel	●ɔ	ɔ✣	ɔ		ɔ✣	●	●ɔ	●ɔ			●ɔ				●ɔ		●	ɔ	
M	Stainless	●ɔ		●	ɔ	●ɔ	●	●ɔ	●ɔ							●ɔ		●	ɔ	
N	Non-ferrous															●ɔ		●		
S	Superalloy				ɔ		●		●ɔ											
H	Hard material																			



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	T9225	T6215	AH8015	AH6225	GH110	SH725	SH730	Coated cermet GT9530	Cermet NS9530	Uncoated TH10	UX30	Dimension (in) RE	IC	S
Finishing	TSF	TPMT 21.51 TSF	TPMT110204-TSF	●	●											0.016	0.250	0.094
		TPMT 21.52 TSF	TPMT110208-TSF	●	●											0.031	0.250	0.094
		TPMT 220.5 TSF	TPMT110302-TSF	●	●	●	●	●					●			0.008	0.250	0.125
		TPMT 221 TSF	TPMT110304-TSF	●	●	●	●	●					●			0.016	0.250	0.125
		TPMT 222 TSF	TPMT110308-TSF	●	●	●	●	●					●			0.031	0.250	0.125
		TPMT 32.51 TSF	TPMT16T304-TSF	●	●											0.016	0.375	0.156
		TPMT 32.52 TSF	TPMT16T308-TSF	●	●											0.031	0.375	0.156
Finishing (sharp edge)	W08	TPGT 5.52V FR-W08	TPGT070100FR-W08							●						0.0012	0.172	0.063
		TPGT 5.52V FL-W08	TPGT070100FL-W08							●						0.0012	0.172	0.063
		TPGT 5.520 FR-W08	TPGT070101FR-W08							●						0.004	0.172	0.063
		TPGT 5.520 FL-W08	TPGT070101FL-W08							●						0.004	0.172	0.063
		TPGT 5.520.5 FR-W08	TPGT070102FR-W08							●						0.008	0.172	0.063
		TPGT 5.520.5 FL-W08	TPGT070102FL-W08							●						0.008	0.172	0.063
		TPGT 5.521 FR-W08	TPGT070104FR-W08							●						0.016	0.172	0.063
		TPGT 5.521 FL-W08	TPGT070104FL-W08							●						0.016	0.172	0.063
Finishing	W08	TPGT 5.52V R-W08	TPGT070100R-W08								●			●		0.0012	0.172	0.063
		TPGT 5.52V L-W08	TPGT070100L-W08								●			●		0.0012	0.172	0.063
		TPGT 5.520 R-W08	TPGT070101R-W08								●			●		0.004	0.172	0.063
		TPGT 5.520 L-W08	TPGT070101L-W08								●			●		0.004	0.172	0.063
		TPGT 5.520.5 R-W08	TPGT070102R-W08								●			●		0.008	0.172	0.063
		TPGT 5.520.5 L-W08	TPGT070102L-W08								●			●		0.008	0.172	0.063
		TPGT 5.521 R-W08	TPGT070104R-W08								●			●		0.016	0.172	0.063
		TPGT 5.521 L-W08	TPGT070104L-W08								●			●		0.016	0.172	0.063
		TPGT 63V L-W08	TPGT080200L-W08									●	●			0.0012	0.187	0.094
		TPGT 630.5 L-W08	TPGT080202L-W08						●			●	●	●	●	0.008	0.187	0.094
		TPGT 631 L-W08	TPGT080204L-W08						●			●	●	●	●	0.016	0.187	0.094
	W10	TPGH 630.5 L-W10	TPGH080202L-W10									●	●			0.008	0.187	0.094
		TPGH 631 L-W10	TPGH080204L-W10									●	●			0.016	0.187	0.094
		TPGH 731 L-W10	TPGH090204L-W10									●	●			0.016	0.219	0.094

● : Line up

Reference pages: Internal toolholder → 4-25 -

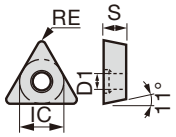
Insert POSITIVE TYPE

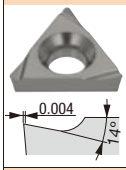
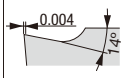
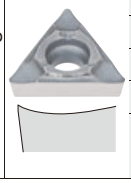
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

TP

Triangular with hole Positive 11°

		GH110	GH330	GT9530	NS9530	TH10	UX30
P	Steel	●	●ɔ	●ɔ	●ɔ	●	ɔ
M	Stainless	●	●ɔ			●	ɔ
N	Non-ferrous					●	
S	Superalloy	●					
H	Hard material						



Application	Chipbreaker	Designation Inch	Designation Metric	Coated GH110	Coated GH330	Coated cermet GT9530	Cermet NS9530	Uncoated TH10	Uncoated UX30	Dimension (in) RE	IC	S
Finishing	**W13**	**TPGH 21.51 L-W13**	**TPGH110204L-W13**			●	●			0.016	0.250	0.094
		**TPGH 220.5 L-W13**	**TPGH110302L-W13**			●	●			0.008	0.250	0.125
		TPGH 221 L-W13	**TPGH110304L-W13**			●	●			0.016	0.250	0.125
	W15	**TPGT 730.5 R-W15**	**TPGT090202R-W15**				●			0.008	0.219	0.094
		TPGT 730.5 L-W15	**TPGT090202L-W15**			●	●	●		0.008	0.219	0.094
		TPGT 731 R-W15	**TPGT090204R-W15**				●			0.016	0.219	0.094
		TPGT 731 L-W15	**TPGT090204L-W15**	●	●	●	●	●	●	0.016	0.219	0.094
		TPGT 21.50.5 R-W15	**TPGT110202R-W15**				●			0.008	0.250	0.094
		TPGT 21.50.5 L-W15	**TPGT110202L-W15**			●	●	●		0.008	0.250	0.094
		TPGT 21.51 L-W15	**TPGT110204L-W15**	●	●	●	●	●	●	0.016	0.250	0.094
		TPGT 21.52 R-W15	**TPGT110208R-W15**				●			0.031	0.250	0.094
		TPGT 21.52 L-W15	**TPGT110208L-W15**						●	0.031	0.250	0.094
		TPGT 220.5 L-W15	**TPGT110302L-W15**				●			0.008	0.250	0.125
		TPGT 221 R-W15	**TPGT110304R-W15**				●			0.016	0.250	0.125
		TPGT 221 L-W15	**TPGT110304L-W15**				●			0.016	0.250	0.125
		TPGT 222 L-W15	**TPGT110308L-W15**				●			0.031	0.250	0.125
		**TPGT 2.520.5 R-W15**	**TPGT130302R-W15**				●			0.008	0.313	0.125
		TPGT 2.520.5 L-W15	**TPGT130302L-W15**			●	●	●		0.008	0.313	0.125
		TPGT 2.521 R-W15	**TPGT130304R-W15**	●			●			0.016	0.313	0.125
		TPGT 2.521 L-W15	**TPGT130304L-W15**	●	●	●	●	●	●	0.016	0.313	0.125
		TPGT 2.522 L-W15	**TPGT130308L-W15**				●	●		0.031	0.313	0.125
		TPGT 32.50.5 R-W15	**TPGT16T302R-W15**				●			0.008	0.375	0.156
		TPGT 32.50.5 L-W15	**TPGT16T302L-W15**			●	●	●		0.008	0.375	0.156
		TPGT 32.51 R-W15	**TPGT16T304R-W15**				●	●		0.016	0.375	0.156
		TPGT 32.51 L-W15	**TPGT16T304L-W15**	●	●	●	●	●	●	0.016	0.375	0.156
		TPGT 32.52 L-W15	**TPGT16T308L-W15**				●	●	●	0.031	0.375	0.156
Finishing to medium cutting	**SS**	**TPGT 21.50.5 SS**	**TPGT110202-SS**				●			0.008	0.250	0.094
		**TPGT 21.51 SS**	**TPGT110204-SS**		●		●			0.016	0.250	0.094
		TPGT 2.520.5 SS	**TPGT130302-SS**				●			0.008	0.313	0.125
		TPGT 2.521 SS	**TPGT130304-SS**		●		●			0.016	0.313	0.125
		TPGT 32.51 SS	**TPGT16T304-SS**		●		●			0.016	0.375	0.156

● : Line up

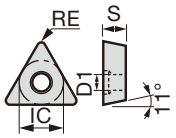
Reference pages: Internal toolholder → 4-25 -

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

TP

Triangular with hole Positive 11°

P	Steel	●ɔ ɔ✣ ɔ ✣ ɔ ɔ✣ ✣ ɔ ●ɔ ɔ ●ɔ ●ɔ ●ɔ
M	Stainless	●ɔ ɔ ●ɔ ●ɔ ●ɔ
N	Non-ferrous	
S	Superalloy	● ɔ ● ɔ ●ɔ
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	T9225	T6215	AH8005	AH8015	AH6225	AH6235	AH725	AH120	GH730	Coated cermet GT9530	AT9530	Cermet NS9530	Dimension (in) RE	IC	S
Finishing to medium cutting	PSS	TPMT 731 PSS	TPMT090204-PSS	●	●	●			●	●	●		●	●		●	0.016	0.219	0.094
		TPMT 732 PSS	TPMT090208-PSS	●	●	●			●	●	●			●		●	0.031	0.219	0.094
		TPMT 21.51 PSS	TPMT110204-PSS	●	●	●			●	●	●			●		●	0.016	0.250	0.094
		TPMT 21.52 PSS	TPMT110208-PSS	●	●	●			●	●	●			●		●	0.031	0.250	0.094
		TPMT 221 PSS	TPMT110304-PSS	●	●	●			●	●	●						0.016	0.250	0.125
		TPMT 222 PSS	TPMT110308-PSS	●	●	●			●	●	●						0.031	0.250	0.125
		TPMT 2.521 PSS	TPMT130304-PSS	●	●	●			●	●	●						0.016	0.313	0.125
		TPMT 2.522 PSS	TPMT130308-PSS	●	●	●			●	●	●			●		●	0.031	0.313	0.125
		TPMT 32.51 PSS	TPMT16T304-PSS	●	●	●			●	●	●			●		●	0.016	0.375	0.156
		TPMT 32.52 PSS	TPMT16T308-PSS	●	●	●			●	●	●			●		●	0.031	0.375	0.156
	PS	TPMT 730.5 PS	TPMT090202-PS	●	●	●			●	●	●		●	●	●	●	0.008	0.219	0.094
		TPMT 731 PS	TPMT090204-PS	●	●	●			●	●	●		●	●	●	●	0.016	0.219	0.094
		TPMT 732 PS	TPMT090208-PS	●	●	●			●	●	●		●	●	●	●	0.031	0.219	0.094
		TPMT 21.50.5 PS	TPMT110202-PS	●	●	●			●	●	●		●	●	●	●	0.008	0.250	0.094
		TPMT 21.51 PS	TPMT110204-PS	●	●	●			●	●	●	●	●	●	●	●	0.016	0.250	0.094
		TPMT 21.52 PS	TPMT110208-PS	●	●	●			●	●	●	●	●	●	●	●	0.031	0.250	0.094
		TPMT 220.5 PS	TPMT110302-PS	●	●	●	●	●								●	0.008	0.250	0.125
		TPMT 221 PS	TPMT110304-PS	●	●	●	●	●	●	●	●		●	●	●	●	0.016	0.250	0.125
		TPMT 222 PS	TPMT110308-PS	●	●	●	●	●	●	●	●		●	●	●	●	0.031	0.250	0.125
		TPMT 2.520.5 PS	TPMT130302-PS	●	●						●			●	●	●	0.008	0.313	0.125
		TPMT 2.521 PS	TPMT130304-PS	●	●	●			●	●	●			●	●	●	0.016	0.313	0.125
		TPMT 2.522 PS	TPMT130308-PS	●	●	●			●	●	●			●	●	●	0.031	0.313	0.125
		TPMT 32.51 PS	TPMT16T304-PS	●	●	●			●	●	●			●	●	●	0.016	0.375	0.156
		TPMT 32.52 PS	TPMT16T308-PS	●	●	●			●	●	●			●	●	●	0.031	0.375	0.156
	TM	TPMT 21.51 TM	TPMT110204-TM	●	●												0.016	0.250	0.094
		TPMT 21.52 TM	TPMT110208-TM	●	●												0.031	0.250	0.094
		TPMT 220.5 TM	TPMT110302-TM	●	●	●	●	●								●	0.008	0.250	0.125
		TPMT 221 TM	TPMT110304-TM	●	●	●	●	●								●	0.016	0.250	0.125
		TPMT 222 TM	TPMT110308-TM	●	●	●	●	●								●	0.031	0.250	0.125
		TPMT 32.51 TM	TPMT16T304-TM	●	●												0.016	0.375	0.156
		TPMT 32.52 TM	TPMT16T308-TM	●	●												0.031	0.375	0.156
	H11	TPGH 220.5 L-H11	TPGH110302L-H11											●		●	0.008	0.250	0.125
		TPGH 221 L-H11	TPGH110304L-H11											●		●	0.016	0.250	0.125
	23	TPMT 730.5-23	TPMT090202-23													●	0.008	0.219	0.094
		TPMT 731-23	TPMT090204-23		●											●	0.016	0.219	0.094
		TPMT 21.51-23	TPMT110204-23		●											●	0.016	0.250	0.094
		TPMT 2.521-23	TPMT130304-23		●											●	0.016	0.313	0.125
		TPMT 2.522-23	TPMT130308-23		●											●	0.031	0.313	0.125
		TPMT 32.51-23	TPMT16T304-23													●	0.016	0.375	0.156
		TPMT 32.52-23	TPMT16T308-23		●											●	0.031	0.375	0.156

● : Line up

Reference pages: Internal toolholder → 4-25 -

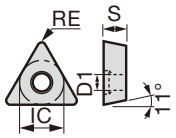
Insert POSITIVE TYPE

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

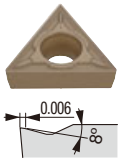
TP

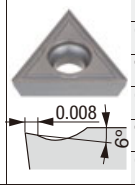
Triangular with hole Positive 11°

P	Steel	●ɔ	ɔ✣	ɔ	ɔ✣	✣	ɔ	●ɔ	ɔ	●		●ɔ			●ɔ						
M	Stainless	●ɔ		●	●ɔ	✣	ɔ	●ɔ	ɔ	●											
N	Non-ferrous																				
S	Superalloy						●	●ɔ		●											
H	Hard material																				



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated T6215	Coated AH6225	Coated AH6235	Coated AH725	Coated AH120	Coated GH730	Coated GH110	Coated cermet GT9530	Cermet NS9530	Dimension (in) RE	IC	S
Medium cutting	**PM**	**TPMT 731 PM**	**TPMT090204-PM**			●	●	●	●						0.016	0.219	0.094
		TPMT 732 PM	TPMT090208-PM			●	●	●	●						0.031	0.219	0.094
		TPMT 21.51 PM	**TPMT110204-PM**	●	●	●	●	●	●		●		●	●	0.016	0.250	0.094
		TPMT 21.52 PM	TPMT110208-PM	●	●	●	●	●	●	●	●				0.031	0.250	0.094
		TPMT 221 PM	**TPMT110304-PM**	●	●	●	●	●	●		●		●	●	0.016	0.250	0.125
		TPMT 222 PM	TPMT110308-PM	●	●	●	●	●	●		●				0.031	0.250	0.125
		TPMT 2.521 PM	**TPMT130304-PM**		●	●	●	●	●					●	0.016	0.313	0.125
		TPMT 2.522 PM	TPMT130308-PM		●	●	●	●	●				●	●	0.031	0.313	0.125
		TPMT 32.51 PM	**TPMT16T304-PM**		●	●	●	●	●					●	0.016	0.375	0.156
		TPMT 32.52 PM	TPMT16T308-PM		●	●	●	●	●						0.031	0.375	0.156
		TPMT 32.53 PM	TPMT16T312-PM		●	●	●	●	●						0.047	0.375	0.156
	24	**TPMT 731-24**	**TPMT090204-24**		●									●	0.016	0.219	0.094
		TPMT 21.51-24	**TPMT110204-24**		●									●	0.016	0.250	0.094
		TPMT 21.52-24	TPMT110208-24											●	0.031	0.250	0.094
		TPMT 2.521-24	**TPMT130304-24**		●									●	0.016	0.313	0.125
		TPMT 2.522-24	TPMT130308-24		●									●	0.031	0.313	0.125
		TPMT 32.51-24	**TPMT16T304-24**		●									●	0.016	0.375	0.156
		TPMT 32.52-24	TPMT16T308-24		●									●	0.031	0.375	0.156





● : Line up

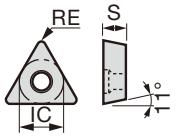
Reference pages: Internal toolholder → 4-25 -

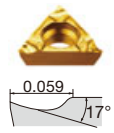
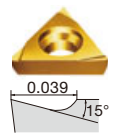
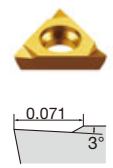
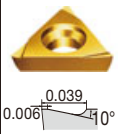
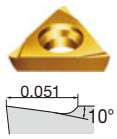
● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

TP

Rhombic, 60°
with hole
Positive 11°

P	Steel	●ⓒ ●ⓒ ●ⓒ ●
M	Stainless	●ⓒ ● ●
N	Non-ferrous	● ●
S	Superalloy	
H	Hard material	●ⓒ



Application	Chipbreaker	Designation Inch	Designation Metric	Coated ST4	QM3	TM4	VM1	ZM3	Dimension (mm) RE	IC	S
Internal finishing	**FG**	**TPGP7308RFG**	**TPGH090202RFG**	●	●	●			0.008	0.219	0.094
		TPGP731**RFG**	TPGH0902**04RFG**	●	●	●			0.016	0.219	0.094
		TPGH2208RFG	**TPGH110302RFG**	●	●	●			0.008	0.250	0.125
		TPGH221**RFG**	TPGH1103**04RFG**	●	●	●			0.016	0.250	0.125
	K	**TPGP7308FLK**	**TPGH090202FLK**			●			0.008	0.219	0.094
		TPGP731**FLK**	TPGH0902**04FLK**			●			0.016	0.219	0.094
		TPGP732**FLK**	TPGH0902**08FLK**			●			0.031	0.219	0.094
Internal medium cutting	**F1**	**TPGH6308FRF1**	**TPGH080202FRF1**			●	●	●	0.008	0.187	0.094
		TPGH631**FRF1**	TPGH0802**04FRF1**			●	●	●	0.016	0.187	0.094
		TPGH7304FRF1	**TPGH090201FRF1**	●	●	●			0.004	0.219	0.094
		TPGH73**08FRF1**	TPGH0902**02FRF1**	●	●	●	●	●	0.008	0.219	0.094
		TPGH731**FRF1**	TPGH0902**04FRF1**	●	●	●	●	●	0.016	0.219	0.094
		TPGH732**FRF1**	TPGH0902**08FRF1**	●	●	●		●	0.031	0.219	0.094
		TPGH2208FRF1	**TPGH110302FRF1**	●	●	●	●	●	0.008	0.250	0.125
		TPGH221**FRF1**	TPGH1103**04FRF1**	●	●	●	●	●	0.016	0.250	0.125
		TPGH222 **FRF1**	TPGH1103**08FRF1**	●	●	●		●	0.031	0.250	0.125
	B2	**TPGH7308FLB2**	**TPGH090202FLB2**			●		●	0.008	0.219	0.094
		TPGH731**FLB2**	TPGH0902**04FLB2**			●		●	0.016	0.219	0.094
		TPGH732**FLB2**	TPGH0902**08FLB2**			●		●	0.031	0.219	0.094
	B3	**TPGP6308FLB3**	**TPGH080202FLB3**			●		●	0.008	0.187	0.094
		TPGP631**FLB3**	TPGH0802**04FLB3**			●		●	0.016	0.187	0.094

● : Line up

Reference pages: Internal toolholder → 4-25 -

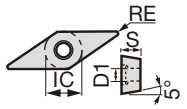
Insert POSITIVE TYPE

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

VB

Rhombic, 35° with hole Positive 5°

P	Steel	●ɔ	ɔ✣	ɔ		ɔ✣	ɔ	●ɔ	●ɔ	●ɔ	●ɔ	●ɔ	●ɔ		●ɔ			●			
M	Stainless	●ɔ		●	ɔ	●ɔ	ɔ	●ɔ	●ɔ	●ɔ	●ɔ							●			
N	Non-ferrous																	●			
S	Superalloy				ɔ		●			●ɔ											
H	Hard material																				



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated T6215	Coated AH8015	Coated AH6225	Coated AH725	Coated SH7025	Coated SH725	Coated SH730	Coated J740	Coated cermet GT9530	Coated cermet J9530	Cermet NS9530	Uncoated TH10	Dimension (in) RE	IC	S
Precision finishing (sharp edge)	**JP**	**VBGT 22V FN-JP**	**VBGT110300FN-JP**							●	●							<0.002	0.250	0.125
		VBGT 220 FN-JP	VBGT110301FN-JP							●	●							<0.004	0.250	0.125
		VBGT 220.5 FN-JP	VBGT110302FN-JP							●	●							<0.008	0.250	0.125
Finishing (sharp edge)	**JS**	**VBGT 22V FN-JS**	**VBGT110300FN-JS**							●	●	●						<0.002	0.250	0.125
		VBGT 220 FN-JS	VBGT110301FN-JS							●	●	●						<0.004	0.250	0.125
		VBGT 220.5 FN-JS	VBGT110302FN-JS							●	●	●						<0.008	0.250	0.125
		VBGT 221 FN-JS	VBGT110304FN-JS							●	●	●						<0.016	0.250	0.125
Finishing	**JS**	**VBGT 220 N-JS**	**VBGT110301N-JS**						●									0.004	0.250	0.125
		VBGT 220.5 N-JS	VBGT110302N-JS						●									0.008	0.250	0.125
		VBGT 221 N-JS	VBGT110304N-JS						●							●		0.016	0.250	0.125
	PSF	**VBMT 220.5 PSF**	**VBMT110302-PSF**						●					●		●		0.008	0.250	0.125
		VBMT 221 PSF	VBMT110304-PSF	●	●				●					●		●		0.016	0.250	0.125
		VBMT 330.5 PSF	**VBMT160402-PSF**						●					●		●		0.008	0.375	0.187
		VBMT 331 PSF	VBMT160404-PSF	●	●				●					●		●		0.016	0.375	0.187
	PF	**VBMT 220.5 PF**	**VBMT110302-PF**											●		●		0.008	0.250	0.125
		VBMT 221 PF	VBMT110304-PF											●		●		0.016	0.250	0.125
		VBMT 222 PF	VBMT110308-PF		●									●		●		0.031	0.250	0.125
		VBMT 331 PF	**VBMT160404-PF**											●		●		0.016	0.375	0.187
		VBMT 332 PF	VBMT160408-PF		●									●		●		0.031	0.375	0.187
	TSF	**VBMT 220.5 TSF**	**VBMT110302-TSF**	●	●	●	●	●								●		0.008	0.250	0.125
		VBMT 221 TSF	VBMT110304-TSF	●	●	●	●	●								●		0.016	0.250	0.125
		VBMT 222 TSF	VBMT110308-TSF	●	●	●	●	●								●		0.031	0.250	0.125
		VBMT 330.5 TSF	**VBMT160402-TSF**	●	●	●	●	●								●		0.008	0.375	0.187
		VBMT 331 TSF	VBMT160404-TSF	●	●	●	●	●								●		0.016	0.375	0.187
		VBMT 332 TSF	VBMT160408-TSF	●	●	●	●	●								●		0.031	0.375	0.187
For external turning on Swiss lathes (sharp edge)	**J10**	**VBGT 22V FR-J10**	**VBGT110300FR-J10**							●	●		●				●	0.0012	0.250	0.125
		VBGT 22V FL-J10	VBGT110300FL-J10								●		●				●	0.0012	0.250	0.125
		VBGT 220 FR-J10	VBGT110301FR-J10							●	●		●			●	●	0.004	0.250	0.125
		VBGT 220 FL-J10	VBGT110301FL-J10								●		●			●	●	0.004	0.250	0.125
		VBGT 220.5 FR-J10	VBGT110302FR-J10							●	●		●			●	●	0.008	0.250	0.125
		VBGT 220.5 FL-J10	VBGT110302FL-J10							●	●		●			●	●	0.008	0.250	0.125
		VBGT 221 FR-J10	VBGT110304FR-J10							●	●		●			●	●	0.016	0.250	0.125
		VBGT 221 FL-J10	VBGT110304FL-J10							●	●		●			●	●	0.016	0.250	0.125
Finishing	**J10**	**VBGT 220.5 R-J10**	**VBGT110302R-J10**												●			0.008	0.250	0.125
		VBGT 220.5 L-J10	VBGT110302L-J10												●			0.008	0.250	0.125
		VBGT 221 R-J10	VBGT110304R-J10												●			0.016	0.250	0.125
		VBGT 221 L-J10	VBGT110304L-J10												●			0.016	0.250	0.125

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

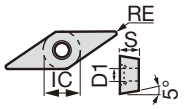
Reference pages: External toolholder → 3-59 -, Internal toolholder → 4-33

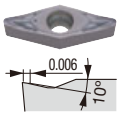
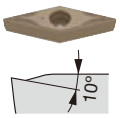
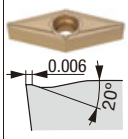
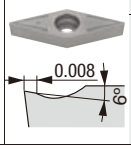
● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

VB

Rhombic, 35°
with hole
Positive 5°

P	Steel	●ⓒ	ⓒ✣	ⓒ			ⓒ✣	✣	ⓒ	●ⓒ			●ⓒ	●ⓒ				●ⓒ			
M	Stainless	●ⓒ		●	●	ⓒ	●ⓒ	✣	ⓒ	●ⓒ											
N	Non-ferrous																				
S	Superalloy				●	ⓒ			●	●ⓒ											
H	Hard material																				



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	T9225	T6215	AH8005	AH8015	AH6225	AH6235	AH725	AH120	Coated cermet GT9530	AT9530	Cermet NS9530	Dimension (in) RE	IC	S
Finishing to medium cutting	**PSS**	**VBMT 221 PSS**	**VBMT110304-PSS**	●	●	●			●	●	●		●		●	0.016	0.250	0.125
		VBMT 222 PSS	VBMT110308-PSS	●	●	●			●	●	●		●		●	0.031	0.250	0.125
		VBMT 331 PSS	**VBMT160404-PSS**	●	●	●			●	●	●		●		●	0.016	0.375	0.187
		VBMT 332 PSS	VBMT160408-PSS	●	●	●			●	●	●		●		●	0.031	0.375	0.187
		VBMT 333 PSS	VBMT160412-PSS	●	●						●					0.047	0.375	0.187
	PS	**VBMT 220.5 PS**	**VBMT110302-PS**	●	●	●	●	●	●	●	●		●	●	●	0.008	0.250	0.125
		VBMT 221 PS	VBMT110304-PS	●	●	●	●	●	●	●	●	●	●	●	●	0.016	0.250	0.125
		VBMT 222 PS	VBMT110308-PS	●	●	●	●	●	●	●	●	●	●	●	●	0.031	0.250	0.125
		VBMT 330.5 PS	**VBMT160402-PS**	●	●	●	●	●	●	●	●		●	●	●	0.008	0.375	0.187
		VBMT 331 PS	VBMT160404-PS	●	●	●	●	●	●	●	●	●	●	●	●	0.016	0.375	0.187
		VBMT 332 PS	VBMT160408-PS	●	●	●	●	●	●	●	●	●	●	●	●	0.031	0.375	0.187
	TM	**VBMT 220.5 TM**	**VBMT110302-TM**	●	●	●		●	●						●	0.008	0.250	0.125
		VBMT 221 TM	VBMT110304-TM	●	●	●		●	●						●	0.016	0.250	0.125
		VBMT 222 TM	VBMT110308-TM	●	●	●		●	●						●	0.031	0.250	0.125
		VBMT 330.5 TM	**VBMT160402-TM**	●	●	●		●	●						●	0.008	0.375	0.187
		VBMT 331 TM	VBMT160404-TM	●	●	●		●	●						●	0.016	0.375	0.187
		VBMT 332 TM	VBMT160408-TM	●	●	●		●	●						●	0.031	0.375	0.187
Medium cutting	**24**	**VBMT 331-24**	**VBMT160404-24**	●	●										●	0.016	0.375	0.187
		VBMT 332-24	VBMT160408-24	●	●										●	0.031	0.375	0.187

●: Line up

Reference pages: External toolholder → 3-59 -, Internal toolholder → 4-33

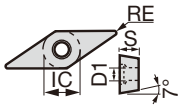
Insert POSITIVE TYPE

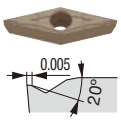
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

VC

Rhombic, 35° with hole Positive 7°

P	Steel	●ɔ	ɔ✣	ɔ			ɔ✣	✣		ɔ	●ɔ			●ɔ	●ɔ			●ɔ													
M	Stainless	●ɔ		●	●	ɔ	●ɔ	✣		ɔ	●ɔ																				
N	Non-ferrous																														
S	Superalloy				●	ɔ			ɔ	●	●ɔ																				
H	Hard material																														



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated T6215	Coated AH8005	Coated AH8015	Coated AH6225	Coated AH6235	Coated AH905	Coated AH725	Coated AH120	Coated cermet GT9530	Coated cermet AT9530	Cermet NS9530	Dimension (in) RE	IC	S
Finishing	**PSF**	**VCMT 630.5 PSF**	**VCMT080202-PSF**									●		●		●	0.008	0.187	0.094
		VCMT 631 PSF	VCMT080204-PSF	●	●							●		●		●	0.016	0.187	0.094
		**VCMT 220.5 PSF**	**VCMT110302-PSF**									●					0.008	0.250	0.125
		VCMT 221 PSF	VCMT110304-PSF	●	●							●					0.016	0.250	0.125
		VCMT 331 PSF	**VCMT160404-PSF**	●	●		●	●			●	●		●		●	0.016	0.375	0.187
		VCMT 332 PSF	VCMT160408-PSF	●	●		●	●			●	●		●		●	0.031	0.375	0.187
	PF	**VCMT 630.5 PF**	**VCMT080202-PF**											●		●	0.008	0.187	0.094
		VCMT 631 PF	VCMT080204-PF											●		●	0.016	0.187	0.094
		VCMT 331 PF	**VCMT160404-PF**											●		●	0.016	0.375	0.187
		VCMT 332 PF	VCMT160408-PF											●		●	0.031	0.375	0.187
	TSF	**VCMT 220.5 TSF**	**VCMT110302-TSF**	●	●	●		●	●							●	0.008	0.250	0.125
		VCMT 221 TSF	VCMT110304-TSF	●	●	●		●	●							●	0.016	0.250	0.125
		VCMT 222 TSF	VCMT110308-TSF	●	●	●		●	●							●	0.031	0.250	0.125
		VCMT 330.5 TSF	**VCMT160402-TSF**	●	●	●		●	●							●	0.008	0.375	0.187
		VCMT 331 TSF	VCMT160404-TSF	●	●	●		●	●							●	0.016	0.375	0.187
		VCMT 332 TSF	VCMT160408-TSF	●	●	●		●	●							●	0.031	0.375	0.187
Finishing to medium cutting	**PSS**	**VCMT 221 PSS**	**VCMT110304-PSS**	●	●	●			●	●		●		●		●	0.016	0.250	0.125
		VCMT 222 PSS	VCMT110308-PSS	●	●	●			●	●		●		●		●	0.031	0.250	0.125
		VCMT 331 PSS	**VCMT160404-PSS**	●	●	●	●	●	●	●	●	●		●		●	0.016	0.375	0.187
		VCMT 332 PSS	VCMT160408-PSS	●	●	●	●	●	●	●	●	●		●		●	0.031	0.375	0.187
	PS	**VCMT 220.5 PS**	**VCMT110302-PS**	●	●	●	●	●	●	●		●		●	●	●	0.008	0.250	0.125
		VCMT 221 PS	VCMT110304-PS	●	●	●	●	●	●	●		●		●	●	●	0.016	0.250	0.125
		VCMT 222 PS	VCMT110308-PS	●	●	●	●	●	●	●		●		●	●	●	0.031	0.250	0.125
		VCMT 330.5 PS	**VCMT160402-PS**	●	●	●		●	●							●	0.008	0.375	0.187
		VCMT 331 PS	VCMT160404-PS	●	●	●	●	●	●	●	●	●	●	●	●	●	0.016	0.375	0.187
		VCMT 332 PS	VCMT160408-PS	●	●	●	●	●	●	●	●	●	●	●	●	●	0.031	0.375	0.187
	TM	**VCMT 220.5 TM**	**VCMT110302-TM**	●	●	●		●	●							●	0.008	0.250	0.125
		VCMT 221 TM	VCMT110304-TM	●	●	●		●	●							●	0.016	0.250	0.125
		VCMT 222 TM	VCMT110308-TM	●	●	●		●	●							●	0.031	0.250	0.125
		VCMT 330.5 TM	**VCMT160402-TM**	●	●	●		●	●							●	0.008	0.375	0.187
		VCMT 331 TM	VCMT160404-TM	●	●	●		●	●							●	0.016	0.375	0.187
		VCMT 332 TM	VCMT160408-TM	●	●	●		●	●							●	0.031	0.375	0.187

● : Line up

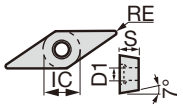
Reference pages: External toolholder → 3-62 -, Internal toolholder → 4-19 -

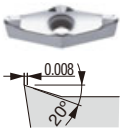
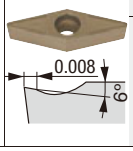
● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

VC

Rhombic, 35°
with hole
Positive 7°

P	Steel	●ⓒ ⓒ✣ ●ⓒ
M	Stainless	●ⓒ ● ⓒ
N	Non-ferrous	●
S	Superalloy	● ⓒ ⓒ ●
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated AH8005	Coated AH8015	Coated AH905	Cermet NS9530	Uncoated KS05F	Dimension (in) RE	IC	S
Finishing to medium cutting for non-ferrous alloys	**AL**	**VCGT 331 AL**	**VCGT160404-AL**							●	0.016	0.375	0.187
		VCGT 332 AL	VCGT160408-AL							●	0.031	0.375	0.187
		VCGT 333 AL	VCGT160412-AL							●	0.047	0.375	0.187
		VCGT 43.55 AL	**VCGT220520-AL**							●	0.078	0.500	0.219
		VCGT 43.57.5 AL	VCGT220530-AL							●	0.118	0.500	0.219
Finishing to medium cutting	**All-round**	**VCMT 331**	**VCMT160404**			●	●	●			0.016	0.375	0.187
		VCMT 332	VCMT160408			●	●	●			0.031	0.375	0.187
		VCMT 333	VCMT160412			●	●	●			0.047	0.375	0.187
Medium cutting	**24**	**VCMT 331-24**	**VCMT160404-24**	●	●				●		0.016	0.375	0.187
		VCMT 332-24	VCMT160408-24	●	●				●		0.031	0.375	0.187

●: Line up

Reference pages: External toolholder → 3-62 -, Internal toolholder → 4-19 -

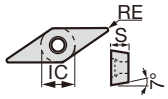
Insert POSITIVE TYPE

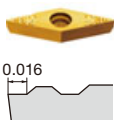
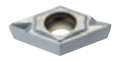
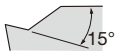
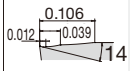
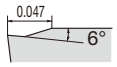
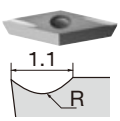
● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

VC

Rhombic, 35°
with hole
Positive 7°

P	Steel						◐	◐	●																
M	Stainless			◐	◐	●			●		●														
N	Non-ferrous								●		●														
S	Superalloy	◐		◐	◐	●																			
H	Hard material			◐			◐																		

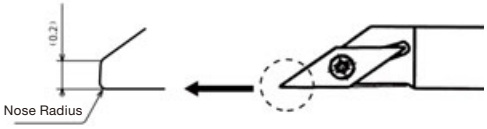


Application	Chipbreaker	Designation Inch	Designation Metric	Coated 650	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	Dimension (in) RE	IC	S
Finishing	**AZ7**	**VCGT2201AZ7**	**VCGT110300AZ7**					●			●	0.001	0.250	0.125
		VCGT2204MAZ7	VCGT110301MAZ7					●			●	0.003	0.250	0.125
		VCGT2208MAZ7	VCGT110302MAZ7					●			●	0.007	0.250	0.125
		VCGT221MAZ7	VCGT110304MAZ7					●			●	0.015	0.250	0.125
Light cut	**TMV**	**VCGT2208MRTMV**	**VCGT110302MRTMV**	●	●	●			●			0.007	0.250	0.125
		VCGT221MRTMV	VCGT110304MRTMV	●	●	●			●			0.015	0.250	0.125
														
	YL	**VCGT2204MYL**	**VCGT110301MYL**	●	●	●	●	●	●			0.003	0.250	0.125
		VCGT2208MYL	VCGT110302MYL	●	●	●	●	●	●			0.007	0.250	0.125
		VCGT221MYL	VCGT110304MYL	●	●	●	●	●	●			0.015	0.250	0.125
														
	AM3	**VCGT2201FNAM3**	**VCGT110300FNAM3**				●		●	●		0.001	0.250	0.125
		VCGT2204MFNAM3	VCGT110301MFNAM3	●	●		●	●	●	●		0.003	0.250	0.125
		VCGT2204FNAM3	VCGT110301FNAM3							●	●	0.004	0.250	0.125
		VCGT2208MFNAM3	VCGT110302MFNAM3	●	●		●	●	●	●		0.007	0.250	0.125
		VCGT2208FNAM3	VCGT110302FNAM3							●	●	0.008	0.250	0.125
		VCGT221MFNAM3	VCGT110304MFNAM3	●	●		●	●	●	●		0.015	0.250	0.125
		VCMT2208FNAM3	VCMT110302FNAM3			●						0.008	0.250	0.125
		VCMT221FNAM3	VCMT110304FNAM3			●						0.016	0.250	0.125
	U	**VCGT2201RU**	**VCGT110300RU**							●	●	0.001	0.250	0.125
		VCGT2204MRU	VCGT110301MRU				●					0.003	0.250	0.125
		VCGT2204RU	VCGT110301RU							●	●	0.004	0.250	0.125
		VCGT2208MRU	VCGT110302MRU				●					0.007	0.250	0.125
		VCGT2208RU	VCGT110302RU							●	●	0.008	0.250	0.125
	UHG	**VCET2203RUHG**	**VCET1103008RUHG**							●		0.003	0.250	0.125
														
	U-WP	**VCGT2202RU-WP**	**VCGT1103005RU-WP**							●	●	0.002	0.250	0.125
		VCGT2204RU-WP	VCGT110301RU-WP							●	●	0.004	0.250	0.125
		VCGT2202RSX-WP	VCGT1103005RSX-WP							●	●	0.002	0.250	0.125
		VCGT2204RSX-WP	VCGT110301RSX-WP							●	●	0.004	0.250	0.125

● : Line up

Features of VCGT-WP insert

NTK WP style inserts have a wiper facet design.
The insert has a 0.2mm flat on the cutting edge when the insert is set into the toolholder.
The flat on the cutting edge ensures a superior surface when feed rates are increased.
WP style inserts can be used in toolholders: SVJC



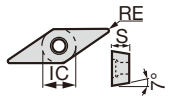
Reference pages: External toolholder → 3-62 -, Internal toolholder → 4-19 -

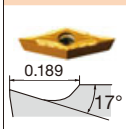
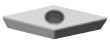
Insert POSITIVE TYPE

VC

Rhombic, 35° with hole Positive 7°

P	Steel	ɔ ɔ
M	Stainless	● ɔ ɔ ● ●
N	Non-ferrous	●
S	Superalloy	ɔ ɔ ●
H	Hard material	ɔ ɔ



Application	Chipbreaker	Designation Inch	Designation Metric	Coated 650	ST4	DM4	DT4	QM3	TM4	Uncoated KM1	RE	IC	S
Medium cutting	CL	VCGT21.508MCL	VCGT110202MCL			●	●	●	●		0.007	0.250	0.094
		VCGT2204MCL	VCGT110301MCL	●	●	●	●	●	●		0.003	0.250	0.125
		VCGT2208MCL	VCGT110302MCL	●	●	●	●	●	●		0.007	0.250	0.125
Non-ferrous	H	VCGW2201H	VCGW110300H							●	0.001	0.250	0.125
		VCGW2204H	VCGW110301H							●	0.004	0.250	0.125
		VCGW2208H	VCGW110302H							●	0.008	0.250	0.125

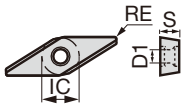
●: Line up

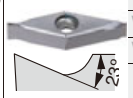
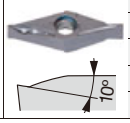
Insert POSITIVE TYPE / DOUBLE SIDED

VX

Rhombic, 35° with hole

P	Steel	ɔ ɔ
M	Stainless	ɔ ɔ
N	Non-ferrous	
S	Superalloy	
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated SH725	RE	IC	S
Finishing (sharp edge)	JRP	VXGU 73.50MFRE-JRP	VXGU09T201MFRE-JRP**	●	<0.004*	0.219	0.109
		VXGU 73.50MFLE-JRP	VXGU09T201MFLE-JRP**	●	<0.004*	0.219	0.109
		VXGU73.50.5MFRE-JRP	VXGU09T202MFRE-JRP**	●	<0.008*	0.219	0.109
		VXGU73.50.5MFLE-JRP	VXGU09T202MFLE-JRP**	●	<0.008*	0.219	0.109
Finishing to medium cutting (sharp edge)	JS	VXGU 73.50MFR-JS	VXGU09T201MFR-JS(1)	●	<0.004*	0.219	0.109
		VXGU 73.50MFL-JS	VXGU09T201MFL-JS(1)	●	<0.004*	0.219	0.109
		VXGU 73.50.5MFR-JS	VXGU09T202MFR-JS(1)	●	<0.008*	0.219	0.109
		VXGU 73.50.5MFL-JS	VXGU09T202MFL-JS(1)	●	<0.008*	0.219	0.109
		VXGU 73.51MFR-JS	VXGU09T204MFR-JS(1)	●	<0.016*	0.219	0.109
		VXGU 73.51MFL-JS	VXGU09T204MFL-JS(1)	●	<0.016*	0.219	0.109

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.
** For external turning applications
(1)Due to chipbreaker profile, max ap for face or ID turning is 0.039".

●: Line up

Reference pages: VC: External toolholder → 3-62 -, Internal toolholder → 4-19 -
VX: External toolholder → 3-78 -

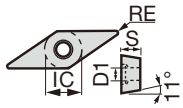
Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

VP

Rhombic, 35°
with hole
Positive 11°

P	Steel	◐ ◐
M	Stainless	◐ ◐
N	Non-ferrous	
S	Superalloy	◐
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated SH725	Coated SH730	Dimension (in) RE	IC	S
Finishing (sharp edge)	JPP	VPET 63X MFR-JPP	VPET0802008MFR-JPP	●	●	<0.0031*	0.187	0.094
		VPET 63X MFL-JPP	VPET0802008MFL-JPP	●		<0.0031*	0.187	0.094
		VPET 630 MFR-JPP	VPET080201MFR-JPP	●	●	<0.004*	0.187	0.094
		VPET 630 MFL-JPP	VPET080201MFL-JPP	●	●	<0.004*	0.187	0.094
		VPET 630.4 MFR-JPP	VPET0802018MFR-JPP	●		<0.007*	0.187	0.094
		VPET 630.4 MFL-JPP	VPET0802018MFL-JPP	●		<0.007*	0.187	0.094
		VPET 630.5 MFR-JPP	VPET080202MFR-JPP	●	●	<0.008*	0.187	0.094
		VPET 630.5 MFL-JPP	VPET080202MFL-JPP	●	●	<0.008*	0.187	0.094
		VPET 22X MFR-JPP	VPET1103008MFR-JPP	●	●	<0.0031*	0.250	0.125
		VPET 220 MFR-JPP	VPET110301MFR-JPP	●	●	<0.004*	0.250	0.125
		VPET 220 MFL-JPP	VPET110301MFL-JPP	●		<0.004*	0.250	0.125
		VPET 220.4 MFR-JPP	VPET1103018MFR-JPP	●	●	<0.007*	0.250	0.125
		VPET 220.5 MFR-JPP	VPET110302MFR-JPP	●	●	<0.008*	0.250	0.125
		VPET 220.5 MFL-JPP	VPET110302MFL-JPP	●	●	<0.008*	0.250	0.125
	JRP	VPET 63X MFR-JRP	VPET0802008MFR-JRP	●	●	<0.0031*	0.187	0.094
		VPET 630 MFR-JRP	VPET080201MFR-JRP	●	●	<0.004*	0.187	0.094
		VPET 630 MFL-JRP	VPET080201MFL-JRP	●	●	<0.004*	0.187	0.094
		VPET 630.4 MFR-JRP	VPET0802018MFR-JRP	●		<0.007*	0.187	0.094
		VPET 630.4 MFL-JRP	VPET0802018MFL-JRP	●		<0.007*	0.187	0.094
		VPET 630.5 MFR-JRP	VPET080202MFR-JRP	●	●	<0.008*	0.187	0.094
		VPET 630.5 MFL-JRP	VPET080202MFL-JRP	●	●	<0.008*	0.187	0.094
		VPET 22X MFR-JRP	VPET1103008MFR-JRP	●	●	<0.0031*	0.250	0.125
		VPET 22X MFL-JRP	VPET1103008MFL-JRP		●	<0.0031*	0.250	0.125
		VPET 220 MFR-JRP	VPET110301MFR-JRP	●	●	<0.004*	0.250	0.125
		VPET 220 MFL-JRP	VPET110301MFL-JRP	●	●	<0.004*	0.250	0.125
		VPET 220.4 MFR-JRP	VPET1103018MFR-JRP	●	●	<0.007*	0.250	0.125
		VPET 220.4 MFL-JRP	VPET1103018MFL-JRP	●		<0.007*	0.250	0.125
		VPET 220.5 MFR-JRP	VPET110302MFR-JRP	●	●	<0.008*	0.250	0.125
		VPET 220.5 MFL-JRP	VPET110302MFL-JRP	●	●	<0.008*	0.250	0.125
	JSP	VPET 63X MFN-JSP	VPET0802008MFN-JSP	●	●	<0.0031*	0.187	0.094
		VPET 630 MFN-JSP	VPET080201MFN-JSP	●	●	<0.004*	0.187	0.094
		VPET 630.4 MFN-JSP	VPET0802018MFN-JSP	●	●	<0.007*	0.187	0.094
		VPET 630.5 MFN-JSP	VPET080202MFN-JSP	●	●	<0.008*	0.187	0.094
		VPET 22X MFN-JSP	VPET1103008MFN-JSP	●	●	<0.0031*	0.250	0.125
		VPET 220 MFN-JSP	VPET110301MFN-JSP	●	●	<0.004*	0.250	0.125
		VPET 220.4 MFN-JSP	VPET1103018MFN-JSP	●	●	<0.007*	0.250	0.125
		VPET 220.5 MFN-JSP	VPET110302MFN-JSP	●	●	<0.008*	0.250	0.125

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

●: Line up

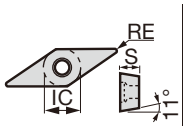
Reference pages: External toolholder → 3-68 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

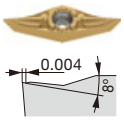
VP

35° Rhombic with hole Positive 11°

P	Steel	●◐
M	Stainless	●◐
N	Non-ferrous	
S	Superalloy	
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated SH7025	RE	IC	S
Precision finishing (sharp edge)	JP	VPGT 22V FN-JP	VPGT110300FN-JP	●	<0.002	0.250	0.125
		VPGT 220 FN-JP	VPGT110301FN-JP	●	<0.004	0.250	0.125
		VPGT 220.5 FN-JP	VPGT110302FN-JP	●	<0.008	0.250	0.125
Finishing (sharp edge)	JS	VPGT 22V FN-JS	VPGT110300FN-JS	●	<0.002	0.250	0.125
		VPGT 220 FN-JS	VPGT110301FN-JS	●	<0.004	0.250	0.125
		VPGT 220.5 FN-JS	VPGT110302FN-JS	●	<0.008	0.250	0.125
		VPGT 221 FN-JS	VPGT110304FN-JS	●	<0.016	0.250	0.125



Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

Reference pages: External toolholder → 3-68 -

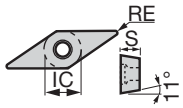
Insert POSITIVE TYPE

● : Continuous cutting
ᑕ : Light interrupted cutting
✣ : Heavy interrupted cutting

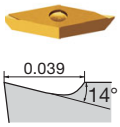
VP

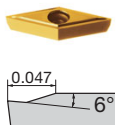
Rhombic,35°
with hole
Positive 11°

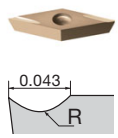
P	Steel	●ᑕ ● ●ᑕ ●ᑕ ●
M	Stainless	●ᑕ ● ● ●
N	Non-ferrous	●
S	Superalloy	●
H	Hard material	●ᑕ



Application	Chipbreaker	Designation Inch	Designation Metric	Coated ST4	DT4	QM3	TM4	VM1	Dimension (in) RE	IC	S
Finishing	KHG	VPET1.51.502LKHG	VPET0802005LKHG					●	0.002	0.187	0.094
		VPEP6303RKHG	VPET0802008RKHG		●		●	●	0.003	0.187	0.094
		VPET1.51.503LKHG	VPET0802008LKHG					●	0.003	0.187	0.094
		VPET1.51.507RKHG	VPET0802018RKHG				●	●	0.007	0.187	0.094
		VPET1.51.507LKHG	VPET0802018LKHG					●	0.007	0.187	0.094
		VPET1.51.508RKHG	VPET080202RKHG				●	●	0.008	0.187	0.094
		VPET1.51.508LKHG	VPET080202LKHG					●	0.008	0.187	0.094
		VPET2202RKHG	VPET1103005RKHG				●	●	0.002	0.250	0.125
		VPET2202LKHG	VPET1103005LKHG					●	0.002	0.250	0.125
		VPET2203RKHG	VPET1103008RKHG				●	●	0.003	0.250	0.125
		VPET2203LKHG	VPET1103008LKHG					●	0.003	0.250	0.125
		VPET2207RKHG	VPET1103018RKHG				●	●	0.007	0.250	0.125
		VPET2207LKHG	VPET1103018LKHG					●	0.007	0.250	0.125
		VPET2208RKHG	VPET110302RKHG				●	●	0.008	0.250	0.125
		VPET2208LKHG	VPET110302LKHG					●	0.008	0.250	0.125
Light cutting	AM3	VPGT2201FNAM3	VPGT110300FNAM3		●		●		0.001	0.250	0.125
		VPGT2204MFNAM3	VPGT110301MFNAM3	●	●	●	●		0.003	0.250	0.125
		VPGT2208MFNAM3	VPGT110302MFNAM3	●	●	●	●		0.007	0.250	0.125
	UHG	VPEP6303LUHG	VPET0802008LUHG		●				0.003	0.187	0.094
		VPEP6303RUHG	VPET0802008RUHG		●				0.003	0.187	0.094







● : Line up

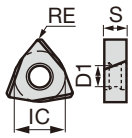
Reference pages: External toolholder → 3-68 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

WB

Trigon, 80°
with hole
Positive 5°

P	Steel	● ●ⓒ ●ⓒ ●ⓒ ●ⓒ ● ⓒ
M	Stainless	● ●ⓒ ●ⓒ ●ⓒ ●ⓒ ● ⓒ
N	Non-ferrous	●
S	Superalloy	● ●ⓒ
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated GH110	Coated SH7025	Coated SH725	Coated SH730	Cermet NS9530	Uncoated TH10	Uncoated UX30	Dimension (in) RE	IC	S
Finishing (sharp edge)	JS	WBGT 520 FR-JS	WBGT030101FR-JS		●	●					<0.004*	0.156	0.063
		WBGT 520 FL-JS	WBGT030101FL-JS		●	●					<0.004*	0.156	0.063
		WBGT 520.5 FR-JS	WBGT030102FR-JS		●	●					<0.008*	0.156	0.063
		WBGT 520.5 FL-JS	WBGT030102FL-JS		●	●					<0.008*	0.156	0.063
		WBGT 521 FR-JS	WBGT030104FR-JS		●	●					<0.016*	0.156	0.063
		WBGT 521 FL-JS	WBGT030104FL-JS		●	●					<0.016*	0.156	0.063
Finishing	JS	WBGT 520 R-JS	WBGT030101R-JS				●				<0.004	0.156	0.063
		WBGT 520 L-JS	WBGT030101L-JS				●				<0.004	0.156	0.063
		WBGT 520.5 R-JS	WBGT030102R-JS				●				<0.008	0.156	0.063
		WBGT 520.5 L-JS	WBGT030102L-JS				●				<0.008	0.156	0.063
		WBGT 521 R-JS	WBGT030104R-JS				●				<0.016	0.156	0.063
		WBGT 521 L-JS	WBGT030104L-JS				●				<0.016	0.156	0.063
Finishing (sharp edge)	W08	WBGT 52V FR-W08	WBGT030100FL-W08		●	●					0.0012	0.156	0.063
		WBGT 52V FL-W08	WBGT030100FR-W08			●					0.0012	0.156	0.063
		WBGT 520 FR-W08	WBGT030101FL-W08		●	●					0.004	0.156	0.063
		WBGT 520 FL-W08	WBGT030101FR-W08			●					0.004	0.156	0.063
		WBGT 520.5 FR-W08	WBGT030102FL-W08		●	●					0.008	0.156	0.063
		WBGT 520.5 FL-W08	WBGT030102FR-W08		●	●					0.008	0.156	0.063
		WBGT 521 FR-W08	WBGT030104FL-W08		●	●					0.016	0.156	0.063
		WBGT 521 FL-W08	WBGT030104FR-W08		●	●					0.016	0.156	0.063
Finishing	W08	WBGT 52V R-W08	WBGT030100R-W08				●				0.0012	0.156	0.063
		WBGT 52V L-W08	WBGT030100L-W08				●	●	●	●	0.0012	0.156	0.063
		WBGT 520 R-W08	WBGT030101R-W08				●				0.004	0.156	0.063
		WBGT 520 L-W08	WBGT030101L-W08				●		●		0.004	0.156	0.063
		WBGT 520.5 R-W08	WBGT030102R-W08				●				0.008	0.156	0.063
		WBGT 520.5 L-W08	WBGT030102L-W08	●			●	●	●	●	0.008	0.156	0.063
		WBGT 521 R-W08	WBGT030104R-W08				●				0.016	0.156	0.063
		WBGT 521 L-W08	WBGT030104L-W08	●			●	●	●	●	0.016	0.156	0.063
	W11	WBGT 520.5 L-W11	WBGT060102L-W11	●				●			0.008	0.156	0.063
		WBGT 521 L-W11	WBGT060104L-W11					●			0.016	0.156	0.063
		WBGT 630.5 L-W11	WBGT080202L-W11					●			0.008	0.187	0.094
		WBGT 631 L-W11	WBGT080204L-W11					●			0.016	0.187	0.094

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

●: Line up

Reference pages: Internal toolholder → 4-23

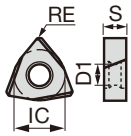
Insert POSITIVE TYPE / DOUBLE SIDED

● : Continuous cutting
ɔ : Light interrupted cutting
✠ : Heavy interrupted cutting

WX

Trigon, 80° with hole

P	Steel	ɔ			●ɔ			●ɔ				●ɔ													
M	Stainless	ɔ		ɔ	●ɔ																				
N	Non-ferrous															●									
S	Superalloy	●		ɔ												●									
H	Hard material																								



Application	Chipbreaker	Designation Inch	Designation Metric	Coated AH725	Coated AH8015	Coated SH725	Coated cermet GT9530	Cermet NS9530	Uncoated KS05F	Dimension (in) RE	IC	S
Finishing	JSS	WXGU 220MFR JSS	WXGU040301MFR-JSS			●				<0.004*	0.250	0.125
		WXGU 220MFL JSS	WXGU040301MFL-JSS			●				<0.004*	0.250	0.125
		WXGU 220.5MFR JSS	WXGU040302MFR-JSS			●				<0.008*	0.250	0.125
		WXGU 220.5MFL JSS	WXGU040302MFL-JSS			●				<0.008*	0.250	0.125
	JSS	WXGU 220MR JSS	WXGU040301MR-JSS	●						<0.004*	0.250	0.125
		WXGU 220ML JSS	WXGU040301ML-JSS	●						<0.004*	0.250	0.125
		WXGU 220.5MR JSS	WXGU040302MR-JSS	●						<0.008*	0.250	0.125
		WXGU 220.5ML JSS	WXGU040302ML-JSS	●						<0.008*	0.250	0.125
Finishing to medium cutting	SS	WXGU 220.5R SS	WXGU040302R-SS	●	●		●	●	●	0.008	0.250	0.125
		WXGU 220.5L SS	WXGU040302L-SS	●	●		●	●	●	0.008	0.250	0.125
		WXGU 221R SS	WXGU040304R-SS	●	●		●	●	●	0.016	0.250	0.125
		WXGU 221L SS	WXGU040304L-SS	●	●		●	●	●	0.016	0.250	0.125
Finishing	TSW	WXGU 221R TSW	WXGU040304R-TSW	●	●		●	●		0.016	0.250	0.125
		WXGU 221L TSW	WXGU040304L-TSW	●	●		●	●		0.016	0.250	0.125
		WXGU 222R TSW	WXGU040308R-TSW	●	●		●	●		0.031	0.250	0.125
		WXGU 222L TSW	WXGU040308L-TSW	●	●		●	●		0.031	0.250	0.125
Finishing to medium cutting (sharp edge)	JS	WXGU 220MFR JS	WXGU040301MFR-JS(1)			●				<0.004*	0.250	0.125
		WXGU 220MFL JS	WXGU040301MFL-JS(1)			●				<0.004*	0.250	0.125
		WXGU 220.5MFR JS	WXGU040302MFR-JS(1)			●				<0.008*	0.250	0.125
		WXGU 220.5MFL JS	WXGU040302MFL-JS(1)			●				<0.008*	0.250	0.125
		WXGU 221MFR JS	WXGU040304MFR-JS(1)			●				<0.016*	0.250	0.125
		WXGU 221MFL JS	WXGU040304MFL-JS(1)			●				<0.016*	0.250	0.125
Finishing to medium cutting (sharp edge)	JTS	WXGU 220MFR JTS	WXGU040301MFR-JTS			●				<0.004*	0.250	0.125
		WXGU 220MFL JTS	WXGU040301MFL-JTS			●				<0.004*	0.250	0.125
		WXGU 220.5MFR JTS	WXGU040302MFR-JTS			●				<0.008*	0.250	0.125
		WXGU 220.5MFL JTS	WXGU040302MFL-JTS			●				<0.008*	0.250	0.125
Finishing to medium cutting	JTS	WXGU 220MR JTS	WXGU040301MR-JTS	●						<0.004*	0.250	0.125
		WXGU 220ML JTS	WXGU040301ML-JTS	●						<0.004*	0.250	0.125
		WXGU 220.5MR JTS	WXGU040302MR-JTS	●						<0.008*	0.250	0.125
		WXGU 220.5ML JTS	WXGU040302ML-JTS	●						<0.008*	0.250	0.125
	TS	WXGU 220.5R TS	WXGU040302R-TS	●	●		●	●	●	0.008	0.250	0.125
		WXGU 220.5L TS	WXGU040302L-TS	●	●		●	●	●	0.008	0.250	0.125
		WXGU 221R TS	WXGU040304R-TS	●	●		●	●	●	0.016	0.250	0.125
		WXGU 221L TS	WXGU040304L-TS	●	●		●	●	●	0.016	0.250	0.125
		WXGU 222R TS	WXGU040308R-TS	●	●		●	●	●	0.031	0.250	0.125
		WXGU 222L TS	WXGU040308L-TS	●	●		●	●	●	0.031	0.250	0.125

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.
(1) Due to chipbreaker profile, max ap for face or ID turning is 0.039".

●: Line up

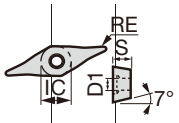
Reference pages: External toolholder → 3-72 -, Internal toolholder → 4-35

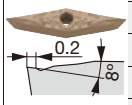
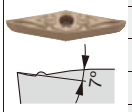
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

YW

Rhombic, 25° with hole Positive 7°

P	Steel	●ɔ ɔ✣ ɔ ✣
M	Stainless	●ɔ ● ɔ ●ɔ
N	Non-ferrous	
S	Superalloy	ɔ
H	Hard material	

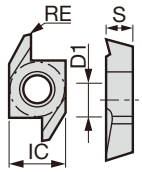


Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated T6215	Coated AH8015	Coated AH6225	Coated cermet GT9530	Cermet NS9530	Dimension (in) RE	IC	S
Finishing to medium cutting	ZF	-	YWMT11T202-ZF	●	●	●	●	●	●	●	0.008	0.184	0.109
		-	YWMT11T204-ZF	●	●	●	●	●	●	●	0.016	0.184	0.109
		-	YWMT16T302-ZF	●	●	●	●	●	●	●	0.008	0.276	0.156
		-	YWMT16T304-ZF	●	●	●	●	●	●	●	0.016	0.276	0.156
		-	YWMT16T308-ZF	●	●	●	●	●	●	●	0.031	0.276	0.156
	ZM	-	YWMT11T202-ZM	●	●	●	●	●	●	●	0.008	0.184	0.109
		-	YWMT11T204-ZM	●	●	●	●	●	●	●	0.016	0.184	0.109
		-	YWMT16T302-ZM	●	●	●	●	●	●	●	0.008	0.276	0.156
		-	YWMT16T304-ZM	●	●	●	●	●	●	●	0.016	0.276	0.156
		-	YWMT16T308-ZM	●	●	●	●	●	●	●	0.031	0.276	0.156

J10E

Back turning

P	Steel	●ɔ
M	Stainless	●ɔ
N	Non-ferrous	
S	Superalloy	
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated SH7025	Dimension (in) RE	IC	S
Back turning	-	-	J10ER005BF	●	0.002	0.250	0.125
		-	J10EL005BF	●	0.002	0.250	0.125
		-	J10ER010BF	●	0.004	0.250	0.125
		-	J10EL010BF	●	0.004	0.250	0.125
		-	J10EL015BF	●	0.006	0.250	0.125
		-	J10ER015BF	●	0.006	0.250	0.125

●: Line up

Reference pages: YW: External toolholder → 3-97 -, Internal toolholder → 4-22 -
J10E: External toolholder → 3-108

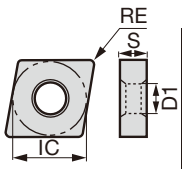
Insert NEGATIVE TYPE

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

CN

Rhombic, 80° with hole

		T9205	T9215	T9225	T9235	T6215	AH8015	AH6225	AH120	GT9530	AT9530	NS9530	NS520	TH10
P	Steel	●	●ɔ	ɔ✣	✣	ɔ		ɔ✣	●ɔ					●
M	Stainless		●ɔ			●	ɔ	●ɔ	●ɔ					●
N	Non-ferrous													●
S	Superalloy						ɔ		●ɔ					
H	Hard material													



Application	Chipbreaker	Designation Inch	Designation Metric	RE	IC	S
Finishing	TF	CNMG 330.5E TF	CNMG090402E-TF	0.008	0.375	0.187
		CNMG 331E TF	CNMG090404E-TF	0.016	0.375	0.187
		CNMG 332E TF	CNMG090408E-TF	0.031	0.375	0.187
		CNMG 430.5 TF	CNMG120402-TF	0.008	0.500	0.187
		CNMG 431 TF	CNMG120404-TF	0.016	0.500	0.187
		CNMG 432 TF	CNMG120408-TF	0.031	0.500	0.187
	TSF	CNMG 330.5E TSF	CNMG090402E-TSF	0.008	0.375	0.187
		CNMG 331E TSF	CNMG090404E-TSF	0.016	0.375	0.187
		CNMG 332E TSF	CNMG090408E-TSF	0.031	0.375	0.187
		CNMG 430.5 TSF	CNMG120402-TSF	0.008	0.500	0.187
		CNMG 431 TSF	CNMG120404-TSF	0.016	0.500	0.187
		CNMG 432 TSF	CNMG120408-TSF	0.031	0.500	0.187
		CNMG 433 TSF	CNMG120412-TSF	0.047	0.500	0.187
	PS	CNMG 330.5E PS	CNMG090402E-PS	0.008	0.375	0.187
		CNMG 331E PS	CNMG090404E-PS	0.016	0.375	0.187
		CNMG 332E PS	CNMG090408E-PS	0.031	0.375	0.187
		CNMG 430.5 PS	CNMG120402-PS	0.008	0.500	0.187
		CNMG 431 PS	CNMG120404-PS	0.016	0.500	0.187
		CNMG 432 PS	CNMG120408-PS	0.031	0.500	0.187
		CNMG 433 PS	CNMG120412-PS	0.047	0.500	0.187
Finishing for mild steel	ZF	CNMG 330.5E ZF	CNMG090402E-ZF	0.008	0.375	0.187
		CNMG 331E ZF	CNMG090404E-ZF	0.016	0.375	0.187
		CNMG 332E ZF	CNMG090408E-ZF	0.031	0.375	0.187
		CNMG 430.5 ZF	CNMG120402-ZF	0.008	0.500	0.187
		CNMG 431 ZF	CNMG120404-ZF	0.016	0.500	0.187
		CNMG 432 ZF	CNMG120408-ZF	0.031	0.500	0.187
		CNMG 433 ZF	CNMG120412-ZF	0.047	0.500	0.187
Finishing	AS	CNMG 431 AS	CNMG120404-AS	0.016	0.500	0.187
		CNMG 432 AS	CNMG120408-AS	0.031	0.500	0.187
		CNMG 433 AS	CNMG120412-AS	0.047	0.500	0.187
	NS	CNMG 431 NS	CNMG120404-NS	0.016	0.500	0.187
		CNMG 432 NS	CNMG120408-NS	0.031	0.500	0.187
	TS	CNMG 330.5E TS	CNMG090402E-TS	0.008	0.375	0.187
		CNMG 331E TS	CNMG090404E-TS	0.016	0.375	0.187
		CNMG 332E TS	CNMG090408E-TS	0.031	0.375	0.187
		CNMG 430.5 TS	CNMG120402-TS	0.008	0.500	0.187
		CNMG 431 TS	CNMG120404-TS	0.016	0.500	0.187
		CNMG 432 TS	CNMG120408-TS	0.031	0.500	0.187
		CNMG 433 TS	CNMG120412-TS	0.047	0.500	0.187

	Coated								Coated cermet		Cermet		Uncoated
	T9205	T9215	T9225	T9235	T6215	AH8015	AH6225	AH120	GT9530	AT9530	NS9530	NS520	TH10
TF		●	●		●	●	●				●		
TSF		●	●		●	●	●	●	●		●		
PS		●	●		●	●	●				●		
ZF		●	●		●	●	●				●		
AS	●	●	●								●		
NS											●		
TS		●	●		●	●	●		●		●		

● : Line up

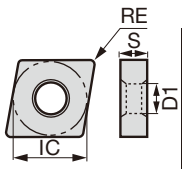
Reference pages: External toolholder → 3-89 -

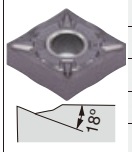
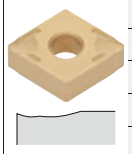
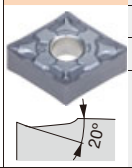
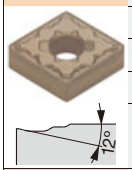
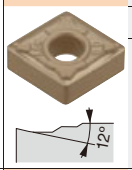
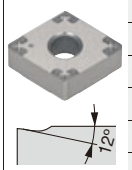
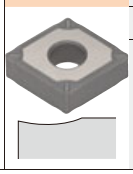
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

CN

Rhombic, 80° with hole

P	Steel	● ●ɔ ɔ✣ ✣ ɔ ✣ ✣ ɔ✣ ✣ ● ●ɔ ●ɔ ●ɔ ●ɔ ●ɔ ●ɔ ●
M	Stainless	●ɔ ● ● ɔ ɔ ɔ ●ɔ ✣ ● ●ɔ ●ɔ ●
N	Non-ferrous	●
S	Superalloy	● ɔ ● ●ɔ
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9205	T9215	T9225	T9235	T6215	AH8005	AH8015	AH6225	AH6235	AH110	AH120	GH330	Coated cermet GT9530	GT720	Cermet NS9530	NS520	Un-coated TH10	Dimension (in) RE	IC	S
Finishing	**SF**	**CNMG 321 SF**	**CNMG090304-SF**					●			●										0.016	0.375	0.125
		CNMG 322 SF	CNMG090308-SF					●			●										0.031	0.375	0.125
		CNMG 431 SF	**CNMG120404-SF**					●			●										0.016	0.500	0.187
		CNMG 432 SF	CNMG120408-SF					●			●										0.031	0.500	0.187
		CNMG 433 SF	CNMG120412-SF					●			●										0.047	0.500	0.187
	SS	**CNMG 331E SS**	**CNMG090404E-SS**								●	●									0.016	0.375	0.187
		CNMG 332E SS	CNMG090408E-SS								●	●									0.031	0.375	0.187
		CNMG 431 SS	**CNMG120404-SS**					●			●	●		●	●						0.016	0.500	0.187
		CNMG 432 SS	CNMG120408-SS					●			●	●		●	●						0.031	0.500	0.187
		CNMG 433 SS	CNMG120412-SS					●			●	●			●						0.047	0.500	0.187
	HRF	**CNMG 431 HRF**	**CNMG120404-HRF**						●	●											0.016	0.500	0.187
		CNMG 432 HRF	CNMG120408-HRF						●	●											0.031	0.500	0.187
		CNMG 433 HRF	CNMG120412-HRF						●	●											0.047	0.500	0.187
Finishing (wiper)	**FW**	**CNMG 331E FW**	**CNMG090404E-FW**	●	●	●										●		●			0.016	0.375	0.187
		CNMG 332E FW	CNMG090408E-FW	●	●	●										●		●			0.031	0.375	0.187
		CNMG 431 FW	**CNMG120404-FW**		●											●		●			0.016	0.500	0.187
		CNMG 432 FW	CNMG120408-FW	●	●	●										●		●			0.031	0.500	0.187
	AFW	**CNMG 431 AFW**	**CNMG120404-AFW**		●	●										●					0.016	0.500	0.187
		CNMG 432 AFW	CNMG120408-AFW	●	●	●	●									●					0.031	0.500	0.187
Finishing	**01**	**CNGG 320.5-01**	**CNGG090302-01**																		0.008	0.375	0.125
		CNGG 321-01	CNGG090304-01																		0.016	0.375	0.125
		CNGG 322-01	CNGG090308-01																		0.031	0.375	0.125
		CNGG 430-01	**CNGG120401-01**										●								0.004	0.500	0.187
		CNGG 430.5-01	CNGG120402-01										●						●	●	0.008	0.500	0.187
		CNGG 431-01	CNGG120404-01										●						●	●	0.016	0.500	0.187
		CNGG 432-01	CNGG120408-01										●						●	●	0.031	0.500	0.187
	11	**CNMG 431-11**	**CNMG120404-11**													●				●	0.016	0.500	0.187
		CNMG 432-11	CNMG120408-11													●	●			●	0.031	0.500	0.187

* Please see Tungaloy General Catalog vol.5 **L011 - L015** about the adjustment of the machining program for rounding or taper machining by using SW/FW.
Please contact our sales representatives if you have any question.

● : Line up

Reference pages: External toolholder → 3-89 -

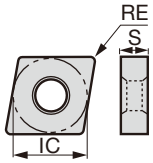
Insert NEGATIVE TYPE

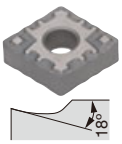
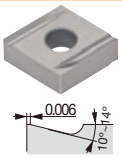
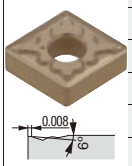
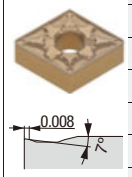
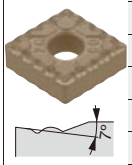
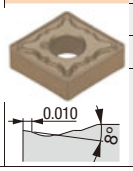
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

CN

Rhombic, 80° with hole

		T9205	T9215	T9225	T9235	T6215	AH8015	AH6225	AH6235	AH725	AH110	AH120	GH110	GT9530	NS9530
P	Steel	●	●ɔ	ɔ✣	✣	ɔ		ɔ✣	✣	ɔ	●	●ɔ	●	●ɔ	●ɔ
M	Stainless		●ɔ			●	ɔ	●ɔ	✣	ɔ	●	●ɔ	●		
N	Non-ferrous														
S	Superalloy						ɔ			●	●	●ɔ	●		
H	Hard material														



Application	Chipbreaker	Designation Inch	Designation Metric	Coated												Coated cermet		Cermet		Dimension (in)		
				T9205	T9215	T9225	T9235	T6215	AH8015	AH6225	AH6235	AH725	AH110	AH120	GH110	GT9530		NS9530		RE	IC	S
Finishing for mild steel	17	CNMG 431-17	CNMG120404-17															●		0.016	0.500	0.187
		CNMG 432-17	CNMG120408-17															●		0.031	0.500	0.187
Finishing	C	CNGG 431 R-C	CNGG120404R-C												●			●		0.016	0.500	0.187
		CNGG 431 L-C	CNGG120404L-C															●		0.016	0.500	0.187
		CNGG 432 R-C	CNGG120408R-C															●		0.031	0.500	0.187
		CNGG 432 L-C	CNGG120408L-C															●		0.031	0.500	0.187
Medium cutting	TM	CNMG 321 TM	CNMG090304-TM		●	●														0.016	0.375	0.125
		CNMG 322 TM	CNMG090308-TM		●	●	●													0.031	0.375	0.125
		CNMG 331E TM	CNMG090404E-TM		●	●		●	●	●				●						0.016	0.375	0.187
		CNMG 332E TM	CNMG090408E-TM		●	●		●	●	●				●						0.031	0.375	0.187
		CNMG 333E TM	CNMG090412E-TM		●	●		●	●	●				●						0.047	0.375	0.187
		CNMG 431 TM	CNMG120404-TM	●	●	●	●	●	●	●	●			●						0.016	0.500	0.187
		CNMG 432 TM	CNMG120408-TM	●	●	●	●	●	●	●	●	●	●	●						0.031	0.500	0.187
		CNMG 433 TM	CNMG120412-TM	●	●	●	●	●	●	●	●		●	●						0.047	0.500	0.187
		CNMG 434 TM	CNMG120416-TM		●	●	●	●	●	●	●			●						0.063	0.500	0.187
		CNMG 542 TM	CNMG160608-TM		●															0.031	0.625	0.250
		CNMG 543 TM	CNMG160612-TM	●	●	●	●							●						0.047	0.625	0.250
		CNMG 642 TM	CNMG190608-TM	●	●	●	●							●						0.031	0.750	0.250
		CNMG 643 TM	CNMG190612-TM	●	●	●	●							●						0.047	0.750	0.250
	PM	CNMG 331E PM	CNMG090404E-PM		●	●		●	●	●										0.016	0.375	0.187
		CNMG 332E PM	CNMG090408E-PM		●	●		●	●	●										0.031	0.375	0.187
		CNMG 333E PM	CNMG090412E-PM		●	●		●	●	●										0.047	0.375	0.187
		CNMG 431-PM	CNMG120404-PM		●	●		●	●	●										0.016	0.500	0.187
		CNMG 432-PM	CNMG120408-PM		●	●		●	●	●										0.031	0.500	0.187
		CNMG 433-PM	CNMG120412-PM		●	●		●	●	●										0.047	0.500	0.187
		CNMG 434-PM	CNMG120416-PM		●	●		●	●	●										0.063	0.500	0.187
Medium cutting for mild steel	ZM	CNMG 331E ZM	CNMG090404E-ZM		●	●		●	●	●										0.016	0.375	0.187
		CNMG 332E ZM	CNMG090408E-ZM		●	●		●	●	●										0.031	0.375	0.187
		CNMG 333E ZM	CNMG090412E-ZM		●	●		●	●	●										0.047	0.375	0.187
		CNMG 431 ZM	CNMG120404-ZM		●	●		●	●	●										0.016	0.500	0.187
		CNMG 432 ZM	CNMG120408-ZM		●	●	●	●	●	●						●		●		0.031	0.500	0.187
		CNMG 433 ZM	CNMG120412-ZM		●	●	●	●	●	●						●				0.047	0.500	0.187
		CNMG 434 ZM	CNMG120416-ZM		●	●		●	●	●										0.063	0.500	0.187
Medium cutting	AM	CNMG 432 AM	CNMG120408-AM		●	●														0.031	0.500	0.187
		CNMG 433 AM	CNMG120412-AM		●	●														0.047	0.500	0.187
		CNMG 434 AM	CNMG120416-AM		●	●														0.063	0.500	0.187

● : Line up

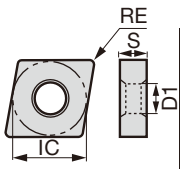
Reference pages: External toolholder → 3-89 -

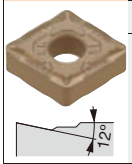
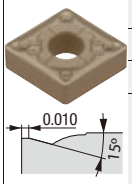
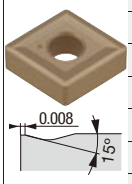
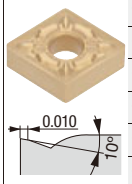
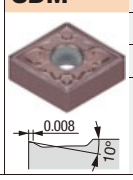
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

CN

Rhombic, 80° with hole

P	Steel	●	●ɔ	ɔ✣	✣	ɔ			ɔ✣	✣		ɔ	●	●ɔ	●ɔ	●ɔ	●ɔ	●ɔ	●		
M	Stainless		●ɔ			●	●	ɔ	●ɔ	✣		ɔ	●	●ɔ					●		
N	Non-ferrous																		●		
S	Superalloy						●	ɔ			ɔ	●	●	●ɔ							
H	Hard material																				



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9205	T9215	T9225	T9235	T6215	AH8005	AH8015	AH6225	AH6235	AH905	AH725	AH110	AH120	Coated cermet GT9530	GT720	Cermet NS9530	NS520	Un-coated TH10		Dimension (in) RE	IC	S
Medium cutting	**NM**	**CNMG 432 NM**	**CNMG120408-NM**	●	●	●	●												●				0.031	0.500	0.187
		CNMG 433 NM	CNMG120412-NM		●	●	●																0.047	0.500	0.187
	DM	**CNMG 431 DM**	**CNMG120404-DM**		●	●		●		●	●												0.016	0.500	0.187
		CNMG 432 DM	CNMG120408-DM	●	●	●	●	●		●	●												0.031	0.500	0.187
		CNMG 433 DM	CNMG120412-DM	●	●	●	●	●		●	●												0.047	0.500	0.187
		CNMG 434 DM	CNMG120416-DM		●	●		●		●	●												0.063	0.500	0.187
	All-round	**CNMG 321**	**CNMG090304**		●	●												●					0.016	0.375	0.125
		CNMG 322	CNMG090308	●	●	●	●											●	●				0.031	0.375	0.125
		CNMG 431	**CNMG120404**	●	●	●	●								●	●	●		●		●		0.016	0.500	0.187
		CNMG 432	CNMG120408	●	●	●	●								●	●	●		●	●	●		0.031	0.500	0.187
		CNMG 433	CNMG120412	●	●	●	●								●	●				●	●		0.047	0.500	0.187
		CNMG 434	CNMG120416	●	●	●	●																0.063	0.500	0.187
		CNMG 542	**CNMG160608**	●	●	●	●									●							0.031	0.625	0.250
		CNMG 543	CNMG160612	●	●	●	●									●							0.047	0.625	0.250
		CNMG 544	CNMG160616	●	●	●	●																0.063	0.625	0.250
		CNMG 642	**CNMG190608**		●	●	●																0.031	0.750	0.250
		CNMG 643	CNMG190612	●	●	●	●									●							0.047	0.750	0.250
		CNMG 644	CNMG190616		●	●	●									●							0.063	0.750	0.250
	SM	**CNMG 331E SM**	**CNMG090404E-SM**					●			●														
		CNMG 332E SM	CNMG090408E-SM					●			●														
		CNMG 333E SM	CNMG090412E-SM					●			●														
		CNMG 431 SM	**CNMG120404-SM**					●			●	●		●											
		CNMG 432 SM	CNMG120408-SM					●			●	●	●	●											
		CNMG 433 SM	CNMG120412-SM					●			●	●		●											
		CNMG 543 SM	**CNMG160612-SM**					●			●														
		CNMG 544 SM	CNMG160616-SM								●														
		CNMG 643 SM	**CNMG190612-SM**								●														
		CNMG 644 SM	CNMG190616-SM								●														
	SDM	**CNMG 431 SDM**	**CNMG120404-SDM**					●	●	●	●	●													
		CNMG 432 SDM	CNMG120408-SDM					●	●	●	●	●													
		CNMG 433 SDM	CNMG120412-SDM					●	●	●	●	●													

● : Line up

Reference pages: External toolholder → 3-89 -

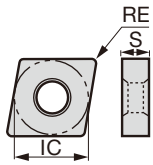
Insert NEGATIVE TYPE

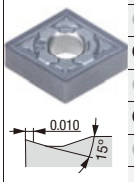
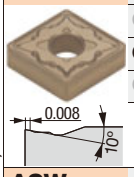
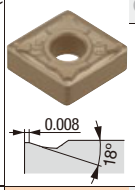
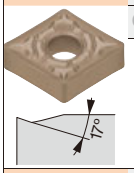
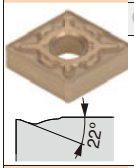
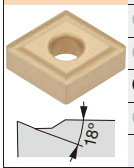
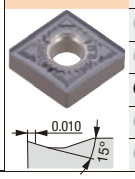
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

CN

Rhombic, 80° with hole

		T9205	T9215	T9225	T6215	AH8005	AH8015	AH6225	AH6235	AH905	AH110	AH120	GT9530	AT9530	NS9530	KS05F	KS20
P	Steel	●	●ɔ	ɔ✣	ɔ			ɔ✣	✣		●	●ɔ	●ɔ	●ɔ		●ɔ			
M	Stainless		●ɔ		●	●	ɔ	●ɔ	✣		●	●ɔ							
N	Non-ferrous															●	ɔ✣
S	Superalloy					●	ɔ			ɔ	●	●ɔ				●	ɔ✣
H	Hard material																



Application	Chipbreaker	Designation Inch	Designation Metric	Coated											Coated cermet		Cermet	Uncoated		Dimension (in)		
				T9205	T9215	T9225	T6215	AH8005	AH8015	AH6225	AH6235	AH905	AH110	AH120	GT9530	AT9530	NS9530	KS05F	KS20	RE	IC	S
Medium cutting	**HRM**	**CNMG 431 HRM**	**CNMG120404-HRM**					●	●											0.016	0.500	0.187
		CNMG 432 HRM	CNMG120408-HRM					●	●											0.031	0.500	0.187
		CNMG 433 HRM	CNMG120412-HRM					●	●											0.047	0.500	0.187
		CNMG 542 HRM	**CNMG160608-HRM**					●	●											0.031	0.625	0.250
		CNMG 543 HRM	CNMG160612-HRM					●	●											0.047	0.625	0.250
		CNMG 643 HRM	**CNMG190612-HRM**					●	●											0.047	0.750	0.250
		CNMG 644 HRM	CNMG190616-HRM					●	●											0.063	0.750	0.250
Medium cutting (wiper)	**SW**	**CNMG 332E SW**	**CNMG090408E-SW**	●	●	●														0.031	0.375	0.187
		CNMG 333E SW	CNMG090412E-SW	●	●	●														0.047	0.375	0.187
		CNMG 432 SW	**CNMG120408-SW**	●	●	●														0.031	0.500	0.187
		CNMG 433 SW	CNMG120412-SW	●	●	●														0.047	0.500	0.187
	*Wiper																					
	ASW	**CNMG 432 ASW**	**CNMG120408-ASW**	●	●	●											●			0.031	0.500	0.187
		CNMG 433 ASW	CNMG120412-ASW	●	●	●														0.047	0.500	0.187
Medium cutting	**TQ**	**CNMG 431 TQ**	**CNMG120404-TQ**		●	●									●	●	●			0.016	0.500	0.187
		CNMG 432 TQ	CNMG120408-TQ		●	●									●	●	●			0.031	0.500	0.187
	TA	**CNMG 432 TA**	**CNMG120408-TA**		●	●														0.031	0.500	0.187
		CNMG 433 TA	CNMG120412-TA		●	●														0.047	0.500	0.187
	SA	**CNMG 431 SA**	**CNMG120404-SA**				●			●	●		●	●						0.016	0.500	0.187
		CNMG 432 SA	CNMG120408-SA				●			●	●		●	●				●		0.031	0.500	0.187
		CNMG 433 SA	CNMG120412-SA				●			●	●		●	●				●		0.047	0.500	0.187
		CNMG 643 SA	**CNMG190612-SA**											●				●		0.047	0.750	0.250
		CNMG 644 SA	CNMG190616-SA											●				●		0.063	0.750	0.250
	HMM	**CNMG 431 HMM**	**CNMG120404-HMM**									●								0.016	0.500	0.187
		CNMG 432 HMM	CNMG120408-HMM									●						●		0.031	0.500	0.187
		CNMG 433 HMM	CNMG120412-HMM									●								0.047	0.500	0.187
		CNMG 542 HMM	**CNMG160608-HMM**									●								0.031	0.625	0.250
		CNMG 543 HMM	CNMG160612-HMM									●								0.047	0.625	0.250
		CNMG 544 HMM	CNMG160616-HMM									●								0.063	0.625	0.250

* Please see **L011 - L015** about the adjustment of the machining program for rounding or taper machining when using SW/FW.
Please contact our sales representatives if you have any questions.

● : Line up

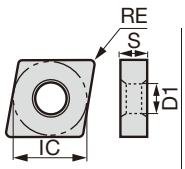
Reference pages: External toolholder → 3-89 -

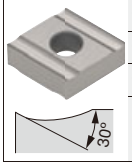
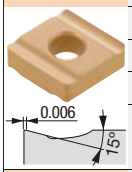
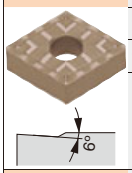
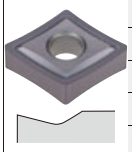
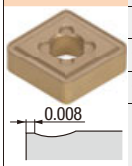
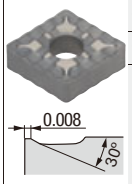
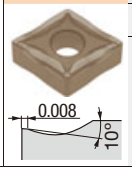
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

CN

Rhombic, 80° with hole

P	Steel	●ɔ ●ɔ✣ ✣ ɔ✣ ✣ ɔ ● ●ɔ ●ɔ ● ●ɔ ɔ● ●
M	Stainless	●ɔ ● ɔ ●ɔ ɔ✣ ✣ ɔ ● ●ɔ ●ɔ ● ●ɔ ●
N	Non-ferrous	● ●
S	Superalloy	● ɔ ɔ ● ● ●ɔ ● ●
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	T9225	T9235	AH8005	AH8015	AH6225	AH6235	AH905	AH725	AH110	AH120	GH330	GH110	Coated cermet GT720	Cermet NS9530	Uncoated KS05F	TH10	Dimension (in) RE	IC	S
Medium cutting	P	CNGG 431 R-P	CNGG120404R-P													●		●		●	0.016	0.500	0.187
		CNGG 431 L-P	CNGG120404L-P													●		●		●	0.016	0.500	0.187
		CNGG 432 R-P	CNGG120408R-P													●				●	0.031	0.500	0.187
		CNGG 432 L-P	CNGG120408L-P													●				●	0.031	0.500	0.187
	S	CNMG 431 R-S	CNMG120404R-S		●	●			●	●					●		●	●			0.016	0.500	0.187
		CNMG 431 L-S	CNMG120404L-S		●	●			●	●					●			●			0.016	0.500	0.187
		CNMG 432 R-S	CNMG120408R-S		●	●			●	●					●		●	●			0.031	0.500	0.187
		CNMG 432 L-S	CNMG120408L-S		●	●			●	●					●			●			0.031	0.500	0.187
	27	CNMG 431-27	CNMG120404-27	●	●													●			0.016	0.500	0.187
		CNMG 432-27	CNMG120408-27	●	●	●							●					●			0.031	0.500	0.187
		CNMG 433-27	CNMG120412-27		●																0.047	0.500	0.187
	28	CNGP 430-28	CNGP120401-28										●	●							0.004	0.500	0.187
		CNGP 430.5-28	CNGP120402-28								●		●	●							0.008	0.500	0.187
		CNGP 431-28	CNGP120404-28								●		●	●					●		0.016	0.500	0.187
		CNGP 432-28	CNGP120408-28								●		●	●					●		0.031	0.500	0.187
		CNGG 430.5-28	CNGG120402-28																●		0.008	0.500	0.187
		CNGG 431-28	CNGG120404-28																●		0.016	0.500	0.187
		CNGG 432-28	CNGG120408-28																●		0.031	0.500	0.187
		CNMG 431-28	CNMG120404-28		●		●	●					●	●					●		0.016	0.500	0.187
		CNMG 432-28	CNMG120408-28				●	●					●	●					●		0.031	0.500	0.187
		CNMG 433-28	CNMG120412-28				●	●						●							0.047	0.500	0.187
	33	CNMG 432-33	CNMG120408-33										●				●				0.031	0.500	0.187
		CNMG 434-33	CNMG120416-33	●																	0.063	0.500	0.187
		CNMG 543-33	CNMG160612-33	●																	0.047	0.625	0.250
		CNMG 643-33	CNMG190612-33	●																	0.047	0.750	0.250
	37	CNMG 431-37	CNMG120404-37	●														●			0.016	0.500	0.187
		CNMG 432-37	CNMG120408-37	●	●										●			●		●	0.031	0.500	0.187
		CNMG 433-37	CNMG120412-37	●																	0.047	0.500	0.187
	38	CNMG 431-38	CNMG120404-38												●			●			0.016	0.500	0.187
		CNMG 432-38	CNMG120408-38	●								●			●			●			0.031	0.500	0.187

● : Line up

Reference pages: External toolholder → 3-89 -

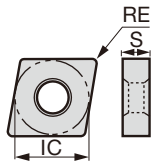
Insert NEGATIVE TYPE

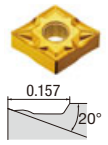
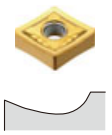
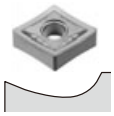
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

CN

Rhombic, 80° with hole

P	Steel	ɔ ɔ
M	Stainless	ɔ ● ●
N	Non-ferrous	● ● ɔ
S	Superalloy	ɔ
H	Hard material	ɔ ɔ



Application	Chipbreaker	Designation Inch	Designation Metric	Coated DM4	Coated QM3	Coated TM4	Coated ZM3	Diamond coated UC1	Dimension (in) RE	IC	S
Light cutting	UL	CNGG431FNUL	CNGG120404FNUL	●	●	●			0.016	0.500	0.187
		CNGG432FNUL	CNGG120408FNUL	●	●	●			0.031	0.500	0.187
Medium cutting	ZP	CNGG431FNZP	CNGG120404FNZP	●	●		●		0.016	0.500	0.187
		CNGG432FNZP	CNGG120408FNZP	●	●		●		0.031	0.500	0.187
	ZP	CNMG431FNZP	CNMG120404FNZP					●	0.016	0.500	0.187
		CNMG432FNZP	CNMG120408FNZP					●	0.031	0.500	0.187

● : Line up

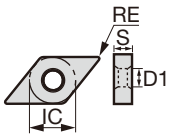
Reference pages: External toolholder → 3-89 -

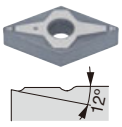
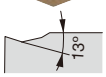
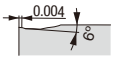
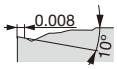
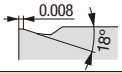
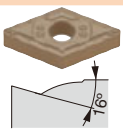
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

DN

Rhombic, 55° with hole

P	Steel	● ●ɔ ɔ✣ ✣ ɔ ɔ✣ ●ɔ
M	Stainless	●ɔ ● ɔ ●ɔ ●ɔ
N	Non-ferrous	●
S	Superalloy	ɔ ●ɔ
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9205	T9215	T9225	T9235	T6215	AH8015	AH6225	AH120	Coated cermet GT9530	AT9530	Cermet NS9530	Uncoated TH10	Dimension (in) RE	IC	S
Finishing	TF	DNMG 330.5E TF	DNMG110402E-TF		●	●		●	●	●				●		0.008	0.375	0.187
		DNMG 331E TF	DNMG110404E-TF		●	●		●	●	●				●		0.016	0.375	0.187
		DNMG 332E TF	DNMG110408E-TF		●	●		●	●	●				●		0.031	0.375	0.187
		DNMG 430.5 TF	DNMG150402-TF		●	●		●	●	●				●		0.008	0.500	0.187
		DNMG 431 TF	DNMG150404-TF		●	●		●	●	●				●	●	0.016	0.500	0.187
		DNMG 432 TF	DNMG150408-TF		●	●		●	●	●				●		0.031	0.500	0.187
	TSF	DNMG 330.5E TSF	DNMG110402E-TSF		●	●		●	●	●	●	●		●		0.008	0.375	0.187
		DNMG 331E TSF	DNMG110404E-TSF		●	●	●	●	●	●	●	●	●	●		0.016	0.375	0.187
		DNMG 332E TSF	DNMG110408E-TSF		●	●	●	●	●	●	●	●	●	●		0.031	0.375	0.187
		DNMG 333E TSF	DNMG110412E-TSF		●	●			●		●	●	●	●		0.047	0.375	0.187
		DNMG 430.5 TSF	DNMG150402-TSF		●	●		●	●	●				●		0.008	0.500	0.187
		DNMG 431 TSF	DNMG150404-TSF	●	●	●	●	●	●	●	●	●	●	●		0.016	0.500	0.187
		DNMG 432 TSF	DNMG150408-TSF	●	●	●	●	●	●	●	●	●	●	●		0.031	0.500	0.187
		DNMG 433 TSF	DNMG150412-TSF	●	●	●	●	●	●	●	●			●		0.047	0.500	0.187
		DNMG 440.5 TSF	DNMG150602-TSF		●	●		●	●	●				●		0.008	0.500	0.250
		DNMG 441 TSF	DNMG150604-TSF		●	●		●	●	●		●	●	●		0.016	0.500	0.250
		DNMG 442 TSF	DNMG150608-TSF	●	●	●	●	●	●	●		●	●	●		0.031	0.500	0.250
		DNMG 443 TSF	DNMG150612-TSF	●	●	●	●	●	●	●				●		0.047	0.500	0.250
	PS	DNMG 330.5E PS	DNMG110402E-PS		●	●		●	●	●				●		0.008	0.375	0.187
		DNMG 331E PS	DNMG110404E-PS		●	●		●	●	●				●		0.016	0.375	0.187
		DNMG 332E PS	DNMG110408E-PS		●	●		●	●	●				●		0.031	0.375	0.187
		DNMG 430.5 PS	DNMG150402-PS		●	●		●	●	●				●		0.008	0.500	0.187
		DNMG 431 PS	DNMG150404-PS		●	●		●	●	●				●		0.016	0.500	0.187
		DNMG 432 PS	DNMG150408-PS		●	●		●	●	●				●		0.031	0.500	0.187
		DNMG 433 PS	DNMG150412-PS		●	●		●	●	●				●		0.047	0.500	0.187
		DNMG 440.5 PS	DNMG150602-PS		●	●		●	●	●				●		0.008	0.500	0.250
		DNMG 441 PS	DNMG150604-PS		●	●		●	●	●				●		0.016	0.500	0.250
		DNMG 442 PS	DNMG150608-PS		●	●		●	●	●				●		0.031	0.500	0.250
		DNMG 443 PS	DNMG150612-PS		●	●		●	●	●				●		0.047	0.500	0.250
Finishing for mild steel	ZF	DNMG 330.5E ZF	DNMG110402E-ZF		●	●		●	●	●				●		0.008	0.375	0.187
		DNMG 331E ZF	DNMG110404E-ZF		●	●		●	●	●				●		0.016	0.375	0.187
		DNMG 332E ZF	DNMG110408E-ZF		●	●		●	●	●				●		0.031	0.375	0.187
		DNMG 430.5 ZF	DNMG150402-ZF		●	●		●	●	●				●		0.008	0.500	0.187
		DNMG 431 ZF	DNMG150404-ZF		●	●	●	●	●	●		●	●	●		0.016	0.500	0.187
		DNMG 432 ZF	DNMG150408-ZF		●	●	●	●	●	●		●	●	●		0.031	0.500	0.187
		DNMG 433 ZF	DNMG150412-ZF		●	●	●	●	●	●				●		0.047	0.500	0.187
		DNMG 440.5 ZF	DNMG150602-ZF		●	●		●	●	●				●		0.008	0.500	0.187
		DNMG 441 ZF	DNMG150604-ZF		●	●		●	●	●				●		0.016	0.500	0.250
		DNMG 442 ZF	DNMG150608-ZF		●	●	●	●	●	●				●		0.031	0.500	0.250
		DNMG 443 ZF	DNMG150612-ZF		●	●		●	●	●				●		0.047	0.500	0.250
Finishing	AS	DNMG 431 AS	DNMG150404-AS		●		●							●		0.016	0.500	0.187
		DNMG 432 AS	DNMG150408-AS		●	●	●							●		0.031	0.500	0.187
		DNMG 433 AS	DNMG150412-AS		●	●	●									0.047	0.500	0.187
		DNMG 441 AS	DNMG150604-AS		●											0.016	0.500	0.250
		DNMG 442 AS	DNMG150608-AS		●	●										0.031	0.500	0.250
		DNMG 443 AS	DNMG150612-AS		●											0.047	0.500	0.250
	NS	DNMG 431 NS	DNMG150404-NS			●								●		0.016	0.500	0.187
		DNMG 432 NS	DNMG150408-NS	●	●	●								●		0.031	0.500	0.187

● : Line up

Reference pages: External toolholder → 3-92 -

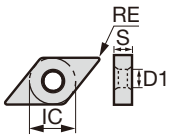
Insert NEGATIVE TYPE

● : Continuous cutting
ᑕ : Light interrupted cutting
✣ : Heavy interrupted cutting

DN

Rhombic, 55° with hole

P	Steel	● ●ᑕ ᑕ✣ ✣ ᑕ ᑕ✣ ✣ ●ᑕ ●ᑕ ●ᑕ ●ᑕ ●ᑕ ●ᑕ ●
M	Stainless	●ᑕ ● ᑕ ●ᑕ ✣ ●ᑕ ●ᑕ ●
N	Non-ferrous	ᑕ✣ ●
S	Superalloy	● ᑕ ●ᑕ ᑕ✣
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9205	T9215	T9225	T9235	T6215	AH8005	AH8015	AH6225	AH6235	AH120	GH330	Coated cermet GT9530	GT720	AT9530	Cermet NS9530	NS520	Uncoated KS20	TH10	Dimension (in) RE	IC	S
Finishing	TS	DNMG 330.5E TS	DNMG110402E-TS		●	●		●		●	●				●			●				0.008	0.375	0.187
		DNMG 331E TS	DNMG110404E-TS		●	●		●		●	●				●			●				0.016	0.375	0.187
		DNMG 332E TS	DNMG110408E-TS		●	●		●		●	●				●			●				0.031	0.375	0.187
		DNMG 430.5 TS	DNMG150402-TS		●	●		●		●	●							●				0.008	0.500	0.187
		DNMG 431 TS	DNMG150404-TS		●	●	●	●		●	●				●		●	●	●			0.016	0.500	0.187
		DNMG 432 TS	DNMG150408-TS	●	●	●	●	●		●	●				●		●	●	●			0.031	0.500	0.187
		DNMG 433 TS	DNMG150412-TS	●	●	●	●	●		●	●							●				0.047	0.500	0.187
		DNMG 440.5 TS	DNMG150602-TS		●	●		●		●	●							●				0.008	0.500	0.250
		DNMG 441 TS	DNMG150604-TS		●	●		●		●	●				●		●	●	●			0.016	0.500	0.250
		DNMG 442 TS	DNMG150608-TS		●	●		●		●	●				●		●	●	●			0.031	0.500	0.250
		DNMG 443 TS	DNMG150612-TS		●	●		●		●	●							●				0.047	0.500	0.250
	SS	DNMG 331E SS	DNMG110404E-SS								●	●										0.016	0.375	0.187
		DNMG 332E SS	DNMG110408E-SS								●	●										0.031	0.375	0.187
		DNMG 431 SS	DNMG150404-SS					●			●	●		●								0.016	0.500	0.187
		DNMG 432 SS	DNMG150408-SS					●			●	●		●						●		0.031	0.500	0.187
		DNMG 433 SS	DNMG150412-SS					●			●	●		●								0.047	0.500	0.187
		DNMG 441 SS	DNMG150604-SS					●			●	●	●	●								0.016	0.500	0.250
		DNMG 442 SS	DNMG150608-SS					●			●	●	●	●								0.031	0.500	0.250
		DNMG 443 SS	DNMG150612-SS					●			●	●										0.047	0.500	0.250
	HRF	DNMG 431 HRF	DNMG150404-HRF						●	●												0.016	0.500	0.187
		DNMG 432 HRF	DNMG150408-HRF						●	●												0.031	0.500	0.187
		DNMG 441 HRF	DNMG150604-HRF						●	●												0.016	0.500	0.250
		DNMG 442 HRF	DNMG150608-HRF						●	●												0.031	0.500	0.250
Finishing (wiper)	FW	DNMG 331E FW	DNMG110404E-FW		●																	0.016	0.375	0.187
		DNMG 332E FW	DNMG110408E-FW		●																	0.031	0.375	0.187
		DNMG 431 FW	DNMG150404-FW		●																	0.016	0.500	0.187
		DNMG 432 FW	DNMG150408-FW		●																	0.031	0.500	0.187
		DNMG 441 FW	DNMG150604-FW		●																	0.016	0.500	0.250
		DNMG 442 FW	DNMG150608-FW		●																	0.031	0.500	0.250
		*Wiper																						
Finishing	01	DNGG 330.5-01	DNGG110402-01															●				0.008	0.375	0.187
		DNGG 331-01	DNGG110404-01															●	●			0.016	0.375	0.187
		DNGG 332-01	DNGG110408-01													●		●				0.031	0.375	0.187
		DNGG 430.5-01	DNGG150402-01															●	●		●	0.008	0.500	0.187
		DNGG 431-01	DNGG150404-01											●				●	●		●	0.016	0.500	0.187
		DNGG 432-01	DNGG150408-01											●				●	●		●	0.031	0.500	0.187
	11	DNMG 331-11	DNMG110404-11															●				0.016	0.375	0.187
		DNMG 332-11	DNMG110408-11															●				0.031	0.375	0.187
		DNMG 431-11	DNMG150404-11											●				●			●	0.016	0.500	0.187
		DNMG 432-11	DNMG150408-11		●													●				0.031	0.500	0.187

* Please see **L011 - L015** about the adjustment of the machining program for rounding or taper machining when using SW/FW.
Please contact our sales representatives if you have any questions.

● : Line up

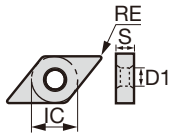
Reference pages: External toolholder → 3-92 -

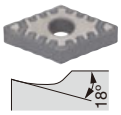
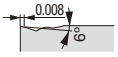
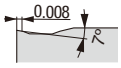
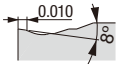
● : Continuous cutting
ɔ : Light interrupted cutting
✠ : Heavy interrupted cutting

DN

Rhombic, 55° with hole

P	Steel	●	●ɔ	ɔ✠	✠	ɔ			ɔ✠	✠	ɔ	●	●ɔ		●ɔ				●ɔ					
M	Stainless		●ɔ			●	●	ɔ	●ɔ	✠	ɔ	●	●ɔ											
N	Non-ferrous																							
S	Superalloy						●	ɔ			●	●	●ɔ											
H	Hard material																							



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9205	T9215	T9225	T9235	T6215	AH8005	AH8015	AH6225	AH6235	AH725	AH110	AH120	Coated cermet GT9530			Cermet NS9530			Dimension (in) RE	IC	S
Finishing for mild steel	17	DNMG 431-17	DNMG150404-17																●			0.016	0.500	0.187
		DNMG 432-17	DNMG150408-17																●			0.031	0.500	0.187
Medium cutting	TM	DNMG 331E TM	DNMG110404E-TM		●	●		●		●	●				●							0.016	0.375	0.187
		DNMG 332E TM	DNMG110408E-TM		●	●		●		●	●				●							0.031	0.375	0.187
		DNMG 333E TM	DNMG110412E-TM		●	●		●		●	●				●							0.047	0.375	0.187
		DNMG 331 TM	DNMG110404-TM		●	●	●															0.016	0.375	0.187
		DNMG 332 TM	DNMG110408-TM		●	●	●															0.031	0.375	0.187
		DNMG 431 TM	DNMG150404-TM	●	●	●	●	●		●	●	●		●	●							0.016	0.500	0.187
		DNMG 432 TM	DNMG150408-TM	●	●	●	●	●		●	●	●	●	●	●							0.031	0.500	0.187
		DNMG 433 TM	DNMG150412-TM	●	●	●	●	●		●	●	●		●	●							0.047	0.500	0.187
		DNMG 434 TM	DNMG150416-TM		●	●		●		●	●	●			●							0.063	0.500	0.187
		DNMG 441 TM	DNMG150604-TM	●	●	●	●	●		●	●				●							0.016	0.500	0.250
		DNMG 442 TM	DNMG150608-TM	●	●	●	●	●		●	●				●							0.031	0.500	0.250
		DNMG 443 TM	DNMG150612-TM	●	●	●	●	●		●	●				●							0.047	0.500	0.250
		DNMG 444 TM	DNMG150616-TM	●	●	●	●	●	●		●											0.063	0.500	0.250
	PM	DNMG 331E PM	DNMG110404E-PM		●	●		●		●	●											0.016	0.375	0.187
		DNMG 332E PM	DNMG110408E-PM		●	●		●		●	●											0.031	0.375	0.187
		DNMG 333E PM	DNMG110412E-PM		●	●		●		●	●											0.047	0.375	0.187
		DNMG 431 PM	DNMG150404-PM		●	●		●		●	●											0.016	0.500	0.187
		DNMG 432 PM	DNMG150408-PM		●	●		●		●	●											0.031	0.500	0.187
		DNMG 433 PM	DNMG150412-PM		●	●		●		●	●											0.047	0.500	0.187
		DNMG 434 PM	DNMG150416-PM		●	●		●		●	●											0.063	0.500	0.187
		DNMG 441 PM	DNMG150604-PM		●	●		●		●	●											0.016	0.500	0.250
		DNMG 442 PM	DNMG150608-PM		●	●		●		●	●											0.031	0.500	0.250
		DNMG 443 PM	DNMG150612-PM		●	●		●		●	●											0.047	0.500	0.250
		DNMG 444 PM	DNMG150616-PM		●	●		●		●	●											0.063	0.500	0.250
Medium cutting for mild steel	ZM	DNMG 331E ZM	DNMG110404E-ZM		●	●		●		●	●											0.016	0.375	0.187
		DNMG 332E ZM	DNMG110408E-ZM		●	●		●		●	●											0.031	0.375	0.187
		DNMG 333E ZM	DNMG110412E-ZM		●	●		●		●	●											0.047	0.375	0.187
		DNMG 431 ZM	DNMG150404-ZM		●	●		●		●	●											0.016	0.500	0.187
		DNMG 432 ZM	DNMG150408-ZM		●	●	●	●		●	●					●			●			0.031	0.500	0.187
		DNMG 433 ZM	DNMG150412-ZM		●	●	●	●		●	●											0.047	0.500	0.187
		DNMG 434 ZM	DNMG150416-ZM		●	●		●		●	●											0.063	0.500	0.187
		DNMG 441 ZM	DNMG150604-ZM		●	●		●		●	●											0.016	0.500	0.250
		DNMG 442 ZM	DNMG150608-ZM		●	●	●	●		●	●											0.031	0.500	0.250
		DNMG 443 ZM	DNMG150612-ZM		●	●		●		●	●											0.047	0.500	0.250
		DNMG 444 ZM	DNMG150616-ZM		●	●		●		●	●											0.063	0.500	0.250
Medium cutting	AM	DNMG 432 AM	DNMG150408-AM		●	●																0.031	0.500	0.187
		DNMG 433 AM	DNMG150412-AM		●	●																0.047	0.500	0.187
		DNMG 434 AM	DNMG150416-AM		●	●																0.063	0.500	0.187
		DNMG 442 AM	DNMG150608-AM		●	●																0.031	0.500	0.250
		DNMG 443 AM	DNMG150612-AM		●	●																0.047	0.500	0.250
		DNMG 444 AM	DNMG150616-AM		●	●																0.063	0.500	0.250

● : Line up

Reference pages: External toolholder → 3-92 -

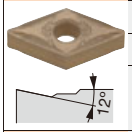
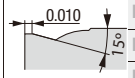
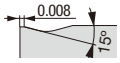
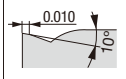
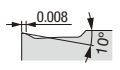
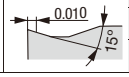
Insert NEGATIVE TYPE

● : Continuous cutting
ɕ : Light interrupted cutting
✣ : Heavy interrupted cutting

DN

Rhombic, 55° with hole

		Coated											Coated cermet		Cermet		Uncoated	Dimension (in)		
		T9205	T9215	T9225	T9235	T6215	AH8005	AH8015	AH6225	AH6235	AH110	AH120	GT9530		NS9530	NS520	TH10	RE	IC	S
P	Steel	●	●ɕ	●✣	✣	ɕ			ɕ✣	✣	●	●ɕ	●ɕ					●		
M	Stainless		●ɕ			●	●	ɕ	●ɕ	✣	●	●ɕ						●		
N	Non-ferrous																	●		
S	Superalloy						●	ɕ			●	●ɕ								
H	Hard material																			

Application	Chipbreaker	Designation Inch	Designation Metric																		
Medium cutting	**NM**	**DNMG 432 NM**	**DNMG150408-NM**		●	●	●								●		●			0.031	0.500	0.187
		DNMG 433 NM	DNMG150412-NM	●	●	●	●													0.047	0.500	0.187
		DNMG 442 NM	**DNMG150608-NM**												●		●			0.031	0.500	0.250
	DM	**DNMG 431 DM**	**DNMG150404-DM**		●	●		●		●	●									0.016	0.500	0.187
		DNMG 432 DM	DNMG150408-DM		●	●	●	●		●	●									0.031	0.500	0.187
		DNMG 433 DM	DNMG150412-DM	●	●	●	●	●		●	●									0.047	0.500	0.187
		DNMG 434 DM	DNMG150416-DM		●	●		●		●	●									0.063	0.500	0.187
		DNMG 441 DM	**DNMG150604-DM**		●	●		●		●	●									0.016	0.500	0.250
		DNMG 442 DM	DNMG150608-DM		●	●	●	●		●	●									0.031	0.500	0.250
		DNMG 443 DM	DNMG150612-DM	●	●	●	●	●		●	●									0.047	0.500	0.250
		DNMG 444 DM	DNMG150616-DM		●	●		●		●	●									0.063	0.500	0.250
Finishing to medium cutting	**All-round**	**DNMG 331**	**DNMG110404**		●	●									●		●			0.016	0.375	0.187
		DNMG 332	DNMG110408	●	●	●	●								●		●			0.031	0.375	0.187
		DNMG 431	**DNMG150404**		●	●	●						●	●	●		●	●	●	0.016	0.500	0.187
		DNMG 432	DNMG150408	●	●	●	●						●	●	●		●	●	●	0.031	0.500	0.187
		DNMG 433	DNMG150412	●	●	●	●						●	●			●	●	●	0.047	0.500	0.187
		DNMG 434	DNMG150416		●	●														0.063	0.500	0.187
		DNMG 441	**DNMG150604**		●	●													●	0.016	0.500	0.250
		DNMG 442	DNMG150608	●	●	●	●												●	0.031	0.500	0.250
		DNMG 443	DNMG150612	●	●	●	●												●	0.047	0.500	0.250
		DNMG 444	DNMG150616		●	●														0.063	0.500	0.250
Medium cutting	**SM**	**DNMG 331E SM**	**DNMG110404E-SM**					●			●									0.016	0.375	0.187
		DNMG 332E SM	DNMG110408E-SM					●			●									0.031	0.375	0.187
		DNMG 431 SM	**DNMG150404-SM**					●			●	●								0.016	0.500	0.187
		DNMG 432 SM	DNMG150408-SM					●			●	●								0.031	0.500	0.187
		DNMG 433 SM	DNMG150412-SM					●			●	●								0.047	0.500	0.187
		DNMG 441 SM	**DNMG150604-SM**					●			●	●								0.016	0.500	0.250
		DNMG 442 SM	DNMG150608-SM					●			●	●								0.031	0.500	0.250
		DNMG 443 SM	DNMG150612-SM					●			●	●								0.047	0.500	0.250
	SDM	**DNMG 431 SDM**	**DNMG150404-SDM**					●	●	●	●	●								0.016	0.500	0.187
		DNMG 432 SDM	DNMG150408-SDM					●	●	●	●	●								0.031	0.500	0.187
		DNMG 433 SDM	DNMG150412-SDM					●			●	●								0.047	0.500	0.187
		DNMG 441 SDM	**DNMG150604-SDM**					●			●	●								0.016	0.500	0.250
		DNMG 442 SDM	DNMG150608-SDM					●	●	●	●	●								0.031	0.500	0.250
		DNMG 443 SDM	DNMG150612-SDM					●	●	●	●	●								0.047	0.500	0.250
	HRM	**DNMG 431 HRM**	**DNMG150404-HRM**						●	●										0.016	0.500	0.250
		DNMG 432 HRM	DNMG150408-HRM						●	●										0.031	0.500	0.187
		DNMG 433 HRM	DNMG150412-HRM						●	●										0.047	0.500	0.187
		DNMG 441 HRM	**DNMG150604-HRM**						●	●										0.016	0.500	0.187
		DNMG 442 HRM	DNMG150608-HRM						●	●										0.031	0.500	0.250
		DNMG 443 HRM	DNMG150612-HRM						●	●										0.047	0.500	0.250

● : Line up

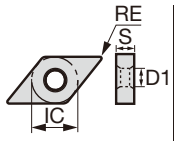
Reference pages: External toolholder → 3-92 -

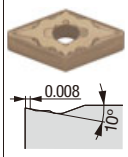
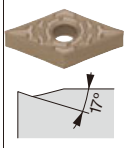
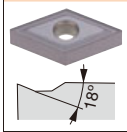
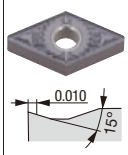
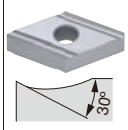
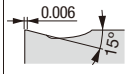
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

DN

Rhombic, 55° with hole

P	Steel	●ɔ	ɔ✣	✣	ɔ	ɔ✣	✣		●ɔ	●	●ɔ		●ɔ	●ɔ		●ɔ			●				
M	Stainless	●ɔ			●	●ɔ	✣		●ɔ	●	●ɔ								●				
N	Non-ferrous																		●				
S	Superalloy							ɔ	●ɔ	●													
H	Hard material																						



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	T9225	T9235	T6215	AH6225	AH6235	AH905	AH120	GH110	GH330	Coated cermet GT9530	AT9530	Cermet NS9530	Uncoated TH10	Dimension (in) RE	IC	S	D1
Finishing (wiper)	**SW**	**DNMG 332E SW**	**DNMG110408E-SW**	●														0.031	0.375	0.187	0.150
		DNMG 333E SW	DNMG110412E-SW	●														0.047	0.375	0.187	0.150
		DNMG 432 SW	**DNMG150408-SW**	●														0.031	0.500	0.187	0.203
		DNMG 433 SW	DNMG150412-SW	●														0.047	0.500	0.187	0.203
		DNMG 442 SW	**DNMG150608-SW**	●														0.031	0.500	0.250	0.203
		DNMG 443 SW	DNMG150612-SW	●														0.047	0.500	0.250	0.203
		*Wiper																			
	TQ	**DNMG 431 TQ**	**DNMG150404-TQ**	●	●									●	●	●		0.016	0.500	0.187	0.203
		DNMG 432 TQ	DNMG150408-TQ	●	●									●	●	●		0.031	0.500	0.187	0.203
	SA	**DNMG 431 SA**	**DNMG150404-SA**								●							0.016	0.500	0.187	0.203
		DNMG 432 SA	DNMG150408-SA								●							0.031	0.500	0.187	0.203
		DNMG 441 SA	**DNMG150604-SA**								●							0.016	0.500	0.250	0.203
		DNMG 442 SA	DNMG150608-SA								●							0.031	0.500	0.250	0.203
	HMM	**DNMG 431 HMM**	**DNMG150404-HMM**							●								0.016	0.500	0.187	0.203
		DNMG 432 HMM	DNMG150408-HMM							●								0.031	0.500	0.187	0.203
		DNMG 433 HMM	DNMG150412-HMM							●								0.047	0.500	0.187	0.203
	P	**DNGG 430.5 R-P**	**DNGG150402R-P**									●					●	0.008	0.500	0.187	0.203
		DNGG 430.5 L-P	DNGG150402L-P									●					●	0.008	0.500	0.187	0.203
		DNGG 431 R-P	DNGG150404R-P									●					●	0.016	0.500	0.187	0.203
		DNGG 431 L-P	DNGG150404L-P									●					●	0.016	0.500	0.187	0.203
		DNGG 432 R-P	DNGG150408R-P														●	0.031	0.500	0.187	0.203
		DNGG 432 L-P	DNGG150408L-P														●	0.031	0.500	0.187	0.203
	S	**DNMG 431 R-S**	**DNMG150404R-S**		●	●		●	●				●			●		0.016	0.500	0.187	0.203
		DNMG 431 L-S	DNMG150404L-S		●	●		●	●				●			●		0.016	0.500	0.187	0.203
		DNMG 432 R-S	DNMG150408R-S		●	●		●	●				●			●		0.031	0.500	0.187	0.203
		DNMG 432 L-S	DNMG150408L-S		●	●		●	●				●			●		0.031	0.500	0.187	0.203
		DNMG 441 R-S	**DNMG150604R-S**		●	●		●	●									0.016	0.500	0.250	0.203
		DNMG 441 L-S	DNMG150604L-S		●	●		●	●									0.016	0.500	0.250	0.203
		DNMG 442 R-S	DNMG150608R-S		●	●		●	●				●					0.031	0.500	0.250	0.203
		DNMG 442 L-S	DNMG150608L-S		●	●		●	●									0.031	0.500	0.250	0.203

* Please see **L011 - L015** about the adjustment of the machining program for rounding or taper machining when using SW/FW.
Please contact our sales representatives if you have any questions.

● : Line up

Reference pages: External toolholder → 3-92 -

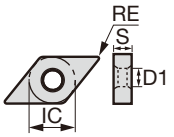
Insert NEGATIVE TYPE

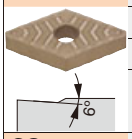
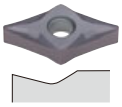
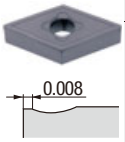
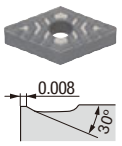
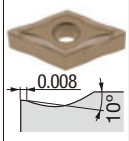
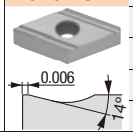
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

DN

Rhombic, 55° with hole

P	Steel	●ɔ ɔ✣ ● ●ɔ ●ɔ
M	Stainless	●ɔ ● ɔ ● ●ɔ ●ɔ
N	Non-ferrous	● ●
S	Superalloy	● ɔ ● ●ɔ ●
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated AH8005	Coated AH8015	Coated AH110	Coated AH120	Coated GH330	Coated cermet GT9530	Cermet NS9530	Uncoated TH10	Uncoated KS05F	Dimension (in) RE	IC	S
Medium cutting	**27**	**DNMG 431-27**	**DNMG150404-27**		●							●			0.016	0.500	0.187
		DNMG 432-27	DNMG150408-27	●	●							●			0.031	0.500	0.187
		DNMG 433-27	DNMG150412-27		●										0.047	0.500	0.187
	28	**DNMG 431-28**	**DNMG150404-28**			●	●	●	●					●	0.016	0.500	0.187
		DNMG 432-28	DNMG150408-28			●	●	●	●					●	0.031	0.500	0.187
		DNMG 441-28	**DNMG150604-28**			●	●							●	0.016	0.500	0.250
		DNMG 442-28	DNMG150608-28			●	●							●	0.031	0.500	0.250
	33	**DNMG 431-33**	**DNMG150404-33**					●							0.016	0.500	0.187
		DNMG 432-33	DNMG150408-33					●					●		0.031	0.500	0.187
	37	**DNMG 431-37**	**DNMG150404-37**									●			0.016	0.500	0.187
		DNMG 432-37	DNMG150408-37							●		●			0.031	0.500	0.187
		DNMG 442-37	**DNMG150608-37**	●											0.031	0.500	0.250
	38	**DNMG 433-38**	**DNMG150412-38**	●											0.047	0.500	0.187
																	
	Parallel	**DNGG 431 R**	**DNGG150404R**								●	●			0.016	0.500	0.187
		DNGG 431 L	DNGG150404L								●	●			0.016	0.500	0.187
		DNGG 432 R	DNGG150408R									●			0.031	0.500	0.187
		DNGG 432 L	DNGG150408L									●			0.031	0.500	0.187

● : Line up

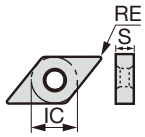
Reference pages: External toolholder → 3-92 -

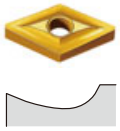
● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

DN

Rhombic, 55° with hole

P	Steel		◐	
M	Stainless	◐		●
N	Non-ferrous			●
S	Superalloy	◐		
H	Hard material	◐	◐	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated DM4	Coated QM3	Coated ZM3	Dimension (in) RE	IC	S
Medium cutting	ZP	DNGG 431 FNZP	DNGG150404FNZP	●	●	●	0.016	0.500	0.187
		DNGG 432 FNZP	DNGG150408FNZP	●	●	●	0.031	0.500	0.187

● : Line up

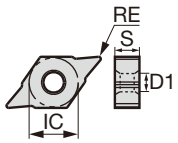
Reference pages: External toolholder → 3-92 -

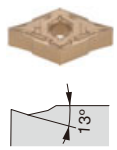
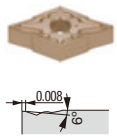
Insert NEGATIVE TYPE

FN

Rhombic, 45° with hole

P	Steel	●c ●✣ c ✣
M	Stainless	●c ● c ●c
N	Non-ferrous	
S	Superalloy	c
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	T9225	T6215	AH8015	AH6225	Dimension (in) RE	IC	S
Finishing	TSF	FNMG 330.5E TSF	FNMG110402E-TSF	●	●	●	●	●	0.008	0.375	0.187
		FNMG 331E TSF	FNMG110404E-TSF	●	●	●	●	●	0.016	0.375	0.187
		FNMG 332E TSF	FNMG110408E-TSF	●	●	●	●	●	0.031	0.375	0.187
		FNMG 333E TSF	FNMG110412E-TSF	●	●	●	●	●	0.047	0.375	0.187
Medium cutting	TM	FNMG 331E TM	FNMG110404E-TM	●	●	●	●	●	0.016	0.375	0.187
		FNMG 332E TM	FNMG110408E-TM	●	●	●	●	●	0.031	0.375	0.187
		FNMG 333E TM	FNMG110412E-TM	●	●	●	●	●	0.047	0.375	0.187
		FNMG 334E TM	FNMG110416E-TM					●	0.063	0.375	0.187

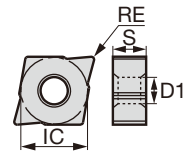
Make sure to offset the cutting edge position after insert change.
Please note that the insert shim may interfere with the workpiece when FNMG insert is used with Q-style toolholder to undercut a work diameter of 1.968" or smaller.

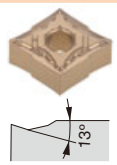
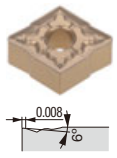
●: Line up

GN

Rhombic, 70° with hole

P	Steel	●c ●✣ c ✣
M	Stainless	●c ● c ●c
N	Non-ferrous	
S	Superalloy	c
H	Hard material	



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	T9225	T6215	AH8015	AH6225	Dimension (in) RE	IC	S
Finishing	TSF	GNMG 330.5E TSF	GNMG090402E-TSF	●	●	●	●	●	0.008	0.375	0.187
		GNMG 331E TSF	GNMG090404E-TSF	●	●	●	●	●	0.016	0.375	0.187
		GNMG 332E TSF	GNMG090408E-TSF	●	●	●	●	●	0.031	0.375	0.187
Medium cutting	TM	GNMG 330.5E TM	-			●		●	0.008	0.375	0.187
		GNMG 331E TM	GNMG090404E-TM	●	●	●	●	●	0.016	0.375	0.187
		GNMG 332E TM	GNMG090408E-TM	●	●	●	●	●	0.031	0.375	0.187
		GNMG 333E TM	GNMG090412E-TM	●	●	●	●	●	0.047	0.375	0.187

Make sure to offset the cutting edge position after insert change.
Do not use ISO-EcoTurn cartridge set for CNMG33 (AD-CL-4/3-SET or -SET-S) with GNMG33 insert.
The insert may move during machining.

●: Line up

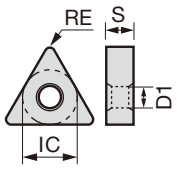
Reference pages: FNMG... : External toolholder → 3-92 -
GNMG...: External toolholder → 3-89 -

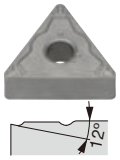
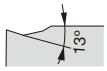
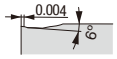
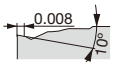
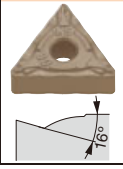
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

TN

Triangular with hole

P	Steel	●	●ɔ	ɔ✣	✣	ɔ		ɔ✣	●ɔ		●ɔ	●ɔ			●ɔ	●ɔ			●				
M	Stainless		●ɔ			●	ɔ	●ɔ	●ɔ										●				
N	Non-ferrous																		●				
S	Superalloy						ɔ		●ɔ														
H	Hard material																						



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9205	T9215	T9225	T9235	T6215	AH8015	AH6225	AH120	Coated cermet GT9530	AT9530	Cermet NS9530	NS520	Uncoated TH10	Dimension (in) RE	IC	S	D1
Finishing	TF	TNMG 230.5E TF	TNMG110402E-TF		●	●		●	●	●				●			0.008	0.250	0.187	0.089
		TNMG 231E TF	TNMG110404E-TF		●	●		●	●	●				●			0.016	0.250	0.187	0.089
		TNMG 232E TF	TNMG110408E-TF		●	●		●	●	●				●			0.031	0.250	0.187	0.089
		TNMG 331 TF	TNMG160402-TF		●	●		●	●	●				●			0.008	0.375	0.187	0.150
		TNMG 3321 TF	TNMG160404-TF		●	●		●	●	●				●	●	●	0.016	0.375	0.187	0.150
		TNMG 3322 TF	TNMG160408-TF		●	●		●	●	●				●	●		0.031	0.375	0.187	0.150
	TSF	TNMG 230.5E TSF	TNMG110402E-TSF		●	●		●	●	●		●		●			0.008	0.250	0.187	0.089
		TNMG 231E TSF	TNMG110404E-TSF		●	●		●	●	●		●	●	●			0.016	0.250	0.187	0.089
		TNMG 232E TSF	TNMG110408E-TSF		●	●		●	●	●		●	●	●			0.031	0.250	0.187	0.089
		TNMG 330.5 TSF	TNMG160402-TSF		●	●		●	●	●	●	●	●	●			0.008	0.375	0.187	0.150
		TNMG 3321 TSF	TNMG160404-TSF		●	●	●	●	●	●	●	●	●	●			0.016	0.375	0.187	0.150
		TNMG 3322 TSF	TNMG160408-TSF	●	●	●	●	●	●	●	●	●	●	●			0.031	0.375	0.187	0.150
		TNMG 3323 TSF	TNMG160412-TSF	●	●	●	●	●	●	●	●	●		●			0.047	0.375	0.187	0.150
	PS	TNMG 230.5E PS	TNMG110402E-PS		●	●		●	●	●				●			0.008	0.250	0.187	0.089
		TNMG 231E PS	TNMG110404E-PS		●	●		●	●	●				●			0.016	0.250	0.187	0.089
		TNMG 232E PS	TNMG110408E-PS		●	●		●	●	●				●			0.031	0.250	0.187	0.089
		TNMG 330.5 PS	TNMG160402-PS		●	●		●	●	●				●			0.008	0.375	0.187	0.150
		TNMG 3321 PS	TNMG160404-PS		●	●		●	●	●				●			0.016	0.375	0.187	0.150
		TNMG 3322 PS	TNMG160408-PS		●	●		●	●	●				●			0.031	0.375	0.187	0.150
		TNMG 3323 PS	TNMG160412-PS		●	●		●	●	●				●			0.047	0.375	0.187	0.150
Finishing for mild steel	ZF	TNMG 230.5E ZF	TNMG110402E-ZF		●	●		●	●	●				●			0.008	0.250	0.187	0.089
		TNMG 231E ZF	TNMG110404E-ZF		●	●		●	●	●				●			0.016	0.250	0.187	0.089
		TNMG 232E ZF	TNMG110408E-ZF		●	●		●	●	●				●			0.031	0.250	0.187	0.089
		TNMG 330.5 ZF	TNMG160402-ZF		●	●		●	●	●				●			0.008	0.375	0.187	0.150
		TNMG 3321 ZF	TNMG160404-ZF		●	●	●	●	●	●		●	●	●			0.016	0.375	0.187	0.150
		TNMG 3322 ZF	TNMG160408-ZF		●	●	●	●	●	●		●	●	●			0.031	0.375	0.187	0.150
		TNMG 3323 ZF	TNMG160412-ZF		●	●		●	●	●				●			0.047	0.375	0.187	0.150
Finishing	AS	TNMG 331 AS	TNMG160404-AS			●	●							●			0.016	0.375	0.187	0.150
		TNMG 3322 AS	TNMG160408-AS	●	●	●	●							●			0.031	0.375	0.187	0.150
		TNMG 3323 AS	TNMG160412-AS	●	●	●											0.047	0.375	0.187	0.150
	NS	TNMG 331 NS	TNMG160404-NS		●	●								●			0.016	0.375	0.187	0.150
		TNMG 3322 NS	TNMG160408-NS	●	●	●								●			0.031	0.375	0.187	0.150

● : Line up

Reference pages: External toolholder → 3-82 -

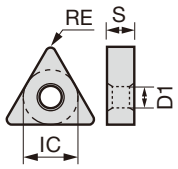
Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

TN

Triangular with hole

		T9205	T9215	T9225	T9235	T6215	AH8005	AH8015	AH6225	AH6235	AH120	GH330	SH725	GT9530	AT9530	NS9530	NS520	KS20
P	Steel	●	●◐	◐✣	✣	◐			◐✣	✣	●◐	●◐	●◐	●◐	●◐	●◐	●◐	
M	Stainless		●◐			●	●	◐	●◐	✣	●◐	●◐	●◐					
N	Non-ferrous																	◐✣
S	Superalloy						●	◐			●◐							◐✣
H	Hard material																	



Application	Chipbreaker	Designation Inch	Designation Metric	RE	IC	S
Finishing	**TS**	**TNMG 330.5E TS**	**TNMG110402E-TS**	0.008	0.250	0.187
		TNMG 231E TS	TNMG110404E-TS	0.016	0.250	0.187
		TNMG 232E TS	TNMG110408E-TS	0.031	0.250	0.187
		TNMG 330.5 TS	**TNMG160402-TS**	0.008	0.375	0.187
		TNMG 331 TS	TNMG160404-TS	0.016	0.375	0.187
		TNMG 332 TS	TNMG160408-TS	0.031	0.375	0.187
		TNMG 333 TS	TNMG160412-TS	0.047	0.375	0.187
	SF	**TNMG 331 SF**	**TNMG160404-SF**	0.016	0.375	0.187
		TNMG 332 SF	TNMG160408-SF	0.031	0.375	0.187
		TNMG 333 SF	TNMG160412-SF	0.047	0.375	0.187
	SS	**TNMG 231E SS**	**TNMG110404E-SS**	0.016	0.250	0.187
		TNMG 232E SS	TNMG110408E-SS	0.031	0.250	0.187
		TNMG 331 SS	**TNMG160404-SS**	0.016	0.375	0.187
		TNMG 332 SS	TNMG160408-SS	0.031	0.375	0.187
		TNMG 333 SS	TNMG160412-SS	0.047	0.375	0.187
		TNMG 431 SS	**TNMG220404-SS**	0.016	0.500	0.187
		TNMG 432 SS	TNMG220408-SS	0.031	0.500	0.187
		TNMG 433 SS	TNMG220412-SS	0.047	0.500	0.187
	HRF	**TNMG 331 HRF**	**TNMG160404-HRF**	0.016	0.375	0.187
		TNMG 332 HRF	TNMG160408-HRF	0.031	0.375	0.187
Finishing (wiper)	**FW**	**TNMG 231E FW**	**TNMG110404E-FW**	0.016	0.250	0.187
		TNMG 232E FW	TNMG110408E-FW	0.031	0.250	0.187
		TNMG 332 FW	**TNMG110408E-FW**	0.031	0.375	0.187
		TNMG 331 FW	TNMG160404-FW	0.016	0.375	0.187
		TNMG 332 FW	TNMG160408-FW	0.031	0.375	0.187
		*Wiper				
Finishing (sharp edge)	**01**	**TNGG 330.5 F-01**	**TNGG160402F-01**	0.008	0.375	0.187
		TNGG 331 F-01	TNGG160404F-01	0.016	0.375	0.187
		TNGG 332 F-01	TNGG160408F-01	0.031	0.375	0.187

* Please see Tungaloy General Catalog vol.5 **L011 - L015** about the adjustment of the machining program for rounding or taper machining by using SW/FW.
Please contact our sales representatives if you have any question.

● : Line up

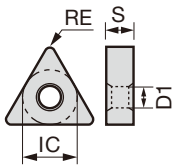
Reference pages: External toolholder → 3-82 -

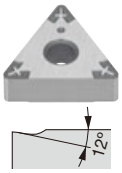
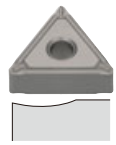
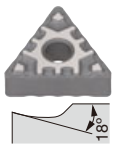
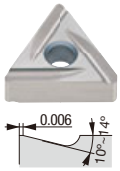
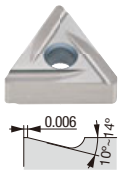
● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

TN

Triangular with hole

P	Steel	ⓒ✣	●	●ⓒ					●ⓒ	●ⓒ				●ⓒ	●ⓒ	●			●					
M	Stainless		●	●ⓒ															●					
N	Non-ferrous																		●					
S	Superalloy		●																					
H	Hard material																							



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9225	Coated GH110	Coated GH330	Coated cermet GT9530	Coated cermet GT720	Cermet NS9530	Cermet NS520	Cermet X407	Uncoated TH10	Dimension (in) RE	IC	S	D1
Finishing	01	TNGG 220.5-01	TNGG110302-01						●				0.008	0.250	0.125	0.089
		TNGG 221-01	TNGG110304-01						●				0.016	0.250	0.125	0.089
		TNGG 222-01	TNGG110308-01						●	●			0.031	0.250	0.125	0.089
		TNGG 330.5-01	TNGG160402-01		●				●	●		●	0.008	0.375	0.187	0.150
		TNGG 331-01	TNGG160404-01		●				●	●		●	0.016	0.375	0.187	0.150
		TNGG 332-01	TNGG160408-01		●				●	●			0.031	0.375	0.187	0.150
		TNGG 333-01	TNGG160412-01				●	●	●				0.047	0.375	0.187	0.150
	11	TNMG 221-11	TNMG110304-11						●				0.016	0.250	0.125	0.089
		TNMG 222-11	TNMG110308-11						●				0.031	0.250	0.125	0.089
		TNMG 330.5-11	TNMG160402-11						●				0.008	0.375	0.187	0.150
		TNMG 331-11	TNMG160404-11			●			●			●	0.016	0.375	0.187	0.150
		TNMG 332-11	TNMG160408-11						●				0.031	0.375	0.187	0.150
		TNMG 431-11	TNMG220404-11						●				0.016	0.500	0.187	0.203
		TNMG 432-11	TNMG220408-11						●				0.031	0.500	0.187	0.203
Finishing for mild steel	17	TNMG 331-17	TNMG160404-17	●		●			●				0.016	0.375	0.187	0.150
		TNMG 332-17	TNMG160408-17	●					●				0.031	0.375	0.187	0.150
Finishing	A, C	TNGG 221 R-A	TNGG110304R-A				●		●				0.016	0.250	0.125	0.089
		TNGG 221 L-A	TNGG110304L-A				●		●				0.016	0.250	0.125	0.089
		TNGG 222 R-A	TNGG110308R-A				●		●				0.031	0.250	0.125	0.089
		TNGG 222 L-A	TNGG110308L-A				●		●				0.031	0.250	0.125	0.089
		TNGG 321 R-C	TNGG160304R-C						●		●		0.016	0.375	0.125	0.150
		TNGG 321 L-C	TNGG160304L-C						●				0.016	0.375	0.125	0.150
		TNGG 322 R-C	TNGG160308R-C						●				0.031	0.375	0.125	0.150
		TNGG 322 L-C	TNGG160308L-C						●				0.031	0.375	0.125	0.150
		TNGG 33V R-C	TNGG160400R-C						●				0.001	0.375	0.187	0.150
		TNGG 33V L-C	TNGG160400L-C						●				0.001	0.375	0.187	0.150
		TNGG 330.5 R-C	TNGG160402R-C				●		●		●	●	0.008	0.375	0.187	0.150
		TNGG 330.5 L-C	TNGG160402L-C				●		●				0.008	0.375	0.187	0.150
		TNGG 331 R-C	TNGG160404R-C		●	●	●		●	●	●	●	0.016	0.375	0.187	0.150
		TNGG 331 L-C	TNGG160404L-C		●	●	●		●		●	●	0.016	0.375	0.187	0.150
		TNGG 332 R-C	TNGG160408R-C		●	●	●		●	●	●	●	0.031	0.375	0.187	0.150
		TNGG 332 L-C	TNGG160408L-C		●	●	●		●		●	●	0.031	0.375	0.187	0.150
Finishing (sharp edge)	D	TNGG 431 R-D	TNGG220404R-D						●		●		0.016	0.500	0.187	0.203
		TNGG 431 L-D	TNGG220404L-D						●				0.016	0.500	0.187	0.203
		TNGG 432 R-D	TNGG220408R-D						●		●		0.031	0.500	0.187	0.203
		TNGG 432 L-D	TNGG220408L-D						●				0.031	0.500	0.187	0.203

● : Line up

Reference pages: External toolholder → 3-82 -

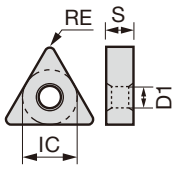
Insert NEGATIVE TYPE

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

TN

Triangular with hole

P	Steel	●	●ɔ	ɔ✣	✣	ɔ			ɔ✣	ɔ	●ɔ	●ɔ	●ɔ			●ɔ	●ɔ			●				
M	Stainless		●ɔ			●	●	ɔ	●ɔ	ɔ	●ɔ	●ɔ								●				
N	Non-ferrous																			●				
S	Superalloy						●	ɔ		●	●ɔ													
H	Hard material																							



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9205	T9215	T9225	T9235	T6215	AH8005	AH8015	AH6225	AH725	AH120	SH725	Coated cermet GT9530	Cermet NS9530	NS520	Un-coated TH10	Dimension (in) RE	IC	S
Finishing (sharp edge)	W	TNGG 330.5 FR-W	TNGG160402FR-W											●					0.008	0.375	0.187
		TNGG 330.5 FL-W	TNGG160402FL-W											●					0.008	0.375	0.187
		TNGG 331 FR-W	TNGG160404FR-W											●					0.016	0.375	0.187
		TNGG 331 FL-W	TNGG160404FL-W											●					0.016	0.375	0.187
		TNGG 332 FR-W	TNGG160408FR-W											●					0.031	0.375	0.187
		TNGG 332 FL-W	TNGG160408FL-W											●					0.031	0.375	0.187
Finishing	W	TNGG 331 R-W	TNGG160404R-W													●		●	0.016	0.375	0.187
		TNGG 331 L-W	TNGG160404L-W													●		●	0.016	0.375	0.187
		TNGG 332 R-W	TNGG160408R-W													●			0.031	0.375	0.187
		TNGG 332 L-W	TNGG160408L-W													●			0.031	0.375	0.187
Medium cutting	TM	TNMG 221 TM	TNMG110304-TM		●	●	●												0.016	0.250	0.125
		TNMG 222 TM	TNMG110308-TM		●	●	●												0.031	0.250	0.125
		TNMG 231E TM	TNMG110404E-TM		●	●		●		●	●								0.016	0.250	0.187
		TNMG 232E TM	TNMG110408E-TM		●	●		●		●	●								0.031	0.250	0.187
		TNMG 233E TM	TNMG110412E-TM		●	●		●		●	●								0.047	0.250	0.187
		TNMG 331 TM	TNMG160404-TM		●	●	●	●		●	●	●	●						0.016	0.375	0.187
		TNMG 332 TM	TNMG160408-TM	●	●	●	●	●		●	●	●	●						0.031	0.375	0.187
		TNMG 333 TM	TNMG160412-TM	●	●	●	●	●		●	●								0.047	0.375	0.187
		TNMG 334 TM	TNMG160416-TM		●	●		●	●	●	●								0.063	0.375	0.187
		TNMG 431 TM	TNMG220404-TM		●	●							●						0.016	0.500	0.187
		TNMG 432 TM	TNMG220408-TM	●	●	●	●						●						0.031	0.500	0.187
		TNMG 433 TM	TNMG220412-TM		●	●	●						●						0.047	0.500	0.187
		TNMG 434 TM	TNMG220416-TM		●	●													0.063	0.500	0.187
	PM	TNMG 231E PM	TNMG110404E-PM		●	●		●		●	●								0.016	0.250	0.187
		TNMG 232E PM	TNMG110408E-PM		●	●		●		●	●								0.031	0.250	0.187
		TNMG 233E PM	TNMG110412E-PM		●	●		●		●	●								0.047	0.250	0.187
		TNMG 331 PM	TNMG160404-PM		●	●	●	●		●	●								0.016	0.375	0.187
		TNMG 332 PM	TNMG160408-PM		●	●	●	●		●	●								0.031	0.375	0.187
		TNMG 333 PM	TNMG160412-PM		●	●	●	●		●	●								0.047	0.375	0.187
		TNMG 334 PM	TNMG160416-PM																0.063	0.375	0.187
Medium cutting for mild steel	ZM	TNMG 231E ZM	TNMG110404E-ZM		●	●		●		●	●								0.016	0.250	0.187
		TNMG 232E ZM	TNMG110408E-ZM		●	●		●		●	●								0.031	0.250	0.187
		TNMG 233E ZM	TNMG110412E-ZM		●	●		●		●	●								0.047	0.250	0.187
		TNMG 331 ZM	TNMG160404-ZM		●	●		●		●	●				●	●			0.016	0.375	0.187
		TNMG 332 ZM	TNMG160408-ZM		●	●		●		●	●				●	●			0.031	0.375	0.187
		TNMG 333 ZM	TNMG160412-ZM		●	●		●		●	●								0.047	0.375	0.187
		TNMG 334 ZM	TNMG160416-ZM		●	●		●		●	●								0.063	0.375	0.187
		TNMG 433 ZM	TNMG220412-ZM			●													0.047	0.500	0.187
Medium cutting	AM	TNMG 332 AM	TNMG160408-AM		●	●													0.031	0.375	0.187
		TNMG 333 AM	TNMG160412-AM		●	●													0.047	0.375	0.187
	NM	TNMG 332 NM	TNMG160408-NM			●													0.031	0.375	0.187
		TNMG 333 NM	TNMG160412-NM		●	●													0.047	0.375	0.187

● : Line up

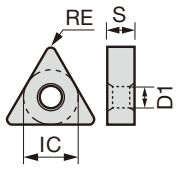
Reference pages: External toolholder → 3-82 -

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

TN

Triangular with hole

P	Steel	●	●ɔ	ɔ✣	✣	ɔ			ɔ✣	✣	ɔ	●	●ɔ	●ɔ		●ɔ	●ɔ		●	
M	Stainless		●ɔ			●	●	ɔ	●ɔ	✣	ɔ	●	●ɔ						●	
N	Non-ferrous																		●	
S	Superalloy						●	ɔ			●	●	●ɔ							
H	Hard material																			



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9205	T9215	T9225	T9235	T6215	AH8005	AH8015	AH6225	AH6235	AH725	AH110	AH120	Coated cermet GT720	Cermet NS9530	NS520	Uncoated TH10	Dimension (in) RE	IC	S
Medium cutting	DM	TNMG 331 DM	TNMG160404-DM		●	●		●		●	●									0.016	0.375	0.187
		TNMG 332 DM	TNMG160408-DM	●	●	●	●	●		●	●									0.031	0.375	0.187
		TNMG 333 DM	TNMG160412-DM		●	●		●		●	●									0.047	0.375	0.187
		TNMG 334 DM	TNMG160416-DM		●	●		●		●	●									0.063	0.375	0.187
	All-round	TNMG 221	TNMG110304		●	●											●		●	0.016	0.250	0.125
		TNMG 222	TNMG110308		●	●											●		●	0.031	0.250	0.125
		TNMG 321	TNMG160304																●	0.016	0.375	0.125
		TNMG 322	TNMG160308																●	0.031	0.375	0.125
		TNMG 331	TNMG160404	●	●	●	●							●	●		●	●	●	0.016	0.375	0.187
		TNMG 332	TNMG160408	●	●	●	●							●	●	●	●	●	●	0.031	0.375	0.187
		TNMG 333	TNMG160412	●	●	●	●							●	●				●	0.047	0.375	0.187
		TNMG 334	TNMG160416		●	●	●												●	0.063	0.375	0.187
		TNMG 335	TNMG160420		●	●	●													0.078	0.375	0.187
		TNMG 432	TNMG220408	●	●	●	●												●	0.031	0.500	0.187
		TNMG 433	TNMG220412	●	●	●	●				●								●	0.047	0.500	0.187
		TNMG 434	TNMG220416		●	●					●								●	0.063	0.500	0.187
		TNMG 542	TNMG270608			●									●					0.031	0.625	0.250
		TNMG 543	TNMG270612			●									●					0.047	0.625	0.250
		TNMG 544	TNMG270616												●					0.063	0.625	0.250
	SM	TNMG 231E SM	TNMG110404E-SM					●			●									0.016	0.250	0.187
		TNMG 232E SM	TNMG110408E-SM					●			●									0.031	0.250	0.187
		TNMG 331 SM	TNMG160404-SM					●			●	●	●							0.016	0.375	0.187
		TNMG 332 SM	TNMG160408-SM					●			●	●	●							0.031	0.375	0.187
		TNMG 333 SM	TNMG160412-SM					●			●	●								0.047	0.375	0.187
		TNMG 432 SM	TNMG220408-SM					●			●	●								0.031	0.500	0.187
		TNMG 433 SM	TNMG220412-SM					●			●	●								0.047	0.500	0.187
	SDM	TNMG 331 SDM	TNMG160404-SDM					●			●	●								0.016	0.375	0.187
		TNMG 332 SDM	TNMG160408-SDM					●			●	●								0.031	0.375	0.187
		TNMG 333 SDM	TNMG160412-SDM					●			●	●								0.047	0.375	0.187
	HRM	TNMG 331 HRM	TNMG160404-HRM						●	●										0.016	0.375	0.187
		TNMG 332 HRM	TNMG160408-HRM						●	●										0.031	0.375	0.187
		TNMG 333 HRM	TNMG160412-HRM						●	●										0.047	0.375	0.187
Medium cutting (wiper)	SW	TNMG 232E SW	TNMG110408E-SW		●															0.031	0.250	0.187
		TNMG 233E SW	TNMG110412E-SW		●															0.047	0.250	0.187
		TNMG 332 SW	TNMG160408-SW		●															0.031	0.375	0.187
		TNMG 333 SW	TNMG160412-SW		●															0.047	0.375	0.187
		*Wiper																				

* Please see Tungaloy General Catalog vol.5 **L011 - L015** about the adjustment of the machining program for rounding or taper machining by using SW/FW.
Please contact our sales representatives if you have any question.

● : Line up

Reference pages: External toolholder → 3-82 -

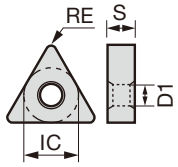
Insert NEGATIVE TYPE

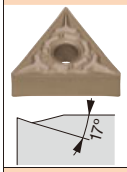
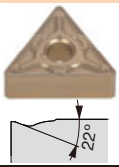
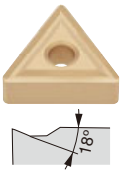
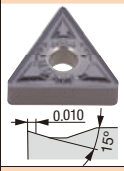
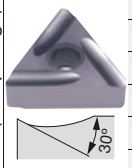
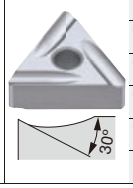
● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

TN

Triangular with hole

P	Steel	●ⓒ	ⓒ✣	ⓒ	ⓒ✣	✣		●ⓒ	●	●ⓒ	●ⓒ	●ⓒ	●ⓒ		●ⓒ				●					
M	Stainless	●ⓒ		●	●ⓒ	✣		●ⓒ	●	●ⓒ	●ⓒ								●					
N	Non-ferrous																	ⓒ✣	●					
S	Superalloy						ⓒ	●ⓒ	●									ⓒ✣						
H	Hard material																							



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated T6215	Coated AH6225	Coated AH6235	Coated AH905	Coated AH120	Coated GH110	Coated GH330	Coated SH725	Coated cermet GT9530	Coated cermet AT9530	Cermet NS9530	Uncoated KS20	Uncoated TH10	Dimension (in) RE	IC	S
Medium cutting	**TQ**	**TNMG 331 TQ**	**TNMG160404-TQ**	●	●									●	●	●			0.016	0.375	0.187
		TNMG 332 TQ	TNMG160408-TQ	●	●									●	●	●			0.031	0.375	0.187
	TA	**TNMG 331 TA**	**TNMG160404-TA**	●	●														0.016	0.375	0.187
		TNMG 332 TA	TNMG160408-TA	●	●														0.031	0.375	0.187
		TNMG 333 TA	TNMG160412-TA	●	●														0.047	0.375	0.187
	SA	**TNMG 331 SA**	**TNMG160404-SA**			●	●	●		●									0.016	0.375	0.187
		TNMG 332 SA	TNMG160408-SA			●	●	●		●							●		0.031	0.375	0.187
		TNMG 333 SA	TNMG160412-SA			●	●	●		●							●		0.047	0.375	0.187
		TNMG 432 SA	**TNMG220408-SA**			●	●	●		●							●		0.031	0.500	0.187
		TNMG 433 SA	TNMG220412-SA			●	●	●		●									0.047	0.500	0.187
	HMM	**TNMG 331 HMM**	**TNMG160404-HMM**						●										0.016	0.375	0.187
		TNMG 332 HMM	TNMG160408-HMM						●										0.031	0.375	0.187
		TNMG 333 HMM	TNMG160412-HMM						●										0.047	0.375	0.187
Medium cutting (sharp edge)	**P**	**TNGG 330.5 FR-P**	**TNGG160402FR-P**										●						0.008	0.375	0.187
		TNGG 3305 FL-P	TNGG160402FL-P										●						0.008	0.375	0.187
		TNGG 331 FR-P	TNGG160404FR-P										●						0.016	0.375	0.187
		TNGG 331 FL-P	TNGG160404FL-P										●						0.016	0.375	0.187
		TNGG 332 FR-P	TNGG160408FR-P										●						0.031	0.375	0.187
		TNGG 332 FL-P	TNGG160408FL-P										●						0.031	0.375	0.187
Medium cutting	**P**	**TNGG 330.5 R-P**	**TNGG160402R-P**								●	●				●		●	0.008	0.375	0.187
		TNGG 3305 L-P	TNGG160402L-P								●	●				●		●	0.008	0.375	0.187
		TNGG 331 R-P	TNGG160404R-P								●	●				●		●	0.016	0.375	0.187
		TNGG 331 L-P	TNGG160404L-P								●	●				●		●	0.016	0.375	0.187
		TNGG 332 R-P	TNGG160408R-P								●	●				●		●	0.031	0.375	0.187
		TNGG 332 L-P	TNGG160408L-P								●	●				●		●	0.031	0.375	0.187

● : Line up

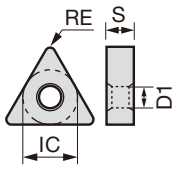
Reference pages: External toolholder → 3-82 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

TN

Triangular with hole

P	Steel	●ⓒ	ⓒ✣	✣			ⓒ✣	✣	ⓒ	●	●ⓒ	●ⓒ	●ⓒ			●ⓒ					●
M	Stainless	●ⓒ			●	ⓒ	●ⓒ	✣	ⓒ	●	●ⓒ	●ⓒ									●
N	Non-ferrous																			●	●
S	Superalloy				●	ⓒ			●	●	●ⓒ									●	
H	Hard material																				



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	Coated T9225	Coated T9235	Coated AH8005	Coated AH8015	Coated AH6225	Coated AH6235	Coated AH725	Coated AH110	Coated AH120	Coated GH330	Coated cermet GT720	Cermet NS9530	Uncoated KS05F	Uncoated TH10	Dimension (in) RE	IC	S
Medium cutting	S	TNMG 331 R-S	TNMG160404R-S	●	●	●			●	●	●			●		●			0.016	0.375	0.187
		TNMG 331 L-S	TNMG160404L-S	●	●	●			●	●				●		●			0.016	0.375	0.187
		TNMG 332 R-S	TNMG160408R-S	●	●	●			●	●	●			●		●			0.031	0.375	0.187
		TNMG 332 L-S	TNMG160408L-S	●	●	●			●	●				●		●			0.031	0.375	0.187
		TNMG 431 R-S	TNMG220404R-S		●	●			●	●				●		●			0.016	0.500	0.187
		TNMG 431 L-S	TNMG220404L-S		●	●			●	●				●		●			0.016	0.500	0.187
		TNMG 432 R-S	TNMG220408R-S		●	●			●	●				●		●			0.031	0.500	0.187
		TNMG 432 L-S	TNMG220408L-S		●	●			●	●				●		●			0.031	0.500	0.187
	27	TNMG 331-27	TNMG160404-27	●	●														0.016	0.375	0.187
		TNMG 332-27	TNMG160408-27	●	●											●			0.031	0.375	0.187
		TNMG 333-27	TNMG160412-27	●	●														0.047	0.375	0.187
		TNMG 431-27	TNMG220404-27		●														0.016	0.500	0.187
		TNMG 432-27	TNMG220408-27		●														0.031	0.500	0.187
		TNMG 433-27	TNMG220412-27		●														0.047	0.500	0.187
	28	TNMG 331-28	TNMG160404-28				●	●					●				●		0.016	0.375	0.187
		TNMG 332-28	TNMG160408-28				●	●					●				●		0.031	0.375	0.187
		TNMG 431-28	TNMG220404-28									●	●						0.016	0.500	0.187
		TNMG 432-28	TNMG220408-28									●	●						0.031	0.500	0.187
	33	TNMG 331-33	TNMG160404-33															●	0.016	0.375	0.187
		TNMG 332-33	TNMG160408-33															●	0.031	0.375	0.187
		TNMG 334-33	TNMG160416-33		●														0.063	0.375	0.187
		TNMG 431-33	TNMG220404-33		●										●				0.016	0.500	0.187
		TNMG 433-33	TNMG220412-33			●													0.047	0.500	0.187
		TNMG 434-33	TNMG220416-33		●														0.063	0.500	0.187
	37	TNMG 331-37	TNMG160404-37	●										●		●			0.016	0.375	0.187
		TNMG 332-37	TNMG160408-37	●										●		●			0.031	0.375	0.187
	38	TNMG 331-38	TNMG160404-38											●					0.016	0.375	0.187
		TNMG 332-38	TNMG160408-38											●					0.031	0.375	0.187

● : Line up

Reference pages: External toolholder → 3-82 -

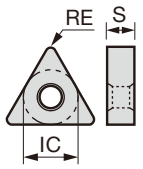
Insert NEGATIVE TYPE

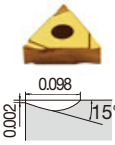
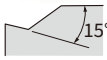
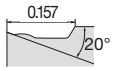
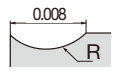
● : Continuous cutting
ᑕ : Light interrupted cutting
✣ : Heavy interrupted cutting

TN

Rhombic, 60° with hole

P	Steel						●ᑕ	●ᑕ	●																
M	Stainless			●ᑕ	●ᑕ	●		●		●															
N	Non-ferrous							●		●		●ᑕ													
S	Superalloy	●ᑕ		●ᑕ	●																				
H	Hard material			●ᑕ		●ᑕ																			



Application	Chipbreaker	Designation Inch	Designation Metric	Coated 650	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	Diamond coated UC1	RE	IC	S
Finishing	D1	TNEG3308FLD1	TNEG160402FLD1						●				0.008	0.375	0.187
		TNEG3308FRD1	TNEG160402FRD1						●				0.008	0.375	0.187
		TNEG331FLD1	TNEG160404FLD1						●				0.016	0.375	0.187
		TNEG331FRD1	TNEG160404FRD1						●				0.016	0.375	0.187
		TNEG332FLD1	TNEG160408FLD1						●				0.031	0.375	0.187
		TNEG332FRD1	TNEG160408FRD1						●				0.031	0.375	0.187
Light cutting	TMV	TNGG3308MRTMV	TNGG160402MRTMV	●	●	●			●				0.007	0.375	0.187
		TNGG331MRTMV	TNGG160404MRTMV	●	●	●			●				0.015	0.375	0.187
															
	UL	TNGG3304MFNUL	TNGG160401MFNUL	●	●	●		●	●				0.003	0.375	0.187
		TNGG3308MFNUL	TNGG160402MFNUL	●	●	●		●	●				0.007	0.375	0.187
		TNGG331MFNUL	TNGG160404MFNUL	●	●	●		●	●				0.015	0.375	0.187
		TNGG332MFNUL	TNGG160408MFNUL		●	●		●	●				0.031	0.375	0.187
	U2	TNGG3304FRU2	TNGG160401FRU2							●	●		0.004	0.375	0.187
		TNGG3308FLU2	TNGG160402FLU2			●					●		0.008	0.375	0.187
		TNGG3308FRU2	TNGG160402FRU2			●					●		0.008	0.375	0.187
		TNGG331FLU2	TNGG160404FLU2			●					●		0.016	0.375	0.187
		TNGG331FRU2	TNGG160404FRU2			●					●		0.016	0.375	0.187
		TNGG332FLU2	TNGG160408FLU2								●		0.031	0.375	0.187
		TNGG332FRU2	TNGG160408FRU2								●		0.031	0.375	0.187
Medium cutting	ZP	TNGG3308FNZP	TNGG160402FNZP			●		●	●	●	●		0.008	0.375	0.187
		TNGG331FNZP	TNGG160404FNZP			●		●	●	●	●		0.016	0.375	0.187
		TNGG332FNZP	TNGG160408FNZP			●		●		●	●		0.031	0.375	0.187
	ZP	TNMG3308FNZP	TNMG160402FNZP									●	0.008	0.375	0.187
		TNMG331FNZP	TNMG160404FNZP									●	0.016	0.375	0.187
		TNMG332FNZP	TNMG160408FNZP									●	0.031	0.375	0.187

● : Line up

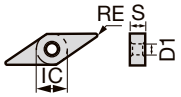
Reference pages: External toolholder → 3-82 -

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

VN

Rhombic, 35°
with hole

P	Steel	●	●ɔ	ɔ✣	✣	ɔ			ɔ✣	✣	●ɔ	●ɔ		●ɔ	●ɔ	●ɔ		●ɔ	●ɔ	●ɔ		●ɔ	●ɔ							
M	Stainless		●ɔ			●	●	ɔ	●ɔ	✣	●ɔ	●ɔ																	
N	Non-ferrous																												
S	Superalloy						●	ɔ			●ɔ																		
H	Hard material																												



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9205	T9215	T9225	T9235	T6215	AH8005	AH8015	AH6225	AH6235	AH120	GH330	Coated cermet GT9530	GT720	AT9530	Cermet NS9530	NS520	Dimension (in) RE	IC	S
Finishing	TF	VNMG 2.330.5E TF	VNMG120402E-TF		●	●		●		●	●							●		0.008	0.281	0.187
		VNMG 2.331E TF	VNMG120404E-TF		●	●		●		●	●							●		0.016	0.281	0.187
		VNMG 2.332E TF	VNMG120408E-TF		●	●		●		●	●							●		0.031	0.281	0.187
		VNMG 330.5 TF	VNMG160402-TF		●	●		●		●	●							●		0.008	0.375	0.187
		VNMG 331 TF	VNMG160404-TF		●	●		●		●	●							●		0.016	0.375	0.187
		VNMG 332 TF	VNMG160408-TF		●	●		●		●	●					●		●		0.031	0.375	0.187
	TSF	VNMG 2.330.5E TSF	VNMG120402E-TSF		●	●		●		●	●				●		●	●		0.008	0.281	0.187
		VNMG 2.331E TSF	VNMG120404E-TSF		●	●		●		●	●				●		●	●		0.016	0.281	0.187
		VNMG 2.332E TSF	VNMG120408E-TSF		●	●		●		●	●				●		●	●		0.031	0.281	0.187
		VNMG 330.5 TSF	VNMG160402-TSF		●	●		●		●	●		●		●		●	●		0.008	0.375	0.187
		VNMG 331 TSF	VNMG160404-TSF	●	●	●	●	●		●	●		●		●		●	●		0.016	0.375	0.187
		VNMG 332 TSF	VNMG160408-TSF	●	●	●	●	●		●	●		●		●		●	●		0.031	0.375	0.187
		VNMG 333 TSF	VNMG160412-TSF	●	●	●	●	●		●	●									0.047	0.375	0.187
	PS	VNMG 2.330.5E PS	VNMG120402E-PS		●	●		●		●	●							●		0.008	0.281	0.187
		VNMG 2.331E PS	VNMG120404E-PS		●	●		●		●	●							●		0.016	0.281	0.187
		VNMG 2.332E PS	VNMG120408E-PS		●	●		●		●	●							●		0.031	0.281	0.187
		VNMG 330.5 PS	VNMG160402-PS		●	●		●		●	●							●		0.008	0.375	0.187
		VNMG 331 PS	VNMG160404-PS		●	●		●		●	●							●		0.016	0.375	0.187
		VNMG 332 PS	VNMG160408-PS		●	●		●		●	●							●		0.031	0.375	0.187
		VNMG 333 PS	VNMG160412-PS		●	●		●		●	●							●		0.047	0.375	0.187
Finishing for mild steel	ZF	VNMG 2.330.5E ZF	VNMG120402E-ZF		●	●		●		●	●							●		0.008	0.281	0.187
		VNMG 2.331E ZF	VNMG120404E-ZF		●	●		●		●	●							●		0.016	0.281	0.187
		VNMG 2.332E ZF	VNMG120408E-ZF		●	●		●		●	●							●		0.031	0.281	0.187
		VNMG 330.5 ZF	VNMG160402-ZF		●	●		●		●	●							●		0.008	0.375	0.187
		VNMG 331 ZF	VNMG160404-ZF		●	●	●	●		●	●				●		●	●		0.016	0.375	0.187
		VNMG 332 ZF	VNMG160408-ZF		●	●	●	●		●	●				●		●	●		0.031	0.375	0.187
		VNMG 333 ZF	VNMG160412-ZF		●	●	●	●		●	●							●		0.047	0.375	0.187
Finishing	TS	VNMG 2.330.5E TS	VNMG120402E-TS		●	●		●		●	●							●		0.008	0.281	0.187
		VNMG 2.331E TS	VNMG120404E-TS		●	●		●		●	●							●		0.016	0.281	0.187
		VNMG 2.332E TS	VNMG120408E-TS		●	●		●		●	●							●		0.031	0.281	0.187
		VNMG 330.5 TS	VNMG160402-TS		●	●		●		●	●							●		0.008	0.375	0.187
		VNMG 331 TS	VNMG160404-TS		●	●	●	●		●	●				●		●	●	●	0.016	0.375	0.187
		VNMG 332 TS	VNMG160408-TS		●	●	●	●		●	●				●		●	●	●	0.031	0.375	0.187
		VNMG 333 TS	VNMG160412-TS		●	●	●	●		●	●							●		0.047	0.375	0.187
	SF	VNMG 331 SF	VNMG160404-SF					●			●									0.016	0.375	0.187
		VNMG 332 SF	VNMG160408-SF					●			●									0.031	0.375	0.187
	SS	VNMG 2.331E SS	VNMG120404E-SS					●			●	●								0.016	0.281	0.187
		VNMG 2.332E SS	VNMG120408E-SS					●			●	●								0.031	0.281	0.187
		VNMG 331 SS	VNMG160404-SS					●			●	●	●	●						0.016	0.375	0.187
		VNMG 332 SS	VNMG160408-SS					●			●	●	●	●						0.031	0.375	0.187
		VNMG 333 SS	VNMG160412-SS					●			●	●	●	●						0.047	0.375	0.187
	HRF	VNMG 331 HRF	VNMG160404-HRF						●	●										0.016	0.375	0.187
		VNMG 332 HRF	VNMG160408-HRF						●	●										0.031	0.375	0.187

● : Line up

Reference pages: External toolholder → 3-95 -

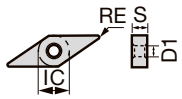
Insert NEGATIVE TYPE

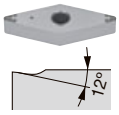
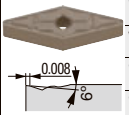
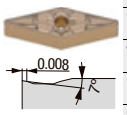
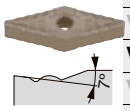
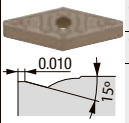
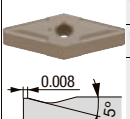
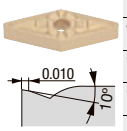
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

VN

Rhombic, 35° with hole

P	Steel	●	●ɔ	ɔ✣	✣	ɔ		ɔ✣	✣	●	●ɔ	●	●ɔ		●ɔ			●ɔ	●ɔ	●				
M	Stainless		●ɔ			●	ɔ	●ɔ	✣	●	●ɔ	●	●ɔ							●				
N	Non-ferrous																			●				
S	Superalloy						ɔ			●	●ɔ	●												
H	Hard material																							



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9205	T9215	T9225	T9235	T6215	AH8015	AH6225	AH6235	AH110	AH120	GH110	GH330	Coated cermet GT9530	Cermet NS9530	Cermet NS520	Uncoated TH10	Dimension (in) RE	IC	S
Finishing	**01**	**VNGG 330.5-01**	**VNGG160402-01**											●			●	●	●	0.008	0.375	0.187
		VNGG 331-01	VNGG160404-01														●	●	●	0.016	0.375	0.187
		VNGG 332-01	VNGG160408-01														●	●		0.031	0.375	0.187
	11	**VNMG 331-11**	**VNMG160404-11**												●		●		●	0.016	0.375	0.187
		VNMG 332-11	VNMG160408-11		●												●			0.031	0.375	0.187
		VNMG 333-11	VNMG160412-11													●	●			0.047	0.375	0.187
Medium cutting	**TM**	**VNMG 2.331E TM**	**VNMG120404E-TM**		●	●		●	●	●										0.016	0.281	0.187
		VNMG 2.332E TM	VNMG120408E-TM		●	●		●	●	●										0.031	0.281	0.187
		VNMG 2.333E TM	VNMG120412E-TM		●	●		●	●	●										0.047	0.281	0.187
		VNMG 331 TM	**VNMG160404-TM**	●	●	●	●	●	●	●		●	●							0.016	0.375	0.187
		VNMG 332 TM	VNMG160408-TM	●	●	●	●	●	●	●		●	●							0.031	0.375	0.187
		VNMG 333 TM	VNMG160412-TM	●	●	●	●	●	●	●		●								0.047	0.375	0.187
	PM	**VNMG 2.331E PM**	**VNMG120404E-PM**		●	●		●	●	●										0.016	0.281	0.187
		VNMG 2.332E PM	VNMG120408E-PM		●	●		●	●	●										0.031	0.281	0.187
		VNMG 2.333E PM	VNMG120412E-PM		●	●		●	●	●										0.047	0.281	0.187
		VNMG 331 PM	**VNMG160404-PM**		●	●		●	●	●										0.016	0.375	0.187
		VNMG 332 PM	VNMG160408-PM		●	●		●	●	●										0.031	0.375	0.187
		VNMG 333 PM	VNMG160412-PM		●	●		●	●	●										0.047	0.375	0.187
Medium cutting for mild steel	**ZM**	**VNMG 2.331E ZM**	**VNMG120404E-ZM**		●	●		●	●	●										0.016	0.281	0.187
		VNMG 2.332E ZM	VNMG120408E-ZM		●	●		●	●	●										0.031	0.281	0.187
		VNMG 2.333E ZM	VNMG120412E-ZM		●	●		●	●	●										0.047	0.281	0.187
		VNMG 331 ZM	**VNMG160404-ZM**		●	●		●	●	●										0.016	0.375	0.187
		VNMG 332 ZM	VNMG160408-ZM		●	●	●	●	●	●										0.031	0.375	0.187
		VNMG 333 ZM	VNMG160412-ZM		●	●	●	●	●	●										0.047	0.375	0.187
Medium cutting	**DM**	**VNMG 331 DM**	**VNMG160404-DM**		●	●		●	●	●										0.031	0.375	0.187
		VNMG 332 DM	VNMG160408-DM	●	●	●	●	●	●	●										0.031	0.375	0.187
		VNMG 333 DM	VNMG160412-DM		●	●	●	●	●	●										0.047	0.375	0.187
	All-round	**VNMG 331**	**VNMG160404**	●	●	●	●					●	●				●		●	0.016	0.375	0.187
		VNMG 332	VNMG160408	●	●	●	●					●	●				●		●	0.031	0.375	0.187
		VNMG 333	VNMG160412		●	●											●			0.047	0.375	0.187
	SM	**VNMG 2.331E SM**	**VNMG120404E-SM**					●		●	●									0.016	0.281	0.187
		VNMG 2.332E SM	VNMG120408E-SM					●		●	●									0.031	0.281	0.187
		**VNMG 331 SM**	**VNMG160404-SM**					●		●	●									0.016	0.375	0.187
		VNMG 332 SM	VNMG160408-SM					●		●	●									0.031	0.375	0.187
		VNMG 333 SM	VNMG160412-SM					●		●	●									0.047	0.375	0.187

● : Line up

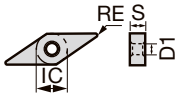
Reference pages: External toolholder → 3-95 -

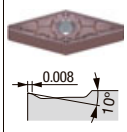
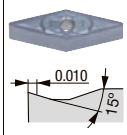
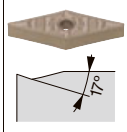
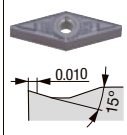
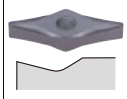
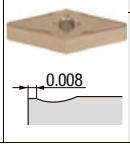
● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

VN

Rhombic, 35° with hole

P	Steel	●ɔ	ɔ✣	ɔ			ɔ✣	✣		●	●ɔ	●ɔ	●ɔ		●ɔ				●		
M	Stainless	●ɔ		●	●	ɔ	●ɔ	✣		●	●ɔ								●		
N	Non-ferrous																		●	●	
S	Superalloy				●	ɔ			ɔ	●	●ɔ								●		
H	Hard material																				



Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	T9225	T6215	AH8005	AH8015	AH6225	AH6235	AH905	AH110	AH120	Coated cermet GT9530	AT9530	Cermet NS9530	Uncoated KS05F	TH10	Dimension (in) RE	IC	S
Medium cutting	**SDM**	**VNMG 331 SDM**	**VNMG160404-SDM**			●			●	●									0.016	0.375	0.187
		VNMG 332 SDM	VNMG160408-SDM			●			●	●									0.031	0.375	0.187
		VNMG 333 SDM	VNMG160412-SDM			●			●	●									0.047	0.375	0.187
	HRM	**VNMG 331 HRM**	**VNMG160404-HRM**				●	●											0.016	0.375	0.187
		VNMG 332 HRM	VNMG160408-HRM				●	●											0.031	0.375	0.187
		VNMG 333 HRM	VNMG160412-HRM				●	●											0.047	0.375	0.187
	TQ	**VNMG 331 TQ**	**VNMG160404-TQ**	●	●									●	●	●			0.016	0.375	0.187
		VNMG 332 TQ	VNMG160408-TQ	●	●									●	●	●			0.031	0.375	0.187
	HMM	**VNMG 331 HMM**	**VNMG160404-HMM**								●								0.016	0.375	0.187
		VNMG 332 HMM	VNMG160408-HMM								●								0.031	0.375	0.187
		VNMG 333 HMM	VNMG160412-HMM								●								0.047	0.375	0.187
	28	**VNMG 331-28**	**VNMG160404-28**				●	●					●				●		0.016	0.375	0.187
		VNMG 332-28	VNMG160408-28				●	●					●				●		0.031	0.375	0.187
	33	**VNMG 331-33**	**VNMG160404-33**		●							●						●	0.016	0.375	0.187
		VNMG 332-33	VNMG160408-33	●	●													●	0.031	0.375	0.187

● : Line up

Reference pages: External toolholder → 3-95 -

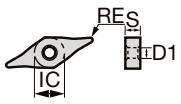
Insert NEGATIVE TYPE

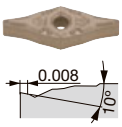
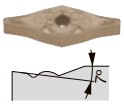
● : Continuous cutting
ɕ : Light interrupted cutting
✣ : Heavy interrupted cutting

YN

Rhombic, 25° with hole

P	Steel	●ɕ	ɕ✣	✣	ɕ		ɕ✣		●ɕ				●ɕ										
M	Stainless	●ɕ			●	ɕ	●ɕ																
N	Non-ferrous																						
S	Superalloy					ɕ																	
H	Hard material																						



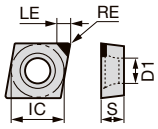
Application	Chipbreaker	Designation Inch	Designation Metric	Coated T9215	T9225	T9235	T6215	AH8015	AH6225	Coated cermet GT9530	Cermet NS9530	Dimension (in) RE	IC	S
Finishing for mild steel	**ZF**	**YNMG 330.5 ZF**	**YNMG160402-ZF**	●	●	●	●	●	●	●	●	0.008	0.375	0.187
		YNMG 331 ZF	YNMG160404-ZF	●	●	●	●	●	●	●	●	0.016	0.375	0.187
		YNMG 332 ZF	YNMG160408-ZF	●	●	●	●	●	●	●	●	0.031	0.375	0.187
Medium cutting for mild steel	**ZM**	**YNMG 331 ZM**	**YNMG160404-ZM**	●	●	●	●	●	●	●	●	0.016	0.375	0.187
		YNMG 332 ZM	YNMG160408-ZM	●	●	●	●	●	●	●	●	0.031	0.375	0.187

● : Line up

Reference pages: External toolholder → 3-95 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

CC



IC : 0.141"
D1 : 0.075"
S : 0.055"

80°Rhombic with hole, Positive 7°

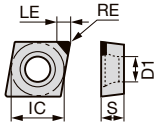
K	Cast iron	
S	Superalloy	
H	Hard material	●
	Sintered metal	●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BX310	BX470
Precision finishing	**1QP-CCGW 4.51.80.5**	**1QP-CCGW03X102**	0.008	0.055	1		○					●	●
	1QP-CCGW 4.51.8**1**	1QP-CCGW03X1**04**	0.016	0.051	1		○					●	●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

CC



IC : 0.172"
D1 : 0.091"
S : 0.070"

80°Rhombic with hole, Positive 7°

K	Cast iron	
S	Superalloy	
H	Hard material	●
	Sintered metal	●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BX310	BX470
Precision finishing	**1QP-CCGW 5.52.20.5**	**1QP-CCGW04T102**	0.008	0.075	1		○					●	●
	1QP-CCGW 5.52.2**1**	1QP-CCGW04T1**04**	0.016	0.071	1		○					●	●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

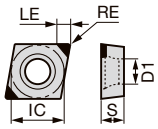
● : Line up

Reference pages: External toolholder → 3-37 -, Internal toolholder → 4-14 -

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

CC



IC : 0.250"
D1 : 0.109"
S : 0.094"

80°Rhombic with hole, Positive 7°

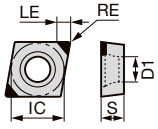
K	Cast iron	◐ ●
S	Superalloy	◐
H	Hard material	● ◐ ✠ ● ◐ ● ◐ ● ● ◐
	Sintered metal	◐ ✠

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10	BXM20	BXA30	BXA40	BX310	BX330	BX360	BX470	BX480	BX930
Precision finishing	2QP-CCGW 21.50.5-LF	2QP-CCGW060202-LF	0.008	0.091	2			○				●	●											
	2QP-CCGW 21.50.5-L	2QP-CCGW060202-L		0.091	2				○			●	●											
	2QP-CCGW 21.51-LF	2QP-CCGW060204-LF	0.016	0.091	2			○				●	●											
	2QP-CCGW 21.51-L	2QP-CCGW060204-L		0.091	2				○			●	●											
	2QP-CCGW 21.52-LF	2QP-CCGW060208-LF	0.031	0.087	2			○				●	●											
	2QP-CCGW 21.52-L	2QP-CCGW060208-L		0.087	2				○			●	●											
Finishing	2QP-CCGW 21.50.5	2QP-CCGW060202	0.008	0.091	2		○					●	●		●	●	●	●						
	2QP-CCMW 21.50.5	2QP-CCMW060202		0.091	2		○												●	●	●			
	2QP-CCGW 21.50.5-LC	2QP-CCGW060202-LC		0.091	2					○		●	●											
	2QP-CCGW 21.51	2QP-CCGW060204	0.016	0.091	2		○					●	●		●	●	●	●				●	●	
	2QP-CCGW 21.51-SR	2QP-CCGW060204SR		0.091	2		○							●										
	2QP-CCMW 21.51	2QP-CCMW060204		0.091	2		○												●	●	●			●
	Q-CCMW 21.51	Q-CCMW060204		0.098	1		○													●				
	2QP-CCGW 21.51-LC	2QP-CCGW060204-LC		0.091	2					○		●	●											
	2QP-CCGW 21.52	2QP-CCGW060208	0.031	0.087	2		○					●	●											
	2QP-CCGW 21.52-SR	2QP-CCGW060208SR		0.087	2		○							●										
	2QP-CCMW 21.52	2QP-CCMW060208		0.087	2		○													●				
	2QP-CCGW 21.52-LC	2QP-CCGW060208-LC		0.087	2					○		●	●											

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

CC with chipbreaker



IC : 0.250"
D1 : 0.109"
S : 0.094"

80°Rhombic with hole, Positive 7°

K	Cast iron	
S	Superalloy	
H	Hard material	● ◐ ✠ ●
	Sintered metal	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10
Precision finishing	2QP-CCGT 21.51 HP	2QP-CCGT060204-HP	0.016	0.091	2		○					●	●	●	●
	2QP-CCGT 21.51 HS	2QP-CCGT060204-HS		0.087	2		○					●	●	●	

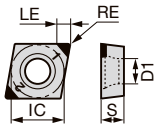
*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

Reference pages: External toolholder → 3-37 -, Internal toolholder → 4-14 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

CC



IC : 0.375"
D1 : 0.173"
S : 0.156"

80°Rhombic with hole, Positive 7°

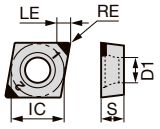
		BXA10	BXA20	BR35F	BXM10	BXM20	BXA30	BXA40	BX310	BX330	BX360	BX470	BX480	BX930
K	Cast iron											●ⓒ	●	
S	Superalloy											●ⓒ		
H	Hard material	●	●ⓒ	✣	●	●ⓒ	●	●ⓒ	●	●	●ⓒ			
	Sintered metal											●ⓒ	●✣	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping
Precision finishing	2QP-CCGW 32.50.5-LF	2QP-CCGW09T302-LF	0.008	0.091	2			○			
	2QP-CCGW 32.50.5-L	2QP-CCGW09T302-L		0.091	2				○		
	2QP-CCGW 32.51-LF	2QP-CCGW09T304-LF	0.016	0.091	2			○			
	2QP-CCGW 32.51-L	2QP-CCGW09T304-L		0.091	2				○		
	2QP-CCGW 32.51 FW	2QP-CCGW09T304FW		0.091	2	○	○				
	2QP-CCGW 32.52-LF	2QP-CCGW09T308-LF	0.031	0.087	2			○			
	2QP-CCGW 32.52-L	2QP-CCGW09T308-L		0.087	2				○		
	2QP-CCGW 32.52 FW	2QP-CCGW09T308FW		0.087	2	○	○				
Finishing	2QP-CCGW 32.50.5	2QP-CCGW09T302	0.008	0.091	2		○				
	2QP-CCGW 32.50.5-LC	2QP-CCGW09T302-LC		0.091	2					○	
	2QP-CCGW 32.51	2QP-CCGW09T304	0.016	0.091	2		○				
	2QP-CCGW 32.51-SR	2QP-CCGW09T304SR		0.091	2		○				
	2QP-CCMW 32.51	2QP-CCMW09T304		0.091	2		○				
	Q-CCMW 32.51	Q-CCMW09T304		0.098	1		○				
	2QP-CCGW 32.51-LC	2QP-CCGW09T304-LC		0.091	2					○	
	2QP-CCGW 32.52	2QP-CCGW09T308	0.031	0.087	2		○				
	2QP-CCGW 32.52-SR	2QP-CCGW09T308SR		0.087	2		○				
	2QP-CCMW 32.52	2QP-CCMW09T308		0.087	2		○				
	2QP-CCGW 32.52-LC	2QP-CCGW09T308-LC		0.087	2					○	
Medium cutting	2QP-CCGW 32.50.5-H	2QP-CCGW09T302-H	0.008	0.091	2						○
	2QP-CCGW 32.51-H	2QP-CCGW09T304-H	0.016	0.091	2						○
	2QP-CCGW 32.51-HC	2QP-CCGW09T304HC		0.091	2						○
	2QP-CCGW 32.52-H	2QP-CCGW09T308-H	0.031	0.087	2						○
	2QP-CCGW 32.52-HC	2QP-CCGW09T308HC		0.087	2						○

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

CC with chipbreaker



IC : 0.375"
D1 : 0.173"
S : 0.156"

80°Rhombic with hole, Positive 7°

		BXA10	BXA20	BR35F	BXM10
K	Cast iron				
S	Superalloy				
H	Hard material	●	●ⓒ	✣	●
	Sintered metal				

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping
Precision finishing	2QP-CCGT 32.51 HP	2QP-CCGT09T304-HP	0.016	0.091	2		○				
	2QP-CCGT 32.51 HS	2QP-CCGT09T304-HS		0.087	2		○				
	2QP-CCGT 32.51 FW-HP	2QP-CCGT09T304FW-HP		0.087	2	○	○				
	2QP-CCGT 32.51 FW-HS	2QP-CCGT09T304FW-HS		0.087	2	○	○				
	2QP-CCGT 32.52 HP	2QP-CCGT09T308-HP	0.031	0.087	2		○				
	2QP-CCGT 32.52 HS	2QP-CCGT09T308-HS		0.087	2		○				
	2QP-CCGT 32.52 FW-HP	2QP-CCGT09T308FW-HP		0.087	2	○	○				
	2QP-CCGT 32.52 FW-HS	2QP-CCGT09T308FW-HS		0.087	2	○	○				

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

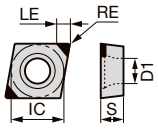
● : Line up

Reference pages: External toolholder → 3-37 -, Internal toolholder → 4-14 -

CBN Insert POSITIVE TYPE

● : Continuous cutting
ᑕ : Light interrupted cutting
✣ : Heavy interrupted cutting

CP



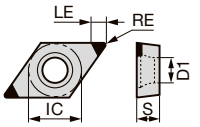
IC : 0.313"
D1 : 0.134"
S : 0.094"

80° Rhombic with hole, Positive 11°

| | | |

● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

DC



IC : 0.250"
D1 : 0.109"
S : 0.094"

55° Rhombic with hole, Positive 7°

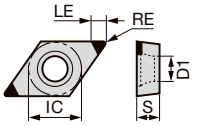
		BXA10	BXA20	BR35F	BXM10	BXM20	BXA30	BXA40	BX310	BX330	BX360	BX470	BX480	BX930
K	Cast iron											●ⓒ	●	
S	Superalloy											●ⓒ		
H	Hard material	●	●ⓒ	✣	●	●ⓒ	●	●ⓒ	●	●	●ⓒ			
	Sintered metal											●ⓒ	●✣	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping
Finishing	2QP-DCGW 21.50.5-LF	2QP-DCGW070202-LF	0.008	0.106	2			○			
	2QP-DCGW 21.50.5-L	2QP-DCGW070202-L		0.106	2				○		
	2QP-DCGW 21.51-LF	2QP-DCGW070204-LF	0.016	0.098	2			○			
	2QP-DCGW 21.51-L	2QP-DCGW070204-L		0.098	2				○		
	2QP-DCGW 21.52-LF	2QP-DCGW070208-LF	0.031	0.083	2			○			
	2QP-DCGW 21.52-L	2QP-DCGW070208-L		0.083	2				○		
Medium cutting	2QP-DCGW 21.50.5	2QP-DCGW070202	0.008	0.106	2		○				
	2QP-DCGW 21.50.5-SR	2QP-DCGW070202SR		0.106	2		○				
	2QP-DCMW 21.50.5	2QP-DCMW070202		0.106	2		○				
	2QP-DCGW 21.50.5-LC	2QP-DCGW070202-LC		0.106	2					○	
	2QP-DCGW 21.51	2QP-DCGW070204	0.016	0.098	2		○				
	2QP-DCGW 21.51-SR	2QP-DCGW070204SR		0.098	2		○				
	2QP-DCMW 21.51	2QP-DCMW070204		0.098	2		○				
	Q-DCMW 21.51	Q-DCMW070204		0.083	1		○				
	2QP-DCGW 21.51-LC	2QP-DCGW070204-LC		0.098	2					○	
	2QP-DCGW 21.52	2QP-DCGW070208	0.031	0.083	2		○				
	2QP-DCGW 21.52-SR	2QP-DCGW070208SR		0.083	2		○				
	2QP-DCGW 21.52-LC	2QP-DCGW070208-LC		0.083	2					○	

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

DC with chipbreaker



IC : 0.250"
D1 : 0.109"
S : 0.094"

55° Rhombic with hole, Positive 7°

		BXA10	BXA20	BR35F	BXM10
K	Cast iron				
S	Superalloy				
H	Hard material	●	●ⓒ	✣	●
	Sintered metal				

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping
Precision finishing	2QP-DCGT 21.51 HP	2QP-DCGT070204-HP	0.016	0.098	2		○				
	2QP-DCGT 21.51 HS	2QP-DCGT070204-HS		0.098	2		○				

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

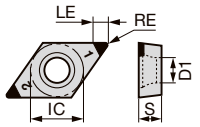
● : Line up

Reference pages: External toolholder → 3-45 -, Internal toolholder → 4-18 -

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

DC



IC : 0.375"
D1 : 0.173"
S : 0.156"

55° Rhombic with hole, Positive 7°

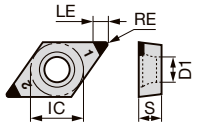
K	Cast iron																		◐●		●										
S	Superalloy																		◐●	●											
H	Hard material	●	◐●	✠	●	◐●	●	◐●	●	●	◐●																				
	Sintered metal																		◐●	◐✠											

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10	BXM20	BXA30	BXA40	BX310	BX330	BX360	BX470	BX480	BX815	BX930
Precision finishing	2QP-DCGW 32.50.5 F	2QP-DCGW11T302F	0.008	0.106	2			○														●			
	2QP-DCGW 32.50.5-LF	2QP-DCGW11T302-LF		0.106	2			○				●	●												
	2QP-DCGW 32.50.5-L	2QP-DCGW11T302-L		0.106	2				○			●	●												
	2QP-DCGW 32.51 F	2QP-DCGW11T304F	0.016	0.098	2			○														●			
	2QP-DCGW 32.51-E	2QP-DCGW11T304-E		0.098	2		○																	●	
	2QP-DCGW 32.51-LT	2QP-DCGW11T304-LT		0.098	2						○													●	
	2QP-DCGW 32.51-LF	2QP-DCGW11T304-LF		0.098	2			○				●	●												
	2QP-DCGW 32.51-L	2QP-DCGW11T304-L		0.098	2				○			●	●												
	2QP-DCGW 32.52-LF	2QP-DCGW11T308-LF	0.031	0.083	2			○				●	●												
	2QP-DCGW 32.52-L	2QP-DCGW11T308-L		0.083	2				○			●	●												
Finishing	2QP-DCGW 32.50.2	2QP-DCGW11T301	0.004	0.109	2		○					●	●												
	2QP-DCGW 32.50.5	2QP-DCGW11T302	0.008	0.106	2		○					●	●		●	●	●	●							
	2QP-DCGW 32.50.5-SR	2QP-DCGW11T302SR		0.106	2		○							●											
	2QP-DCMW 32.50.5	2QP-DCMW11T302		0.106	2		○												●	●	●				
	2QP-DCGW 32.50.5-LC	2QP-DCGW11T302-LC		0.106	2					○		●	●												
	2QP-DCGW 32.51	2QP-DCGW11T304	0.016	0.098	2		○					●	●		●	●	●	●				●	●		
	2QP-DCGW 32.51-SR	2QP-DCGW11T304SR		0.098	2		○							●											
	2QP-DCMW 32.51	2QP-DCMW11T304		0.098	2		○												●	●	●			●	
	Q-DCMW 32.51	Q-DCMW11T304		0.083	1		○													●					
	2QP-DCGW 32.51-LC	2QP-DCGW11T304-LC		0.098	2					○		●	●												
	2QP-DCGW 32.52	2QP-DCGW11T308	0.031	0.083	2		○					●	●		●	●	●	●				●			
	2QP-DCGW 32.52-SR	2QP-DCGW11T308SR		0.083	2		○							●											
	2QP-DCMW 32.52	2QP-DCMW11T308		0.083	2		○												●	●	●				
	2QP-DCGW 32.52-LC	2QP-DCGW11T308-LC		0.083	2					○		●	●												
Medium cutting	2QP-DCGW 32.50.5-H	2QP-DCGW11T302-H	0.008	0.106	2						○		●												
	2QP-DCGW 32.51-H	2QP-DCGW11T304-H	0.016	0.098	2						○		●												
	2QP-DCGW 32.51-HC	2QP-DCGW11T304HC		0.098	2						○			●											
	2QP-DCGW 32.52-H	2QP-DCGW11T308-H	0.031	0.083	2						○		●												
	2QP-DCGW 32.52-HC	2QP-DCGW11T308HC		0.083	2						○			●											

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

DC with chipbreaker



IC : 0.375"
D1 : 0.173"
S : 0.156"

55° Rhombic with hole, Positive 7°

K	Cast iron																														
S	Superalloy																														
H	Hard material	●	◐●	✠	●																										
	Sintered metal																														

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10
Precision finishing	2QP-DCGT 32.51 HP	2QP-DCGT11T304-HP	0.016	0.098	2		○					●	●	●	●
	2QP-DCGT 32.51 HS	2QP-DCGT11T304-HS		0.098	2		○					●	●	●	
	2QP-DCGT 32.52 HP	2QP-DCGT11T308-HP	0.031	0.083	2		○					●	●	●	●
	2QP-DCGT 32.52 HS	2QP-DCGT11T308-HS		0.083	2		○					●	●	●	

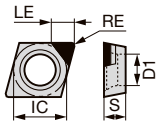
*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

Reference pages: External toolholder → 3-45 -, Internal toolholder → 4-18 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

EP



IC : 0.141"
D1 : 0.075"
S : 0.055"

75° Rhombic, Positive 11° with hole

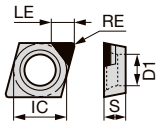
K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BX310	BX470
Finishing	1QP-EPGW 4.51.80.5	1QP-EPGW03X102	0.008	0.055	1		○					●	●
Finishing	1QP-EPGW 4.51.81	1QP-EPGW03X104	0.016	0.051	1		○					●	●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

EP



IC : 0.156"
D1 : 0.091"
S : 0.063"

75° Rhombic, Positive 11° with hole

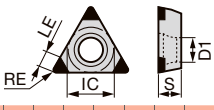
K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BX310	BX470
Finishing	1QP-EPGW 520.5	1QP-EPGW040102	0.008	0.067	1		○					●	●
Finishing	1QP-EPGW 521	1QP-EPGW040104	0.016	0.063	1		○					●	●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

TC



IC : 0.219"
D1 : 0.098"
S : 0.094"

Triangular Positive 7° with hole

K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20
Finishing	3QP-TCGW 730.5	3QP-TCGW090202	0.008	0.091	3		○					●	●
Finishing	3QP-TCGW 731	3QP-TCGW090204	0.016	0.087	3		○					●	●
Finishing	3QP-TCGW 732	3QP-TCGW090208	0.031	0.075	3		○					●	●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

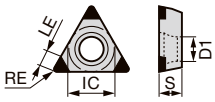
● : Line up

Reference pages: EP: Internal toolholder → 4-11 -
TC: External toolholder → 3-71, Internal toolholder → 4-24 -

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

TC



IC : 0.250"
D1 : 0.109"
S : 0.094"

Triangular Positive 7° with hole

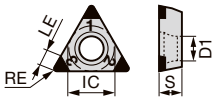
K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20
Finishing	3QP-TCGW 21.50.5	3QP-TCGW110202	0.008	0.091	3		○					●	●
Finishing	3QP-TCGW 21.51	3QP-TCGW110204	0.016	0.087	3		○					●	●
Finishing	3QP-TCGW 21.52	3QP-TCGW110208	0.031	0.075	3		○					●	●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

TC



IC : 0.375"
D1 : 0.173"
S : 0.156"

Triangular Positive 7° with hole

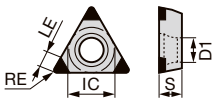
K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20
Finishing	3QP-TCGW 32.50.5	3QP-TCGW16T302	0.008	0.091	3		○					●	●
Finishing	3QP-TCGW 32.51	3QP-TCGW16T304	0.016	0.087	3		○					●	●
Finishing	3QP-TCGW 32.52	3QP-TCGW16T308	0.031	0.075	3		○					●	●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

TP



IC : 0.187"
D1 : 0.091"
S : 0.094"

Triangular Positive 11° with hole

K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BXM10	BXM20	BXA30	BXA40	BX310	BX330	BX360	BX930
Finishing	3QP-TPGW 630.5	3QP-TPGW080202	0.008	0.091	3		○					●	●								
Finishing	3QP-TPGW 631	3QP-TPGW080204		0.087	3		○					●	●	●	●	●	●				
Finishing	3QP-TPMW 631	3QP-TPMW080204	0.016	0.087	3		○											●	●	●	●
Finishing	Q-TPMW 631	Q-TPMW080204		0.087	1		○												●		
Finishing	3QP-TPGW 632	3QP-TPGW080208	0.031	0.075	3		○					●	●								

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

Reference pages: TC: External toolholder → 3-71, Internal toolholder → 4-24 -
TP: Internal toolholder → 4-25 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✠ : Heavy interrupted cutting

TP

Triangular Positive 11° with hole

IC : 0.219"
D1 : 0.098"
S : 0.094"

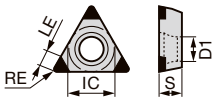
| | | |

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

TP

Triangular Positive 11° with hole



IC : 0.250"
D1 : 0.134"
S : 0.125"

		BXA10	BXA20	BR35F	BXM10	BXM20	BXA30	BXA40	BX310	BX330	BX360	BX470	BX480	BX910	BX930
K	Cast iron											◐	●	●	
S	Superalloy											◐			
H	Hard material	●	◐	✣	●	◐	●	◐	●	●	◐				
	Sintered metal											◐	✣		

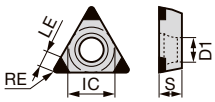
Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10	BXM20	BXA30	BXA40	BX310	BX330	BX360	BX470	BX480	BX910	BX930
Precision finishing	3QP-TPGW 220.5-LF	3QP-TPGW110302-LF	0.008	0.091	3			○				●	●												
	3QP-TPGW 220.5-L	3QP-TPGW110302-L		0.091	3				○			●	●												
	3QP-TPGW 221 F	3QP-TPGW110304F	0.016	0.087	3			○														●			
	3QP-TPGW 221-LF	3QP-TPGW110304-LF		0.087	3			○				●	●												
	3QP-TPGW 221-L	3QP-TPGW110304-L		0.087	3				○			●	●												
	3QP-TPGW 222 F	3QP-TPGW110308F	0.031	0.075	3			○														●			
	3QP-TPGW 222-LF	3QP-TPGW110308-LF		0.075	3			○				●	●												
	3QP-TPGW 222-L	3QP-TPGW110308-L		0.075	3				○			●	●												
Finishing	3QP-TPGW 220.5	3QP-TPGW110302	0.008	0.091	3		○					●	●			●	●	●					●		
	3QP-TPMW 220.5	3QP-TPMW110302		0.091	3		○												●	●	●				●
	3QP-TPGW 220.5-LC	3QP-TPGW110302-LC		0.091	3					○		●	●												
	3QP-TPGW 221	3QP-TPGW110304	0.016	0.087	3		○					●	●		●	●	●	●				●	●		
	3QP-TPGW 221-SR	3QP-TPGW110304SR		0.087	3		○							●											
	3QP-TPMW 221	3QP-TPMW110304		0.087	3		○												●	●	●				●
	Q-TPMW 221	Q-TPMW110304		0.087	1		○													●					
	3QP-TPGW 221-LC	3QP-TPGW110304-LC		0.087	3					○		●	●												
	3QP-TPGW 222	3QP-TPGW110308	0.031	0.075	3		○					●	●		●	●	●	●				●	●	●	
	3QP-TPGW 222-SR	3QP-TPGW110308SR		0.075	3		○							●											
	3QP-TPMW 222	3QP-TPMW110308		0.075	3		○												●	●	●				●
	Q-TPMW 222	Q-TPMW110308		0.075	1		○													●					
	3QP-TPGW 222-LC	3QP-TPGW110308-LC		0.075	3					○		●	●												
Medium cutting	3QP-TPGW 220.5-H	3QP-TPGW110302-H	0.008	0.091	3						○		●												
	3QP-TPGW 221-H	3QP-TPGW110304-H	0.016	0.087	3						○		●												
	3QP-TPGW 221-HC	3QP-TPGW110304HC		0.087	3						○			●											
	3QP-TPGW 222-H	3QP-TPGW110308-H	0.031	0.075	3						○		●												
	3QP-TPGW 222-HC	3QP-TPGW110308HC		0.075	3						○			●											

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

TP with chipbreaker

Triangular Positive 11° with hole



IC : 0.250"
D1 : 0.134"
S : 0.125"

		BXA10	BXA20	BR35F	BXM10
K	Cast iron				
S	Superalloy				
H	Hard material	●	◐	✣	●
	Sintered metal				

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10
Precision finishing	3QP-TPGT 221 HP	3QP-TPGT110304-HP	0.016	0.087	3		○					●	●	●	●
	3QP-TPGT 221 HS	3QP-TPGT110304-HS		0.083	3		○					●	●	●	
	3QP-TPGT 222 HP	3QP-TPGT110308-HP	0.031	0.075	3		○					●	●	●	●
	3QP-TPGT 222 HS	3QP-TPGT110308-HS		0.071	3		○					●	●	●	

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

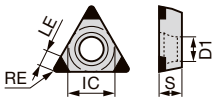
● : Line up

Reference pages: Internal toolholder → 4-25 -

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

TP

Triangular Positive 11° with hole



IC : 0.313"
D1 : 0.134"
S : 0.125"

		BXA10	BXA20	BXM10	BXM20	BXA30	BXA40	BX310	BX330	BX360	BX480	BX930
K	Cast iron										●◐	●
S	Superalloy										●◐	
H	Hard material	●	●◐	●	●◐	●	●◐	●	●	●◐		
	Sintered metal										◐✣	

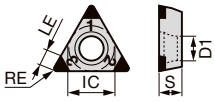
Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BXM10	BXM20	BXA30	BXA40	BX310	BX330	BX360	BX480	BX930
Finishing	3QP-TPGW 2.520.5	3QP-TPGW130302	0.008	0.091	3		○					●	●		●	●	●				●	
	3QP-TPMW 2.520.5	3QP-TPMW130302		0.091	3		○											●	●	●		●
	Q-TPMW 2.520.5	Q-TPMW130302		0.094	1		○												●			
	3QP-TPGW 2.521	3QP-TPGW130304	0.016	0.087	3		○					●	●	●	●	●	●				●	
	3QP-TPMW 2.521	3QP-TPMW130304		0.087	3		○											●	●	●		●
	Q-TPMW 2.521	Q-TPMW130304		0.091	1		○												●			
	3QP-TPGW 2.522	3QP-TPGW130308	0.031	0.075	3		○					●	●									

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

TP

Triangular Positive 11° with hole



IC : 0.375"
D1 : 0.173"
S : 0.156"

		BXA10	BXA20	BXM10	BXM20	BXA30	BXA40	BX310	BX330	BX360	BX480	BX930
K	Cast iron										●◐	●
S	Superalloy										●◐	
H	Hard material	●	●◐	●	●◐	●	●◐	●	●	●◐		
	Sintered metal										◐✣	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BXM10	BXM20	BXA30	BXA40	BX310	BX330	BX360	BX480	BX930
Finishing	3QP-TPGW 32.50.5	3QP-TPGW16T302	0.008	0.091	3		○					●	●									
	3QP-TPGW 32.51	3QP-TPGW16T304	0.016	0.087	3		○					●	●	●	●	●	●				●	
	3QP-TPMW 32.51	3QP-TPMW16T304		0.087	3		○											●	●	●		●
	Q-TPMW 32.51	Q-TPMW16T304		0.091	1		○												●			
	3QP-TPGW 32.52	3QP-TPGW16T308	0.031	0.075	3		○					●	●	●	●	●	●					
	3QP-TPMW 32.52	3QP-TPMW16T308		0.075	3		○											●				

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

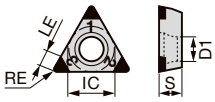
Reference pages: Internal toolholder → 4-25 -

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

TP

Triangular Positive 11° with hole

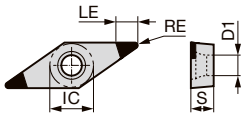


IC : 0.375"
D1 : 0.173"
S : 0.187"

| | | |

● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

VB



IC : 0.250"
D1 : 0.110"
S : 0.094"

35° Rhombic Positive 5° with hole

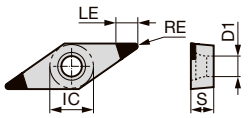
K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20
Finishing	2QP-VBGW 21.50.5	2QP-VBGW110202	0.008	0.138	2		○					●	●
	2QP-VBGW 21.51	2QP-VBGW110204	0.016	0.122	2		○					●	●
	2QP-VBGW 21.52	2QP-VBGW110208	0.031	0.087	2		○					●	●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

VB



IC : 0.250"
D1 : 0.110"
S : 0.125"

35° Rhombic Positive 5° with hole

K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10	BXM20	BXA30	BXA40	BX310	BX330	BX360	BX930
Precision finishing	2QP-VBGW 220.5-LF	2QP-VBGW110302-LF	0.008	0.138	2			○				●	●									
	2QP-VBGW 220.5-L	2QP-VBGW110302-L		0.138	2				○			●	●									
	2QP-VBGW 221-LF	2QP-VBGW110304-LF	0.016	0.122	2			○				●	●									
	2QP-VBGW 221-L	2QP-VBGW110304-L		0.122	2				○			●	●									
	2QP-VBGW 222-LF	2QP-VBGW110308-LF	0.031	0.087	2			○				●	●									
	2QP-VBGW 222-L	2QP-VBGW110308-L		0.087	2				○			●	●									
Finishing	2QP-VBGW 220.2	2QP-VBGW110301	0.004	0.122	2		○					●	●									
	2QP-VBGW 220.5	2QP-VBGW110302	0.008	0.138	2		○					●	●									
	2QP-VBGW 220.5-LC	2QP-VBGW110302-LC		0.138	2					○		●	●									
	2QP-VBGW 221	2QP-VBGW110304	0.016	0.122	2		○					●	●		●	●	●	●				
	2QP-VBGW 221-SR	2QP-VBGW110304SR		0.122	2		○							●								
	2QP-VBMW 221	2QP-VBMW110304		0.122	2		○												●	●	●	●
	2QP-VBGW 221-LC	2QP-VBGW110304-LC		0.122	2					○		●	●									
	2QP-VBGW 222	2QP-VBGW110308	0.031	0.087	2		○					●	●		●	●	●	●				
	2QP-VBGW 222-SR	2QP-VBGW110308SR		0.087	2		○							●								
	2QP-VBMW 222	2QP-VBMW110308		0.087	2		○												●	●	●	●
	2QP-VBGW 222-LC	2QP-VBGW110308-LC		0.087	2					○		●	●									

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

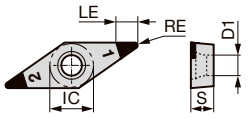
● : Line up

Reference pages: External toolholder → 3-59 -, Internal toolholder → 4-33

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

VB with chipbreaker



IC : 0.250"
D1 : 0.110"
S : 0.125"

35° Rhombic Positive 5° with hole

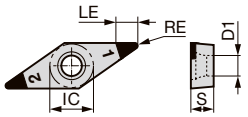
K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BXM10
Precision finishing	2QP-VBGT 331 HP	2QP-VBGT110304-HP	0.016	0.118	2		○					●	●	●
	2QP-VBGT 221 HS	2QP-VBGT110304-HS		0.118	2		○					●	●	
	2QP-VBGT 221 HS	2QP-VBGT110308-HP	0.031	0.087	2		○					●	●	●
	2QP-VBGT 222 HS	2QP-VBGT110308-HS		0.087	2		○					●	●	

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

VB



IC : 0.375"
D1 : 0.173"
S : 0.187"

35° Rhombic Positive 5° with hole

K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10	BXM20	BXA30	BXA40	BX310	BX330	BX360
Precision finishing	2QP-VBGW 330.5-LF	2QP-VBGW160402-LF	0.008	0.138	2			○				●	●								
	2QP-VBGW 330.5-L	2QP-VBGW160402-L		0.138	2				○			●	●								
	2QP-VBGW 331-LF	2QP-VBGW160404-LF	0.016	0.122	2			○				●	●								
	2QP-VBGW 331-L	2QP-VBGW160404-L		0.122	2				○			●	●								
	2QP-VBGW 332-LF	2QP-VBGW160408-LF	0.031	0.087	2			○				●	●								
	2QP-VBGW 332-L	2QP-VBGW160408-L		0.087	2				○			●	●								
Finishing	2QP-VBGW 330.5	2QP-VBGW160402	0.008	0.138	2		○					●	●								
	2QP-VBGW 330.5-LC	2QP-VBGW160402-LC		0.138	2					○		●	●								
	2QP-VBGW 331	2QP-VBGW160404	0.016	0.122	2		○					●	●		●	●	●	●			
	2QP-VBGW 331-SR	2QP-VBGW160404SR		0.122	2		○							●							
	2QP-VBMW 331	2QP-VBMW160404		0.122	2		○												●	●	●
	2QP-VBGW 331-LC	2QP-VBGW160404-LC		0.122	2					○		●	●								
	2QP-VBGW 332	2QP-VBGW160408	0.031	0.087	2		○					●	●		●	●	●	●			
	2QP-VBGW 332-SR	2QP-VBGW160408SR		0.087	2		○							●							
	2QP-VBMW 332	2QP-VBMW160408		0.087	2		○												●	●	●
	2QP-VBGW 332-LC	2QP-VBGW160408-LC		0.087	2					○		●	●								
	2QP-VBGW 333	2QP-VBGW160412	0.047	0.118	2		○					●	●								
Medium cutting	2QP-VBGW 330.5-H	2QP-VBGW160402-H	0.008	0.138	2						○		●								
	2QP-VBGW 331-H	2QP-VBGW160404-H	0.016	0.122	2						○		●								
	2QP-VBGW 331-HC	2QP-VBGW160404HC		0.122	2						○			●							
	2QP-VBGW 332-H	2QP-VBGW160408-H	0.031	0.087	2						○		●								
	2QP-VBGW 332-HC	2QP-VBGW160408HC		0.087	2						○			●							

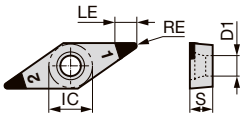
*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

Reference pages: External toolholder → 3-59 -, Internal toolholder → 4-33

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

VB with chipbreaker



IC : 0.375"
D1 : 0.173"
S : 0.187"

35° Rhombic Positive 5° with hole

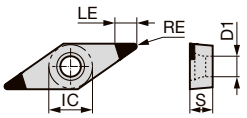
K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BXM10
Precision finishing	2QP-VBGT 331 HP	2QP-VBGT160404-HP	0.016	0.118	2		○					●	●	●
	2QP-VBGT 331 HS	2QP-VBGT160404-HS		0.118	2		○					●	●	
	2QP-VBGT 332 HP	2QP-VBGT160408-HP	0.031	0.087	2		○					●	●	●
	2QP-VBGT 332 HS	2QP-VBGT160408-HS		0.087	2		○					●	●	

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

VC



IC : 0.187"
D1 : 0.091"
S : 0.094"

35° Rhombic Positive 7° with hole

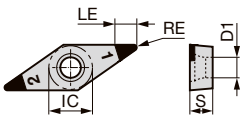
K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20
Finishing	2QP-VCGW 630.5	2QP-VCGW080202	0.008	0.138	2		○					●	●
	2QP-VCGW 631	2QP-VCGW080204	0.016	0.122	2		○					●	●
	2QP-VCGW 632	2QP-VCGW080208	0.031	0.087	2		○					●	●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

VC



IC : 0.375"
D1 : 0.173"
S : 0.187"

35° Rhombic Positive 7° with hole

K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BXM10	BXM20	BXA40	BX330	BX360	BX815	BX930
Precision finishing	2QP-VCGW 332-E	2QP-VCGW160408-E	0.031	0.087	2		○												●	
	2QP-VCGW 332-LT	2QP-VCGW160408-LT		0.087	2						○								●	
	2QP-VCGW 333-E	2QP-VCGW160412-E	0.047	0.118	2		○												●	
	2QP-VCGW 333-LT	2QP-VCGW160412-LT		0.118	2						○								●	
Finishing	2QP-VCGW 330.5	2QP-VCGW160402	0.008	0.138	2		○					●	●							
	2QP-VCGW 331	2QP-VCGW160404	0.016	0.122	2		○					●	●	●	●	●				
	2QP-VCMW 331	2QP-VCMW160404		0.122	2		○										●	●		●
	2QP-VCGW 332	2QP-VCGW160408	0.031	0.087	2		○					●	●							
Medium cutting	2QP-VCGW 330.5-H	2QP-VCGW160402-H	0.008	0.138	2						○	●	●							
	2QP-VCGW 331-H	2QP-VCGW160404-H	0.016	0.122	2						○	●	●							
	2QP-VCGW 332-H	2QP-VCGW160408-H	0.031	0.087	2						○	●	●							

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

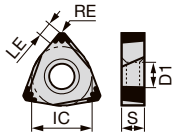
● : Line up

Reference pages: VB: External toolholder → 3-59 -, Internal toolholder → 4-33
VC: External toolholder → 3-62 -, Internal toolholder → 4-19 -

CBN Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

WX



IC : 0.250"
D1 : 0.106"
S : 0.125"

80° Trigon with hole

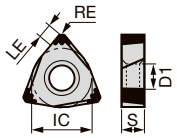
K	Cast iron	
S	Superalloy	
H	Hard material	● ●◐ ✣
	Sintered metal	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F
Finishing	6QS-WXGQ 220.5SPR	6QS-WXGQ040302SPR	0.008	0.071	6		○					●	●	●
	6QS-WXGQ 220.5SPL	6QS-WXGQ040302SPL		0.071	6		○					●	●	●
	6QS-WXGQ 221SPR	6QS-WXGQ040304SPR	0.016	0.071	6		○					●	●	●
	6QS-WXGQ 221SPL	6QS-WXGQ040304SPL		0.071	6		○					●	●	●
	6QS-WXGQ 222SPR	6QS-WXGQ040308SPR	0.031	0.067	6		○					●	●	●
	6QS-WXGQ 222SPL	6QS-WXGQ040308SPL		0.067	6		○					●	●	●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

WX with chipbreaker



IC : 0.250"
D1 : 0.106"
S : 0.125"

80° Trigon with hole

K	Cast iron	
S	Superalloy	
H	Hard material	● ●◐ ✣
	Sintered metal	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F
Precision finishing	6QS-WXGU 221R HP	6QS-WXGU040304R-HP	0.016	0.071	6		○					●	●	●
	6QS-WXGU 221L HP	6QS-WXGU040304L-HP		0.071	6		○					●	●	●
	6QS-WXGU 222R HP	6QS-WXGU040308R-HP	0.031	0.067	6		○					●	●	●
	6QS-WXGU 222L HP	6QS-WXGU040308L-HP		0.067	6		○					●	●	●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

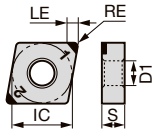
● : Line up

Reference pages: External toolholder → 3-72 -, Internal toolholder → 4-35

● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

CN

80°Rhombic with hole



IC : 0.500"
D1 : 0.203"
S : 0.187"

		BXA10	BXA20	BR35F	BXM10	BXM20	BXC50	BXA30	BXA40	BX310	BX330	BX360	BX380	BX470	BX480	BX815	BX930
K	Cast iron													●ⓒ			●
S	Superalloy													●ⓒ	●		
H	Hard material	●	●ⓒ	✣	●	●ⓒ	✣	●	●ⓒ	●	●	●ⓒ	✣				
	Sintered metal													●ⓒ	ⓒ✣		

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping
Precision finishing	2QP-CNGA 430.5-LF	2QP-CNGA120402-LF	0.008	0.091	2			○			
	2QP-CNGA 430.5-L	2QP-CNGA120402-L		0.091	2				○		
	2QP-CNGA 431-F	2QP-CNGA120404F	0.016	0.091	2			○			
	2QP-CNGA 431-E	2QP-CNGA120404-E		0.091	2		○				
	2QP-CNGA 431-LT	2QP-CNGA120404-LT		0.091	2						○
	2QP-CNGA 431-LF	2QP-CNGA120404-LF		0.091	2			○			
	4QS-CNGA 431-LF	4QS-CNGA120404-LF		0.063	4			○			
	2QP-CNGA 431-L	2QP-CNGA120404-L		0.091	2				○		
	2QP-CNGA 431-FW	2QP-CNGA120404FW		0.091	2	○	○				
	2QP-CNGA 431-W	-		0.091	2	○	○				
	4QS-CNGA 431-FW	4QS-CNGA120404FW		0.063	4	○	○				
	2QP-CNMA 431-W	2QP-CNMA120404W		0.091	2	○	○				
	4QP-CNMA 431	4QP-CNMA120404W		0.091	4	○	○				
	2QP-CNGA 432-F	2QP-CNGA120408F	0.031	0.087	2			○			
	2QP-CNGA 432-E	2QP-CNGA120408-E		0.087	2						
	2QP-CNGA 432-LT	2QP-CNGA120408-LT		0.087	2						
	2QP-CNGA 432-LF	2QP-CNGA120408-LF		0.087	2			○			
	4QS-CNGA 432-LF	4QS-CNGA120408-LF		0.059	4			○			
	2QP-CNGA 432-L	2QP-CNGA120408-L		0.087	2				○		
	2QP-CNGA 432 FW	2QP-CNGA120408FW		0.087	2	○	○				
	2QP-CNGA 432-W	-		0.087	2	○	○				
	4QS-CNGA 432 FW	4QS-CNGA120408FW		0.071	4	○	○				
	2QP-CNMA 432-W	2QP-CNMA120408W		0.087	2	○	○				
	4QP-CNMA 432	4QP-CNMA120408W		0.087	4	○	○				
	2QP-CNGA 433-E	2QP-CNGA120412-E	0.047	0.094	2						
	2QP-CNGA 433-LT	2QP-CNGA120412-LT		0.094	2						
	2QP-CNGA 433-LF	2QP-CNGA120412-LF		0.094	2			○			
	4QS-CNGA 433-LF	4QS-CNGA120412-LF		0.067	4			○			
	2QP-CNGA 433-L	2QP-CNGA120412-L		0.094	2				○		
	2QP-CNGA 433 FW	2QP-CNGA120412FW		0.094	2	○	○				
	4QS-CNGA 433 FW	4QS-CNGA120412FW		0.083	4	○	○				
	2QP-CNMA 433-W	2QP-CNMA120412W		0.094	2	○	○				
	4QP-CNMA 433	4QP-CNMA120412W		0.094	4	○	○				
	2QP-CNGA 434-E	2QP-CNGA120416-E	0.063	0.130	2						
	2QP-CNGA 434-LT	2QP-CNGA120416-LT		0.130	2						
	2QP-CNGA 435-E	2QP-CNGA120420-E	0.079	0.125	2						
	2QP-CNGA 435-LT	2QP-CNGA120420-LT		0.125	2						
Finishing	2QP-CNGA 430.5	2QP-CNGA120402	0.008	0.091	2		○				
	2QP-CNGA 430.5-LC	2QP-CNGA120402-LC		0.091	2					○	
	2QP-CNGA 431	2QP-CNGA120404	0.016	0.091	2		○				
	T2QP-CNGA 431	T2QP-CNGA120404		0.091	2		○				
	2QP-CNGA 431-SR	2QP-CNGA120404SR		0.091	2		○				
	4QS-CNGA 431	4QS-CNGA120404		0.063	4		○				
	4QS-CNGA 431-SR	4QS-CNGA120404SR		0.063	4		○				
	4QP-CNGA 431	4QP-CNGA120404		0.091	4		○				
	2QP-CNGA 431-LC	2QP-CNGA120404-LC		0.091	2					○	
	4QS-CNGA 431-LC	4QS-CNGA120404-LC		0.063	4					○	

T at the beginning of the designation means 10 pieces per package.
*Indicates the insert to use if the wear indicated is what happens with the standard hone.

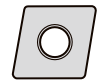
● : Line up

Reference pages: External toolholder → 3-89 -

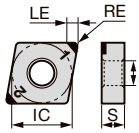
CBN Insert NEGATIVE TYPE

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

CN



80°Rhombic with hole



IC : 0.500"
D1 : 0.203"
S : 0.187"

		BXA10	BXA20	BR35F	BXM10	BXM20	BXC50	BXA30	BXA40	BX310	BX330	BX360	BX380	BX470	BX480	BX930
K	Cast iron														●ɔ	●
S	Superalloy														●ɔ	
H	Hard material	●	●ɔ	✣	●	●ɔ	✣	●	●ɔ	●	●	●ɔ	✣			
	Sintered metal													●ɔ	ɔ✣	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10	BXM20	BXC50	BXA30	BXA40	BX310	BX330	BX360	BX380	BX470	BX480	BX930
Finishing	2QP-CNGA 432	2QP-CNGA120408	0.031	0.087	2		○					●	●		●	●				●	●	●	●	●	●	●
	T2QP-CNGA 432	T2QP-CNGA120408		0.087	2		○															●				
	2QP-CNGA 432-SR	2QP-CNGA120408SR		0.087	2		○							●												
	4QS-CNGA 432	4QS-CNGA120408		0.059	4		○					●	●													
	4QS-CNGA 432-SR	4QS-CNGA120408SR		0.059	4		○							●												
	4QP-CNGA 432	4QP-CNGA120408		0.087	4		○										●	●	●							
	2QP-CNGA 432-LC	2QP-CNGA120408-LC	0.031	0.087	2					○		●	●													
	4QS-CNGA 432-LC	4QS-CNGA120408-LC		0.059	4					○		●	●													
	2QP-CNGA 433	2QP-CNGA120412	0.047	0.094	2		○					●	●		●	●				●	●	●	●	●	●	●
	2QP-CNGA 433-SR	2QP-CNGA120412SR		0.094	2		○							●												
	4QS-CNGA 433	4QS-CNGA120412		0.067	4		○					●	●													
	4QS-CNGA 433-SR	4QS-CNGA120412SR		0.067	4		○							●												
	4QP-CNGA 433	4QP-CNGA120412		0.094	4		○										●	●	●							
	2QP-CNGA 433-LC	2QP-CNGA120412-LC		0.094	2					○		●	●													
	4QS-CNGA 433-LC	4QS-CNGA120412-LC		0.067	4					○		●	●													
	2QP-CNGA 434	2QP-CNGA120416	0.063	0.130	2		○					●	●													
	2QP-CNGA 434-SR	2QP-CNGA120416SR		0.130	2		○							●												
	2QP-CNGA 435	2QP-CNGA120420	0.079	0.125	2		○					●	●													
	2QP-CNGA 435-SR	2QP-CNGA120420SR		0.125	2		○							●												
	2QP-CNGA 436	2QP-CNGA120424	0.094	0.122	2		○					●	●													
	2QP-CNGA 436-SR	2QP-CNGA120424SR		0.122	2		○							●												
Medium cutting	2QP-CNGA 431-H	2QP-CNGA120404-H	0.016	0.091	2						○	●	●			●						●	●			
	2QP-CNGA 431-HC	2QP-CNGA120404HC		0.091	2						○			●												
	4QS-CNGA 431-H	4QS-CNGA120404-H		0.063	4						○	●	●													
	4QS-CNGA 431-HC	4QS-CNGA120404HC		0.063	4						○			●												
	4QP-CNGA 431-H	4QP-CNGA120404-H		0.091	4						○								●							
	2QP-CNGA 432-H	2QP-CNGA120408-H	0.031	0.087	2						○	●	●			●						●	●			
	2QP-CNGA 432-HC	2QP-CNGA120408HC		0.087	2						○			●												
	4QS-CNGA 432-H	4QS-CNGA120408-H		0.059	4						○	●	●													
	4QS-CNGA 432-HC	4QS-CNGA120408HC		0.059	4						○			●												
	4QP-CNGA 432-H	4QP-CNGA120408-H		0.087	4						○								●							
	2QP-CNGA 433-H	2QP-CNGA120412-H	0.047	0.094	2						○	●	●			●						●	●			
	2QP-CNGA 433-HC	2QP-CNGA120412HC		0.094	2						○			●												
	4QS-CNGA 433-H	4QS-CNGA120412-H		0.067	4						○	●	●													
	4QS-CNGA 433-HC	4QS-CNGA120412HC		0.067	4						○			●												
	4QP-CNGA 433-H	4QP-CNGA120412-H		0.094	4						○								●							
	2QP-CNGA 434-HC	2QP-CNGA120416HC	0.063	0.130	2						○			●												
	2QP-CNGA 435-HC	2QP-CNGA120420HC	0.079	0.125	2						○			●												
	2QP-CNGA 436-HC	2QP-CNGA120424HC	0.094	0.122	2						○			●												

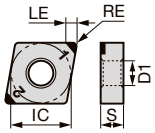
*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

Reference pages: External toolholder → 3-89 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

CN with chipbreaker



IC : 0.500"
D1 : 0.203"
S : 0.187"

80°Rhombic with hole

K	Cast iron	
S	Superalloy	
H	Hard material	● ●ⓒ ✣ ● ●ⓒ ●ⓒ
	Sintered metal	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10	BXM20	BXA40
Precision finishing	2QP-CNGM 431 HP	2QP-CNGM120404-HP	0.016	0.091	2		○					●	●	●	●		
	4QS-CNGG 431 HP	4QS-CNGG120404-HP		0.063	4		○					●	●	●			
	2QP-CNGM 431 HS	2QP-CNGM120404-HS		0.091	2		○					●	●	●			
	4QS-CNGG 431 HS	4QS-CNGG120404-HS		0.063	4		○					●	●	●			
	2QP-CNGM 432 HP	2QP-CNGM120408-HP	0.031	0.087	2		○					●	●	●	●		
	4QS-CNGG 432 HP	4QS-CNGG120408-HP		0.059	4		○					●	●	●			
	2QP-CNGM 432 FW-HP	2QP-CNGM120408FW-HP		0.087	2	○	○					●	●		●		
	4QS-CNGG 432 FW-HP	4QS-CNGG120408FW-HP		0.071	4	○	○					●	●				
	2QP-CNGM 432 HS	2QP-CNGM120408-HS		0.087	2		○					●	●	●			
	4QS-CNGG 432 HS	4QS-CNGG120408-HS		0.071	4		○					●	●	●			
	2QP-CNGM 432 FW-HS	2QP-CNGM120408FW-HS		0.087	2	○	○					●	●				
	2QP-CNGM 433-HP	2QP-CNGM120412-HP	0.047	0.094	2		○					●	●	●	●		
	2QP-CNGM 433 HS	2QP-CNGM120412-HS		0.094	2		○					●	●	●			
	4QS-CNGG 433 HS	4QS-CNGG120412-HS		0.087	4		○					●	●	●			
	2QP-CNGM 433 FW-HS	2QP-CNGM120412FW-HS		0.094	2	○	○					●	●				
Medium cutting	2QP-CNGM 432 HF	2QP-CNGM120408-HF	0.031	0.087	2		○						●			●	
	4QS-CNGG 432 HF	4QS-CNGG120408-HF		0.071	4		○						●				
	4QP-CNGG 432 HF	4QP-CNGG120408-HF		0.087	4		○										●
	2QP-CNGM 432 HM	2QP-CNGM120408-HM		0.087	2		○						●			●	
	4QS-CNGG 432 HM	4QS-CNGG120408-HM		0.059	4		○						●				
	4QP-CNGG 432 HM	4QP-CNGG120408-HM		0.087	4		○										●
	2QP-CNGM 433 HF	2QP-CNGM120412-HF	0.047	0.094	2		○						●			●	
	4QS-CNGG 433 HF	4QS-CNGG120412-HF		0.087	4		○						●				
	4QP-CNGG 433 HF	4QP-CNGG120412-HF		0.094	4		○										●
	2QP-CNGM 433 HM	2QP-CNGM120412-HM		0.094	2		○						●			●	
	4QS-CNGG 433 HM	4QS-CNGG120412-HM		0.067	4		○						●				
	4QP-CNGG 433 HM	4QP-CNGG120412-HM		0.094	4		○										●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

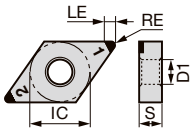
● : Line up

Reference pages: External toolholder → 3-89 -

CBN Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

DN



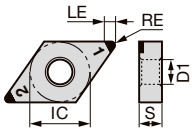
IC : 0.375"
D1 : 0.150"
S : 0.187"

55° Rhombic with hole

| | | |

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

DN



IC : 0.500"
D1 : 0.203"
S : 0.187"

55° Rhombic with hole

		BXA10	BXA20	BR35F	BXM10	BXM20	BXC50	BXA30	BXA40	BX310	BX330	BX360	BX380	BX470	BX480	BX930
K	Cast iron														●◐	●
S	Superalloy														●◐	
H	Hard material	●	●◐	✣	●	●◐	✣	●	●◐	●	●	●◐	✣			
	Sintered metal													●◐	◐✣	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10	BXM20	BXC50	BXA30	BXA40	BX310	BX330	BX360	BX380	BX470	BX480	BX930
Finishing	2QP-DNGA 432	2QP-DNGA150408	0.031	0.083	2		○					●	●		●	●				●	●	●	●	●	●	●
	2QP-DNGA 432-SR	2QP-DNGA150408SR		0.083	2		○							●												
	4QS-DNGA 432	4QS-DNGA150408		0.063	4		○					●	●													
	4QS-DNGA 432-SR	4QS-DNGA150408SR		0.063	4		○							●												
	4QP-DNGA 432	4QP-DNGA150408		0.083	4		○										●	●	●							
	2QP-DNGA 432-LC	2QP-DNGA150408-LC		0.083	2					○		●	●													
	4QS-DNGA 432-LC	4QS-DNGA150408-LC		0.063	4					○		●	●													
	2QP-DNGA 433	2QP-DNGA150412	0.047	0.079	2		○					●	●		●	●				●	●	●	●		●	●
	2QP-DNGA 433-SR	2QP-DNGA150412SR		0.079	2		○							●												
	4QS-DNGA 433	4QS-DNGA150412		0.063	4		○					●	●													
	4QS-DNGA 433-SR	4QS-DNGA150412SR		0.063	4		○							●												
	4QP-DNGA 433	4QP-DNGA150412		0.079	4		○										●	●	●							
	2QP-DNGA 433-LC	2QP-DNGA150412-LC		0.079	2					○		●	●													
	4QS-DNGA 433-LC	4QS-DNGA150412-LC		0.063	4					○		●	●													
	2QP-DNGA 434	2QP-DNGA150416	0.063	0.134	2		○					●	●													
	2QP-DNGA 434-SR	2QP-DNGA150416SR		0.134	2		○							●												
	2QP-DNGA 435	2QP-DNGA150420	0.079	0.118	2		○					●	●													
	2QP-DNGA 435-SR	2QP-DNGA150420SR		0.118	2		○							●												
	2QP-DNGA 436	2QP-DNGA150424	0.094	0.102	2		○					●	●													
	2QP-DNGA 436-SR	2QP-DNGA150424SR		0.102	2		○							●												
Medium cutting	2QP-DNGA 431-H	2QP-DNGA150404-H	0.016	0.098	2						○	●	●			●						●	●			
	2QP-DNGA 431-HC	2QP-DNGA150404HC		0.098	2						○			●												
	4QS-DNGA 431-H	4QS-DNGA150404-H		0.079	4						○	●	●													
	4QS-DNGA 431-HC	4QS-DNGA150404HC		0.079	4						○			●												
	4QP-DNGA 431-H	4QP-DNGA150404-H		0.098	4						○								●							
	2QP-DNGA 432-H	2QP-DNGA150408-H	0.031	0.083	2						○	●	●			●					●	●				
	2QP-DNGA 432-HC	2QP-DNGA150408HC		0.083	2						○			●												
	4QS-DNGA 432-H	4QS-DNGA150408-H		0.063	4						○	●	●													
	4QS-DNGA 432-HC	4QS-DNGA150408HC		0.063	4						○			●												
	4QP-DNGA 432-H	4QP-DNGA150408-H		0.083	4						○								●							
	2QP-DNGA 433-H	2QP-DNGA150412-H	0.047	0.079	2						○	●	●			●						●	●			
	2QP-DNGA 433-HC	2QP-DNGA150412HC		0.079	2						○			●												
	4QS-DNGA 433-H	4QS-DNGA150412-H		0.063	4						○	●	●													
	4QS-DNGA 433-HC	4QS-DNGA150412HC		0.063	4						○			●												
	4QP-DNGA 433-H	4QP-DNGA150412-H		0.079	4						○								●							
	2QP-DNGA 434-HC	2QP-DNGA150416HC	0.063	0.134	2						○			●												
	2QP-DNGA 435-HC	2QP-DNGA150420HC	0.079	0.118	2						○			●												
	2QP-DNGA 436-HC	2QP-DNGA150424HC	0.094	0.102	2						○			●												

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

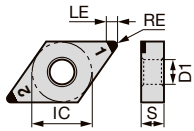
● : Line up

Reference pages: External toolholder → 3-92 -

CBN Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

DN with chipbreaker



IC : 0.500"
D1 : 0.203"
S : 0.187"

55° Rhombic with hole

		BXA10	BXA20	BR35F	BXM10	BXM20	BXA40
K	Cast iron	●	●◐	✣	●	●◐	●◐
S	Superalloy						
H	Hard material						
	Sintered metal						

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10	BXM20	BXA40
Precision finishing	2QP-DNGM 431 HP	2QP-DNGM150404-HP	0.016	0.098	2		○					●	●	●	●		
	4QS-DNGG 431 HP	4QS-DNGG150404-HP		0.079	4		○					●	●	●			
	2QP-DNGM 431 HS	2QP-DNGM150404-HS		0.098	2		○					●	●	●			
	4QS-DNGG 431 HS	4QS-DNGG150404-HS		0.079	4		○					●	●	●			
	2QP-DNGM 432 HP	2QP-DNGM150408-HP	0.031	0.083	2		○					●	●	●	●		
	4QS-DNGG 432 HP	4QS-DNGG150408-HP		0.063	4		○					●	●	●			
	2QP-DNGM 432 HS	2QP-DNGM150408-HS		0.083	2		○					●	●	●			
	4QS-DNGG 432 HS	4QS-DNGG150408-HS		0.063	4		○					●	●	●			
	2QP-DNGM 433 HP	2QP-DNGM150412-HP	0.047	0.079	2		○					●	●	●			
	2QP-DNGM 433 HS	2QP-DNGM150412-HS		0.079	2		○					●	●	●			
	4QS-DNGG 433 HS	4QS-DNGG150412-HS		0.063	4		○					●	●	●			
Medium cutting	2QP-DNGM 432 HF	2QP-DNGM150408-HF	0.031	0.083	2		○						●			●	
	4QS-DNGG 432 HF	4QS-DNGG150408-HF		0.079	4		○						●				
	4QP-DNGG 432 HF	4QP-DNGG150408-HF		0.083	4		○										●
	2QP-DNGM 432 HM	2QP-DNGM150408-HM		0.083	2		○									●	
	4QS-DNGG 432 HM	4QS-DNGG150408-HM		0.063	4		○						●				
	4QP-DNGG 432 HM	4QP-DNGG150408-HM		0.083	4		○										●
	2QP-DNGM 433 HF	2QP-DNGM150412-HF	0.047	0.079	2		○						●			●	
	4QS-DNGG 433 HF	4QS-DNGG150412-HF		0.102	4		○						●				
	4QP-DNGG 433 HF	4QP-DNGG150412-HF		0.079	4		○										●
	2QP-DNGM 433 HM	2QP-DNGM150412-HM		0.079	2		○									●	
	4QP-DNGG433 HM	4QP-DNGG150412-HM		0.079	4		○										●

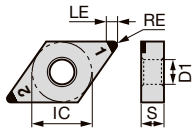
*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

Reference pages: External toolholder → 3-92 -

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

DN



IC : 0.500"
D1 : 0.203"
S : 0.250"

55° Rhombic with hole

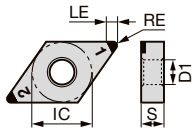
K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10	BXM20
Precision finishing	2QP-DNGA 441-LF	2QP-DNGA150604-LF	0.016	0.098	2			○				●	●			
	2QP-DNGA 441-L	2QP-DNGA150604-L		0.098	2				○			●	●			
	2QP-DNGA 442-LF	2QP-DNGA150608-LF	0.031	0.083	2			○				●	●			
	2QP-DNGA 442-L	2QP-DNGA150608-L		0.083	2				○			●	●			
	2QP-DNGA 443-LF	2QP-DNGA150612-LF	0.047	0.079	2			○				●	●			
	2QP-DNGA 443-L	2QP-DNGA150612-L		0.079	2				○			●	●			
Finishing	2QP-DNGA 441	2QP-DNGA150604	0.016	0.098	2		○					●	●		●	●
	2QP-DNGA 441-SR	2QP-DNGA150604SR		0.098	2		○							●		
	2QP-DNGA 441-LC	2QP-DNGA150604-LC		0.098	2					○		●	●			
	2QP-DNGA 442	2QP-DNGA150608	0.031	0.083	2		○					●	●		●	●
	2QP-DNGA 442-SR	2QP-DNGA150608SR		0.083	2		○							●		
	2QP-DNGA 442-LC	2QP-DNGA150608-LC		0.083	2					○		●	●			
	2QP-DNGA 443	2QP-DNGA150612	0.047	0.079	2		○					●	●		●	●
	2QP-DNGA 443-SR	2QP-DNGA150612SR		0.079	2		○							●		
	2QP-DNGA 443-LC	2QP-DNGA150612-LC		0.079	2					○		●	●			
Medium cutting	2QP-DNGA 441-H	2QP-DNGA150604-H	0.016	0.098	2						○	●	●			
	2QP-DNGA 441-HC	2QP-DNGA150604HC		0.098	2						○			●		
	2QP-DNGA 442-H	2QP-DNGA150608-H	0.031	0.083	2						○	●	●			
	2QP-DNGA 442-HC	2QP-DNGA150608HC		0.083	2						○			●		
	2QP-DNGA 443-H	2QP-DNGA150612-H	0.047	0.079	2						○	●	●			
	2QP-DNGA 443-HC	2QP-DNGA150612HC		0.079	2						○			●		

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

DN with chipbreaker



IC : 0.500"
D1 : 0.203"
S : 0.250"

55° Rhombic with hole

K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10
Precision finishing	2QP-DNGM 442 HP	2QP-DNGM150608-HP	0.031	0.083	2		○					●	●	●	●
	2QP-DNGM 442 HS	2QP-DNGM150608-HS		0.083	2		○					●	●	●	

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

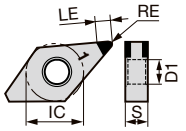
● : Line up

Reference pages: External toolholder → 3-92 -

CBN Insert NEGATIVE TYPE

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

FN



IC : 0.500"
D1 : 0.203"
S : 0.187"

45° Rhombic with hole

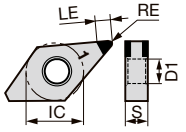
K	Cast iron	
S	Superalloy	
H	Hard material	●ɔ
	Sintered metal	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA20
Precision finishing	2QP-FNGA 431-LF	2QP-FNGA150404-LF	0.016	0.102	2			○				●
	2QP-FNGA 431-L	2QP-FNGA150404-L		0.102	2				○			●
	2QP-FNGA 432-LF	2QP-FNGA150408-LF	0.031	0.118	2			○				●
	2QP-FNGA 432-L	2QP-FNGA150408-L		0.118	2				○			●
	2QP-FNGA 433-LF	2QP-FNGA150412-LF	0.047	0.130	2			○				●
	2QP-FNGA 433-L	2QP-FNGA150412-L		0.130	2				○			●
Finishing	2QP-FNGA 430.5	2QP-FNGA150402	0.008	0.109	2		○					●
	2QP-FNGA 431	2QP-FNGA150404	0.016	0.102	2		○					●
	2QP-FNGA 431-LC	2QP-FNGA150404-LC		0.102	2					○		●
	2QP-FNGA 432	2QP-FNGA150408	0.031	0.118	2		○					●
	2QP-FNGA 432-LC	2QP-FNGA150408-LC		0.118	2					○		●
	2QP-FNGA 433	2QP-FNGA150412	0.047	0.130	2		○					●
	2QP-FNGA 433-LC	2QP-FNGA150412-LC		0.130	2					○		●
Medium cutting	2QP-FNGA 431-H	2QP-FNGA150404-H	0.016	0.102	2						○	●
	2QP-FNGA 432-H	2QP-FNGA150408-H	0.031	0.118	2						○	●
	2QP-FNGA 433-H	2QP-FNGA150412-H	0.047	0.130	2						○	●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

FN with chipbreaker



IC : 0.500"
D1 : 0.203"
S : 0.187"

45° Rhombic with hole

K	Cast iron	
S	Superalloy	
H	Hard material	●ɔ
	Sintered metal	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA20
Precision finishing	2QP-FNGG 431 HP	2QP-FNGG150404-HP	0.016	0.102	2		○					●
	2QP-FNGG 432 HP	2QP-FNGG150408-HP	0.031	0.118	2		○					●
	2QP-FNGG 433 HP	2QP-FNGG150412-HP	0.047	0.130	2		○					●

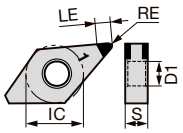
*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

Reference pages: External toolholder → 3-92 -

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

FN



IC : 0.500"
D1 : 0.203"
S : 0.250"

45° Rhombic with hole

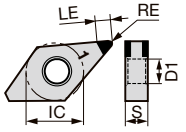
K	Cast iron	
S	Superalloy	
H	Hard material	●ɔ
	Sintered metal	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Improve issue* Flank wear	Improve issue* Crater wear	Improve issue* Chipping	BXA20
Precision finishing	2QP-FNGA 441-LF	2QP-FNGA150604-LF	0.016	0.102	2			○				●
	2QP-FNGA 441-L	2QP-FNGA150604-L		0.102	2				○			●
	2QP-FNGA 442-LF	2QP-FNGA150608-LF	0.031	0.118	2			○				●
	2QP-FNGA 442-L	2QP-FNGA150608-L		0.118	2				○			●
	2QP-FNGA 443-LF	2QP-FNGA150612-LF	0.047	0.130	2			○				●
	2QP-FNGA 443-L	2QP-FNGA150612-L		0.130	2				○			●
Finishing	2QP-FNGA 441	2QP-FNGA150604	0.016	0.102	2		○					●
	2QP-FNGA 441-LC	2QP-FNGA150604-LC		0.102	2					○		●
	2QP-FNGA 442	2QP-FNGA150608	0.031	0.118	2		○					●
	2QP-FNGA 442-LC	2QP-FNGA150608-LC		0.118	2					○		●
	2QP-FNGA 443	2QP-FNGA150612	0.047	0.130	2		○					●
	2QP-FNGA 443-LC	2QP-FNGA150612-LC		0.130	2					○		●
Medium cutting	2QP-FNGA 441-H	2QP-FNGA150604-H	0.016	0.102	2						○	●
	2QP-FNGA 442-H	2QP-FNGA150608-H	0.031	0.118	2						○	●
	2QP-FNGA 443-H	2QP-FNGA150612-H	0.047	0.130	2						○	●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

FN with chipbreaker



IC : 0.500"
D1 : 0.203"
S : 0.250"

45° Rhombic with hole

K	Cast iron	
S	Superalloy	
H	Hard material	●ɔ
	Sintered metal	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Improve issue* Flank wear	Improve issue* Crater wear	Improve issue* Chipping	BXA20
Precision finishing	2QP-FNGG 441 HP	2QP-FNGG150604-HP	0.016	0.102	2		○					●
	2QP-FNGG 442 HP	2QP-FNGG150608-HP	0.031	0.118	2		○					●
	2QP-FNGG 443 HP	2QP-FNGG150612-HP	0.047	0.130	2		○					●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

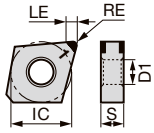
● : Line up

Reference pages: External toolholder → 3-92 -

CBN Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

GN



IC : 0.500"
D1 : 0.203"
S : 0.187"

70° Rhombic with hole

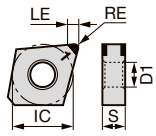
K	Cast iron	●
S	Superalloy	
H	Hard material	● ◐ ✣ ◐ ◐
	Sintered metal	◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM20	BX360	BX470	BX930
Precision finishing	2QP-GNGA 430.5-LF	2QP-GNGA120402-LF	0.008	0.087	2			○				●	●					
	2QP-GNGA 430.5-L	2QP-GNGA120402-L		0.087	2				○			●	●					
	2QP-GNGA 431-LF	2QP-GNGA120404-LF	0.016	0.083	2			○				●	●					
	2QP-GNGA 431-L	2QP-GNGA120404-L		0.083	2				○			●	●					
	2QP-GNGA 432-LF	2QP-GNGA120408-LF	0.031	0.083	2			○				●	●					
	2QP-GNGA 432-L	2QP-GNGA120408-L		0.083	2				○			●	●					
	2QP-GNGA 433-LF	2QP-GNGA120412-LF	0.047	0.087	2			○				●	●					
	2QP-GNGA 433-L	2QP-GNGA120412-L		0.087	2				○			●	●					
Finishing	2QP-GNGA 430.5	2QP-GNGA120402	0.008	0.087	2		○					●	●					
	2QP-GNGA 430.5-LC	2QP-GNGA120402-LC		0.087	2					○		●	●					
	2QP-GNGA 431	2QP-GNGA120404	0.016	0.083	2		○					●	●		●	●		
	2QP-GNGA 431-SR	2QP-GNGA120404SR		0.083	2		○							●				
	2QP-GNGA 431-LC	2QP-GNGA120404-LC		0.083	2					○		●	●					
	2QP-GNGA 432	2QP-GNGA120408	0.031	0.083	2		○					●	●		●	●	●	●
	2QP-GNGA 432-SR	2QP-GNGA120408SR		0.083	2		○							●				
	2QP-GNGA 432-LC	2QP-GNGA120408-LC		0.083	2					○		●	●					
	2QP-GNGA 433	2QP-GNGA120412	0.047	0.087	2		○					●	●		●	●	●	●
	2QP-GNGA 433-SR	2QP-GNGA120412SR		0.087	2		○							●				
	2QP-GNGA 433-LC	2QP-GNGA120412-LC		0.087	2					○		●	●					
Medium cutting	2QP-GNGA 431-H	2QP-GNGA120404-H	0.016	0.083	2						○	●	●					
	2QP-GNGA 431-HC	2QP-GNGA120404HC		0.083	2						○			●				
	2QP-GNGA 432-H	2QP-GNGA120408-H	0.031	0.083	2						○	●	●					
	2QP-GNGA 432-HC	2QP-GNGA120408HC		0.083	2						○			●				
	2QP-GNGA 433-H	2QP-GNGA120412-H	0.047	0.087	2						○	●	●					
	2QP-GNGA 433-HC	2QP-GNGA120412HC		0.087	2						○			●				

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

GN with chipbreaker



IC : 0.500"
D1 : 0.203"
S : 0.187"

70° Rhombic with hole

K	Cast iron	
S	Superalloy	
H	Hard material	● ◐ ●
	Sintered metal	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BXM10
Precision finishing	2QP-GNGG 431 HP	2QP-GNGG120404-HP	0.016	0.083	2		○					●	●	●
	2QP-GNGG 431 HS	2QP-GNGG120404-HS		0.083	2		○					●	●	
	2QP-GNGG 432 HP	2QP-GNGG120408-HP	0.031	0.083	2		○					●	●	●
	2QP-GNGG 432 HS	2QP-GNGG120408-HS		0.083	2		○					●	●	
	2QP-GNGG 433 HP	2QP-GNGG120412-HP	0.047	0.087	2		○					●	●	●
	2QP-GNGG 433 HS	2QP-GNGG120412-HS		0.087	2		○					●	●	

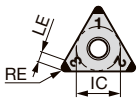
*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

Reference pages: External toolholder → 3-89 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

TN



IC : 0.375"
D1 : 0.150"
S : 0.187"

Triangular with hole

K	Cast iron																	●ⓒ		●
S	Superalloy																	●ⓒ	●	
H	Hard material	●	●ⓒ	✣	●	●ⓒ	✣	●	●ⓒ	●	●	●ⓒ	✣							
	Sintered metal																	●ⓒ	ⓒ✣		

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10	BXM20	BXC50	BXA30	BXA40	BX310	BX330	BX360	BX380	BX470	BX480	BX815	BX930
Precision finishing	3QP-TNGA 330.5-LF	3QP-TNGA160402-LF	0.008	0.091	3			○				●	●														
	3QP-TNGA 330.5-L	3QP-TNGA160402-L		0.091	3				○			●	●														
	3QP-TNGA 331-F	3QP-TNGA160404F	0.016	0.087	3			○																●			
	3QP-TNGA 331-LF	3QP-TNGA160404-LF		0.087	3			○				●	●														
	6QS-TNGA 331-LF	6QS-TNGA160404-LF		0.075	6			○				●	●														
	3QP-TNGA 331-L	3QP-TNGA160404-L		0.087	3				○			●	●		●	●					●						
	3QP-TNGA 331-WG	3QP-TNGA160404WG		0.094	3	○	○					●	●			●											
	3QP-TNGA 332-F	3QP-TNGA160408F	0.031	0.075	3			○																●			
	3QP-TNGA 332-E	3QP-TNGA160408-E		0.075	3		○																			●	
	3QP-TNGA 332-LT	3QP-TNGA160408-LT		0.075	3						○															●	
	3QP-TNGA 332-LF	3QP-TNGA160408-LF		0.075	3			○				●	●														
	6QS-TNGA 332-LF	6QS-TNGA160408-LF		0.063	6			○				●	●														
	3QP-TNGA 332-L	3QP-TNGA160408-L		0.075	3				○			●	●		●	●					●						
	3QP-TNGA 332-WG	3QP-TNGA160408WG		0.087	3	○	○					●	●		●	●											
	3QP-TNGA 333-LF	3QP-TNGA160412-LF	0.047	0.075	3			○				●	●														
	6QS-TNGA 333-LF	6QS-TNGA160412-LF		0.071	6			○				●	●														
	3QP-TNGA 333-L	3QP-TNGA160412-L		0.094	3				○			●	●		●	●					●						
Finishing	3QP-TNGA 330.5	3QP-TNGA160402	0.008	0.091	3		○					●	●														
	3QP-TNGA 330.5-LC	3QP-TNGA160402-LC		0.091	3					○		●	●														
	3QP-TNGA 331	3QP-TNGA160404	0.016	0.087	3		○					●	●		●	●				●	●	●	●	●	●		●
	T3QP-TNGA 331	T3QP-TNGA160404		0.087	3		○															●					
	3QP-TNGA 331-SR	3QP-TNGA160404SR		0.087	3		○							●													
	6QS-TNGA 331	6QS-TNGA160404		0.075	6		○					●	●														
	6QS-TNGA 331-SR	6QS-TNGA160404SR		0.075	6		○							●													
	6QP-TNGA 331	6QP-TNGA160404		0.087	6		○										●	●	●								
	3QP-TNGA 331-LC	3QP-TNGA160404-LC		0.087	3					○		●	●														
	6QS-TNGA 331-LC	6QS-TNGA160404-LC		0.075	6					○		●	●														

T at the beginning of the designation means 10 pieces per package.
*Indicates the insert to use if the wear indicated is what happens with the standard hone.
Please see page L031 about the toolholders recommended for wiper inserts of the designation with WG at the end.

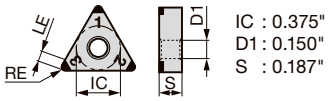
● : Line up

Reference pages: External toolholder → 3-82 -

CBN Insert NEGATIVE TYPE

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

TN



IC : 0.375"
D1 : 0.150"
S : 0.187"

Triangular with hole

		BXA10	BXA20	BR35F	BXM10	BXM20	BXC50	BXA30	BXA40	BX310	BX330	BX360	BX380	BX470	BX480	BX930
K	Cast iron														●ɔ	●
S	Superalloy														●ɔ	
H	Hard material	●	●ɔ	✣	●	●ɔ	✣	●	●ɔ	●	●	●ɔ	✣			
	Sintered metal													●ɔ	ɔ✣	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping
Finishing	3QP-TNGA 332	3QP-TNGA160408	0.031	0.075	3		○				
	T3QP-TNGA 332	T3QP-TNGA160408		0.075	3		○				
	3QP-TNGA 332-SR	3QP-TNGA160408SR		0.075	3		○				
	6QS-TNGA 332	6QS-TNGA160408		0.063	6		○				
	6QS-TNGA 332-SR	6QS-TNGA160408SR		0.063	6		○				
	6QP-TNGA 332	6QP-TNGA160408		0.075	6		○				
	3QP-TNGA 332-LC	3QP-TNGA160408-LC		0.075	3					○	
	6QS-TNGA 332-LC	6QS-TNGA160408-LC		0.075	6					○	
	3QP-TNGA 333	3QP-TNGA160412	0.047	0.094	3		○				
	3QP-TNGA 333-SR	3QP-TNGA160412SR		0.094	3		○				
	6QS-TNGA 333	6QS-TNGA160412		0.071	6		○				
	6QS-TNGA 333-SR	6QS-TNGA160412SR		0.071	6		○				
	6QP-TNGA 333	6QP-TNGA160412		0.094	6		○				
	3QP-TNGA 333-LC	3QP-TNGA160412-LC		0.094	3					○	
	6QS-TNGA 333-LC	6QS-TNGA160412-LC		0.071	6					○	
	3QP-TNGA 334	3QP-TNGA160416	0.063	0.130	3		○				
	3QP-TNGA 334-SR	3QP-TNGA160416SR		0.130	3		○				
	3QP-TNGA 335	3QP-TNGA160420	0.079	0.118	3		○				
	3QP-TNGA 335-SR	3QP-TNGA160420SR		0.118	3		○				
	3QP-TNGA 336	3QP-TNGA160424	0.094	0.106	3		○				
	3QP-TNGA 336-SR	3QP-TNGA160424SR		0.106	3		○				
Medium cutting	3QP-TNGA 331-H	3QP-TNGA160404-H	0.016	0.087	3						○
	3QP-TNGA 331-HC	3QP-TNGA160404HC		0.087	3						○
	6QS-TNGA 331-H	6QS-TNGA160404-H		0.075	6						○
	6QS-TNGA 331-HC	6QS-TNGA160404HC		0.075	6						○
	6QP-TNGA 331-H	6QP-TNGA160404-H		0.087	6						○
	3QP-TNGA 332-H	3QP-TNGA160408-H	0.031	0.075	3						○
	3QP-TNGA 332-HC	3QP-TNGA160408HC		0.075	3						○
	6QS-TNGA 332-H	6QS-TNGA160408-H		0.063	6						○
	6QS-TNGA 332-HC	6QS-TNGA160408HC		0.063	6						○
	6QP-TNGA 332-H	6QP-TNGA160408-H		0.075	6						○
	3QP-TNGA 333-H	3QP-TNGA160412-H	0.047	0.094	3						○
	3QP-TNGA 333-HC	3QP-TNGA160412HC		0.094	3						○
	6QS-TNGA 333-H	6QS-TNGA160412-H		0.071	6						○
	6QS-TNGA 333-HC	6QS-TNGA160412HC		0.071	6						○
	6QP-TNGA 333-H	6QP-TNGA160412-H		0.094	6						○
	3QP-TNGA 334-HC	3QP-TNGA160416HC	0.063	0.130	3						○
	3QP-TNGA 335-HC	3QP-TNGA160420HC	0.079	0.118	3						○
	3QP-TNGA 336-HC	3QP-TNGA160424HC	0.094	0.106	3						○

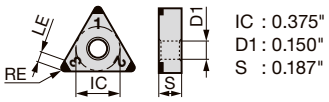
*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

Reference pages: External toolholder → 3-82 -

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

TN with chipbreaker



IC : 0.375"
D1 : 0.150"
S : 0.187"

Triangular with hole

K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10	BXM20	BXA40
Precision finishing	3QP-TNGM 331 HP	3QP-TNGM160404-HP	0.016	0.087	3		○					●	●	●	●		
	6QS-TNGG 331 HP	6QS-TNGG160404-HP		0.075	6		○					●	●	●			
	3QP-TNGM 331 HS	3QP-TNGM160404-HS		0.087	3		○					●	●	●			
	6QS-TNGG 331 HS	6QS-TNGG160404-HS		0.075	6		○					●	●	●			
	3QP-TNGM 332 HP	3QP-TNGM160408-HP	0.031	0.075	3		○					●	●	●	●		
	6QS-TNGG 332 HP	6QS-TNGG160408-HP		0.063	6		○					●	●	●			
	3QP-TNGM 332 HS	3QP-TNGM160408-HS		0.075	3		○					●	●	●			
	6QS-TNGG 332 HS	6QS-TNGG160408-HS		0.063	6		○					●	●	●			
	3QP-TNGM 333 HP	3QP-TNGM160412-HP	0.047	0.094	3		○					●	●	●			
	6QS-TNGG 333 HP	6QS-TNGG160412-HP		0.071	6		○					●	●	●			
	3QP-TNGM 333 HS	3QP-TNGM160412-HS		0.094	3		○					●	●	●			
	6QS-TNGG 333 HS	6QS-TNGG160412-HS		0.071	6		○					●	●	●			
Medium cutting	3QP-TNGM 332 HF	3QP-TNGM160408-HF	0.031	0.075	3		○						●			●	
	6QS-TNGG 332 HF	6QS-TNGG160408-HF		0.083	4		○						●				
	6QP-TNGG 332 HF	6QP-TNGG160408-HF		0.075	6		○										●
	3QP-TNGM 332 HM	3QP-TNGM160408-HM		0.075	3		○									●	
	6QS-TNGG 332 HM	6QS-TNGG160408-HM		0.063	6		○						●				
	6QP-TNGG 332 HM	6QP-TNGG160408-HM		0.075	6		○										●
	3QP-TNGM 333 HF	3QP-TNGM160412-HF	0.047	0.094	3		○						●			●	
	6QS-TNGG 333 HF	6QS-TNGG160412-HF		0.098	4		○						●				
	6QP-TNGG 333 HF	6QP-TNGG160412-HF		0.094	6		○										●
	3QP-TNGM 333 HM	3QP-TNGM160412-HM		0.094	3		○									●	
	6QP-TNGG 333 HM	6QP-TNGG160412-HM		0.094	6		○										●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

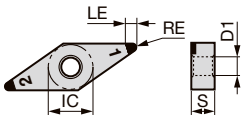
Reference pages: External toolholder → 3-82 -

CBN Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

VN

35° Rhombic with hole



IC : 0.375"
D1 : 0.150"
S : 0.187"

		BXA10	BXA20	BR35F	BXM10	BXM20	BXC50	BXA30	BXA40	BX310	BX330	BX360	BX380	BX470	BX480	BX930
K	Cast iron														●◐	●
S	Superalloy														●◐	
H	Hard material	●	●◐	✣	●	●◐	✣	●	●◐	●	●	●◐	✣			
	Sintered metal													●◐	◐✣	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BR35F	BXM10	BXM20	BXC50	BXA30	BXA40	BX310	BX330	BX360	BX380	BX470	BX480	BX930
Precision finishing	2QP-VNGA 330.5-LF	2QP-VNGA160402-LF	0.008	0.138	2			○				●	●													
	4QS-VNGA 330.5-LF	4QS-VNGA160402-LF		0.118	4			○				●	●													
	2QP-VNGA 330.5-L	2QP-VNGA160402-L		0.138	2				○			●	●													
	2QP-VNGA 331-LF	2QP-VNGA160404-LF	0.016	0.122	2			○				●	●													
	4QS-VNGA 331-LF	4QS-VNGA160404-LF		0.102	4			○				●	●													
	2QP-VNGA 331-L	2QP-VNGA160404-L		0.122	2				○			●	●		●	●					●					
	2QP-VNGA 332-LF	2QP-VNGA160408-LF	0.031	0.087	2			○				●	●													
	4QS-VNGA 332-LF	4QS-VNGA160408-LF		0.067	4			○				●	●													
	2QP-VNGA 332-L	2QP-VNGA160408-L		0.087	2				○			●	●		●	●					●					
	2QP-VNGA 333-LF	2QP-VNGA160412-LF	0.047	0.118	2			○				●	●													
	4QS-VNGA 333-LF	4QS-VNGA160412-LF		0.067	4			○				●	●													
	2QP-VNGA 333-L	2QP-VNGA160412-L		0.118	2				○			●	●													
Finishing	2QP-VNGA 330.5	2QP-VNGA160402	0.008	0.138	2		○					●	●													
	4QS-VNGA 330.5	4QS-VNGA160402		0.118	4		○					●	●													
	2QP-VNGA 330.5-LC	2QP-VNGA160402-LC		0.138	2					○		●	●													
	4QS-VNGA 330.5-LC	4QS-VNGA160402-LC		0.118	4					○		●	●													
	2QP-VNGA 331	2QP-VNGA160404	0.016	0.122	2		○					●	●		●	●				●	●	●	●	●	●	●
	2QP-VNGA 331-SR	2QP-VNGA160404SR		0.122	2		○							●												
	4QS-VNGA 331	4QS-VNGA160404		0.102	4		○					●	●													
	4QS-VNGA 331-SR	4QS-VNGA160404SR		0.102	4		○							●												
	4QP-VNGA 331	4QP-VNGA160404		0.122	4		○										●	●	●							
	2QP-VNGA 331-LC	2QP-VNGA160404-LC		0.122	2					○		●	●													
	4QS-VNGA 331-LC	4QS-VNGA160404-LC		0.102	4					○		●	●													
	2QP-VNGA 332	2QP-VNGA160408	0.031	0.087	2		○					●	●		●	●				●	●	●	●	●	●	●
	2QP-VNGA 332-SR	2QP-VNGA160408SR		0.087	2		○							●												
	4QS-VNGA 332	4QS-VNGA160408		0.067	4		○					●	●													
	4QS-VNGA 332-SR	4QS-VNGA160408SR		0.067	4		○							●												
	4QP-VNGA 332	4QP-VNGA160408		0.087	4		○										●	●	●							
	2QP-VNGA 332-LC	2QP-VNGA160408-LC		0.087	2					○		●	●													
	4QS-VNGA 332-LC	4QS-VNGA160408-LC		0.067	4					○		●	●													
	2QP-VNGA 333	2QP-VNGA160412	0.047	0.118	2		○					●	●			●										
	4QS-VNGA 333	4QS-VNGA160412		0.067	4		○					●	●													
	4QP-VNGA 333	4QP-VNGA160412		0.118	4		○											●	●							
	2QP-VNGA 333-LC	2QP-VNGA160412-LC		0.118	2					○		●	●													
	4QS-VNGA 333-LC	4QS-VNGA160412-LC		0.067	4					○		●	●													
Medium cutting	2QP-VNGA 331-H	2QP-VNGA160404-H	0.016	0.122	2						○	●	●			●						●	●			
	2QP-VNGA 331-HC	2QP-VNGA160404HC		0.122	2						○			●												
	4QS-VNGA 331-H	4QS-VNGA160404-H		0.102	4						○	●	●													
	4QS-VNGA 331-HC	4QS-VNGA160404HC		0.102	4						○			●												
	4QP-VNGA 331-H	4QP-VNGA160404-H		0.122	4						○								●							
	2QP-VNGA 332-H	2QP-VNGA160408-H	0.031	0.087	2						○	●	●			●						●	●			
	2QP-VNGA 332-HC	2QP-VNGA160408HC		0.087	2						○			●												
	4QS-VNGA 332-H	4QS-VNGA160408-H		0.067	4						○	●	●													
	4QS-VNGA 332-HC	4QS-VNGA160408HC		0.067	4						○			●												
	4QP-VNGA 332-H	4QP-VNGA160408-H		0.087	4						○								●							
	2QP-VNGA 333-H	2QP-VNGA160412-H	0.047	0.118	2						○	●	●													
	4QS-VNGA 333-H	4QS-VNGA160412-H		0.067	4						○	●	●													

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

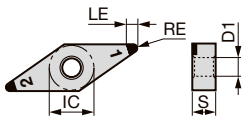
● : Line up

Reference pages: External toolholder → 3-95 -

● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

VN with chipbreaker

35° Rhombic with hole



IC : 0.375"
D1 : 0.150"
S : 0.187"

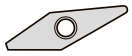
K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA10	BXA20	BXM10	BXM20	BXA40
Precision finishing	2QP-VNGM 331 HP	2QP-VNGM160404-HP	0.016	0.122	2		○					●	●			
	4QS-VNGG 331 HP	4QS-VNGG160404-HP		0.102	4		○					●	●			
	2QP-VNGM 331 HS	2QP-VNGM160404-HS		0.122	2		○					●	●			
	4QS-VNGG 331 HS	4QS-VNGG160404-HS		0.102	4		○					●	●			
	2QP-VNGM 332 HP	2QP-VNGM160408-HP	0.031	0.087	2		○					●	●	●		
	4QS-VNGG 332 HP	4QS-VNGG160408-HP		0.067	4		○					●	●			
	2QP-VNGM 332 HS	2QP-VNGM160408-HS		0.087	2		○					●	●			
	4QS-VNGG 332 HS	4QS-VNGG160408-HS		0.067	4		○					●	●			
Medium cutting	2QP-VNGM 332 HF	2QP-VNGM160408-HF	0.031	0.087	2		○								●	
	4QP-VNGG 332 HF	4QP-VNGG160408-HF		0.087	4		○									●
	2QP-VNGM 332 HM	2QP-VNGM160408-HM		0.087	2		○								●	
	4QS-VNGG 332 HM	4QS-VNGG160408-HM		0.067	4		○						●			
	4QP-VNGG 332 HM	4QP-VNGG160408-HM		0.087	4		○									●

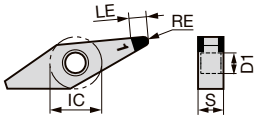
*Indicates the insert to use if the wear indicated is what happens with the standard hone.

● : Line up

YN



25° Rhombic with hole



IC : 0.375"
D1 : 0.150"
S : 0.187"

K	Cast iron
S	Superalloy
H	Hard material
	Sintered metal

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA20
Precision finishing	2QP-YNGA 331-LF	2QP-YNGA160404-LF	0.016	0.122	2			○				●
	2QP-YNGA 331-L	2QP-YNGA160404-L		0.122	2				○			●
	2QP-YNGA 332-LF	2QP-YNGA160408-LF	0.031	0.118	2			○				●
	2QP-YNGA 332-L	2QP-YNGA160408-L		0.118	2				○			●
Finishing	2QP-YNGA 330.5	2QP-YNGA160402	0.008	0.138	2		○					●
	2QP-YNGA 331	2QP-YNGA160404	0.016	0.122	2		○					●
	2QP-YNGA 331-LC	2QP-YNGA160404-LC		0.122	2					○		●
	2QP-YNGA 332	2QP-YNGA160408	0.031	0.118	2		○					●
	2QP-YNGA 332-LC	2QP-YNGA160408-LC		0.118	2					○		●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

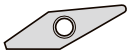
● : Line up

Reference pages: External toolholder → 3-95 -

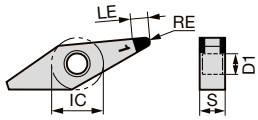
CBN Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

YN with chipbreaker



25° Rhombic with hole



IC : 0.375"
D1 : 0.150"
S : 0.187"

K	Cast iron	
S	Superalloy	
H	Hard material	●◐
	Sintered metal	

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Wiper	Standard	Improve issue* Burr	Flank wear	Crater wear	Chipping	BXA20
Precision finishing	**2QP-YNGG 331 HP**	**2QP-YNGG160404-HP**	0.016	0.122	2		○					●
	2QP-YNGG 33**2 HP**	2QP-YNGG160408-HP	0.031	0.118	2		○					●

*Indicates the insert to use if the wear indicated is what happens with the standard hone.

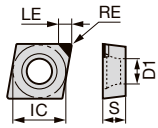
● : Line up

C
D
E
F
G
T
V
W
Y
OTHERS

Reference pages: External toolholder → 3-95 -

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

CC



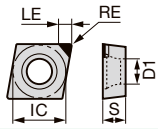
IC : 0.250"
D1 : 0.109"
S : 0.094"

80°Rhombic Positive 7° with hole

N Non-ferrous ●◐ ●◐ ●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX110	DX120	DX140
Finishing	CCGW 21.5V DIA	CCGW060200-DIA	0.002	0.094	1				●
	CCMT 21.50.5 DIA	CCMT060202-DIA	0.008	0.094	1	○		●	
	CCGW 21.50.5 DIA	CCGW060202-DIA		0.094	1				●
	1QP-CCGT 21.51 NS	1QP-CCGT060204-NS	0.016	0.122	1	○	●		
	1QP-CCMT 21.51	1QP-CCMT060204		0.094	1	○	●		
	CCMT 21.51 DIA	CCMT060204-DIA		0.094	1	○		●	
	CCGW 21.51 DIA	CCGW060204-DIA		0.094	1				●

● : Line up



IC : 0.375"
D1 : 0.173"
S : 0.156"

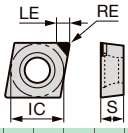
CC

80°Rhombic Positive 7° with hole

N Non-ferrous ●◐ ●◐ ●◐ ●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX110	DX120	DX140	DX160
Finishing	CCMT 32.50.5 DIA	CCMT09T302-DIA	0.008	0.094	1	○		●		
	CCGW 32.50.5 DIA	CCGW09T302-DIA		0.138	1				●	
	1QP-CCGT 32.51 NS	1QP-CCGT09T304-NS	0.016	0.122	1	○	●			
	1QP-CCMT 32.51	1QP-CCMT09T304		0.094	1	○	●			
	CCMT 32.51 DIA	CCMT09T304-DIA		0.094	1	○		●		
	CCGW 32.51 DIA	CCGW09T304-DIA		0.138	1				●	●
	1QP-CCGT 32.52 NS	1QP-CCGT09T308-NS	0.031	0.118	1	○	●			
	CCGW 32.52 DIA	CCGW09T308-DIA		0.134	1				●	

● : Line up



IC : 0.250"
S : 0.094"

CC

80°Rhombic Positive 7° with hole

N Non-ferrous ●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	PD2
Finishing	CCMT21.504PBF	CCMT060201PBF	0.004	0.091	1	○	●
	CCMT21.508PBF	CCMT060202PBF	0.008	0.091	1	○	●
	CCMT21.51PBF	CCMT060204PBF	0.016	0.091	1	○	●

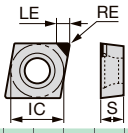
● : Line up

Reference pages: External toolholder → 3-37 -, Internal toolholder → 4-14 -

PCD Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

CC



IC : 0.375"
S : 0.156"

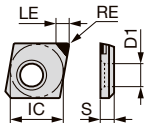
80°Rhombic Positive 7° with hole

N Non-ferrous ●◐ ●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	PD1	PD2
Finishing	CCMT32.504PBF	CCMT09T301PBF	0.004	0.091	1	○		●
	CCMT32.508PBF	CCMT09T302PBF	0.008	0.091	1	○		●
	CCMT32.51PBF	CCMT09T304PBF	0.016	0.091	1	○		●
	CCMT32.508PF	CCMT09T302PF	0.008	0.091	1			●
	CCMT32.51PF	CCMT09T304PF	0.016	0.091	1			●
	CCMW32.504	CCMW09T301	0.004	0.130	1		●	
	CCMW32.508	CCMW09T302	0.008	0.130	1		●	
	CCMW32.51	CCMW09T304	0.016	0.118	1		●	
	CCMW32.52	CCMW09T308	0.031	0.118	1		●	

● : Line up

CP



IC : 0.375"
D1 : 0.157"
S : 0.094"

80° Rhombic Positive 11° with hole

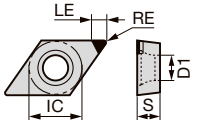
N Non-ferrous ●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX140
Finishing	CPGA 31.50.5 DIA	CPGA090202-DIA	0.008	0.094	1		●
	CPGA 31.51 DIA	CPGA090204-DIA	0.016	0.094	1		●

Tungaloy's standard hole specifi cation (ISO non-compliant)

● : Line up

DC



IC : 0.250"
D1 : 0.110"
S : 0.094"

55° Rhombic Positive 7° with hole

N Non-ferrous ●◐ ●◐ ●◐

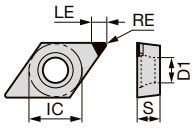
Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX110	DX120	DX140
Finishing	DCGW 21.5V DIA	DCGW070200-DIA	0.002	0.094	1				●
	DCMT 21.50.5 DIA	DCMT070202-DIA	0.008	0.091	1	○		●	
	DCGW 21.50.5 DIA	DCGW070202-DIA		0.091	1			●	●
	1QP-DCGT 21.51 NS	1QP-DCGT070204-NS	0.016	0.118	1	○	●		
	DCMT 21.51 DIA	DCMT070204-DIA		0.083	1	○		●	
	DCGW 21.51 DIA	DCGW070204-DIA		0.083	1				●

● : Line up

Reference pages: CC: External toolholder → 3-37 -, Internal toolholder → 4-14 -
CP: Internal toolholder → 4-17
DC: External toolholder → 3-45 -, Internal toolholder → 4-18 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

DC



IC : 0.375"
D1 : 0.173"
S : 0.156"

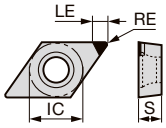
55° Rhombic Positive 7° with hole

	N Non-ferrous	●◐	●◐	●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX110	DX120	DX140
Finishing	DCMT 32.50.5 DIA	DCMT11T302-DIA	0.008	0.125	1	○		●	
	DCGW 32.50.5 DIA	DCGW11T302-DIA		0.125	1				●
	1QP-DCGT 32.51 NS	1QP-DCGT11T304-NS	0.016	0.118	1	○	●		
	DCMT 32.51 DIA	DCMT11T304-DIA		0.118	1	○		●	
	DCGW 32.51 DIA	DCGW11T304-DIA		0.118	1				●
	1QP-DCGT 32.52 NS	1QP-DCGT11T308-NS	0.031	0.118	1	○	●		
	DCGW 32.52 DIA	DCGW11T308-DIA		0.106	1				●

● : Line up

DC



IC : 0.250"
S : 0.094"

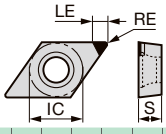
55°Rhombic Positive 7° with hole

	N Non-ferrous	●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	PD2
Finishing	DCMT21.504PBF	DCMT070201PBF	0.004	0.091	1	○	●
	DCMT21.508PBF	DCMT070202PBF	0.008	0.091	1	○	●
	DCMT21.504PF	DCMT070201PF	0.004	0.091	1		●
	DCMT21.508PF	DCMT070202PF	0.008	0.091	1		●

● : Line up

DC



IC : 0.375"
S : 0.156 "

55°Rhombic Positive 7° with hole

	N Non-ferrous	●◐	●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	PD1	PD2
Finishing	DCMT32.504PBF	DCMT11T301PBF	0.004	0.091	1	○		●
	DCMT32.508PBF	DCMT11T302PBF	0.008	0.091	1	○		●
	DCMT32.51PBF	DCMT11T304PBF	0.016	0.091	1	○		●
	DCMT32.508PF	DCMT11T302PF	0.008	0.091	1			●
	DCMT32.51PF	DCMT11T304PF	0.016	0.091	1			●
	DCMW32.504	DCMW11T301	0.004	0.169	1		●	
	DCMW32.508	DCMW11T302	0.008	0.169	1		●	
	DCMW32.51	DCMW11T304	0.016	0.157	1		●	
	DCMW32.52	DCMW11T308	0.031	0.150	1		●	

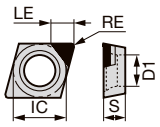
● : Line up

Reference pages: External toolholder → 3-45 -, Internal toolholder → 4-18 -

PCD Insert POSITIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

EP



IC : 0.156"
D1 : 0.091"
S : 0.063"

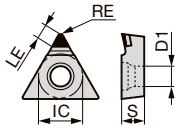
75° Rhombic Positive 11° with hole

N Non-ferrous ●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX140
Finishing	EPGW 520.5 DIA	EPGW040102-DIA	0.008	0.079	1		●
Finishing	EPGW 521 DIA	EPGW040104-DIA	0.016	0.075	1		●

● : Line up

TC



IC : 0.187"
D1 : 0.106"
S : 0.094"

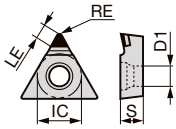
Triangular Positive 7° with hole

N Non-ferrous ●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX120
Finishing	TCMT 63Y DIA	TCMT080202-DIA	0.008	0.087	1	○	●
Finishing	TCMT 631 DIA	TCMT080204-DIA	0.016	0.079	1	○	●

● : Line up

TC



IC : 0.250"
D1 : 0.109"
S : 0.094"

Triangular Positive 7° with hole

N Non-ferrous ●◐

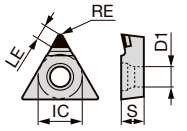
Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX120
Finishing	TCMT 21.50.5 DIA	TCMT110202-DIA	0.008	0.094	1	○	●
Finishing	TCMT 21.51 DIA	TCMT110204-DIA	0.016	0.087	1	○	●

● : Line up

Reference pages: EP: Internal toolholder → 4-11 -
TC: External toolholder → 3-71, Internal toolholder → 4-24 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TC



IC : 0.250"
D1 : 0.109"
S : 0.125"

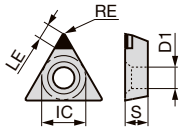
Triangular Positive 7° with hole

	N Non-ferrous	●◐	●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX110	DX120
Finishing	TCMT 220.5 DIA	TCMT110302-DIA	0.008	0.094	1	○		●
	1QP- TCMT 221	1QP-TCMT110304	0.016	0.087	1	○	●	
	TCMT 221 DIA	TCMT110304-DIA		0.087	1	○		●

● : Line up

TP



IC : 0.219"
D1 : 0.098"
S : 0.094"

Triangular Positive 11° with hole

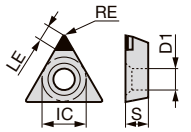
	N Non-ferrous	●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX140
Finishing	TPGA 73Y DIA	TPGA090202-DIA	0.008	0.094	1		●
	TPGA 731 DIA	TPGA090204-DIA	0.016	0.087	1		●

Tungaloy's standard hole specifi cation (ISO non-compliant)

● : Line up

TP



IC : 0.250"
D1 : 0.110"
S : 0.094"

Triangular Positive 11° with hole

	N Non-ferrous	●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX140
Finishing	TPGA 21.50 DIA	TPGA110202-DIA	0.008	0.094	1		●
	TPGA 21.51 DIA	TPGA110204-DIA	0.016	0.087	1		●

Tungaloy's standard hole specifi cation (ISO non-compliant)

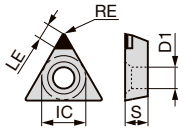
● : Line up

Reference pages: TC: External toolholder → 3-71, Internal toolholder → 4-24 -
TP: Internal toolholder → 4-25 -

PCD Insert POSITIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

TP



IC : 0.250"
D1 : 0.118"
S : 0.125"

Triangular Positive 11° with hole

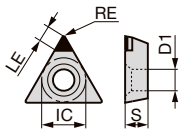
N Non-ferrous ●ⓒ

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX140
Finishing	TPGA 220.5 DIA	TPGA110302-DIA	0.008	0.094	1		●
	TPGA 221 DIA	TPGA110304-DIA	0.016	0.087	1		●
	TPGA 222 DIA	TPGA110308-DIA	0.031	0.114	1		●

Tungaloy's standard hole specifi cation (ISO non-compliant)

● : Line up

TP



IC : 0.375"
D1 : 0.157"
S : 0.125"

Triangular Positive 11° with hole

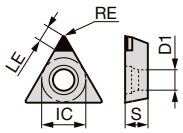
N Non-ferrous ●ⓒ

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX140
Finishing	TPGA 320.5 DIA	TPGA160302-DIA	0.008	0.130	1		●
	TPGA 321 DIA	TPGA160304-DIA	0.016	0.125	1		●
	TPGA 322 DIA	TPGA160308-DIA	0.031	0.114	1		●

Tungaloy's standard hole specifi cation (ISO non-compliant)

● : Line up

TP



IC : 0.187"
D1 : 0.091"
S : 0.094"

Triangular Positive 11° with hole

N Non-ferrous ●ⓒ

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX140
Finishing	TPGW 63Y DIA	TPGW080202-DIA	0.008	0.094	1		●
	TPGW 631 DIA	TPGW080204-DIA	0.016	0.091	1		●

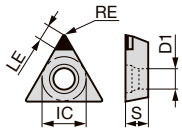
● : Line up

Reference pages: Internal toolholder → 4-25 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

TP

Triangular Positive 11° with hole



IC : 0.219"
D1 : 0.098"
S : 0.094"

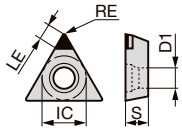
N Non-ferrous

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX120	DX140
Finishing	TPGW 73Y DIA	TPGW090202-DIA	0.008	0.094	1		●	●
Finishing	TPGW 731 DIA	TPGW090204-DIA	0.016	0.087	1			●

● : Line up

TP

Triangular Positive 11° with hole



IC : 0.250"
D1 : 0.109"
S : 0.094"

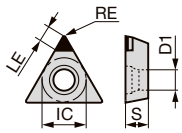
N Non-ferrous

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX120	DX140
Finishing	TPGW 21.50.5 DIA	TPGW110202-DIA	0.008	0.094	1		●	●
Finishing	TPGW 21.51 DIA	TPGW110204-DIA	0.016	0.087	1			●

● : Line up

TP

Triangular Positive 11° with hole



IC : 0.313"
D1 : 0.134"
S : 0.125"

N Non-ferrous

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX120	DX140
Finishing	TPGW 2.520.5 DIA	TPGW130302-DIA	0.008	0.130	1		●	●
Finishing	TPGW 2.521 DIA	TPGW130304-DIA	0.016	0.125	1			●

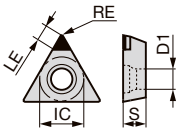
● : Line up

Reference pages: Internal toolholder → 4-25 -

PCD Insert POSITIVE TYPE

● : Continuous cutting
ᑕ : Light interrupted cutting
✣ : Heavy interrupted cutting

TP



IC : 0.375"
D1 : 0.173"
S : 0.156"

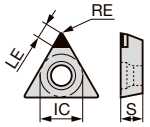
Triangular Positive 11° with hole

N Non-ferrous ●ᑕ

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX140
Finishing	TPGW 32.50.5 DIA	TPGW16T302-DIA	0.008	0.130	1		●
	TPGW 32.51 DIA	TPGW16T304-DIA	0.016	0.125	1		●
	TPGW 32.52 DIA	TPGW16T308-DIA	0.031	0.114	1		●

● : Line up

TP



IC : 0.219"
S : 0.094"

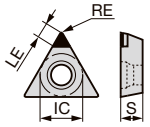
60°Rhombic Positive 11° with hole

N Non-ferrous ●ᑕ

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	PD2
Finishing	TPMP7304PBF	TPMT090201PBF	0.004	0.091	1	○	●
	TPMP7308PBF	TPMT090202PBF	0.008	0.091	1	○	●
	TPMP731PBF	TPMT090204PBF	0.016	0.091	1	○	●
	TPMP7308PF	TPMT090202PF	0.008	0.091	1		●
	TPMP731PF	TPMT090204PF	0.016	0.091	1		●

● : Line up

TP



IC : 0.250"
S : 0.125"

60°Rhombic Positive 11° with hole

N Non-ferrous ●ᑕ

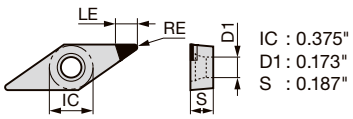
Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	PD2
Finishing	TPMT2204PBF	TPMT110301PBF	0.004	0.091	1	○	●
	TPMT2208PBF	TPMT110302PBF	0.008	0.091	1	○	●
	TPMT221PBF	TPMT110304PBF	0.016	0.091	1	○	●
	TPMT2208PF	TPMT110302PF	0.008	0.091	1		●
	TPMT221PF	TPMT110304PF	0.016	0.091	1		●

● : Line up

Reference pages: Internal toolholder → 4-25 -

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

VC



IC : 0.375"
D1 : 0.173"
S : 0.187"

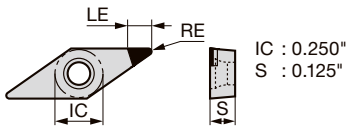
35° Rhombic Positive 7° with hole

N Non-ferrous ●◐ ●◐ ●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX110	DX120	DX140
Finishing	VCMT 330.5 DIA	VCMT160402-DIA	0.008	0.189	1	○		●	
	VCGW 330.5 DIA	VCGW160402-DIA		0.189	1				●
	1QP-VCGT 331 NS	1QP-VCGT160404-NS	0.016	3	1	○	●		
	VCMT 331 DIA	VCMT160404-DIA		0.173	1	○		●	
	VCGW 331 DIA	VCGW160404-DIA		0.173	1				●
	1QP-VCGT 332 NS	1QP-VCGT160408-NS	0.031	3	1	○	●		

● : Line up

VC



IC : 0.250"
S : 0.125"

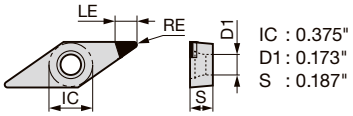
35°Rhombic Positive 7° with hole

N Non-ferrous ●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	PD1
Finishing	VCMW2204	VCMW110301	0.004	0.118	1		●
	VCMW2208	VCMW110302	0.008	0.130	1		●
	VCMW221	VCMW110304	0.016	0.130	1		●

● : Line up

VB



IC : 0.375"
D1 : 0.173"
S : 0.187"

35° Rhombic Positive 5° with hole

N Non-ferrous ●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX110
Finishing	1QP-VBGT 331 NS	1QP-VBGT160404-NS	0.016	3	1	○	●
	1QP-VBGT 332 NS	1QP-VBGT160408-NS	0.031	3	1	○	●

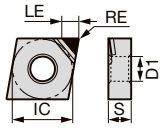
● : Line up

Reference pages: VC: External toolholder → 3-62 -, Internal toolholder → 4-19 -
VB: External toolholder → 3-59 -, Internal toolholder → 4-33

PCD Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
✣ : Heavy interrupted cutting

CN



IC : 0.500"
D1 : 0.203"
S : 0.187"

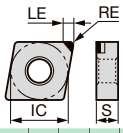
80°Rhombic with hole

N Non-ferrous ●◐ ●◐ ●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX110	DX120	DX140
Finishing	1QP-CNMM 430.5	1QP-CNMM120402	0.008	0.109	1	○	●		
	CNMM 430.5-DIA	CNMM120402-DIA		0.138	1	○		●	
	1QP-CNMM 431	1QP-CNMM120404	0.016	0.109	1	○	●		
	CNMM 431-DIA	CNMM120404-DIA		0.138	1	○		●	
	CNGA 431 DIA	CNGA120404-DIA		0.138	1				●
	CNGA 432 DIA	CNGA120408-DIA	0.031	0.109	1				●

● : Line up

CN



IC : 0.500"
S : 0.187"

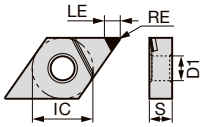
80°Rhombic with hole

N Non-ferrous ●◐

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	PD2
Finishing	CNMX431PF	CNMX120404PF	0.016	0.134	1		●
	CNMX432PF	CNMX120408PF	0.031	0.134	1		●

● : Line up

DN



IC : 0.500"
D1 : 0.203"
S : 0.187"

55° Rhombic with hole

N Non-ferrous ●◐ ●◐ ●◐

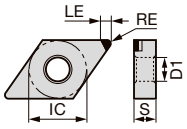
Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX120	DX140	DX160
Finishing	DNMM 430.5-DIA	DNMM150402-DIA	0.008	0.130	1	○	●		
	DNMM 431-DIA	DNMM150404-DIA	0.016	0.122	1	○	●		
	DNGA 431 DIA	DNGA150404-DIA		0.122	1			●	●
	DNGA 432 DIA	DNGA150408-DIA	0.031	0.109	1			●	

● : Line up

Reference pages: CN: External toolholder → 3-89 -
DN: External toolholder → 3-92 -

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

DN



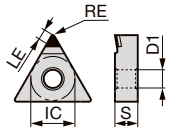
IC : 0.500"
S : 0.187"

55°Rhombic with hole

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	PD2
N Non-ferrous ●◐							
Finishing	DNMX431PF	DNMX150404PF	0.016	0.177	1		●
Finishing	DNMX432PF	DNMX150408PF	0.031	0.177	1		●

● : Line up

TN



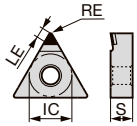
IC : 0.375"
D1 : 0.150"
S : 0.187"

Triangular with hole

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX110	DX120	DX140	DX160
N Non-ferrous ●◐ ●◐ ●◐ ●◐										
Finishing	1QP-TNMM 330.5	1QP-TNMM160402	0.008	0.106	1	○	●			
Finishing	TNMM 330.5-DIA	TNMM160402-DIA		0.130	1	○		●		
Finishing	1QP-TNMM 331	1QP-TNMM160404	0.016	0.102	1	○	●			
Finishing	TNMM 331-DIA	TNMM160404-DIA		0.125	1	○		●		
Finishing	TNGA 331 DIA	TNGA160404-DIA		0.125	1				●	●
Finishing	TNGA 332 DIA	TNGA160408-DIA	0.031	0.114	1				●	●

● : Line up

TN



IC : 0.375"
S : 0.187"

60°Rhombic with hole

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	PD2
N Non-ferrous ●◐							
Finishing	TNMX331PF	TNMX160404PF	0.016	0.118	1		●
Finishing	TNMX332PF	TNMX160408PF	0.031	0.118	1		●

● : Line up

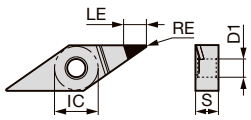
Reference pages: DN: External toolholder → 3-92 -
TN: External toolholder → 3-82 -

PCD Insert NEGATIVE TYPE

● : Continuous cutting
ⓒ : Light interrupted cutting
✣ : Heavy interrupted cutting

VN

35° Rhombic with hole



IC : 0.375"
D1 : 0.150"
S : 0.187"

N Non-ferrous ●ⓒ

Application	Designation Inch	Designation Metric	Dimension (in) RE	Dimension (in) LE	No. of corners	Chipbreaker	DX120
Finishing	**VNMM 330.5-DIA**	**VNMM160402-DIA**	0.008	0.189	1	○	●
	VNMM 331-DIA	**VNMM160404-DIA**	0.016	0.173	1	○	●
	VNMM 332-DIA	**VNMM160408-DIA**	0.031	0.142	1	○	●

● : Line up

C
D
E
F
G
T
V
W
Y
OTHERS

Reference pages: External toolholder → 3-95 -

MEMO

3. External Toolholders

Main products

MINIFORCE TURN

Economical double-sided inserts with excellent sharpness

DXGU 3-74 -
WXGU 3-72 -
VXGU 3-78 -

MINIFORCE TURN / J-SERIES

Stepped-head off-set toolholder

DC** 3-48
CC** 3-37
VB** 3-60 -

MINIFORCE TURN / J-SERIES

Round shank toolholder series

DC** 3-53 -
DXGU 3-76 -
VXGU 3-80 -

MODUMINI TURN

Interchangeable head toolholder

DC** 3-45 -
DXGU 3-74 -
CC** 3-37 -
WXGU 3-72
VB** 3-59 -
VXGU 3-78 -
Shank 3-130 -

J-SERIES

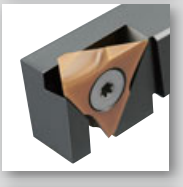
Back turning toolholder

3-108

Y-axis holder Series

Solves chip evacuation problems using gravity

3-50 -



TFX Series

Maximum depth of cut 5.0 mm

3-102 -

DS-ACH

Instantly adjust cutting edge height, reducing time

3-42 -

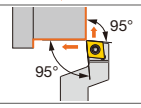
TBP

High rigidity with vertically mounted inserts and screw clamps for back turning

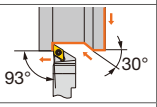
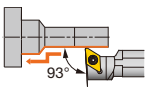
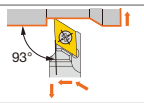
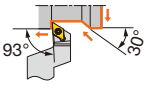
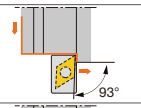
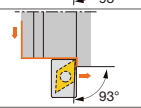
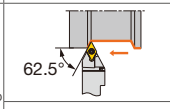
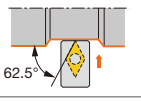
3-111 -

Inch

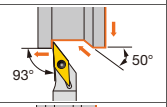
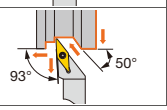
CC** inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Holder: Modular head	Y-axis feed	Through-coolant	Clamping style: Screw-on	Back-clamp	Offset	Page
95°		**JSCL2CR/L SCLCR/L-N**	CC** 2/3			●	●	●						✓		without	3-38 3-40
		SCLCR-OH/ OH2/OH3	CC**3				●	●					●	✓		with	3-38 3-39
		**SCLCR-F**	CC**3				●							✓		with	3-41

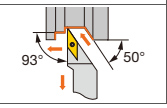
DC** inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Cylindrical shank (shank dia.) 0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Holder: Modular head	Y-axis feed	Through-coolant	Clamping style: Screw-on	Back-clamp	Offset	Page
93°		**JSDJ2CR/L**	DC**2/3			●	●	●										✓		without	3-47
		**JS-SDUCL**	DC**2/3										●	●				✓		–	3-53
		**SDJCR-OH/OH 2/OH3**	DC**3				●	●										✓		with	3-46 3-47
		**SDJCR-F**	DC**3				●											✓		with	3-49
		**Y-SDJCR-OH/ OH2**	DC**2/3			●	●									●	●	✓		without	3-50
		**Y-SDJCR**	DC**2/3			●	●	●								●		✓		without	3-51
62.5°		**JSDNCN**	DC**2/3			●	●	●										✓		with	3-56
		**Y-SDNCN**	DC**3				●									●		✓		with	3-57

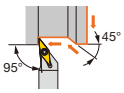
VB** inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width)							Holder			Clamping style		Offset	Page
				0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Modular head	Y-axis feed	Through-coolant	Screw-on	Back-clamp		
93°		**JSVJ2BR/L**	VB**2			●	●	●						✓		without	3-59
		**JSVJBR/L**	VB**2/3						●	●				✓		with	3-61

VC** inserts

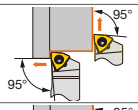
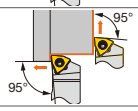
Cutting edge angle	Application	Designation	Insert	Square shank (height x width)							Holder			Clamping style		Offset	Page
				0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Modular head	Y-axis feed	Through-coolant	Screw-on	Back-clamp		
93°		**SVJCR/L**	VC**3					●	●	●				✓		with	3-63

VP** inserts

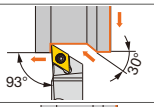
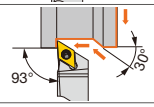
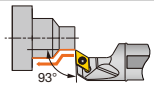
Cutting edge angle	Application	Designation	Insert	Square shank (height x width)							Holder			Clamping style		Offset	Page
				0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Modular head	Y-axis feed	Through-coolant	Screw-on	Back-clamp		
95°		**JSVL2PR/L**	VP**6				●	●						✓		without	3-68

Inch

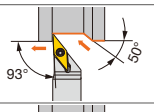
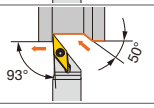
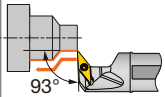
WXGU inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Holder: Modular head	Y-axis feed	Through-coolant	Clamping style: Screw-on	Back-clamp	Offset	Page
95°		**JSWL2XR/L**	WXGU			●	●	●						✓		without	3-73
		**JPWL2XR/L**	WXGU			●	●	●							✓	without	3-73

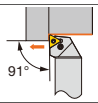
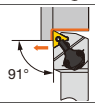
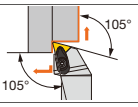
DX*U inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Cylindrical shank (shank dia.) 0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Holder: Modular head	Y-axis feed	Through-coolant	Clamping style: Screw-on	Back-clamp	Offset	Page
93°		**JSDJ2XR/L**	DX*U			●	●	●										✓		without	3-75
		**JPDJ2XR/L**	DX*U			●	●	●											✓	without	3-75
		**JS-SDUXL**	DX*U									●	●	●				✓		–	3-76

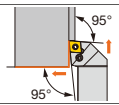
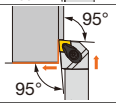
VXGU inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Cylindrical shank (shank dia.) 0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Holder: Modular head	Y-axis feed	Through-coolant	Clamping style: Screw-on	Back-clamp	Offset	Page
93°		**JSVJ2XR/L**	VXGU			●	●	●										✓		without	3-79
		**JPVJ2XR/L**	VXGU			●	●	●											✓	without	3-79
		**JS***-SVUXL**	VXGU									●	●	●				✓		–	3-80

TN** inserts

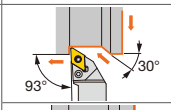
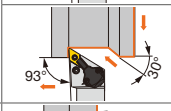
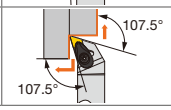
Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Holder: Modular head	Y-axis feed	Through-coolant	Clamping style: Lever-lock	Double-clamp	Offset	Page
91°		**PTGNR/L**	TN**2						●	●				✓		with	3-83
		**PTGNR/L -CHP**	TN**2/3						●	●			●	✓		with	3-84
100°		**PTXNR-N**	TN**3			●	●	●						✓		with	3-86
105°		**ATQNR/L**	TN**3						●	●					✓	with	3-88

CN** inserts

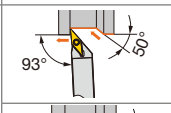
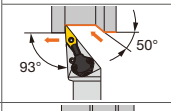
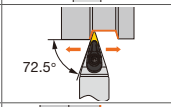
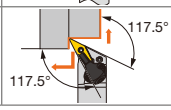
Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Holder: Modular head	Y-axis feed	Through-coolant	Clamping style: Lever-lock	Double-clamp	Offset	Page
95°		**PCLNR/L**	CN**/ GN**3						●	●			●	✓		with	3-90
		**PCLNR/L-CHP**	CN**/ GN**3/4						●	●			●	✓		with	3-91

Inch

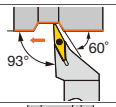
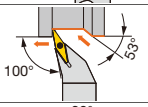
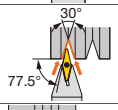
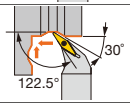
DN** inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Holder: Modular head	Y-axis feed	Through-coolant	Clamping style: Lever-lock	Double-clamp	Offset	Page
93°		**PDJNR/L**	DN**/ FN**3					●	●	●				✓		with	3-92
93°		**PDJNR/L-CHP**	DN**/ FN**3/4						●	●			●	✓		with	3-93
107.5°		**ADQNR/L**	DN**/ FN**3/4						●	●					✓	with	3-94

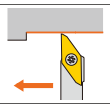
V/YN** inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Holder: Modular head	Y-axis feed	Through-coolant	Clamping style: Lever-lock	Back-clamp	Double-clamp	Offset	Page
93°		**JPVJ2NR/L**	VN**2.3				●	●							✓		without	3-95
93°		**PVJNR/L-CHP**	VN**2.3/3, YN**3						●	●			●	✓			with	3-95
72.5°		**AVVNN**	VN**2.3/3, YN**3						●	●						✓	with	3-96
117.5°		**PVQNR/L-CHP**	VN**/YN3						●	●			●	✓			with	3-96

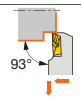
YWMT inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width)							Holder			Clamping style		Offset	Page
				0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Modular head	Y-axis feed	Through-coolant	Screw-on	Back-clamp		
93°		**SYJBR/L**	YWMT16						●	●				✓		with	3-97
100°		**SYHBR/L**	YWMT16						●	●				✓		with	3-97
77.5°		**SYIBN**	YWMT16						●	●				✓		with	3-98
122.5°		**SYQBR/L**	YWMT16						●	●				✓		with	3-98

CSVF inserts

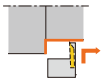
Cutting edge angle	Application	Designation	Insert	Square shank (height x width)							Clamping style		Offset	Page
				0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Screw-on	Back-clamp		
91°		**CSVR/L**	CSVF			●	●				✓		with	3-100

TF** inserts

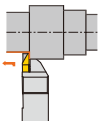
Cutting edge angle	Application	Designation	Insert	Square shank (height x width)							Holder	Clamping style		Offset	Page
				0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Through-coolant	Screw-on	Back-clamp		
93°		**TFTR-OH2/ OH3**	TFX33/ TF33					●			●	✓		with	3-102

Inch

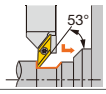
TBP inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.375 x 0.375	0.375 x 0.472	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Holder Y-axis feed	Through-coolant	Cutting edge effective length	Cutting depth maximum	Clamping style Screw-on	Back-clamp	Offset	Page
Back turning		**TBPR-OH/ OH2/OH3**	TBP			●	●	●				●	3 mm - 4.8 mm	5.3 mm	✓		-	3-111 3-112
		TBPR/L	TBP		●		●	●					3 mm - 4.8 mm	5.3 mm	✓		-	3-112
		**Y-TBPR-OH**	TBP				●				●	●	3 mm - 4.8 mm	–	✓		-	3-113
		Y-TBPR	TBP		●		●	●			●		3 mm - 4.8 mm	–	✓		-	3-113

TBPA inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Holder Through-coolant	Cutting edge effective length	Cutting depth maximum	Clamping style Screw-on	Back-clamp	Offset	Page
Back turning		**CTPAR/L-OH / OH2**	TBPA				●	●			●	4.5 mm - 6.3 mm	5.3 mm - 6.8 mm	✓		-	3-116 3-117
		CTPAR/L	TBPA				●	●				4.5 mm - 6.3 mm	5.3 mm - 6.8 mm	✓		-	3-117

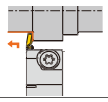
TBVC inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.375 x 0.375	0.375 x 0.472	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Cutting edge effective length	Cutting depth maximum	Clamping style Clamp-on	Screw-on	Back-clamp	Offset	Page
Back turning		**TBVCR-F**	TBVC VC..1103..				●				7 mm	8.5 mm	✓			-	3-121

TBMH inserts

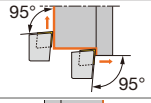
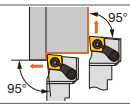
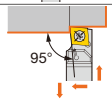
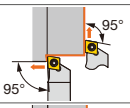
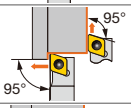
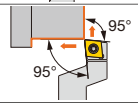
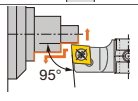
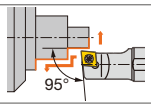
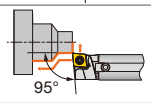
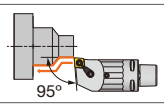
Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Holder Y-axis feed	Through-coolant	Cutting edge effective length	Cutting depth maximum	Clamping style Screw-on	Back-clamp	Offset	Page
Back turning		**GTTR-OH/ OH2/OH3**	TBMH				●	●				●	0.3 mm - 1.3 mm	1.6 mm	✓		-	3-123 3-124
		GTTR	TBMH			●	●	●	●				0.3 mm - 1.3 mm	1.6 mm - 2.7 mm	✓		-	3-125
		Y-GTTR-OH	TBMH				●				●	●	0.3 mm - 1.3 mm	1.6 mm	✓		-	3-126
		Y-GTTR	TBMH			●	●	●			●		0.3 mm - 1.3 mm	1.6 mm	✓		-	3-126

TBDP inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.375 x 0.375	0.375 x 0.472	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Holder Y-axis feed	Cutting edge effective length	Cutting depth maximum	Clamping style Clamp-on	Screw-on	Back-clamp	Offset	Page
Back turning		**TBDPR/L**	TBDP			●	●	●				3.5 mm	3 mm - 5 mm	✓			-	3-120

Metric

CC** inserts

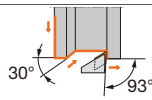
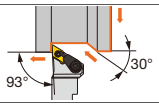
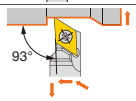
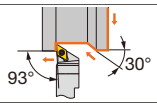
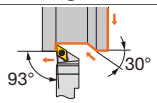
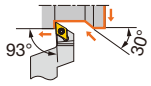
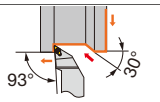
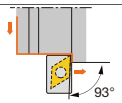
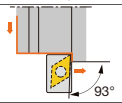
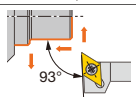
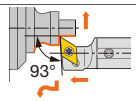
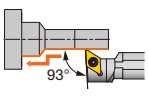
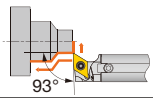
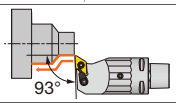
Cutting edge angle	Application	Designation	Insert	Square shank (height x width)												
				8 x 8	10 x 10	10 x 12	10 x 14	10 x 15	10 x 20	12 x 12	12 x 14	12 x 16	12 x 18	12 x 24	16 x 16	16 x 20	20 x 20
95°		**QC-JSCL2CR-Y-CHP**	CC**09							●		●			●	●	
		**QC-JSCL2CR-CHP**	CC**06/09			●				●		●			●	●	
		**SCLCR-OH/OH2/OH3**	CC**09			●	●				●				●		
		**JSCL2CR/L SCLCR/L-N**	CC**06/09	●	●					●					●		
		**JTCL2CR/L**	CC**06/09		●					●					●		
		**JSCLCR-F15 SCLCR-F**	CC**09					●	●			●	●	●		●	
		**DS-SCLL-ACH**	CC**09														
		**DS-SCLL**	CC**06/09														
		**QR-SCLCL-CHP**	CC**09														
		**C3SCLCL-CHP**	CC**09														

* When using stepped-head shank, the “Offset” will be “with”.

Cylindrical shank (shank dia.)									Tung Cap	Holder			Clamping style		Offset	Page
ø14	ø15.875	ø16	ø19.05	ø20	ø22	ø25	ø25.4	ø32	C3	Modular head	Y-axis feed	Through-coolant	Screw-on	Back-clamp		
										●	●	●	✓		without*	3-37
										●		●	✓		without*	3-37
												●	✓		with	3-38 3-39
													✓		without	3-38 3-40
														✓	without	3-40
													✓		with	3-41
		●	●	●	●	●	●						✓		–	3-42
	●	●	●	●	●	●	●	●					✓		–	3-43
		●	●	●						●		●	✓		–	3-44
									●			●	✓		–	3-44

Metric

DC** inserts

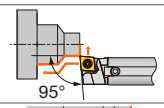
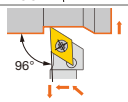
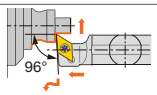
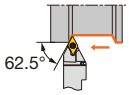
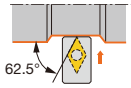
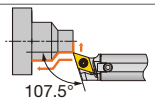
Cutting edge angle	Application	Designation	Insert	Square shank (height x width)												
				8 x 8	10 x 10	10 x 12	10 x 14	10 x 15	10 x 20	10 x 16	12 x 10	12 x 12	12 x 14	12 x 16	12 x 18	12 x 24
93°		**QC-JSDJ2CR-Y-CHP**	DC**11									●		●		
		**QC-JSDJ2CR-CHP**	DC**07/11			●						●		●		
		**SDJCR-OH/OH 2/OH3**	DC**11				●						●			
		**JSDJ2CR/L SDJC-N-OH**	DC**07/11	●	●							●				
		**JTDJ2CR/L**	DC**07/11		●							●				
		**JSDJCR-F15 SDJCR-F**	DC**07/11					●	●	●				●	●	●
		**JSDJCR/L**	DC**07/11	●	●							●				
		**Y-SDJCR-OH/OH2**	DC**11									●				
		**Y-SDJCR**	DC**07/11		●							●				
		**CH-SDUCL**	DC**11		●							●				
		**DS-SDUL-ACH**	DC**11													
		**JS-SDUCL DS-SDUL**	DC**07/11													
		**QR-SDUCL-CHP**	DC**11													
		**C3SDUCL-CHP**	DC**11													

* When using stepped-head shank, the “Offset” will be “with”.

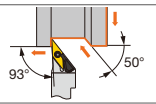
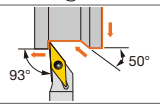
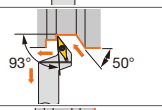
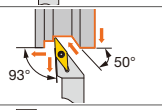
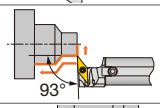
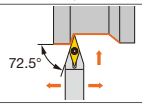
					Cylindrical shank (shank dia.)								Tung Cap	Holder			Clamping style		Offset	Page
	16 x 16	16 x 20	16 x 28	20 x 20	ø14	ø15.875	ø16	ø19.05	ø20	ø22	ø25	ø25.4	ø32	C3	Modular head	Y-axis feed	Through-coolant	Screw-on	Back-clamp		
	●	●													●	●	●	✓		without*	3-45
	●	●													●		●	✓		without*	3-45
	●																●	✓		with	3-46 3-47
	●																	✓		without	3-47
	●																		✓	without	3-48
		●	●															✓		with	3-48 3-49
	●																	✓		with	3-49
	●															●	●	✓		without	3-50
	●															●		✓		without	3-51
	●			●														✓		–	3-51
							●	●	●	●	●	●						✓		–	3-52
						●	●	●	●	●	●	●						✓		–	3-53
							●	●	●						●		●	✓		–	3-54
														●			●	✓		–	3-54

Metric

DC** inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width)												
				8 x 8	10 x 10	10 x 12	10 x 14	10 x 15	10 x 20	10 x 16	12 x 10	12 x 12	12 x 14	12 x 16	12 x 18	12 x 24
95°		**QR-SDLCL-CHP**	DC**11													
96°		**SDXCR-N**	DC**11		●							●				
		**DS-SDXL**	DC**11													
62.5°		**JSDNCN SDNCN**	DC**07/11	●	●							●				
		**Y-SDNCN**	DC**11									●				
107.5°		**QR-SDQCL-CHP**	DC**11													

VB** inserts

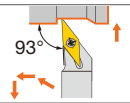
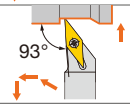
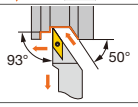
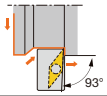
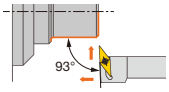
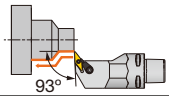
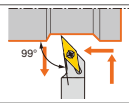
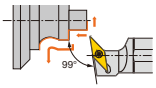
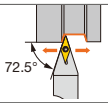
Cutting edge angle	Application	Designation	Insert	Square shank (height x width)					Cylindrical shank (shank dia.)			Holder		Clamping style		Offset	Page
				10 x 10	12 x 12	12 x 16	16 x 16	16 x 20	ø16	ø19.05	ø20	Modular head	Through-coolant	Screw-on	Back-clamp		
93°		**QC-JSVJ2BR-CHP**	VB**11		●	●	●	●				●	●	✓		without*	3-59
		**JSVJ2BR/L**	VB**11	●	●		●							✓		without	3-59
		**JSVJBR-F15**	VB**11			●		●						✓		with	3-60
		**JSVJBR/L**	VB**11	●	●		●							✓		with	3-60
		**QR-SVUBL-CHP**	VB**11						●	●	●	●	●	✓		-	3-61
72.5°		**JSVNBN**	VB**11	●	●		●							✓		with	3-61

* When using stepped-head shank, the “Offset” will be “with”.

					Cylindrical shank (shank dia.)									Tung Cap	Holder			Clamping style		Offset	Page
	16 x 16	16 x 20	16 x 28	20 x 20	ø14	ø15.875	ø16	ø19.05	ø20	ø22	ø25	ø25.4	ø32	C3	Modular head	Y-axis feed	Through-coolant	Screw-on	Back-clamp		
							●	●	●						●		●	✓		-	3-55
	●																	✓		without	3-55
								●	●		●		●					✓		-	3-56
	●			●														✓		with	3-56 3-57
	●															●		✓		without	3-57
							●	●	●						●		●	✓		-	3-58

Metric

VC** inserts

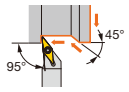
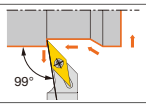
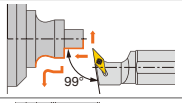
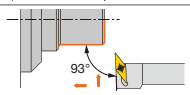
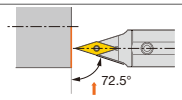
Cutting edge angle	Application	Designation	Insert	Square shank (height x width)								Cylindrical shank (shank dia.)				
				8 x 8	10 x 10	10 x 12	10 x 14	12 x 12	12 x 14	16 x 16	20 x 20	ø14	ø15.875	ø16	ø19.05	ø20
93°		**SVJCR-OH**	VC**1103				●		●	●						
		**SVJCR/L**	VC**1103	●	●			●		●						
		**SVJCR/L**	VC**1604							●	●					
		**Y-SVJCR-OH**	VC**1103					●		●						
		**CH-SVUCL**	VC**1103		●			●		●	●					
		**C3SVUCL-CHP**	VC**1103													
95°		**Y-SVXCL**	VC**1103					●								
99°		**SVXCR/L-N**	VC**1103			●		●								
		**DS-SVXL**	VC**1103										●	●	●	●
72.5°		**SVVCN**	VC**1103	●	●			●		●	●					

* When using stepped-head shank, the “Offset” will be “with”.

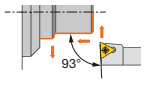
				Tung Cap	Holder		Clamping style		Offset	Page
	ø22	ø25	ø25.4	C3	Y-axis feed	Through-coolant	Screw-on	Back-clamp		
						●	✓		without	3-62
							✓		without	3-62
							✓		with	3-63
					●	●	✓		without	3-63
							✓		-	3-64
				●		●	✓		-	3-64
					●		✓		without	3-65
							✓		without	3-65
	●	●	●				✓		-	3-66
							✓		with	3-66 3-67

Metric

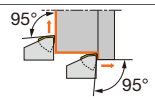
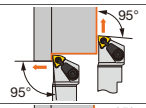
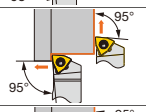
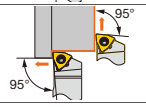
VP** inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 10 x 10	10 x 12	12 x 12	16 x 16	Cylindrical shank (shank dia.) ø16	ø19.05	ø20	ø22	ø25.4	Clamping style Screw-on	Back-clamp	Offset	Page
95°		**JSVL2PR/L**	VP**08/11	●		●	●						✓		without	3-68
117.5°		**JSVP2PR/L**	VP**08/11	●		●	●						✓		without	3-68
99°		**SVXPR/L**	VP**11		●	●							✓		without	3-69
		**DS-SVXP**	VP**08						●	●	●	●	✓		-	3-69
93°		**CH-SVUPL**	VP**08	●		●							✓		-	3-70
72.5°		**DS-SVVPN-ACH**	VP**11					●	●	●	●	●	✓		-	3-70

TC** inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 8 x 8	8 x 10	10 x 10	12 x 12	16 x 16	Clamping style Screw-on	Back-clamp	Offset	Page
91°		**JSTACR/L**	TC**08/11	●		●	●	●	✓		without	3-71
93°		**CH-STUCL**	TC**09			●	●		✓		-	3-71

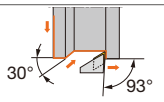
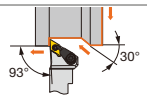
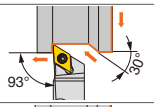
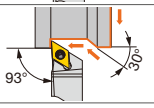
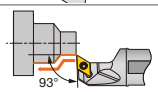
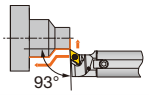
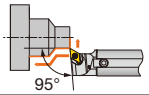
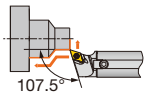
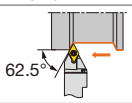
WXGU inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width)								Holder			Clamping style		Offset	Page
				10 x 10	10 x 12	10 x 16	12 x 12	12 x 16	16 x 16	16 x 20	20 x 20	Modular head	Y-axis feed	Through-coolant	Screw-on	Back-clamp		
95°		**QC-JSWL2XR-Y-CHP**	WXGU				●	●	●	●		●	●	●	✓		without*	3-72
		**QC-JSWL2XR-CHP**	WXGU		●		●	●	●	●		●		●	✓		without*	3-72
		**JSWL2XR/L**	WXGU	●			●		●		●				✓		without	3-73
		**JPWL2XR/L**	WXGU	●			●		●							✓	without	3-73

* When using stepped-head shank, the “Offset” will be “with”.

Metric

DX*U inserts

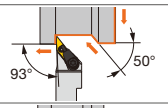
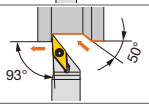
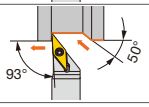
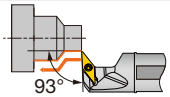
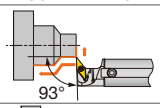
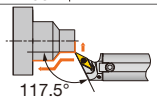
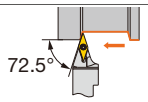
Cutting edge angle	Application	Designation	Insert	Square shank (height x width)								Cylindrical shank (shank dia.)				
				10 x 10	10 x 12	10 x 16	12 x 12	12 x 16	16 x 16	16 x 20	20 x 20	ø14	ø15.875	ø16	ø19.05	ø20
93°		**QC-JSDJ2XR-Y-CHP**	DX*U				●	●	●	●						
		**QC-JSDJ2XR-CHP**	DX*U		●		●	●	●	●						
		**JSDJ2XR/L**	DX*U	●			●		●		●					
		**JPDJ2XR/L**	DX*U	●			●		●							
		**JS-SDUXL**	DX*U									●	●	●	●	●
		**QR-SDUXL-CHP**	DX*U											●	●	●
95°		**QR-SDLXL-CHP**	DX*U											●	●	●
107.5°		**QR-SDQXL-CHP**	DX*U											●	●	●
62.5°		**QC-JSDNXR-CHP**	DX*U		●		●	●	●	●						

* When using stepped-head shank, the “Offset” will be “with”.

				Holder			Clamping style		Offset	Page
	ø22	ø25	ø25.4	Modular head	Y-axis feed	Through-coolant	Screw-on	Back-clamp		
				●	●	●	✓		without*	3-74
				●		●	✓		without*	3-74
							✓		without	3-75
								✓	without	3-75
	●	●	●				✓		-	3-76
				●		●	✓		-	3-76
				●		●	✓		-	3-77
				●		●	✓		-	3-77
				●		●	✓		with	3-78

Metric

VXGU inserts

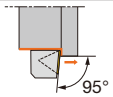
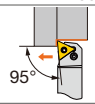
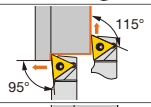
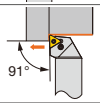
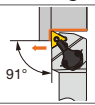
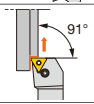
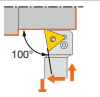
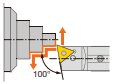
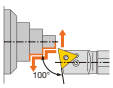
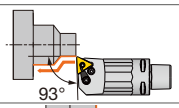
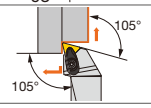
Cutting edge angle	Application	Designation	Insert	Square shank (height x width)								Cylindrical shank (shank dia.)				
				10 x 10	10 x 12	10 x 16	12 x 12	12 x 16	16 x 16	16 x 20	20 x 20	ø15.875	ø16	ø19.05	ø20	ø22
93°		**QC-JSVJ2XR-CHP**	VXGU		●		●	●	●	●						
		**JSVJ2XR/L**	VXGU	●			●		●		●					
		**JPVJ2XR/L**	VXGU	●			●		●							
		**JS***-SVUXL**	VXGU									●	●	●	●	●
		**QR-SVUXL-CHP**	VXGU										●	●	●	
117.5°		**QR-SVQXL-CHP**	VXGU										●	●	●	
72.5°		**QC12-JSVVXR-CHP**	VXGU		●		●	●	●	●						

* When using stepped-head shank, the “Offset” will be “with”.

			Holder		Clamping style		Offset	Page
	ø25	ø25.4	Modular head	Through-coolant	Screw-on	Back-clamp		
			●	●	✓		without*	3-78
					✓		without	3-79
						✓	without	3-79
	●	●			✓		-	3-80
			●	●	✓		-	3-80
			●	●	✓		-	3-81
			●	●	✓		with	3-81

Metric

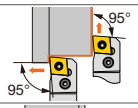
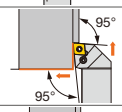
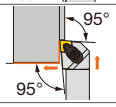
TN** inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width)					Cylindrical shank (shank dia.)						Tung Cap
				10 x 16	12 x 16	16 x 16	16 x 20	20 x 20	ø16	ø19.05	ø20	ø22	ø25	ø25.4	C3
95°		**QC-PTL2NR-Y-CHP**	TN**1604			●	●								
		**QC-PTL2NR-CHP**	TN**1604			●	●								
		**JTTLNR/L**	TN**1604		●	●									
91°		**PTGNR/L**	TN**1104/ 1604			●		●							
		**PTGNR/L -CHP**	TN**1104/ 1604					●							
		**PTFNR/L**	TN**1104/ 1604			●		●							
100°		**PTXN-OH3/OH2**	TN**1604	●	●	●									
		**PTXNR-N**	TN**1604	●	●	●		●							
		**DS-PTXL-ACH**	TN**1604						●	●	●	●	●	●	
		**DS-PTXL**	TN**1604						●	●	●	●		●	
93°		**C3PTUNL**	TN**1604												●
105°		**ATQNR/L**	TN**1604					●							

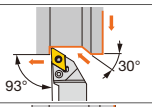
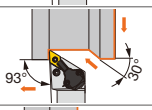
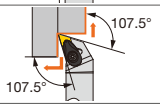
	Holder			Clamping style				Offset	Page
	Modular head	Y-axis feed	Through-coolant	Lever-lock	Back-clamp	Double-clamp	Screw-on		
	●	●	●	✓				without	3-82
	●		●	✓				without	3-82
					✓			without	3-83
				✓				with	3-83
			●	✓				with	3-84
				✓				with	3-84
			●	✓				without	3-85
				✓				without	3-86
				✓				-	3-87
				✓				-	3-87
			●	✓				-	3-88
						✓		with	3-88

Metric

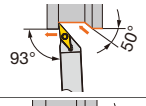
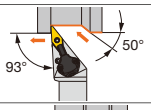
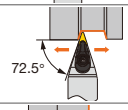
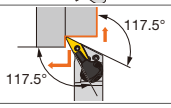
CN** inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 16 x 16	16 x 20	20 x 20	Holder Through-coolant	Clamping style Lever-lock	Double-clamp	Offset	Page
95°		**PCL2NR PCLNR-N**	CN**1204		●	●		✓		without	3-89
		**PCLNR/L**	CN**0904/ 1204	●		●		✓		with	3-90
		**PCLNR/L-CHP**	CN**0904/ 1204			●	●	✓		with	3-91

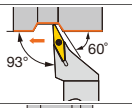
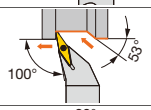
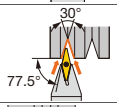
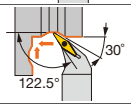
DN** inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 16 x 16	16 x 25	20 x 20	Holder Through-coolant	Clamping style Lever-lock	Double-clamp	Offset	Page
93°		**PDJNR/L**	DN**1104/ 1504/1506	●		●		✓		with	3-92
		**PDJNR/L-CHP**	DN**1104/ 1504			●	●	✓		with	3-93
107.5°		**ADQNR/L**	DN**1104/ 1504/1506			●			✓	with	3-94

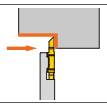
V/YN** inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 12 x 12	16 x 16	20 x 20	Holder Through-coolant	Clamping style Lever-lock	Back-clamp	Double-clamp	Offset	Page
93°		**JPVJ2NR/L**	VN**1204	●	●				✓		without	3-95
		**PVJNR/L-CHP**	VN**1204 V/YN**1604			●	●	✓			with	3-95
72.5°		**AVVNN**	VN**1204 V/YN**1604			●				✓	with	3-96
117.5°		**PVQNR/L-CHP**	V/YN**1604			●	●	✓			with	3-96

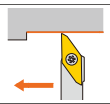
YWMT inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 20 x 20	Clamping style: Screw-on	Clamping style: Back-clamp	Offset	Page
93°		**SYJBR/L**	YWMT16	●	✓		with	3-97
100°		**SYHBR/L**	YWMT16	●	✓		with	3-97
77.5°		**SYIBN**	YWMT16	●	✓		with	3-98
122.5°		**SYQBR/L**	YWMT16	●	✓		with	3-98

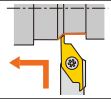
JV*N inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 6 x 6	7 x 7	8 x 8	10 x 10	Clamping style: Screw-on	Clamping style: Back-clamp	Offset	Page
Front turning		**JSXXR/L05**	JVFN45R/L	●	●	●	●	✓		without	3-99

CSVF inserts

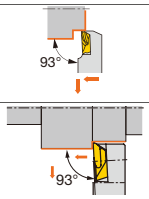
Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 7 x 7	8 x 8	9.5 x 9.5	10 x 10	12 x 12	Clamping style: Screw-on	Clamping style: Back-clamp	Offset	Page
91°		**CSVR/L**	CSVF	●	●	●	●	●	✓		with	3-100

CSVB inserts

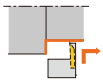
Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 7 x 7	8 x 8	9.5 x 9.5	10 x 10	12 x 12	Cutting edge effective length	Cutting depth maximum	Clamping style: Screw-on	Clamping style: Back-clamp	Offset	Page
Back turning		**CSVR/L**	CSVB	●	●	●	●	●	0.7 mm - 1 mm	2 mm	✓		with	3-105

Metric

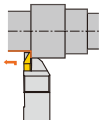
TF** inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 10 x 10	10 x 14	12 x 12	12 x 14	16 x 16	20 x 20	Holder Through-coolant	Clamping style Screw-on	Back-clamp	Offset	Page
93°		**TFTR-OH**	TFX33/TF33		●		●	●		●	✓		with	3-102
		TFTR	TFX33/TF33	●		●		●	●		✓		without	3-103

TBP inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 8 x 8	10 x 10	10 x 12	12 x 12	13 x 13	16 x 16	Cylindrical shank (shank dia.) ø19.05	ø20	ø25.4	Holder Y-axis feed	Through-coolant
Back turning		**TBPR-OH/OH2/OH3**	TBP			●	●		●					●
		TBPR/L	TBP	●	●		●		●					
		**Y-TBPR-OH**	TBP				●		●				●	●
		Y-TBPR	TBP		●		●						●	
		DS-TBPL	TBP							●	●	●		

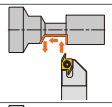
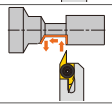
TBPA inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 10 x 10	12 x 12	16 x 16	20 x 20	Holder Through-coolant	Cutting edge effective length	Cutting depth maximum	Clamping style Screw-on	Back-clamp	Offset	Page
Back turning		**TBPAR-OH**	TBPA		●	●	●	●	4.5 mm - 6.3 mm	5.3 mm - 6.8 mm	✓		-	3-116
		CTPAR/L-OH /OH2	TBPA		●	●		●	4.5 mm - 6.3 mm	5.3 mm - 6.8 mm	✓		-	3-116 3-117
		CTPAR/L	TBPA	●	●	●	●		4.5 mm - 6.3 mm	5.3 mm - 6.8 mm	✓		-	3-117
		CH-TBPAL	TBPA			●	●		4.5 mm - 6.3 mm	5.3 mm - 6.8 mm	✓		-	3-118

	Cutting edge effective length	Cutting depth maximum	Clamping style		Offset	Page
			Screw-on	Back-clamp		
	3 mm - 4.8 mm	5.3 mm	✓		-	3-111 3-112
	3 mm - 4.8 mm	5.3 mm	✓		-	3-112
	3 mm - 4.8 mm	–	✓		-	3-113
	3 mm - 4.8 mm	–	✓		-	3-113
	3 mm - 4.8 mm	5.3 mm	✓		-	3-113

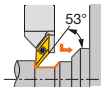
Metric

J10E inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 10 x 10	10 x 12	12 x 12	12 x 16	16 x 16	16 x 20	Holder: Modular head	Holder: Through-coolant	Cutting edge effective length	Cutting depth maximum	Clamping style: Screw-on	Clamping style: Back-clamp	Page
Back turning		**QC-JSEGR-CHP**	J10ER		●	●	●	●	●	●	●	3 mm	3.3 mm	✓		3-108
Back turning		**JSEGR/L**	J10ER/L	●		●		●				3 mm	3.3 mm	✓		3-108

* When using stepped-head shank, the “Offset” will be “with”.

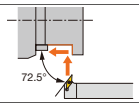
TBVC inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 10 x 10	12 x 12	16 x 16	20 x 20	Cutting edge effective length	Cutting depth maximum	Clamping style: Screw-on	Clamping style: Back-clamp	Offset	Page
Back turning		**TBVCR-F**	TBVC VC..1103..	●	●	●	●	7 mm	8.5 mm	✓		-	3-121

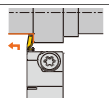
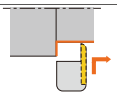
TBMH inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 8 x 8	8 x 10	10 x 10	10 x 12	12 x 12	16 x 16	20 x 20	Cylindrical shank (shank dia.) ø14	ø15.875	ø16	ø19.05	ø20	ø22
Back turning		**GTTR-OH/OH2/OH3**	TBMH				●	●	●							
Back turning		**GTTR**	TBMH	●		●		●	●	●						
Back turning		**Y-GTTR-OH**	TBMH					●	●							
Back turning		**Y-GTTR**	TBMH			●		●								
Back turning		**DS-GTTL**	TBMH								●	●	●	●	●	●
Back turning		**CH-GTTL**	TBMH			●		●	●							

VC.. inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 16 x 16	Square shank (height x width) 20 x 20	Cutting edge effective length	Cutting depth maximum	Clamping style Screw-on	Clamping style Back-clamp	Offset	Page
Back turning		**CH-SVXCL**	VC..1103..	●	●	7 mm	7 mm	✓		-	3-122

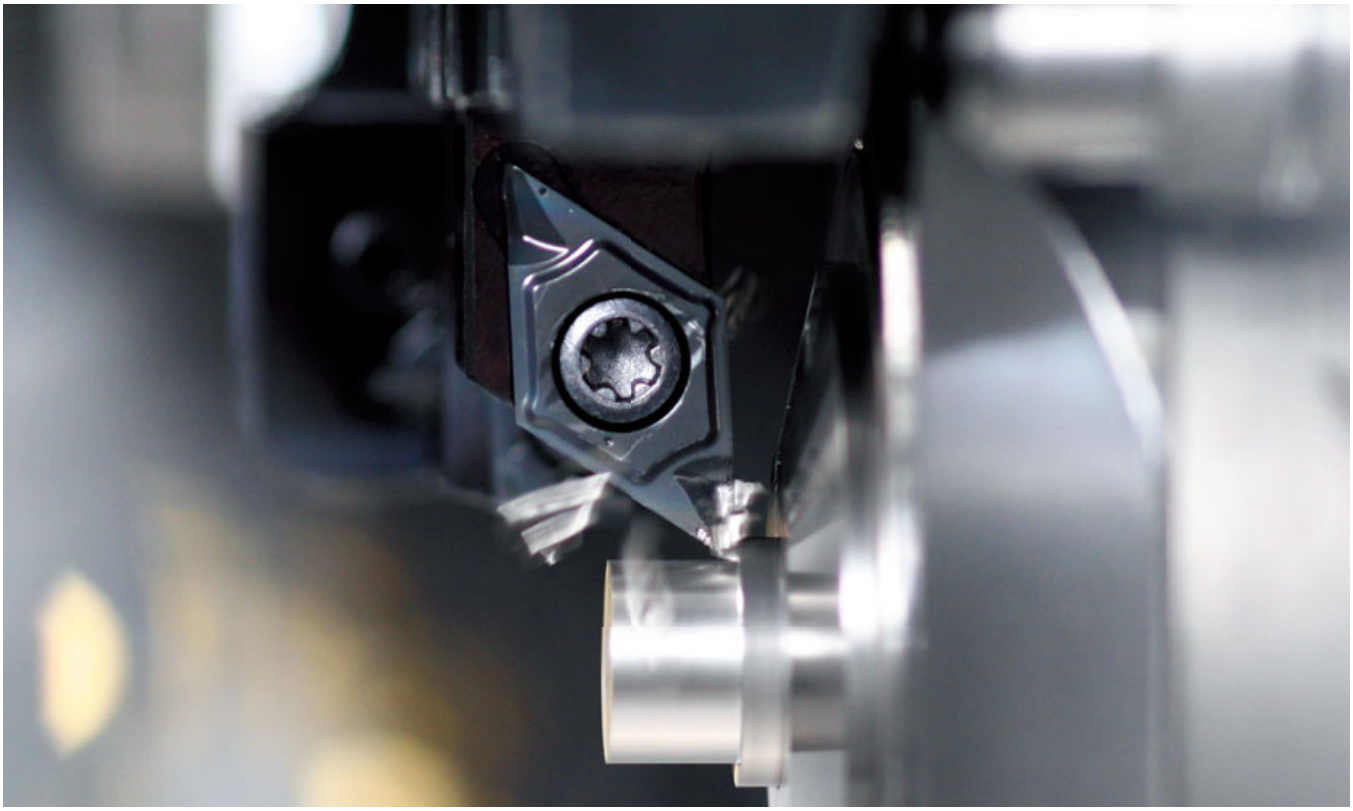
TBDP inserts

Cutting edge angle	Application	Designation	Insert	Square shank (height x width) 10 x 10	Square shank (height x width) 12 x 12	Square shank (height x width) 16 x 16	Square shank (height x width) 20 x 20	Holder Y-axis feed	Cutting edge effective length	Cutting depth maximum	Clamping style Clamp-on	Clamping style Screw-on	Clamping style Back-clamp	Offset	Page
Back turning		**TBDPR/L**	TBDP	●	●	●	●		3.5 mm	3 mm - 5 mm	✓			-	3-120
		**Y-TBDPR**	TBDP		●			●	3.5 mm	5 mm	✓			-	3-120

ø25	ø25.4	ø32	Holder Y-axis feed	Holder Through-coolant	Cutting edge effective length	Cutting depth maximum	Clamping style Screw-on	Clamping style Back-clamp	Offset	Page
				●	0.3 mm - 1.3 mm	1.6 mm	✓		-	3-123 3-124
					0.3 mm - 1.3 mm	1.6 mm - 2.7 mm	✓		-	3-125
			●	●	0.3 mm - 1.3 mm	1.6 mm	✓		-	3-126
			●		0.3 mm - 1.3 mm	1.6 mm	✓		-	3-126
●	●	●			0.3 mm - 1.3 mm	1.6 mm	✓		-	3-127
					0.3 mm - 1.3 mm	1.5 mm	✓		-	3-127

TMV Chipbreaker

For front turning | Specially designed for vibration cutting on automatic lathes



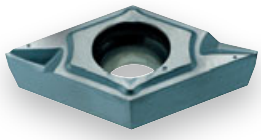
N°1 Chipbreaker for vibration machining

Reliably long tool life and stable chip evacuation during vibration cutting

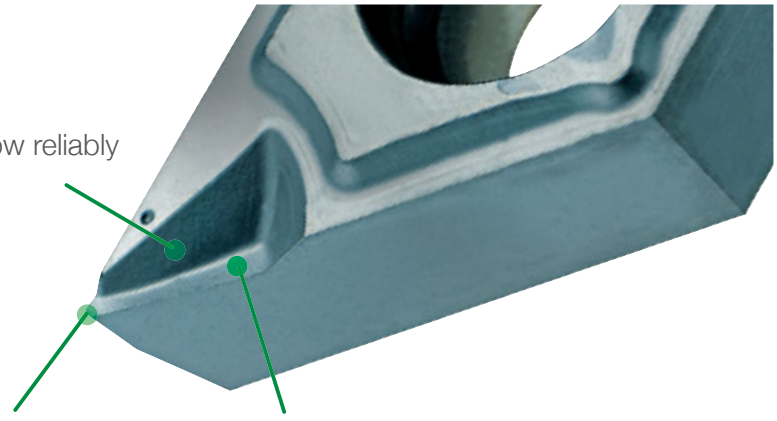
Performance

- **Significantly reducing damage of cutting edge**
  Extended lifespan can be expected even in the machining of difficult-to-cut materials
- **More stable of chip control**
  Stable chip formation during vibration cutting

What is the unique point?



Controls chip flow reliably

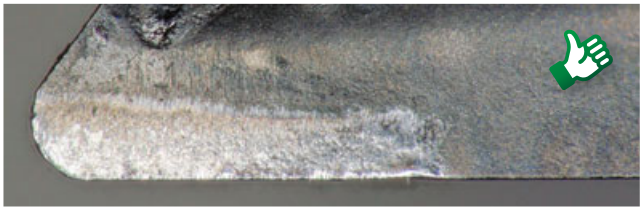


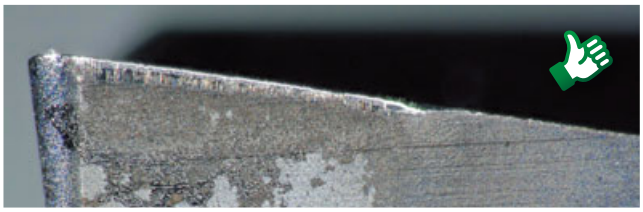
Shape to prevent cutting edge damage from chipping

Rake face shape to withstand high cutting feeds

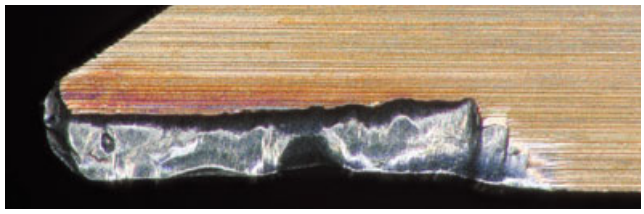
Achieving extended tool life and stable cutting performance in vibration cutting

TMV Chipbreaker





conventional



Cutting conditions

Grade	Work materials	Operation	Cutting conditions		
			Cutting speed (m/min)	Feed (mm/rev)	D.O.C. (mm)
ST4	Austenitic stainless steel (SUS304 / SUS316 etc)	Front turning	40 - 100	0.02 - 0.06	0.5 - 2.0
DM4	Carbon steel / Alloy steel (S45C / SCM435 etc)		50 - 120		
TM4	Non-ferrous (Aluminum / Titanium etc)		60 - 150		

Vibration condition

CITIZEN MACHINERY CO., LTD. (LFV)		
P	Q	D
Mode 1	0.5	0.5

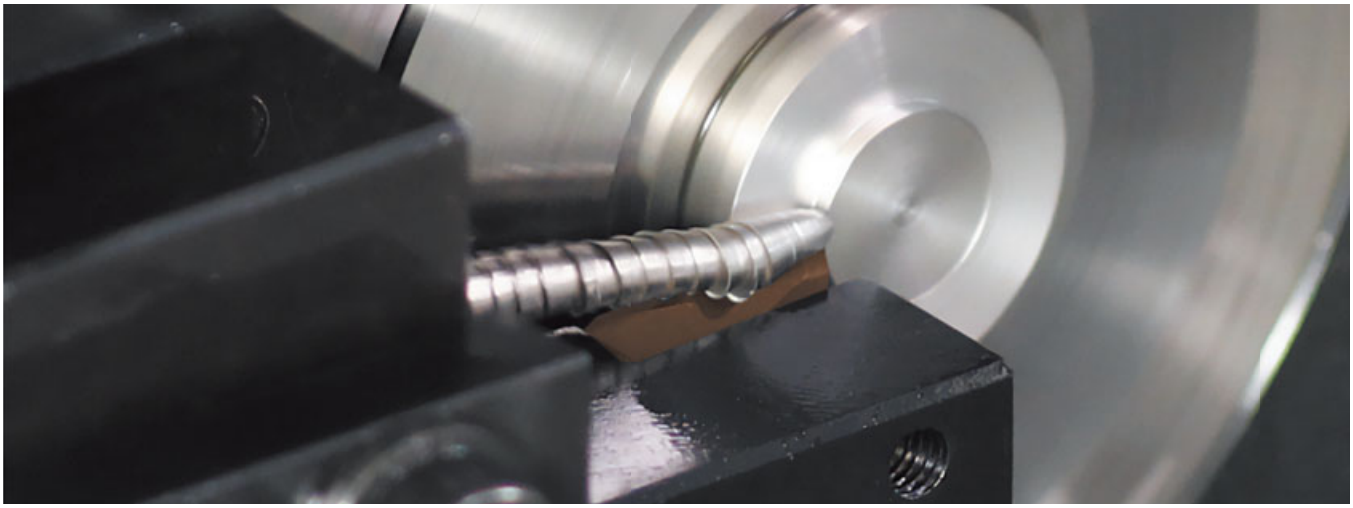
* Our products are designed with a low cutting edge, please use them after aligning with the center.
* When using insert radius R0.08, please set the feed rate to 0.02 mm/rev or less.
  If you want to increase the feed rate beyond 0.02 mm/rev. we recommend using the [Mode 2 / E4.0 / R0.5]

Star precision Co., Ltd. (Step Cycle Pro)	
A (Chip length factor)	D (Amplitude factor)
More than 2.0	More than 2.0

* Our products are designed with a low cutting edge, please use them after aligning with the center.
* When using insert radius R0.08, please set the feed rate to 0.02 mm/rev or less.

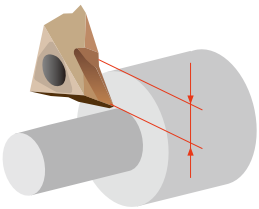
The Front Max

For front turning | Swiss CNC Lathes



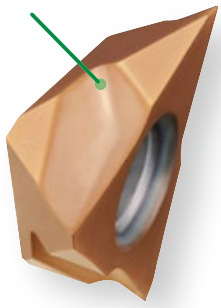
Maximum depth of cut 5.0 mm
Single pass machining reduces cycle time

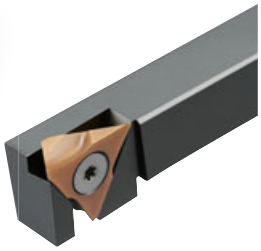
Fewer machining passes reduce insert wear.
Tool life can be extended.



Max 5.0 mm

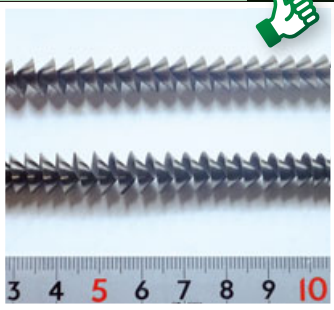
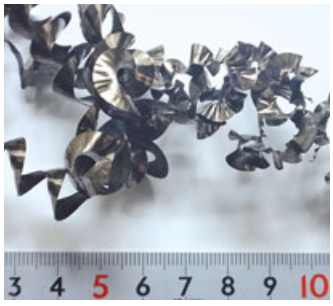
Uniquely Designed Chipbreaker Achieves
Excellent Chip Control And Machined Surfaces.





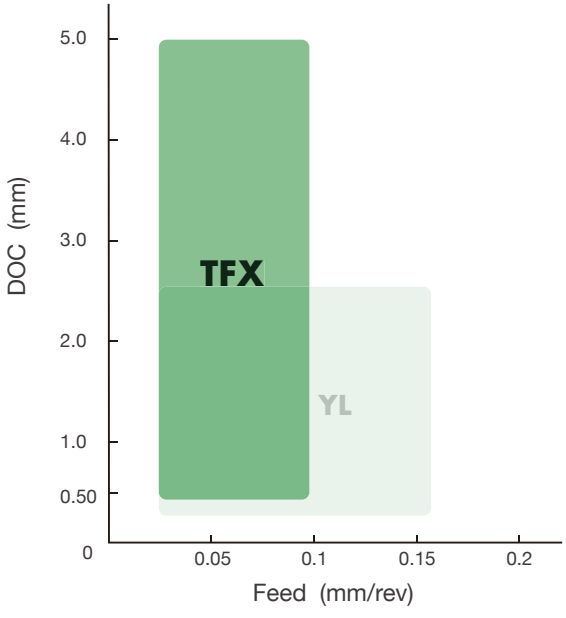
Dedicated holder

Case study

The Front Max	Competitor
	

material: AISI304
ap5.0mm vc=80m/min f=0.03mm/rev WET

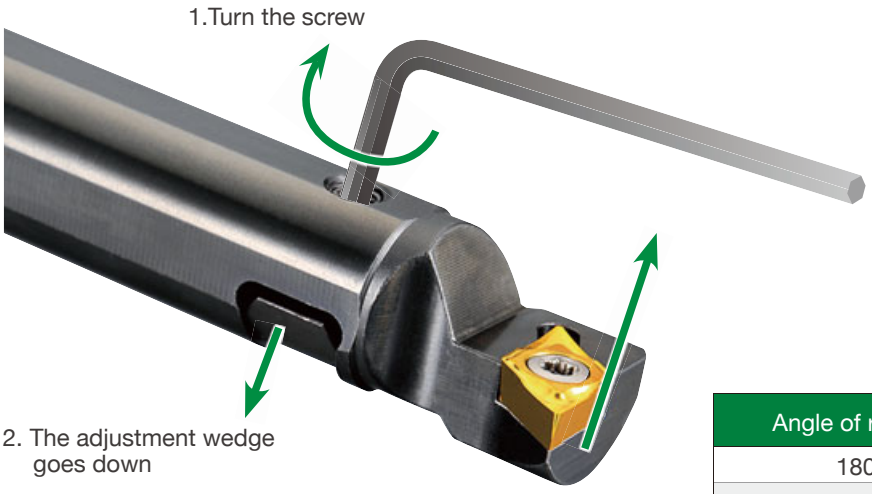
Functioning range



Adjustable centerline height DS tool holders

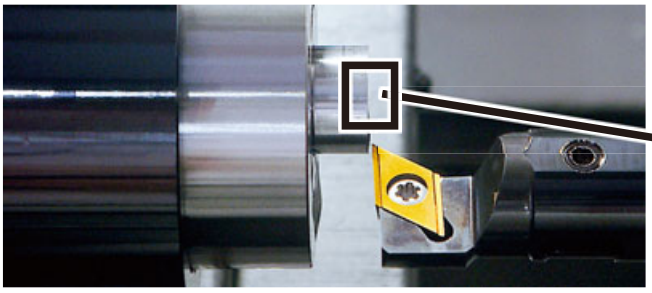
For front turning | Swiss CNC Lathes

Instantly adjust cutting edge height, reducing time and elevating quality

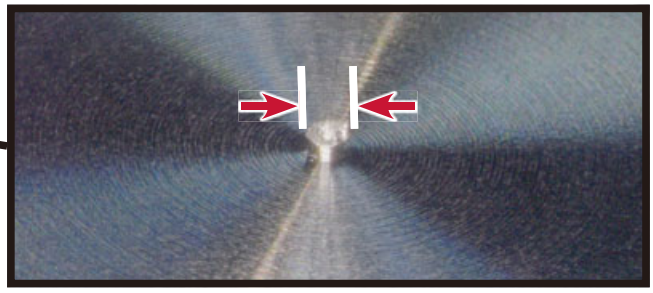


Angle of rotation	Increase cutting edge height
180°	0.05
360°	0.10
540°	0.20
720°	0.30

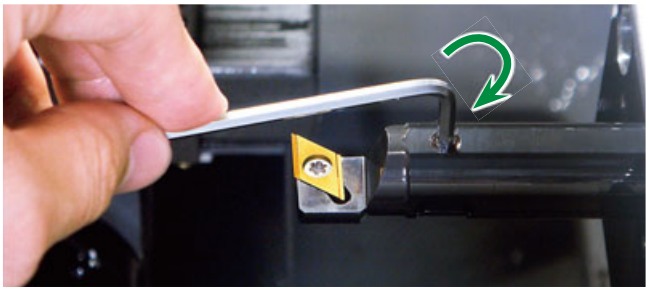
* The amount of cutting edge height increase differs depending on the model number.



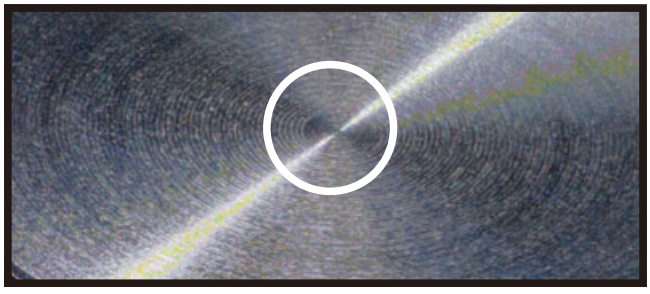
1. Take a facing test cut slightly below centerline



2. Measure the dia. of center boss

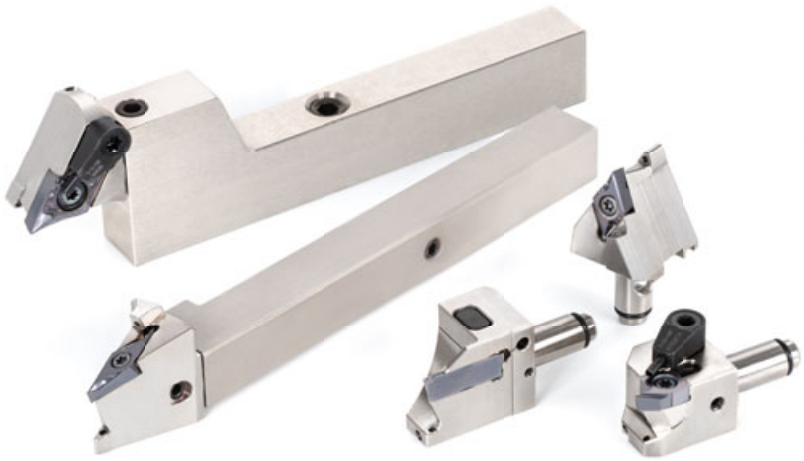


3. Raise the center height by one half of the dia. of the boss.



4. Re-machine the end face

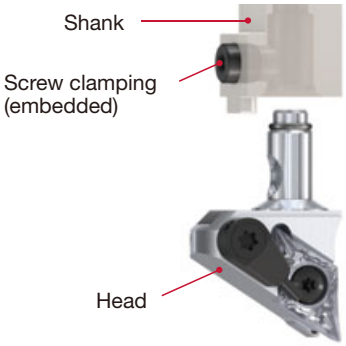
MODUMINI TURN



Modular style Swiss turning tool system facilitates tool changes with high repeatability

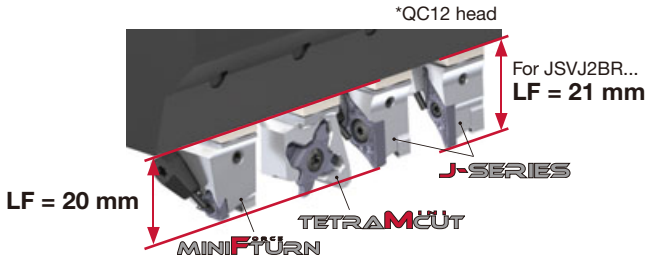
Unique coupling design

Simply loosen the clamping screw for easy tool exchanges.
Unique coupling design allows extremely high repeatability.



Benefits of Y-axis feed

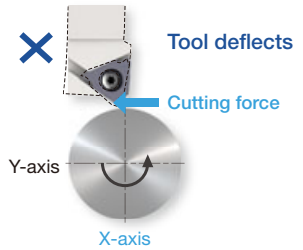
Designed with common functional lengths (LF), the cutting heads allow easy tool changes without removing the shank from the tool post.



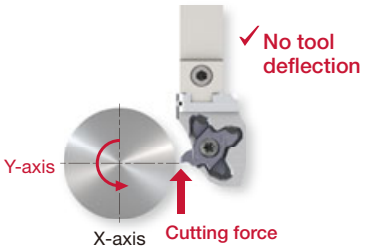
Benefits of Y-axis feed

No chip entanglements — Chips are directed downward and away from the cutting zone

Conventional X-axis feed



Y-axis feed



Conventional X-axis feed

Y-axis feed

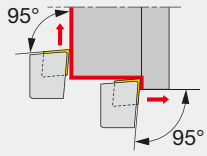
CC

Rhombic, 80°
with hole
Positive 7°

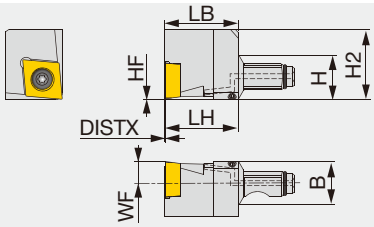
MODUMINI TURN

QC12/16-JSCL2CR-Y-CHP

Screw-on Y-axis turning modular head with 95° approach angle, for positive 80° rhombic inserts, with high pressure coolant capability



Cutting edge style **L2**



Without offset

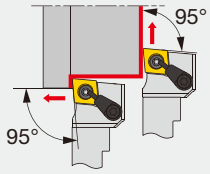
Right hand (R) shown.

Metric	H	B	LH	HF	WF	LB	H2	DISTX	RE**	Insert	Torque*
QC12-JSCL2CR09-Y-CHP	12 (0.750")	12 (0.750")	19.5 (0.768")	0 (0")	6 (0.236")	19.8 (0.780")	18.6 (0.732")	0.3 (0.012")	0.2 (0.008")	CC**09T3... (CC**32.5...)	1.2 (0.89)
QC16-JSCL2CR09-Y-CHP	16 (1.000")	16 (1.000")	21 (0.827")	0 (0")	8 (0.315")	21.3 (0.839")	16 (0.630")	0.3 (0.012")	0.2 (0.008")	CC**09T3... (CC**32.5...)	1.2 (0.89)

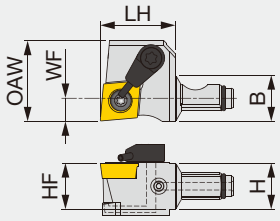
Torque: Recommended clamping torque: N·m (lbs·ft)
RE**: Standard corner radius

QC10/12/16-JSCL2CR-CHP

Screw-on modular head with 95° approach angle, for positive 80° rhombic inserts, with high pressure coolant capability



Cutting edge style **L2**



Without offset

Right hand (R) shown.

Metric	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*
QC10-JSCL2CR06-CHP	10 (0.625")	10 (0.625")	17 (0.669")	10 (0.394")	5 (0.197")	13 (0.512")	0.2 (0.008")	CC**09T3... (CC**32.5...)	1.2 (0.89)
QC12-JSCL2CR09-CHP	12 (0.750")	12 (0.750")	19.5 (0.768")	12 (0.472")	6 (0.236")	21 (0.827")	0.2 (0.008")	CC**09T3... (CC**32.5...)	1.2 (0.89)
QC16-JSCL2CR09-CHP	16 (1.000")	16 (1.000")	21 (0.827")	16 (0.630")	8 (0.315")	20 (0.787")	0.2 (0.008")	CC**09T3... (CC**32.5...)	1.2 (0.89)

Torque: Recommended clamping torque: N·m (lbs·ft)
RE**: Standard corner radius

SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench	O-ring
QC12-JSCL2CR09-Y-CHP	CSTB-4SD	-	T-8F	ORSS-0454.5X1.0NBR70
QC16-JSCL2CR09-Y-CHP	CSTB-4SD	-	T-8F	ORSS-0757.5X1.0NBR70
QC10-JSCL2CR06-CHP	CSTB-2.5	-	T-8F	ORSS-0353.5X1.0NBR70
QC12-JSCL2CR09-CHP	CSTB-4SD	S-CU-CHP	T-8F	ORSS-0454.5X1.0NBR70
QC16-JSCL2CR09-CHP	CSTB-4SD	S-CU-CHP	T-8F	ORSS-0757.5X1.0NBR70

Reference pages : Inserts → 2-11 -, CBN → 2-87 -, PCD → 2-119 -, Shank, Accessory → 3-130 -

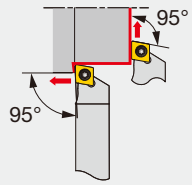
CC

Rhombic, 80°
with hole
Positive 7°

J-SERIES

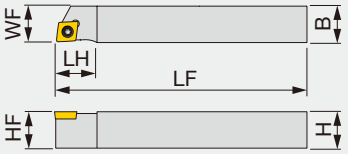
JSCL2CR/L

Screw-on toolholder with 95° approach angle, for positive 80° rhombic inserts



Cutting edge style **L2**

Without offset



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
JSCL2CR/L062	0.375	0.375	5.000	0.438	0.375	0.375	0.008	CC**21.5...	0.89
JSCL2CR/L082	0.500	0.500	5.000	0.438	0.500	0.500	0.008	CC**21.5...	0.89
JSCL2CR/L103	0.625	0.625	5.000	0.625	0.625	0.625	0.008	CC**32.5...	0.89

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSCL2CR/L1010X06	10	10	120	12	10	10	0.2	CC**0602...	1.2
JSCL2CR/L1212F06	12	12	85	12	12	12	0.2	CC**0602...	1.2
JSCL2CR/L1212X06	12	12	120	12	12	12	0.2	CC**0602...	1.2
JSCL2CR/L1212F09	12	12	85	16	12	12	0.2	CC**09T3...	1.2
JSCL2CR/L1212X09	12	12	120	16	12	12	0.2	CC**09T3...	1.2
JSCL2CR/L1616X09	16	16	120	16	16	16	0.2	CC**09T3...	1.2

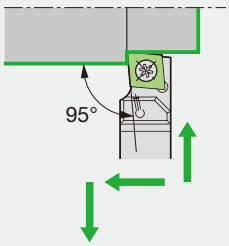
Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE: Standard corner radius

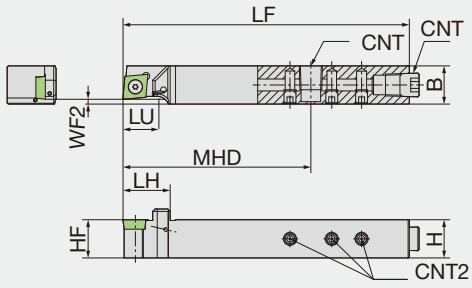
SPARE PARTS

Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JSCL2CR/L062/082, JSCL2CR/L**06	CSTB-2.5	T-8F	(T-8L)
JSCL2CR/L103, JSCL2CR/L**09	CSTB-4SD	T-8F	(T-8L)

SCLCR-OH3

Screw-on toolholder with 95° approach angle, for positive 80° rhombic inserts, with high pressure coolant capability





Right hand (R) shown.

Inch	H	B	LF	LH	HF	LU	MHD	WF2	CNT	CNT2	Insert
SCLCR103XL-F079-OH3	0.625	0.625	4.724	0.787	0.625	0.697	3.100	0.079	NPT1/8	M5	CC**32.5...

Metric	H	B	LF	LH	HF	LU	MHD	WF2	CNT	CNT2	Insert
SCLCR1012H09N-OH3	10	12	100	17	10	12	62.5	0	M6*1	M5	CC**09T3...
SCLCR1616X09N-F02OH3	16	16	120	20	16	17.7	78.75	2	Rc1/8	M5	CC**09T3...

NOTE: Reference Chart of OH3 Hole Position→10-1

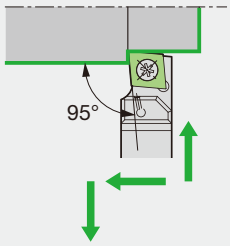
SPARE PARTS

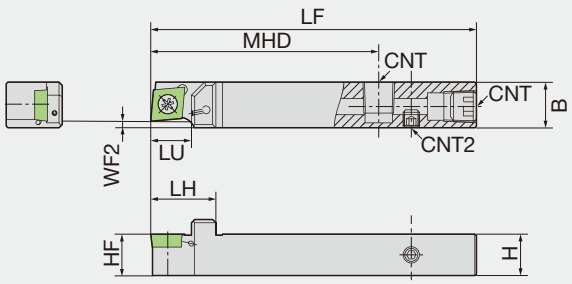
Designation	Clamp screw	Screw (for CNT)	SCREW (FOR CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
SCLCR103XL-F079-OH3	LRIS-4*10	SPR1/8	SS0505SC	LLR-25S	LW-2.5
SCLCR1012H09N-OH3	LRIS-4*10	SS0605SC	SS0505SC	LLR-25S	LW-2.5
SCLCR1616X09N-F02OH3	LRIS-4*10	SPR1/8	SS0505SC	LLR-25S	LW-2.5

Reference pages : Inserts → 2-11 -, CBN → 2-87 -, PCD → 2-119 -

SCLCR-OH2

Screw-on toolholder with 95° approach angle, for positive 80° rhombic inserts, with high pressure coolant capability





Right hand (R) shown.

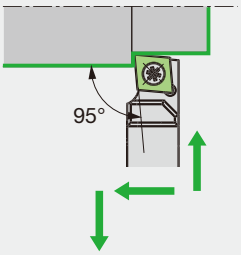
Inch	H	B	LF	LH	HF	LU	MHD	WF2	CNT	CNT2	Insert
SCLCR083H-F079-OH2	0.500	0.551	3.937	0.787	0.500	0.472	2.756	0.079	NPT1/8	M5	CC**32.5...
SCLCR103XL-F079-OH2	0.625	0.551	4.724	0.787	0.625	0.697	2.756	0.079	NPT1/8	M5	CC**32.5...
Metric	**H**	**B**	**LF**	**LH**	**HF**	**LU**	**MHD**	**WF2**	**CNT**	**CNT2**	**Insert**
SCLCR1214H09N-F02OH2	12	14	100	19.5	12	12	70	2	Rc1/8	M5	CC**09T3...
SCLCR1616X09N-F02OH2	16	16	120	19.5	16	17.7	70	2	Rc1/8	M5	CC**09T3...

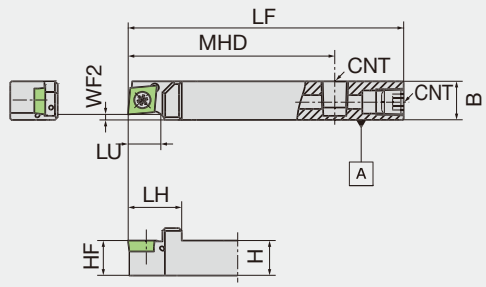
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
SCLCR083H-F079-OH2	LRIS-4*10	SPNPT1/8	SS0505SC	LLR-25S	LW-2.5
SCLCR103XL-F079-OH2	LRIS-4*10	SPNPT1/8L	SS0505SC	LLR-25S	LW-2.5
SCLCR**09N-F02OH2	LRIS-4*10	SPR1/8	SS0505SC	LLR-25S	LW-2.5

SCLCR-OH

Screw-on toolholder with 95° approach angle, for positive 80° rhombic inserts, with high pressure coolant capability





Right hand (R) shown.

Inch	H	B	LF	LH	HF	LU	MHD	WF2	CNT	Insert
SCLCR082H-F079-OH	0.500	0.551	3.937	0.768	0.500	0.472	2.953	0.079	NPT1/8	CC**21.5...
SCLCR083H-F079-OH	0.500	0.551	3.937	0.768	0.500	0.472	2.953	0.079	NPT1/8	CC**32.5...
SCLCR103HL-F079-OH	0.625	0.551	3.937	0.768	0.625	0.697	2.953	0.079	NPT1/8	CC**32.5...
Metric	**H**	**B**	**LF**	**LH**	**HF**	**LU**	**MHD**	**WF2**	**CNT**	**Insert**
SCLCR1014F09N-F02OH	10	14	80	19.5	10	12	55	2	M6*1	CC**09T3...
SCLCR1214H09N-F02OH	12	14	100	19.5	12	12	75	2	Rc1/8	CC**09T3...
SCLCR1616H09N-F02OH	16	16	100	19.5	16	17.7	75	2	Rc1/8	CC**09T3...

SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Wrench (for Clamp screw)	Wrench (for CNT)
SCLCR082H-F079-OH	LRIS-2.5*7	SPNPT1/8	-	CLR-15S
SCLCR083H-F079-OH	LRIS-4*10	SPNPT1/8	-	LLR-25S
SCLCR103HL-F079-OH	LRIS-4*10	SPR1/8	SS0505SC	LLR-25S
SCLCR1014F09N-F02OH	LRIS-4*10	SS0605SC	LLR-25S	LW-3
SCLCR**H09N-F02OH	LRIS-4*10	SPR1/8	LLR-25S	–

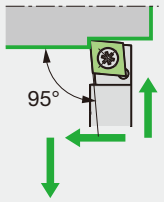
Reference pages : Inserts → 2-11 -, CBN → 2-87 -, PCD → 2-119 -

CC

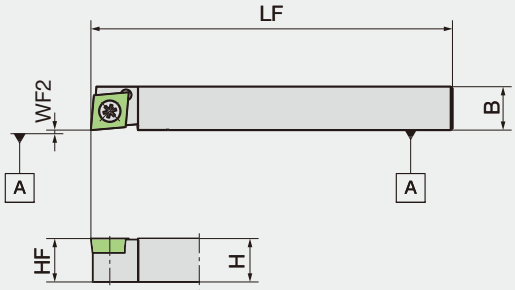
Rhombic, 80°
with hole
Positive 7°

SCLC-N

Screw-on toolholder with 95° approach angle, for positive 80° rhombic inserts



Without offset



Right hand (R) shown.

Inch	H	B	LF	HF	WF2	Insert
SCLCL062C	0.375	0.375	4.724	0.375	0	CC**21.5...
SCLCL082C	0.500	0.500	4.724	0.500	0	CC**21.5...
SCLCR062C	0.375	0.375	4.724	0.375	0	CC**21.5...
SCLCR082C	0.500	0.500	4.724	0.500	0	CC**21.5...

Metric	H	B	LF	HF	WF2	Insert
SCLCR0808X06N	8	8	120	8	0	CC**0602...
SCLCL0808X06N	8	8	120	8	0	CC**0602...

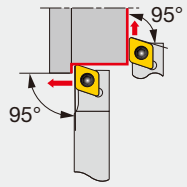
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
SCLCL062C	LRIS-2.5*7	CLR-15S
SCLCL082C	LRIS-2.5*7	CLR-15S
SCLCR062C	LRIS-2.5*7	CLR-15S
SCLCR082C	LRIS-2.5*7	CLR-15S
SCLCR0808X06N	LRIS-2.5*7	CLR-15S

J-SERIES

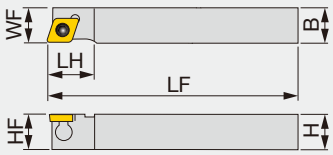
JTCL2CR/L

Back-clamp toolholder with 95° approach angle, for positive 80° rhombic inserts



Cutting edge style **L2**

Without offset



Right hand (R) shown.

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JTCL2CR/L1010X06	10	10	120	12	10	10	0.2	CC**0602...	0.9
JTCL2CR/L1212F09	12	12	85	16	12	12	0.2	CC**09T3...	1.2
JTCL2CR/L1212X09	12	12	120	16	12	12	0.2	CC**09T3...	1.2
JTCL2CR/L1616X09	16	16	120	16	16	16	0.2	CC**09T3...	1.2

Torque*: Recommended clamping torque (N·m)
RE**: Standard corner radius

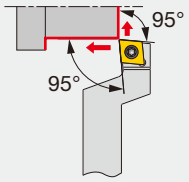
SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
JTCL2CR/L**06	JCP-2	JDS-3525	P-2F
JTCL2CR/L**09	JCP-3	JDS-5040	P-2.5F

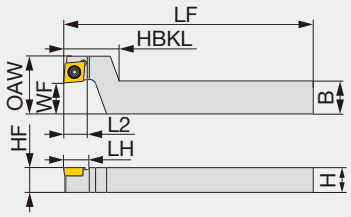
Reference pages : Inserts → 2-11 -, CBN → 2-87 -, PCD → 2-119 -

JSCLCR-F

Screw-on stepped-head toolholder with 95° approach angle, for positive 80° rhombic inserts



Cutting edge style **L**



Right hand (R) shown.

Metric	H	B	LF	L2	HBKL	LH	HF	WF	OAW	RE**	Insert	Torque*
JSCLCR1216F09-F15	12	16	85	12	27	12.5	12	15	28	0.2	CC**09T3...	1.2
JSCLCR1216X09-F15	12	16	120	12	27	12.5	12	15	28	0.2	CC**09T3...	1.2
JSCLCR1620X09-F15	16	20	120	12	27	12.5	16	15	28	0.2	CC**09T3...	1.2

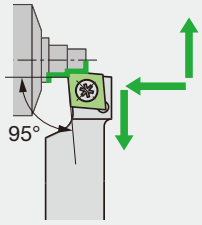
Torque*: Recommended clamping torque (N·m)
RE**: Standard corner radius

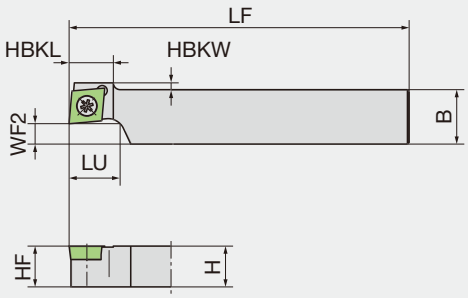
SPARE PARTS

Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JSCLCR**F15	CSTB-4SD	T-8F	(T-8L)

SCLC-N-F

Screw-on stepped-head toolholder with 95° approach angle, for positive 80° rhombic inserts





Right hand (R) shown.

Inch	H	B	LF	HBKW	HBKL	HF	LU	WF2	Insert
SCLCR083C-F250	0.500	0.728	4.724	-	-	0.500	0.591	0.250	CC**32.5...
SCLCR083C-F500	0.500	0.984	4.724	-	-	0.500	0.591	0.500	CC**32.5...

Metric	H	B	LF	HBKW	HBKL	HF	LU	WF2	Insert
SCLCR1015X09N-F05	10	15	120	2	13	10	12	5	CC**09T3...
SCLCR1020X09N-F10	10	20	120	2	13	10	12	10	CC**09T3...
SCLCR1218X09N-F06	12	18	120	–	13	12	12	6	CC**09T3...
SCLCR1224X09N-F12	12	24	120	–	13	12	12	12	CC**09T3...

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
SCLCR1**	LRIS-4*10	LLR-25S

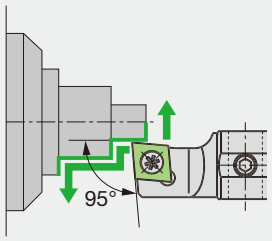
Reference pages : Inserts → 2-11 -, CBN → 2-87 -, PCD → 2-119 -

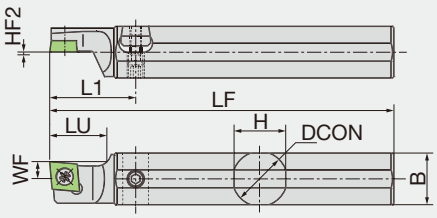
CC

Rhombic, 80°
with hole
Positive 7°

DS-SCL-ACH

Screw-on round-shank toolholder with 95° approach angle, for positive 80° rhombic inserts, with adjustable centerline height capability





Left hand (L) shown.

Metric	H	B	LF	DCON	HF2	LU	L1	WF	Insert
DS-SCLL16F-09-ACH	15.5	15.5	80	16	Type B(0~+0.3)	20	30	6	CC**09T3...
DS-SCLL19-09-ACH	18	18	120	19.05	Type A(0~+0.2)	20	30	6	CC**09T3...
DS-SCLL20-09-ACH	19	19	120	20	Type A(0~+0.2)	20	30	6	CC**09T3...
DS-SCLL22-09-ACH	21	21	120	22	Type A(0~+0.2)	20	30	6	CC**09T3...
DS-SCLL25-09-ACH	24	24	150	25.4	Type A(0~+0.2)	20	30	6	CC**09T3...
DS-SCLL25-09MET-ACH	24	24	150	25	Type A(0~+0.2)	20	30	6	CC**09T3...

NOTE: Use a right-handed (R) or non-handed insert.

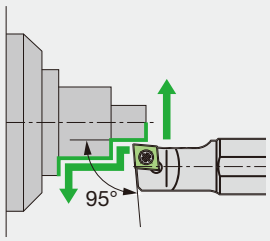
SPARE PARTS

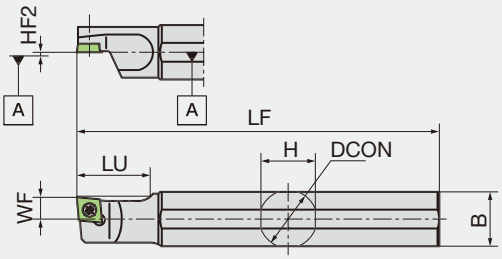
Designation	Clamp screw	Screw (for Wedge)	Wedge	Wrench (for Clamp screw)	Wrench (for Wedge)
DS-SCLL**-ACH	LRIS-4*8	WS060415-003	ACH-W18	LLR-25S-20*65	LW-3
DS-SCLL25-09**-ACH	LRIS-4*8	WS060419-004	ACH-W24	LLR-25S-20*65	LW-3

Reference pages : Inserts → 2-11 -, CBN → 2-87 -, PCD → 2-119 -

DS-SCL

Screw-on round-shank toolholder with 95° approach angle, for positive 80° rhombic inserts





Left hand (L) shown.

Metric	H	B	LF	DCON	HF2	LU	WF	Insert
DS-SCLL15H-06	15	15	100	15.875	0	20	6	CC**0602...
DS-SCLL15H-09	15	15	100	15.875	0	20	6	CC**09T3...
DS-SCLL16F-06	15	15	80	16	0	20	6	CC**0602...
DS-SCLL16F-09	15	15	80	16	0	20	6	CC**09T3...
DS-SCLL19-06	18	18	120	19.05	0	20	6	CC**0602...
DS-SCLL19-09	18	18	120	19.05	0	20	6	CC**09T3...
DS-SCLL19GX-09	18	18	85	19.05	0	20	6	CC**09T3...
DS-SCLL20-06	19	19	120	20	0	20	6	CC**0602...
DS-SCLL20-09	19	19	120	20	0	20	6	CC**09T3...
DS-SCLL20X-06	19	19	95	20	0	20	6	CC**0602...
DS-SCLL20X-09	19	19	95	20	0	20	6	CC**09T3...
DS-SCLL22-06	21	21	120	22	0	20	6	CC**0602...
DS-SCLL22-09	21	21	120	22	0	20	6	CC**09T3...
DS-SCLL25-06	24	24	120	25.4	0	20	6	CC**0602...
DS-SCLL25-06MET	24	24	120	25	0	20	6	CC**0602...
DS-SCLL25-09	24	24	150	25.4	0	20	6	CC**09T3...
DS-SCLL25-09MET	24	24	120	25	0	20	6	CC**09T3...
DS-SCLL32-09	30	30	150	32	0	20	6	CC**09T3...

NOTE: Use a right-handed (R) or non-handed insert.

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
DS-SCLL**06**	LRIS-2.5*7	CLR-15S
DS-SCLL**09**	LRIS-4*8	LLR-25S-20*65

Reference pages : Inserts → 2-11 -, CBN → 2-87 -, PCD → 2-119 -

CC

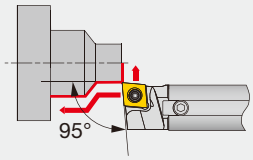
Rhombic, 80°
with hole
Positive 7°

MODUMINI TURN

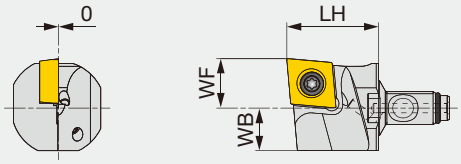
QR12-SCLCL-CHP

J-SERIES

Screw-on modular head with 95° approach angle, for positive 80° rhombic inserts, with high pressure coolant capability



Cutting edge style **L**



Left hand (L) shown.

Metric	LH	WF	WB	RE**	Insert	Torque*	Shank
QR12C-SCLCL09-CHP	19.5 (0.768")	8.5 (0.335")	8 (0.315")	0.2 (0.008")	CC**09T3... (CC 32.5...)	1.2 (0.89)	A16*-QR12
QR12D-SCLCL09-CHP	19.5 (0.768")	10.5 (0.413")	9 (0.354")	0.2 (0.008")	CC**09T3... (CC 32.5...)	1.2 (0.89)	A19/20*-QR12

Torque*: Recommended clamping torque: N·m (lbf·ft)
RE**: Standard corner radius

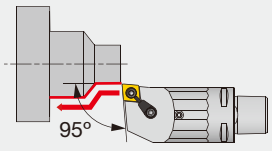
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SCLCL09-CHP	CSTB-4SD	T-8F	ORSS-0454.5X1.0NBR70

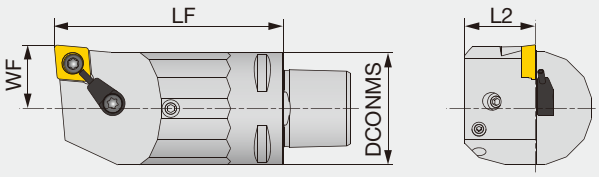
TUNGCAP

C-SCLCL-CHP

Screw-on toolholder, with 95° approach angle, for positive 80° rhombic inserts, with high pressure coolant capability



Cutting edge style **L**



Left hand (L) shown.

Metric	DCONMS	LF	L2	WF	RE	Insert
C3SCLCL18040-09-CHP	32	40	20	18	0.8	CC**09T3...
C3SCLCL18065-09-CHP	32	65	20	18	0.8	CC**09T3...

Applicable for 14 MPa (2031 PSI) coolant
Cannot be used for boring

SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench
C3SCLCL...	CSTB-4S	S-CU-CHP	T-15F

Reference pages : Inserts → 2-11 -, CBN → 2-87 -, PCD → 2-119 -, Shank, Accessory → 3-130 -

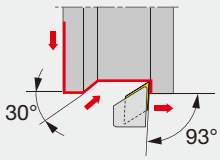
DC

Rhombic, 55°
with hole
Positive 7°

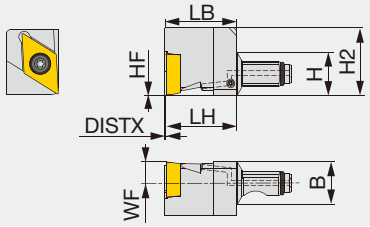
MODUMINI TURN

QC12/16-JSDJ2CR-Y-CHP

Screw-on Y-axis turning modular head with 93° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability



Cutting edge style **J2**



Without offset

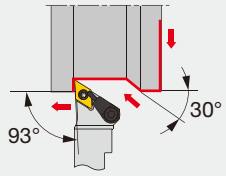
Right hand (R) shown.

Metric	H	B	LH	HF	WF	LB	H2	DISTX	RE**	Insert	Torque*
QC12-JSDJ2CR11-Y-CHP	12 (0.750")	12 (0.750")	19.5 (0.768")	0 (0")	6 (0.236")	19.8 (0.780")	18.7 (0.736")	0.3 (0.012")	0.2 (0.008")	DC**11T3... (DC**32.5...)	1.2 (0.89)
QC16-JSDJ2CR11-Y-CHP	16 (1.000")	16 (1.000")	21 (0.827")	0 (0")	8 (0.315")	21.3 (0.839")	18.7 (0.736")	0.3 (0.012")	0.2 (0.008")	DC**11T3... (DC**32.5...)	1.2 (0.89)

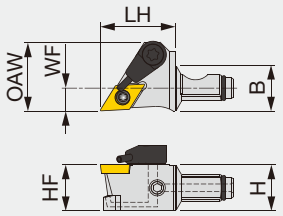
Torque*: Recommended clamping torque: N·m (lbs·ft)
RE**: Standard corner radius

QC10/12/16-JSDJ2CR-CHP

Screw-on modular head with 93° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability



Cutting edge style **J2**



Without offset

Right hand (R) shown.

Metric	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*
QC10-JSDJ2CR07-CHP	10 (0.625")	10 (0.625")	17 (0.669")	10 (0.394")	5 (0.197")	13 (0.512")	0.2 (0.008")	DC**0702... (DC**21.5...)	1.2 (0.89)
QC12-JSDJ2CR07-CHP	12 (0.750")	12 (0.750")	19.5 (0.768")	12 (0.472")	6 (0.236")	18 (0.709")	0.2 (0.008")	DC**0702... (DC**21.5...)	1.2 (0.89)
QC12-JSDJ2CR11-CHP	12 (0.750")	12 (0.750")	19.5 (0.768")	12 (0.472")	6 (0.236")	21 (0.827")	0.2 (0.008")	DC**11T3... (DC**32.5...)	1.2 (0.89)
QC16-JSDJ2CR11-CHP	16 (1.000")	16 (1.000")	21 (0.827")	16 (0.630")	8 (0.315")	20 (0.787")	0.2 (0.008")	DC**11T3... (DC**32.5...)	1.2 (0.89)

Torque*: Recommended clamping torque: N·m (lbs·ft)
RE**: Standard corner radius

SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench	O-ring
QC**-JSDJ2CR11-Y-CHP	CSTB-4SD		T-8F	ORSS-0454.5X1.0NBR70
QC10-JSDJ2CR07-CHP	CSTB-2.5	-	T-8F	ORSS-0353.5X1.0NBR70
QC12-JSDJ2CR07-CHP	CSTB-2.5	S-CU-CHP	T-8F	ORSS-0454.5X1.0NBR70
QC12-JSDJ2CR11-CHP	CSTB-4SD	S-CU-CHP	T-8F	ORSS-0454.5X1.0NBR70
QC16-JSDJ2CR11-CHP	CSTB-4SD	S-CU-CHP	T-8F	ORSS-0757.5X1.0NBR70

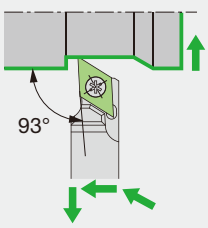
Reference pages : Inserts → 2-23 -, CBN → 2-91 -, PCD → 2-120 -, Shank, Accessory → 3-130 -

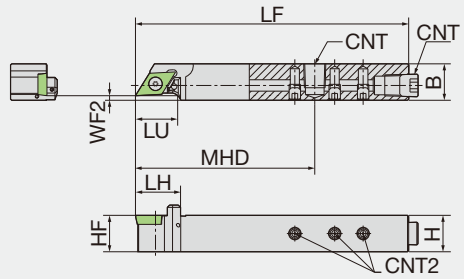
DC

Rhombic, 55°
with hole
Positive 7°

SDJCR-OH3

Screw-on toolholder with 93° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability





Right hand (R) shown.

Inch	H	B	LF	LH	HF	LU	MHD	WF2	CNT	CNT2		Insert
SDJCR103XL-F079-OH3	0.625	0.625	4.724	0.78	0.625	0.724	3.100	0.079	NPT1/8	M5	DC**32.5...	DC**32.5...WP(TFD11...)
Metric	**H**	**B**	**LF**	**LH**	**HF**	**LU**	**MHD**	**WF2**	**CNT**	**CNT2**		**Insert**
SDJCR1012H11N-OH3	10	12	100	16.8	10	16	62.5	0	M6*1	M5	DC**11T3...	DC**11T3...WP(TFD11...)
SDJCR1616X11N-F02OH3	16	16	120	19.8	16	18.4	78.75	2	Rc1/8	M5	DC**11T3...	DC**11T3...WP(TFD11...)

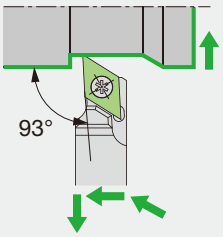
NOTE: Reference Chart of OH3 Hole Position→10-1

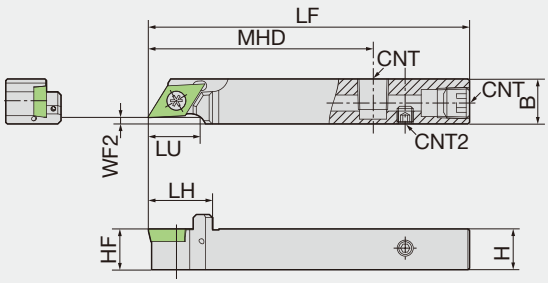
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
SDJCR103XL-F079-OH3	LRIS-4*10	SPNPT1/8	SS0505SC	LLR-25S	LW-2.5
SDJCR1012H11N-OH3	LRIS-4*10	SS0605SC	SS0505SC	LLR-25S	LW-2.5
SDJCR1616X11N-F02OH3	LRIS-4*10	SPR1/8	SS0505SC	LLR-25S	LW-2.5

SDJCR-OH2

Screw-on toolholder with 93° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability





Right hand (R) shown.

Inch	H	B	LF	LH	HF	LU	MHD	WF2	CNT	CNT2		Insert
SDJCR083H-F079-OH2	0.500	0.551	3.937	0.787	0.500	0.630	2.756	0.079	NPT1/8	M5	DC**32.5...	DC**32.5...WP(TFD11...)
SDJCR103XL-F079-OH2	0.625	0.625	4.724	0.787	0.625	0.724	2.756	0.079	NPT1/8	M5	DC**32.5...	DC**32.5...WP(TFD11...)
Metric	**H**	**B**	**LF**	**LH**	**HF**	**LU**	**MHD**	**WF2**	**CNT**	**CNT2**		**Insert**
SDJCR1214H11N-F02OH2	12	14	100	19.5	12	16	70	2	Rc1/8	M5	DC**11T3...	DC**11T3...WP(TFD11...)
SDJCR1616X11N-F02OH2	16	16	120	19.5	16	18.4	70	2	Rc1/8	M5	DC**11T3...	DC**11T3...WP(TFD11...)

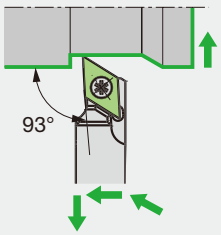
SPARE PARTS

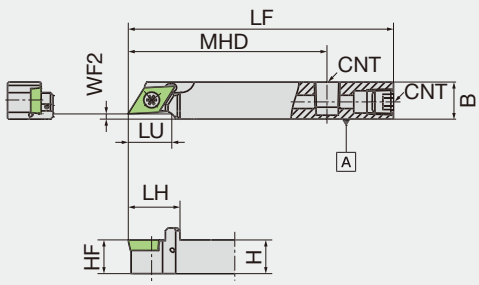
Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
SDJCR083H-F079-OH2	LRIS-4*10	SPNPT1/8	SS0505SC	LLR-25S	LW-2.5
SDJCR103XL-F079-OH2	LRIS-4*10	SPNPT1/8L	SS0505SC	LLR-25S	LW-2.5
SDJCR1214H11N-F02OH2	LRIS-4*10	SPR1/8	SS0505SC	LLR-25S	LW-2.5
SDJCR1616X11N-F02OH2	LRIS-4*10	SPR1/8L	SS0505SC	LLR-25S	LW-2.5

Reference pages : Inserts → 2-23 -, CBN → 2-91 -, PCD → 2-120 -

SDJCR-OH

Screw-on toolholder with 93° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability





Right hand (R) shown.

Inch	H	B	LF	LH	HF	LU	MHD	WF2	CNT		Insert
SDJCR082H-F079-OH	0.500	0.551	3.937	0.768	0.500	0.472	2.953	0.079	NPT1/8	DC**21.5...	DC**21.5...WP(TFD11...)
SDJCR083H-F079-OH	0.500	0.551	3.937	0.768	0.500	0.630	2.953	0.079	NPT1/8	DC**32.5...	DC**32.5...WP(TFD11...)
SDJCR103HL-F079-OH	0.625	0.625	3.937	0.768	0.625	0.724	2.953	0.079	NPT1/8	DC**32.5...	DC**32.5...WP(TFD11...)

Metric	H	B	LF	LH	HF	LU	MHD	WF2	CNT		Insert
SDJCR1014F11N-F02OH	10	14	80	19.5	10	16	55	2	M6*1	DC**11T3...	DC**11T3...WP(TFD11...)
SDJCR1214H11N-F02OH	12	14	100	19.5	12	16	75	2	Rc1/8	DC**11T3...	DC**11T3...WP(TFD11...)
SDJCR1616H11N-F02OH	16	16	100	19.5	16	18.4	75	2	Rc1/8	DC**11T3...	DC**11T3...WP(TFD11...)

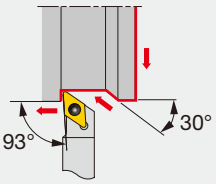
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Wrench (for Clamp screw)	Wrench (for CNT2)
SDJCR082H-F079-OH	LRIS-2.5*7	SPNPT1/8	CLR-15S	-
SDJCR083H-F079-OH	LRIS-4*10	SPNPT1/8	LLR-25S	-
SDJCR103HL-F079-OH	LRIS-4*10	SPNPT1/8	LLR-25S	-
SDJCR1014F11N-F02OH	LRIS-4*10	SS0605SC	LLR-25S	LW-3
SDJCR1214H11N-F02OH	LRIS-4*10	SPR1/8	LLR-25S	–
SDJCR1616H11N-F02OH	LRIS-4*10	SPR1/8	LLR-25S	–

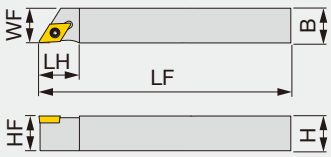
J-SERIES

JSDJ2CR/L

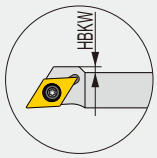
Screw-on toolholder with 93° approach angle, for positive 55° rhombic inserts



Cutting edge style **J2**



Without offset



JSDJ2CR/L1010X11
JSDJ2CR/L1212F11
JSDJ2CR/L1212X11

Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	HBKW	RE**	Insert	Torque
JSDJ2CR/L062	0.375	0.375	5.000	0.563	0.375	0.380	-	0.008	DC**21.5...	0.89
JSDJ2CR/L082	0.500	0.500	5.000	0.563	0.500	0.500	-	0.008	DC**21.5...	0.89
JSDJ2CR/L103	0.625	0.625	5.000	0.813	0.625	0.630	-	0.008	DC**32.5...	0.89

Metric	H	B	LF	LH	HF	WF	HBKW	RE**	Insert	Torque*
JSDJ2CR/L0808F07	8	8	85	14	8	8	-	0.2	DC**0702...	1.2
JSDJ2CR/L1010X07	10	10	120	14	10	10	-	0.2	DC**0702...	1.2
JSDJ2CR/L1010X11	10	10	120	20	10	10	4	0.2	DC**11T3...	1.2
JSDJ2CR/L1212F07	12	12	85	14	12	12	-	0.2	DC**0702...	1.2
JSDJ2CR/L1212F11	12	12	85	20	12	12	2	0.2	DC**11T3...	1.2
JSDJ2CR/L1212X07	12	12	120	14	12	12	-	0.2	DC**0702...	1.2
JSDJ2CR/L1212X11	12	12	120	20	12	12	2	0.2	DC**11T3...	1.2
JSDJ2CR/L1616X11	16	16	120	20	16	16	-	0.2	DC**11T3...	1.2

Torque: Recommended clamping torque: lbs·ft (*N·m)
RE**: Standard corner radius

SPARE PARTS

Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JSDJ2CR/L062/082, JSDJ2CR/L**07	CSTB-2.5	T-8F	(T-8L)
JSDJ2CR/L103, JSDJ2CR/L**11	CSTB-4SD	T-8F	(T-8L)

Reference pages : Inserts → 2-23 -, CBN → 2-91 -, PCD → 2-120 -

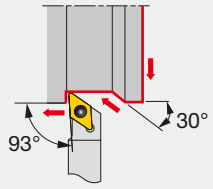
DC

Rhombic, 55°
with hole
Positive 7°

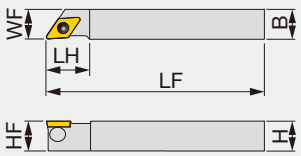
J-SERIES

JTDJ2CR/L

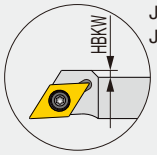
Back-clamp toolholder with 93° approach angle, for positive 55° rhombic inserts



Cutting edge style **J2**



Without offset
JTDJ2CR/L1212F11
JTDJ2CR/L1212X11



Right hand (R) shown.

Metric	H	B	LF	LH	HF	WF	HBKW	RE**	Insert	Torque*
JTDJ2CR/L1010X07	10	10	120	14	10	10	-	0.2	DC**0702...	0.9
JTDJ2CR/L1212F07	12	12	85	14	12	12	-	0.2	DC**0702...	0.9
JTDJ2CR/L1212X07	12	12	120	14	12	12	-	0.2	DC**0702...	0.9
JTDJ2CR/L1212F11	12	12	85	20	12	12	2	0.2	DC**11T3...	1.2
JTDJ2CR/L1212X11	12	12	120	20	12	12	2	0.2	DC**11T3...	1.2
JTDJ2CR/L1616X11	16	16	120	20	16	16	-	0.2	DC**11T3...	1.2

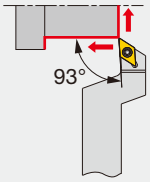
Torque*: Recommended clamping torque (N·m)
RE**: Standard corner radius

SPARE PARTS

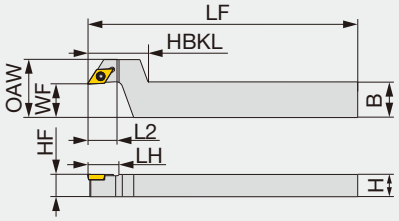
Designation	Clamping screw	Clamp	Clamping screw
JTDJ2CR/L**07	JCP-2	JDS-3525	P-2F
JTDJ2CR/L**11	JCP-3	JDS-5040	P-2.5F

JSDJCR-F

Screw-on stepped-head toolholder with 93° approach angle, for positive 55° rhombic inserts



Cutting edge style **J**



Right hand (R) shown.

Metric	H	B	LF	L2	HBKL	LH	HF	WF	OAW	RE**	Insert	Torque*
JSDJCR1016X07-F15	10	16	120	12.5	27	14	10	15	26	0.2	DC**0702...	1.2
JSDJCR1216F07-F15	12	16	85	12.5	27	14	12	15	26	0.2	DC**0702...	1.2
JSDJCR1216X07-F15	12	16	120	12.5	27	14	12	15	26	0.2	DC**0702...	1.2
JSDJCR1216F11-F15	12	16	85	12.5	27	20	12	15	28	0.2	DC**11T3...	1.2
JSDJCR1216X11-F15	12	16	120	12.5	27	20	12	15	28	0.2	DC**11T3...	1.2
JSDJCR1620X11-F15	16	20	120	12.5	27	20	16	15	28	0.2	DC**11T3...	1.2

Torque*: Recommended clamping torque (N·m)
RE**: Standard corner radius

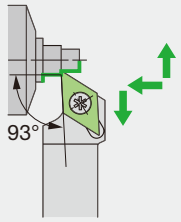
SPARE PARTS

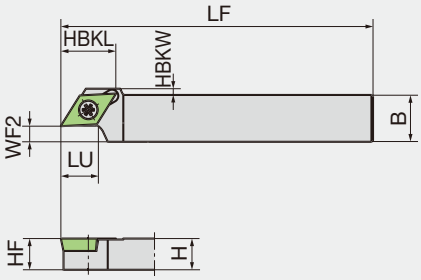
Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JSDJC**H07, JSDJCR**07-F15	CSTB-2.5	T-8F	(T-8L)
JSDJC**H11, JSDJCR**11-F15	CSTB-4SD	T-8F	(T-8L)

Reference pages : Inserts → 2-23 -, CBN → 2-91 -, PCD → 2-120 -

SDJC-N-F

Screw-on stepped-head toolholder with 93° approach angle, for positive 55° rhombic inserts





Right hand (R) shown.

Inch	H	B	LF	HBKL	HBKW	HF	LU	WF2		Insert
SDJCR083C-F250	0.500	0.728	4.724	-	-	0.500	0.472	0.250	DC**32.5...	DC**32.5...WP(TFD11...)
SDJCR083C-F500	0.500	0.984	4.724	-	-	0.500	0.472	0.500	DC**32.5...	DC**32.5...WP(TFD11...)
Metric	**H**	**B**	**LF**	**HBKL**	**HBKW**	**HF**	**LU**	**WF2**		**Insert**
SDJCR1015X07N-F05	10	15	120	13	0	10	12	5	DC**0702...	DC**0702...WP(TFD07...)
SDJCR1015X11N-F05	10	15	120	19	2	10	12	5	DC**11T3...	DC**11T3...WP(TFD11...)
SDJCR1020X07N-F10	10	20	120	13	0	10	12	10	DC**0702...	DC**0702...WP(TFD07...)
SDJCR1020X11N-F10	10	20	120	19	2	10	12	10	DC**11T3...	DC**11T3...WP(TFD11...)
SDJCR1218X11N-F06	12	18	120	20	0	12	12	6	DC**11T3...	DC**11T3...WP(TFD11...)
SDJCR1224X11N-F12	12	24	120	20	0	12	12	12	DC**11T3...	DC**11T3...WP(TFD11...)
SDJCR1620X11N-F08	16	20	120	20	0	16	18.5	8	DC**11T3...	DC**11T3...WP(TFD11...)
SDJCR1628X11N-F16	16	28	120	20	0	16	18.5	16	DC**11T3...	DC**11T3...WP(TFD11...)

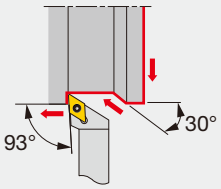
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
SDJCR**083C-F...	LRIS-4*10	LLR-25S
SDJCR**X07**	LRIS-2.5*7	CLR-15S
SDJCR**X11**	LRIS-4*10	LLR-25S

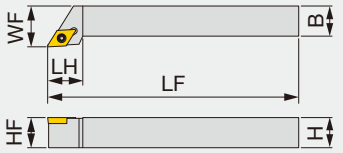
J-SERIES

JSDJCR/L

Screw-on toolholder with 93° approach angle, for positive 55° rhombic inserts



Cutting edge style **J**



Right hand (R) shown.

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSDJCR/L0808H07	8	8	100	14	8	10	0.4	DC**0702...	1.2
JSDJCR/L1010H11	10	10	100	18	10	12	0.8	DC**11T3...	1.2
JSDJCR/L1212H07	12	12	100	14	12	16	0.4	DC**0702...	1.2
JSDJCR/L1212H11	12	12	100	18	12	16	0.8	DC**11T3...	1.2
JSDJCR/L1616H11	16	16	100	18	16	20	0.8	DC**11T3...	1.2

Torque*: Recommended clamping torque (N·m)
RE**: Standard corner radius

SPARE PARTS

Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JSDJC**H07, JSDJCR**07-F15	CSTB-2.5	T-8F	(T-8L)
JSDJC**H11, JSDJCR**11-F15	CSTB-4SD	T-8F	(T-8L)

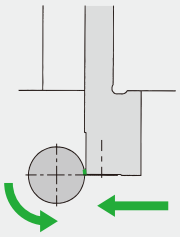
Reference pages : Inserts → 2-23 -, CBN → 2-91 -, PCD → 2-120 -

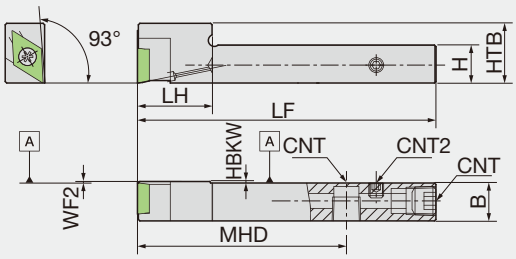
DC

Rhombic, 55°
with hole
Positive 7°

Y-SDJCR-OH2

Screw-on Y-axis turning toolholder with 93° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability





Without offset

Right hand (R) shown.

Inch	H	B	LF	LH	HBKW	HTB	MHD	WF2	CNT	CNT2		Insert
Y-SDJCR083H-IN-OH2	0.500	0.500	3.937	0.984	0.020	0.787	2.756	0	NPT1/8	M5	DC**32.5...	DC**32.5...WP(TFD11...)
Metric	**H**	**B**	**LF**	**LH**	**HBKW**	**HTB**	**MHD**	**WF2**	**CNT**	**CNT2**		**Insert**
Y-SDJCR1212H11S-OH2	12	12	100	20	0.5	20	70	0	Rc1/8	M5	DC**32.5...	DC**32.5...WP(TFD11...)

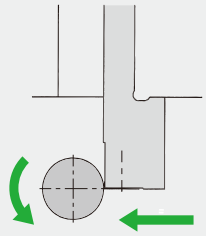
NOTE: Use a right-handed (R) or non-handed insert.
NOTE: There is a risk of interference with the Y-axis holder depending on the combination of the maximum workpiece diameter and machining diameter.
→10-1

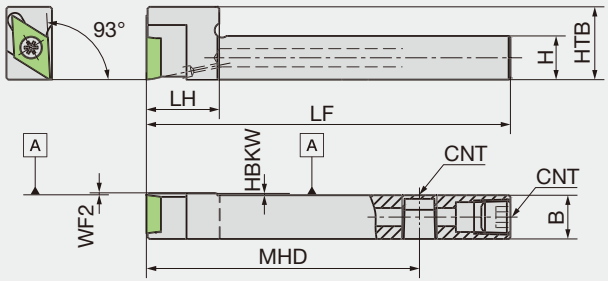
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
Y-SDJCR083H-IN-OH2	LRIS-4*10	SPNPT1/8	SS0505SC	LLR25S-20*65	LW-2.5
Y-SDJCR1212H11S-OH2	LRIS-4*10	SPR1/8	SS0505SC	LLR-25S-20*65	LW-2.5

Y-SDJCR-OH

Screw-on Y-axis turning toolholder with 93° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability





Without offset

Right hand (R) shown.

Inch	H	B	LF	LH	HBKW	HTB	MHD	WF2	CNT		Insert
Y-SDJCR062H-IN-OH	0.375	0.375	3.937	0.984	0.02	0.787	2.953	0	M6*1	DC..21.5..	DC..21.5..WP(TFD11...)
Y-SDJCR082H-IN-OH	0.500	0.500	3.937	0.984	0.02	0.787	2.953	0	NPT1/8	DC..21.5..	DC..21.5..WP(TFD11...)
Y-SDJCR083H-IN-OH	0.500	0.500	3.937	0.984	0.02	0.787	2.953	0	NPT1/8	DC**32.5...	DC**32.5...WP(TFD11...)
Y-SDJCR103H-IN-OH	0.625	0.625	3.937	0.984	0.02	0.787	2.953	0	NPT1/8	DC**32.5...	DC**32.5...WP(TFD11...)
Metric	**H**	**B**	**LF**	**LH**	**HBKW**	**HTB**	**MHD**	**WF2**	**CNT**		**Insert**
Y-SDJCR1212H11S-OH	12	12	100	20	0.5	20	75	0	Rc1/8	DC**11T3...	DC**11T3...WP(TFD11...)
Y-SDJCR1616H11-OH	16	16	100	25	0.5	20	75	0	Rc1/8	DC**11T3...	DC**11T3...WP(TFD11...)

NOTE: Use a right-handed (R) or non-handed insert.
NOTE: There is a risk of interference with the Y-axis holder depending on the combination of the maximum workpiece diameter and machining diameter.
→10-1

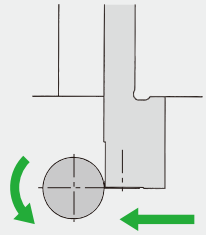
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Wrench (for Clamp screw)	Wrench (for CNT)
Y-SDJCR062H-IN-OH	LRIS-2.5*7	SS0605SC	CLR-15S	LW-3
Y-SDJCR082H-IN-OH	LRIS-2.5*7	SPNPT1/8	CLR-15S	-
Y-SDJCR083H-IN-OH, Y-SDJCR103H-IN-OH Y-SDJCR1212H**-OH, Y-SDJCR1616H**-OH,	LRIS-4*10	SPR1/8	LLR-25S-20*65	-

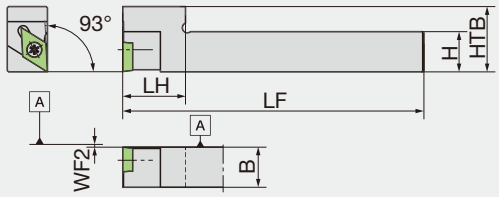
Reference pages : Inserts → 2-23 -, CBN → 2-91 -, PCD → 2-120 -

Y-SDJCR

Screw-on Y-axis turning toolholder with 93° approach angle, for positive 55° rhombic inserts



Without offset



Right hand (R) shown.

Inch	H	B	LF	LH	HTB	WF2		Insert
Y-SDJCR062-IN	0.375	0.375	4.724	0.984	0.787	0	DC**21.5...	DC**21.5...WP(TFD07...)
Y-SDJCR082-IN	0.500	0.500	4.724	0.984	0.787	0	DC**21.5...	DC**21.5...WP(TFD07...)
Y-SDJCR083-IN	0.500	0.500	4.724	0.984	0.787	0	DC**32.5...	DC**32.5...WP(TFD11...)
Y-SDJCR103-IN	0.625	0.625	4.724	0.984	0.787	0	DC**32.5...	DC**32.5...WP(TFD11...)
Metric	**H**	**B**	**LF**	**LH**	**HTB**	**WF2**		**Insert**
Y-SDJCR10-07S	10	10	120	20	20	0	DC**0702...	DC**0702...WP(TFD07...)
Y-SDJCR10-11MS	10	10	120	22	20	0	DC**11T3...	DC**11T3...WP(TFD11...)
Y-SDJCR10-11S	10	10	120	20	20	0	DC**11T3...	DC**11T3...WP(TFD11...)
Y-SDJCR12-07S	12	12	120	20	20	0	DC**0702...	DC**0702...WP(TFD07...)
Y-SDJCR12-11MS	12	12	120	22	20	0	DC**11T3...	DC**11T3...WP(TFD11...)
Y-SDJCR12-11S	12	12	120	20	20	0	DC**11T3...	DC**11T3...WP(TFD11...)
Y-SDJCR16-11S	16	16	120	20	20	0	DC**11T3..	DC**11T3...WP(TFD11...)

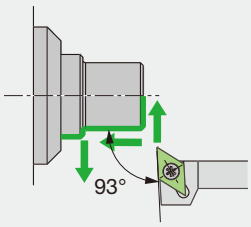
NOTE: Use a right-handed (R) or non-handed insert.
NOTE: There is a risk of interference with the Y-axis holder depending on the combination of the maximum workpiece diameter and machining diameter.
→10-1

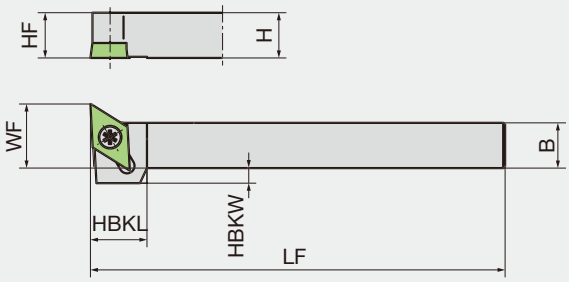
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
Y-SDJCR062-IN, Y-SDJCR082-IN, Y-SDJCR**-07S	LRIS-2.5*7	CLR-15S
Y-SDJCR083-IN, Y-SDJCR103-IN, Y-SDJCR**-11**	LRIS-4*10	LLR-25S-20*65

CH-SDUC

Screw-on toolholder with 93° approach angle, for positive 55° rhombic inserts, for horizontal gang style tool post





Left hand (L) shown.

Metric	H	B	LF	HBKL	HBKW	HF	WF		Insert
CH-SDUCL1010H11	10	10	100	15	6	10	15	DC**11T3...	DC**11T3...WP(TFD11...)
CH-SDUCL1212H11	12	12	100	15	4	12	17	DC**11T3...	DC**11T3...WP(TFD11...)
CH-SDUCL1616H11	16	16	100	–	–	16	21	DC**11T3...	DC**11T3...WP(TFD11...)
CH-SDUCL2020H11	20	20	100	–	–	20	25	DC**11T3...	DC**11T3...WP(TFD11...)

NOTE: Use a right-handed (R) or non-handed insert.

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CH-SDUCL**H11	LRIS-4*12PW	CLR-15S

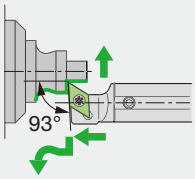
Reference pages : Inserts → 2-23 -, CBN → 2-91 -, PCD → 2-120 -

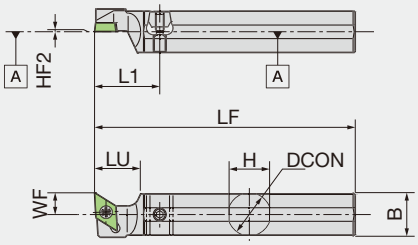
DC

Rhombic, 55°
with hole
Positive 7°

DS-SDU-ACH

Screw-on round-shank toolholder with 93° approach angle, for positive 55° rhombic inserts, with adjustable centerline height capability





Left hand (L) shown.

Metric	H	B	LF	DCON	HF2	LU	L1	WF	Insert	
DS-SDUL16F-11-ACH	15.5	15.5	80	16	Type B(0~+0.3)	17	30	10	DC**11T3...	DC**11T3...WP(TFD11...)
DS-SDUL19-11-ACH	18	18	120	19.05	Type A(0~+0.2)	20	30	10	DC**11T3...	DC**11T3...WP(TFD11...)
DS-SDUL20-11-ACH	19	19	120	20	Type B(0~+0.3)	20	30	10	DC**11T3...	DC**11T3...WP(TFD11...)
DS-SDUL22-11-ACH	21	21	120	22	Type B(0~+0.3)	20	30	10	DC**11T3...	DC**11T3...WP(TFD11...)
DS-SDUL25-11-ACH	24	24	150	25.4	Type A(0~+0.2)	20	30	10	DC**11T3...	DC**11T3...WP(TFD11...)
DS-SDUL25-11MET-ACH	24	24	150	25	Type A(0~+0.2)	20	30	10	DC**11T3...	DC**11T3...WP(TFD11...)

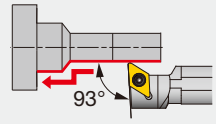
SPARE PARTS

Designation	Clamp screw	Screw (for Wedge)	Wedge	Wrench (for Clamp screw)	Wrench (for Wedge)
DS-SDUL1**11-ACH	LRIS-4*10	WS060415-003	ACH-W18	LLR-25S-20*65	LW-3
DS-SDUL20-11-ACH	LRIS-4*10	WS060419-004	ACH-W18	LLR-25S-20*65	LW-3
DS-SDUL22-11-ACH	LRIS-4*10	WS060419-004	ACH-W18	LLR-25S-20*65	LW-3
DS-SDUL25-11**-ACH	LRIS-4*10	WS060419-004	ACH-W24	LLR-25S-20*65	LW-3

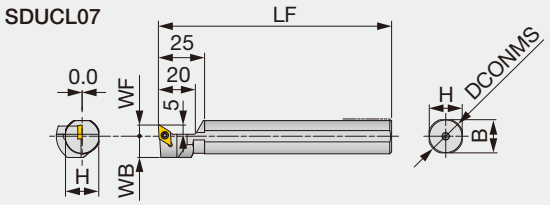
Reference pages : Inserts → 2-23 -, CBN → 2-91 -, PCD → 2-120 -

JS-SDUCL

Screw-on round-shank toolholder with 93° approach angle, for positive 55° rhombic inserts



Cutting edge style **U**



Left hand (L) shown.

Metric	DCONMS	WF	LF	H	B	WB	RE**	Insert	Torque*
JS19K-SDUCL07	19.05	6	125	18	18	11.5	0.4	DC**0702...	1.2
JS20K-SDUCL07	20	6	125	19	19	11.5	0.4	DC**0702...	1.2
JS22K-SDUCL07	22	6	125	21	21	11.5	0.4	DC**0702...	1.2
JS19K-SDUCL11	19.05	10	125	18	18	11.5	0.8	DC**11T3...	1.2
JS20K-SDUCL11	20	10	125	19	19	11.5	0.8	DC**11T3...	1.2
JS22K-SDUCL11	22	11	125	21	21	11.5	0.8	DC**11T3...	1.2
JS25K-SDUCL11	25	12	125	24	24	12.5	0.8	DC**11T3...	1.2
JS254K-SDUCL11	25.4	12	125	24	24	12.7	0.8	DC**11T3...	1.2

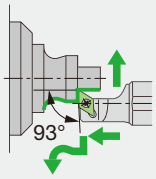
Torque*: Recommended clamping torque (N·m)
RE**: Standard corner radius

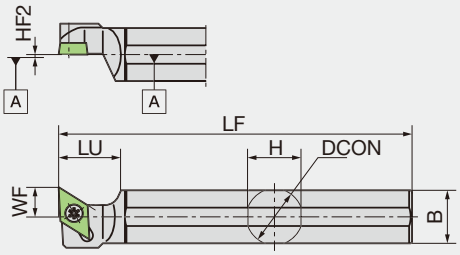
SPARE PARTS

Designation	Clamping screw	Wrench
JS**K-SDUCL07	CSTB-2.5	T-8F
JS**K-SDUCL11	CSTB-4SD	T-8F

DS-SDU

Screw-on round-shank toolholder with 93° approach angle, for positive 55° rhombic inserts





Left hand (L) shown.

Metric	H	B	LF	DCON	HF2	LU	WF		Insert
DS-SDUL15H-07	15	15	100	15.875	0	20	6	DC**0702...	DC**0702...WP(TFD07...)
DS-SDUL16F-07	15	15	80	16	0	20	6	DC**0702...	DC**0702...WP(TFD07...)
DS-SDUL16F-11	15	15	80	16	0	20	10	DC**11T3...	DC**11T3...WP(TFD11...)
DS-SDUL16X-07	15	15	95	16	0	20	6	DC**0702...	DC**0702...WP(TFD07...)
DS-SDUL19-07	18	18	120	19.05	0	20	6	DC**0702...	DC**0702...WP(TFD07...)
DS-SDUL19-11	18	18	120	19.05	0	20	10	DC**11T3...	DC**11T3...WP(TFD11...)
DS-SDUL20-07	19	19	120	20	0	20	6	DC**0702...	DC**0702...WP(TFD07...)
DS-SDUL20-11	19	19	120	20	0	20	10	DC**11T3...	DC**11T3...WP(TFD11...)
DS-SDUL20X-07	19	19	95	20	0	20	6	DC**0702...	DC**0702...WP(TFD07...)
DS-SDUL20X-11	19	19	95	20	0	20	10	DC**11T3...	DC**11T3...WP(TFD11...)
DS-SDUL22-07	21	21	120	22	0	20	6	DC**0702...	DC**0702...WP(TFD07...)
DS-SDUL22-11	21	21	120	22	0	20	10	DC**11T3...	DC**11T3...WP(TFD11...)
DS-SDUL25-11	24	24	150	25.4	0	20	10	DC**11T3...	DC**11T3...WP(TFD11...)
DS-SDUL25-11SPL	24	24	150	25.4	0	20	12.5	DC**11T3...	DC**11T3...WP(TFD11...)

NOTE: Use a right-handed (R) or non-handed insert.

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
DS-SDUL**-07	LRIS-2.5*7	CLR-15S
DS-SDUL**-11...	LRIS-4*10	LLR-25S-20*65

Reference pages : Inserts → 2-23 -, CBN → 2-91 -, PCD → 2-120 -

DC

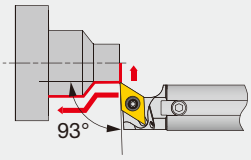
Rhombic, 55°
with hole
Positive 7°

MODUMINI TURN

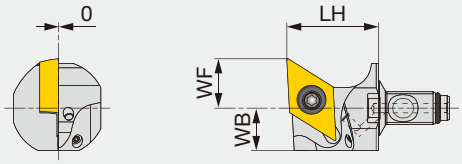
QR12-SDUCL-CHP

J-SERIES

Screw-on modular head with 93° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability



Cutting edge style **U**



Left hand (L) shown.

Metric	LH	WF	WB	RE**	Insert	Torque*	Shank
QR12C-SDUCL11-CHP	19.5 (0.768")	8.5 (0.335")	10.7 (0.421")	0.2 (0.008")	DC**11T3... (DC** 32.5...)	1.2 (0.89)	A16*-QR12
QR12D-SDUCL11-CHP	19.5 (0.768")	10.5 (0.413")	9 (0.354")	0.2 (0.008")	DC**11T3... (DC** 32.5...)	1.2 (0.89)	A19/20*-QR12

Torque*: Recommended clamping torque: N·m (lbf·ft)
RE**: Standard corner radius

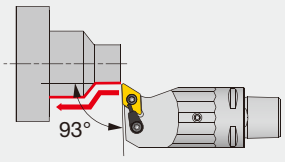
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SDUCL11-CHP	CSTB-4SD	T-8F	ORSS-0454.5X1.0NBR70

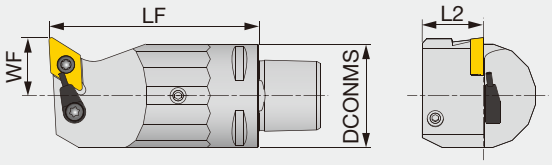
TUNGCAP

C-SDUCL-CHP

Screw-on toolholder, with 93° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability



Cutting edge style **U**



Left hand (L) shown.

Metric	DCONMS	LF	L2	WF	RE	Insert
C3SDUCL18040-11-CHP	32	40	19	18	0.8	DC**11T3...
C3SDUCL18065-11-CHP	32	65	19	18	0.8	DC**11T3...

Applicable for 14 MPa (2031 PSI) coolant
Cannot be used for boring

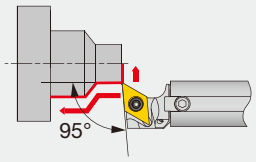
SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench
C3SDUCL...	CSTB-4S	S-CU-CHP	T-15F

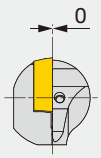
Reference pages : Inserts → 2-23 -, CBN → 2-91 -, PCD → 2-120 -, Shank, Accessory → 3-130 -

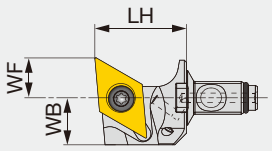
QR12-SDLCL-CHP

Screw-on modular head with 95° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability



Cutting edge style **L**





Left hand (L) shown.

Metric	LH	WF	WB	RE**	Insert	Torque*	Shank
QR12C-SDLCL11-CHP	19.5 (0.768")	8.5 (0.335")	10 (0.394")	0.2 (0.008")	DC**11T3... (DC** 32.5...)	1.2 (0.89)	A16*-QR12
QR12D-SDLCL11-CHP	19.5 (0.768")	10.5 (0.413")	9 (0.354")	0.2 (0.008")	DC**11T3... (DC** 32.5...)	1.2 (0.89)	A19/20*-QR12

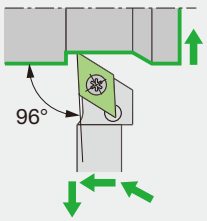
Torque*: Recommended clamping torque: N·m (lbf·ft)
RE**: Standard corner radius

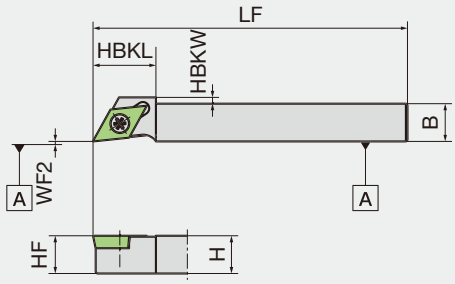
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SDLCL11-CHP	CSTB-4SD	T-8F	ORSS-0454.5X1.0NBR70

SDXCR-N

Screw-on toolholder with 96° approach angle, for positive 55° rhombic inserts





Without offset

Right hand (R) shown.

Metric	H	B	LF	HBKL	HBKW	HF	WF2	Insert
SDXCR1010X11N	10	10	120	20	3	10	0	DC**11T3...
SDXCR1212X11N	12	12	120	20	1	12	0	DC**11T3...
SDXCR1616X11N	16	16	120	–	–	16	0	DC**11T3...

NOTE: Use a right-handed (R) or non-handed insert.

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
SDXCR**X11N	LRIS-4*10	LLR-25S

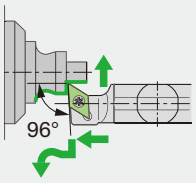
Reference pages : Inserts → 2-23 -, CBN → 2-91 -, PCD → 2-120 -, Shank, Accessory → 3-130 -

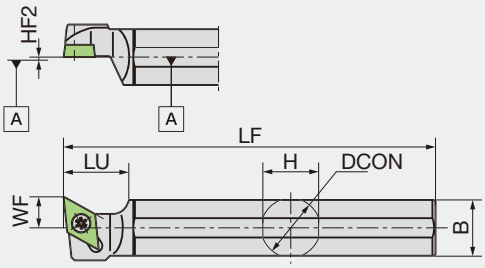
DC

Rhombic, 55°
with hole
Positive 7°

DS-SDXL

Screw-on round-shank toolholder with 96° approach angle, for positive 55° rhombic inserts





Left hand (L) shown.

Metric	H	B	LF	DCON	HF2	LU	WF	Insert
DS-SDXL19-11	18	18	120	19.05	0	20	10	DC**11T3...
DS-SDXL20-11	19	19	120	20	0	20	10	DC**11T3...
DS-SDXL20X-11	19	19	95	20	0	20	10	DC**11T3...
DS-SDXL25-11MET	24	24	120	25	0	20	10	DC**11T3...
DS-SDXL32-11	30	30	150	32	0	20	10	DC**11T3...

NOTE: Use a right-handed (R) or non-handed insert.

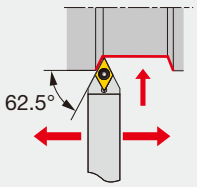
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
DS-SDXL**	LRIS-4*10	LLR-25S

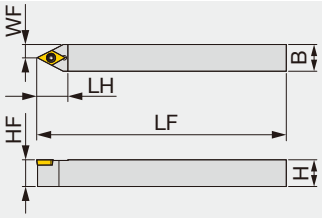
J-SERIES

JSDNCN

Screw-on toolholder with 62.5° approach angle, for positive 55° rhombic inserts



Cutting edge style **N**



Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
JSDNCN062	0.375	0.375	5.000	0.563	0.375	0.188	0.008	DC**21.5...	0.89
JSDNCN082	0.500	0.500	5.000	0.563	0.500	0.250	0.008	DC**21.5...	0.89
JSDNCN103	0.625	0.625	5.000	0.813	0.625	0.313	0.008	DC**21.5...	0.89

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSDNCN1010X07	10	10	120	15	10	5	0.2	DC**0702...	1.2
JSDNCN1010X11	10	10	120	21	10	5	0.2	DC**11T3...	1.2
JSDNCN1212F07	12	12	85	15	12	6	0.2	DC**0702...	1.2
JSDNCN1212X07	12	12	120	15	12	6	0.2	DC**0702...	1.2
JSDNCN1212F11	12	12	85	21	12	6	0.2	DC**11T3...	1.2
JSDNCN1212X11	12	12	120	21	12	6	0.2	DC**11T3...	1.2
JSDNCN1616X11	16	16	120	21	16	8	0.2	DC**11T3...	1.2

Torque: Recommended clamping torque: lbs·ft (*N·m)
RE**: Standard corner radius

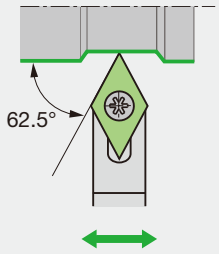
SPARE PARTS

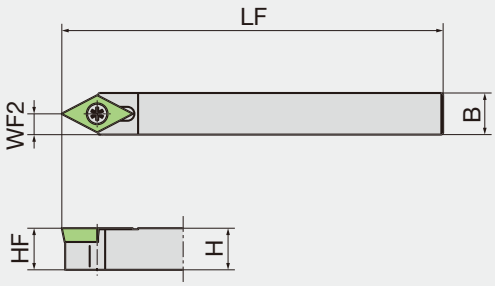
Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JSDFCR/L1212H07, JSDNCN**07 JSDNCN062, 082, 103	CSTB-2.5	T-8F	(T-8L)
JSDNCN**11, JSDFCR/L1616H11	CSTB-4SD	T-8F	(T-8L)

Reference pages : Inserts → 2-23 -, CBN → 2-91 -, PCD → 2-120 -

SDNCN

Screw-on toolholder with 62.5° approach angle, for positive 55° rhombic inserts





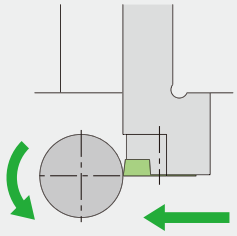
Inch	H	B	LF	HF	WF2	Insert
SDNCN-062	0.375	0.375	2.500	0.375	0.187	DC**21.5...
SDNCN-082	0.500	0.500	3.500	0.500	0.250	DC**21.5...
SDNCN-083	0.500	0.500	3.937	0.500	0.250	DC**32.5...
SDNCN-103	0.625	0.625	3.937	0.625	0.313	DC**32.5...
Metric	**H**	**B**	**LF**	**HF**	**WF2**	**Insert**
SDNCN08-X07	8	8	120	8	4	DC**0702...
SDNCN12-X11	12	12	120	12	6	DC**11T3...

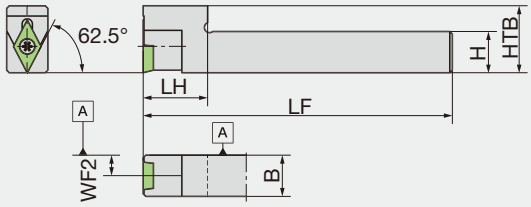
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
SDNCN-062	LRIS-2.5*7	CLR-15S
SDNCN-082	LRIS-2.5*7	CLR-15S
SDNCN-083	LRIS-4*10	LLR-25S
SDNCN-103	LRIS-4*10	LLR-25S
SDNCN08-X07	LRIS-2.5*7	CLR-15S
SDNCN12-X11	LRIS-4*10	LLR-25S

Y-SDNCN

Screw-on Y-axis turning toolholder with 62.5° approach angle, for positive 55° rhombic inserts





Right hand (R) shown.

Inch	H	B	LF	LH	HTB	WF2	Insert
Y-SDNCN083-IN	0.500	0.500	4.724	0.984	0.827	0.250	DC**32.5...
Metric	**H**	**B**	**LF**	**LH**	**HTB**	**WF2**	**Insert**
Y-SDNCN12-11S	12	12	120	20	21	6	DC**11T3...
Y-SDNCN16-11S	16	16	120	20	21	8	DC**11T3...

NOTE: There is a risk of interference with the Y-axis holder depending on the combination of the maximum workpiece diameter and machining diameter.
→10-1

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
Y-SDNCN083-IN, Y-SDNCN**-11S	LRIS-4*10	LLR-25S-20*65

Reference pages : Inserts → 2-23 -, CBN → 2-91 -, PCD → 2-120 -

DC

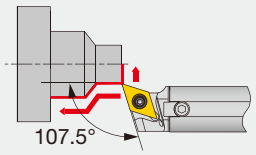
Rhombic, 55°
with hole
Positive 7°

MODUMINI TURN

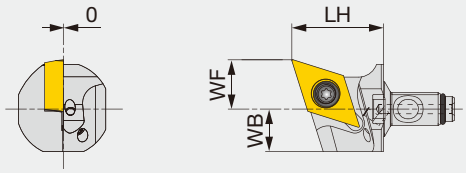
QR12-SDQCL-CHP

J-SERIES

Screw-on modular head with 107.5° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability



Cutting edge style **Q**



Left hand (L) shown.

Metric	LH	WF	WB	RE**	Insert	Torque*	Shank
QR12C-SDQCL11-CHP	19.5 (0.768")	8.5 (0.335")	8 (0.315")	0.2 (0.008")	DC**11T3... (DC** 32.5...)	1.2 (0.89)	A16*-QR12
QR12D-SDQCL11-CHP	19.5 (0.768")	10.5 (0.413")	9 (0.354")	0.2 (0.008")	DC**11T3... (DC** 32.5...)	1.2 (0.89)	A19/20*-QR12

Torque*: Recommended clamping torque: N·m (lbf·ft)
RE**: Standard corner radius

SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SDQCL11-CHP	CSTB-4SD	T-8F	ORSS-0454.5X1.0NBR70

Reference pages : Inserts → 2-23 -, CBN → 2-91 -, PCD → 2-120 -, Shank, Accessory → 3-130 -

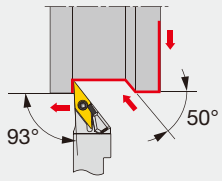
VB

Rhombic, 35°
with hole
Positive 5°

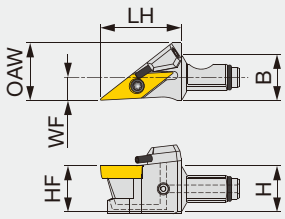
MODUMINI TURN

QC12/16-JSVJ2BR-CHP

Screw-on modular head with 93° approach angle, for positive 35° rhombic inserts, with high pressure coolant capability



Cutting edge style **J2**



Without offset

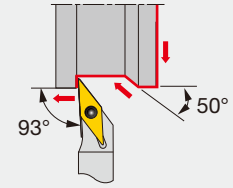
Right hand (R) shown.

Metric	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*
QC12-JSVJ2BR11-CHP	12 (0.750")	12 (0.750")	21 (0.827")	12 (0.472")	6 (0.236")	15 (0.591")	0.2 (0.008")	VB**1103... (VB** 22...)	1.2 (0.89)
QC16-JSVJ2BR11-CHP	16 (1.000")	16 (1.000")	21 (0.827")	16 (0.630")	8 (0.315")	20 (0.787")	0.2 (0.008")	VB**1103... (VB** 22...)	1.2 (0.89)

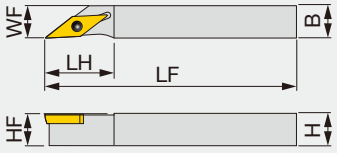
Torque: Recommended clamping torque: N·m (lbs·ft)
RE**: Standard corner radius

JSVJ2BR/L

Screw-on toolholder with 93° approach angle, for positive 35° rhombic inserts



Cutting edge style **J2**



Without offset

Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
JSVJ2BR/L062	0.375	0.375	5.000	0.813	0.375	0.375	0.008	VB** 22...	0.89
JSVJ2BR/L082	0.500	0.500	5.000	0.813	0.500	0.500	0.008	VB** 22...	0.89
JSVJ2BR/L102	0.625	0.625	5.000	0.813	0.625	0.625	0.008	VB** 22...	0.89
Metric	**H**	**B**	**LF**	**LH**	**HF**	**WF**	**RE****	**Insert**	**Torque***
JSVJ2BR/L1010X11	10	10	120	21	10	10	0.2	VB**1103...	1.2
JSVJ2BR/L1212F11	12	12	85	21	12	12	0.2	VB**1103...	1.2
JSVJ2BR/L1212X11	12	12	120	21	12	12	0.2	VB**1103...	1.2
JSVJ2BR/L1616X11	16	16	120	21	16	16	0.2	VB**1103...	1.2

Torque: Recommended clamping torque: lbs·ft (*N·m)
RE**: Standard corner radius

SPARE PARTS

Designation	Clamping screw	Wrench 1	O-ring	Coolant nozzle	Screw	Wrench 2
QC12-JSVJ2BR11-CHP	CSTB-2.5	T-8F	ORSS-0454.5X1.0NBR70	NZ-1.10-7-CHP	SSHM4-4-TB	P-2
QC16-JSVJ2BR11-CHP	CSTB-2.5	T-8F	ORSS-0757.5X1.0NBR70	NZ-1.10-7-CHP	SSHM3-3	-
JSVJ2BR/L...	CSTB-2.5	T-8F	-	-	-	-

Reference pages : Inserts → 2-48 -, CBN → 2-99 -, Shank, Accessory → 3-130 -

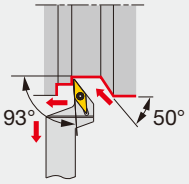
VB

Rhombic, 35° with hole
Positive 5°

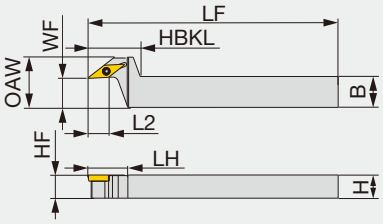
J-SERIES

JSVJBR-F

Screw-on stepped-head toolholder with 93° approach angle, for positive 35° rhombic inserts



Cutting edge style **J**



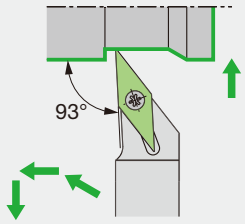
Right hand (R) shown.

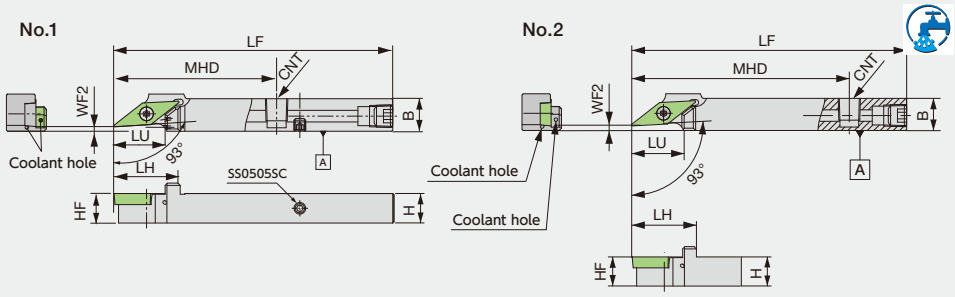
Metric	H	B	LF	L2	HBKL	LH	HF	WF	OAW	RE**	Insert	Torque*
JSVJBR1216F11-F15	12	16	85	12.6	27	21	12	15	26	0.2	VB**1103...	1.2
JSVJBR1216X11-F15	12	16	120	12.6	27	21	12	15	26	0.2	VB**1103...	1.2
JSVJBR1620X11-F15	16	20	120	12.6	27	21	16	15	26	0.2	VB**1103...	1.2

Torque*: Recommended clamping torque (N·m) RE**: Standard corner radius

SVJBR-OH/OH2

Screw-on toolholder with 93° approach angle, for positive 35° rhombic inserts, with high pressure coolant capability





Inch	H	B	LF	LH	HF	LU	MHD	WF2	CNT	CNT2		Insert	Figure
SVJBL083C-F079-OH	0.500	0.551	4.724	1.102	0.846	0.500	3.74	0.079	NPT1/8	-	VB**33...	VB**33...WP(TFV11...)	2
SVJBL103C-F079-OH	0.625	0.625	4.724	1.102	0.846	0.625	3.74	0.079	NPT1/8	-	VB**33...	VB**33...WP(TFV11...)	2
SVJBR083C-F079-OH2	0.500	0.551	4.724	1.102	0.846	0.500	2.756	0.079	NPT1/8	M5	VB**33...	VB**33...WP(TFV11...)	1
SVJBR103C-F079-OH	0.625	0.625	4.724	1.102	0.846	0.625	3.74	0.079	NPT1/8	-	VB**33...	VB**33...WP(TFV11...)	2
SVJBR103C-F079-OH2	0.625	0.625	4.724	1.102	0.846	0.625	2.756	0.079	NPT1/8	M5	VB**33...	VB**33...WP(TFV11...)	1

Metric	H	B	LF	LH	HF	LU	MHD	WF2	CNT	CNT2		Insert	Figure
SVJBL1214X16N-F02OH	12	14	120	28	21.5	12	95	2	NPT1/8	-	VB**1604...	VB**1604...WP(TFV11...)	2
SVJBL1616X16N-F02OH	16	16	120	28	21.5	16	95	2	NPT1/8	-	VB**1604...	VB**1604...WP(TFV11...)	2
SVJBR1214X16N-F02OH	12	14	120	28	21.5	12	95	2	NPT1/8	-	VB**1604...	VB**1604...WP(TFV11...)	2
SVJBR1616X16N-F02OH	16	16	120	28	21.5	16	95	2	NPT1/8	-	VB**1604...	VB**1604...WP(TFV11...)	2

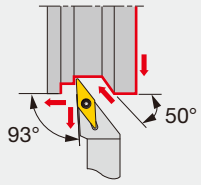
SPARE PARTS

Designation	Clamping screw	screw	screw	Wrench 1	Wrench 2
SVJBL083C-F079-OH	LRIS-4*10	SPNPT1/8	-	LLR-25S	-
SVJBL103C-F079-OH	LRIS-4*10	SPNPT1/8	-	LLR-25S	-
SVJBR083C-F079-OH2	LRIS-4*10	SPNPT1/8	SS0505SC	LLR-25S	LW-2.5
SVJBR103C-F079-OH	LRIS-4*10	SPNPT1/8	-	LLR-25S	-
SVJBR103C-F079-OH2	LRIS-4*10	SPNPT1/8L	SS0505SC	LLR-25S	LW-2.5
SVJBL1214X16N-F02OH	LRIS-4*10	LLR-25S	-	-	-
SVJBL1616X16N-F02OH	LRIS-4*10	LLR-25S	-	-	-
SVJBR1214X16N-F02OH	LRIS-4*10	LLR-25S	-	-	-
SVJBR1616X16N-F02OH	LRIS-4*10	LLR-25S	-	-	-

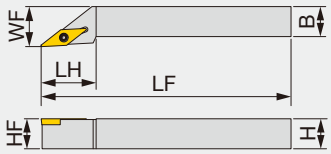
Reference pages : Inserts → 2-48 -, CBN → 2-99 -

JSVJBR/L

Screw-on toolholder with 93° approach angle, for positive 35° rhombic inserts



Cutting edge style **J**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
SVJBR/L122	0.750	0.750	4.500	1.063	0.750	1.000	0.0160	VB**22...	0.89
SVJBR/L123	0.750	0.750	4.500	1.181	0.750	1.000	0.0320	VB**33...	0.89
SVJBR/L163	1.000	1.000	6.000	1.575	1.000	1.250	0.0320	VB**33...	0.89

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSVJBR/L1010H11	10	10	100	20	10	12	0.4	VB**1103...	1.2
JSVJBR/L1212H11	12	12	100	22	12	16	0.4	VB**1103...	1.2
JSVJBR/L1616H11	16	16	100	22	16	20	0.4	VB**1103...	1.2

SPARE PARTS

Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JSVJBR**-F15, JSVJBR/L...	CSTB-2.5	T-8F	(T-8L)

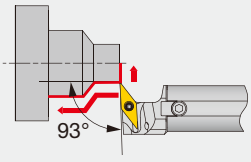
Torque: Recommended clamping torque: lbs·ft (*N·m) RE**: Standard corner radius

MODUMINI TURN

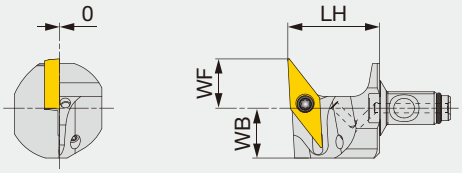
QR12-SVUBL-CHP

J-SERIES

Screw-on modular head with 93° approach angle, for positive 35° rhombic inserts, with high pressure coolant capability



Cutting edge style **U**



Left hand (L) shown.

Metric	LH	WF	WB	RE**	Insert	Torque*	Shank
QR12C-SVUBL11-CHP	19.5 (0.768")	8.5 (0.335")	13 (0.512")	0.2 (0.008")	VB**1103... (VB** 22...)	1.2 (0.89")	A16*-QR12
QR12D-SVUBL11-CHP	19.5 (0.768")	10.5 (0.413")	10.6 (0.417")	0.2 (0.008")	VB**1103... (VB** 22...)	1.2 (0.89")	A19/20*-QR12

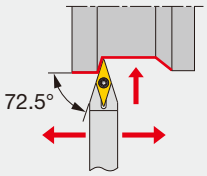
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SVUBL11-CHP	CSTB-2.5	T-8F	ORSS-0454.5X1.0NBR70

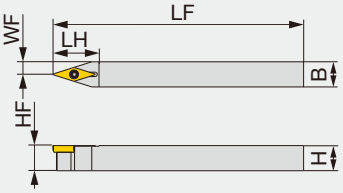
Torque*: Recommended clamping torque: N·m (lbf·ft)
RE**: Standard corner radius

JSVNBN

Screw-on toolholder with 72.5° approach angle, for positive 35° rhombic inserts



Cutting edge style **N**



Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSVNBN1010X11	10	10	120	22	10	5	0.2	VB**1103...	1.2
JSVNBN1212F11	12	12	85	22	12	6	0.2	VB**1103...	1.2
JSVNBN1212X11	12	12	120	22	12	6	0.2	VB**1103...	1.2
JSVNBN1616X11	16	16	120	22	16	8	0.2	VB**1103...	1.2

SPARE PARTS

Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JSVNB...	CSTB-2.5	T-8F	(T-8L)

Torque*: Recommended clamping torque (N·m)
RE**: Standard corner radius

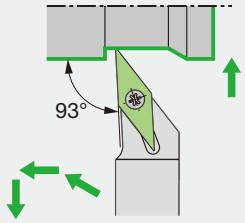
Reference pages : Inserts → 2-48 -, CBN → 2-99 -, Shank, Accessory → 3-130 -

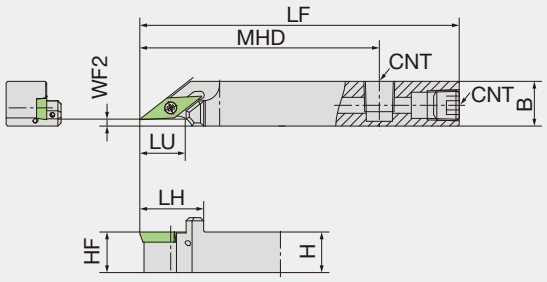
VC

Rhombic, 35° with hole
Positive 7°

SVJCR-OH

Screw-on toolholder with 93° approach angle, for positive 35° rhombic inserts, with high pressure coolant capability





Right hand (R) shown.

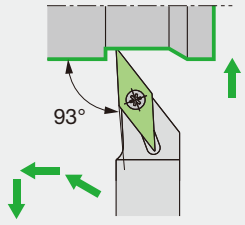
Inch	H	B	LF	LH	HF	LU	MHD	WF2	CNT		Insert
SVJCR062H-F079-OH	0.375	0.472	3.937	0.787	0.375	0.571	2.953	0.079	M6×1	VC**22...	VC**22...WP(TFV11...)
SVJCR082H-F079-OH	0.500	0.551	3.937	0.787	0.500	0.571	2.953	0.079	NPT1/8	VC**22...	VC**22...WP(TFV11...)
SVJCR102H-F079-OH	0.625	0.625	3.937	0.787	0.625	0.571	2.953	0.079	NPT1/8	VC**22...	VC**22...WP(TFV11...)
SVJCR082H-F079-OH2	0.500	0.551	3.937	0.787	0.500	0.571	2.756	0.079	NPT1/8	VC**22...	VC**22...WP(TFV11...)
SVJCR102X-F079-OH2	0.625	0.625	4.724	0.787	0.625	0.571	2.756	0.079	NPT1/8	VC**22...	VC**22...WP(TFV11...)
SVJCR082H-F500-OH2	0.500	0.972	3.937	0.787	0.500	0.571	2.756	0.500	NPT1/8	VC**22...	VC**22...WP(TFV11...)
Metric	**H**	**B**	**LF**	**LH**	**HF**	**LU**	**MHD**	**WF2**	**CNT**		**Insert**
SVJCR1014F11N-F02OH	10	14	80	21	10	18	55	2	M6*1	VC**1103...	VC**1103...WP(TFV11...)
SVJCR1214H11N-F02OH	12	14	100	21	12	18	75	2	Rc1/8	VC**1103...	VC**1103...WP(TFV11...)
SVJCR1616H11N-F02OH	16	16	100	21	16	18	75	2	Rc1/8	VC**1103...	VC**1103...WP(TFV11...)

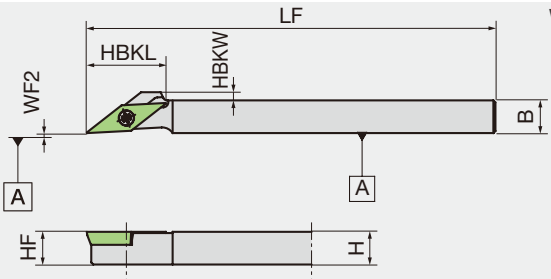
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT)	Wrench (for Clamp screw)	Wrench (for CNT)
SVJCR062H-F079-OH, SVJCR1014F11N-F02OH	LRIS-2.5*7	SS0605SC	-	CLR-15S	LW-3
SVJCR082H-F079-OH, SVJCR102H-F079-OH	LRIS-2.5*7	SPNPT1/8	SS0505SC	CLR-15S	-
SVJCR082H-F079-OH2	LRIS-2.5*7	SPNPT1/8	-	CLR-15S	LW-2.5
SVJCR102X-F079-OH2	LRIS-2.5*7	SPNPT1/8L	-	CLR-15S	LW-2.5
SVJCR1214H11N-F02OH, SVJCR1616H11N-F02OH	LRIS-2.5*7	SPR1/8	-	CLR-15S	–

SVJCR/L

Screw-on toolholder with 93° approach angle, for positive 35° rhombic inserts





Right hand (R) shown.

Inch	H	B	LF	HBKL	HBKW	HF	WF2		Insert
SVJCR-062C	0.375	0.375	4.724	-	-	0.375	0	VC**22...	VC**22...WP(TFV11...)
SVJCR-082C	0.500	0.500	4.724	-	-	0.500	0	VC**22...	VC**22...WP(TFV11...)
SVJCR-102C	0.625	0.625	4.724	-	-	0.625	0	VC**22...	VC**22...WP(TFV11...)
SVJCR082C-F250	0.500	0.709	4.724	0.827	-	0.500	0.250	VC**22...	VC**22...WP(TFV11...)
SVJCR082C-F500	0.500	0.984	4.724	0.827	-	0.500	0.500	VC**22...	VC**22...WP(TFV11...)
Metric	**H**	**B**	**LF**	**HBKL**	**HBKW**	**HF**	**WF2**		**Insert**
SVJCR0808H11N	8	8	100	19	2	8	0	VC**1103...	VC**1103...WP(TFV11...)
SVJCR1010X11N	10	10	120	–	–	10	0	VC**1103...	VC**1103...WP(TFV11...)
SVJCR1212X11N	12	12	120	–	–	12	0	VC**1103...	VC**1103...WP(TFV11...)
SVJCR1616X11N	16	16	120	–	–	16	0	VC**1103...	VC**1103...WP(TFV11...)
SVJCL1010X11N	10	10	120	–	–	10	0	VC**1103...	VC**1103...WP(TFV11...)
SVJCL1212X11N	12	12	120	–	–	12	0	VC**1103...	VC**1103...WP(TFV11...)
SVJCL1616X11N	16	16	120	–	–	16	0	VC**1103...	VC**1103...WP(TFV11...)

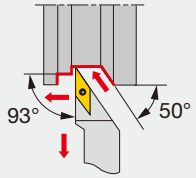
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
SVJCR-**C, SVJCR-**C-F..., SVJCR**11N	LRIS-2.5*7	CLR-15S

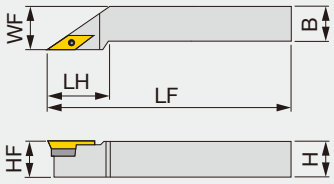
Reference pages : Inserts → 2-50 -, CBN → 2-101, PCD → 2-127

SVJCR/L

Screw-on toolholder with 93° approach angle, for positive 35° rhombic inserts



Cutting edge style **J**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert
SVJCR/L103	0.625	0.625	4.500	1.000	0.625	0.725	0.031	VC** 33...
SVJCR/L123	0.750	0.750	4.500	1.250	0.750	0.955	0.031	VC** 33...
SVJCR/L163	1.000	1.000	6.000	1.500	1.000	1.250	0.031	VC** 33...

Metric	H	B	LF	LH	HF	WF	RE**	Insert
SVJCR/L1616H16	16	16	100	32	16	20	0.8	VC**1604...
SVJCR/L2020K16	20	20	125	32	20	25	0.8	VC**1604...

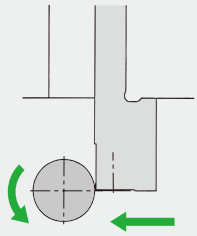
**RE: Standard corner radius

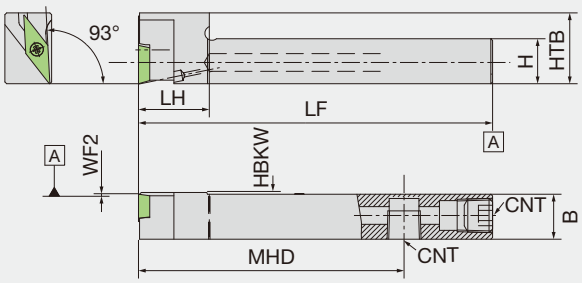
SPARE PARTS

Designation	Clamping screw	Shim	Shim screw	Wrench 1	Wrench 2
SVJCR/L...	CSTB-3.5L	SSV32	DTS5-3.5	P-3.5	T-15F

Y-SVJCR-OH

Screw-on Y-axis turning toolholder with 93° approach angle, for positive 35° rhombic inserts, with high pressure coolant capability





Without offset

Right hand (R) shown.

Inch	H	B	LF	LH	HBKW	HTB	MHD	WF2	CNT		Insert
Y-SVJCR062H-IN-OH	0.472	0.375	3.937	0.984	0.020	0.787	2.953	0	M6×1	VC**22...	VC**22...WP(TFV11...)
Y-SVJCR082HS-IN-OH	0.500	0.500	3.937	0.787	0.020	0.787	2.953	0	NPT1/8	VC**22...	VC**22...WP(TFV11...)
Y-SVJCR102H-IN-OH	0.625	0.625	3.937	0.984	0.020	0.787	2.953	0	NPT1/8	VC**22...	VC**22...WP(TFV11...)
Y-SVJCR082HS-IN-OH2	0.500	0.500	3.937	0.787	0.020	0.787	2.756	0	NPT1/8	VC**22...	VC**22...WP(TFV11...)

Metric	H	B	LF	LH	HBKW	HTB	MHD	WF2	CNT		Insert
Y-SVJCR1212H11S-OH	12	12	100	20	0.5	20	75	0	Rc1/8	VC**1103...	VC**1103...WP(TFV11...)
Y-SVJCR1616H11S-OH	16	16	100	20	0.5	20	75	0	Rc1/8	VC**1103...	VC**1103...WP(TFV11...)

NOTE: Use a right-handed (R) or non-handed insert.
NOTE: There is a risk of interference with the Y-axis holder depending on the combination of the maximum workpiece diameter and machining diameter.
→10-1

SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT)	Wrench (for Clamp screw)	Wrench (for CNT)
Y-SVJCR062H-IN-OH	LRIS-2.5*7	SS0605SC	-	CLR-15S	LW-3
Y-SVJCR082HS-IN-OH	LRIS-2.5*7	SPNPT1/8	-	CLR-15S	-
Y-SVJCR102H-IN-OH	LRIS-2.5*7	SPNPT1/8	-	CLR-15S	-
Y-SVJCR082HS-IN-OH2	LRIS-2.5*7	SPNPT1/8	SS0505SC	CLR-15S	LW-2.5
Y-SVJCR**H11S-OH	LRIS-2.5*7	SPR1/8	-	CLR-15S	-

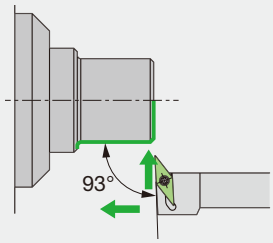
Reference pages : Inserts → 2-50 -, CBN → 2-101, PCD → 2-127

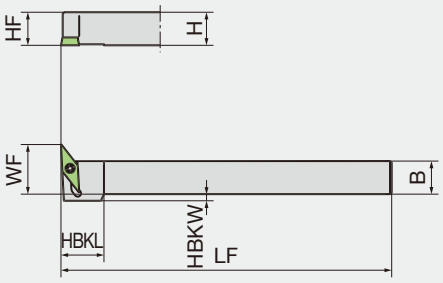
VC

Rhombic, 35° with hole
Positive 7°

CH-SVUCL

Screw-on toolholder with 93° approach angle, for positive 35° rhombic inserts, for horizontal gang style tool post





Left hand (L) shown.

Metric	H	B	LF	HBKL	HBKW	HF	KAPR	WF	Insert	
CH-SVUCL1010H11	10	10	100	15	2	10	3°	18	VC**1103...	VC**1103...WP(TFV11...)
CH-SVUCL1212H11	12	12	100	–	–	12	3°	20	VC**1103...	VC**1103...WP(TFV11...)
CH-SVUCL1616H11	16	16	100	–	–	16	3°	24	VC**1103...	VC**1103...WP(TFV11...)
CH-SVUCL2020H11	20	20	100	–	–	20	3°	28	VC**1103...	VC**1103...WP(TFV11...)

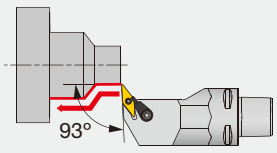
NOTE: Use a right-handed (R) or non-handed insert.

SPARE PARTS

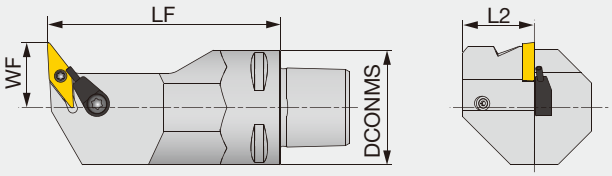
Designation	Clamp screw	Wrench (for Clamp screw)
CH-SVUCL**H11	LRIS-2.5*7	CLR-15S

TUNGCAP C-SVUCL-CHP

Screw-on toolholder, with 93° approach angle, for positive 35° rhombic inserts, with high pressure coolant capability



Cutting edge style **U**



Left hand (L) shown.

Metric	DCONMS	LF	L2	WF	RE	Insert
C3SVUCL18065-11-CHP	32	65	20	18	0.4	VC**1103...

Applicable for 14 MPa (2031 PSI) coolant
Cannot be used for boring

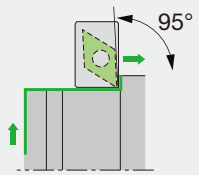
SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench
C3SVUCL18065-11-CHP	CSTB-2.5	S-CU-CHP	T-8F

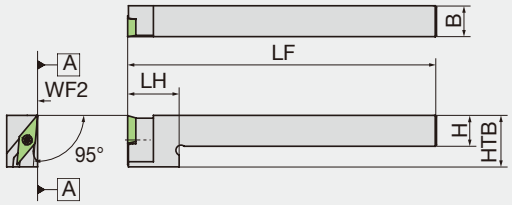
Reference pages : Inserts → 2-50 -, CBN → 2-101, PCD → 2-127

Y-SVXCL

Screw-on Y-axis turning toolholder with 95° approach angle, for positive 35° rhombic inserts



Without offset



Left hand (L) shown.

Metric	H	B	LF	LH	WF2	Insert
Y-SVXCL12-11S	12	12	120	20	0	VC**1103...

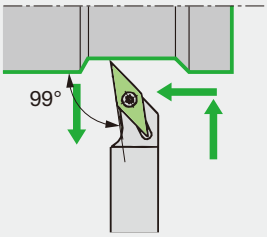
NOTE: Use a left-handed (L) or non-handed insert.
NOTE: There is a risk of interference with the Y-axis holder depending on the combination of the maximum workpiece diameter and machining diameter.
→10-1

SPARE PARTS

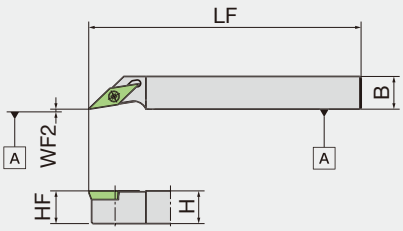
Designation	Clamp screw	Wrench (for Clamp screw)
SVACR1010L13NW	LRIS-3*8	RLR-20S

SVXCR/L-N

Screw-on toolholder with 99° approach angle, for positive 35° rhombic inserts



Without offset



Right hand (R) shown.

Metric	H	B	LF	HF	WF2	Insert
SVXCR1012X11N	10	12	120	10	0	VC**1103...
SVXCR1212X11N	12	12	120	12	0	VC**1103...
SVXCL1012X11N	10	12	120	10	0	VC**1103...

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
SVXCR**X11N	LRIS-2.5*7	CLR-15S

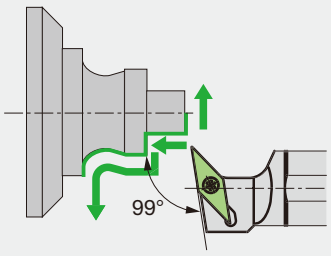
Reference pages : Inserts → 2-50 -, CBN → 2-101, PCD → 2-127

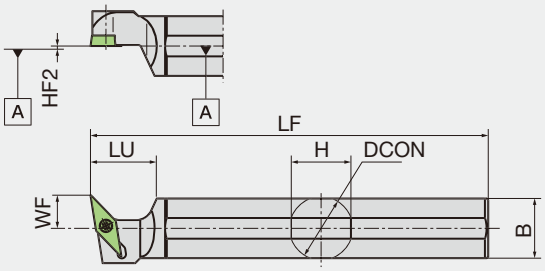
VC

Rhombic, 35° with hole
Positive 7°

DS-SVXL

Screw-on round-shank toolholder with 99° approach angle, for positive 35° rhombic inserts





Left hand (L) shown.

Metric	H	B	LF	DCON	HF2	LU	WF	Insert
DS-SVXL15H-11	15	15	100	15.875	0	20.5	10	VC**1103...
DS-SVXL16F-11	15	15	80	16	0	20.5	10	VC**1103...
DS-SVXL19-11	18	18	120	19.05	0	20	10	VC**1103...
DS-SVXL19-11SPL	18	18	160	19.05	0	20	11	VC**1103...
DS-SVXL20-11	19	19	120	20	0	20	10	VC**1103...
DS-SVXL20X-11	19	19	95	20	0	20	10	VC**1103...
DS-SVXL22-11	21	21	120	22	0	20	10	VC**1103...
DS-SVXL25-11	24	24	150	25.4	0	20	10	VC**1103...
DS-SVXL25-11MET	24	24	150	25	0	20	10	VC**1103...

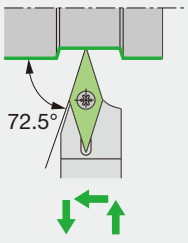
NOTE: Use a right-handed (R) or non-handed insert.

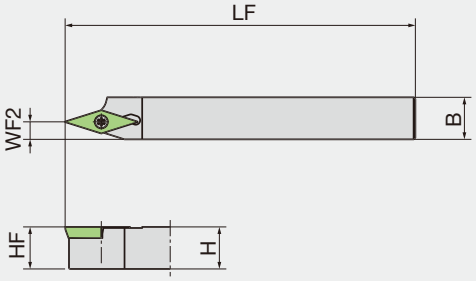
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
DS-SVXL**	LRIS-2.5*7	CLR-15S

SVVC-N

Screw-on toolholder with 72.5° approach angle, for positive 35° rhombic inserts





Right hand (R) shown.

Metric	H	B	LF	HF	WF2	Insert
SVVCR1212X11N	12	12	120	12	5	VC**1103...
SVVCR1616X11N	16	16	120	16	5	VC**1103...

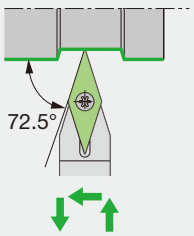
SPARE PARTS

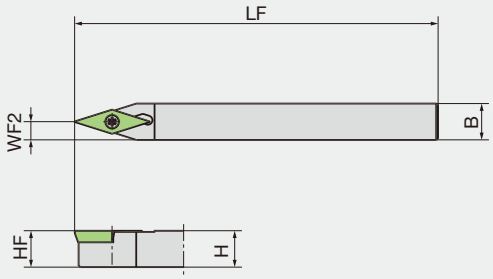
Designation	Clamp screw	Wrench (for Clamp screw)
SVVCR**	LRIS-2.5*7	CLR-15S

Reference pages : Inserts → 2-50 -, CBN → 2-101, PCD → 2-127

SVVCN

Screw-on toolholder with 72.5° approach angle, for positive 35° rhombic inserts





Metric	H	B	LF	HF	WF2	Insert
SVVCN0808H11N	8	8	100	8	4	VC**1103...
SVVCN1010X11N	10	10	120	10	5	VC**1103...
SVVCN20-X11	20	20	120	20	10	VC**1103...

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
SVVCN**	LRIS-2.5*7	CLR-15S

Reference pages : Inserts → 2-50 -, CBN → 2-101, PCD → 2-127

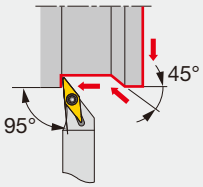
VP

Rhombic, 35°
with hole
Positive 11°

J-SERIES

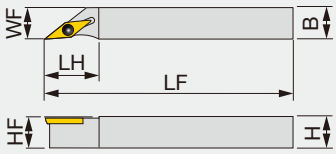
JSVL2PR/L

Screw-on toolholder with 95° approach angle, for positive 35° rhombic inserts



Cutting edge style **L2**

Without offset



Right hand (R) shown.

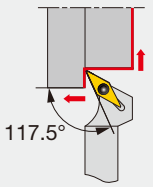
Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
JSVL2PR/L082	0.500	0.500	5.000	0.813	0.500	0.500	0.008	VP**63...	0.89
JSVL2PR/L102	0.625	0.625	5.000	0.813	0.625	0.625	0.008	VP**63...	0.89

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSVL2PR/L1010X08	10	10	120	16	10	10	0.2	VP**0802...	0.6
JSVL2PR/L1010K08	10	10	125	16	10	10	0.2	VP**0802...	0.6
JSVL2PR/L1212F08	12	12	85	16	12	12	0.2	VP**0802...	0.6
JSVL2PR/L1212F11	12	12	85	21	12	12	0.2	VP**1103...	1.2
JSVL2PR/L1212X08	12	12	120	16	12	12	0.2	VP**0802...	0.6
JSVL2PR/L1212X11	12	12	120	21	12	12	0.2	VP**1103...	1.2
JSVL2PR/L1212K08	12	12	125	16	12	12	0.2	VP**0802...	0.6
JSVL2PR/L1616X08	16	16	120	16	16	16	0.2	VP**0802...	0.6
JSVL2PL1616K08	16	16	125	16	16	16	0.2	VP**0802...	0.6
JSVL2PR/L1616X11	16	16	120	21	16	16	0.2	VP**1103...	1.2

Torque: Recommended clamping torque: lbs·ft (*N·m)
RE**: Standard corner radius

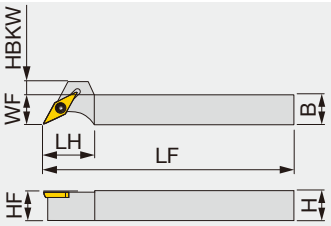
JSVP2PR/L

Screw-on toolholder with 117.5° approach angle, for positive 35° rhombic inserts



Cutting edge style **P2**

Without offset



Right hand (R) shown.

Metric	H	B	LF	LH	HF	WF	HBKW	RE**	Insert	Torque*
JSVP2PR/L1010K08	10	10	125	16	10	10	4	0.2	VP**0802...	0.6
JSVP2PR/L1010K11	10	10	125	20	10	10	8	0.2	VP**1103...	1.2
JSVP2PR/L1212K08	12	12	125	16	12	12	2	0.2	VP**0802...	0.6
JSVP2PR/L1212K11	12	12	125	20	12	12	6	0.2	VP**1103...	1.2
JSVP2PR/L1616K08	16	16	125	16	16	16	2	0.2	VP**0802...	0.6
JSVP2PR/L1616K11	16	16	125	20	16	16	6	0.2	VP**1103...	1.2

Torque*: Recommended clamping torque (N·m)
RE**: Standard corner radius

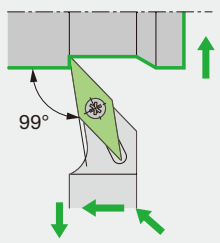
SPARE PARTS

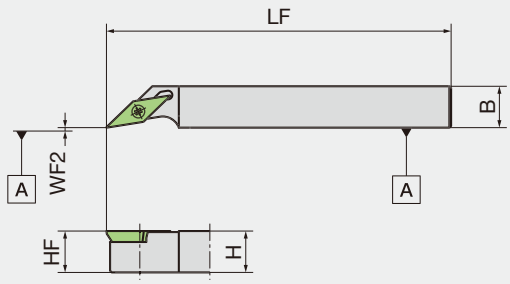
Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JSVL2PR/L082/102	CSTB-2.5	T-8F	(T-8L)
JSVL2PR/L**08, JSVP2PR/L**08	CSTB-2L	T-6F	(T-6L)
JSVL2PR/L**11, JSVP2PR/L**11	CSTB-2.5	T-8F	(T-8L)

Reference pages : Inserts → 2-54 -

SVXPR/L

Screw-on toolholder with 99° approach angle, for positive 35° rhombic inserts





Without offset

Right hand (R) shown.

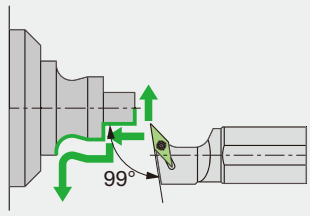
Metric	H	B	LF	HF	WF2	Insert
SVXPR1012X11N	10	12	120	10	0	VP**1103...
SVXPR1212X11N	12	12	120	12	0	VP**1103...
SVXPL1012X11N	10	12	120	10	0	VP**1103...
SVXPL1212X11N	12	12	120	12	0	VP**1103...

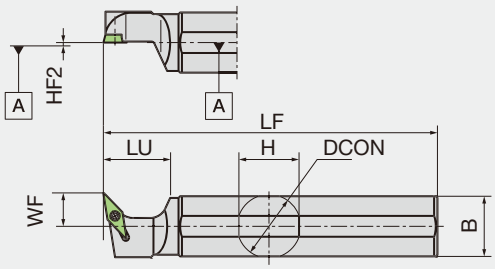
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
SVXPR**X11N	LRIS-2.5*7	CLR-15S

DS-SVXP

Screw-on round-shank toolholder with 99° approach angle, for positive 35° rhombic inserts





Left hand (L) shown.

Metric	H	B	LF	DCON	HF2	LU	WF	Insert
DS-SVXPL19-08	18	18	120	19.05	0	20	10	VP**0802...
DS-SVXPL20-08	19	19	120	20	0	20	10	VP**0802...
DS-SVXPL22-08	21	21	120	22	0	20	10	VP**0802...
DS-SVXPL25-08	24	24	150	25.4	0	20	10	VP**0802...

NOTE: Use a right-handed (R) or non-handed insert.

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
DS-SVXPL**-08	LRIS-2*6	CLR-13S

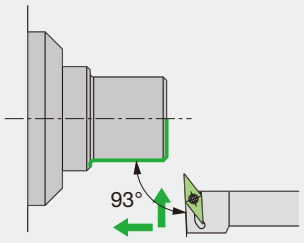
Reference pages : Inserts → 2-54 -

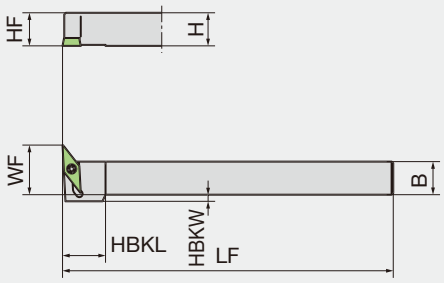
VP

Rhombic, 35°
with hole
Positive 11°

CH-SVUPL

Screw-on toolholder with 93° approach angle, for positive 35° rhombic inserts, for horizontal gang style tool post





Left hand (L) shown.

Metric	H	B	LF	HBKL	HBKW	HF	WF	Insert
CH-SVUPL1010H08	10	10	100	13	2	10	15	VP**0802...
CH-SVUPL1212H08	12	12	100	–	–	12	17	VP**0802...

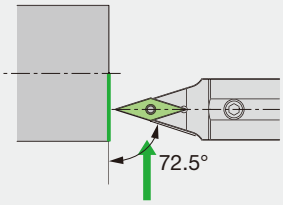
NOTE: Use a right-handed (R) or non-handed insert.

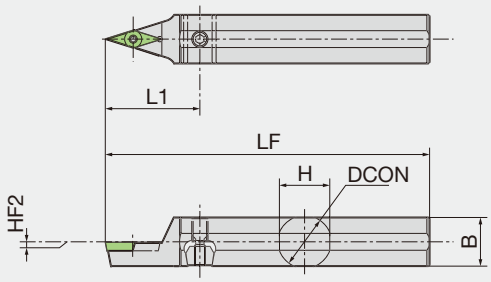
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CH-SVUPL**H08	LRIS-2*6	CLR-13S

DS-SVVPN-ACH

Screw-on round-shank toolholder with 72.5° approach angle, for positive 35° rhombic inserts, with adjustable centerline height capability





Metric	H	B	LF	DCON	HF2	L1	Insert
DS-SVVPN16-11-ACH	15.5	15	120	16	Type B(0~+0.3)	31	VP**1103...
DS-SVVPN19-11-ACH	18	18	120	19.05	Type B(0~+0.3)	35	VP**1103...
DS-SVVPN20-11-ACH	19	19	120	20	Type B(0~+0.3)	35	VP**1103...
DS-SVVPN22-11-ACH	21	21	120	22	Type A(0~+0.2)	35	VP**1103...
DS-SVVPN25-11-ACH	24	24	150	25.4	Type A(0~+0.2)	35	VP**1103...

SPARE PARTS

Designation	Clamp screw	Screw (for Wedge)	Wedge	Wrench (for Clamp screw)	Wrench (for Wedge)
DS-SVVPN16..., DS-SVVPN19...	LRIS-2.5*7	WS060415-003	ACH-W18	CLR-15S	LW-3
DS-SVVPN20..., DS-SVVPN22...	LRIS-2.5*7	WS060419-004	ACH-W18	CLR-15S	LW-3
DS-SVVPN25-11-ACH	LRIS-2.5*7	WS060419-004	ACH-W24	CLR-15S	LW-3

Reference pages : Inserts → 2-54 -

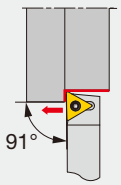
TC

Triangular with hole Positive 7°

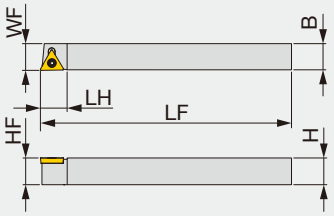
J-SERIES

JSTACR/L

Screw-on toolholder with 91° approach angle, for positive 60° triangular inserts



Cutting edge style **A**



Without offset

Right hand (R) shown.

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSTACR/L0808K08	8	8	125	10	8	8	0.2	TC**0802...	0.6
JSTACR/L1010K08	10	10	125	10	10	10	0.2	TC**0802...	0.6
JSTACR/L1212K11	12	12	125	12	12	12	0.4	TC**1102...	1.2
JSTACR/L1616H11	16	16	100	12	16	16	0.4	TC**1102...	1.2

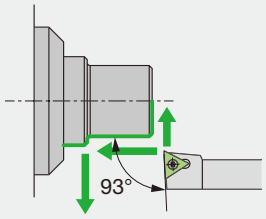
Torque*: Recommended clamping torque (N·m) RE**: Standard corner radius

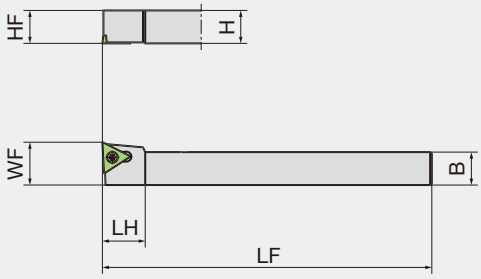
SPARE PARTS

Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JSTACR/L**K08	CSTB-2L	T-6F	(T-6L)
JSTACR/L**11	CSTB-2.5	T-8F	(T-8L)

CH-STUCL

Screw-on toolholder with 93° approach angle, for positive 60° rhombic inserts, for horizontal gang style tool post





Left hand (L) shown.

Metric	H	B	LF	LH	HF	WF	Insert
CH-STUCL1010H09	10	10	100	13	10	13	TC**0902...
CH-STUCL1212H09	12	12	100	13	12	15	TC**0902...

NOTE: Use a right-handed (R) or non-handed insert.

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CH-STUCL**H09	LRIS-2.2*6	CLR-13S

Reference pages : Inserts → 2-36 -, CBN → 2-93 -, PCD → 2-122 -

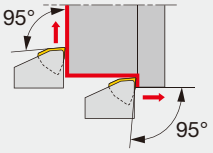
WX

Trigon, 80°
with hole

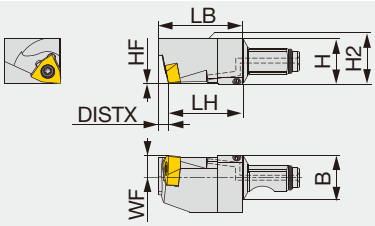
MINIFORCE TURN

QC12/16-JSWL2XR-Y-CHP

Screw-on Y-axis turning modular head with 95° approach angle, for WXGU inserts, with high pressure coolant capability



Cutting edge style **L2**



Without offset

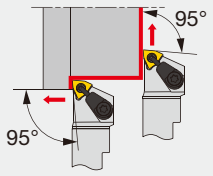
Right hand (R) shown.

Metric	H	B	LH	HF	WF	LB	H2	DISTX	RE**	Insert	Torque
QC12-JSWL2XR04-Y-CHP	12 (0.750")	12 (0.750")	19.5 (0.768")	0 (0")	6 (0.236")	22.3 (0.878")	12 (0.472")	2.8 (0.110")	0.2 (0.008")	WXGU0403**L... (WXGU22**L...)	0.9 (0.66)
QC16-JSWL2XR04-Y-CHP	16 (1.000")	16 (1.000")	21 (0.827")	0 (0")	8 (0.315")	23.8 (0.937")	16 (0.630")	2.8 (0.110")	0.2 (0.008")	WXGU0403**L... (WXGU22**L...)	0.9 (0.66)

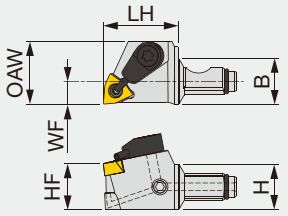
Torque: Recommended clamping torque: N·m (lbs·ft)
RE**: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L).

QC10/12/16-JSWL2XR-CHP

Screw-on modular head with 95° approach angle, for WXGU inserts, with high pressure coolant capability



Cutting edge style **L2**



Without offset

Right hand (R) shown.

Metric	H	B	LH	HF	WF	OAW	RE**	Insert	Torque
QC10-JSWL2XR04-CHP	10 (0.625")	10 (0.625")	17 (0.669")	10 (0.394")	5 (0.197")	13 (0.512")	0.2 (0.008")	WXGU0403**L... (WXGU22**L...)	0.9 (0.66)
QC12-JSWL2XR04-CHP	12 (0.750")	12 (0.750")	19.5 (0.768")	12 (0.472")	6 (0.236")	16.5 (0.650")	0.2 (0.008")	WXGU0403**L... (WXGU22**L...)	0.9 (0.66)
QC16-JSWL2XR04-CHP	16 (1.000")	16 (1.000")	21 (0.827")	16 (0.630")	8 (0.315")	20 (0.787")	0.2 (0.008")	WXGU0403**L... (WXGU22**L...)	0.9 (0.66)

Torque: Recommended clamping torque: N·m (lbs·ft)
RE**: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L).

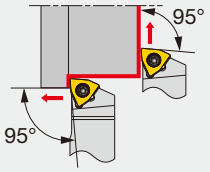
SPARE PARTS

Designation	Clamping screw 1	Coolant unit	Wrench 1	O-ring
QC12-JSWL2XR04-Y-CHP	SR34-514	-	T-7F	ORSS-0454.5X1.0NBR70
QC16-JSWL2XR04-Y-CHP	SR34-514	-	T-7F	ORSS-0757.5X1.0NBR70
QC10-JSWL2XR04-CHP	SR34-514	-	T-7F	ORSS-0353.5X1.0NBR70
QC12-JSWL2XR04-CHP	SR34-514	S-CU-CHP	T-7F	ORSS-0454.5X1.0NBR70
QC16-JSWL2XR04-CHP	SR34-514	S-CU-CHP	T-7F	ORSS-0757.5X1.0NBR70

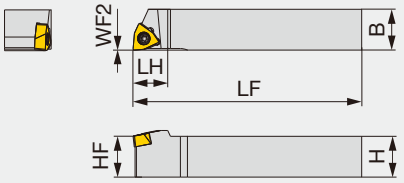
Reference pages : Inserts → 2-58, CBN → 2-102, Shank, Accessory → 3-130 -

JSWL2XR/L

Screw-on toolholder with 95° approach angle, for WXGU inserts



Cutting edge style **L2**



Without offset

Right hand (R) shown.

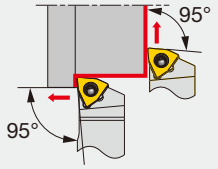
Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
JSWL2XR/L062	0.375	0.375	4.750	0.500	0.375	0	0.008	WXGU22**L/R...	0.66
JSWL2XR/L082	0.500	0.500	4.750	0.500	0.500	0	0.008	WXGU22**L/R...	0.66
JSWL2XR/L102	0.625	0.625	4.750	0.500	0.625	0	0.008	WXGU22**L/R...	0.66

Metric	H	B	LF	LH	HF	WF2	RE**	Insert	Torque*
JSWL2XR/L1010X04	10	10	120	11	10	0	0.2	WXGU0403**L/R...	0.9
JSWL2XR/L1212F04	12	12	85	11	12	0	0.2	WXGU0403**L/R...	0.9
JSWL2XR/L1212X04	12	12	120	11	12	0	0.2	WXGU0403**L/R...	0.9
JSWL2XR/L1616X04	16	16	120	13	16	0	0.2	WXGU0403**L/R...	0.9
JSWL2XR/L2020H04	20	20	100	13	20	0	0.2	WXGU0403**L/R...	0.9

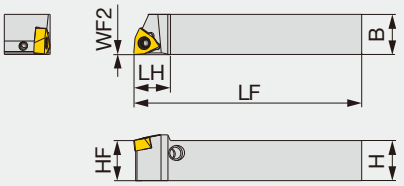
Torque: Recommended clamping torque: lbs·ft (*N·m)
RE**: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R).

JPWL2XR/L

Lever-lock toolholder with 95° approach angle, for WXGU inserts



Cutting edge style **L2**



Without offset

Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
JPWL2XR/L062	0.375	0.375	4.750	0.500	0.375	0	0.008	WXGU22**L/R...	0.66
JPWL2XR/L082	0.500	0.500	4.750	0.500	0.500	0	0.008	WXGU22**L/R...	0.66
JPWL2XR/L102	0.625	0.625	4.750	0.500	0.625	0	0.008	WXGU22**L/R...	0.66

Metric	H	B	LF	LH	HF	WF2	RE**	Insert	Torque*
JPWL2XR/L1010X04	10	10	120	11	10	0	0.2	WXGU0403**L/R...	0.9
JPWL2XR/L1212F04	12	12	85	11	12	0	0.2	WXGU0403**L/R...	0.9
JPWL2XR/L1212X04	12	12	120	11	12	0	0.2	WXGU0403**L/R...	0.9
JPWL2XR/L1616X04	16	16	120	13	16	0	0.2	WXGU0403**L/R...	0.9

Torque: Recommended clamping torque: lbs·ft (*N·m)
RE**: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw 1	Lever	Pin	Clamping screw 2	Wrench 1	Wrench 2
JSWL2XR/L...	SR34-514	-	-	-	T-7F	-
JPWL2XR/L...	-	SLLV-2	SL-PI-2	SR10400611	-	HW2.0/5RED

Reference pages : Inserts → 2-58, CBN → 2-102

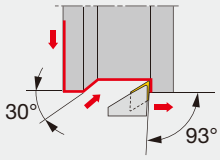
DX

Rhombic, 55° with hole

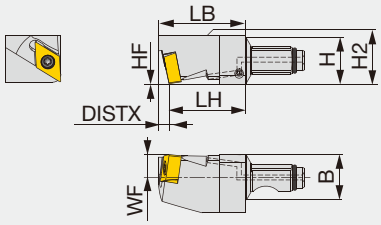
MINIFORCE TURN

QC12/16-JSDJ2XR-Y-CHP

Screw-on Y-axis turning modular head with 93° approach angle, for DX*U inserts, with high pressure coolant capability



Cutting edge style **J2**



Without offset

Right hand (R) shown.

Metric	H	B	LH	HF	WF	LB	H2	DISTX	RE**	Insert	Torque*
QC12-JSDJ2XR07-Y-CHP	12 (0.750")	12 (0.750")	19.5 (0.768")	0 (0")	6 (0.236")	22.3 (0.878")	12.5 (0.492")	2.8 (0.110")	0.2 (0.008")	DX*U0703**L... (DX*U22**L...)	0.9 (0.66)
QC16-JSDJ2XR07-Y-CHP	16 (1.000")	16 (1.000")	21 (0.827")	0 (0")	8 (0.315")	23.8 (0.937")	16 (0.630")	2.8 (0.110")	0.2 (0.008")	DX*U0703**L... (DX*U22**L...)	0.9 (0.66)

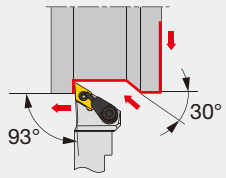
Torque: Recommended clamping torque: N·m (lbs·ft) RE**: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L).

SPARE PARTS

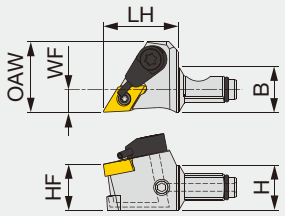
Designation	Clamping screw	Wrench	O-ring
QC12-JSDJ2XR07-Y-CHP	SR34-514	T-7F	ORSS-0454.5X1.0NBR70
QC16-JSDJ2XR07-Y-CHP	SR34-514	T-7F	ORSS-0454.5X1.0NBR70

QC10/12/16-JSDJ2XR-CHP

Screw-on modular head with 93° approach angle, for DX*U inserts, with high pressure coolant capability



Cutting edge style **J2**



Without offset

Right hand (R) shown.

Metric	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*
QC10-JSDJ2XR07-CHP	10 (0.625")	10 (0.625")	17 (0.669")	10 (0.394")	5 (0.197")	13 (0.512")	0.2 (0.008")	DX*U0703**L... (DX*U22**L...)	0.9 (0.66)
QC12-JSDJ2XR07-CHP	12 (0.750")	12 (0.750")	19.5 (0.768")	12 (0.472")	6 (0.236")	18.4 (0.724")	0.2 (0.008")	DX*U0703**L... (DX*U22**L...)	0.9 (0.66)
QC16-JSDJ2XR07-CHP	16 (1.000")	16 (1.000")	21 (0.827")	16 (0.630")	8 (0.315")	20 (0.787")	0.2 (0.008")	DX*U0703**L... (DX*U22**L...)	0.9 (0.66)

Torque: Recommended clamping torque: N·m (lbs·ft)
RE**: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L).

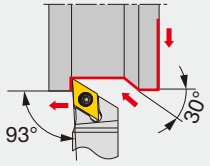
SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench	O-ring
QC10-JSDJ2XR07-Y-CHP	SR34-514	-	T-7F	ORSS-0757.5X1.0NBR70
QC12-JSDJ2XR07-Y-CHP	SR34-514	S-CU-CHP	T-7F	ORSS-0454.5X1.0NBR70
QC16-JSDJ2XR07-Y-CHP	SR34-514	S-CU-CHP	T-7F	ORSS-0757.5X1.0NBR70

Reference pages : Inserts → 2-32 -, Shank, Accessory → 3-130 -

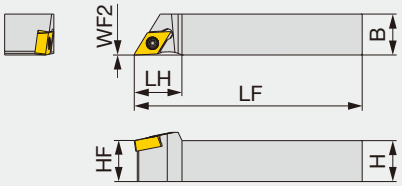
JSDJ2XR/L

Screw-on toolholder with 93° approach angle, for DX*U inserts



Cutting edge style **J2**

Without offset



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
JSDJ2XR/L062	0.375	0.375	4.750	0.625	0.375	0	0.008	DX*U22**L/R...	0.66
JSDJ2XR/L082	0.500	0.500	4.750	0.625	0.500	0	0.008	DX*U22**L/R...	0.66
JSDJ2XR/L102	0.625	0.625	4.750	0.625	0.625	0	0.008	DX*U22**L/R...	0.66

Metric	H	B	LF	LH	HF	WF2	RE**	Insert	Torque*
JSDJ2XR/L1010X07	10	10	120	14	10	0	0.2	DX*U0703**L/R...	0.9
JSDJ2XR/L1212F07	12	12	85	14	12	0	0.2	DX*U0703**L/R...	0.9
JSDJ2XR/L1212X07	12	12	120	14	12	0	0.2	DX*U0703**L/R...	0.9
JSDJ2XR/L1616X07	16	16	120	18	16	0	0.2	DX*U0703**L/R...	0.9
JSDJ2XR/L2020H07	20	20	100	18	20	0	0.2	DX*U0703**L/R...	0.9

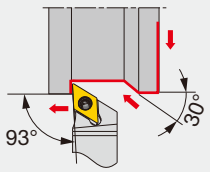
Torque: Recommended clamping torque: lbs·ft (*N·m) RE**: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Wrench
JSDJ2XR/L...	SR34-514	T-7F

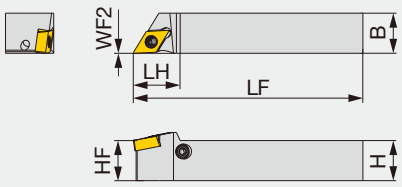
JPDJ2XR/L

Lever-lock toolholder with 93° approach angle, for DX*U inserts



Cutting edge style **J2**

Without offset



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
JPDJ2XR/L062	0.375	0.375	4.750	0.625	0.375	0	0.008	DX*U22**L/R...	0.66
JPDJ2XR/L082	0.500	0.500	4.750	0.625	0.500	0	0.008	DX*U22**L/R...	0.66
JPDJ2XR/L102	0.625	0.625	4.750	0.625	0.625	0	0.008	DX*U22**L/R...	0.66

Metric	H	B	LF	LH	HF	WF2	RE**	Insert	Torque*
JPDJ2XR/L1010X07	10	10	120	14	10	0	0.2	DX*U0703**L/R...	0.9
JPDJ2XR/L1212F07	12	12	85	14	12	0	0.2	DX*U0703**L/R...	0.9
JPDJ2XR/L1212X07	12	12	120	14	12	0	0.2	DX*U0703**L/R...	0.9
JPDJ2XR/L1616X07	16	16	120	18	16	0	0.2	DX*U0703**L/R...	0.9

Torque: Recommended clamping torque: lbs·ft (*N·m) RE**: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R).

SPARE PARTS

Designation	Lever	Pin	Clamping screw 1	Wrench 1
JPDJ2XR/L...	SLLV-2	SL-PI-2	SR10400611	HW2.0/5RED

Reference pages : Inserts → 2-32 -

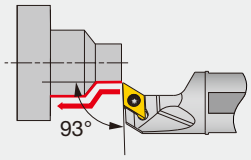
DX

Rhombic, 55° with hole

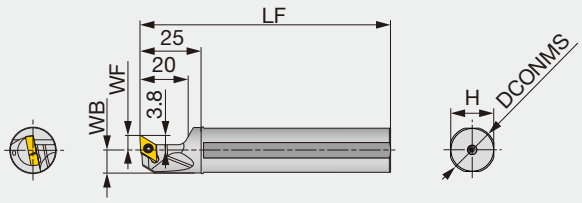
MINIFORCE TURN

JS-SDUXL

Screw-on round-shank toolholder with 93° approach angle, for DX*U inserts



Cutting edge style **U**



Left hand (L) shown.

Metric	DCONMS	WF	LF	H	WB	RE**	Insert	Torque*
JS14H-SDUXL07	14	6	100	13	6.75	0.2	DX*U0703**L...	0.9
JS159F-SDUXL07	15.875	6	85	15	7.687	0.2	DX*U0703**L...	0.9
JS16F-SDUXL07	16	6	85	15	7.75	0.2	DX*U0703**L...	0.9
JS19G-SDUXL07	19.05	6	90	18	9.275	0.2	DX*U0703**L...	0.9
JS19X-SDUXL07	19.05	6	120	18	9.275	0.2	DX*U0703**L...	0.9
JS20G-SDUXL07	20	6	90	19	9.75	0.2	DX*U0703**L...	0.9
JS20X-SDUXL07	20	6	120	19	9.75	0.2	DX*U0703**L...	0.9
JS22X-SDUXL07	22	10	120	21	10.75	0.2	DX*U0703**L...	0.9
JS25H-SDUXL07	25	10	100	24	12.25	0.2	DX*U0703**L...	0.9
JS254X-SDUXL07	25.4	10	120	24	12.45	0.2	DX*U0703**L...	0.9

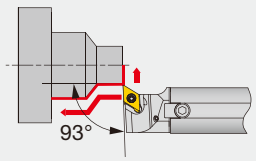
Torque*: Recommended clamping torque (N·m) RE**: Standard corner radius
Use left-hand toolholders (L) with left-hand inserts (L).

SPARE PARTS

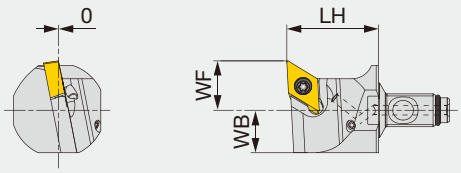
Designation	Clamping screw	Wrench
JS**-SDUXL07	SR34-514	T-7F

QR12-SDUXL-CHP

Screw-on modular head with 93° approach angle, for DX*U inserts, with high pressure coolant capability



Cutting edge style **U**



Left hand (L) shown.

Metric	LH	WF	WB	RE**	Insert	Torque*	Shank
QR12C-SDUXL07-CHP	19.5 (0.768")	8.5 (0.335")	8 (0.315")	0.2 (0.008")	DX*U0703**L... (DX*U 22**L...)	0.9 (0.66")	A16*-QR12
QR12D-SDUXL07-CHP	19.5 (0.768")	10.5 (0.413")	9 (0.354")	0.2 (0.008")	DX*U0703**L... (DX*U 22**L...)	0.9 (0.66")	A19/20*-QR12

Use left-hand toolholders (L) with left-hand inserts (L).
Torque*: Recommended clamping torque: N·m (lbf·ft)
RE**: Standard corner radius

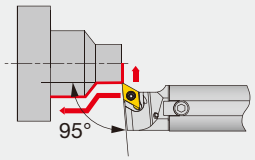
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SDUXL07-CHP	SR 34-514	T-7F	ORSS-0454.5X1.0NBR70

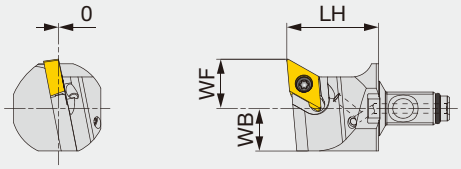
Reference pages : Inserts → 2-32 -, Shank, Accessory → 3-130 -

QR12-SDLXL-CHP

Screw-on modular head with 95° approach angle, for DX*U inserts, with high pressure coolant capability



Cutting edge style **L**



Left hand (L) shown.

Metric	LH	WF	WB	RE**	Insert	Torque*	Shank
QR12C-SDLXL07-CHP	19.5 (0.768")	8.5 (0.335")	8 (0.315")	0.2 (0.008")	DX*U0703**L... (DX*U 22**L...)	0.9 (0.66")	A16*-QR12
QR12D-SDLXL07-CHP	19.5 (0.768")	10.5 (0.413")	9 (0.354")	0.2 (0.008")	DX*U0703**L... (DX*U 22**L...)	0.9 (0.66")	A19/20*-QR12

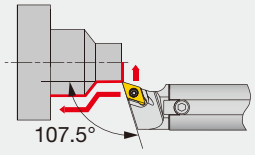
Use left-hand toolholders (L) with left-hand inserts (L).
Torque*: Recommended clamping torque: N·m (lbf·ft)
RE**: Standard corner radius

SPARE PARTS

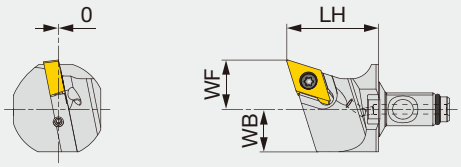
Designation	Clamping screw	Wrench	O-ring
QR12*-SDLXL07-CHP	SR 34-514	T-7F	ORSS-0454.5X1.0NBR70

QR12-SDQXL-CHP

Screw-on modular head with 107.5° approach angle, for DX*U inserts, with high pressure coolant capability



Cutting edge style **Q**



Left hand (L) shown.

Metric	LH	WF	WB	RE**	Insert	Torque*	Shank
QR12C-SDQXL07-CHP	19.5 (0.768")	8.5 (0.335")	8 (0.315")	0.2 (0.008")	DX*U0703**L... (DX*U 22**L...)	0.9 (0.66")	A16*-QR12
QR12D-SDQXL07-CHP	19.5 (0.768")	10.5 (0.413")	9 (0.354")	0.2 (0.008")	DX*U0703**L... (DX*U 22**L...)	0.9 (0.66")	A19/20*-QR12

Use left-hand toolholders (L) with left-hand inserts (L).
Torque*: Recommended clamping torque: N·m (lbf·ft)
RE**: Standard corner radius

SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SDQXL07-CHP	SR 34-514	T-7F	ORSS-0454.5X1.0NBR70

Reference pages : Inserts → 2-32 -, Shank, Accessory → 3-130 -

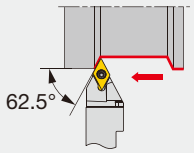
VX

Rhombic, 35° with hole

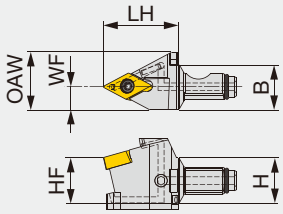
MINIFORCE TURN

QC10/12/16-JSDNXR-CHP

Screw-on modular head with 62.5° approach angle, for DX*U inserts, with high pressure coolant capability



Cutting edge style **N**



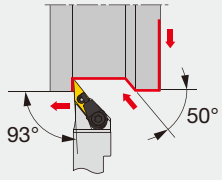
Right hand (R) shown.

Metric	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*
QC10-JSDNXR07-CHP	10 (0.625")	10 (0.625")	17 (0.669")	10 (0.394")	6 (0.236")	13 (0.512")	0.2 (0.008")	DX*U0703**L... (DX*U22**L...)	0.9 (0.66)
QC12-JSDNXR07-CHP	12 (0.750")	12 (0.750")	19.5 (0.768")	12 (0.472")	6 (0.236")	15 (0.591")	0.2 (0.008")	DX*U0703**L... (DX*U22**L...)	0.9 (0.66)
QC16-JSDNXR07-CHP	16 (1.000")	16 (1.000")	21 (0.827")	16 (0.630")	6 (0.236")	20 (0.787")	0.2 (0.008")	DX*U0703**L... (DX*U22**L...)	0.9 (0.66)

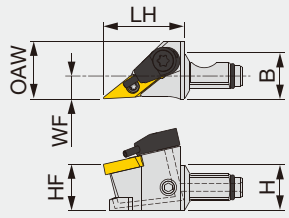
Torque*: Recommended clamping torque: N·m (lbs·ft)
RE**: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L).

QC10/12/16-JSVJ2XR-CHP

Screw-on modular head with 93° approach angle, for VXGU inserts, with high pressure coolant capability



Cutting edge style **J2**



Without offset

Right hand (R) shown.

Metric	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*
QC10-JSVJ2XR09-CHP	10 (0.625")	10 (0.625")	17 (0.669")	10 (0.394")	5 (0.197")	13 (0.512")	0.2 (0.008")	VXGU09T2**L... (VXGU73.5**L...)	0.9 (0.66)
QC12-JSVJ2XR09-CHP	12 (0.750")	12 (0.750")	21 (0.827")	12 (0.472")	6 (0.236")	15 (0.591")	0.2 (0.008")	VXGU09T2**L... (VXGU73.5**L...)	0.9 (0.66)
QC16-JSVJ2XR09-CHP	16 (1.000")	16 (1.000")	21 (0.827")	16 (0.630")	8 (0.315")	20 (0.787")	0.2 (0.008")	VXGU09T2**L... (VXGU73.5**L...)	0.9 (0.66)

Torque: Recommended clamping torque: N·m (lbs·ft)
RE**: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L).

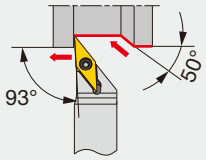
SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench	O-ring
QC10-JSDNXR07-CHP	SR 34-514	-	T-7F	ORSS-0353.5X1.0NBR70
QC12-JSDNXR07-CHP	SR34-508	-	T-7F	ORSS-0454.5X1.0NBR70
QC16-JSDNXR07-CHP	SR 34-514	-	T-7F	ORSS-0757.5X1.0NBR70
QC10-JSVJ2XR09-CHP	SR 34-508	-	T-7F	ORSS-0353.5X1.0NBR70
QC12-JSVJ2XR09-CHP	SR34-508	S-CU-CHP	T-7F	ORSS-0454.5X1.0NBR70
QC16-JSVJ2XR09-CHP	SR 34-508	S-CU-CHP	T-7F	ORSS-0757.5X1.0NBR70

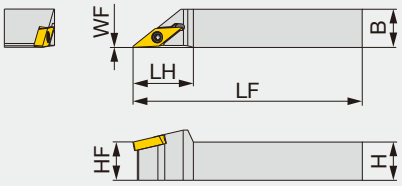
Reference pages : QC**-JSDNXR-CHP : Inserts → 2-32 -
QC**-JSVJ2XR-CHP : Inserts → 2-53
Shank, Accessory → 3-130 -

JSVJ2XR/L

Screw-on toolholder with 93° approach angle, for VXGU inserts



Cutting edge style **J2**



Without offset

Right hand (R) shown.

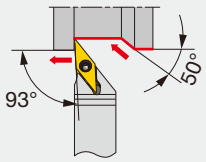
Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
JSVJ2XR/L067	0.375	0.375	4.750	0.669	0.375	0	0.008	VXGU73*L/R...	0.66
JSVJ2XR/L087	0.500	0.500	4.750	0.748	0.500	0	0.008	VXGU73*L/R...	0.66
JSVJ2XR/L107	0.625	0.625	4.750	0.748	0.625	0	0.008	VXGU73*L/R...	0.66

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JSVJ2XR/L1010X09	10	10	120	17	10	0	0.2	VXGU09T2**L/R...	0.9
JSVJ2XR/L1212F09	12	12	85	19	12	0	0.2	VXGU09T2**L/R...	0.9
JSVJ2XR/L1212X09	12	12	120	19	12	0	0.2	VXGU09T2**L/R...	0.9
JSVJ2XR/L1616X09	16	16	120	19	16	0	0.2	VXGU09T2**L/R...	0.9
JSVJ2XR/L2020H09	20	20	100	19	20	0	0.2	VXGU09T2**L/R...	0.9

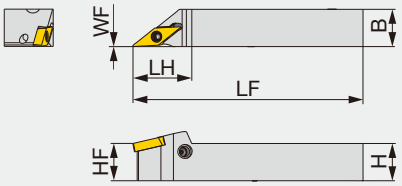
Torque: Recommended clamping torque: lbs·ft (*N·m) RE**: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L).
Use left-hand toolholders (L) with right-hand inserts (R).

JPVJ2XR/L

Lever-lock toolholder with 93° approach angle, for VXGU inserts



Cutting edge style **J2**



Without offset

Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
JPVJ2XR/L067	0.375	0.375	4.750	0.669	0.375	0	0.008	VXGU73*L/R...	0.66
JPVJ2XR/L087	0.500	0.500	4.750	0.748	0.500	0	0.008	VXGU73*L/R...	0.66
JPVJ2XR/L107	0.625	0.625	4.750	0.748	0.625	0	0.008	VXGU73*L/R...	0.66

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JPVJ2XR/L1010X09	10	10	120	19	10	0	0.2	VXGU09T2**L/R...	0.9
JPVJ2XR/L1212F09	12	12	85	19	12	0	0.2	VXGU09T2**L/R...	0.9
JPVJ2XR/L1212X09	12	12	120	19	12	0	0.2	VXGU09T2**L/R...	0.9
JPVJ2XR/L1616X09	16	16	120	19	16	0	0.2	VXGU09T2**L/R...	0.9

Torque: Recommended clamping torque: lbs·ft (*N·m) RE**: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L).
Use left-hand toolholders (L) with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Wrench	Lever	Pin	Clamping screw	Wrench
JSVJ2XR/L...	SR34-508	T-7F	-	-	-	-
JPVJ2XR/L...	-	-	SLLV-1	SL-PI-2	SR10400611	HW2.0/5RED

Reference pages : Inserts → 2-53

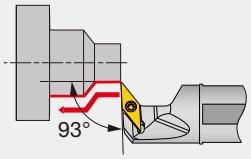
VX

Rhombic, 35° with hole

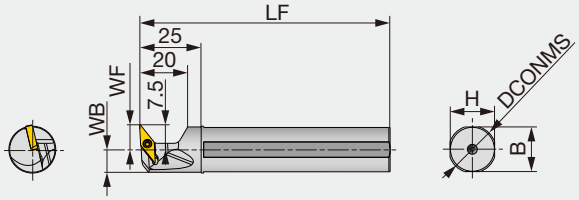
MINIFORCE TURN

JS-SVUXL

Screw-on round-shank toolholder with 93° approach angle, for VXGU inserts



Cutting edge style **U**



Left hand (L) shown.

Metric	DCONMS	WF	LF	H	B	WB	RE**	Insert	Torque
JS159F-SVUXL09	15.875	10	85	15	15	7.7	0.2	VXGU09T2**L...	0.9
JS16F-SVUXL09	16	10	85	15	15	7.7	0.2	VXGU09T2**L...	0.9
JS19G-SVUXL09	19.05	10	90	18	18	9.2	0.2	VXGU09T2**L...	0.9
JS19X-SVUXL09	19.05	10	120	18	18	9.2	0.2	VXGU09T2**L...	0.9
JS20G-SVUXL09	20	10	90	19	19	9.7	0.2	VXGU09T2**L...	0.9
JS20X-SVUXL09	20	10	120	19	19	9.7	0.2	VXGU09T2**L...	0.9
JS22X-SVUXL09	22	10	120	21	21	10.7	0.2	VXGU09T2**L...	0.9
JS25H-SVUXL09	25	10	100	24	24	12.2	0.2	VXGU09T2**L...	0.9
JS254X-SVUXL09	25.4	10	120	24	24	12.4	0.2	VXGU09T2**L...	0.9

Torque: Recommended clamping torque: N·m
**RE: Standard corner radius
Note: Use left-hand toolholders (L) with left-hand inserts (L).

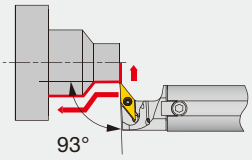
SPARE PARTS

Designation	Clamping screw	Wrench
JS**-SVUXL09	SR34-508	T-7F

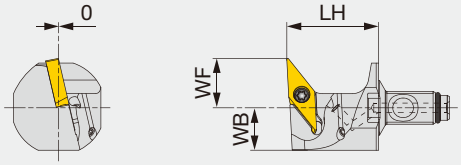
MODUMINI TURN

QR12-SVUXL-CHP

Screw-on modular head with 93° approach angle, for VXGU inserts, with high pressure coolant capability



Cutting edge style **U**



Left hand (L) shown.

Metric	LH	WF	WB	RE**	Insert	Torque*	Shank
QR12C-SVUXL09-CHP	19.5 (0.768")	8.5 (0.335")	9.5 (0.374")	0.2 (0.008")	VXGU09T2**L... (VXGU 73.5**L...)	0.9 (0.66")	A16*-QR12
QR12D-SVUXL09-CHP	19.5 (0.768")	10.5 (0.413")	9 (0.354")	0.2 (0.008")	VXGU09T2**L... (VXGU 73.5**L...)	0.9 (0.66")	A19/20*-QR12

Use left-hand toolholders (L) with left-hand inserts (L).
Torque*: Recommended clamping torque: N·m (lbf·ft)
RE**: Standard corner radius

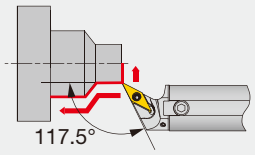
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-SVUXL09-CHP	SR 34-508	T-7F	ORSS-0454.5X1.0NBR70

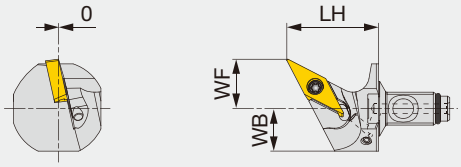
Reference pages : Inserts → 2-53, Shank, Accessory → 3-130 -

QR12-SVQXL-CHP

Screw-on modular head with 117.5° approach angle, for VXGU inserts, with high pressure coolant capability



Cutting edge style **Q**



Left hand (L) shown.

Metric	LH	WF	WB	RE**	Insert	Torque*	Shank
QR12C-SVQXL09-CHP	19.5 (0.768")	8.5 (0.335")	8 (0.315")	0.2 (0.008")	VXGU09T2**L... (VXGU 73.5**L...)	0.9 (0.66")	A16*-QR12
QR12D-SVQXL09-CHP	19.5 (0.768")	10.5 (0.413")	9 (0.354")	0.2 (0.008")	VXGU09T2**L... (VXGU 73.5**L...)	0.9 (0.66")	A19/20*-QR12

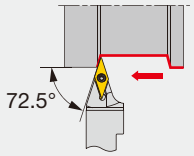
Use left-hand toolholders (L) with left-hand inserts (L).
Torque*: Recommended clamping torque: N·m (lbf·ft)
RE**: Standard corner radius

SPARE PARTS

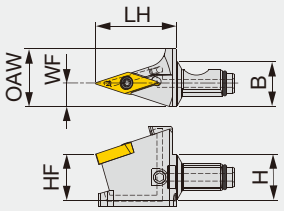
Designation	Clamping screw	Wrench	O-ring
QR12*-SVQXL09-CHP	SR 34-508	T-7F	ORSS-0454.5X1.0NBR70

MINIFORCE TURN
QC10/12/16-JSVVXR-CHP

Screw-on modular head with 72.5° approach angle, for VXGU inserts, with high pressure coolant capability



Cutting edge style **V**



Right hand (R) shown.

Metric	H	B	LH	HF	WF	OAW	RE**	Insert	Torque*
QC10-JSVVXR09-CHP	10 (0.625")	10 (0.625")	17.5 (0.689")	10 (0.394")	5 (0.197")	13 (0.512")	0.2 (0.008")	VXGU09T2**L... (VXGU73**L...)	0.9 (0.66)
QC12-JSVVXR09-CHP	12 (0.750")	12 (0.750")	21 (0.827")	12 (0.472")	6 (0.236")	15 (0.591")	0.2 (0.008")	VXGU09T2**L... (VXGU73**L...)	0.9 (0.66)
QC16-JSVVXR09-CHP	16 (1.000")	16 (1.000")	21 (0.827")	16 (0.630")	6 (0.236")	20 (0.787")	0.2 (0.008")	VXGU09T2**L... (VXGU73**L...)	0.9 (0.66)

Torque: Recommended clamping torque: N·m (lbs·ft)
RE**: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L).

SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QC10-JSVVXR09-CHP	SR34-508	T-7F	ORSS-0353.5X1.0NBR70
QC12-JSVVXR09-CHP	SR34-508	T-7F	ORSS-0454.5X1.0NBR70
QC16-JSVVXR09-CHP	SR34-508	T-7F	ORSS-0757.5X1.0NBR70

Reference pages : Inserts → 2-53, Shank, Accessory → 3-130 -

TN

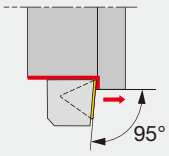
Triangular with hole

MODUMINI TURN

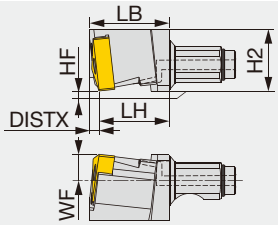
QC16-PTL2NR-Y-CHP

J-SERIES

Lever-lock Y-axis turning modular head with 95° approach angle, for negative 60° triangular inserts, with high pressure coolant capability



Cutting edge style **L2**



Without offset

Right hand (R) shown.

Metric	LH	HF	WF	LB	H2	DISTX	RE**	Insert	Torque*	Shank
QC16-PTL2NR16-Y-CHP	21 (0.827")	0 (0")	8 (0.315")	23.8 (0.937")	18.7 (0.736")	2.8 (0.110")	0.4 (0.016")	TN**1604… (TN** 33...)	1.5 (1.11)	QC-16... (16 mm) QC-10X... (0.625")

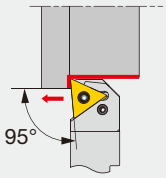
Torque*: Recommended clamping torque: N·m (lbs·ft)
RE**: Standard corner radius

SPARE PARTS

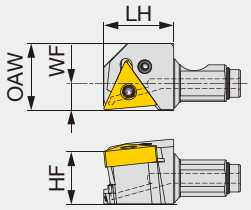
Designation	Clamping screw	Wrench	Lever	O-ring
QC16-PTL2NR16-Y-CHP	LCS33	P-2	LCL33N	ORSS-0757.5X1.0NBR70

QC16-PTL2NR-CHP

Lever-lock modular head with 95° approach angle, for negative 60° triangular inserts, with high pressure coolant capability



Cutting edge style **L2**



Without offset

Right hand (R) shown.

Metric	LH	HF	WF	OAW	RE**	Insert	Torque*	Shank
QC16-PTL2NR16-CHP	21 (0.827")	16 (0.630")	8 (0.315")	20 (0.787")	0.4 (0.016")	TN**1604… (TN** 33...)	1.5 (1.11)	QC-16... (16 mm) QC-10X... (0.625")

Torque*: Recommended clamping torque: N·m (lbs·ft)
RE**: Standard corner radius

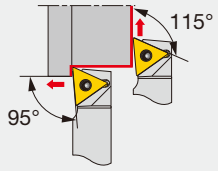
SPARE PARTS

Designation	Clamping screw	Wrench	Lever	O-ring
QC16-PTL2NR16-CHP	LCS33	P-2	LCL33N	ORSS-0757.5X1.0NBR70

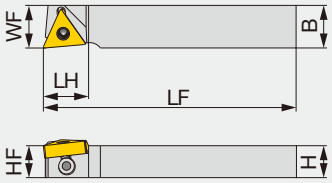
Reference pages : Inserts → 2-75 -, CBN → 2-113 -, PCD → 2-129, Shank, Accessory → 3-130 -

JTTLNR/L

Back-clamp toolholder with 95° approach angle, for negative 60° triangular inserts



Cutting edge style **L**



Without offset

Right hand (R) shown.

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
JTTLNR/L1216F16	12	16	85	17	12	16	0.4	TN**1604...	1
JTTLNR/L1216X16	12	16	120	17	12	16	0.4	TN**1604...	1
JTTLNR/L1616X16	16	16	120	17	16	16	0.4	TN**1604...	1

Torque*: Recommended clamping torque (N·m)
RE**: Standard corner radius

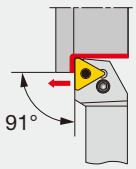
SPARE PARTS

Designation	Clamp	Clamping screw	Clamping screw 1	Wrench
JTTLNR/L...	JCP-3N	JDS-5040	-	P-2.5F

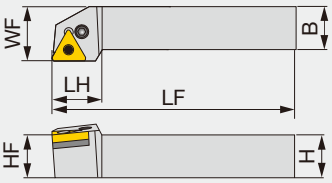
ISOEcoTURN

PTGNR/L

Lever-lock toolholder with 91° approach angle, for negative triangular inserts



Cutting edge style **G**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
PTGNR/L1223	0.750	0.750	4.500	0.750	0.750	1.000	0.031	TN** 23...	1.5
PTGNR/L1623	1.000	1.000	6.000	0.750	1.000	1.250	0.031	TN** 23...	1.5

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PTGNR/L1616	16	16	100	22	16	20	0.8	TN**1604...	2
PTGNR/L2020K1104	20	20	125	20	20	25	0.8	TN**1104...	2
PTGNR/L2020	20	20	125	22	20	25	0.8	TN**1604...	2

Torque: Recommended clamping torque: lbs·ft (*N·m) **RE: Standard corner radius

SPARE PARTS

Designation	Shim	Clamping screw	Wrench	Spring pin	Lever
PTGNR/L**23, PTGNR/L**1104	-	LCS23A	P-2.5	-	LCL23
PTGNR/L1616, 2020	LST317	LCS3	P-2.5	LSP3	LCL3

Reference pages : Inserts → 2-75 -, CBN → 2-113 -, PCD → 2-129

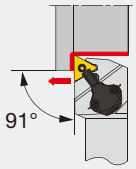
TN

Triangular with hole

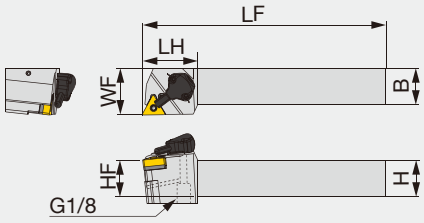
TUNGTJET URN
PTGNR/L-CHP

Tube connection

Lever lock toolholders – 91° approach angle.
For negative triangle insert. High-pressure coolant capability.



Cutting edge style **G**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE **	Insert	Torque
PTGNR/L1223-CHP	0.750	0.750	4.500	1.500	0.750	1.250	0.031	TN** 23...	1.48
PTGNR/L123-CHP	0.750	0.750	4.500	1.500	0.750	1.250	0.031	TN** 33...	1.48
PTGNR/L1623-CHP	1.000	1.000	6.000	1.500	1.000	1.250	0.031	TN** 23...	1.48
PTGNR/L163-CHP	1.000	1.000	6.000	1.500	1.000	1.250	0.031	TN** 33...	1.48
Metric	**H**	**B**	**LF**	**LH**	**HF**	**WF**	**RE ** **	**Insert**	**Torque***
PTGNR/L2020K1104-CHP	20	20	125	38	20	32	0.8	TN**1104...	2
PTGNR/L2020K16-CHP	20	20	125	38	20	32	0.8	TN**1604...	2

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE: Standard corner radius

SPARE PARTS

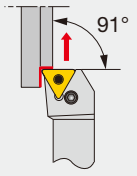
Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
PTGNR/L**23-CHP, PTGNR/L**1104-CHP	-	LCS23A	P-2.5	LSP3	LCL23
PTGNR/L123, 163-CHP PTGNR/L**16-CHP	LST317	LCS3	P-2.5	LSP3	LCL3

SPARE PARTS

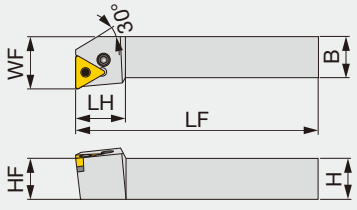
Designation	Coolant unit	Mounting screw	Wrench 2	O-ring	Coolant screw	Wrench 3
PTGNR/L**23-CHP, PTGNR/L**1104-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2
PTGNR/L123, 163-CHP PTGNR/L**16-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

TURNINGA
PTFNR/L

Lever-lock toolholder with 91° approach angle, for negative triangular inserts



Cutting edge style **F**



Right hand (R) shown.

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PTFNR/L1616	16	16	100	22	16	20	0.8	TN**1604...	2
PTFNR/L2020K1104	20	20	125	16	20	25	0.8	TN**1104...	2
PTFNR/L2020	20	20	125	22	20	25	0.8	TN**1604...	2

*Torque: Recommended clamping torque (N·m)
**RE : Standard corner radius

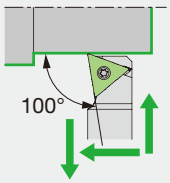
SPARE PARTS

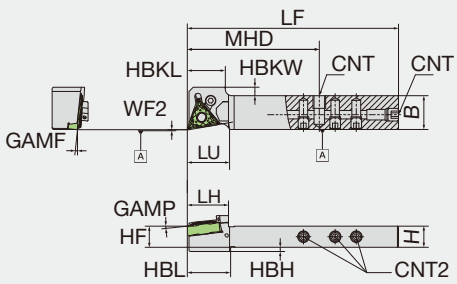
Designation	Shim	Clamping screw 1	Clamping screw 2	Wrench	Spring pin	Lever
PTFNR/L1616, 2020	LST317	-	LCS3	P-2.5	LSP3	LCL3
PTFNR/L**1104	-	LCS23A	-	P-2.5	-	LCL23

Reference pages : Inserts → 2-75 -, CBN → 2-113 -, PCD → 2-129

PTXN-OH3

Lever-lock toolholder with 100° approach angle, for negative 60° rhombic inserts, with high pressure coolant capability





Without offset

Right hand (R) shown.

Metric	H	B	LF	LH	GAMF	GAMP	GAMP	HBKL	HBKW	HBL	HF	LU	MHD	WF2	CNT	CNT2	Insert
PTXNR1016X33N-OH3	10	16	100	19.5	6°	6°	2	18	4	20.5	10	20	62.5	0	M6*1	M5	TN**1604...
PTXNR1616X33N-OH3	16	16	120	19.5	6°	6°	–	18	4	–	16	20	78.75	0	Rc1/8	M5	TN**1604...

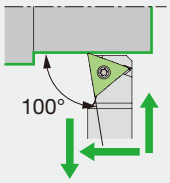
NOTE: Reference Chart of OH3 Hole Position→10-1

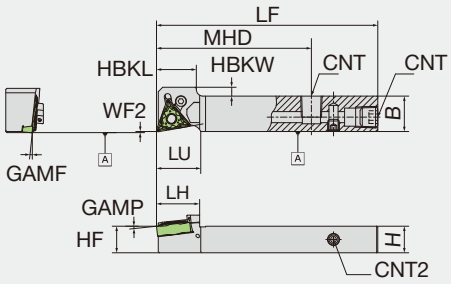
SPARE PARTS

Designation	Clamp screw	Lever	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)
PTXNR**X33N-OH3	LCS33	LCL33N	SS0605SC	SS0505SC	LW-2.5

PTXN-OH2

Lever-lock toolholder with 100° approach angle, for negative 60° rhombic inserts, with high pressure coolant capability





Without offset

Right hand (R) shown.

Metric	H	B	LF	LH	GAMF	GAMP	HBKL	HBKW	HF	LU	MHD	WF2	CNT	CNT2	Insert
PTXNR1216X33N-OH2	12	16	100	19.5	6°	6°	18	4	12	20	70	0	Rc1/8	M5	TN**1604...

SPARE PARTS

Designation	Clamp screw	Lever	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)
PTXNR1216X33N-OH2	LCS33	LCL33N	SPR1/8	SS0505SC	LW-2.5

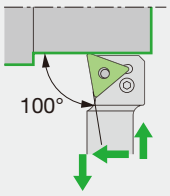
Reference pages : Inserts → 2-75 -, CBN → 2-113 -, PCD → 2-129

TN

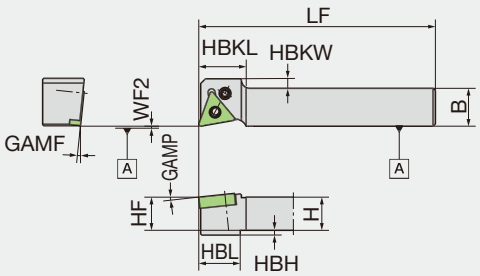
Triangular with hole

PTXNR-N

Lever-lock toolholder with 100° approach angle, for negative 60° rhombic inserts



Without offset



Right hand (R) shown.

Inch	H	B	LF	GAMF	GAMP	HBH	HBKL	HBKW	HBL	HF	WF2	Insert
PTXNR063C	0.375	0.375	4.724	6°	6°	0.097	0.709	0.162	0.689	0.375	0	TN**33...
PTXNR083C	0.500	0.500	4.724	6°	6°	-	0.709	0.162	-	0.500	0	TN**33...
PTXNR103C	0.625	0.625	4.724	6°	6°	-	0.709	0.162	-	0.625	0	TN**33...

Metric	H	B	LF	GAMF	GAMP	HBH	HBKL	HBKW	HBL	HF	WF2	Insert
PTXNR1016X33N	10	16	120	6°	6°	2	18	4	17.5	10	0	TN**1604...
PTXNR1216X33N	12	16	120	6°	6°	–	18	4	–	12	0	TN**1604...
PTXNR1216X33NGX	12	16	85	6°	6°	–	18	4	–	12	0	TN**1604...
PTXNR1616X33N	16	16	120	6°	6°	–	18	4	–	16	0	TN**1604...
PTXNR2020X33N	20	20	120	6°	6°	–	18	–	–	20	0	TN**1604...

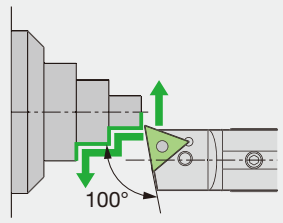
SPARE PARTS

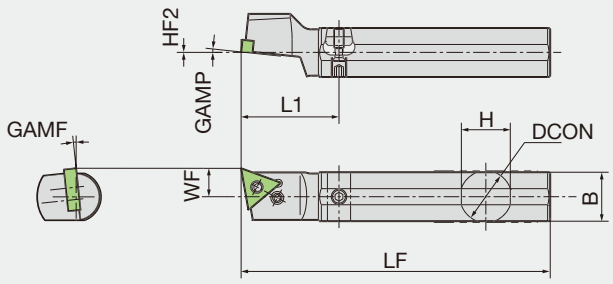
Designation	Clamp screw	Lever	Wrench (for Wedge)
PTXNR**	LCS33	LCL33N	LW-2

Reference pages : Inserts → 2-75 -, CBN → 2-113 -, PCD → 2-129

DS-PTXL-ACH

Lever-lock round-shank toolholder with 100° approach angle, for negative 60° rhombic inserts, with adjustable centerline height capability





Left hand (L) shown.

Metric	H	B	LF	DCON	GAMF	GAMP	HF2	L1	WF	Insert
DS-PTXL16-33-ACH	15.5	15	120	16	6°	6°	Type B(0~+0.3)	38	11	TN**1604...
DS-PTXL19-33-ACH	18	18	120	19.05	6°	6°	Type B(0~+0.3)	38	11	TN**1604...
DS-PTXL20-33-ACH	19	19	120	20	6°	6°	Type B(0~+0.3)	38	11	TN**1604...
DS-PTXL22-33-ACH	21	21	120	22	6°	6°	Type B(0~+0.3)	38	12	TN**1604...
DS-PTXL25-33-ACH	24	24	150	25.4	6°	6°	Type A(0~+0.2)	38	13	TN**1604...
DS-PTXL25-33MET-ACH	24	24	150	25	6°	6°	Type A(0~+0.2)	38	13	TN**1604...

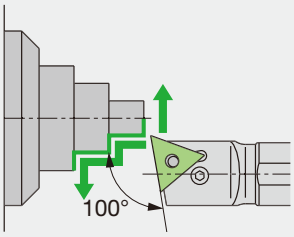
NOTE: Use a right-handed (R) or non-handed insert.

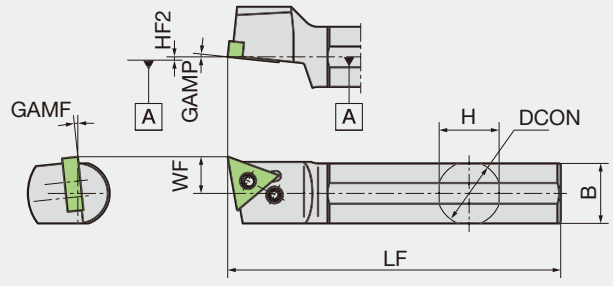
SPARE PARTS

Designation	Clamp screw	Screw (for Wedge)	Lever	Wedge	Wrench (for Wedge)
DS-PTXL16-33-ACH	LCS33	WS060415-003	LCL33N	ACH-W18	LW-2
DS-PTXL19-33-ACH	LCS33	WS060415-003	LCL33N	ACH-W18	LW-2
DS-PTXL20-33-ACH	LCS33	WS060419-004	LCL33N	ACH-W18	LW-2
DS-PTXL22-33-ACH	LCS33	WS060419-004	LCL33N	ACH-W18	LW-2
DS-PTXL25-33**	LCS33	WS060419-004	LCL33N	ACH-W24	LW-2

DS-PTXL

Lever-lock round-shank toolholder with 100° approach angle, for negative 60° rhombic inserts





Left hand (L) shown.

Metric	H	B	LF	DCON	GAMF	GAMP	HF2	L1	WF	Insert
DS-PTXL16-33	15	15	120	16	6°	6°	0	–	11	TN**1604...
DS-PTXL19-33	18	18	120	19.05	6°	6°	0	–	11	TN**1604...
DS-PTXL20-33	19	19	120	20	6°	6°	0	–	11	TN**1604...
DS-PTXL22-33	21	21	120	22	6°	6°	0	–	12	TN**1604...
DS-PTXL25M-33	24	24	150	25.4	6°	6°	0	–	13	TN**1604...

NOTE: Use a right-handed (R) or non-handed insert.

SPARE PARTS

Designation	Clamp screw	Lever	Wrench (for Clamp screw)
DS-PTXL**	LCS33	LCL33N	LW-2

Reference pages : Inserts → 2-75 -, CBN → 2-113 -, PCD → 2-129

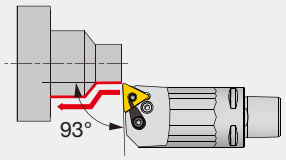
TN

Triangular with hole

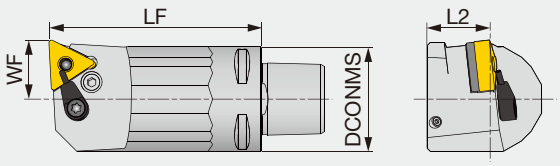
TUNGCAP

C-PTUNL-CHP

Lever-lock toolholder, with 93° approach angle, for negative 60° triangular inserts, with high pressure coolant capability



Cutting edge style **U**



Left hand (L) shown.

Metric	DCONMS	LF	L2	WF	RE	Insert
C3PTUNL18040-16-CHP	32	40	19	18	0.8	TN**1604...
C3PTUNL18065-16-CHP	32	65	19	18	0.8	TN**1604...

Applicable for 14 MPa (2031 PSI) coolant
Cannot be used for boring

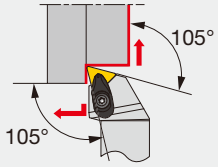
SPARE PARTS

Designation	Coolant unit	Shim	Lever	Clamping screw	Spring pin	Wrench
C3PTUNL...	S-CU-CHP	LST317	LCL3	LCS3	LSP3	P-2.5

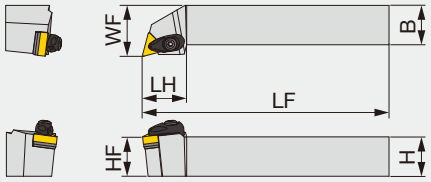
TURNINGA

ATQNR/L

Double-clamp toolholder with 105° approach angle, for negative 60° triangular inserts



Cutting edge style **Q**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
ATQNR/L123-A	0.750	0.750	4.500	1.125	0.750	1.000	0.031	TN** 33...	2.2
ATQNR/L163-A	1.000	1.000	6.000	1.125	1.000	1.250	0.031	TN** 33...	2.2

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
ATQNR/L2020K16-A	20	20	125	28	20	25	0.8	TN**1604...	3
ATQNR/L2525M16-A	25	25	150	28	25	32	0.8	TN**1604...	3

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE : Standard corner radius

SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
ATQNR/L...	ACP3S	ACS-5W	BP-7	SP-2.5	AST322	CSTB-3.5	T-15F

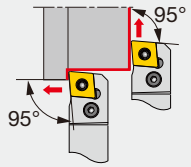
Reference pages : Inserts → 2-75 -, CBN → 2-113 -, PCD → 2-129

CN

Rhombic, 80° with hole

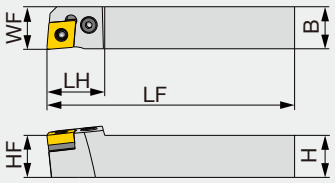
PCL2NR

Lever-lock toolholder with 95° approach angle, for negative 80° rhombic inserts



Cutting edge style **L2**

Without offset



Right hand (R) shown.

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PCL2NR2020H12	20	20	100	26	20	20	0.8	CN/GN**1204...	3

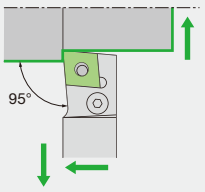
Torque*: Recommended clamping torque (N·m)
RE**: Standard corner radius

SPARE PARTS

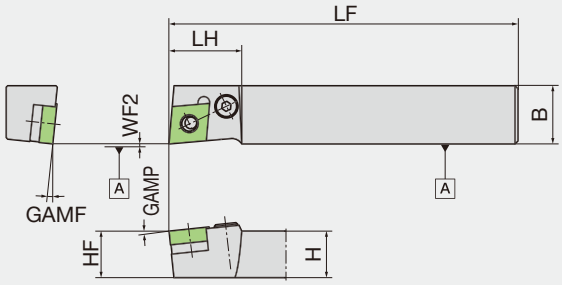
Designation	Shim	Clamping screw	Lever	Spring pin	Wrench
PCL2NR2020H12	LSC42	LCS4	LCL4	LSP4	P-3

PCLNR-N

Lever-lock toolholder with 95° approach angle, for negative 80° rhombic inserts



Without offset



Right hand (R) shown.

Metric	H	B	LF	LH	GAMF	GAMP	HF	WF2	Insert
PCLNR1620X43N	16	20	120	25	6°	6°	16	0	CN**1204...

SPARE PARTS

Designation	Shim seat	Clamp screw	Lever	Spring	Wrench (for Clamp screw)
PCLNR1620X43N	LSC42	LCS4CA	LCL4	LSP4	LW-3

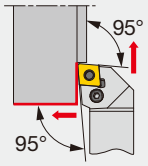
Reference pages : Inserts → 2-60 -, CBN → 2-103 -, PCD → 2-128

CN

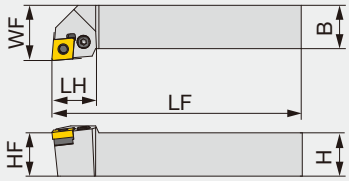
Rhombic, 80° with hole

J-SERIES
PCLNR/L

Lever-lock toolholder with 95° approach angle, for negative 80°/70° rhombic inserts



Cutting edge style **L**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
PCLNR/L1233	0.750	0.750	4.500	0.813	0.750	1.000	0.031	CN**/GNMG 33...	1.48
PCLNR/L1633	1.000	1.000	6.000	0.813	1.000	1.250	0.031	CNMG332E	1.48

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PCLNR/L1616H09	16	16	100	20	16	20	0.8	CN**0903...	2
PCLNR/L1616	16	16	100	26	16	20	0.8	CN**/GNGA1204...	3
PCLNR/L1616H12E	16	16	100	26	16	20	0.8	CN**/GNGA1204...	3
PCLNR/L2020K09	20	20	125	20	20	25	0.8	CN**0903...	2
PCLNR/L2020K0904	20	20	125	20	20	25	0.8	CN**/GNMG0904...	2
PCLNR/L2020	20	20	125	28	20	25	0.8	CN**/GNGA1204...	3
PCLNR/L2020K12E	20	20	125	28	20	25	0.8	CN**/GNGA1204...	3

Torque: Recommended clamping torque: lbs·ft (*N·m) RE**: Standard corner radius

SPARE PARTS

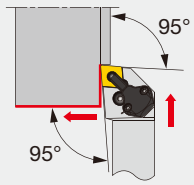
Designation	Shim	Clamping screw	Wrench	Spring pin	Lever
PCLNR/L**09	ELSC32	LCS3	P-2.5	LSP3L	LCL33
PCLNR/L1616	LSC42	LCS4CA	P-3	LSP4	LCL4
PCLNR/L1616H12E	ELSC42	LCS4CA	P-3	LSP4S	LCL43S
PCLNR/L1233, PCLNR/L**0904	LSC317	LCS3	P-2.5	LSP3	LCL33
PCLNR/L2020	LSC42	LCS4	P-3	LSP4	LCL4
PCLNR/L2020K12E	ELSC42	LCS4	P-3	LSP4S	LCL43M

Reference pages : Inserts → 2-60 -, CBN → 2-103 -, PCD → 2-128

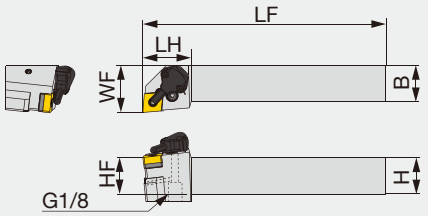
PCLNR/L-CHP

Tube connection

Lever lock toolholders – 95° approach angle.
For negative 80°/70° rhombic insert. High-pressure coolant capability.



Cutting edge style **L**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
PCLNR/L1233-CHP	0.750	0.750	4.500	1.300	0.750	1.250	0.031	CN**/GNMG 33...	1.48
PCLNR/L124-CHP	0.750	0.750	4.500	1.300	0.750	1.250	0.031	CN**/GNGA 43...	2.21
PCLNR/L1633-CHP	1.000	1.000	6.000	1.300	1.000	1.250	0.031	CN**/GNMG 33...	1.48
PCLNR/L164-CHP	1.000	1.000	6.000	1.300	1.000	1.250	0.031	CN**/GNGA 43...	2.21

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PCLNR/L2020K0904-CHP	20	20	125	33	20	32	0.8	CN**/GNMG0904...	2
PCLNR/L2020K12-CHP	20	20	125	33	20	32	0.8	CN**/GNGA1204...	3

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE: Standard corner radius

SPARE PARTS

Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
PCLNR/L**33-CHP, PCLNR/L**0904-CHP	LSC317	LCS3	P-2.5	LSP3	LCL33
PCLNR/L**4-CHP, PCLNR/L**12-CHP	LSC42	LCS4	P-3	LSP4	LCL4

SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring	Coolant screw	Wrench 3
PCLNR/L**33-CHP, PCLNR/L**0904-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2
PCLNR/L**4-CHP, PCLNR/L**12-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

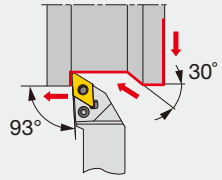
Reference pages : Inserts → 2-60 -, CBN → 2-103 -, PCD → 2-128

DN

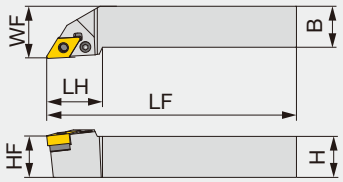
Rhombic, 55° with hole

PDJNR/L

Lever-lock toolholder with 93° approach angle, for negative 55°/45° rhombic inserts



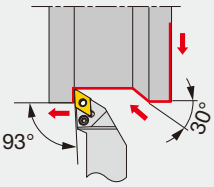
Cutting edge style **J**



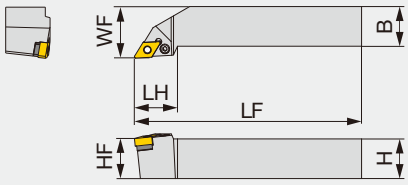
Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
PDJNR/L1033	0.625	0.625	4.000	1.125	0.625	0.875	0.031	DN**/FNMG 33...	1.48
PDJNR/L1233	0.750	0.750	4.500	1.125	0.750	1.000	0.031	DN**/FNMG 33...	1.48

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PDJNR2020H15	20	20	100	32	20	25	0.8	DN**/FNGA1504...	3



Cutting edge style **J**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
PDJNR/L1033	0.625	0.625	4.000	1.125	0.625	0.875	0.031	DN**/FNMG 33...	1.5
PDJNR/L1233	0.750	0.750	4.500	1.125	0.750	1.000	0.031	DN**/FNMG 33...	1.5
PDJNR/L1633	1.000	1.000	6.000	1.125	1.000	1.250	0.031	DN**/FNMG 33...	1.5

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PDJNR/L1616H1104	16	16	100	27	16	20	0.8	DN**/FNMG1104...	2
PDJNR/L1616H11	16	16	100	27	16	20	0.8	DN**/FNMG1104...	2
PDJNR/L2020K1104	20	20	125	27	20	25	0.8	DN**/FNMG1104...	2
PDJNR/L2020K11	20	20	125	27	20	25	0.8	DN**/FNMG1104...	2
PDJNR/L2020	20	20	125	34	20	25	0.8	DN**/FNGA1504...	3
PDJNR2020K15E	20	20	125	36	20	25	0.8	DN**/FNGA1506...	3
PDJNR/L2520	25	20	150	34	25	25	0.8	DN**/FNGA1504...	3

Torque: Recommended clamping torque: lbs·ft (*N·m) **RE: Standard corner radius

SPARE PARTS

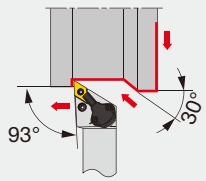
Designation	Shim	Clamping screw	Wrench	Spring pin	Lever
PDJNR/L**33, PDJNR/L**11/1104	ELSD32	LCS3	P-2.5	LSP3	LCL33L
PDJNR2020H15, PDJNR/L2020, PDJNR/L2520	LSD42	LCS4	P-3	LSP4	LCL4
PDJNR2020K15E	ELSD42	ELCS4	P-3	LSP4S	LCL44

Reference pages : Inserts → 2-67 -, 2-74, CBN → 2-106 -, 2-110 -, PCD → 2-128 -

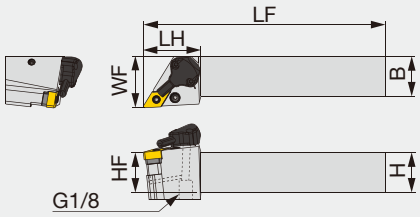
PDJNR/L-CHP

Tube connection

Lever lock toolholders – 93° approach angle.
For negative 55°/45° rhombic insert. High-pressure coolant capability.



Cutting edge style **J**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
PDJNR/L1233-CHP	0.750	0.750	4.500	1.420	0.750	1.250	0.031	DN**/FNMG 33...	1.48
PDJNR/L124-CHP	0.750	0.750	4.500	1.420	0.750	1.250	0.031	DN**/FNGA 43...	2.21
PDJNR/L1633-CHP	1.000	1.000	6.000	1.420	1.000	1.250	0.031	DN**/FNMG 33...	1.48
PDJNR/L164-CHP	1.000	1.000	6.000	1.420	1.000	1.250	0.031	DN**/FNGA 43...	2.21

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PDJNR/L2020K1104-CHP	20	20	125	36	20	32	0.8	DN**/FNMG1104...	2
PDJNR/L2020K15-CHP	20	20	125	36	20	32	0.8	DN**/FNGA1504...	3

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE: Standard corner radius
20Mpa (2901 PSI)

SPARE PARTS

Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
PDJNR/L**33-CHP, PDJNR/L**1104-CHP	ELSD32	LCS3	P-2.5	LSP3	LCL33L
PDJNR/L**4-CHP, PDJNR/L**15-CHP	LSD43A	LCS4	P-3	LSP4	LCL4

SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring	Coolant screw	Wrench 3
PDJNR/L**33-CHP, PDJNR/L**1104-CHP	CU-D-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2
PDJNR/L**4-CHP, PDJNR/L**15-CHP	CU-D-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

Reference pages : Inserts → 2-67 -, 2-74, CBN → 2-106 -, 2-110 -, PCD → 2-128 -

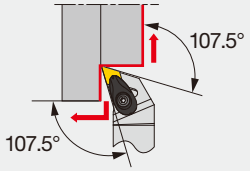
DN

Rhombic, 55° with hole

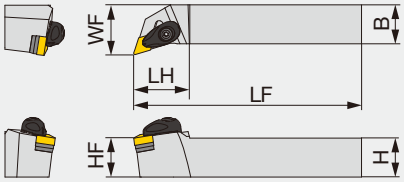
TURNINGA

ADQNR/L

Double-clamp toolholder with 107.5° approach angle, for negative 55°/45° rhombic inserts



Cutting edge style **Q**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
ADQNR/L1233-A	0.750	0.750	4.500	1.150	0.750	1.000	0.031	DN**/FNMG 33...	2.2
ADQNR/L124-A	0.750	0.750	4.500	1.250	0.750	1.000	0.031	DN**/FNGA 43...	2.2
ADQNR/L1633-A	1.000	1.000	6.000	1.150	1.000	1.250	0.031	DN**/FNMG 33...	2.2
ADQNR/L164-A	1.000	1.000	6.000	1.500	1.000	1.250	0.031	DN**/FNGA 43...	2.2

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
ADQNR/L2020K1104-A	20	20	125	30	20	25	0.8	DN**/FNMG1104...	3
ADQNR/L2020K15-A	20	20	125	32	20	25	0.8	DN**/FNGA1504...	3
ADQNR/L2020K1506-A	20	20	125	32	20	25	0.8	DN**/FNGA1506...	3

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE : Standard corner radius

SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
ADQNR/L**33-A, ADQNR/L**1104-A	ACP3S-E	ACS-5W	BP-7	SP-2.5	ASD322	CSTB-3.5	T-15F
ADQNR/L124, 164-A, ADQNR/L**15-A	ACP4S	ACS-5W	BP-7	SP-2.5	ASD432	CSTB-3.5	T-15F
ADQNR/L**1506-A	ACP4S	ACS-5W	BP-7	SP-2.5	ASD423	CSTB-3.5	T-15F

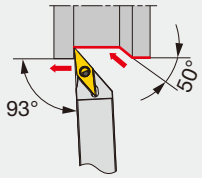
Reference pages : Inserts → 2-67 -, 2-74, CBN → 2-106 -, 2-110 -, PCD → 2-128 -

VN

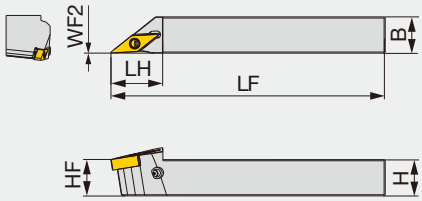
Rhombic, 35° with hole

ISOTURN
JPVJ2NR/L

Back-clamp toolholder with 93° approach angle, for negative 35° rhombic inserts



Cutting edge style **J**



Without offset

Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
JPVJ2NR082.33	0.500	0.500	4.750	0.900	0.500	0	0.0078	VN**2.33...	0.66
JPVJ2NR102.33	0.625	0.625	4.750	0.900	0.625	0	0.0078	VN**2.33...	0.66

Metric	H	B	LF	LH	HF	WF2	RE**	Insert	Torque*
JPVJ2NR/L1212X1204	12	12	120	23	12	0	0.2	VN**1204...	0.9
JPVJ2NR/L1616X1204	16	16	120	23	16	0	0.2	VN**1204...	0.9

Torque: Recommended clamping torque: lbs·ft (*N·m)
RE**: The holder measurements are true with this insert radius

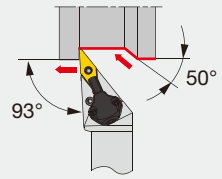
SPARE PARTS

Designation	Lever	Pin	Clamping screw	Wrench
JPVJ2NR/L***.33 JPVJ2NR/L**1204	SLLV-4	SL-PI-2	SR10400611	HW2.0/5RED

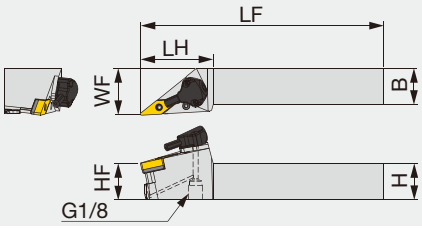
TUNGTURN
PVJNR/L-CHP

Tube connection

Lever lock toolholders – 93° approach angle.
For negative 35°/25° rhombic insert. High-pressure coolant capability.



Cutting edge style **J**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
PVJNR/L123-CHP	0.750	0.750	4.500	1.969	0.750	1.250	0.031	VN**/YN** 33...	1.48
PVJNR/L122.33-CHP	0.750	0.750	4.500	2.000	0.750	1.250	0.031	VN** 2.33...	1.48
PVJNR/L163-CHP	1.000	1.000	6.000	1.969	1.000	1.250	0.031	VN**/YN** 33...	1.48
PVJNR/L162.33-CHP	1.000	1.000	6.000	2.000	1.000	1.250	0.031	VN** 2.33...	1.48

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PVJNR/L2020K1204-CHP	20	20	125	50	20	32	0.8	VN**1204...	2
PVJNR/L2020K16-CHP	20	20	125	50	20	32	0.8	VN**/YN**1604...	2

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE: Standard corner radius
20Mpa (2901 PSI)

SPARE PARTS

Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
PVJNR/L**2.33-CHP, PVJNR/L**1204-CHP	LSV212	LCS3V	P-2.5	LSP3	LCL3V
PVJNR/L123, 163-CHP, PVJNR/L**16-CHP	LSV317	LCS3V	P-2.5	LSP3	LCL3V

SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring	Coolant screw	Wrench 3
PVJNR/L**2.33-CHP, PVJNR/L**1204-CHP	CU-V-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2
PVJNR/L123, 163-CHP, PVJNR/L**16-CHP	CU-V-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

Reference pages : Inserts → 2-83 -, 2-86, CBN → 2-116 -, 2-117 -, PCD → 2-130

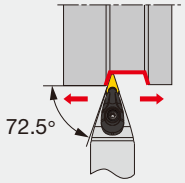
VN

**Rhombic, 35°
with hole**

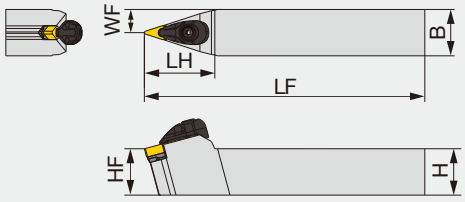
TURNING

AVVNN

Double-clamp toolholder with 72.5° approach angle, for negative 35°/25° rhombic inserts



Cutting edge style **V**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert	Torque
AVVNN122.33-A	0.750	0.750	4.500	1.500	0.750	0.375	0.031	VN** 2.33...	2.2
AVVNN123-A	0.750	0.750	4.500	1.870	0.750	0.375	0.031	VN**/YN** 33...	2.2
AVVNN162.33-A	1.000	1.000	6.000	1.500	1.000	0.500	0.031	VN** 2.33...	2.2
AVVNN163-A	1.000	1.000	6.000	1.870	1.000	0.500	0.031	VN**/YN** 33...	2.2

Metric	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
AVVNN2020K1204-A	20	20	125	38	20	10	0.8	VN**1204...	3
AVVNN2020K16-A	20	20	125	46	20	10	0.8	VN**/YN**1604...	3

Torque: Recommended clamping torque: lbs·ft (*N·m) **RE: Standard corner radius

SPARE PARTS

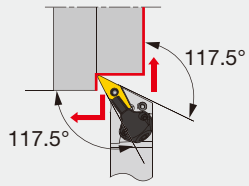
Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
AVVNN**2.33-A, AVVNN**1204-A	ACP3L-E	ACS-5W	BP-7	SP-2.5	ASV222	CSTB-3.0	T-15F
AVVNN123, 163-A, AVVNN**16-A	ACP3L	ACS-5W	BP-7	SP-2.5	ASV322	CSTB-3.5	T-15F

TUNGTURN TJET

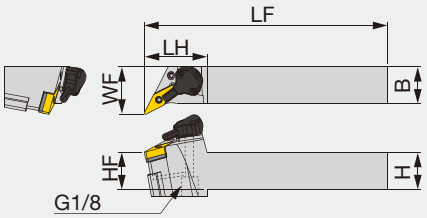
PVQNR/L-CHP

Tube connection

Lever lock toolholders – 117.5° approach angle.
For negative 35°/25° rhombic insert. High-pressure coolant capability.



Cutting edge style **Q**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE **	Insert	Torque
PVQNR/L123-CHP	0.750	0.750	4.500	1.688	0.750	1.250	0.031	VN**/YN** 33...	1.48
PVQNR/L163-CHP	1.000	1.000	6.000	1.688	1.000	1.250	0.031	VN**/YN** 33...	1.48

Metric	H	B	LF	LH	HF	WF	RE **	Insert	Torque*
PVQNR/L2020K16-CHP	20	20	125	42.5	20	32	0.8	VN**/YN**1604...	2

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE: Standard corner radius

SPARE PARTS

Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
PVQNR/L**-CHP	LSV317	LCS3V	P-2.5	LSP3	LCL3V

SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring	Coolant screw	Wrench 3
PVQNR/L**-CHP	CU-V-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

Reference pages : Inserts → 2-83 -, 2-86, CBN → 2-116 -, 2-117 -, PCD → 2-130

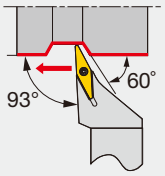
YW

Rhombic, 25°
with hole
Positive 7°

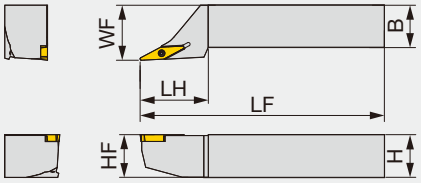
Y-PRO SERIES

SYJBR/L

Screw-on toolholder with 93° approach angle, for positive 25° rhombic inserts



Cutting edge style **J**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert
SYJBR/L123	0.750	0.750	4.500	1.350	0.750	1.000	0.031	YWMT16T3...
SYJBR/L163	1.000	1.000	6.000	1.500	1.000	1.250	0.031	YWMT16T3...

Metric	H	B	LF	LH	HF	WF	RE**	Insert
SYJBR/L2020K16	20	20	125	35	20	25	0.8	YWMT16T3...

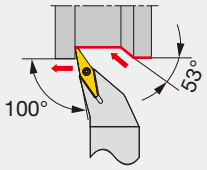
**RE: Standard corner radius

SPARE PARTS

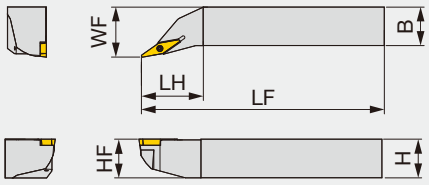
Designation	Clamping screw	Wrench
SYJBR/L...	CSTB-2.5L080	T-8F

SYHBR/L

Screw-on toolholder with 100° approach angle, for positive 25° rhombic inserts



Cutting edge style **H**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert
SYHBR/L123	0.750	0.750	4.500	1.350	0.750	1.000	0.031	YWMT16T3...
SYHBR/L163	1.000	1.000	6.000	1.500	1.000	1.250	0.031	YWMT16T3...

Metric	H	B	LF	LH	HF	WF	RE**	Insert
SYHBR/L2020K16	20	20	125	35	20	27	0.8	YWMT16T3...

**RE : Standard corner radius

SPARE PARTS

Designation	Clamping screw	Wrench
SYHBR/L...	CSTB-2.5L080	T-8F

Reference pages : Inserts → 2-59

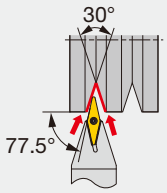
YW

Rhombic, 25°
with hole
Positive 7°

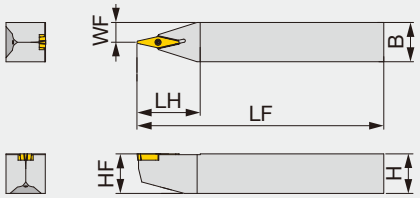
Y-PRO SERIES

SYIBN

Screw-on toolholder with 77.5° approach angle, for positive 25° rhombic inserts



Cutting edge style **I**



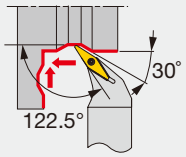
Inch	H	B	LF	LH	HF	WF	RE**	Insert
SYIBN123	0.750	0.750	4.500	1.250	0.750	0.375	0.031	YWMT16T3...
SYIBN163	1.000	1.000	6.000	1.500	1.000	0.500	0.031	YWMT16T3...

Metric	H	B	LF	LH	HF	WF	RE**	Insert
SYIBN2020K16	20	20	125	32	20	10	0.8	YWMT16T3...

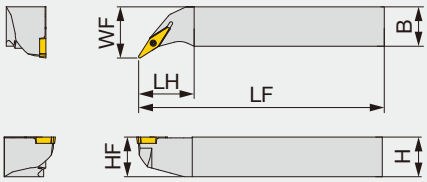
**RE : Standard corner radius

SYQBR/L

Screw-on toolholder with 122.5° approach angle, for positive 25° rhombic inserts



Cutting edge style **Q**



Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	RE**	Insert
SYQBR/L123	0.750	0.750	4.500	1.350	0.750	1.000	0.031	YWMT16T3...
SYQBR/L163	1.000	1.000	6.000	1.500	1.000	1.250	0.031	YWMT16T3...

Metric	H	B	LF	LH	HF	WF	RE**	Insert
SYQBR/L2020K16	20	20	125	35	20	27	0.8	YWMT16T3...

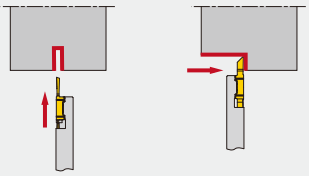
**RE : Standard corner radius

SPARE PARTS

Designation	Clamping screw	Wrench
SYIBN..., SYQBR/L...	CSTB-2.5L080	T-8F

Reference pages : Inserts → 2-59

Parting-off and front turning toolholders



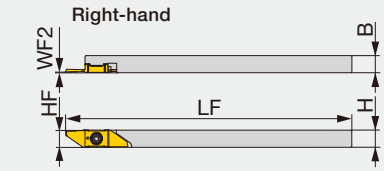


Fig. 1

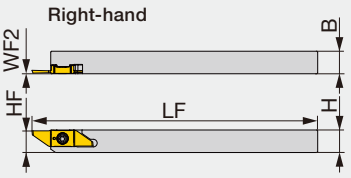
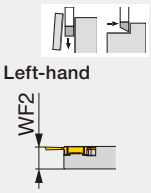


Fig. 2



Metric	H	B	LF	HF	WF2(1)	Insert	Torque*	Fig.
JSXXL0606X05	6	6	120	5.6	5.8	JV*N..., JVN...	1.3	1
JSXXR/L0707X05	7	7	120	6.6	0.2/6.8	JV*N..., JVN...	1.3	1
JSXXR/L0808F05	8	8	85	7.7	0.2/7.8	JV*N..., JVN...	1.3	2
JSXXR/L0808H05	8	8	100	7.7	0.2/7.8	JV*N..., JVN...	1.3	2
JSXXR/L1010H05	10	10	100	9.7	0.2/9.8	JV*N..., JVN...	1.3	2

Torque*: Recommended clamping torque (N·m)
(1) The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.
Use the right-hand insert (JV****R...) for a right-hand holder (JSXXR...); the left-hand insert (JV****L...) for a left-hand holder (JSXXL...).

SPARE PARTS

Designation	Clamping screw	Wrench
JSXXR...05	CSTB-2.5L054DL	T-7F
JSXXL...05	CSTB-2.5L054DR	T-7F

INSERT

JVFN45R/L (For front turning)

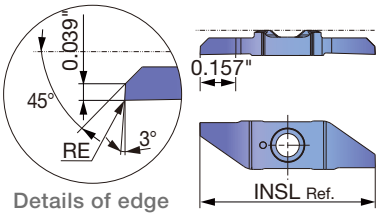


Fig. 1

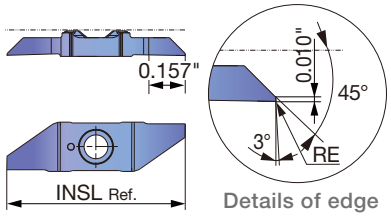


Fig. 2

P	Steel	★
M	Stainless	★
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	★
H	Hard materials	

★ : First choice

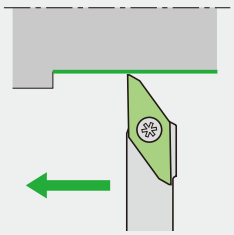
Designation	HAND	RE	Coated SH725	INSL (in)	Fig.
JVFN45R0310F	R	0	●	0.827	1
JVFN45L0302FL	L	0	●	0.827	2

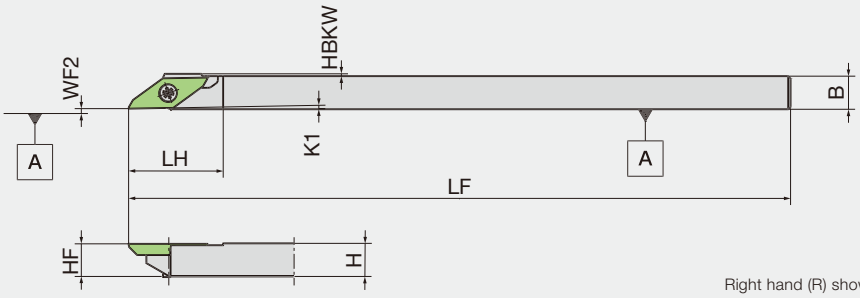
● : Line up

CSVF.. series/Toolholder

CSVR/L

Screw-on toolholder for front turning





Right hand (R) shown.

Inch	H	B	LF	LH	HBKW	HF	K1	WF2	Insert
CSVR06-IN-NC	0.375	0.375	4.724	0.787	-	0.375	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08-IN-NC	0.500	0.500	4.724	0.787	-	0.500	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL06-IN-NC	0.375	0.375	4.724	0.787	-	0.375	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL08-IN-NC	0.500	0.500	4.724	0.787	-	0.500	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..

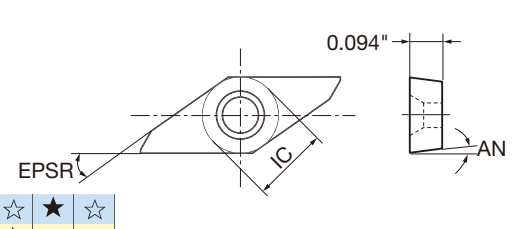
Metric	H	B	LF	LH	HBKW	HF	K1	WF2	Insert
CSVR07	7	7	140	20	0.5	7	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR07GX	7	7	85	20	0.5	7	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08	8	8	140	20	0	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08GX	8	8	85	20	0	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR095	9.5	9.5	140	20	0	9.5	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR10	10	10	140	20	0	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR12	12	12	140	20	0	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR12GX	12	12	85	20	0	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL07	7	7	140	20	0.5	7	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL08	8	8	140	20	0	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL10	10	10	140	20	0	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL08NC	8	8	120	20	-	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL10NC	10	10	120	20	-	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL12NC	12	12	120	20	-	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08NC	8	8	120	20	-	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08NC-F	8	8	120	20	-	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR10GXNC	10	10	85	20	-	10	1°	0 - 0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR10NC	10	10	120	20	-	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR12NC	12	12	120	20	-	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CSVR/L**	LRIS-2.5*7	CLR-15S

INSERT

CSVF-V without chipbreaker (For front turning)



Right hand (R) shown.

P	Steel	☆	★	☆
M	Stainless	★	☆	☆
N	Non-ferrous			★
S	Superalloys	★		
H	Hard materials	★		

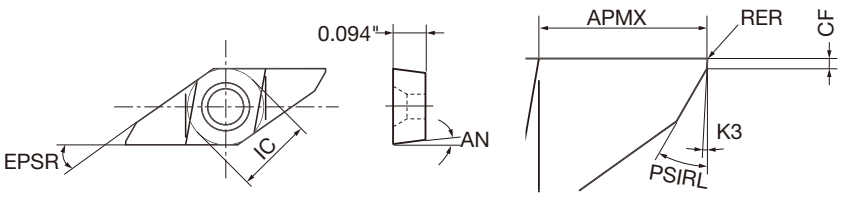
★ : First choice
☆ : Second choice

Designation	HAND	Coated			Mirror finish	APMX (in)	IC (in)	AN	EPSR	CF (in)	K3	PSIRL	RER (in)
		DT4	VM1	ZM3									
CSVF11FRV	R		●		Ⓜ	-	0.250	7°	35°	0.012	5°	30°	0
CSVF11FRV-A	R		●		Ⓜ	-	0.250	7°	35°	0.012	2°	30°	0
CSVF11FRV-C	R		●		Ⓜ	-	0.250	7°	35°	0.006	5°	30°	0
CSVF11FRV-M	R	●	●	●	Ⓜ	-	0.250	7°	35°	0.006	2°	30°	0
CSVF11FLV	L		●		Ⓜ	-	0.250	7°	35°	0.012	5°	30°	0
CSVF11FLV-M	L		●		Ⓜ	-	0.250	7°	35°	0.006	2°	30°	0

All angles shown are obtained when insert is set in the holder.

● : Line up

CSVF-VB with chipbreaker (For front turning)



Right hand (R) shown.

P	Steel	☆	★	☆
M	Stainless	★	☆	☆
N	Non-ferrous			★
S	Superalloys	★		
H	Hard materials	★		

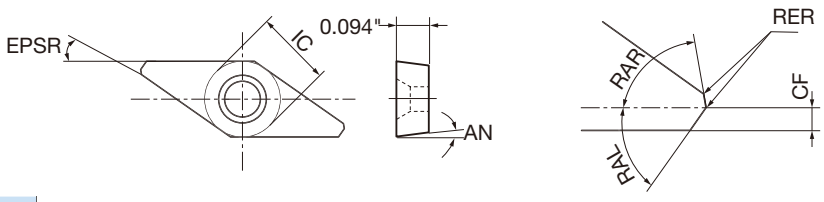
★ : First choice
☆ : Second choice

Designation	HAND	Coated			Mirror finish	APMX (in)	IC (in)	AN	EPSR	CF (in)	K3	PSIRL	RER (in)
		DT4	VM1	ZM3									
CSVF11FRVB	R		●		Ⓜ	0.118	0.250	7°	35°	0.012	5°	30°	0
CSVF11FRVB-A	R		●		Ⓜ	0.118	0.250	7°	35°	0.012	2°	30°	0
CSVF11FRVB-C	R		●		Ⓜ	0.118	0.250	7°	35°	0.006	5°	30°	0
CSVF11FRVB-M	R	●	●	●	Ⓜ	0.118	0.250	7°	35°	0.006	2°	30°	0
CSVF11FLVB	L		●		Ⓜ	0.118	0.250	7°	35°	0.012	5°	30°	0
CSVF11FLVB-M	L		●		Ⓜ	0.118	0.250	7°	35°	0.006	2°	30°	0

All angles shown are obtained when insert is set in the holder.

● : Line up

CSVF-VX without chipbreaker (For front turning)



Left hand (L) shown.

P	Steel	★	
M	Stainless	☆	
N	Non-ferrous		
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

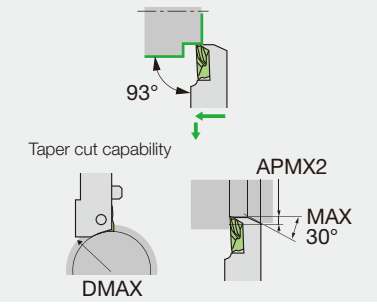
Designation	HAND	Coated	Mirror finish	APMX (in)	IC (in)	AN	EPSR	CF (in)	RAL	RAR	RER (in)
		VM1									
CSVF11FRVX	L	●	Ⓜ	-	0.250	7°	35°	0.028	45°	80°	0

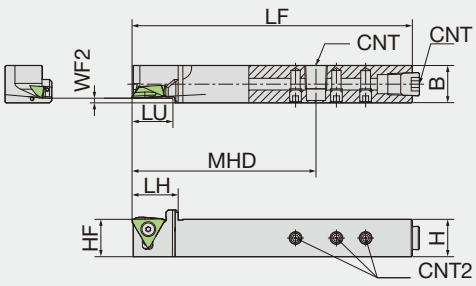
All angles shown are obtained when insert is set in the holder.

● : Line up

TFT-OH3

Screw-on toolholder for front turning, with high pressure coolant capability





Right hand (R) shown.

Inch	DMAX	APMX2	H	B	LF	LH	HF	LU	MHD	WF2	CNT	CNT2	Insert	
TFTR10X-IN-OH3	1.575	0.098	0.625	0.625	4.724	0.778	0.625	0.709	3.1	0.079	NPT1/8	M5	TFX33..	TF33..
Metric	**DMAX**	**APMX2**	**H**	**B**	**LF**	**LH**	**HF**	**LU**	**MHD**	**WF2**	**CNT**	**CNT2**	**Insert**	
TFTR1616X-OH3	40	2.5	16	16	120	19.75	16	18	78.75	2	Rc1/8	M5	TFX33..	TF33..

[Workpiece shape restrictions during machining]
DMAX: Max. bar stock diameter during APMX2 max DOC
APMX2: Max depth of cut

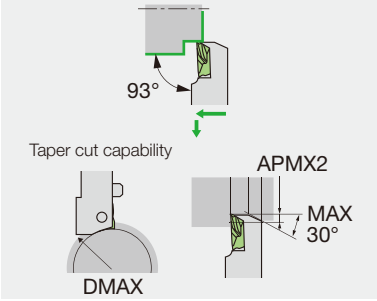
NOTE: Reference Chart of OH3 Hole Position→10-1

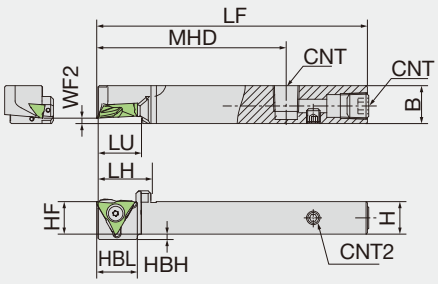
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
TFTR10X-IN-OH3	LR-S-4*10PW	SPNPT1/8	SS0505SC	CLR-15S	LW-2.5
TFTR1616X-OH3	LR-S-4*10PW	SPR1/8L	SS0505SC	CLR-15S	LW-2.5

TFT-OH2

Screw-on toolholder for front turning, with high pressure coolant capability





Right hand (R) shown.

Inch	DMAX	APMX2	H	B	LF	LH	HBH	HBL	HF	LU	MHD	WF2	CNT	CNT2	Insert	
TFTR06H-IN-OH2	0.787	0.098	0.375	0.551	3.937	0.787	0.157	0.591	0.375	0.591	2.756	0.079	M6*1	M5	TFX33..	TF33..
TFTR08H-IN-OH2	1.181	0.098	0.500	0.551	3.937	0.787	0.079	0.591	0.5	0.591	2.756	0.079	NPT1/8	M5	TFX33..	TF33..
TFTR10X-IN-OH2	1.575	0.098	0.625	0.625	4.724	0.787	-	-	0.625	0.689	2.756	0.079	NPT1/8	M5	TFX33..	TF33..
Metric	**DMAX**	**APMX2**	**H**	**B**	**LF**	**LH**	**HBH**	**HBL**	**HF**	**LU**	**MHD**	**WF2**	**CNT**	**CNT2**	**Insert**	
TFTR1014H-OH2	20	2.5	10	14	100	20	4	15	10	15	70	2	M6*1	M5	TFX33..	TF33..
TFTR1214H-OH2	30	2.5	12	14	120	20	2	15	12	15	70	2	Rc1/8	M5	TFX33..	TF33..
TFTR1616X-OH2	40	2.5	16	16	120	20	–	–	16	17.5	70	2	Rc1/8	M5	TFX33..	TF33..

[Workpiece shape restrictions during machining]
DMAX: Max. bar stock diameter during APMX2 max DOC
APMX2: Max depth of cut

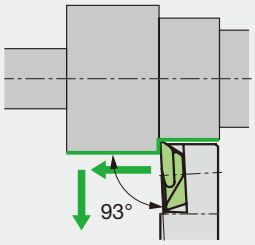
SPARE PARTS

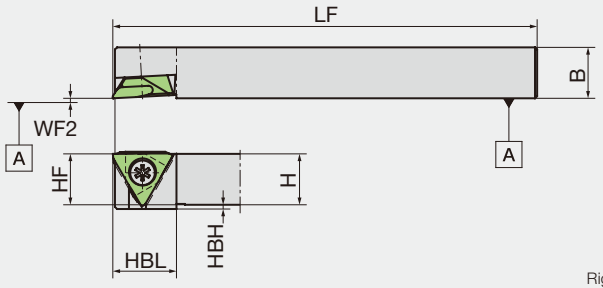
Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
TFTR06H-IN-OH2, TFTR1014H-OH2	LR-S-4*10PW	SS0605SC	SS0505SC	CLR-15S	LW-2.5
TFTR08H-IN-OH2 TFTR1214H-OH2	LR-S-4*10PW	SPR1/8	SS0505SC	CLR-15S	LW-2.5
TFTR10X-IN-OH2 TFTR1616X-OH2	LR-S-4*10PW	SPR1/8L	SS0505SC	CLR-15S	LW-2.5

Reference pages : Inserts → 3-104

TFTR

Screw-on toolholder for front turning





Right hand (R) shown.

Inch	H	B	LF	HBH	HBL	HF	WF2	Insert	
TFTR06-IN	0.375	0.375	4.724	0.118	0.591	0.375	0	TFX33..	TF33..
TFTR08-IN	0.500	0.500	4.724	0.039	0.591	0.500	0	TFX33..	TF33..

Metric	H	B	LF	HBH	HBL	HF	WF2	Insert	
TFTR10	10	10	120	3	15	10	0	TFX33..	TF33..
TFTR12	12	12	120	1	15	12	0	TFX33..	TF33..
TFTR16	16	16	120	–	–	16	0	TFX33..	TF33..
TFTR20	20	20	120	–	–	20	0	TFX33..	TF33..

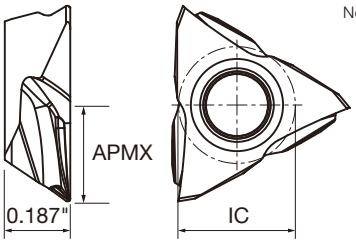
SPARE PARTS

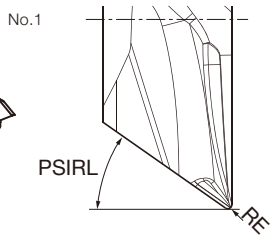
Designation	Clamp screw	Wrench (for Clamp screw)
TFTR**	LR-S-4*10PW	CLR-15S

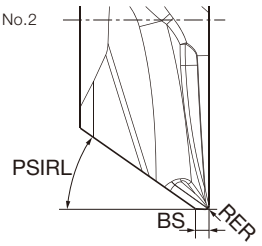
Reference pages : Inserts → 3-104

INSERT

TFX The Front Max







Right hand (R) shown.

P	Steel	★	☆
M	Stainless	☆	★
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials	★	

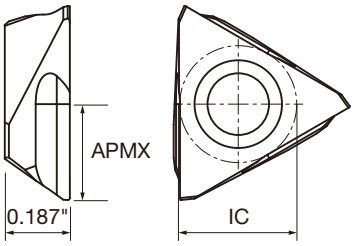
★ : First choice
☆ : Second choice

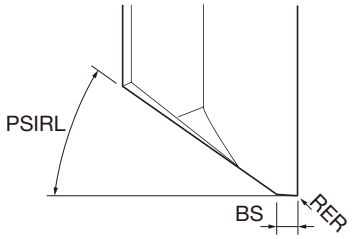
Designation	Coated DM4	Coated ST4	Wiper	APMX (in)	IC (in)	BS (in)	PSIRL	RE (in)	RER (in)	Figure
TFX3301MR	●	●	No	0.197	0.375	–	32°	0.003	–	1
TFX3302MR	●	●	No	0.197	0.375	–	32°	0.007	–	1
TFX3304MR	●	●	No	0.197	0.375	–	32°	0.015	–	1
TFX3301MRW	●	●	Straight	0.197	0.375	0.020	32°	–	0.003	2
TFX3302MRW	●	●	Straight	0.197	0.375	0.020	32°	–	0.007	2
TFX3304MRW	●	●	Straight	0.197	0.375	0.020	32°	–	0.015	2

All angles shown are obtained when insert is set in the holder.

● : Line up

TF





Right hand (R) shown.

P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

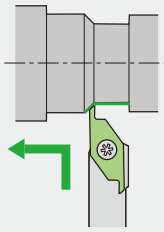
Designation	Coated ZM3	Wiper	APMX (in)	IC (in)	BS (in)	PSIRL	RER (in)
TF3300R	●	Straight	0.157	0.375	0.020	32°	0
TF3305R	●	Straight	0.157	0.375	0.020	32°	0.002
TF3315R	●	Straight	0.157	0.375	0.020	32°	0.006
TF3320R	●	Straight	0.157	0.375	0.020	32°	0.008

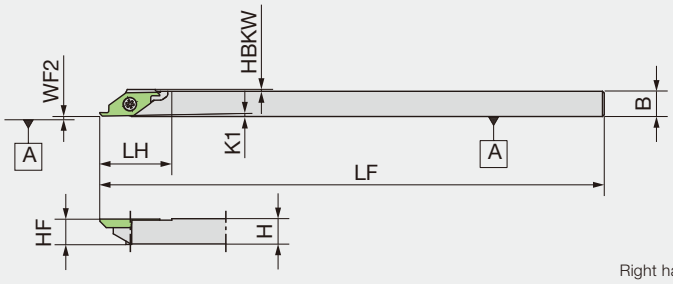
All angles shown are obtained when insert is set in the holder.

● : Line up

CSVR/L

Screw-on toolholder for back turning





Right hand (R) shown.

Inch	H	B	LF	LH	HBKW	HF	K1	WF2	Insert
CSVL06-IN-NC	0.375	0.375	4.724	0.787	-	0.375	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL08-IN-NC	0.500	0.500	4.724	0.787	-	0.500	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR06-IN-NC	0.375	0.375	4.724	0.787	-	0.375	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08-IN-NC	0.500	0.500	4.724	0.787	-	0.500	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
Metric	**H**	**B**	**LF**	**LH**	**HBKW**	**HF**	**K1**	**WF2**	**Insert**
CSVR07	7	7	140	20	0.5	7	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR07GX	7	7	85	20	0.5	7	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08	8	8	140	20	0	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08GX	8	8	85	20	0	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR095	9.5	9.5	140	20	0	9.5	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR10	10	10	140	20	0	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR12	12	12	140	20	0	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR12GX	12	12	85	20	0	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL07	7	7	140	20	0.5	7	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL08	8	8	140	20	0	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL10	10	10	140	20	0	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL08NC	8	8	120	20	-	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL10NC	10	10	120	20	-	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL12NC	12	12	120	20	-	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08NC	8	8	120	20	-	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08NC-F	8	8	120	20	-	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR10GXNC	10	10	85	20	-	10	1°	0 - 0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR10NC	10	10	120	20	-	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR12NC	12	12	120	20	-	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..

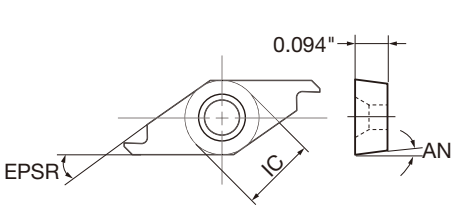
SPARE PARTS

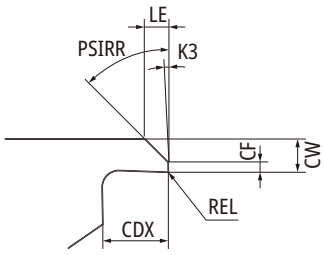
Designation	Clamp screw	Wrench (for Clamp screw)
CSVR/L**	LRIS-2.5*7	CLR-15S

Reference pages : Inserts → 3-106 -

INSERT

CSVB-V without chipbreaker (For back turning)





Right hand (R) shown.

P	Steel	☆	★	☆
M	Stainless	★	☆	☆
N	Non-ferrous			★
S	Superalloys	★		
H	Hard materials	★		

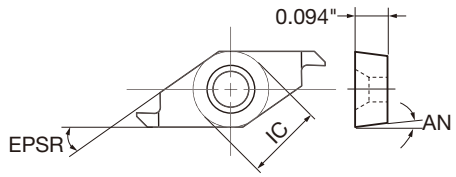
★ : First choice
☆ : Second choice

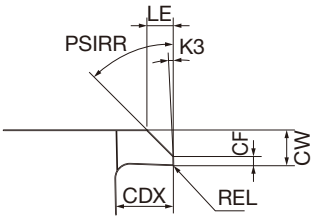
Designation	HAND	Coated			Mirror finish	LE (in)	CDX (in)	IC (in)	AN	EPSR	CF (in)	CW (in)	K3	PSIRR	REL (in)
		DT4	VM1	ZM3											
CSVB11FRV	R		●		Ⓜ	0.028	0.079	0.250	7°	35°	0.012	0.039	5°	45°	0
CSVB11FRV12	R		●		Ⓜ	0.031	0.079	0.250	7°	35°	0.012	0.047	5°	45°	0
CSVB11FRV14	R		●		Ⓜ	0.039	0.079	0.250	7°	35°	0.012	0.055	5°	45°	0
CSVB11FRV-A	R		●		Ⓜ	0.028	0.079	0.250	7°	35°	0.012	0.039	2°	45°	0
CSVB11FRV-C	R		●		Ⓜ	0.028	0.079	0.250	7°	35°	0.006	0.039	5°	45°	0
CSVB11FRV-M	R	●	●	●	Ⓜ	0.028	0.079	0.250	7°	35°	0.006	0.039	2°	45°	0
CSVB11FLV	L		●		Ⓜ	0.028	0.079	0.250	7°	35°	0.012	0.039	5°	45°	0
CSVB11FLV-M	L		●		Ⓜ	0.028	0.079	0.250	7°	35°	0.006	0.039	2°	45°	0

All angles shown are obtained when insert is set in the holder.

● : Line up

CSVB-VB with chipbreaker (For back turning)





Right hand (R) shown.

P	Steel	☆	★	☆
M	Stainless	★	☆	☆
N	Non-ferrous			★
S	Superalloys	★		
H	Hard materials	★		

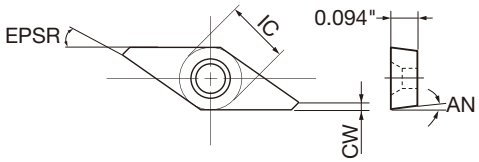
★ : First choice
☆ : Second choice

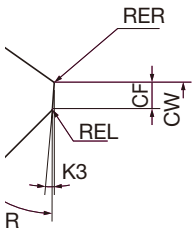
Designation	HAND	Coated			Mirror finish	LE (in)	CDX (in)	IC (in)	AN	EPSR	CF (in)	CW (in)	K3	PSIRR	REL (in)
		DT4	VM1	ZM3											
CSVB11FRVB	R		●		Ⓜ	0.028	0.079	0.250	7°	35°	0.012	0.039	5°	45°	0
CSVB11FRVB12	R		●		Ⓜ	0.031	0.079	0.250	7°	35°	0.012	0.047	5°	45°	0
CSVB11FRVB14	R		●		Ⓜ	0.039	0.079	0.250	7°	35°	0.012	0.055	5°	45°	0
CSVB11FRVB-A	R		●		Ⓜ	0.028	0.079	0.250	7°	35°	0.012	0.039	2°	45°	0
CSVB11FRVB-C	R		●		Ⓜ	0.028	0.079	0.250	7°	35°	0.006	0.039	5°	45°	0
CSVB11FRVB-M	R	●	●	●	Ⓜ	0.028	0.079	0.250	7°	35°	0.006	0.039	2°	45°	0
CSVB11FLVB-M	L		●		Ⓜ	0.028	0.079	0.250	7°	35°	0.006	0.039	2°	45°	0

All angles shown are obtained when insert is set in the holder.

● : Line up

CSVB-VX without chipbreaker (For back turning)





Left hand (L) shown.

P	Steel	★	
M	Stainless	☆	
N	Non-ferrous		
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

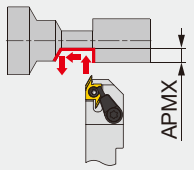
Designation	HAND	Coated	Mirror finish	IC (in)	AN	EPSR	CF (in)	CW (in)	K3	PSIRL	REL (in)	RER (in)
		VM1										
CSVB11FLVX	L	●	Ⓜ	0.250	7°	35°	0.001	0.028	5°	45°	0	0

All angles shown are obtained when insert is set in the holder.

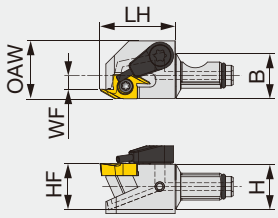
● : Line up

J-SERIES
QC10/12/16-JSEGR-CHP

Screw-on modular head for back turning, with high pressure coolant capability



APMX =0.118"



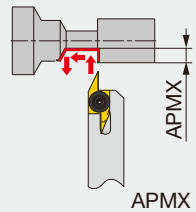
Right hand (R) shown.

Metric	H	B	LH	HF	WF	OAW	Insert	Torque*
QC10-JSEGR10-CHP	10 (0.625")	10 (0.625")	17 (0.669")	10 (0.394")	2.5 (0.098")	13 (0.512")	J10ER...	1.2 (0.89)
QC12-JSEGR10-CHP	12 (0.750")	12 (0.750")	19.5 (0.768")	12 (0.472")	3.5 (0.138")	15 (0.591")	J10ER...	1.2 (0.89)
QC16-JSEGR10-CHP	16 (1.000")	16 (1.000")	21 (0.827")	16 (0.630")	5.5 (0.217")	20 (0.787")	J10ER...	1.2 (0.89)

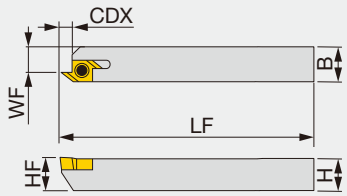
Torque* : Recommended clamping torque: N·m (lbs·ft)

JSEGR/L

Screw-on toolholder for back turning



APMX = 3 mm



Metric	H	B	LF	CDX	HF	WF	Insert	Torque*
JSEGR/L1010K10	10	10	125	3.3	10	7.5	J10ER/L...	1.2
JSEGR/L1212K10	12	12	125	3.3	12	9.5	J10ER/L...	1.2
JSEGR/L1616K10	16	16	125	3.3	16	13.5	J10ER/L...	1.2

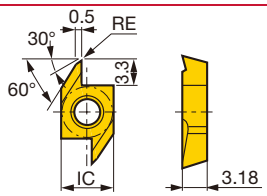
Torque*: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench	Wrench 2 (Optional)	O-ring
QC10-JSEGR10-CHP	CSTB-2.5	-	T-8F	-	ORSS-0353.5X1.0NBR70
QC12-JSEGR10-CHP	CSTB-2.5	S-CU-CHP	T-8F	-	ORSS-0454.5X1.0NBR70
QC16-JSEGR10-CHP	CSTB-2.5	S-CU-CHP	T-8F	-	ORSS-0757.5X1.0NBR70
JSEGR/L...	CSTB-2.5	-	T-8F	(T-8L)	-

INSERT

J10E (Sharp edge)



Right hand (R) shown.

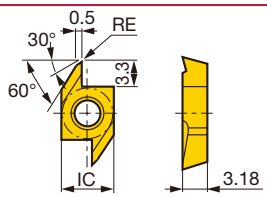
P	Steel	★ ☆ ★
M	Stainless	★ ☆
K	Cast iron	★ ☆ ☆
N	Non-ferrous	★
S	Superalloys	☆ ★
H	Hard materials	★

★ : First choice
☆ : Second choice

Designation	HAND	RE (mm)	Coated		Cermet	Uncoated	IC (mm)	Max. depth of cut (mm)
			SH725	J740	NS9530	TH10		
J10ER/L005BF	R	0.05	●	●		●	6.35	3
J10ER/L005BF	L	0.05	●	●		●	6.35	3
J10ER/L010BF	R	0.1	●	●		●	6.35	3
J10ER/L010BF	L	0.1	●	●		●	6.35	3
J10ER/L015BF	R	0.15	●		●		6.35	3
J10ER/L015BF	L	0.15	●		●		6.35	3

● : Line up

J10E (Honed edge)



Right hand (R) shown.

P	Steel	★ ★
M	Stainless	★
K	Cast iron	★ ☆
N	Non-ferrous	
S	Superalloys	☆
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	HAND	RE (mm)	Coated	Coated cermet	IC (mm)	Max. depth of cut (mm)
			J740	J9530		
J10ER005B	R	0.05	●	●	6.35	3
J10EL005B	L	0.05	●		6.35	3
J10ER010B	R	0.1	●	●	6.35	3
J10EL010B	L	0.1	●		6.35	3

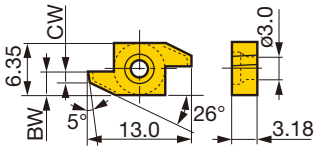
● : Line up

STANDARD CUTTING CONDITIONS (J10E type insert)

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Steel 1045, etc.	SH725	164 - 656	0.0004 - 0.004
		J740	33 - 328	0.0004 - 0.004
		NS9530	164 - 492	0.0004 - 0.004
		J9530	164 - 492	0.0004 - 0.004
	Free-cutting steel	SH725	164 - 656	0.0004 - 0.004
		J740	33 - 328	0.0004 - 0.004
M	Stainless steel 303, etc.	SH725	164 - 656	0.0004 - 0.004
		J740	33 - 328	0.0004 - 0.004
		NS9530	164 - 492	0.0004 - 0.004
		J9530	164 - 492	0.0004 - 0.004
N	Aluminum alloys, Brass Si < 12%, 5056, 6061, etc.	TH10	33 - 656	0.0004 - 0.004
S	Difficult-to-machine material, Titanium alloys Ti-6Al-4V, etc.	TH10	33 - 98	0.0004 - 0.004

INSERT

10E (Insert blank)



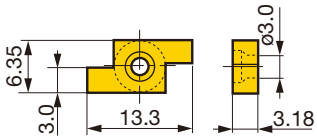
Right hand (R) shown.
Unit: mm

Designation	HAND	Uncoated TH10			
10ER100B	R	●			
10EL100B	L	●			
10ER150B	R	●			
10EL150B	L	●			

● : Line up

Note: Right hand holder (JSEGR...) use right hand insert (10ER...) and left hand holder (JSEGL...) use left hand insert (10EL...)

10E (Insert blank)



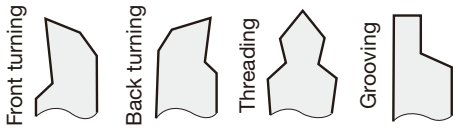
Right hand (R) shown.
Unit: mm

Designation	HAND	Uncoated TH10			
10ER300	R	●			
10EL300	L	●			

● : Line up

Note: Right hand holder (JSEGR...) use right hand insert (10ER...) and left hand holder (JSEGL...) use left hand insert (10EL...)

Formed examples of insert blanks



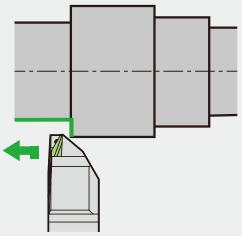
Notes:
- Front relief angle, side relief angle, edge width can be ground depending on the application.
- Insert blanks can be formed to a profiling tool which has a width up to 0.118".

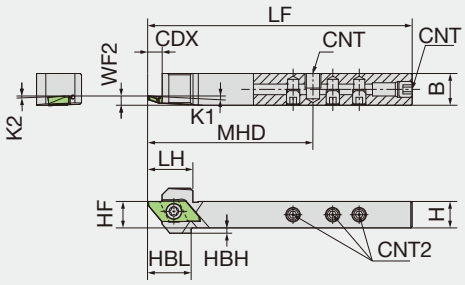
Standard cutting conditions

Operations	Workpiece material		Carbon steel	Stainless steel	Brass
Lateral feed (external turning)	Cutting speed (sfm)		~ 330	~ 160	~ 650
	Feed (ipr)	Roughing	~ 0.002	~ 0.001	~ 0.004
		Medium	~ 0.001	~ 0.001	~ 0.002
		Finishing	~ 0.0007	~ 0.0006	~ 0.0016
Parting-off Grooving Forming	Cutting speed (sfm)		~ 260	~ 100	~ 500
	Feed (ipr)	Roughing	~ 0.0007	~ 0.0006	~ 0.002
		Medium	~ 0.0006	~ 0.0004	~ 0.001
		Finishing	~ 0.0004	~ 0.0003	~ 0.0006

TBP-OH3

Screw-on toolholder for back turning, with high pressure coolant capability





Right hand (R) shown.

Inch	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert
TBPR10X-IN-OH3	0.625	0.625	4.724	0.787	0.217	-	-	0.625	3°	2°	3.100	0.138	NPT1/8	M5	TBP..

Metric	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert
TBPR1012H-OH3	10	12	100	17.33	5.5	2	16.5	10	3°	2°	62.5	3.5	M6*1	M5	TBP..
TBPR16X-OH3	16	16	120	20	5.5	–	–	16	3°	2°	78.75	3.5	Rc1/8	M5	TBP..

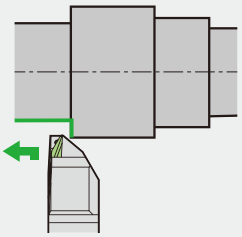
NOTE: Reference Chart of OH3 Hole Position→10-1

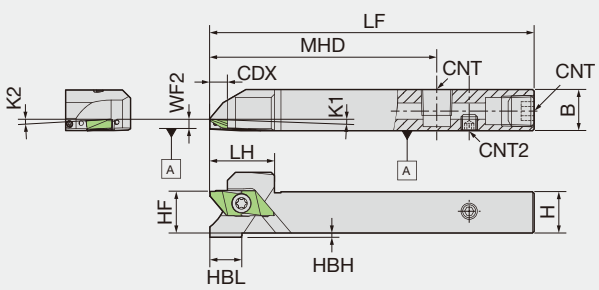
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
TBPR10X-IN-OH3	LRIS-4*12PW	SPNPT1/8	SS0505SC	CLR-15S	LW-2.5
TBPR1012H-OH3	LRIS-4*10PW	SS0605SC	SS0505SC	CLR-15S	LW-2.5
TBPR16X-OH3	LRIS-4*12PW	SPR1/8	SS0505SC	CLR-15S	LW-2.5

TBP-OH2

Screw-on toolholder for back turning, with high pressure coolant capability





Right hand (R) shown.

Inch	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert
TBPR08H-IN-OH2	0.500	0.500	3.937	0.787	0.217	0.051	0.394	0.5	3°	2°	0.138	NPT1/8	M5	M5	TBP..
TBPR10X-IN-OH2	0.625	0.625	4.724	0.787	0.217	-	-	0.625	3°	2°	0.138	NPT1/8	M5	M5	TBP..

Metric	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert
TBPR12H-OH2	12	12	100	19.5	5.5	2	10	12	3°	2°	70	3.5	Rc1/8	M5	TBP..
TBPR16X-OH2	16	16	120	19.5	5.5	–	–	16	3°	2°	70	3.5	Rc1/8	M5	TBP..

NOTE: Use a right-handed (R) or non-handed insert.

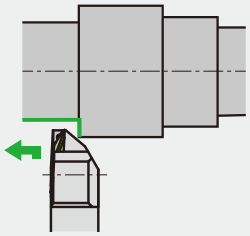
SPARE PARTS

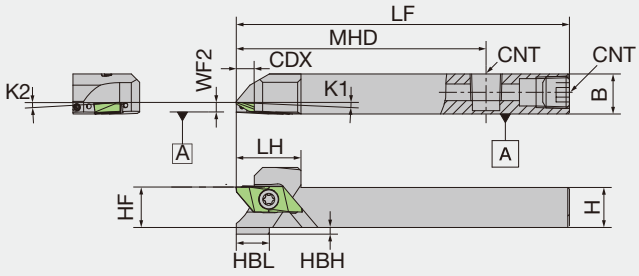
Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
TBPR**-OH2	LRIS-4*12PW	SPR1/8	SS0505SC	CLR-15S	LW-2.5

Reference pages : Inserts → 3-114 -

TBP-OH

Screw-on toolholder for back turning, with high pressure coolant capability





Right hand (R) shown.

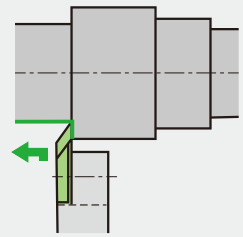
Inch	H	B	LF	HBH	HBL	HF	K1	K2	MHD	WF2	CDX	CNT	Insert
TBPR06H-IN-OH	0.375	0.472	3.937	0.176	0.748	0.375	3°	2°	2.953	0.138	0.217	M6*1	TBP..
TBPR08H-IN-OH	0.500	0.500	3.937	0.051	0.394	0.500	3°	2°	2.953	0.138	0.217	NPT1/8	TBP..
TBPR10H-IN-OH	0.625	0.625	3.937	-	-	0.625	3°	2°	2.953	0.138	0.217	NPT1/8	TBP..
Metric	**H**	**B**	**LF**	**HBH**	**HBL**	**HF**	**K1**	**K2**	**MHD**	**WF2**	**CDX**	**CNT**	**Insert**
TBPR1012H-OH	10	12	100	4	19	10	3°	2°	75	3.5	5.5	M6*1	TBP..
TBPR12H-OH	12	12	100	2	10	12	3°	2°	75	3.5	5.5	Rc1/8	TBP..
TBPR16H-OH	16	16	100	–	–	16	3°	2°	75	3.5	5.5	Rc1/8	TBP..

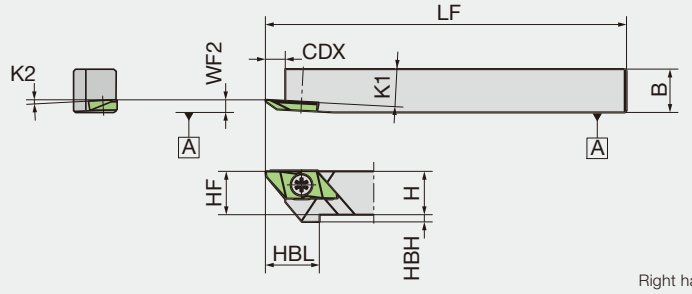
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Wrench (for Clamp screw)
TBPR06H-IN-OH, TBPR1012H-OH	LRIS-4*12PW	SS0605SC	CLR-15S
TBPR08H-IN-OH, TBPR10H-IN-OH	LRIS-4*12PW	SPNPT1/8	CLR-15S
TBPR12H-OH, TBPR16H-OH	LRIS-4*12PW	SPR1/8	CLR-15S

TBPR/L

Screw-on toolholder for back turning





Right hand (R) shown.

Inch	H	B	LF	HBH	HBL	HF	K1	K2	WF2	CDX	Insert
TBPR06-IN	0.375	0.375	4.724	0.079	0.591	0.375	3°	2°	0.138	0.217	TBP..
TBPR08-IN	0.500	0.500	4.724	-	-	0.500	3°	2°	0.138	0.217	TBP..
TBPR10-IN	0.625	0.625	4.724	-	-	0.625	3°	2°	0.138	0.217	TBP..
Metric	**H**	**B**	**LF**	**HBH**	**HBL**	**HF**	**K1**	**K2**	**WF2**	**CDX**	**Insert**
TBPR08	8	10	120	4	15	8	3°	2°	3.5	5.5	TBP..
TBPR10	10	10	120	2	15	10	3°	2°	3.5	5.5	TBP..
TBPR10H	10	10	100	2	15	10	3°	2°	3.5	5.5	TBP..
TBPR12	12	12	120	–	–	12	3°	2°	3.5	5.5	TBP..
TBPR12GX	12	12	85	–	–	12	3°	2°	3.5	5.5	TBP..
TBPR16	16	16	120	–	–	16	3°	2°	3.5	5.5	TBP..
TBPR16H	16	16	100	–	–	16	3°	2°	3.5	5.5	TBP..
TBPL08	8	10	120	4	15	8	3°	2°	3.5	5.5	TBP..
TBPL10	10	10	120	2	15	10	3°	2°	3.5	5.5	TBP..
TBPL12	12	12	120	–	–	12	3°	2°	3.5	5.5	TBP..
TBPL16	16	16	120	–	–	16	3°	2°	3.5	5.5	TBP..

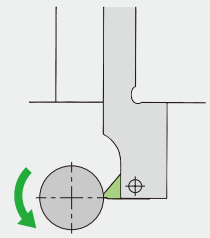
SPARE PARTS

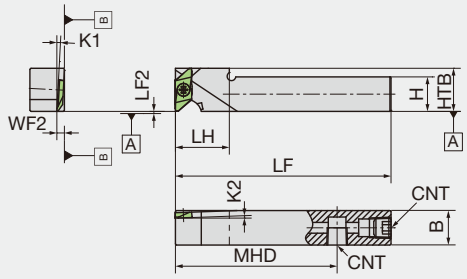
Designation	Clamp screw	Wrench (for Clamp screw)
TBPR06-IN TBPR/L08, TBPR/L10**	LRIS-4*10PW	CLR-15S
TBPR08-IN TBPR/L12**	LRIS-4*12PW	CLR-15S
TBPR/L16**	LRIS-4*12PW	CLR-15S

Reference pages : Inserts → 3-114 -

Y-TBPR-OH

Screw-on Y-axis turning toolholder for back turning, with high pressure coolant capability





Right hand (R) shown.

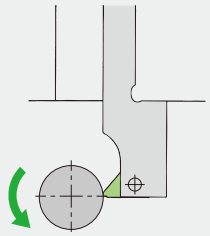
Inch	H	B	LF	LH	HTB	K1	K2	LF2	MHD	WF2	CNT	Insert
Y-TBPR08H-IN-OH2	0.500	0.500	3.937	0.984	0.787	3°	2°	0	2.756	0.138	NPT1/8	TBP..

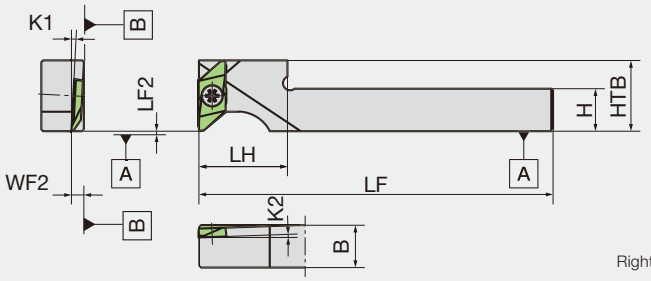
Metric	H	B	LF	LH	HTB	K1	K2	LF2	MHD	WF2	CNT	Insert
Y-TBPR12HS-OH	12	12	100	20	20	3°	2°	0	75	3.5	Rc1/8	TBP..
Y-TBPR12HS-OH2	12	12	100	20	20	3°	2°	0	70	3.5	Rc1/8	TBP..
Y-TBPR16H-OH	16	16	100	25	20	3°	2°	0	75	3.5	Rc1/8	TBP..

NOTE: Use a right-handed (R) insert.
NOTE: There is a risk of interference with the Y-axis holder depending on the combination of the maximum workpiece diameter and machining diameter.→10-1

Y-TBPR

Screw-on Y-axis turning toolholder for back turning





Right hand (R) shown.

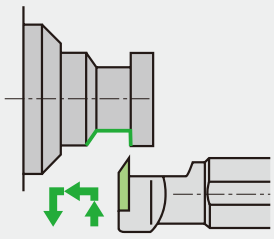
Metric	H	B	LF	LH	HTB	K1	K2	LF2	WF2	Insert
Y-TBPR06-IN	0.375	0.375	2.756	0.984	0.787	3°	2°	0	0.138	TBP..
Y-TBPR08-IN	0.500	0.500	2.756	0.984	0.787	3°	2°	0	0.138	TBP..
Y-TBPR10-IN	0.625	0.625	2.756	0.984	0.787	3°	2°	0	0.138	TBP..

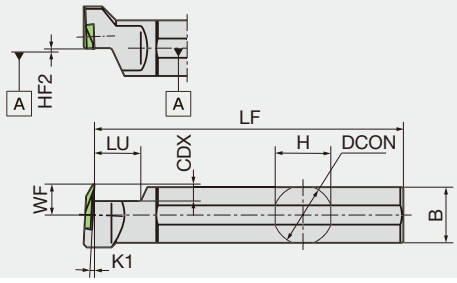
Metric	H	B	LF	LH	HTB	K1	K2	LF2	WF2	Insert
Y-TBPR10MS	10	10	120	22	20	3°	2°	0	3.5	TBP..
Y-TBPR10S	10	10	120	20	20	3°	2°	0	3.5	TBP..
Y-TBPR12MS	12	12	120	22	20	3°	2°	0	3.5	TBP..
Y-TBPR12S	12	12	120	20	20	3°	2°	0	3.5	TBP..

NOTE: Use a right-handed (R) insert.
NOTE: There is a risk of interference with the Y-axis holder depending on the combination of the maximum workpiece diameter and machining diameter.→10-1

DS-TBPL

DS Toolholders / For sleeve tool post





Left hand (L) shown.

Metric	H	B	LF	CDX	DCON	HF2	K1	K2	LU	WF	Insert
DS-TBPL19	18	18	120	5.5	19.05	0	3°	2°	14	10	TBP...
DS-TBPL20	19	19	120	5.5	20	0	3°	2°	14	10	TBP...
DS-TBPL25	24	24	150	5.5	25.4	0	3°	2°	14	10	TBP...

NOTE: Use a right-handed (R) insert.

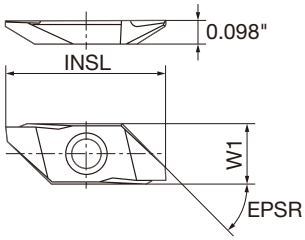
SPARE PARTS

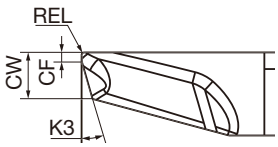
Designation	Clamp screw	Clamp screw 1	Screw (for CNT)	Wrench (for Clamp screw)	Wrench 1 (for Clamp screw)
Y-TBPR08H-IN-OH2	LRIS-4*12PW	SPNPT1/8	SS0505SC	CLR-15S	LW-2.5
Y-TBPR**-OH, Y-TBPR12HS-OH2	LRIS-4*12PW	-	SPR1/8	CLR-15S	-
Y-TBPR10**, Y-TBPR12MS	LRIS-4*10PW	-	-	CLR-15S	-
Y-TBPR12S	LRIS-4*12PW	-	-	CLR-15S	-
DS-TBPL**	-	LRIS-4*10	-	-	LLR-25S-20*65

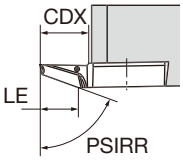
Reference pages : Inserts → 3-114 -

INSERT

TBP with BM-Chipbreaker







Right hand (R) shown.

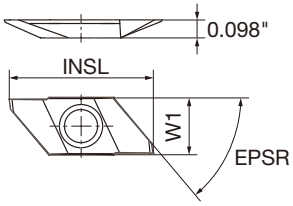
P	Steel	★		☆
M	Stainless	☆	★	☆
N	Non-ferrous			★
S	Superalloys	★		☆
H	Hard materials	★		☆

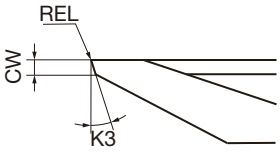
★ : First choice
☆ : Second choice

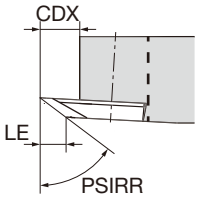
Designation	HAND	Coated			LE (in)	CDX (in)	INSL (in)	W1 (in)	EPSR	CF (in)	CW (in)	K3	PSIRR	REL (in)
		DM4	ST4	TM4										
TBP72FR05-BM	R	●	●	●	0.138	0.209	0.787	0.315	50°	0.012	0.055	16°	72°	0.002
TBP72FR10M-BM	R	●	●	●	0.138	0.209	0.787	0.315	50°	0.012	0.055	16°	72°	0.003
TBP72FR20M-BM	R	●	●	●	0.138	0.209	0.787	0.315	50°	0.012	0.055	16°	72°	0.007

● : Line up

TBP with Chipbreaker







Right hand (R) shown.

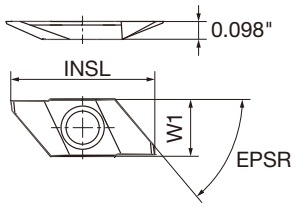
P	Steel	★	☆	☆	★	☆
M	Stainless	☆	★	★	☆	☆
N	Non-ferrous			★		★
S	Superalloys	☆	★			
H	Hard materials	★	☆			

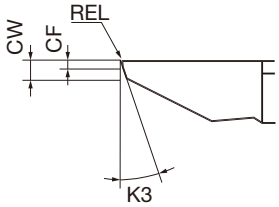
★ : First choice
☆ : Second choice

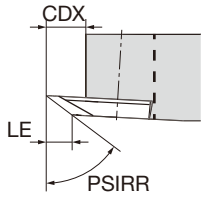
Designation	HAND	Coated					LE (in)	CDX (in)	INSL (in)	W1 (in)	EPSR	CF	CW (in)	K3	PSIRR	REL (in)
		QM3	DT4	TM4	VM1	ZM3										
TBP55FR00	R				●	●	0.118	0.209	0.787	0.315	50°	–	0.020	15°	55°	0
TBP55FR10	R				●	●	0.118	0.209	0.787	0.315	50°	–	0.020	15°	55°	0.004
TBP60FR00	R	●	●	●	●	●	0.146	0.209	0.787	0.315	50°	–	0.020	15°	60°	0
TBP60FR10	R	●		●	●	●	0.146	0.209	0.787	0.315	50°	–	0.020	15°	60°	0.004
TBP60FR10M	R	●	●		●		0.146	0.209	0.787	0.315	50°	–	0.020	15°	60°	0.003
TBP60FR20	R			●			0.146	0.209	0.787	0.315	50°	–	0.020	15°	60°	0.008
TBP55FL00	L					●	0.118	0.209	0.787	0.315	50°	–	0.020	15°	55°	0
TBP55FL10	L					●	0.118	0.209	0.787	0.315	50°	–	0.020	15°	55°	0.004
TBP60FL00	L					●	0.146	0.209	0.787	0.315	50°	–	0.020	15°	60°	0
TBP60FL10	L					●	0.146	0.209	0.787	0.315	50°	–	0.020	15°	60°	0.004

● : Line up

TBP-V without Chipbreaker







Right hand (R) shown.

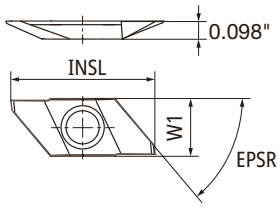
P	Steel	★	☆		
M	Stainless	☆	★		
N	Non-ferrous		☆	★	
S	Superalloys				
H	Hard materials				

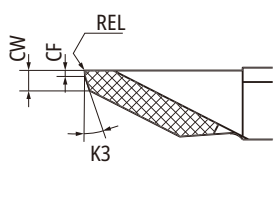
★ : First choice
☆ : Second choice

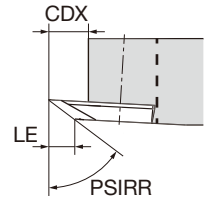
Designation	HAND	Coated		Uncoated	Mirror finish	LE (in)	CDX (in)	INSL (in)	W1 (in)	EPSR	CF (in)	CW (in)	K3	PSIRR	REL (in)
		VM1	ZM3	KM1											
TBP60FRV	R	●	●	●	Ⓜ	0.189	0.209	0.787	0.315	50°	0.008	0.028	15°	60°	0
TBP60FRV05	R	●		●	Ⓜ	0.189	0.209	0.787	0.315	50°	0.008	0.028	15°	60°	0.002
TBP60FRV10	R	●	●	●	Ⓜ	0.189	0.209	0.787	0.315	50°	0.008	0.028	15°	60°	0.004
TBP60FLV	L	●			Ⓜ	0.189	0.209	0.787	0.315	50°	0.008	0.028	15°	60°	0

● : Line up

TBP-P PCD tipped







Right hand (R) shown.

P	Steel		
M	Stainless		
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

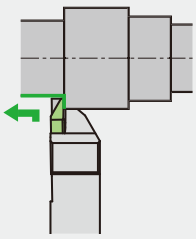
★ : First choice
☆ : Second choice

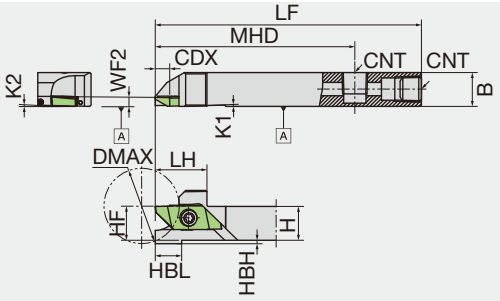
Designation	HAND	PCD		LE (in)	CDX (in)	INSL (in)	W1 (in)	EPSR	CF (in)	CW (in)	K3	PSIRR	REL (in)
		PD1											
TBP60FRV00-P	R	●		0.157	0.209	0.787	0.315	50°	0.008	0.028	15°	60°	0
TBP60FRV10-P	R	●		0.157	0.209	0.787	0.315	50°	0.008	0.028	15°	60°	0.004

● : Line up

TBPAR-OH

Screw-on toolholder for back turning, with high pressure coolant capability





Right hand (R) shown.

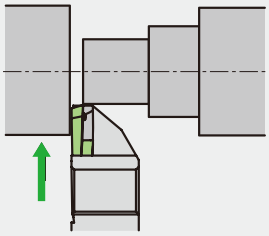
Metric	DMAX	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	Insert
TBPAR12H-OH	25	12	12	100	19.5	6.8	4	10	12	1°	2°	75	-3.4	Rc1/8	TBPA..
TBPAR16H-OH	35	16	16	100	19.5	6.8	2	10	16	1°	2°	75	-3.4	Rc1/8	TBPA..
TBPAR20H-OH	50	20	20	100	19.5	6.8	–	–	20	1°	2°	75	-3.4	Rc1/8	TBPA..

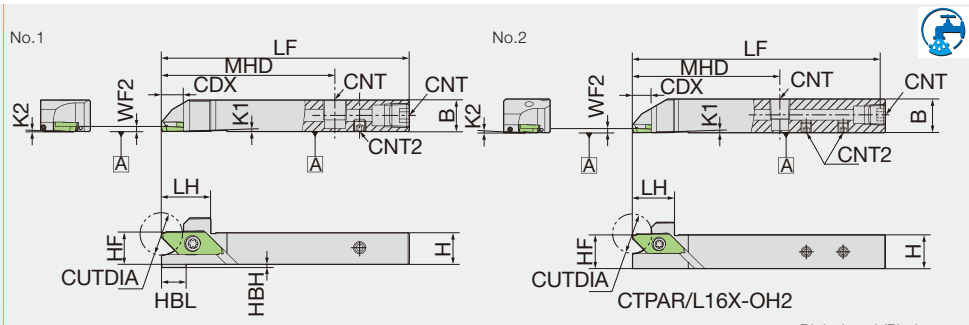
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Wrench (for Clamp screw)
TBPAR**-OH	LRIS-4*12PW	SPR1/8	CLR-15S

CTPAR/L-OH2

Screw-on toolholder for back turning, with high pressure coolant capability





Right hand (R) shown.

Inch	CUTDIA	H	B	LF	LH	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert		Figure
CTPAR08H-IN-OH2	0.630	0.500	0.500	3.937	0.787	0.051	0.394	0.500	1°	2°	2.756	0.079	NPT1/8	M5	CTPA..	TBPA..	1
CTPAR10X-IN-OH2	0.630	0.625	0.625	4.724	0.787	-	-	0.625	1°	2°	2.756	0.079	NPT1/8	M5	CTPA..	TBPA..	2

Metric	CUTDIA	H	B	LF	LH	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert		Figure
CTPAR12H-OH2	16	12	12	100	19.5	2	10	12	1°	2°	70	2	Rc1/8	M5	CTPA..	TBPA..	1
CTPAR16X-OH2	16	16	16	120	19.5	–	–	16	1°	2°	70	2	Rc1/8	M5	CTPA..	TBPA..	2
CTPAL12H-OH2	16	12	12	100	19.5	2	10	12	1°	2°	70	2	Rc1/8	M5	CTPA..	TBPA..	1
CTPAL16X-OH2	16	16	16	120	19.5	–	–	16	1°	2°	70	2	Rc1/8	M5	CTPA..	TBPA..	2

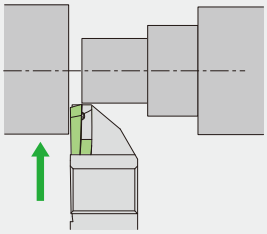
SPARE PARTS

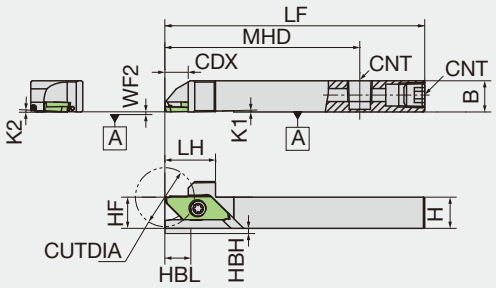
Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
CTPAR08H-IN-OH2	LRIS-4*12PW	SPNPT1/8	SS0505SC	CLR-15S	LW-2.5
CTPAR10X-IN-OH2	LRIS-4*12PW	SPNPT1/8L	SS0505SC	CLR-15S	LW-2.5
CTPAR/L**-OH2	LRIS-4*12PW	SPR1/8	SS0505SC	CLR-15S	LW-2.5

Reference pages : Inserts → 3-118 -

CTPA-OH

Screw-on toolholder for back turning, with high pressure coolant capability





Right hand (R) shown.

Inch	CUTDIA	H	B	LF	LH	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	Insert	
CTPAR06H-IN-OH	0.630	0.375	0.375	3.937	0.768	0.176	0.787	0.375	1°	2°	2.953	0	M6*1	CTPA..	TBPA..
CTPAR10H-IN-OH	0.630	0.625	0.625	3.937	0.768	-	-	0.625	1°	2°	2.953	0	NPT1/8	CTPA..	TBPA..

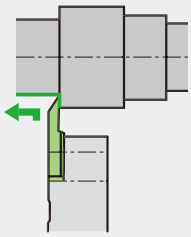
Metric	CUTDIA	H	B	LF	LH	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	Insert	
CTPAL12H-OH	16	12	12	100	19.5	2	10	12	1°	2°	75	0	Rc1/8	CTPA..	TBPA..
CTPAL16H-OH	16	16	16	100	19.5	–	–	16	1°	2°	75	0	Rc1/8	CTPA..	TBPA..

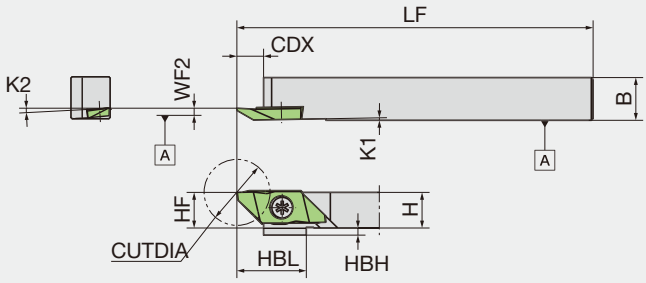
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CTPAR**-IN-OH	LRIS-4*12PW	CLR-15S
CTPAL**-OH	LRIS-4*12PW	CLR-15S

CTPAR/L

Screw-on toolholder for back turning





Right hand (R) shown.

Inch	CUTDIA	H	B	LF	CDX	HBH	HBL	HF	K1	K2	WF2	Insert	
CTPAR06-IN	0.630	0.375	0.375	4.724	0.295	0.079	0.768	0.375	1°	2°	0	CTPA..	TBPA..
CTPAR08-IN	0.630	0.500	0.500	4.724	0.295	-	-	0.500	1°	2°	0	CTPA..	TBPA..
CTPAR10-IN	0.630	0.625	0.625	4.724	0.295	-	-	0.625	1°	2°	0	CTPA..	TBPA..
CTPAL06-IN	0.630	0.375	0.375	4.724	0.295	0.079	0.768	0.375	1°	2°	0	CTPA..	TBPA..
CTPAL08-IN	0.630	0.500	0.500	4.724	0.295	-	-	0.500	1°	2°	0	CTPA..	TBPA..
CTPAL10-IN	0.630	0.625	0.625	4.724	0.295	-	-	0.625	1°	2°	0	CTPA..	TBPA..

Metric	CUTDIA	H	B	LF	CDX	HBH	HBL	HF	K1	K2	WF2	Insert	
CTPAR10	16	10	10	120	7.5	2	19.5	10	1°	2°	0	CTPA..	TBPA..
CTPAR12	16	12	12	120	7.5	–	–	12	1°	2°	0	CTPA..	TBPA..
CTPAR12GX	16	12	12	85	7.5	–	–	12	1°	2°	0	CTPA..	TBPA..
CTPAR16	16	16	16	120	7.5	–	–	16	1°	2°	0	CTPA..	TBPA..
CTPAR20F	16	20	20	80	7.5	–	–	20	1°	2°	0	CTPA..	TBPA..
CTPAL10	16	10	10	120	7.5	2	19.5	10	1°	2°	0	CTPA..	TBPA..
CTPAL12	16	12	12	120	7.5	–	–	12	1°	2°	0	CTPA..	TBPA..
CTPAL12GX	16	12	12	85	7.5	–	–	12	1°	2°	0	CTPA..	TBPA..
CTPAL16	16	16	16	120	7.5	–	–	16	1°	2°	0	CTPA..	TBPA..
CTPAL20F	16	20	20	80	7.5	–	–	20	1°	2°	0	CTPA..	TBPA..

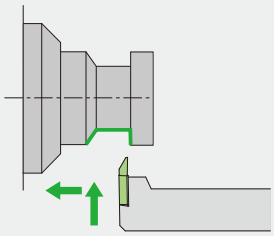
SPARE PARTS

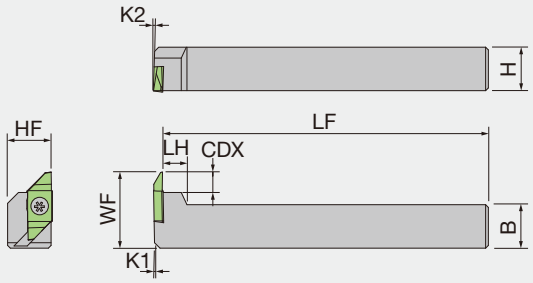
Designation	Clamp screw	Wrench (for Clamp screw)
CTPAR/L06-IN, CTPAR/L10	LRIS-4*10PW	CLR-15S
CTPAR/L08-IN, CTPAR/L10-IN, CTPAR/L112**	LRIS-4*12PW	CLR-15S
CTPAR/L116	LRIS-4*12PW	CLR-15S
CTPAR/L120F	LRIS-4*10	LLR-25S

Reference pages : Inserts → 3-118 -

CH-TBPAL

Screw-on toolholder for back turning for horizontal gang style tool post





Left hand (L) shown.

Metric	H	B	LF	LH	CDX	HF	K1	K2	WF	Insert
CH-TBPAL16	16	16	120	9	7.5	16	1°	2°	28	TBPA..
CH-TBPAL20	20	20	120	9	7.5	20	1°	2°	32	TBPA..

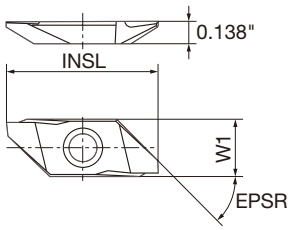
NOTE: Use a right-handed insert.

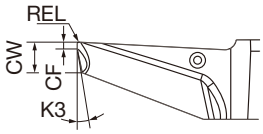
SPARE PARTS

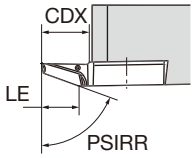
Designation	Clamp screw	Wrench (for Clamp screw)
CH-TBPAL**	LRIS-4*10	LLR-25S

INSERT

TBPA with BM-Chipbreaker







Right hand (R) shown.

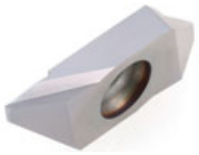
P	Steel	★		☆
M	Stainless	☆	★	☆
N	Non-ferrous			★
S	Superalloys	★		☆
H	Hard materials	★		☆

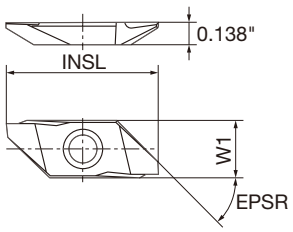
★ : First choice
☆ : Second choice

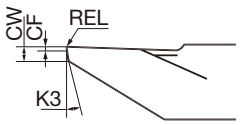
Designation	HAND	Coated			LE (in)	CDX (in)	INSL (in)	W1 (in)	EPSR	CF (in)	CW (in)	K3	PSIRR	REL (in)
		DM4	ST4	TM4										
TBPA70FR05-BM	R	●	●	●	0.217	0.256	0.984	0.370	45°	0.012	0.053	12°	70°	0.002
TBPA70FR10M-BM	R	●	●	●	0.217	0.256	0.984	0.370	45°	0.012	0.053	12°	70°	0.003
TBPA70FR20M-BM	R	●	●	●	0.217	0.256	0.984	0.370	45°	0.012	0.053	12°	70°	0.007

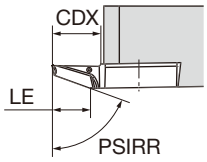
● : Line up

TBPA with Chipbreaker









Right hand (R) shown.

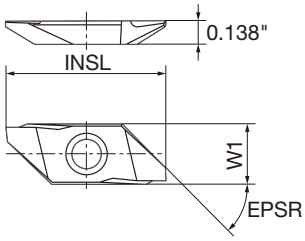
P	Steel	★	☆	★	☆
M	Stainless	☆	★	☆	☆
N	Non-ferrous				★
S	Superalloys	☆	★		
H	Hard materials	★	☆		

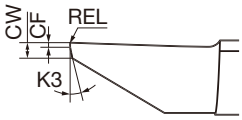
★ : First choice
☆ : Second choice

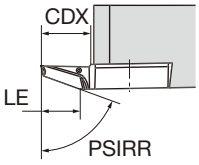
Designation	HAND	Coated				Mirror finish	LE (in)	CDX (in)	INSL (in)	W1 (in)	EPSR	CF (in)	CW (in)	K3	PSIRR	REL (in)
		QM3	DT4	VM1	ZM3											
TBPA60FR10M	R	●				Ⓜ	0.177	0.209	0.984	0.370	45°	0.012	0.028	15°	60°	0.003
TBPA60FRPB10	R			●	●	Ⓜ	0.177	0.209	0.984	0.370	45°	0.012	0.028	15°	60°	0.004
TBPA60FRPB10M	R		●	●		Ⓜ	0.177	0.209	0.984	0.370	45°	0.012	0.028	15°	60°	0.003
TBPA60FRPB20M	R		●			Ⓜ	0.177	0.209	0.984	0.370	45°	0.012	0.028	15°	60°	0.007
TBPA60FRVB	R		●	●	●	Ⓜ	0.177	0.209	0.984	0.370	45°	0.008	0.028	15°	60°	0
TBPA60FLPB10	L				●	Ⓜ	0.177	0.209	0.984	0.370	45°	0.012	0.028	15°	60°	0.004
TBPA60FLVB	L				●	Ⓜ	0.177	0.209	0.984	0.370	45°	0.008	0.028	15°	60°	0

● : Line up

TBPA-V without Chipbreaker







Right hand (R) shown.

P	Steel	★	★
M	Stainless	☆	★
N	Non-ferrous		★
S	Superalloys		
H	Hard materials		

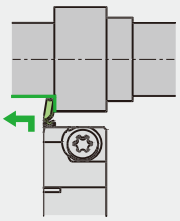
★ : First choice
☆ : Second choice

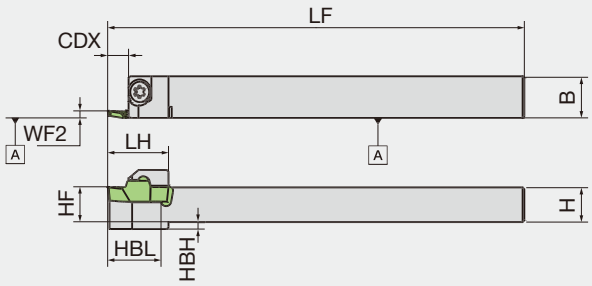
Designation	HAND	Coated		Mirror finish	LE	CDX (in)	INSL (in)	W1 (in)	EPSR	CF (in)	CW (in)	K3	PSIRR	REL (in)
		VM1	ZM3											
TBPA60FRV	R	●	●	Ⓜ	0.248	0.268	0.984	0.370	45°	0.008	0.028	15°	60°	0
TBPA60FLV	L		●	Ⓜ	0.248	0.268	0.984	0.370	45°	0.008	0.028	15°	60°	0

● : Line up

TBDPR/L

Screw-on toolholder for back turning





Right hand (R) shown.

Inch	H	B	LF	LH	CDX	HBH	HBL	HF	WF2	Insert
TBDPR06-IN	0.375	0.472	4.724	0.571	0.118	0.079	0.571	0.375	0.081	TBDP..
TBDPR08-IN	0.500	0.500	4.724	0.689	0.197	-	-	0.500	0.081	TBDP..
TBDPR10-IN	0.625	0.625	4.724	0.768	0.197	-	-	0.625	0.081	TBDP..

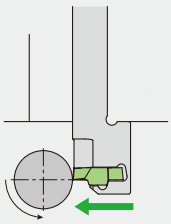
Metric	H	B	LF	LH	CDX	HBH	HBL	HF	WF2	Insert
TBDPR1012	10	12	120	15	3	2	14.5	10	2.05	TBDP..
TBDPR1012H	10	12	100	15	3	2	14.5	10	2.05	TBDP..
TBDPR12	12	12	120	18	5	–	–	12	2.05	TBDP..
TBDPR16	16	16	120	19.5	5	–	–	16	2.05	TBDP..
TBDPR20	20	20	120	19.5	5	–	–	20	2.05	TBDP..
TBDPL1012	10	12	120	15	3	2	14.5	10	2.05	TBDP..
TBDPL12	12	12	120	18	5	–	–	12	2.05	TBDP..
TBDPL16	16	16	120	19.5	5	–	–	16	2.05	TBDP..

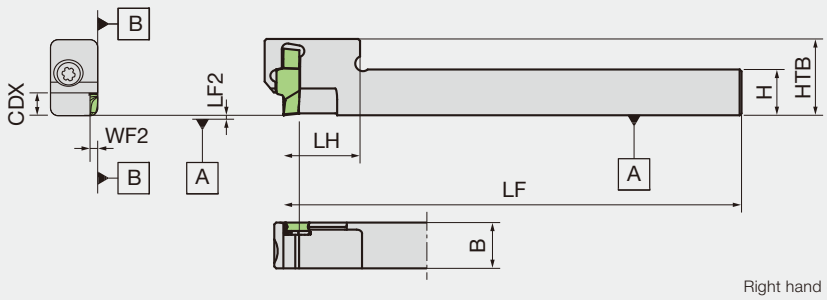
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
TBDPR**	LRIS-4*12	LLR-25S

Y-TBDPR

Screw-on Y-axis turning toolholder for back turning





Right hand (R) shown.

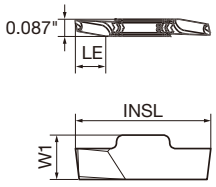
Metric	H	B	LF	LH	CDX	HTB	LF2	WF2	Insert
Y-TBDPR12S	12	12	120	20	5	20	0	2.05	TBDP..

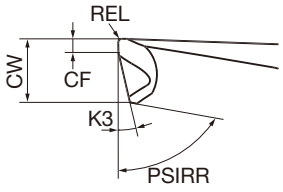
NOTE: Use a right-handed (R) insert.
NOTE: There is a risk of interference with the Y-axis holder depending on the combination of the maximum workpiece diameter and machining diameter.
→10-1

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
Y-TBDPR12S	LRIS-4*12	LLR-25S

TBDP





Right hand (R) shown.

P	Steel		☆	★	★
M	Stainless	★	★	☆	☆
N	Non-ferrous				★
S	Superalloys		★	☆	
H	Hard materials		☆	★	

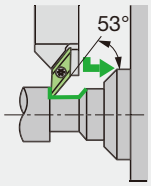
★ : First choice
☆ : Second choice

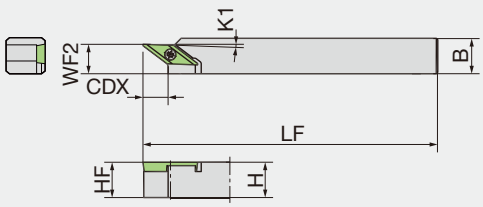
Designation	HAND	Coated				LE (in)	INSL (in)	W1 (in)	CF (in)	CW (in)	K3	PSIRR	REL (in)
		ST4	DM4	QM3	TM4								
TBDP22005R	R	●	●	●	●	0.138	0.688	0.236	0.012	0.055	13°	80°	0.002
TBDP2201MR	R	●	●	●	●	0.138	0.688	0.236	0.012	0.055	13°	80°	0.003
TBDP2202MR	R	●	●	●	●	0.138	0.688	0.236	0.012	0.055	13°	80°	0.007

● : Line up

TBVCR-F

Screw-on toolholder for back turning





Right hand (R) shown.

Inch	H	B	LF	CDX	HF	KAPR	K1	WF2	Insert	
TBVCR08-F10-IN	0.500	0.500	4.724	0.335	0.500	53°	2°	0.394	TBVC11FR..	VC**1103...
Metric	**H**	**B**	**LF**	**CDX**	**HF**	**KAPR**	**K1**	**WF2**	**Insert**	
TBVCR10-F10	10	10	120	8.5	10	53°	2°	10	TBVC11FR..	VC**1103...
TBVCR12-F10	12	12	120	8.5	12	53°	2°	10	TBVC11FR..	VC**1103...
TBVCR12GX-F10	12	12	85	8.5	12	53°	2°	10	TBVC11FR..	VC**1103...
TBVCR16-F10	16	16	120	8.5	16	53°	2°	10	TBVC11FR..	VC**1103...
TBVCR16H-F10	16	16	100	8.5	16	53°	2°	10	TBVC11FR..	VC**1103...
TBVCR20F-F10	20	20	80	8.5	20	53°	2°	10	TBVC11FR..	VC**1103...

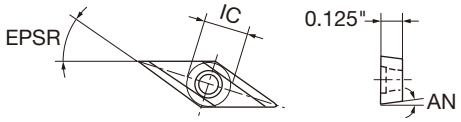
SPARE PARTS

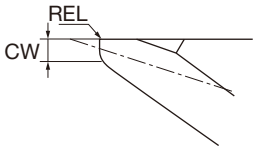
Designation	Clamp screw	Wrench (for Clamp screw)
TBVCR**	LRIS-2.5*7	CLR-15S

Reference pages : Inserts → 3-118, 2-50 -, PCD → 2-127

INSERT

TBVC..





Right hand (R) shown.

P	Steel	★	★
M	Stainless	☆	★
N	Non-ferrous		★
S	Superalloys		
H	Hard materials		

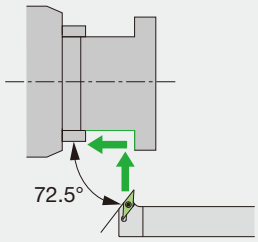
★ : First choice
☆ : Second choice

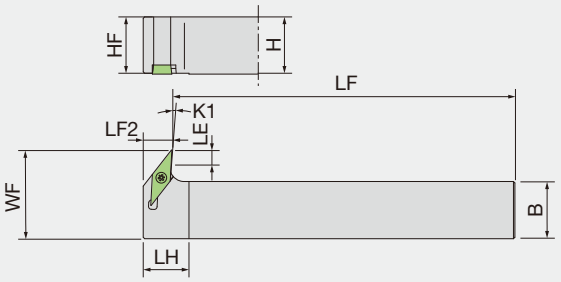
Designation	HAND	Coated VM1	Coated ZM3	IC (in)	AN	EPSR	CW (in)	REL (in)
TBVC11FR05U	R		●	0.250	7°	35°	0.020	0.002
TBVC11FR10S	R		●	0.250	7°	35°	0.020	0.004
TBVC11FR10U	R	●	●	0..250	7°	35°	0.020	0.004

● : Line up

CH-SVXCL

Screw-on toolholder for back turning for horizontal gang style tool post





Left hand (L) shown.

Metric	H	B	LF	LH	HF	K1	LE	LF2	WF	Insert
CH-SVXCL1616X11	16	16	120	16	16	3°	7	10	27	VC**1103...
CH-SVXCL2020X11	20	20	120	16	20	3°	7	10	31	VC**1103...

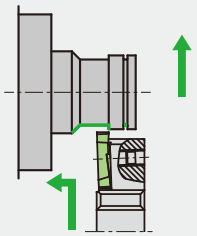
SPARE PARTS

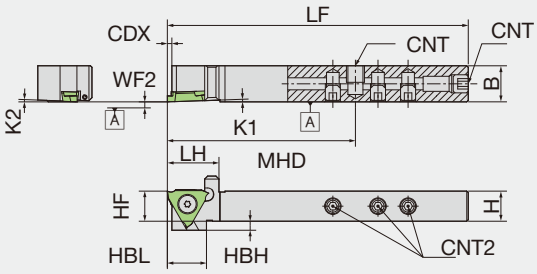
Designation	Clamp screw	Wrench (for Clamp screw)
CH-SVXCL**X11	LRIS-2.5*7	CLR-15S

Reference pages : Inserts → 2-50 -, PCD → 2-127

GTTR-OH3

Screw-on toolholder for back turning, with high pressure coolant capability





Right hand (R) shown.

Inch	H	B	LF	LH	CDX	CW	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert	
GTTR10XB-IN-OH3	0.625	0.625	4.724	0.787	0.063	-	-	-	0.625	2°	2°	3.100	0	NPT1/8	M5	GT**32..	TBMH32..

Metric	H	B	LF	LH	CDX	CW	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert	
GTTR1012H00-OH3	10	12	100	17.15	3	0.3 - 3	3	13	10	2°	2°	62.5	0	Rc1/8	M5	GT**32..	TBMH32..
GTTR16X00-OH3	16	16	120	20	3.65	0.3 - 3	–	–	16	2°	2°	78.75	0	Rc1/8	M5	GT**32..	TBMH32..

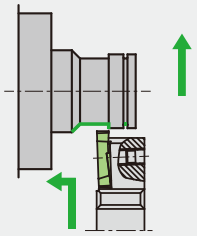
NOTE: Reference Chart of OH3 Hole Position→10-1

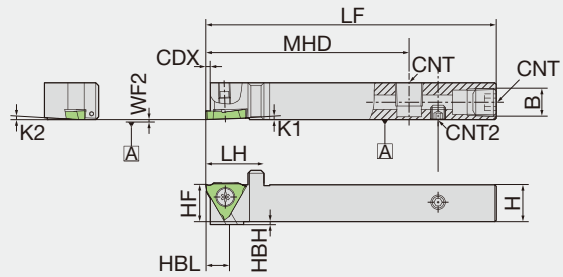
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	SCREW (FOR CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
GTTR10XB-IN-OH3	LR-S-4*10PW	SPNPT1/8	SS0505SC	CLR-15S	LW-2.5
GTTR1012H00-OH3	LR-S-4*10PW	SS0605SC	SS0505SC	CLR-15S	LW-2.5
GTTR16X00-OH3	LR-S-4*10PW	SPR1/8	SS0505SC	CLR-15S	LW-2.5

GTTR-OH2

Screw-on toolholder for back turning, with high pressure coolant capability





Right hand (R) shown.

Inch	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert	
GTTR08HA-IN-OH2	0.500	0.500	3.937	0.787	0.071	0.039	0.512	0.500	2°	2°	2.756	0	NPT1/8	M5	GT**32..	TBMH32..
GTTR08HB-IN-OH2	0.500	0.500	3.937	0.787	0.106	0.039	0.512	0.500	2°	2°	2.756	0	NPT1/8	M5	GT**32..	TBMH32..
GTTR10XA-IN-OH2	0.625	0.625	3.937	0.787	0.071	-	-	0.625	2°	2°	2.756	0	NPT1/8	M5	GT**32..	TBMH32..
GTTR10XB-IN-OH2	0.625	0.625	4.724	0.787	0.106	-	-	0.625	2°	2°	2.756	0	NPT1/8	M5	GT**32..	TBMH32..

Metric	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert	
GTTR12H00-OH2	12	12	100	19.5	1.6	1	13	12	2°	2°	70	0	Rc1/8	M5	GT**32..	TBMH32..
GTTR16X00-OH2	16	16	120	19.5	1.6	–	–	16	2°	2°	70	0	Rc1/8	M5	GT**32..	TBMH32..

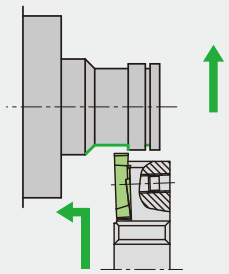
SPARE PARTS

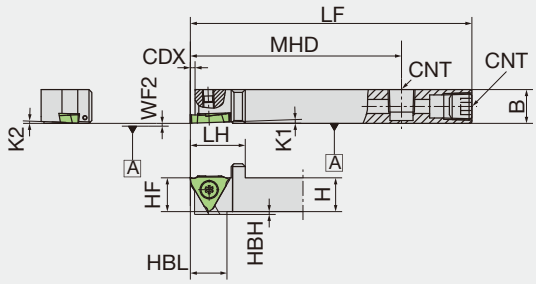
Designation	Clamp screw	Screw (for CNT)	SCREW (FOR CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
GTTR**H/X*-IN-OH2, GTTR**H00-OH2	LR-S-4*10PW	SPR1/8	SS0505SC	CLR-15S	LW-2.5

Reference pages : Inserts → 3-128

GTTR-OH

Screw-on toolholder for back turning, with high pressure coolant capability





Right hand (R) shown.

Inch	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	Insert	
GTTR10HA-IN-OH	0.625	0.625	3.937	0.768	0.071	-	-	0.625	2°	2°	2.953	0	NPT1/8	GT**32..	TBMH32..
GTTR10HB-IN-OH	0.625	0.625	4.724	0.768	0.106	-	-	0.625	2°	2°	2.953	0	NPT1/8	GT**32..	TBMH32..

Metric	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	Insert	
GTTR1012H00-OH	10	12	100	19.5	1.6	1	13	10	2°	2°	70	0	M6*1	GT**32..	TBMH32..
GTTR12H00-OH	12	12	100	19.5	1.6	1	13	12	2°	2°	70	0	Rc1/8	GT**32..	TBMH32..
GTTR16H00-OH	16	16	100	19.5	1.6	–	–	16	2°	2°	70	0	Rc1/8	GT**32..	TBMH32..

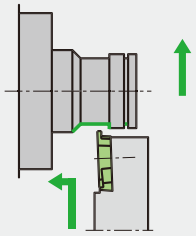
SPARE PARTS

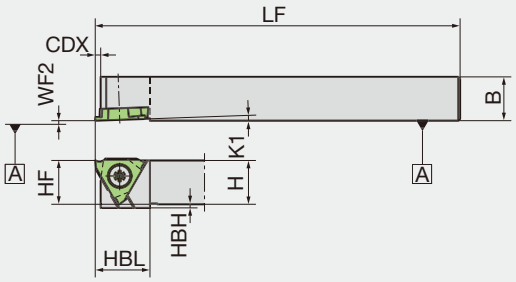
Designation	Clamp screw	Screw (for CNT)	Wrench (for Clamp screw)
GTTR10HA-IN-OH	LR-S-4*10PW	SPNPT1/8	CLR-15S
GTTR10HB-IN-OH	LR-S-4*10PW	SPNPT1/8	CLR-15S
GTTR1012H00-OH	LR-S-4*10PW	SS0605SC	CLR-15S
GTTR12H00-OH	LR-S-4*10PW	SPR1/8	CLR-15S
GTTR16H00-OH	LR-S-4*10PW	SPR1/8	CLR-15S

Reference pages : Inserts → 3-128

GTTR

Screw-on toolholder for back turning





Right hand (R) shown.

Inch	H	B	LF	CDX	HBH	HBL	HF	K1	K2	WF2	Insert	
GTTR06A-IN	0.375	0.375	4.724	0.071	0.118	0.591	0.375	2°	2°	0	GT**32..	TBMH32..
GTTR06B-IN	0.375	0.375	4.724	0.106	0.118	0.591	0.375	2°	2°	0	GT**32..	TBMH32..
GTTR08A-IN	0.500	0.500	4.724	0.071	0.039	0.591	0.500	2°	2°	0	GT**32..	TBMH32..
GTTR08B-IN	0.500	0.500	4.724	0.106	0.039	0.591	0.500	2°	2°	0	GT**32..	TBMH32..
GTTR10A-IN	0.625	0.625	4.724	0.071	-	-	0.625	2°	2°	0	GT**32..	TBMH32..
GTTR10B-IN	0.625	0.625	4.724	0.106	-	-	0.625	2°	2°	0	GT**32..	TBMH32..
GTTR12A-IN	0.750	0.750	4.724	0.071	-	-	0.750	2°	2°	0	GT**32..	TBMH32..
GTTR12B-IN	0.750	0.750	4.724	0.106	-	-	0.750	2°	2°	0	GT**32..	TBMH32..
GTTL06A-IN	0.375	0.375	4.724	0.071	0.118	0.591	0.375	2°	2°	0	GT**32..	TBMH32..
GTTL06B-IN	0.375	0.375	4.724	0.106	0.118	0.591	0.375	2°	2°	0	GT**32..	TBMH32..
GTTL08A-IN	0.500	0.500	4.724	0.071	0.039	0.591	0.500	2°	2°	0	GT**32..	TBMH32..
GTTL08B-IN	0.500	0.500	4.724	0.106	0.039	0.591	0.500	2°	2°	0	GT**32..	TBMH32..
GTTL10A-IN	0.625	0.625	4.724	0.071	-	-	0.625	2°	2°	0	GT**32..	TBMH32..
GTTL10B-IN	0.625	0.625	4.724	0.106	-	-	0.625	2°	2°	0	GT**32..	TBMH32..

Metric	H	B	LF	CDX	HBH	HBL	HF	K1	K2	WF2	Insert	
GTTR08F00	8	8	80	1.6	5	15	8	2°	2°	0	GT**32..	TBMH32..
GTTR08K00	8	8	120	1.6	5	15	8	2°	2°	0	GT**32..	TBMH32..
GTTR10F00	10	10	80	1.6	3	15	10	2°	2°	0	GT**32..	TBMH32..
GTTR10F15	10	10	80	2.7	3	15	10	2°	2°	0	GT**32..	TBMH32..
GTTR10F25	10	10	80	2.7	3	15	10	2°	2°	0	GT**32..	TBMH32..
GTTR10K00	10	10	120	1.6	3	15	10	2°	2°	0	GT**32..	TBMH32..
GTTR10K15	10	10	120	2.7	3	15	10	2°	2°	0	GT**32..	TBMH32..
GTTR10K25	10	10	120	2.7	3	15	10	2°	2°	0	GT**32..	TBMH32..
GTTR12F00	12	12	80	1.6	1	15	12	2°	2°	0	GT**32..	TBMH32..
GTTR12F15	12	12	80	2.7	1	15	12	2°	2°	0	GT**32..	TBMH32..
GTTR12F25	12	12	80	2.7	1	15	12	2°	2°	0	GT**32..	TBMH32..
GTTR12K00	12	12	120	1.6	1	15	12	2°	2°	0	GT**32..	TBMH32..
GTTR12K15	12	12	120	2.7	1	15	12	2°	2°	0	GT**32..	TBMH32..
GTTR12K25	12	12	120	2.7	1	15	12	2°	2°	0	GT**32..	TBMH32..
GTTR16H00	16	16	100	1.6	–	–	16	2°	2°	0	GT**32..	TBMH32..
GTTR16H15	16	16	100	2.7	–	–	16	2°	2°	0	GT**32..	TBMH32..
GTTR16H25	16	16	100	2.7	–	–	16	2°	2°	0	GT**32..	TBMH32..
GTTR16K00	16	16	120	1.6	–	–	16	2°	2°	0	GT**32..	TBMH32..
GTTR16K15	16	16	120	2.7	–	–	16	2°	2°	0	GT**32..	TBMH32..
GTTR16K25	16	16	120	2.7	–	–	16	2°	2°	0	GT**32..	TBMH32..
GTTR20K00	20	20	125	2.7	–	–	20	2°	2°	0	GT**32..	TBMH32..
GTTR25M00	25	25	150	2.7	–	–	25	2°	2°	0	GT**32..	TBMH32..

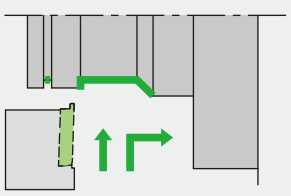
SPARE PARTS

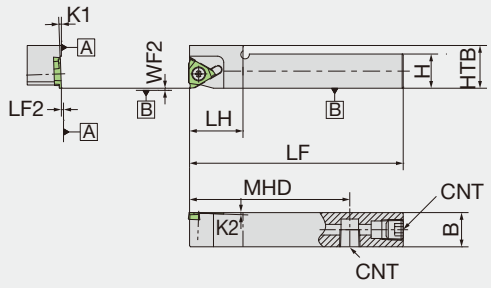
Designation	Clamp screw	Wrench (for Clamp screw)
GTTR**	LR-S-4*10PW	CLR-15S

Reference pages : Inserts → 3-128

Y-GTTR-OH

Screw-on Y-axis turning toolholder for back turning, with high pressure coolant capability





Right hand (R) shown.

Inch	H	B	LF	LH	HTB	K1	K2	LF2	MHD	WF2	CNT	Insert	
Y-GTTR08H-IN-OH	0.500	0.500	3.937	0.984	0.787	2°	2°	0	2.953	0	NPT1/8	GT**32..	TBMH32..
Y-GTTR08H-IN-OH2	0.500	0.500	3.937	0.984	0.787	2°	2°	0	2.756	0	NPT1/8	GT**32..	TBMH32..
Metric	**H**	**B**	**LF**	**LH**	**HTB**	**K1**	**K2**	**LF2**	**MHD**	**WF2**	**CNT**	**Insert**	
Y-GTTR12H00S-OH	12	12	100	20	20	2°	2°	0	75	0	Rc1/8	GT**32..	TBMH32..
Y-GTTR16H00-OH	16	16	100	25	20	2°	2°	0	75	0	Rc1/8	GT**32..	TBMH32..

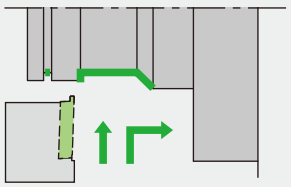
NOTE: Use a right-handed (R) insert.
NOTE: There is a risk of interference with the Y-axis holder depending on the combination of the maximum workpiece diameter and machining diameter.
→10-1

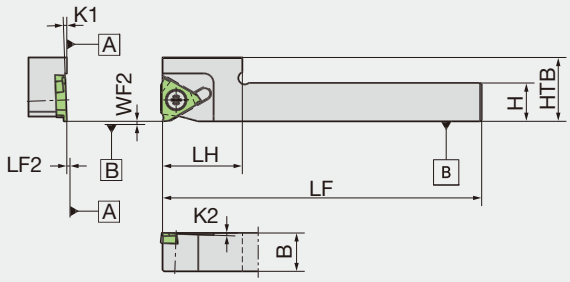
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Wrench (for Clamp screw)
Y-GTTR**H-IN-OH	LR-S-4*10PW	SPNPT1/8	CLR-15S
Y-GTTR**-OH	LR-S-4*10PW	SPR1/8	CLR-15S

Y-GTTR

Screw-on Y-axis turning toolholder for back turning





Right hand (R) shown.

Inch	H	B	LF	LH	HTB	K1	K2	LF2	WF2	Insert	
Y-GTTR06-IN	0.375	0.375	4.724	0.984	0.787	2°	2°	0	0	GT**32..	TBMH32..
Y-GTTR08-IN	0.500	0.500	4.724	0.984	0.787	2°	2°	0	0	GT**32..	TBMH32..
Y-GTTR10-IN	0.625	0.625	4.724	0.984	0.787	2°	2°	0	0	GT**32..	TBMH32..
Metric	**H**	**B**	**LF**	**LH**	**HTB**	**K1**	**K2**	**LF2**	**WF2**	**Insert**	
Y-GTTR10MS	10	10	120	22	20	2°	2°	0	0	GT**32..	TBMH32..
Y-GTTR10S	10	10	120	20	20	2°	2°	0	0	GT**32..	TBMH32..
Y-GTTR12MS	12	12	120	22	20	2°	2°	0	0	GT**32..	TBMH32..
Y-GTTR12S	12	12	120	20	20	2°	2°	0	0	GT**32..	TBMH32..

NOTE: Use a right-handed (R) insert.
NOTE: There is a risk of interference with the Y-axis holder depending on the combination of the maximum workpiece diameter and machining diameter.
→10-1

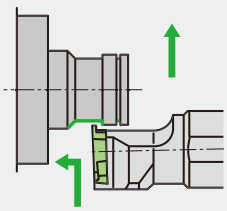
SPARE PARTS

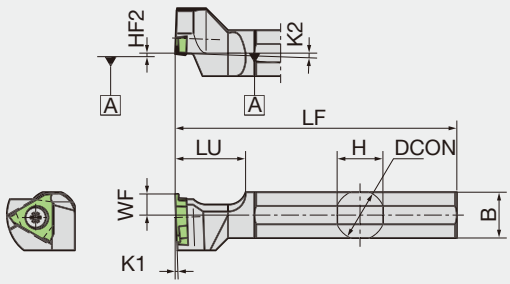
Designation	Clamp screw	Wrench (for Clamp screw)
Y-GTTR**	LR-S-4*10PW	CLR-15S

Reference pages : Inserts → 3-128

DS-GTTL

Screw-on round-shank toolholder for back turning





Left hand (L) shown.

Metric	H	B	LF	DCON	HF2	K1	K2	LU	WF	Insert	
DS-GTTL14F	13	13	80	14	0	2°	2°	19	6	GT**32..	TBMH32..
DS-GTTL15H	15	15	100	15.875	0	2°	2°	19	6	GT**32..	TBMH32..
DS-GTTL16X	15	15	95	16	0	2°	2°	19	6	GT**32..	TBMH32..
DS-GTTL19	18	18	120	19.05	0	2°	2°	19	6	GT**32..	TBMH32..
DS-GTTL20	19	19	120	20	0	2°	2°	19	6	GT**32..	TBMH32..
DS-GTTL22	21	21	120	22	0	2°	2°	19	6	GT**32..	TBMH32..
DS-GTTL25	24	24	120	25.4	0	2°	2°	19	10	GT**32..	TBMH32..
DS-GTTL25-MET	24	24	150	25	0	2°	2°	19	10	GT**32..	TBMH32..
DS-GTTL32	30	30	150	32	0	2°	2°	19	10	GT**32..	TBMH32..

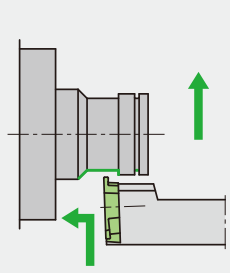
NOTE: Use a right-handed (R) insert.

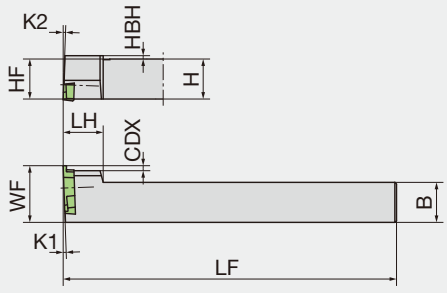
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
DS-GTTL**	LR-S-4*9	RLR-20S

CH-GTTL

Screw-on toolholder for back turning for horizontal gang style tool post





Left hand (L) shown.

Metric	H	B	LF	LH	CDX	HBH	HF	K1	K2	WF	Insert	
CH-GTTL10H00	10	10	100	12	1.5	3	10	2°	2°	15	GT**32..	TBMH32..
CH-GTTL12H00	12	12	100	12	1.5	1	12	2°	2°	17	GT**32..	TBMH32..
CH-GTTL16H00	16	16	100	12	1.5	–	16	2°	2°	21	GT**32..	TBMH32..

NOTE: Use a right-handed (R) insert.

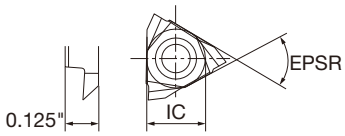
SPARE PARTS

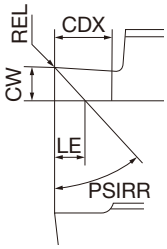
Designation	Clamp screw	Wrench (for Clamp screw)
CH-GTTL**H00	LR-S-4*9	RLR-20S

Reference pages : Inserts → 3-128

INSERT

TBMH with Chipbreaker





Right hand (R) shown.

P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	Coated ZM3	LE (in)	CDX (in)	IC (in)	EPSR	CW (in)	PSIRR	REL (in)
TBMH32100R05-22	R	●	0.012	0.071	0.375	60°	0.039	22°	0.002
TBMH32100R05-45	R	●	0.035	0.071	0.375	60°	0.039	45°	0.002
TBMH32150R05-22	R	●	0.020	0.106	0.375	60°	0.059	22°	0.002
TBMH32150R05-45	R	●	0.051	0.102	0.375	60°	0.059	45°	0.002

● : Line up

MINI FORCE TURN STANDARD CUTTING CONDITIONS

FOR EXTERNAL TURNING

Applications	ISO	Workpiece material	Priority	Chip breaker	Grade	Cutting speed *Vc* (sfm)	Depth of cut *ap* (in)	Feed *f* (ipr)
For swiss type automatic lathes	P	Low carbon steels Carbon steels 1045, etc. Low alloy steels Alloy steels 4140, etc.	First choice	JS	SH725	164 - 591	0.004 - 0.118	0.001 - 0.004
			With high sharpness	JSS	SH725	164 - 591	0.004 - 0.059	0.001 - 0.004
	M	Stainless steels (Austenitic) 304, etc. Stainless steels (Martensitic and ferritic) 430, etc. Stainless steels (Precipitation hardened 174, etc.	First choice	JS	SH725	164 - 591	0.004 - 0.049	0.001 - 0.004
			With high sharpness	JSS	SH725	164 - 591	0.004 - 0.059	0.001 - 0.004
For small size CNC lathes	P	Low carbon steels Carbon steels 1045, etc. Low alloy steels Alloy steels 4140, etc.	First choice	SS	AH725	164 - 591	0.006 - 0.059	0.002 - 0.008
				TS	AH725	164 - 591	0.012 - 0.079	0.003 - 0.012
			For improved surface finish	SS	NS9530	164 - 656	0.006 - 0.059	0.002 - 0.008
				TS	NS9530	164 - 656	0.012 - 0.079	0.003 - 0.012
			For wear resistance	SS	GT9530	164 - 820	0.006 - 0.059	0.002 - 0.008
				TS	GT9530	164 - 820	0.012 - 0.079	0.003 - 0.012
	M	Stainless steels (Austenitic) 304, etc. Stainless steels (Martensitic and ferritic) 430, etc. Stainless steels (Precipitation hardened 174, etc.	First choice	SS	AH8015	164 - 492	0.006 - 0.059	0.002 - 0.008
			For impact resistance	TS	AH8015	164 - 492	0.012 - 0.079	0.003 - 0.012

J-SERIES STANDARD CUTTING CONDITIONS

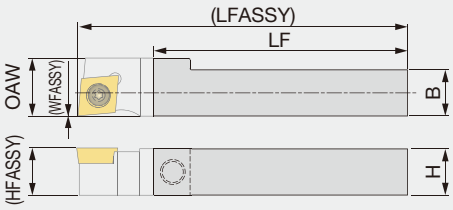
ISO	Workpiece material	Priority	Grade	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Low carbon steels Carbon steels 1045, etc. Low alloy steels Alloy steels 4140, etc.	First choice	SH725	164 - 656	0.0004 - 0.008
		For impact resistance	AH725	164 - 656	0.0004 - 0.008
M	Stainless steels (Austenitic) 304, etc. Stainless steels (Martensitic and ferritic) 430, etc. Stainless steels (Precipitation hardened 174, etc.	First choice	SH725	164 - 656	0.0004 - 0.008
		For impact resistance	AH725	164 - 656	0.0004 - 0.008
S	Titanium alloys Ti-6Al-4V, etc. Superalloys Inconel718, etc.	First choice	SH725	66 - 262	0.0004 - 0.008
		For impact resistance	AH725	66 - 262	0.0004 - 0.008

ACCESSORY

MODUMINI TURN

QC-08 and QC-1212

Shank for modular heads



Inch	H	B	WFASSY	LF	OAW	HFASSY	LFASSY(1)	Torque
QC-08F	0.500	0.500	0	2.560	0.590	0.500	3.346	2.21
QC-08X	0.500	0.500	0	3.940	0.590	0.500	4.724	2.21
Metric	**H**	**B**	**WFASSY**	**LF**	**OAW**	**HFASSY**	**LFASSY(1)**	**Torque***
QC-1212F	12	12	0	65	15	12	85	3
QC-1212X	12	12	0	100	15	12	120	3

Torque: Recommended clamping torque: lbs·ft (*N·m)
(1) The size is true when the modular head with LH = 19.5 mm is mounted.

QC-1012/1212/1616-CHP

Shank for modular heads, with high pressure coolant capability

Tube connection

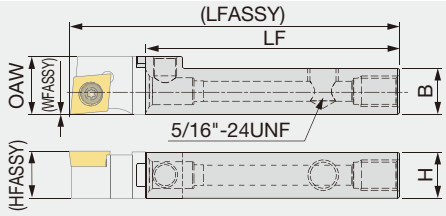


Fig.1

Direct connection

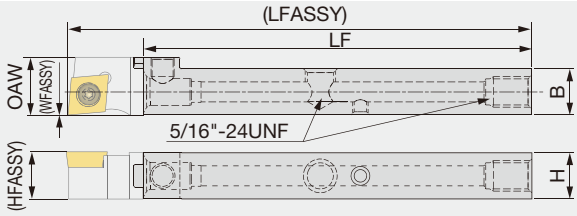


Fig.2

Inch	H	B	LF	WFASSY	OAW	HFASSY	LFASSY(1)	Torque*	Fig.
QC-08F-CHP	0.500	0.500	2.559	0	0.591	0.500	3.346	2.21	1
QC-06H-CHP (*)	0.375	0.500	3.268	0.512	0.512	0.375	3.937	1.84	2
QC-08X-CHP (*)	0.500	0.500	3.937	0	0.591	0.500	4.724	2.21	2
QC-10X-CHP (*)	0.625	0.625	3.897	0.787	0.787	0.625	4.724	6.27	2
Metric	**H**	**B**	**LF**	**WFASSY**	**OAW**	**HFASSY**	**LFASSY(1)**	**Torque***	**Fig.**
QC-1212F-CHP	12	12	65	0	15	12	85	3	1
QC-1212X-CHP (*)	12	12	100	0	15	12	120	3	2
QC-1012H-CHP (*)	10	12	83	0	13	10	100	2.5	2
QC-1616X-CHP (*)	16	16	99	0	20	16	120	8.5	2

Torque: Recommended clamping torque: lbs·ft (*N·m)
Through-coolant shank
(*) : Compatible to the direct internal coolant supply system without the use of external coolant hose.
(1) The size is true when the modular head with LH = 19.5 mm is mounted.

SPARE PARTS

Designation	Clamping screw	Wrench	Coolant plug	Wrench	DirectJet plug	Wrench
QC-08*, QC-1212*	SRM6X0.5-26977	P-3	-	-	-	-
QC-08F-CHP, QC-1212F-CHP	SRM6X0.5-26977	P-3	SR5/16UNF TL360	P-4	-	-
QC-06H-CHP, QC-1012H-CHP	SRM5X0.5	P-2.5	SR 5/16UNF TL360	P-4	SSHM4-4-TB	P-2
QC-08X-CHP, QC-1212X-CHP	SRM6X0.5-26977	P-3	SR5/16UNF TL360	P-4	SSHM4-6-TB	P-2
QC-10X-CHP, QC-1616X-CHP	SRM8X0.5	P-5	SR 5/16UNF TL360	P-4	SSHM4-6-TB	P-2

QC-1216/1620-F15-CHP

Stepped-head shank for modular heads, with high pressure coolant capability

Tube connection

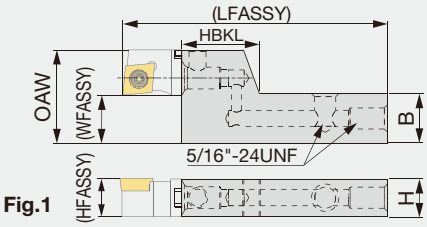


Fig.1

Direct connection

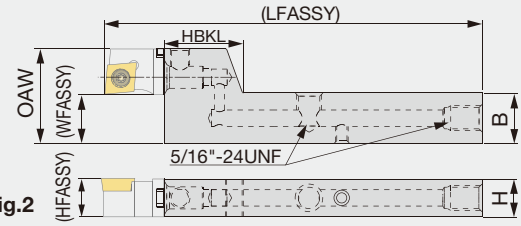


Fig.2

Inch	H	B	LF	OAW	WFASSY	HFASSY	LFASSY(1)	HBKL	Torque*	Fig.
QC-08F-F10-CHP	0.500	0.625	2.559	1.220	0.625	0.500	3.346	0.980	2.21	1
QC-08X-F10-CHP (*)	0.500	0.625	3.937	1.220	0.625	0.500	4.724	0.980	2.21	2
QC-10X-F10-CHP (*)	0.625	0.750	3.897	1.413	0.625	0.625	4.724	1.181	6.27	2

Metric	H	B	LF	OAW	WFASSY	HFASSY	LFASSY(1)	HBKL	Torque*	Fig.
QC-1216F-F15-CHP	12	16	65	30	15	12	85	25	3	1
QC-1216X-F15-CHP (1)	12	16	100	30	15	12	120	25	3	2
QC-1620X-F15-CHP	16	20	99	35	15	16	120	30	8.5	2

Torque: Recommended clamping torque: lbs·ft (*N·m)
QC12 heads only can be mounted on these shanks.
(*) : Compatible to the direct internal coolant supply system without the use of external coolant hose.
(1) The size is true when the modular head with LH = 19.5 mm is mounted.

SPARE PARTS

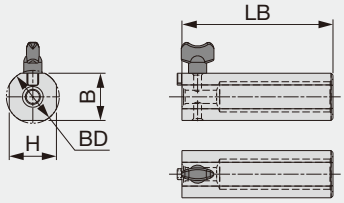
Designation	Clamping screw	Wrench	Coolant plug	Wrench	DirectJet plug	Wrench
QC-08F-F10-CHP, QC-1216F-F15-CHP	SRM6X0.5-26977	P-3	SR5/16UNF TL360	P-4	-	-
QC-08X-F10-CHP, QC-1216X-F15-CHP	SRM6X0.5-26977	P-3	SR5/16UNF TL360	P-4	SSHM4-6-TB	P-2
QC-10X-F10-CHP, QC-1620X-F15-CHP	SRM8X0.5	P-5	SR 5/16UNF TL360	P-4	SSHM4-6-TB	P-2

ACCESSORY

MODUMINI TURN

QC-10/12/16D28EXC

Modular head holder for insert change



Inch	BD	LB	H	B
QC-10D28EXC	1.063	3.150	0.945	0.945
QC-12D28EXC	1.102	3.150	0.984	0.984
QC-16D28EXC	1.102	3.150	0.984	0.984

Metric	BD	LB	H	B
QC-10D28EXC	27	80	24	24
QC-12D28EXC	28	80	25	25
QC-16D28EXC	28	80	25	25

Note: This is a dedicated modular-head holder designed to facilitate insert changes. Do not use this holder for machining as it may cause damages to tool, workpiece, machine, and possible human injury.

SPARE PARTS

Designation	Fixing screw
QC-**D28EXC	KNOBM5X10

ModuMini-Turn modular heads are small. When it is difficult to change inserts while holding the modular head with fingers, use the dedicated holder to facilitate insert changes.

QC10/12/16-STOPPER

Protective plug for shank

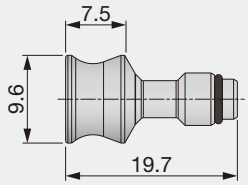


Fig. 1

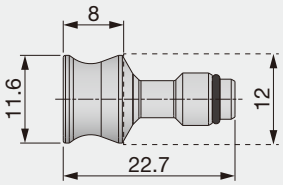


Fig. 2

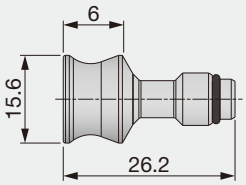


Fig. 3

(Unit: mm)

Metric	Fig.
QC10-STOPPER	1
QC12-STOPPER	2
QC16-STOPPER	3

SPARE PARTS

Designation	O-ring
QC10-STOPPER	ORSS-0353.5X1.0NBR70
QC12-STOPPER	ORSS-0454.5X1.0NBR70
QC16-STOPPER	ORSS-0757.5X1.0NBR70

The cutting head located in the feed direction of the Y-axis tool can be removed to make room for machining larger-sized barstock. If this is the case, attach the plug to the shank to protect the coupling surface from chips, as well as prevent coolant leakage during machining.

MEMO

4. Internal Toolholders

Main products

TINY MINI TURN

Solid boring bar for turning small diameters with high precision

4-44 -

STREAMJETBAR

Highly rigid toolholders providing good chip evacuation

4-11 -

MINI FORCE TURN

Economical double-sided inserts with excellent sharpness

WXGU 4-35
DXGU 4-36 -

Y-PRO SERIES

Inserts with 25° corner angle for profiling

Shank **ø0.500" - 0.625", ø12 - 16 mm**

4-22

Mogul Bar

Anti vibration boring bar and special chipbreaker for good chip evaculation
-Opposite direction to the feed-

4-16

LBM Series

Min machining diameter ø1.0– with high precision

4-38 -

STICK DUO

Economical 2 corners solid bar with wide range of choice

4-55

Shaper DUO

Unique tools for Hexalobular, Hexagon and Square hole process.

7-1

Sleeve

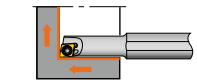
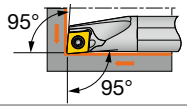
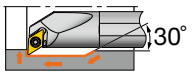
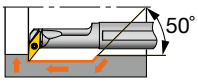
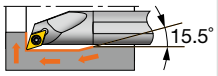
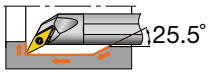
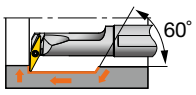
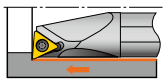
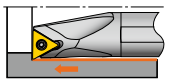
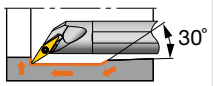
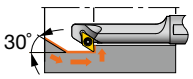
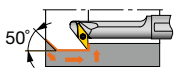
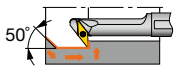
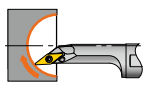
Wide range of choice -Coolant supply / Adjustable overhang length

4-42, 4-58

Miniature Internal Turning - Quick Guide

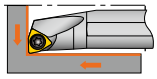
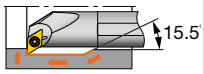
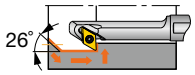
Positive type (Inch)

StreamJet-Bar

Appli-cation	Style	Designation	Insert	Material	Through coolant	ISO Insert	Y-PRO	Min. bore diameter DMIN (in) 0 0.125 0.250 0.375 0.500 0.625 0.750 0.875 1.000 1.250	Page
Boring & Internal facing		**SEXPR**	EPGT 5	Steel Carbide	●	✓		ø0.250" – ø0.250"	4-11
Boring & Internal facing		**SCLCR/L**	CC**2/3	Steel Carbide	●	✓		ø0.375" – ø1.250" ø0.500" – ø1.250"	4-14
Boring & internal profiling		**SDUCR/L**	DC**2/3	Steel Carbide	●	✓		ø0.625" – ø1.000" ø0.625" – ø1.000"	4-18
Boring & internal profiling		**SVUCR/L**	VC**6/2	Steel	●	✓		ø0.875" – ø1.000"	4-19
Boring & internal profiling		**SDQCR/L**	DC**2	Steel	●	✓		ø0.625" – ø0.875"	4-20
Boring & internal profiling		**SVQCR/L**	VC**6/2	Steel	●	✓		ø0.688" – ø1.000"	4-21
Boring & internal profiling		**SYUBR/L**	YW**11	Steel Carbide	●	✓		ø1.000" ø0.875" – ø1.000"	4-22
Boring		**STUPR/L**	TP**7/2/3	Steel Carbide	●	✓		ø0.438" – ø1.250" ø0.438" – ø0.875"	4-25
Blind hole boring		**STFPR/L**	TP**2/3	Carbide	●		✓	ø0.500" – ø1.000"	4-28
Internal undercut & profiling		**SYQBR/L**	YW**11	Steel Carbide	●	✓		ø0.750" – ø0.875" ø0.750" – ø0.875"	4-29
Back boring		**SDZCR/L**	DC**2	Steel	●	✓		ø0.875"	4-31
Back boring		**SVZCR/L**	VC**6/2	Steel	●	✓		ø0.750" – ø1.000"	4-32
Back boring		**SVZBR/L**	VB**2	Steel	●	✓		ø1.000"	4-33
Internal sphere cutting		**SVJCR/L**	VC**2	Steel	●	✓		ø1.000"	4-34

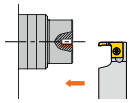
Double-sided insert with positive cutting edges (Inch)

MiniForce-Turn

Appli-cation	Style	Designation	Insert	Material	Through coolant	MINIFÜRN	Min. bore diameter DMIN (in) 0 0.125 0.250 0.375 0.500 0.625 0.750 0.875 1.000	Page
Boring & Internal facing		**SWLXR/L**	WX*U...	Steel Carbide	●	✓	ø0.500" ø1.000" ø0.500" ø1.000"	4-35
Boring & internal profiling		**SDXXR/L**	DX*U...	Steel Carbide	●	✓	ø0.625" ø1.000"	4-36
Back boring		**SDZXR/L**	DX*U...	Steel	●	✓	ø0.625" ø0.875"	4-37

Solid bar type (Inch)

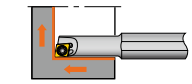
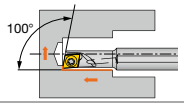
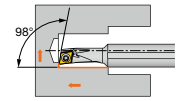
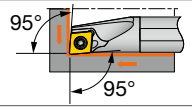
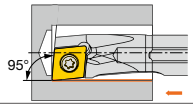
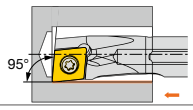
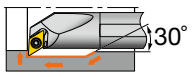
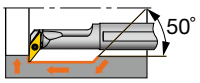
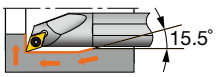
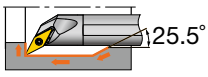
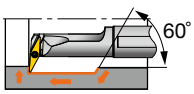
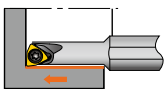
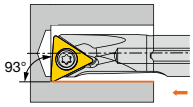
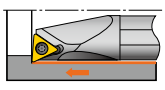
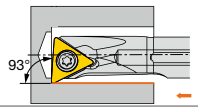
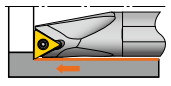
LBM series

Appli-cation	Style	Designation	Insert	Through coolant	Min. bore diameter DMIN (in) 0 0.125 0.250 0.375 0.500 0.625	Page
Internal, Front turning		**LBMAR**	LBM..		ø0.039" ø0.118"	4-38

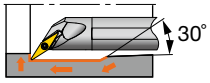
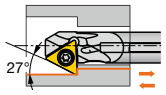
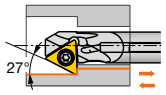
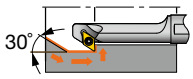
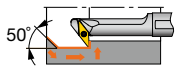
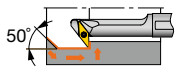
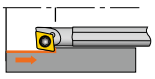
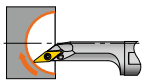
Miniature Internal Turning - Quick Guide

Positive type (Metric)

StreamJet-Bar / Mogul Bar

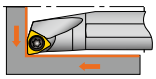
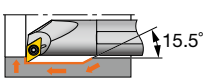
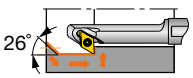
Appli-cation	Style	Designation	Insert	Material	Through coolant	StreamJet-Bar	Mogul Bar	Min. bore diameter DMIN (mm) 0 10 20 30 40 50	Page
Boring & Internal facing		**SEXPR**	EP...	Steel Carbide	●	✓		ø4.5 ø7 ø4.5 ø7	4-53
		**S/C-MBR-OH**	MBL..	Steel Carbide	●		✓	ø5	4-12
		**S/C-SEXR-OH**	ERGH..	Steel Carbide	●		✓	ø6	4-13
		**SCLCR/L**	CC...	Steel Carbide	●	✓		ø5 ø27 ø5 ø27	4-14
		**S/C-SCLCR/L-OH**	CC..	Steel Carbide	●		✓	ø10 ø18	4-16
		**S/C-SCLPR/L-OH**	CP...	Steel Carbide	●		✓	ø7 ø10	4-17
Boring & internal profiling		**SDUCR/L**	DC...	Steel Carbide	●	✓		ø13 ø32 ø13 ø27	4-18
		**SVUCR/L**	VC...	Steel Carbide	●	✓		ø16 ø32 ø18 ø32	4-19
		**SDQCR/L**	DC...	Steel Carbide	●	✓		ø13 ø30 ø13 ø25	4-20
		**SVQCR/L**	VC...	Steel Carbide	●	✓		ø13.5 ø21.5 ø13.5 ø21.5	4-21
		**SYUBR/L**	YW...	Steel Carbide	●	✓		ø20 ø20 ø24.5	4-22
Boring		**SWUBR/L**	WB...	Steel Carbide	●	✓		ø6 ø8 ø6 ø8	4-23
		**S/C-STUCR/L-OH**	TC..	Steel Carbide	●		✓	ø8	4-24
		**STUPR/L**	TP...	Steel Carbide	●	✓		ø8 ø34 ø8 ø27	4-25
		**S/C-STUPR/L-OH**	TP..	Steel Carbide	●		✓	ø10 ø22	4-27
Blind hole boring		**STFPR/L**	TP...	Steel Carbide	●	✓		ø10 ø27 ø10 ø22	4-28

StreamJet-Bar / Mogul Bar

Appli-cation	Style	Designation	Insert	Material	Through coolant	StreamJet-Bar	Mogul Bar	Min. bore diameter DMIN (mm) 0 10 20 30 40 50	Page
Internal undercut & profiling		**SYQBR/L**	YW...	Steel Carbide	●	✓		ø17 ø21.5 ø17 ø21.5	4-29
Front turning, Back turning		**C-STZCR-OH**	TC..	Carbide	●		✓	ø10	4-30
		**C-STZPR-OH**	TP...	Carbide	●		✓	ø12 ø17.5	4-30
Back boring		**SDZCR/L**	DC...	Steel Carbide	●	✓		ø14 ø25 ø18 ø22	4-31
		**SVZCR/L**	VC...	Steel	●	✓		ø16	4-32
		**SVZBR/L**	VB...	Steel	●	✓		ø20 ø40	4-33
		**SEZPR/L**	EP...	Steel Carbide	●	✓		ø5.5 ø6.5 ø5.5 ø6.5	4-34
Internal sphere cutting		**SVJCR/L**	VC...	Steel	●	✓		ø16 ø20	4-34

Double-sided insert with positive cutting edges (Metric)

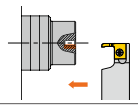
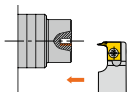
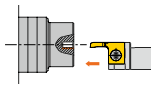
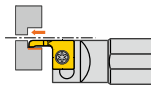
MiniForce-Turn

Appli-cation	Style	Designation	Insert	Material	Through coolant	MINIFÜRN	Min. bore diameter DMIN (mm) 0 10 20 30 40 50	Page
Boring & Internal facing		**SWLXR/L**	WX*U...	Steel Carbide	●	✓	ø12 ø22 ø12 ø22	4-35
Boring & internal profiling		**SDXXR/L**	DX*U...	Steel Carbide	●	✓	ø13 ø24 ø13 ø24	4-36
Back boring		**SDZXR/L**	DX*U...	Steel Carbide	●	✓	ø14 ø20 ø18 ø22	4-37

Miniature Internal Turning - Quick Guide

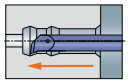
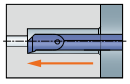
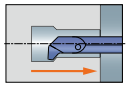
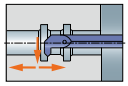
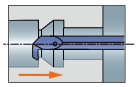
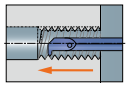
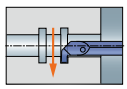
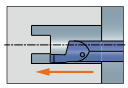
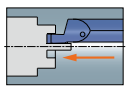
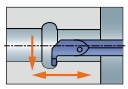
Solid bar type (Metric)

LBM series

Appli-cation	Style	Designation	Insert	Through coolant	Min. bore diameter DMIN (mm) 0 10 20 30 40 50	Page
Internal, Front turning		**LBMAR**	LBM..		ø1 ø3	4-38
		**LBMAR-S**	LBMD..S		ø1 ø2.3	4-38
		**CH-LBML**	LBM.. LBMD..S		ø1 ø3	4-39
		**DS-LBMBL**	LBM.. LBMD..S		ø1 ø3	4-39

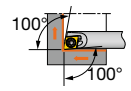
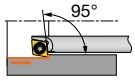
TinyMini-Turn

Solid carbide tools for small diameters turning

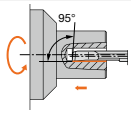
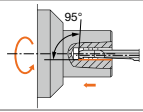
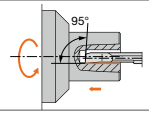
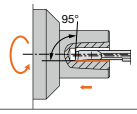
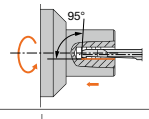
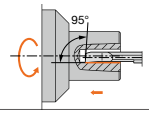
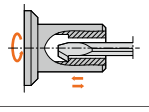
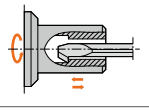
	Application	Description	Through coolant	Cylindrical shank ø4	Cylindrical shank ø7	Groove width (mm)	Min. bore diameter DMIN (mm) 0 2 4 6 8 10 12 14 15	Page
Boring, profiling & chamfering		**TBT**		●	●	-	ø0.6 ø7	4-44
		JBT	●	●	●	-	ø1 ø7	4-45
Internal, Face grooving		**TBP**		●	●	-	ø2.8 ø5	4-46
		JBP	●	●	●	-	ø2.8 ø5	
Back boring & chamfering		**TBU**			●	-	ø5	4-46
		JBU	●		●	-	ø5	4-47
Boring & 45°chamfering		**TBC**			●	-	ø5 ø6.8	4-47
		JBC	●		●	-	ø5 ø6.8	
Back boring		**TBB**		●	●	-	ø3 ø7	4-48
		JBB	●	●	●	-	ø3 ø5	
Threading (Metric thread)		**TBI**		●	●	-	ø4 ø7	4-48
		JBI	●	●	●	-	ø4 ø6	4-49
Internal Grooving		**TBG**		●	●	0.5 - 2	ø2 ø6.8	4-49
		JBG	●	●	●	0.5 - 2	ø2 ø6.8	4-50
Face grooving		**TBF**			●	1 - 3	ø6 ø15	4-51
		JBF	●		●	1 - 3	ø6 ø15	
Face grooving (for shaft)		**TBS**			●	2	ø6	4-52
		JBS	●		●	2	ø6	
Boring & profiling (full radius type)		**TBR**			●	1	ø5 ø6.8	4-52
		JBR	●		●	1	ø5 ø6.8	

TinyMini-Turn

Indexable tools for small diameters turning

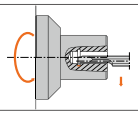
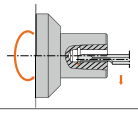
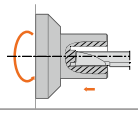
Application		Description	Material	Cylindrical shank ø7	Through coolant	Min. bore diameter DMIN (mm) 0 2 4 6 8 10	Page
Boring & internal facing		**SEXPR**	Steel Carbide	●	●	ø5 ø6	4-53
Back boring		**SEZPR**	Steel Carbide	●	●	ø5.5	4-53

STICK DUO series

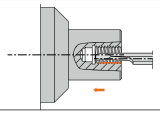
Appli-cation	Style	Designation	Sleeve	Cylindrical shank ø2	ø2.5	ø3	ø3.5	ø4	ø5	ø6	ø8	Min. bore diameter DMIN (mm)	High precision	Page
Internal, Front turning		**SBFS-S**	HY-NBH-OH HY-NBH NBH	●	●	●	●	●	●	●		2.2 - 6.2		4-62
		**SBFB-F**	HY-NBH-OH HY-NBH NBH	●	●	●	●	●	●	●		2.2 - 6.2		4-63
		**SBFS-H**	HY-NBH-OH HY-NBH NBH	●	●	●	●	●	●	●	●	2.2 - 8.2		4-64
		**SHFS-S**	HY-NBH-OH HY-NBH NBH	●	●	●	●	●	●			2.2 - 5.2	●	4-65
		**SHFB-F**	HY-NBH-OH HY-NBH NBH	●	●	●	●	●	●			2.2 - 5.2	●	4-66
		**SHFS-H**	HY-NBH-OH HY-NBH NBH	●	●	●	●	●	●			2.2 - 5.2	●	4-67
Internal, Back turning		**SBB-S**	HY-NBH-OH HY-NBH NBH			●		●				3.0 - 4.0		4-68
		**SBB**	HY-NBH-OH HY-NBH NBH			●		●				3.0 - 4.0		4-68

Miniature Internal Turning - Quick Guide

STICK DUO series

Appli-cation	Style	Designation	Sleeve	Cylindrical shank ø3	ø4	ø5	ø6	ø8	Min. bore diameter DMIN (mm)	Groove width (mm)	Page
Internal Grooving		**SBG-S**	HY-NBH-OH HY-NBH NBH	●	●	●	●	●	3.0 - 8.0	0.5 - 2.0	4-69
		**SBG**	HY-NBH-OH HY-NBH NBH	●	●	●	●	●	3.0 - 8.0	0.5 - 2.0	4-70
Internal, Face grooving		**SFG**	HY-NBH-OH HY-NBH NBH				●	●	6.0 - 8.0	1.0 - 3.0	4-71

STICK DUO series

Appli-cation	Style	Designation	Sleeve	Cylindrical shank ø2.5	ø3	ø3.5	ø4	ø5	ø6	Min. bore diameter DMIN (mm)	Pitch (mm) 0	1	2	3	4	5	Page
Internal, Threading		**SBT**	HY-NBH-OH HY-NBH NBH	●	●	●	●	●	●	2.5 - 6.0	0.5	1.75					4-72

SHAPER DUO

Appli-cation	Style	Designation	Sleeve	Cylindrical shank ø2	ø2.5	ø3	ø3.5	ø4	ø5	ø6	ø8	Socket size	AF renge (mm)	Page
Hexagon		**SSP-H**	HY-NBH-OH HY-NBH NBH	●		●		●	●	●	●	-	1.0 - 12.1	7-3
Hexalobular		**SSP-T**	HY-NBH-OH HY-NBH NBH						●			T6 - T30	-	7-4
Square		**SSP-S**	HY-NBH-OH HY-NBH NBH	●	●	●	●	●	●	●	●	-	2.0 - 8.0	7-5

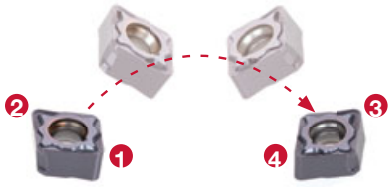
MINIFORCE TURN

Economical double-sided positive insert

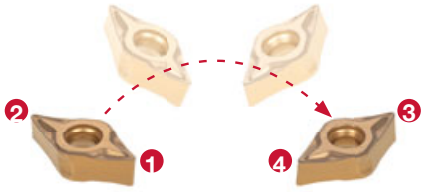
Innovative geometry and seat interface ensures stability and high performance.

Insert

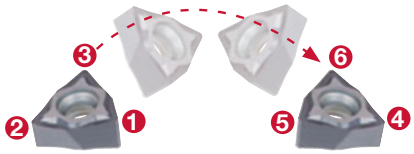
CXMU0603... 4 edges, rhombic 80°



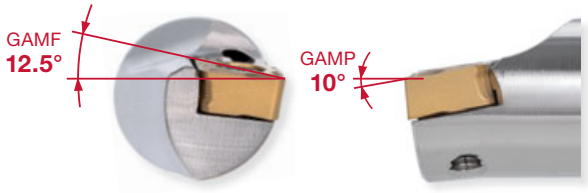
DXM/GU0703... 4 edges, rhombic 55°



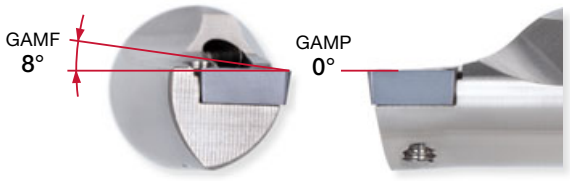
WXGU0403... 6 positive cutting edges



Low cutting force machining with high rake angle



MINIFORCE TURN
A12M-SCLXR06-D140



Conventional
A12M-SCLCR06-D140

Reference pages: 4-35 - 4-37

Mogul Bar

For ID boring | Swiss CNC Lathes

Highly rigid bars and inserts that direct chips away from the part

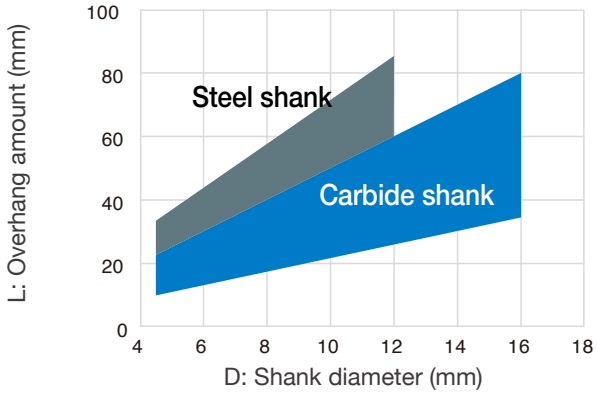
Unique boring bar design greatly improves rigidity combined with chipbreakers that control the direction of the chip evacuation during the boring operation

Features

Toolholder overhang

Steel shank L/D ≦ 5

Carbide shank L/D ≦ 7



Cutting conditions
Material : Alloy steel, Stainless steel
Vc = 80m/min *f* = 0.05 - 0.1 mm/rev
*a*p = 0.1 - 0.5 mm
WET

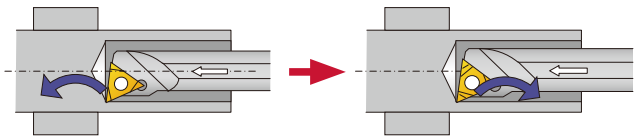
Features

F1, F05, FG chipbreakers developed for blind hole applications to direct chips backward and out of the hole to prevent chip packing

Coolant through boring bars to support chip evacuation

Conventional chipbreaker

FG chipbreakers
F1 F05 chipbreakers



Reference pages: Inserts → 2-11, CBN → 2-87 -, PCD → 2-119 -, Shank → 4-16

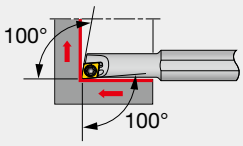
EP

Rhombic, 75°
with hole
Positive 11°

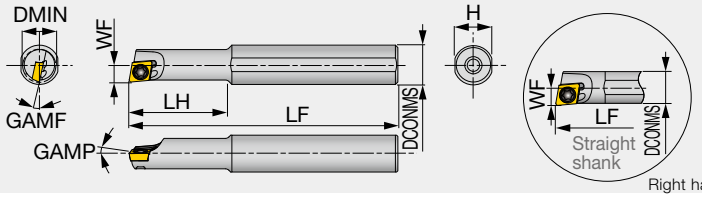
STREAMJETBAR

A/E-SEXPR/L

Screw-on boring bar, for positive 75° rhombic inserts



Cutting edge style **X**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	GAMF	RE**	Insert	Torque
A05-SEXPR/L04-D04	Steel	0.250	0.313	0.125	5.000	0.812	0.287	0°	-12°	0.016	EPGT 52...	0.44
E05-SEXPR04-D04	Carbide	0.250	0.313	0.125	5.000	1.562	0.287	0°	-12°	0.016	EPGT 52...	0.44

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	GAMF	RE**	Insert	Torque*
A04F-SEXPR/L03-D045	Steel	4.5	4	2.3	80	8	3.8	0°	-15°	0.2	EP**03X1...	0.6
A04F-SEXPR/L03-D050	Steel	5	4	2.5	80	8	3.8	0°	-13°	0.2	EP**03X1...	0.6
A05F-SEXPR/L04-D055	Steel	5.5	5	2.75	80	9	4.8	0°	-12°	0.4	EP**0401...	0.6
A06G-SEXPR/L04-D070	Steel	7	6	3.6	90	11	5.75	0°	-12°	0.4	EP**0401...	0.6
A08H-SEXPR/L04-D055	Steel	5.5	8	2.75	100	16	7.5	0°	-12°	0.4	EP**0401...	0.6
A08H-SEXPR/L04-D070	Steel	7	8	3.6	100	20	7.5	0°	-12°	0.4	EP**0401...	0.6
E04G-SEXPR/L03-D045	Carbide	4.5	4	2.3	90	9	3.8	0°	-15°	0.2	EP**03X1...	0.6
E04G-SEXPR/L03-D050	Carbide	5	4	2.5	90	9	3.8	0°	-13°	0.2	EP**03X1...	0.6
E05G-SEXPR/L04-D055	Carbide	5.5	5	2.75	90	10	4.8	0°	-12°	0.4	EP**0401...	0.6
E06H-SEXPR/L04-D070	Carbide	7	6	3.6	100	12	5.75	0°	-12°	0.4	EP**0401...	0.6
E08K-SEXPR/L04-D055	Carbide	5.5	8	2.75	125	28	7.5	0°	-12°	0.4	EP**0401...	0.6
E08K-SEXPR/L04-D070	Carbide	7	8	3.6	125	40	7.5	0°	-12°	0.4	EP**0401...	0.6

Torque: Recommended clamping torque: lbs·ft (*N·m) **RE : Standard corner radius
Note: Use right-hand toolholders (SEXPR**) with left-hand inserts (L); and left-hand toolholders (SEXPL**) with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Wrench
A**-SEXPR/L03-D...	CSTA-1.6	T-6F
A**-SEXPR/L04-D...	CSTB-2	T-6F
E**-SEXPR/L03-D...	CSTA-1.6	T-6F
E**-SEXPR/L04-D...	CSTB-2	T-6F

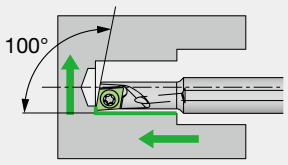
Reference pages: Insert → 2-34 -, CBN → 2-93, PCD → 2-122

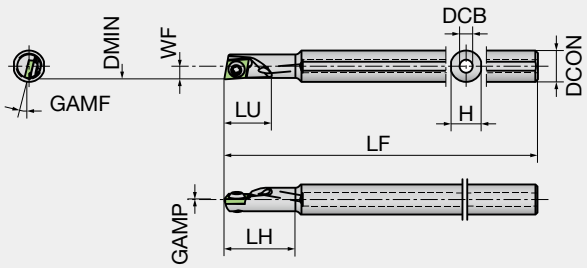
MB

Rhombic, 75°
with hole
Positive 9°

S/C-MBR-OH

Screw-on boring bar, for positive 75° rhombic inserts





Right hand (R) shown.

Metric	Material	DMIN	DCON	WF	LF	LH	H	GAMP	GAMF	RE*	DCB	LU	Insert
S06F-MBRD05-OH	Steel	5	6	2.5	80	13.5	5.7	0°	13°	0.15	2.5	9	MBL..
C045F-MBRD05-OH	Carbide	5	4.5	2.5	80	10.5	4	0°	13°	0.15	1.5	9	MBL..
C06F-MBRD05-OH	Carbide	5	6	2.5	80	18	5.7	0°	13°	0.15	1.5	9	MBL..

Use a left-handed insert
For F1 chipbreaker, right-hand inserts fit to right-hand toolholder
F1 chipbreaker evacuates chips BACKWARD**RE: Standard corner radius
*RE: Standard corner radius

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
**-MBRD05-OH	LR-S-2*3.5	CLR-13S

INSERT

MBL with chipbreaker

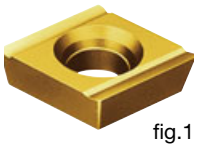


fig.1

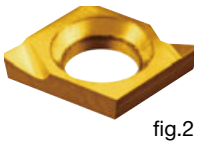
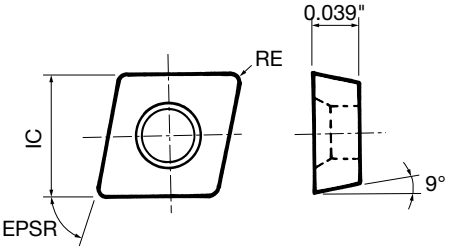


fig.2



P	Steel	★	☆	☆	
M	Stainless	☆	★	☆	☆
N	Non-ferrous			★	☆
S	Superalloys	☆			
H	Hard materials	★			

★ : First choice
☆ : Second choice

Designation	HAND	Coated				RE (in)	EPSR	IC (in)	Figure
		QM3	ST4	TM4	ZM3				
MBL005FL	L	●		●	●	0.002	75°	0.142	1
MBL015FL	L	●		●	●	0.006	75°	0.142	1
MBL005FRF1	R	●	●	●		0.002	75°	0.142	2
MBL015FRF1	R	●	●	●		0.006	75°	0.142	2

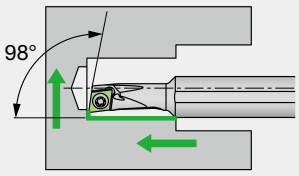
● : Line up

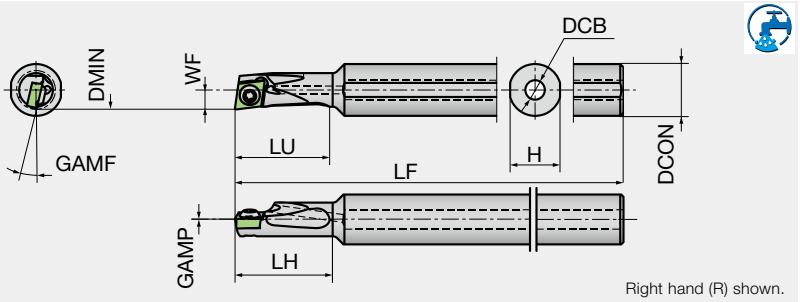
EP

Rhombic, 75°
with hole
Positive 9°

S/C-SEXR-OH

Screw-on boring bar, for positive 75° rhombic inserts





Right hand (R) shown.

Metric	Material	DMIN	DCON	WF	LF	LH	H	GAMP	GAMF	RE*	DCB	LU	Insert
S08G-SEXRRT3D06-OH	Steel	6	8	3	90	15	7.7	0°	13°	0.2	3	15	ERGHT301..
C05G-SEXRRT3D06-OH	Carbide	6	5	3	90	12.5	4	0°	13°	0.2	1.5	11	ERGHT301..
C06G-SEXRRT3D06-OH	Carbide	6	6	3	90	20	5.7	0°	13°	0.2	1.5	11	ERGHT301..
C06G-SEXRLT3D06-OH	Carbide	6	6	3	90	20	5.7	0°	13°	0.2	1.5	11	ERGHT301..

Use a left-handed insert
For F1 chipbreaker, right-hand inserts fit to right-hand toolholder
F1 chipbreaker evacuates chips BACKWARD
*RE: Standard corner radius

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
**-SEXRRT3D06-OH	LR-S-2*3.7	CLR-13S

INSERT

ERGH

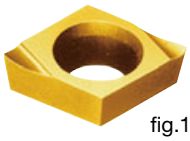


fig.1

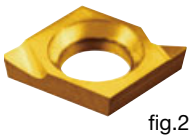
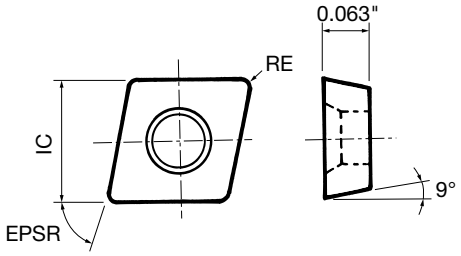


fig.2



P	Steel	★	☆	☆	
M	Stainless	☆	★	☆	☆
N	Non-ferrous			★	☆
S	Superalloys	☆			
H	Hard materials	★			

★ : First choice
☆ : Second choice

Designation	HAND	Coated				RE (in)	EPSR	IC (in)	Figure
		QM3	ST4	TM4	ZM3				
ERGHT30102FRA2	R			●	●	0.008	75°	0.156	1
ERGHT30104FRA2	R			●		0.016	75°	0.156	1
ERGHT30102FLA2	L			●	●	0.008	75°	0.156	1
ERGHT30104FLA2	L			●	●	0.016	75°	0.156	1
ERGHT30101FRF1	R	●	●	●		0.004	75°	0.156	2
ERGHT30102FRF1	R	●	●	●		0.008	75°	0.156	2
ERGHT30104FRF1	R	●	●	●		0.016	75°	0.156	2

● : Line up

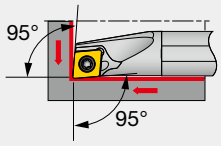
CC

Rhombic, 80°
with hole
Positive 7°

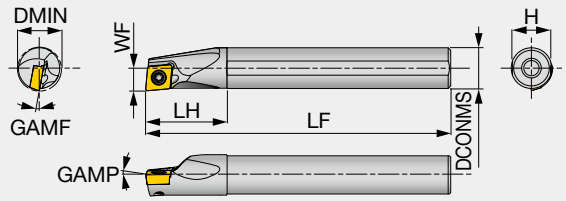
STREAMJETBAR

A/E-SCLCR/L

Screw-on boring bar, for positive 80° rhombic inserts



Cutting edge style **L**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	GAMF	RE**	Insert	Torque
A05-SCLCR/L2-D06	Steel	0.375	0.313	0.200	4.500	0.630	0.300	0°	-14°	0.016	CC** 21.5...	0.89
A06-SCLCR/L2-D08	Steel	0.500	0.375	0.281	5.000	0.750	0.350	0°	-9°	0.016	CC** 21.5...	0.89
A08-SCLCR/L2-D11	Steel	0.687	0.500	0.406	5.000	1.000	0.475	0°	-6°	0.016	CC** 21.5...	0.89
A10-SCLCR/L3-D14	Steel	0.875	0.625	0.531	7.000	1.250	0.600	0°	-7°	0.016	CC** 32.5...	2.2
A12-SCLCR/L3-D16	Steel	1.000	0.750	0.594	7.000	1.438	0.725	0°	-5°	0.031	CC** 32.5...	2.2
A16-SCLCR/L3-D20	Steel	1.250	1.000	0.687	7.000	1.750	0.975	0°	-4°	0.031	CC** 32.5...	2.2
E06-SCLCR/L2-D08	Carbide	0.500	0.375	0.281	5.000	0.750	0.350	0°	-9°	0.016	CC** 21.5...	0.89
E08-SCLCR/L2-D11	Carbide	0.688	0.500	0.406	5.000	1.000	0.475	0°	-6°	0.016	CC** 21.5...	0.89
E10-SCLCR/L2-D14	Carbide	0.875	0.625	0.531	7.000	1.250	0.600	0°	-7°	0.016	CC** 21.5...	0.89
E10-SCLCR/L3-D14	Carbide	0.875	0.625	0.531	7.000	1.250	0.600	0°	-7°	0.016	CC** 32.5...	2.2
E12-SCLCR/L3-D16	Carbide	1.000	0.750	0.594	7.000	1.438	0.725	0°	-5°	0.031	CC** 32.5...	2.2
E16-SCLCR/L3-D20	Carbide	1.250	1.000	0.687	10.000	1.750	0.975	0°	-4°	0.031	CC** 32.5...	2.2

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	GAMF	RE**	Insert	Torque*
A04F-SCLCR/L03-D050	Steel	5	4	2.5	80	8	3.8	0°	-15°	0.2	CC**03X1...	0.6
A05F-SCLCR/L03-D060	Steel	6	5	3	80	9	4.8	0°	-13°	0.2	CC**03X1...	0.6
A06G-SCLCR/L04-D070	Steel	7	6	3.5	90	11	5.75	0°	-13°	0.2	CC**04T1...	0.6
A07G-SCLCR/L04-D080	Steel	8	7	4	90	12	6.75	0°	-11°	0.2	CC**04T1...	0.6
A08H-SCLCR/L06-D100	Steel	10	8	5.5	100	16	7.5	0°	-13°	0.4	CC**0602...	1.2
A10F-SCLCR06-D120	Steel	12	10	6	80	20	9	0°	-10°	0.4	CC**0602...	1.2
A10K-SCLCR/L06-D120	Steel	12	10	6	125	20	9	0°	-10°	0.4	CC**0602...	1.2
A12H-SCLCR06-D140	Steel	14	12	7	100	24	11	0°	-8°	0.4	CC**0602...	1.2
A12M-SCLCR/L06-D140	Steel	14	12	7	150	24	11	0°	-8°	0.4	CC**0602...	1.2
A12H-SCLCR06-D160	Steel	16	12	9	100	24	11	0°	-7°	0.4	CC**0602...	1.2
A12M-SCLCR/L06-D160	Steel	16	12	9	150	24	11	0°	-7°	0.4	CC**0602...	1.2
A16K-SCLCR09-D180	Steel	18	16	9	125	32	15	0°	-9°	0.8	CC**09T3...	3
A16Q-SCLCR/L09-D180	Steel	18	16	9	180	32	15	0°	-10°	0.8	CC**09T3...	3
A16K-SCLCR09-D200	Steel	20	16	11	125	32	15	0°	-9°	0.8	CC**09T3...	3
A16Q-SCLCR/L09-D200	Steel	20	16	11	180	32	15	0°	-9°	0.8	CC**09T3...	3
A20R-SCLCR/L09-D220	Steel	22	20	11	200	32	18	0°	-8°	0.8	CC**09T3...	3
A25S-SCLCR/L09-D270	Steel	27	25	13.5	250	45	23	0°	-6°	0.8	CC**09T3...	3
E04G-SCLCR/L03-D050	Carbide	5	4	2.5	90	9	3.8	0°	-15°	0.2	CC**03X1...	0.6
E05G-SCLCR/L03-D060	Carbide	6	5	3	90	10	4.8	0°	-13°	0.2	CC**03X1...	0.6
E06H-SCLCR/L04-D070	Carbide	7	6	3.5	100	12	5.75	0°	-13°	0.2	CC**04T1...	0.6
E07H-SCLCR/L04-D080	Carbide	8	7	4	100	14	6.75	0°	-11°	0.2	CC**04T1...	0.6
E08G-SCLCR06-D100	Carbide	10	8	5.5	90	22	7.5	0°	-13°	0.4	CC**0602...	1.2
E08K-SCLCR/L06-D100	Carbide	10	8	5.5	125	22	7.5	0°	-13°	0.4	CC**0602...	1.2
E10F-SCLCR06-D120	Carbide	12	10	6	80	25	9	0°	-10°	0.4	CC**0602...	1.2
E10H-SCLCR06-D120	Carbide	12	10	6	100	25	9	0°	-10°	0.4	CC**0602...	1.2
E10M-SCLCR/L06-D120	Carbide	12	10	6	150	25	9	0°	-10°	0.4	CC**0602...	1.2
E12G-SCLCR06-D140	Carbide	14	12	7	90	27	11	0°	-8°	0.4	CC**0602...	1.2
E12J-SCLCR06-D140	Carbide	14	12	7	110	27	11	0°	-8°	0.4	CC**0602...	1.2
E12Q-SCLCR/L06-D140	Carbide	14	12	7	180	27	11	0°	-8°	0.4	CC**0602...	1.2
E12G-SCLCR06-D160	Carbide	16	12	9	90	27	11	0°	-7°	0.4	CC**0602...	1.2
E12J-SCLCR06-D160	Carbide	16	12	9	110	27	11	0°	-7°	0.4	CC**0602...	1.2
E12Q-SCLCR/L06-D160	Carbide	16	12	9	180	27	11	0°	-7°	0.4	CC**0602...	1.2
E16H-SCLCR09-D180	Carbide	18	16	9	100	32	15	0°	-10°	0.8	CC**09T3...	3
E16L-SCLCR09-D180	Carbide	18	16	9	130	32	15	0°	-10°	0.8	CC**09T3...	3
E16R-SCLCR/L09-D180	Carbide	18	16	9	200	32	15	0°	-10°	0.8	CC**09T3...	3

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	GAMF	RE**	Insert	Torque*
E16H-SCLCR09-D200	Carbide	20	16	11	100	32	15	0°	-9°	0.8	CC**09T3...	3
E16L-SCLCR09-D200	Carbide	20	16	11	130	32	15	0°	-9°	0.8	CC**09T3...	3
E16R-SCLCR/L09-D200	Carbide	20	16	11	200	32	15	0°	-9°	0.8	CC**09T3...	3
E20S-SCLCR09-D220	Carbide	22	20	11	250	36	18	0°	-8°	0.8	CC**09T3...	3
E25T-SCLCR09-D270	Carbide	27	25	13.5	300	45	23	0°	-6°	0.8	CC**09T3...	3

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE: Standard corner radius
Note: Use right-hand toolholders (SCLCR**) with left-hand inserts (L); and left-hand toolholders (SCLCL**) with right-hand inserts (R).

INCH SPARE PARTS

Designation	Clamping screw	Wrench
A**-SCLCR/L2-D...	CSTB-2.5S	T-8F
A**-SCLCR/L3-D...	CSTB-4S	T-15F
E06-SCLCR/L2-D08	CSTB-2.5S	T-8F
E**-SCLCR/L2-D...	CSTB-2.5B	T-8F
E**-SCLCR/L3-D...	CSTB-4S	T-15F

METRIC SPARE PARTS

Designation	Clamping screw	Wrench
A**-SCLCR/L03-D...	CSTA-1.6	T-6F
A**-SCLCR/L04-D...	CSTB-2	T-6F
A**-SCLCR/L06-D...	CSTB-2.5S	T-8F
A**-SCLCR/L09-D...	CSTB-4S	T-15F
E**-SCLCR/L03-D...	CSTA-1.6	T-6F
E**-SCLCR/L04-D...	CSTB-2	T-6F
E**-SCLCR/L06-D...	CSTB-2.5S	T-8F
E16*-SCLCR/L09-D...	CSTB-4L060	T-15F
E2**-SCLCR/L09-D...	CSTB-4S	T-15F

Reference pages: Insert → 2-11 -, CBN → 2-87 -, PCD → 2-119 -

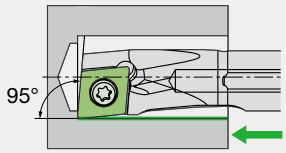
CC

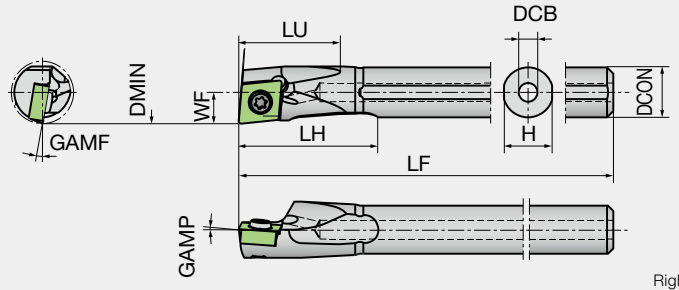
Rhombic, 80°
with hole
Positive 7°

Mogul Bar

S/C-SCLC-OH

Screw-on boring bar, for positive 80° rhombic inserts





Right hand (R) shown.

Metric	Material	DMIN	DCON	WF	LF	LH	H	GAMF	GAMP	RE*	DCB	LU	Insert
S08H-SCLCR06D10-OH	Steel	10	8	5	100	22	7.7	13°	0°	0.4	3	16	CC**0602...
S10K-SCLCR06D12-OH	Steel	12	10	6	125	27.5	9.6	11°	0°	0.4	3.5	20	CC**0602...
S12M-SCLCR06D14-OH	Steel	14	12	7	150	32.5	11.5	9°	0°	0.4	4	23	CC**0602...
S16Q-SCLCR09D18-OH	Steel	18	16	9	180	42.5	15.4	10°	0°	0.4	5	30	CC**09T3...
C08K-SCLCR06D10-OH	Carbide	10	8	5	125	16.5	7.7	13°	0°	0.4	2.5	15	CC**0602...
C10M-SCLCR06D12-OH	Carbide	12	10	6	150	20	9.6	11°	0°	0.4	2.5	19.5	CC**0602...
C10M-SCLCL06D12-OH	Carbide	12	10	6	150	20	9.6	11°	0°	0.4	2.5	19.5	CC**0602...
C12M-SCLCR06D14-OH	Carbide	14	12	7	150	23.5	11.5	9°	0°	0.4	3	22.5	CC**0602...

Use a left-handed insert
For F1 chipbreaker, right-hand inserts fit to right-hand toolholder
F1 chipbreaker evacuates chips BACKWARD
*RE: Standard corner radius

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
S/C**-SCLCR06**	LRIS-2.5*5	CLR-15S
S**-SCLCR09**	LRIS-4*8	LLR-25S-20*65

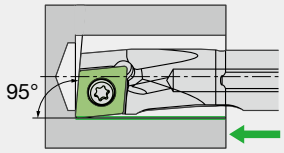
Reference pages: Insert → 2-11 -, CBN → 2-87 -, PCD → 2-119 -

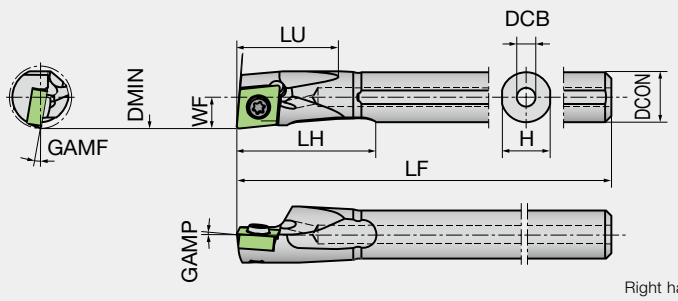
CP

Rhombic, 80°
with hole
Positive 11°

S/C-SCLP-OH

Screw-on boring bar, for positive 80° rhombic inserts





Right hand (R) shown.

Metric	Material	DMIN	DCON	WF	LF	LH	H	GAMP	GAMF	RE*	DCB	LU	Insert
S06F-SCLPR04D07-OH	Steel	7	6	3.5	80	17	5.75	5°	9°	0.2	2.5	12	CP**0401...
S07G-SCLPR04D08-OH	Steel	8	7	4	90	19.5	6.75	5°	7°	0.2	3	13.5	CP**0401...
S08H-SCLPR06D10-OH	Steel	10	8	5	100	22	7.7	5°	10°	0.4	3	16	CP**0602...
C06H-SCLPR04D07-OH	Carbide	7	6	3.5	100	11.5	5.75	5°	9°	0.2	2	12	CP**0401...
C06H-SCLPL04D07-OH	Carbide	7	6	3.5	100	11.5	5.75	5°	9°	0.2	2	12	CP**0401...
C07J-SCLPR04D08-OH	Carbide	8	7	4	110	13	6.75	5°	7°	0.2	2	13.5	CP**0401...
C08K-SCLPR06D10-OH	Carbide	10	8	5	125	16.5	7.7	5°	10°	0.4	2.5	15	CP**0602...
C08K-SCLPL06D10-OH	Carbide	10	8	5	125	16.5	7.7	5°	10°	0.4	2.5	15	CP**0602...

Use a left-handed insert
For F1 chipbreaker, right-hand inserts fit to right-hand toolholder
F1 chipbreaker evacuates chips BACKWARD
*RE: Standard corner radius

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
S/C**-SCLPR04**	LR-S-2*3.7	CLR-13S
S/C**-SCLPR06**	LR-S-2.5*6	CLR-15S

Reference pages: Insert → 2-20 -, CBN → 2-90, PCD → 2-120

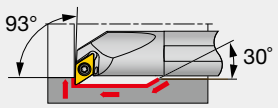
DC

Rhombic, 55°
with hole
Positive 7°

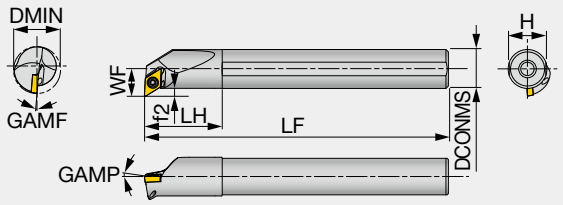
STREAMJETBAR

A/E-SDUCR/L

Screw-on boring bar, for positive 55° rhombic inserts



Cutting edge style **U**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque
A06-SDUCR2-D10	Steel	0.625	0.375	0.406	5.000	0.750	0.350	0.218	0°	-8°	0.016	DC** 21.5...	0.89
A08-SDUCR/L2-D11	Steel	0.688	0.500	0.406	5.000	1.000	0.475	0.156	0°	-6°	0.016	DC** 21.5...	0.89
A10-SDUCR2-D14	Steel	0.875	0.625	0.531	7.000	1.250	0.600	0.218	0°	-4°	0.016	DC** 21.5...	0.89
A12-SDUCR/L3-D16	Steel	1.000	0.750	0.594	10.000	1.500	0.700	0.218	0°	-2°	0.032	DC** 32.5...	2.2
E06-SDUCR2-D10	Carbide	0.625	0.375	0.406	5.000	1.000	0.375	0.218	0°	-7°	0.016	DC** 21.5...	0.89
E08-SDUCR2-D11	Carbide	0.688	0.500	0.406	5.000	1.062	0.475	0.156	0°	-6°	0.016	DC** 21.5...	0.89
E10-SDUCR2-D14	Carbide	0.875	0.625	0.531	7.000	1.250	0.600	0.218	0°	-4°	0.016	DC** 21.5...	0.89
E12-SDUCR/L3-D16	Carbide	1.000	0.750	0.594	7.000	1.438	0.750	0.218	0°	-5°	0.032	DC** 32.5...	2.2

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A10K-SDUCR/L07-D130	Steel	13	10	7	125	20	9	2	0°	-10°	0.4	DC**0702...	1.2
A12M-SDUCR/L07-D160	Steel	16	12	9.3	150	24	11	3.3	0°	-6°	0.4	DC**0702...	1.2
A16Q-SDUCR/L07-D200	Steel	20	16	11.3	180	32	15	3.3	0°	-5°	0.4	DC**0702...	1.2
A20R-SDUCR/L11-D270	Steel	27	20	16.1	200	36	18	6.1	0°	-5°	0.8	DC**11T3...	3
A25S-SDUCR/L11-D320	Steel	32	25	18.6	250	45	23	6.1	0°	-4°	0.8	DC**11T3...	3
E10H-SDUCR07-D130	Carbide	13	10	7	100	25	9	1.9	5°	-3.5°	0.4	DC**0702...	1.2
E10M-SDUCR/L07-D130	Carbide	13	10	7	150	25	9	2	0°	-10°	0.4	DC**0702...	1.2
E12J-SDUCR07-D160	Carbide	16	12	9.3	110	27	11	3.2	0°	-6°	0.4	DC**0702...	1.2
E12Q-SDUCR/L07-D160	Carbide	16	12	9.3	180	27	11	3.3	0°	-6°	0.4	DC**0702...	1.2
E16L-SDUCR07-D200	Carbide	20	16	11.3	130	32	15	3.2	0°	-5°	0.4	DC**0702...	1.2
E16R-SDUCR/L07-D200	Carbide	20	16	11.3	200	32	15	3.3	0°	-5°	0.4	DC**0702...	1.2
E20S-SDUCR11-D270	Carbide	27	20	16.1	250	36	18	6.1	0°	-5°	0.8	DC**11T3...	3

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE : Standard corner radius
Note: Use right-hand toolholders (SDUCR**) with left-hand inserts (L); and left-hand toolholders (SDUCL**) with right-hand inserts (R).

INCH SPARE PARTS

Designation	Clamping screw	Wrench
A/E06-SDUCR2-D10, A/E10-SDUCR2-D14	CSTB-2.5	T-8F
A08-SDUCR/L2-D11 E08-SDUCR2-D11	CSTB-2.5B	T-8F
A12-SDUCR/L3-D16	CSTB-3.5	T-15F
E12-SDUCR/L3-D16	CSTB-4S	T15-F

METRIC SPARE PARTS

Designation	Clamping screw	Wrench
A1**-SDUCR/L07-D1*0	CSTB-2.5S	T-8F
A16Q-SDUCR/L07-D200	CSTB-2.5	T-8F
A2**-SDUCR/L11-D**0	CSTB-4S	T-15F
E1**-SDUCR/L07-D1*0	CSTB-2.5S	T-8F
E16*-SDUCR/L07-D200	CSTB-2.5	T-8F
E20S-SDUCR11-D270	CSTB-4S	T-15F

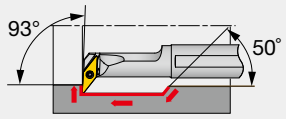
Reference pages: Insert → 2-23 -, CBN → 2-91 -, PCD → 2-120 -

VC

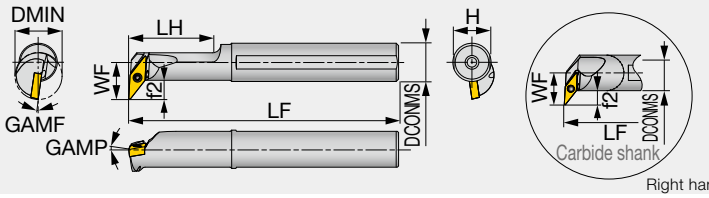
Rhombic, 35°
with hole
Positive 7°

A/E-SVUCR/L

Screw-on boring bar, for positive 35° rhombic inserts



Cutting edge style **U**



Inch	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque
A10-SVUCR6-D14	Steel	0.875	0.625	0.531	7.000	1.250	0.600	0.218	0°	-5°	0.016	VC** 63...	0.44
A12-SVUCR2-D16	Steel	1.000	0.750	0.594	10.000	1.420	0.725	0.218	0°	-5°	0.016	VC** 22...	1.0

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A12M-SVUCR/L08-D160	Steel	16	12	11	150	30	11	5.5	0°	-8°	0.4	VC**0802...	0.6
A25S-SVUCR/L16-D320	Steel	32	25	19	250	45	23	6.5	0°	-5°	0.8	VC**1604...	3
E12Q-SVUCR/L08-D180	Carbide	18	12	11.5	180	-	11	5.5	0°	-8°	0.4	VC**0802...	0.6
E25T-SVUCR/L16-D320	Carbide	32	25	19	300	-	23	6.5	0°	-5°	0.8	VC**1604...	3

Torque: Recommended clamping torque: lbs·ft (*N·m) **RE : Standard corner radius
Note: Use right-hand toolholders (SVUCR**) with left-hand inserts (L); and left-hand toolholders (SVUCL**) with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Wrench
A10-SVUCR6-D14	CSTB-2L	T-6F
A12-SVUCR2-D16	CSTB-2.5	T-8F
A12M-SVUCR/L08-D160	CSTB-2L	T-6F
A25S-SVUCR/L16-D320	CSTB-3.5	T-15F
E12Q-SVUCR/L08-D180	CSTB-2L	T-6F
E25T-SVUCR/L16-D320	CSTB-3.5	T-15F

Reference pages: Insert → 2-50 -, CBN → 2-101, PCD → 2-127

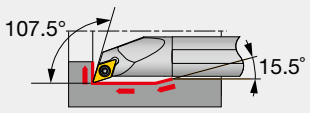
DC

Rhombic, 55°
with hole
Positive 7°

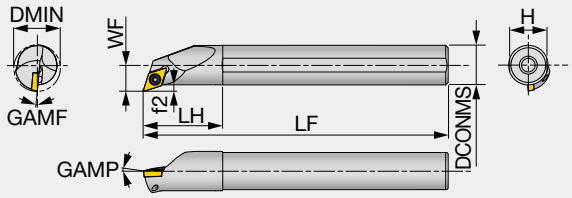
STREAMJETBAR

A/E-SDQCR/L

Screw-on boring bar, for positive 55° rhombic inserts



Cutting edge style **Q**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque
A06-SDQCR2-D10	Steel	0.625	0.375	0.406	5.000	0.750	0.350	-	0°	-7°	0.016	DC** 21.5...	0.89
A08-SDQCR2-D11	Steel	0.688	0.500	0.406	5.000	1.000	0.475	-	0°	-6°	0.016	DC** 21.5...	0.89
A10-SDQCR2-D14	Steel	0.875	0.625	0.531	7.000	1.250	0.600	-	0°	-4°	0.016	DC** 21.5...	0.89

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A10K-SDQCR/L07-D130	Steel	13	10	7.6	125	20	9	2.6	0°	-8°	0.4	DC**0702...	1.2
A12M-SDQCR/L07-D160	Steel	16	12	8.6	150	24	11	2.6	0°	-6°	0.4	DC**0702...	1.2
A16Q-SDQCR/L07-D200	Steel	20	16	10.6	180	32	15	2.6	0°	-5°	0.4	DC**0702...	1.2
A20R-SDQCR/L11-D250	Steel	25	20	13.7	200	36	18	3.7	0°	-7°	0.8	DC**11T3...	3
A25S-SDQCR/L11-D300	Steel	30	25	16.2	250	45	23	3.7	0°	-4°	0.8	DC**11T3...	3
E10H-SDQCR07-D130	Carbide	13	10	7.6	100	25	9	2.5	0°	-8°	0.4	DC**0702...	1.2
E10M-SDQCR/L07-D130	Carbide	13	10	7.6	150	25	9	2.6	0°	-8°	0.4	DC**0702...	1.2
E12J-SDQCR07-D160	Carbide	16	12	8.6	110	27	11	2.5	0°	-6°	0.4	DC**0702...	1.2
E12Q-SDQCR/L07-D160	Carbide	16	12	8.6	180	27	11	2.6	0°	-6°	0.4	DC**0702...	1.2
E16L-SDQCR07-D200	Carbide	20	16	10.6	130	32	15	2.5	0°	-5°	0.4	DC**0702...	1.2
E16R-SDQCR/L07-D200	Carbide	20	16	10.6	200	32	15	2.6	0°	-5°	0.4	DC**0702...	1.2
E20S-SDQCR/L11-D250	Carbide	25	20	13.7	250	36	18	3.7	0°	-7°	0.8	DC**11T3...	3

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE : Standard corner radius
Note: Use right-hand toolholders (SDQCR**) with left-hand inserts (L); and left-hand toolholders (SDQCL**) with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Wrench
A**-SDQCR2-D...	CSTB-2.5B	T-8F
A1**-SDQCR/L07-D**0	CSTB-2.5S	T-8F
A2**-SDQCR/L11-D**0	CSTB-4S	T-15F
E1**-SDQCR/L07-D**0	CSTB-2.5S	T-8F
E20S-SDQCR/L11-D250	CSTB-4S	T-15F

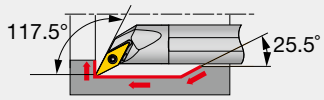
Reference pages: Insert → 2-23 -, CBN → 2-91 -, PCD → 2-120 -

VC

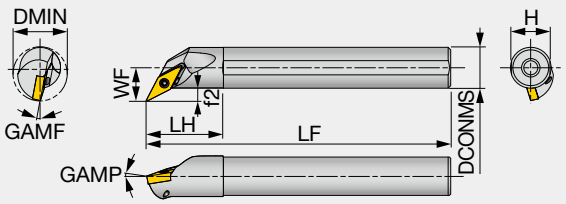
Rhombic, 35°
with hole
Positive 7°

A/E-SVQCR/L

Screw-on boring bar, for positive 35° rhombic inserts



Cutting edge style **Q**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque
A08-SVQCR6-D11	Steel	0.688	0.500	0.375	5.000	1.000	0.475	0.125	-5°	-8°	0.016	VC** 63...	0.44
A10-SVQCR2-D16	Steel	1.000	0.625	0.500	10.000	1.250	0.600	0.188	-5°	-8°	0.016	VC** 22...	0.89

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A10K-SVQCR/L08-D135	Steel	13.5	10	8	125	20	9	3	-5°	-8°	0.4	VC**0802...	0.6
A16Q-SVQCR/L11-D215	Steel	21.5	16	13	180	30	15	4.9	-5°	-8°	0.4	VC**1103...	1.2
E10M-SVQCR/L08-D135	Carbide	13.5	10	8	150	25	9	3	-5°	-8°	0.4	VC**0802...	0.6
E16R-SVQCR/L11-D215	Carbide	21.5	16	13	200	32	15	4.9	-5°	-8°	0.4	VC**1103...	1.2

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE : Standard corner radius
Note: Use right-hand toolholders (SVQCR**) with left-hand inserts (L); and left-hand toolholders (SVQCL**) with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Wrench
A08-SVQCR6-D11	CSTB-2L	T-6F
A10-SVQCR2-D16	CSTB-2.5	T-8F
A10K-SVQCR/L08-D135	CSTB-2L	T-6F
A16Q-SVQCR/L11-D215	CSTB-2.5	T-8F
E10M-SVQCR/L08-D135	CSTB-2L	T-6F
E16R-SVQCR/L11-D215	CSTB-2.5	T-8F

Reference pages: Insert → 2-50 -, CBN → 2-101, PCD → 2-127

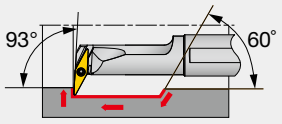
YW

Rhombic, 25°
with hole
Positive 7°

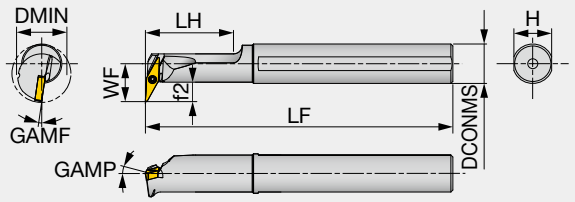
Y-PRO SERIES

A/E-SYUBR/L

Screw-on boring bar, for positive 25° rhombic inserts



Cutting edge style **U**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque
A10-SYUBR/L2-D16	Steel	1.000	0.625	0.625	7.000	1.250	0.600	0.312	0°	-8°	0.016	YW**11T2...	0.44
E08-SYUBR/L2-D14	Carbide	0.875	0.500	0.563	5.000	1.060	0.475	0.307	0°	-8°	0.016	YW**11T2...	0.44
E10-SYUBR/L2-D16	Carbide	1.000	0.625	0.625	7.000	1.250	0.600	0.307	0°	-8°	0.016	YW**11T2...	0.44

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A16Q-SYUBR/L11-D200	Steel	20	16	15.5	180	35	15	8	0°	-8°	0.4	YW**11T2...	0.6
E12Q-SYUBR/L11-D200	Carbide	20	12	13.5	180	27	11	7.5	0°	-8°	0.4	YW**11T2...	0.6
E16R-SYUBR/L11-D245	Carbide	24.5	16	16	200	32	15	8	0°	-8°	0.4	YW**11T2...	0.6

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE : Standard corner radius

SPARE PARTS

Designation	Clamping screw	Wrench
A**-SYUBR/L...	CSTB-2L	T-6F
E**-SYUBR/L...	CSTB-2L	T-6F

Reference pages: Insert → 2-59

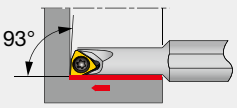
WB

Trigon, 80°
with hole
Positive 5°

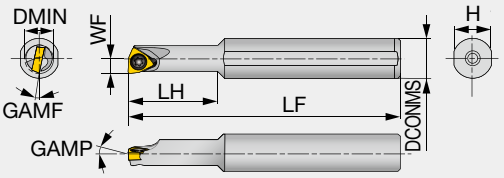
STREAMJETBAR

A/E-SWUBR/L

Screw-on boring bar, for positive 80° trigon inserts



Cutting edge style **U**



Right hand (R) shown.

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	GAMF	RE**	Insert	Torque*
A05F-SWUBR/L03-D060	Steel	6	5	3	80	9	4.8	0°	-13°	0.4	WB**0301...	0.6
A06G-SWUBR/L03-D070	Steel	7	6	3.5	90	11	5.75	0°	-12°	0.4	WB**0301...	0.6
A07G-SWUBR/L03-D080	Steel	8	7	4	90	12	6.75	0°	-11°	0.4	WB**0301...	0.6
A08H-SWUBR03-D060	Steel	6	8	3.1	100	18	7.5	0°	-12°	0.4	WB**0301...	0.6
A08H-SWUBR03-D070	Steel	7	8	3.6	100	20	7.5	0°	-12°	0.4	WB**0301...	0.6
E05G-SWUBR/L03-D060	Carbide	6	5	3	90	10	4.8	0°	-13°	0.4	WB**0301...	0.6
E06H-SWUBR/L03-D070	Carbide	7	6	3.5	100	12	5.75	0°	-12°	0.4	WB**0301...	0.6
E07H-SWUBR/L03-D080	Carbide	8	7	4	100	14	6.75	0°	-11°	0.4	WB**0301...	0.6
E08K-SWUBR03-D060	Carbide	6	8	3.1	125	30	7.5	0°	-12°	0.4	WB**0301...	0.6
E08K-SWUBR03-D070	Carbide	7	8	3.6	125	40	7.5	0°	-12°	0.4	WB**0301...	0.6

*Torque: Recommended clamping torque (N·m)
**RE : Standard corner radius
Note: Use right-hand toolholders (SVUCR*) with left-hand inserts (L); and left-hand toolholders (SWUBL**) with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Wrench
A/E**-SWUBR/L...	CSTB-2	T-6F

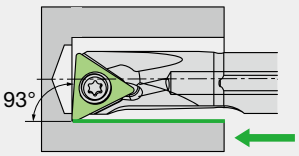
Reference pages: Insert → 2-57

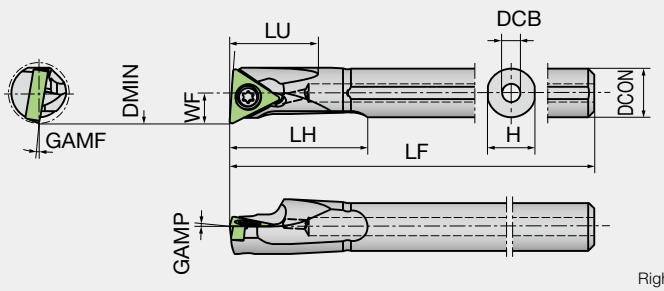
TC

Triangular
with hole
Positive 7°

S/C-STUC-OH

Screw-on boring bar, for positive 60° triangular inserts





Right hand (R) shown.

Metric	Material	DMIN	DCON	WF	LF	LH	H	GAMP	GAMF	RE*	DCB	LU	Insert
S07G-STUCR06D08-OH	Steel	8	7	4	90	19.5	6.75	0°	11°	0.2	2.5	12.5	TC**0601...
C07J-STUCR06D08-OH	Carbide	8	7	4	110	13	6.75	0°	11°	0.2	2	12.5	TC**0601...
C07J-STUCL06D08-OH	Carbide	8	7	4	110	13	6.75	0°	11°	0.2	2	12.5	TC**0601...

Use a left-handed insert
For F05 chipbreaker, right-hand inserts fit to right-hand toolholder
F05 chipbreaker evacuates chips BACKWARD
*RE: Standard corner radius

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
S/C07G-STUCR/L06D08-OH	LR-S-2*4.4	CLR-13S

Reference pages: Insert → 2-36 -, CBN → 2-93 -, PCD → 2-122 -

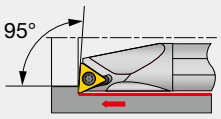
TP

Triangular with hole Positive 11°

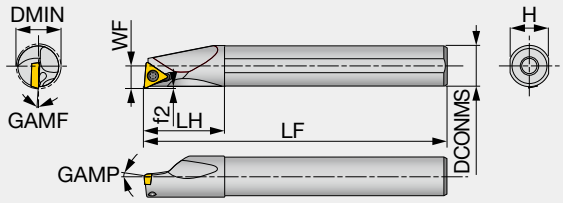
STREAMJETBAR

A/E-STUPR/L

Screw-on boring bar, for positive 60° triangular inserts



Cutting edge style **U**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque
A05-STUPR/L7-D07	Steel	0.438	0.313	0.250	5.00	0.625	2.880	-	5°	-7°	0.016	TP** 73...(1)	0.66
A06-STUPR/L2-D08	Steel	0.500	0.375	0.281	5.00	0.750	0.350	-	5°	-5°	0.016	TP** 21.5...(1)	0.89
A08-STUPR/L2-D11	Steel	0.688	0.500	0.406	5.00	1.000	0.475	-	5°	-3°	0.016	TP** 21.5...(1)	0.89
A10-STUPR/L2-D14	Steel	0.875	0.625	0.531	7.00	1.250	0.600	-	5°	-2°	0.016	TP** 21.5...(1)	1.00
A10-STUPR/L2.5-D14	Steel	0.875	0.625	0.531	7.00	1.250	0.600	-	5°	-2°	0.016	TP** 22...(1)	1.00
A12-STUPR/L3-D16	Steel	1.000	0.750	0.594	7.00	1.437	0.725	-	5°	-2°	0.032	TP** 32.5...(1)	1.00
A16-STUPR/L3-D20	Steel	1.250	1.000	0.688	7.00	1.750	0.975	-	5°	0°	0.032	TP** 32.5...(1)	2.20
E05-STUPR7-D07	Carbide	0.438	0.313	0.250	5.00	0.625	2.880	-	5°	-7°	0.016	TP** 73...(1)	0.66
E06-STUPR2-D08	Carbide	0.500	0.375	0.281	5.00	0.750	0.350	-	5°	-5°	0.016	TP** 21.5...(1)	0.89
E08-STUPR2-D11	Carbide	0.688	0.500	0.406	5.00	1.000	0.475	-	5°	-3°	0.016	TP** 21.5...(1)	0.89
E10-STUPR2.5-D14	Carbide	0.875	0.625	0.531	7.00	1.250	0.600	-	5°	-2°	0.016	TP** 22...(1)	1.00

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A07G-STUPR/L07-D080	Steel	8	7	4	90	12	6.75	0.4	5°	-10°	0.4	TP**0701...	0.9
A08H-STUPR/L07-D080	Steel	8	8	4	100	19.5	7.5	0.5	5°	-10°	0.4	TP**0701...	0.9
A08H-STUPR/L09-D100	Steel	10	8	5.5	100	16	7.5	0.6	5°	-8°	0.4	TP**0902...(1)	0.9
A10F-STUPR1102-D120	Steel	12	10	6.5	80	20	9	1.4	5°	-6°	0.4	TP**1102...(1)	1.2
A10K-STUPR/L1102-D120	Steel	12	10	6.5	125	20	9	0.7	5°	-6°	0.4	TP**1102...(1)	1.2
A10K-STUPR/L1103-D120	Steel	12	10	6.5	125	20	9	0.6	5°	-10°	0.4	TP**1103...(1)	1.4
A12H-STUPR1102-D140	Steel	14	12	7	100	24	11	0.8	5°	-4°	0.4	TP**1102...(1)	1.2
A12M-STUPR/L1102-D140	Steel	14	12	7	150	24	11	0.8	5°	-4°	0.4	TP**1102...(1)	1.2
A12M-STUPR/L1103-D140	Steel	14	12	7	150	24	11	0.6	5°	-6°	0.4	TP**1103...(1)	1.4
A12H-STUPR1102-D160	Steel	16	12	9	100	24	11	0.6	5°	-3°	0.4	TP**1102...(1)	1.2
A12M-STUPR/L1102-D160	Steel	16	12	9	150	24	11	0.6	5°	-3°	0.4	TP**1102...(1)	1.2
A16K-STUPR13-D180	Steel	18	16	9	125	32	15	0.8	5°	-3°	0.4	TP**1303...(1)	1.4
A16Q-STUPR/L1103-D180	Steel	18	16	9	180	32	15	0.8	5°	-4°	0.4	TP**1103...(1)	1.4
A16Q-STUPR/L13-D180	Steel	18	16	9	180	32	15	0.8	5°	-3°	0.4	TP**1303...(1)	1.4
A16K-STUPR13-D200	Steel	20	16	11	125	32	15	0.6	5°	-3°	0.4	TP**1303...(1)	1.4
A16Q-STUPR/L13-D200	Steel	20	16	11	180	32	15	0.6	5°	-3°	0.4	TP**1303...(1)	1.4
A20R-STUPR/L1103-D220	Steel	22	20	11	200	36	18	0.7	5°	-2°	0.4	TP**1103...(1)	1.4
A20R-STUPR/L13-D220	Steel	22	20	11	200	36	18	0.7	5°	-2°	0.4	TP**1303...(1)	1.4
A25S-STUPR/L16-D270	Steel	27	25	13.5	250	45	23	0.5	5°	-1°	0.8	TP**16T3...(1)	3
A32T-STUPR/L16-D340	Steel	34	32	17	300	50	30	0.7	5°	0°	0.8	TP**16T3...	3
E07H-STUPR/L07-D080	Carbide	8	7	4	100	14	6.75	0.3	5°	-10°	0.4	TP**0701...	0.9
E08G-STUPR07-D080	Carbide	8	8	4	90	44.5	7.5	0.5	5°	-10°	0.4	TP**0701...	0.9
E08K-STUPR/L07-D080	Carbide	8	8	4	125	44.5	7.5	0.5	5°	-10°	0.4	TP**0701...	0.9
E08G-STUPR09-D100	Carbide	10	8	5.5	90	22	7	0.6	5°	-8°	0.4	TP**0902...(1)	0.9
E08K-STUPR/L09-D100	Carbide	10	8	5.5	125	22	7	0.6	5°	-8°	0.4	TP**0902...(1)	0.9
E10F-STUPR1102-D120	Carbide	12	10	6.5	80	25	9	0.5	5°	-6°	0.4	TP**1102...(1)	1.2
E10H-STUPR1102-D120	Carbide	12	10	6.5	100	25	9	0.6	5°	-6°	0.4	TP**1102...(1)	1.2
E10M-STUPR/L1102-D120	Carbide	12	10	6.5	150	25	9	0.6	5°	-6°	0.4	TP**1102...(1)	1.2
E10M-STUPR/L1103-D120	Carbide	12	10	6.5	150	25	9	0.7	5°	-10°	0.4	TP**1103...(1)	1.4
E12G-STUPR1102-D140	Carbide	14	12	7	90	27	11	0.8	5°	-4°	0.4	TP**1102...(1)	1.2
E12J-STUPR1102-D140	Carbide	14	12	7	110	27	11	0.8	5°	-4°	0.4	TP**1102...(1)	1.2
E12Q-STUPR/L1102-D140	Carbide	14	12	7	180	27	11	0.8	5°	-4°	0.4	TP**1102...(1)	1.2
E12Q-STUPR/L1103-D140	Carbide	14	12	7	180	27	11	0.7	5°	-6°	0.4	TP**1103...(1)	1.4
E12G-STUPR1102-D160		16	12	9	90	27	11	0.6	5°	-3°	0.4	TP**1102...(1)	1.2
E12J-STUPR1102-D160		16	12	9	110	27	11	0.6	5°	-3°	0.4	TP**1102...(1)	1.2

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
E12Q-STUPR/L1102-D160	Carbide	16	12	9	180	27	11	0.6	5°	-3°	0.4	TP**1102...(1)	1.2
E16H-STUPR13-D180	Carbide	18	16	9	100	32	15	0.9	5°	-3°	0.4	TP**1303...(1)	1.4
E16R-STUPR/L1103-D180	Carbide	18	16	9	200	32	15	0.8	5°	-3°	0.4	TP**1103...(1)	1.4
E16L-STUPR13-D180	Carbide	18	16	9	130	32	15	0.6	5°	-3°	0.4	TP**1303...(1)	1.4
E16R-STUPR/L13-D180	Carbide	18	16	9	200	32	15	0.6	5°	-3°	0.4	TP**1303...(1)	1.4
E16H-STUPR13-D200	Carbide	20	16	11	100	32	15	0.6	5°	-3°	0.4	TP**1303...(1)	1.4
E16L-STUPR13-D200	Carbide	20	16	11	130	32	15	0.6	5°	-3°	0.4	TP**1303...(1)	1.4
E16R-STUPR/L13-D200	Carbide	20	16	11	200	32	15	0.6	5°	-3°	0.4	TP**1303...(1)	1.4
E20S-STUPR1103-D220	Carbide	22	20	11	250	36	18	0.7	5°	-2°	0.4	TP**1103...(1)	1.4
E20S-STUPR13-D220	Carbide	22	20	11	250	36	18	0.6	5°	-2°	0.4	TP**1303...(1)	1.4
E25T-STUPR16-D270	Carbide	27	25	13.5	300	45	23	0.5	5°	-1°	0.8	TP**16T3...	3

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE : Standard corner radius
Note: Use right-hand toolholders (STUPR**) with left-hand inserts (L); and left-hand toolholders (STUPL**) with right-hand inserts (R).
(1) TPGH, TPGM, and TPGA inserts cannot be used.

INCH SPARE PARTS

Designation	Clamping screw	Wrench
A05-STUPR/L7-D07	CSTB-2.2S	T-7F
A06-STUPR/L2-D08	CSTB-2.5S	T-8F
A08-STUPR/L2-D11	CSTB-2.5B	T-8F
A10-STUPR/L2-D14	CSTB-2.5	T-8F
A10-STUPR/L2.5-D14	CSTB-2.5	T-8F
A12-STUPR/L3-D16	CSTB-4M	T-15F
A16-STUPR/L3-D20	CSTB-4M	T-15F
E05-STUPR7-D07	CSTB-2.2S	T-7F
E06-STUPR2-D08	CSTB-2.5S	T-8F
E08-STUPR2-D11	CSTB-2.5B	T-8F
E10-STUPR2.5-D14	CSTB-3	T-9F

METRIC SPARE PARTS

Designation	Clamping screw	Wrench
A/E07*-STUPR/L07-...	CSTB-2.2L038	T-7F
A/E08*-STUPR/L07-...	CSTB-2.2L038	T-7F
A/E08*-STUPR/L09-...	CSTB-2.2L038	T-7F
A/E10*-STUPR/L1102-...	CSTB-2.5S	T-8F
A/E10*-STUPR/L1103-...	CSTB-3L050	T-9F
A/E12*-STUPR/L1102-...	CSTB-2.5B	T-8F
A/E12*-STUPR/L1103-...	CSTB-3L050	T-9F
A/E16*-STUPR/L1103-...	CSTB-3S	T-9F
A/E16*-STUPR/L13-...	CSTB-3S	T-9F
A/E20*-STUPR/L1103-...	CSTB-3S	T-9F
A/E20*-STUPR/L13-...	CSTB-3	T-9F
A/E25*-STUPR/L16-...	CSTB-4M	T-15F
A32*-STUPR/L16-...	CSTB-4M	T-15F

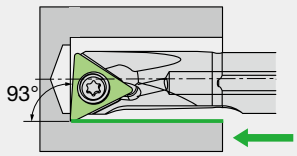
Reference pages: Insert → 2-42 -, CBN → 2-94 -, PCD → 2-123 -

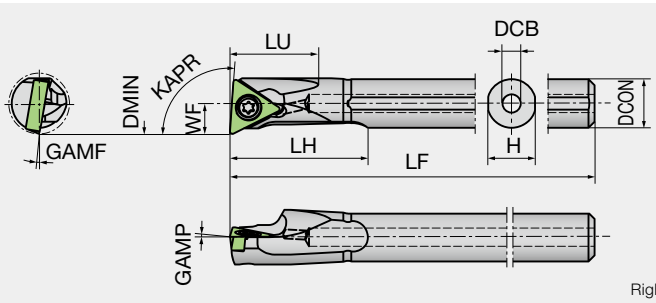
TP

Triangular with hole Positive 11°

S/C-STUP-OH

Screw-on boring bar, for positive 60° triangular inserts





Right hand (R) shown.

Metric	Material	DMIN	DCON	WF	LF	LH	H	GAMP	GAMF	RE*	DCB	LU	Insert
S08H-STUPR09D10-OH	Steel	10	8	5	100	22.5	7.7	5°	10°	0.4	3	14.5	TP**0902...
S10K-STUPR11D12-OH	Steel	12	10	6	125	27.5	9.6	5°	7.5°	0.4	3.5	18.5	TP**1103...
S12M-STUPR11D14-OH	Steel	14	12	7	150	32.5	11.5	5°	5°	0.4	4	22	TP**1103...
S16Q-STUPR11D18-OH	Steel	18	16	9	180	42.5	15.4	5°	3°	0.4	5	28.5	TP**1103...
S20Q-STUPR11D22-OH	Steel	22	20	11	180	46	19.4	5°	3°	0.4	5	38	TP**1103...
C08K-STUPR09D10-OH	Carbide	10	8	5	125	16.5	7.7	5°	10°	0.4	2.5	14.5	TP**0902...
C08K-STUPL09D10-OH	Carbide	10	8	5	125	16.5	7.7	5°	10°	0.4	2.5	14.5	TP**0902...
C10M-STUPR11D12-OH	Carbide	12	10	6	150	20	9.6	5°	7.5°	0.4	2.5	17.5	TP**1103...
C10M-STUPL11D12-OH	Carbide	12	10	6	150	20	9.6	5°	7.5°	0.4	2.5	17.5	TP**1103...
C12M-STUPR11D14-OH	Carbide	14	12	7	150	23	11.5	5°	5°	0.4	3	21.5	TP**1103...
C16Q-STUPR11D18-OH	Carbide	18	16	9	180	29	15.4	5°	3°	0.4	4	28	TP**1103...

Use a left-handed insert
For F1/FG chipbreaker, right-hand inserts fit to right-hand toolholder
F1/FG chipbreaker evacuates chips BACKWARD
*RE: Standard corner radius

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
S/C**-STUPR/L09**	LR-S-2.5*4.8	CLR-15S
S/C**-STUPR/L11**	LR-S-3*5.8	RLR-20S

Reference pages: Insert → 2-42 -, CBN → 2-94 -, PCD → 2-123 -

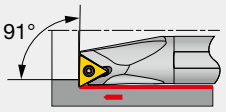
TP

Triangular with hole Positive 11°

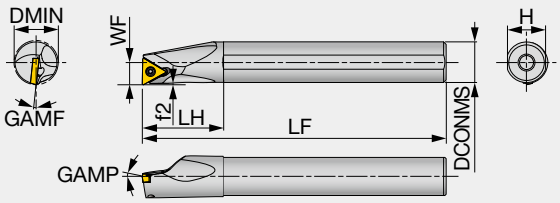
STREAMJETBAR

A/E-STFPR/L

Screw-on boring bar, for positive 60° triangular inserts



Cutting edge style **F**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque
E06-STFPR2-D08	Carbide	0.500	0.375	0.281	5.000	1.000	0.350	-	0°	-5°	0.016	TP** 21.5...	0.89
E08-STFPR2-D11	Carbide	0.688	0.500	0.406	5.000	1.062	0.475	-	0°	-3°	0.016	TP** 21.5...	0.89
E10-STFPR2-D14	Carbide	0.875	0.625	0.531	7.000	1.250	0.605	-	0°	-2°	0.016	TP** 21.5...	0.89
E12-STFPR/L3-D16	Carbide	1.000	0.750	0.594	7.000	1.438	0.725	-	0°	-2°	0.032	TP** 32.5...	2.2

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A08H-STFPR/L09-D100	Steel	10	8	5.5	100	16	7.5	0.7	5°	-8°	0.4	TP**0902...	0.9
A10K-STFPR/L1102-D120	Steel	12	10	6.5	125	20	9	0.7	5°	-6°	0.4	TP**1102...	1.2
A12M-STFPR/L1102-D140	Steel	14	12	7.0	150	24	11	0.6	5°	-4°	0.4	TP**1102...	1.2
A16Q-STFPR/L13-D180	Steel	18	16	9	180	32	15	0.7	5°	-2°	0.4	TP**1303...	1.4
A20R-STFPR13-D220	Steel	22	20	11	200	36	18	0.8	5°	-2°	0.4	TP**1303...	1.4
A25S-STFPR16-D270	Steel	27	25	13.5	250	45	23	0.6	5°	-1°	0.4	TP**16T3...	3
E08K-STFPR/L09-D100	Carbide	10	8	5.5	125	22	7.5	0.7	5°	-8°	0.4	TP**0902...	0.9
E10M-STFPR/L1102-D120	Carbide	12	10	6.5	150	25	9	0.7	5°	-6°	0.4	TP**1102...	1.2
E12Q-STFPR/L1102-D140	Carbide	14	12	7	180	27	11	0.6	5°	-4°	0.4	TP**1102...	1.2
E16R-STFPR13-D180	Carbide	18	16	9	200	32	15	0.7	5°	-2°	0.4	TP**1303...	1.4
E20S-STFPR13-D220	Carbide	22	20	11	250	36	18	0.8	5°	-2°	0.4	TP**1303...	1.4

Torque: Recommended clamping torque: lbs·ft (*N·m) **RE : Standard corner radius
Note: Use right-hand toolholders (STFPR**) with left-hand inserts (L); and left-hand toolholders (STFPL**) with right-hand inserts (R).
TPGH, TPGM, and TPGA inserts cannot be used.

INCH SPARE PARTS

Designation	Clamping screw	Wrench
E06-STFPR2-D08	CSTB-2.5B	T-8F
E08/10-STFPR2-D1...	CSTB-2.5	T-8F
E12-STFPR/L3-D16	CSTB-4S	T-15F

METRIC SPARE PARTS

Designation	Clamping screw	Wrench
A08H-STFPR/L09-D100	CSTB-2.2S	T-7F
A10K-STFPR/L1102-D120	CSTB-2.5B	T-8F
A12M-STFPR/L1102-D140	CSTB-2.5	T-8F
A16Q-STFPR/L13-D180	CSTB-3S	T-9F
A20R-STFPR13-D220	CSTB-3	T-9F
A25S-STFPR16-D270	CSTB-4M	T-15F
E08K-STFPR/L09-D100	CSTB-2.2S	T-7F
E10M-STFPR/L1102-D120	CSTB-2.5B	T-8F
E12Q-STFPR/L1102-D140	CSTB-2.5	T-8F
E16R-STFPR13-D180	CSTB-3S	T-9F
E20S-STFPR13-D220	CSTB-3	T-9F

Reference pages: Insert → 2-42 -, CBN → 2-94 -, PCD → 2-123 -

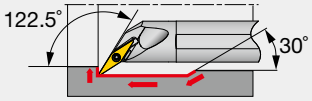
YW

Rhombic, 25°
with hole
Positive 7°

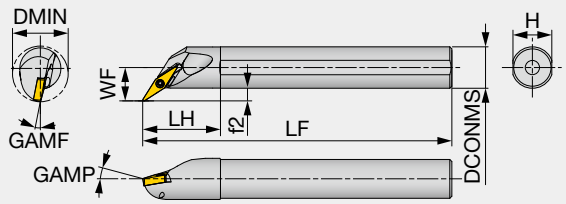
Y-PRO SERIES

A/E-SYQBR/L

Screw-on boring bar, for positive 25° rhombic inserts



Cutting edge style **Q**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque
A08-SYQBR2-D12	Steel	0.750	0.500	0.438	5.000	1.000	0.475	0.188	-5°	-10°	0.016	YW**11T2...	0.44
A10-SYQBR2-D14	Steel	0.875	0.625	0.500	7.000	1.250	0.600	0.188	-5°	-8°	0.016	YW**11T2...	0.44
E08-SYQBR2-D12	Carbide	0.750	0.500	0.438	5.000	1.000	0.475	0.188	-5°	-10°	0.016	YW**11T2...	0.44
E10-SYQBR2-D14	Carbide	0.875	0.625	0.500	7.000	1.250	0.600	0.188	-5°	-8°	0.016	YW**11T2...	0.44

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A12M-SYQBR/L11-D170	Steel	17	12	10.5	150	24	11	4.5	-5°	-10°	0.4	YW**11T2...	0.6
A16Q-SYQBR/L11-D215	Steel	21.5	16	13	180	30	15	5	-5°	-8°	0.4	YW**11T2...	0.6
E12Q-SYQBR/L11-D170	Carbide	17	12	10.5	180	27	11	4.5	-5°	-10°	0.4	YW**11T2...	0.6
E16R-SYQBR/L11-D215	Carbide	21.5	16	13	200	32	15	5	-5°	-8°	0.4	YW**11T2...	0.6

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE : Standard corner radius

SPARE PARTS

Designation	Clamping screw	Wrench
A/E**-SYQBR/L...	CSTB-2L	T-6F

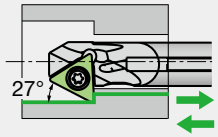
Reference pages: Insert → 2-59

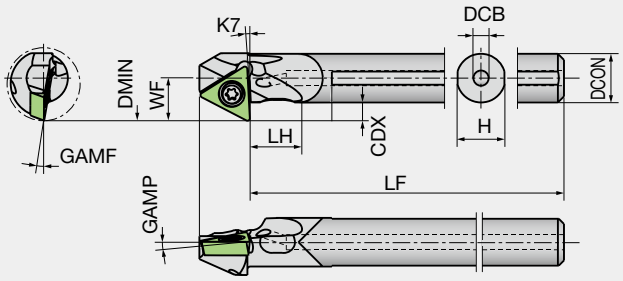
TC

Triangular with hole Positive 7°

C-STZC/ZP-OH

Screw-on boring bar, for positive 60° triangular inserts





Right hand (R) shown.

Metric	DMIN	DCON	WF	LF	LH	H	GAMP	GAMF	RE*	CDX	DCB	Insert
C06H-STZCR06D10-OH	10	6	5.5	100	6	5.8	0°	10°	0.2	2.5	2	TC**0601...
C08K-STZPR09D12-OH	12	8	7	125	8.5	7.7	5°	10°	0.4	3	2.5	TP**0902...
C10M-STZPR09D14-OH	14	10	8	150	12	9.6	5°	7°	0.4	3	2.5	TP**0902...
C12M-STZPR11D175-OH	17.5	12	10.5	150	14.5	11.5	5°	5°	0.4	4.5	3	TP**1103...

Use a left-handed insert
For F05 chipbreaker, right-hand inserts fit to right-hand toolholder
F05 chipbreaker evacuates chips BACKWARD
*RE: Standard corner radius

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
C06H-STZCR06D10-OH	LR-S-2*4.4	CLR-13S
C**-STZPR09**	LR-S-2.5*4.8	CLR-15S
C12M-STZPR11D175-OH	LR-S-3*5.8	RLR-20S

Reference pages: Insert → 2-36 -, 2-42 -, CBN → 2-93 -, 2-94 -, PCD → 2-122 -, 2-123 -

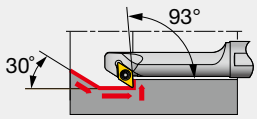
DC

Rhombic, 55°
with hole
Positive 7°

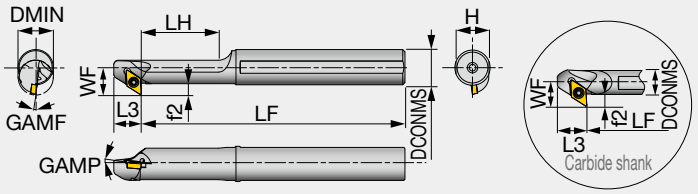
STREAMJETBAR

A/E-SDZCR/L

Screw-on boring bar, for positive 55° rhombic inserts



Cutting edge style **Z**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	L3	H	f2	GAMP	GAMF	RE**	Insert	Torque
A10-SDZCR2-D14	Steel	0.875	0.625	0.531	7.000	1.250	0.500	0.600	0.219	0°	-4°	0.016	DC** 21.5...	0.89

Metric	Material	DMIN	DCONMS	WF	LF	LH	L3	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A12M-SDZCR/L07-D140	Steel	14	12	10.5	150	30	12.5	11	4.5	0°	-9°	0.4	DC**0702...	1.2
A16Q-SDZCR/L07-D160	Steel	16	16	12.5	180	35	12.5	15	4.5	0°	-8°	0.4	DC**0702...	1.2
A20R-SDZCR/L11-D200	Steel	20	20	15.5	200	40	15.0	18	5.5	0°	-8°	0.8	DC**11T3...	3
A25S-SDZCR/L11-D250	Steel	25	25	18	250	50	15	23	5.5	0°	-6°	0.8	DC**11T3...	3
E12Q-SDZCR/L07-D180	Carbide	18	12	10.5	180	-	12.5	11	4.5	0°	-8°	0.4	DC**0702...	1.2
E16R-SDZCR/L07-D220	Carbide	22	16	12.5	200	-	12.5	15	4.5	0°	-6°	0.4	DC**0702...	1.2

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE : Standard corner radius
Note: Use right-hand toolholders (SDZCR**) with right-hand inserts (R); and left-hand toolholders (SDZCL**) with left-hand inserts (L).

SPARE PARTS

Designation	Clamping screw	Wrench
A10-SDZCR2-D14	CSTB-2.5	T-8F
A1**-SDZCR/L07-D1*0	CSTB-2.5	T-8F
A2**-SDZCR/L11-D2*0	CSTB-4S	T-15F
E1**-SDZCR/L07-D**0	CSTB-2.5	T-8F

Reference pages: Insert → 2-23 -, CBN → 2-91 -, PCD → 2-120 -

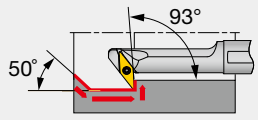
VC

Rhombic, 35° with hole
Positive 7°

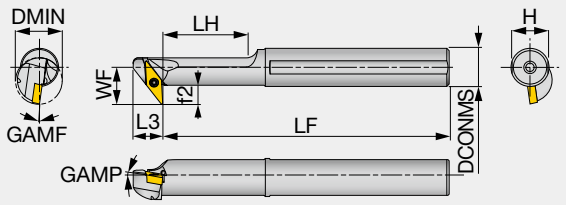
STREAMJETBAR

A-SVZCR/L

Screw-on boring bar, for positive 35° rhombic inserts



Cutting edge style **Z**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	L3	H	f2	GAMP	GAMF	RE**	Insert	Torque
A08-SVZCR6-D12	Steel	0.750	0.500	0.438	5.000	1.000	0.395	0.475	0.188	0°	-6°	0.016	VC** 63...	0.44
A12-SVZCR2-D16	Steel	1.000	0.750	0.593	10.000	1.425	0.500	0.725	0.218	0°	-7°	0.016	VC** 22...	0.44

Metric	Material	DMIN	DCONMS	WF	LF	LH	L3	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A12M-SVZCR/L08-D160	Steel	16	12	11	150	30	10	11	5.5	0°	-8°	0.4	VC**0802...	0.6

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE : Standard corner radius
Note: Use right-hand toolholders (SVZCR**) with right-hand inserts (R); and left-hand toolholders (SVZCL**) with left-hand inserts (L).

SPARE PARTS

Designation	Clamping screw	Wrench
A08-SVZCR6-D12	CSTB-2L	T-6F
A12-SVZCR2-D16	CSTB-2.5	T-8F
A12M-SVZCR/L08-D160	CSTB-2L	T-6F

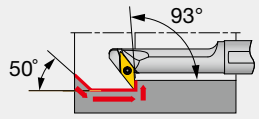
Reference pages: Insert → 2-50 -, CBN → 2-101, PCD → 2-127

VB

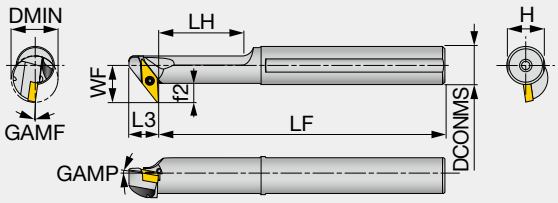
Rhombic, 35°
with hole
Positive 5°

A-SVZBR/L

Screw-on boring bar, for positive 35° rhombic inserts



Cutting edge style **Z**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	L3	H	f2	GAMP	GAMF	RE**	Insert	Torque
A12-SVZBR2-D16	Steel	1.000	0.750	0.594	10.000	1.425	0.500	0.725	0.219	0°	-5°	0.016	VB** 22...	0.89

Metric	Material	DMIN	DCONMS	WF	LF	LH	L3	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A16Q-SVZBR/L11-D200	Steel	20	16	15.5	180	35	12.5	15	8	0°	-8°	0.4	VB**1103...	1.2
A20R-SVZBR/L11-D250	Steel	25	20	17.5	200	40	12.5	18	8	0°	-7°	0.4	VB**1103...	1.2
A25S-SVZBR/L16-D320	Steel	32	25	24	250	50	17.5	23	12	0°	-6°	0.8	VB**1604...	3
A32T-SVZBR/L16-D400	Steel	40	32	27.5	300	72	17.5	30	12	0°	-5°	0.8	VB**1604...	3

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE : Standard corner radius
Note: Use right-hand toolholders (SVZBR**) with right-hand inserts (R); and left-hand toolholders (SVZBL**) with left-hand inserts (L).

SPARE PARTS

Designation	Clamping screw	Wrench
A12-SVZBR2-D16	CSTB-2.5	T-8F
A**-SVZBR/L11-D2*0	CSTB-2.5	T-8F
A25S-SVZBR/L16-D320	CSTB-3.5	T-15F
A32T-SVZBR/L16-D400	CSTB-3.5L	T-15F

Reference pages: Insert → 2-48 -, CBN → 2-99 -, PCD → 2-127

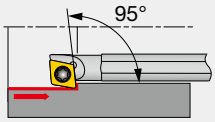
EP

Rhombic, 75°
with hole
Positive 11°

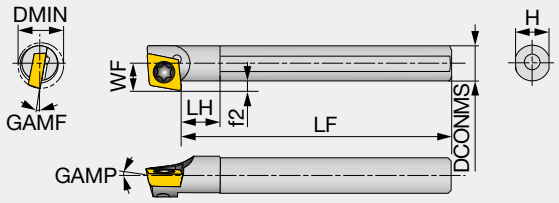
STREAMJETBAR

A/E-SEZPR/L

Screw-on boring bar, for positive 75° rhombic inserts



Cutting edge style **Z**



Right hand (R) shown.

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A04F-SEZPR/L03-D055	Steel	5.5	4	3.2	80	4	3.8	1.2	0°	-8°	0.2	EP**03X1...	0.6
A05F-SEZPR/L03-D065	Steel	6.5	5	3.7	80	5	4.8	1.2	0°	-6°	0.2	EP**03X1...	0.6
E04G-SEZPR/L03-D055	Carbide	5.5	4	3.2	90	5	3.8	1.2	0°	-8°	0.2	EP**03X1...	0.6
E05G-SEZPR/L03-D065	Carbide	6.5	5	3.7	90	6	4.8	1.2	0°	-6°	0.2	EP**03X1...	0.6

*Torque: Recommended clamping torque (N·m)
**RE : Standard corner radius
Note: Use right-hand toolholders (SEZPR**) with right-hand inserts (R); and left-hand toolholders (SEZPL**) with left-hand inserts (L).

SPARE PARTS

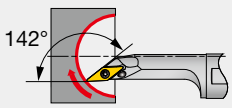
Designation	Clamping screw	Wrench
A**-SEZPR/L03-D...	CSTA-1.6	T-6F
E**-SEZPR/L03-D...	CSTA-1.6	T-6F

VC

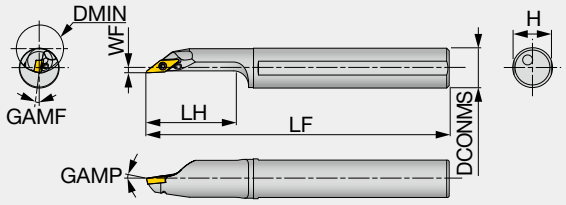
Rhombic, 35°
with hole
Positive 7°

A-SVJCR/L

Screw-on boring bar, for positive 35° rhombic inserts



Cutting edge style **J**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	GAMF	RE**	Insert	Torque
A10-SVJCR2-D16	Steel	1.000	0.625	0.156	7.000	1.750	0.600	-5°	-6°	0.016	VC** 22..	0.89

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	GAMF	RE**	Insert	Torque*
A12M-SVJCR/L08-D160	Steel	16	12	2	150	28	11	-5°	-5°	0.4	VC**0802...	0.6
A16Q-SVJCR/L08-D200	Steel	20	16	2	180	35	15	-5°	-5°	0.4	VC**0802...	0.6

Torque: Recommended clamping torque: lbs·ft (*N·m)
**RE : Standard corner radius
Note: Use right-hand toolholders (SVJCR**) with left-hand inserts (L); and left-hand toolholders (SVJCL**) with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Wrench
A**-SVJCR/L...	CSTB-2L	T-6F

Reference pages: A/E-SEZPR/L: Insert → 2-34 -, CBN → 2-93, PCD → 2-122
A-SVJCR/L: Insert →2-50 -, CBN → 2-101, PCD → 2-127

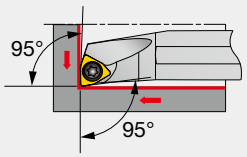
WX

Trigon, 80°
with hole

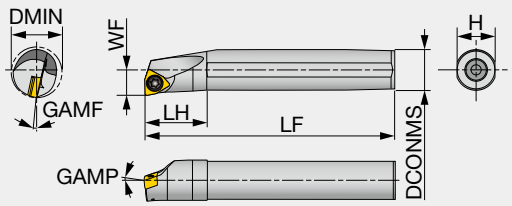
MINIFORCE TURN

A/E-SWLXR/L

Screw-on boring bar, for WXGU inserts



Cutting edge style **L**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	GAMF	RE**	Insert	Torque
A06-SWLXR/L2-D08	Steel	0.500	0.375	0.281	5.000	0.750	0.350	-10°	-14°	0.016	WXGU 22**L/R...	0.66
A08-SWLXR/L2-D11	Steel	0.688	0.500	0.406	5.000	1.000	0.475	-10°	-10°	0.016	WXGU 22**L/R...	0.66
A10-SWLXR/L2-D14	Steel	0.875	0.625	0.531	7.000	1.250	0.600	-10°	-8°	0.016	WXGU 22**L/R...	0.66
A12-SWLXR/L2-D16	Steel	1.000	0.750	0.593	7.000	1.438	0.725	-10°	-7°	0.016	WXGU 22**L/R...	0.66
A16-SWLXR/L2-D20	Steel	1.250	1.000	0.625	7.000	1.438	0.938	-10°	-7°	0.016	WXGU 22**L/R...	0.66
E06-SWLXR/L2-D08	Carbide	0.500	0.375	0.281	5.000	1.000	0.350	-10°	-14°	0.016	WXGU 22**L/R...	0.66
E08-SWLXR/L2-D11	Carbide	0.688	0.500	0.406	5.000	1.063	0.475	-10°	-10°	0.016	WXGU 22**L/R...	0.66
E10-SWLXR/L2-D14	Carbide	0.875	0.625	0.531	7.000	1.250	0.600	-10°	-8°	0.016	WXGU 22**L/R...	0.66
E12-SWLXR/L2-D16	Carbide	1.000	0.750	0.593	7.000	1.438	0.725	-10°	-7°	0.016	WXGU 22**L/R...	0.66
E16-SWLXR/L2-D20	Carbide	1.250	1.000	0.625	10.000	1.812	0.938	-10°	-7°	0.016	WXGU 22**L/R...	0.66

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	GAMF	RE**	Insert	Torque*
A10K-SWLXR/L04-D120	Steel	12	10	6	125	20	9	-10°	-16°	0.4	WXGU0403**L/R...	0.9
A12M-SWLXR/L04-D140	Steel	14	12	7	150	24	11	-10°	-14°	0.4	WXGU0403**L/R...	0.9
A16Q-SWLXR/L04-D180	Steel	18	16	9	180	32	15	-10°	-11°	0.4	WXGU0403**L/R...	0.9
A20R-SWLXR/L04-D220	Steel	22	20	11	200	36	18	-10°	-10°	0.4	WXGU0403**L/R...	0.9
E10M-SWLXR/L04-D120	Carbide	12	10	6	150	25	9	-10°	-16°	0.4	WXGU0403**L/R...	0.9
E12Q-SWLXR/L04-D140	Carbide	14	12	7	180	27	11	-10°	-14°	0.4	WXGU0403**L/R...	0.9
E16R-SWLXR/L04-D180	Carbide	18	16	9	200	32	15	-10°	-11°	0.4	WXGU0403**L/R...	0.9
E20S-SWLXR/L04-D220	Carbide	22	20	11	250	36	18	-10°	-10°	0.4	WXGU0403**L/R...	0.9

Torque: Recommended clamping torque: lbs·ft (*N·m) **RE: Standard corner radius
Note: Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R)

SPARE PARTS

Designation	Clamping screw	Wrench
A/E**-SWLXR/L...	SR34-514	T-7F

Reference pages: Insert → 2-58 -

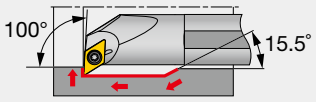
DX

Rhombic, 55° with hole

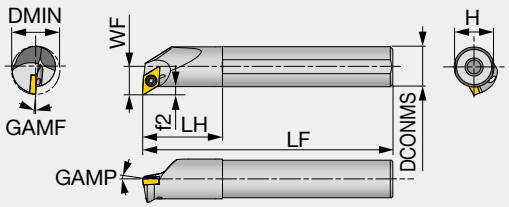
MINIFORCE TURN

A/E-SDXXR/L

Screw-on boring bar, for DXG/MU inserts



Cutting edge style **X**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque
A06-SDXXR/L2-D10	Steel	0.625	0.375	0.406	5.000	0.750	0.350	0.218	-14°	-16°	0.016	DXG/MU 22**L/R...	0.66
A08-SDXXR/L2-D11	Steel	0.688	0.500	0.406	5.000	1.000	0.475	0.156	-14°	-14°	0.016	DXG/MU 22**L/R...	0.66
A10-SDXXR/L2-D14	Steel	0.875	0.625	0.531	7.000	1.250	0.600	0.218	-13°	-13°	0.016	DXG/MU 22**L/R...	0.66
A12-SDXXR/L2-D16	Steel	1.000	0.750	0.593	7.000	1.438	0.725	0.218	-13°	-12°	0.016	DXG/MU 22**L/R...	0.66
E06-SDXXR/L2-D10	Carbide	0.625	0.375	0.406	5.000	1.000	0.350	-	-14°	-16°	0.016	DXG/MU 22**L/R...	0.66
E08-SDXXR/L2-D11	Carbide	0.688	0.500	0.406	5.000	1.063	0.475	-	-14°	-14°	0.016	DXG/MU 22**L/R...	0.66
E10-SDXXR/L2-D14	Carbide	0.875	0.625	0.531	7.000	1.250	0.600	-	-13°	-13°	0.016	DXG/MU 22**L/R...	0.66
E12-SDXXR/L2-D16	Carbide	1.000	0.750	0.593	7.000	1.438	0.725	-	-13°	-12°	0.016	DXG/MU 22**L/R...	0.66

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A10K-SDXXR/L07-D130	Steel	13	10	7.6	125	20	9	2.6	-14°	-16°	0.4	DXG/MU0703**L/R...	0.9
A12M-SDXXR/L07-D160	Steel	16	12	8.6	150	24	11	2.6	-14°	-14°	0.4	DXG/MU0703**L/R...	0.9
A16Q-SDXXR/L07-D200	Steel	20	16	10.6	180	32	15	2.6	-13°	-13°	0.4	DXG/MU0703**L/R...	0.9
A20R-SDXXR/L07-D240	Steel	24	20	12.6	200	36	18	2.6	-13°	-12°	0.4	DXG/MU0703**L/R...	0.9
E10M-SDXXR/L07-D130	Carbide	13	10	7.6	150	25	9	2.6	-14°	-16°	0.4	DXG/MU0703**L/R...	0.9
E12Q-SDXXR/L07-D160	Carbide	16	12	8.6	180	27	11	2.6	-14°	-14°	0.4	DXG/MU0703**L/R...	0.9
E16R-SDXXR/L07-D200	Carbide	20	16	10.6	200	32	15	2.6	-13°	-13°	0.4	DXG/MU0703**L/R...	0.9
E20S-SDXXR/L07-D240	Carbide	24	20	12.6	250	36	18	2.6	-13°	-12°	0.4	DXG/MU0703**L/R...	0.9

Torque: Recommended clamping torque: lbs·ft (*N·m) **RE : Standard corner radius
Note: Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R)

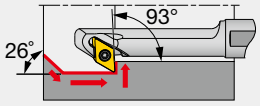
SPARE PARTS

Designation	Clamping screw	Wrench
A/E**-SDXXR/L...	SR34-514	T-7F
S**-SDXXR/L07-H	SR34-514	T-7F

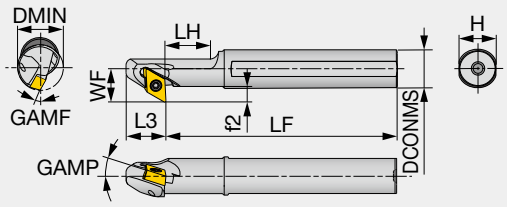
Reference pages: : Insert → 2-32 -

A/E-SDZXR/L

Screw-on boring bar, for DXG/MU inserts



Cutting edge style **Z**



Right hand (R) shown.

Inch	Material	DMIN	DCONMS	WF	LF	LH	L3	H	f2	GAMP	GAMF	RE**	Insert	Torque
A08-SDZXR/L2-D10	Steel	0.625	0.500	0.438	5.000	1.125	0.500	0.475	0.188	-10°	-14°	0.016	DXG/MU 22**R/L...	0.66
A10-SDZXR/L2-D11	Steel	0.688	0.625	0.500	7.000	1.250	0.500	0.600	0.188	-10°	-12.5°	0.016	DXG/MU 22**R/L...	0.66
A12-SDZXR/L2-D14	Steel	0.875	0.750	0.563	7.000	1.375	0.500	0.725	0.188	-10°	-10.5°	0.016	DXG/MU 22**R/L...	0.66

Metric	Material	DMIN	DCONMS	WF	LF	LH	L3	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A12M-SDZXR/L07-D140	Steel	14	12	10.5	150	30	13	11	4.5	-10°	-14°	0.4	DXG/MU0703**R/L...	0.9
A16Q-SDZXR/L07-D160	Steel	16	16	12.5	180	35	13	15	4.5	-10°	-12.5°	0.4	DXG/MU0703**R/L...	0.9
A20R-SDZXR/L07-D200	Steel	20	20	14.5	200	40	13	18	4.5	-10°	-10.5°	0.4	DXG/MU0703**R/L...	0.9
E12Q-SDZXR/L07-D180	Carbide	18	12	10.5	180	-	13	11	4.5	-11°	-11°	0.4	DXG/MU0703**R/L...	0.9
E16R-SDZXR/L07-D220	Carbide	22	16	12.5	200	-	13	15	4.5	-11°	-9°	0.4	DXG/MU0703**R/L...	0.9

Torque: Recommended clamping torque: lbs·ft (*N·m) **RE : Standard corner radius

Note: Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).

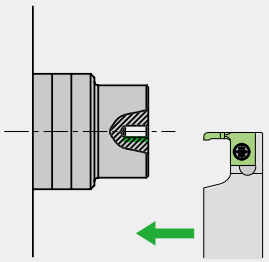
SPARE PARTS

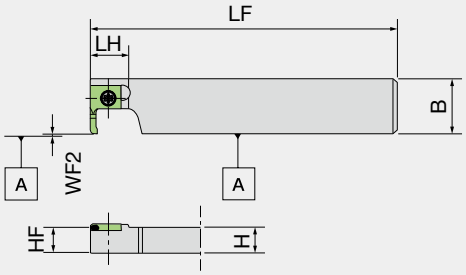
Designation	Clamping screw	Wrench
A/E**-SDZXR/L...	SR34-514	T-7F

Reference pages: : Insert → 2-32 -

LBMA

Screw-on toolholder for boring insert





Right hand (R) shown.

Inch	DMIN	H	B	LF	LH	HF	WF	WF2	Insert
LBMAR06-IN	0.039 - 0.118	0.375	0.375	4.724	0.591	0.375	-	0	LBM..
LBMAR08-IN	0.039 - 0.118	0.500	0.500	4.724	0.591	0.500	-	0	LBM..
LBMAR10-IN	0.039 - 0.118	0.625	0.625	4.724	0.591	0.625	-	0	LBM..

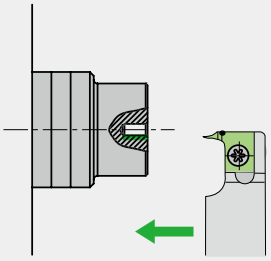
Metric	DMIN	H	B	LF	LH	HF	WF	WF2	Insert
LBMAR08	1 - 3	8	21.5	120	15	8	-	0	LBM..
LBMAR10	1 - 3	10	21.5	120	15	10	-	0	LBM..
LBMAR12	1 - 3	12	21.5	120	15	12	-	0	LBM..
LBMAR16	1 - 3	16	21.5	120	15	16	-	0	LBM..

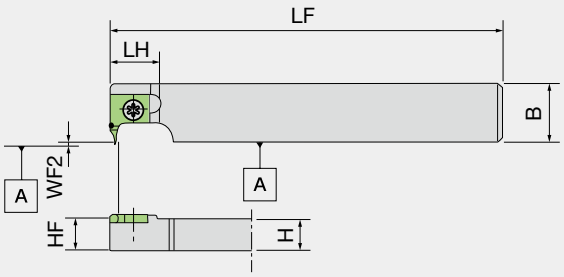
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
LBMAR06-IN	LRIS-4*10PW	CLR-15S
LBMAR08-IN	LRIS-4*12PW	CLR-15S
LBMAR10-IN	LRIS-4*12PW	CLR-15S
LBMAR10	LRIS-4*10PW	CLR-15S
LBMAR12	LRIS-4*12PW	CLR-15S
LBMAR16	LRIS-4*12PW	CLR-15S
LBMAR08	LRIS-4*10	LLR-25S

LBMA-S

Screw-on toolholder for boring insert





Right hand (R) shown.

Metric	DMIN	H	B	LF	LH	HF	WF	WF2	Insert
LBMAR10SGX	1 - 2.3	10	18	85	15	10	-	0	LBMD..S
LBMAR10S	1 - 2.3	10	18	120	15	10	-	0	LBMD..S
LBMAR12S	1 - 2.3	12	18	120	15	12	-	0	LBMD..S

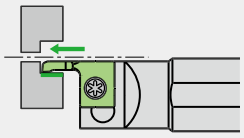
SPARE PARTS

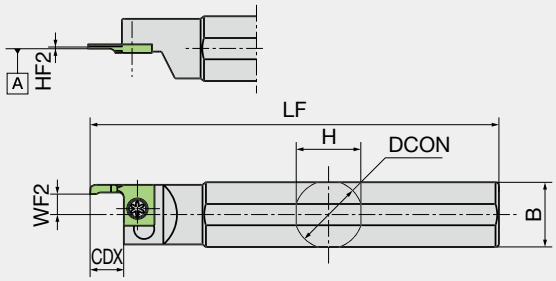
Designation	Clamp screw	Wrench (for Clamp screw)
LBMAR10**	LRIS-4*10PW	CLR-15S
LBMAR12S	LRIS-4*12PW	CLR-15S

Reference pages: : Insert → 4-40, 4-41

DS-LBMB

Screw-on round-shank toolholder for boring insert





Left hand (L) shown.

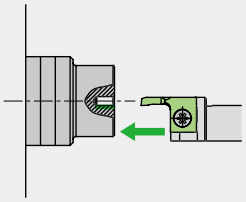
Metric	DMIN	H	B	LF	CDX	DCON	HF2	WF	WF2	Insert	
DS-LBMBL14F	1 - 3	13	13	80	10	14	0	-	6.35	LBM..	LBMD..S
DS-LBMBL15H	1 - 3	15	15	100	10	15.875	0	-	6.35	LBM..	LBMD..S
DS-LBMBL16X	1 - 3	15	15	95	10	16	0	-	6.35	LBM..	LBMD..S
DS-LBMBL19	1 - 3	18	18	120	10	19.05	0	-	6.35	LBM..	LBMD..S
DS-LBMBL20	1 - 3	19	19	120	10	20	0	-	6.35	LBM..	LBMD..S
DS-LBMBL22	1 - 3	21	21	120	10	22	0	-	6.35	LBM..	LBMD..S
DS-LBMBL25	1 - 3	24	24	150	10	25.4	0	-	6.35	LBM..	LBMD..S
DS-LBMBL25-MET	1 - 3	24	24	120	10	25	0	-	6.35	LBM..	LBMD..S

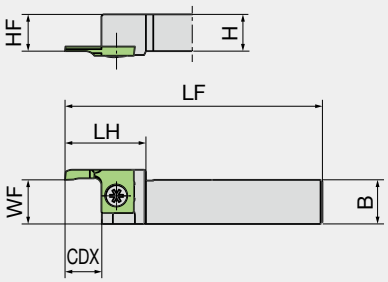
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
DS-LBMBL**	LRIS-4*10PW	CLR-15S

CH-LBM

Screw-on toolholder for boring insert, for horizontal gang style tool post





Left hand (L) shown.

Metric	DMIN	H	B	LF	LH	CDX	HF	WF	Insert	
CH-LBML1012H	1 - 3	10	12	100	22	10	10	12.35	LBM..	LBMD..S
CH-LBML1212H	1 - 3	12	12	100	22	10	12	12.35	LBM..	LBMD..S

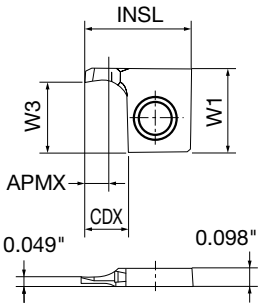
SPARE PARTS

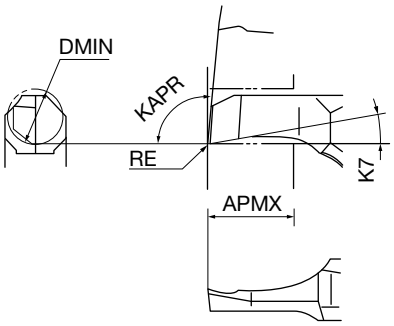
Designation	Clamp screw	Wrench (for Clamp screw)
CH-LBML**	LRIS-4*10PW	CLR-15S

Reference pages: : Insert → 4-40, 4-41

LBMD-S

Short type





Left hand (L) shown.

P	Steel	★	
M	Stainless	☆	
N	Non-ferrous		
S	Superalloys		
H	Hard materials		

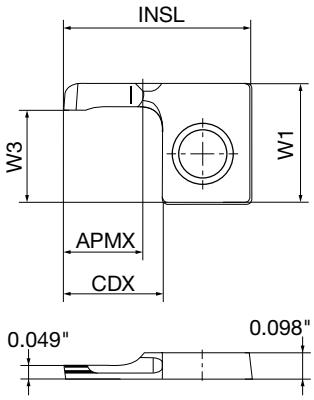
★ : First choice
☆ : Second choice

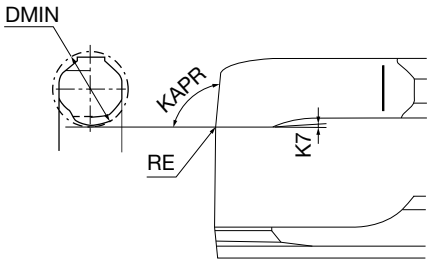
Designation	HAND	Coated VM1	Mirror finish	DMIN (in)	APMX (in)	CDX (in)	INSL (in)	K7	KAPR	W1 (in)	W3 (in)	RE (in)
LBMD1020FLPB05S	L	●	Ⓜ	0.039	0.079	0.236	0.591	10°	95°	0.472	0.394	0.002
LBMD1020FLVBS	L	●	Ⓜ	0.039	0.079	0.236	0.591	10°	95°	0.472	0.394	0
LBMD1430FLPB05S	L	●	Ⓜ	0.055	0.118	0.236	0.591	10°	95°	0.472	0.394	0.002
LBMD1430FLVBS	L	●	Ⓜ	0.055	0.118	0.236	0.591	10°	95°	0.472	0.394	0
LBMD1730FLPB05S	L	●	Ⓜ	0.067	0.118	0.236	0.591	10°	95°	0.472	0.394	0.002
LBMD1730FLVBS	L	●	Ⓜ	0.067	0.118	0.236	0.591	10°	95°	0.472	0.394	0
LBMD2035FLPB05S	L	●	Ⓜ	0.079	0.138	0.236	0.591	10°	95°	0.472	0.394	0.002
LBMD2035FLVBS	L	●	Ⓜ	0.079	0.138	0.236	0.591	10°	95°	0.472	0.394	0
LBMD2335FLPB05S	L	●	Ⓜ	0.091	0.138	0.236	0.591	10°	95°	0.472	0.394	0.002
LBMD2335FLVBS	L	●	Ⓜ	0.091	0.138	0.236	0.591	10°	95°	0.472	0.394	0

● : Line up

LBM

Long type





Left hand (L) shown.

P	Steel	★	☆
M	Stainless	☆	★
N	Non-ferrous		★
S	Superalloys		
H	Hard materials		

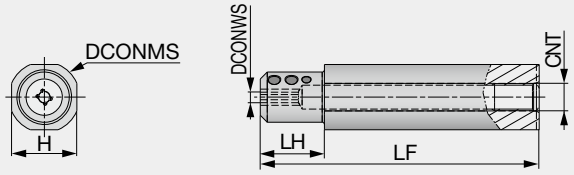
★ : First choice
☆ : Second choice

Designation	HAND	Coated		Mirror finish	DMIN (in)	APMX (in)	CDX (in)	INSL (in)	K7	KAPR	W1 (in)	W3 (in)	RE (in)
		VM1	ZM3										
LBMD1020FLPB05	L	●		Ⓜ	0.039	0.079	0.390	0.744	10°	95°	0.472	0.394	0.002
LBMD1020FLVB	L	●		Ⓜ	0.039	0.079	0.390	0.744	10°	95°	0.472	0.394	0
LBMD2060FLPB05	L	●		Ⓜ	0.079	0.236	0.390	0.744	10°	95°	0.472	0.394	0.002
LBMD2060FLVB	L	●		Ⓜ	0.079	0.236	0.390	0.744	10°	95°	0.472	0.394	0
LBME2060FLP05	L	●		Ⓜ	0.079	0.236	0.390	0.744	2°	105°	0.472	0.394	0.002
LBME2060FLPB05	L	●		Ⓜ	0.079	0.236	0.390	0.744	2°	105°	0.472	0.394	0.002
LBME2060FLV	L	●		Ⓜ	0.079	0.236	0.390	0.744	2°	105°	0.472	0.394	0
LBME2060FLVB	L	●		Ⓜ	0.079	0.236	0.390	0.744	2°	105°	0.472	0.394	0
LBM3080FLPB05	L	●		Ⓜ	0.118	0.315	0.390	0.744	2°	90°	0.472	0.378	0.002
LBM3080FLVB	L	●		Ⓜ	0.118	0.315	0.390	0.744	2°	90°	0.472	0.378	0
LBMC3080FLP05	L	●	●	Ⓜ	0.118	0.315	0.390	0.744	2°	95°	0.472	0.378	0.002
LBMC3080FLPB05	L	●	●	Ⓜ	0.118	0.315	0.390	0.744	2°	95°	0.472	0.378	0.002
LBMC3080FLV	L	●	●	Ⓜ	0.118	0.315	0.390	0.744	2°	95°	0.472	0.378	0
LBMC3080FLVB	L	●	●	Ⓜ	0.118	0.315	0.390	0.744	2°	95°	0.472	0.378	0

● : Line up

JBBS-4N

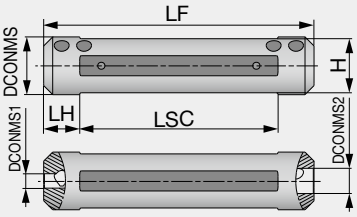
Sleeve for internal coolant supply with 4 coolant holes



Metric	DCONMS	DCONWS	LF	LH	H	CNT
JBBS12-4-L80C-4N	12	4	80	10	10.3	Rc1/16
JBBS127-4-L80C-4N	12.7	4	80	10	11.6	Rc1/16
JBBS14-4-L80C-4N	14	4	80	10	12	Rc1/8
JBBS159-4-L100C-4N	15.875	4	100	10	14.58	Rc1/8
JBBS159-7-L100C-4N	15.875	7	100	10	14.58	Rc1/8
JBBS16-4-L100C-4N	16	4	100	10	15	Rc1/8
JBBS16-7-L100C-4N	16	7	100	10	15	Rc1/8
JBBS19-4-L100C-4N	19.05	4	100	20	17.2	Rc1/8
JBBS19-7-L100C-4N	19.05	7	100	20	17.2	Rc1/8
JBBS20-4-L100C-4N	20	4	100	20	18	Rc1/8
JBBS20-7-L100C-4N	20	7	100	20	18	Rc1/8
JBBS22-4-L100C-4N	22	4	100	20	20	Rc1/8
JBBS22-7-L100C-4N	22	7	100	20	20	Rc1/8
JBBS25-4-L100C-4N	25	4	100	23	23	Rc1/8
JBBS25-7-L100C-4N	25	7	100	23	23	Rc1/8
JBBS254-4-L100C-4N	25.4	4	100	23	23.4	Rc1/8
JBBS254-7-L100C-4N	25.4	7	100	23	23.4	Rc1/8

JBBS

Sleeve for external coolant supply



Metric	DCONMS	DCONWS1	DCONWS2	LF	LH	LSC	H
JBBS12-4-4	12	4	4	75	10	55	10.3
JBBS127-4-4	12.7	4	4	76.2	10	56.2	11.6
JBBS14-4-4	14	4	4	75	10	55	12
JBBS159-4-7	15.875	4	7	76.2	10	56.2	14
JBBS16-4-7	16	4	7	75	10	55	15
JBBS19-4-7	19.05	4	7	89	10	69	17.2
JBBS20-4-7	20	4	7	90	10	70	18
JBBS22-4-7	22	4	7	90	10	70	20
JBBS25-4-7	25	4	7	100	10	80	23
JBBS254-4-7	25.4	4	7	90	10	70	23.4

SPARE PARTS

Designation	Clamping screw	Wrench
JBBS**-4-L***C-4N, JBBS127-4-4, JBBS**-4-7	SSHM5-6PF-S	P-2.5
JBBS**-7-L***C-4N, JBBS12-4-4, JBBS14-4-4	SSHM5-4PF-S	P-2.5

JBBS-C

Sleeve for internal coolant supply

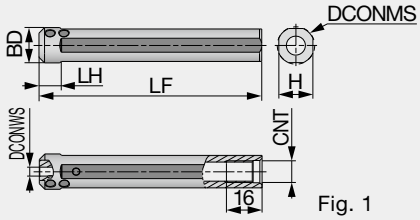


Fig. 1

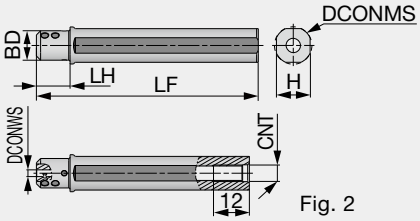
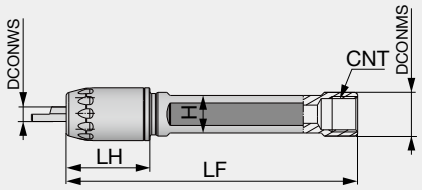


Fig. 2

Metric	DCONMS	BD	DCONWS	LF	LH	H	CNT	Fig.
JBBS159-4-L100C	15.875	15.875	4	100	10	14.58	Rc1/8	1
JBBS159-7-L100C	15.875	15.875	7	100	10	14.58	Rc1/8	1
JBBS16-4-L100C	16	16	4	100	10	15	Rc1/8	1
JBBS16-7-L100C	16	16	7	100	10	15	Rc1/8	1
JBBS19-4-L100C	19.05	17.5	4	100	20	17.2	Rc1/8	2
JBBS19-7-L100C	19.05	17.5	7	100	20	17.2	Rc1/8	2
JBBS20-4-L100C	20	17.5	4	100	20	18	Rc1/8	2
JBBS20-7-L100C	20	17.5	7	100	20	18	Rc1/8	2
JBBS22-4-L100C	22	17.5	4	100	20	20	Rc1/8	2
JBBS22-7-L100C	22	17.5	7	100	20	20	Rc1/8	2
JBBS25-4-L100C	25	18	4	100	23	23	Rc1/8	2
JBBS25-7-L100C	25	18	7	100	23	23	Rc1/8	2
JBBS254-4-L100C	25.4	18	4	100	23	23.4	Rc1/8	2
JBBS254-7-L100C	25.4	18	7	100	23	23.4	Rc1/8	2

JBBSA-C

Collet chuck sleeve for solid carbide bars



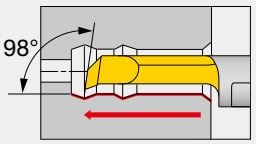
Metric	DCONMS	DCONWS	LF	LH	H	CNT
JBBSA16-4-L100C	16	4	100	23	14	Rc1/8
JBBSA16-7-L100C	16	7	100	23	14	Rc1/8
JBBSA20-4-L120C	20	4	120	23	18	Rc1/8
JBBSA20-7-L120C	20	7	120	23	18	Rc1/8

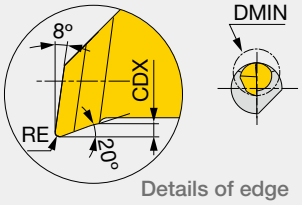
SPARE PARTS

Designation	Clamping screw	Cap	Wrench	Wrench 1
JBBS**-4-L100C	SSHM5-6PF-S		P-2.5	-
JBBS**-7-L100C	SSHM5-4PF-S		P-2.5	-
JBBSA**-4-L100C	-	CAP-A-4	-	WRENCH-A-4
JBBSA**-7-L100C	-	CAP-A-7	-	WRENCH-A-7

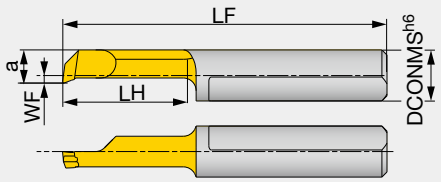
TBTR/L

Solid boring bar for boring, profiling, and chamfering





Details of edge



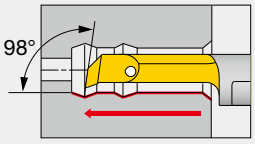
Right hand (R) shown.

Metric	SH725	DMIN	DCONMS	WF	a	LF	LH	CDX	RE $^{+0.05}_{0}$
TBTR04045005-D010	●	1	4	-1.1	0.9	21	4.5	0.1	0.05
TBTR04065005-D010	●	1	4	-1.1	0.9	23	6.5	0.1	0.05
TBTR04040005-D020	●	2	4	-0.3	1.7	20.5	4	0.1	0.05
TBTR04090005-D020	●	2	4	-0.3	1.7	25.5	9	0.1	0.05
TBTR04140005-D020	●	2	4	-0.3	1.7	30.5	14	0.1	0.05
TBTR/L04090010-D028	●	2.8	4	0.9	2.6	25.5	9	0.2	0.1
TBTR04150010-D028	●	2.8	4	0.9	2.6	31.5	15	0.2	0.1
TBTR04190010-D028	●	2.8	4	0.9	2.6	35.5	19	0.2	0.1
TBTR04090010-D040	●	4	4	1.5	3.5	25.5	9	0.3	0.1
TBTR04150010-D040	●	4	4	1.5	3.5	31.5	15	0.3	0.1
TBTR04190010-D040	●	4	4	1.5	3.5	35.5	19	0.3	0.1
TBTR04230010-D040	●	4	4	1.5	3.5	39.5	23	0.3	0.1
TBTR04270010-D040	●	4	4	1.5	3.5	43.5	27	0.3	0.1
TBTR07090015-D050	●	5	7	0.9	4.4	25	9	0.5	0.15
TBTR07140015-D050	●	5	7	0.9	4.4	30	14	0.5	0.15
TBTR07190015-D050	●	5	7	0.9	4.4	35	19	0.5	0.15
TBTR07240015-D050	●	5	7	0.9	4.4	40	24	0.5	0.15
TBTR07290015-D050	●	5	7	0.9	4.4	45	29	0.5	0.15
TBTR07340015-D050	●	5	7	0.9	4.4	50	34	0.5	0.15
TBTR07140015-D060	●	6	7	1.8	5.3	30	14	0.5	0.15
TBTR/L07210015-D060	●	6	7	1.8	5.3	37	21	0.5	0.15
TBTR07240015-D060	●	6	7	1.8	5.3	40	24	0.5	0.15
TBTR07290015-D060	●	6	7	1.8	5.3	45	29	0.5	0.15
TBTR07340015-D060	●	6	7	1.8	5.3	50	34	0.5	0.15
TBTR07410015-D060	●	6	7	1.8	5.3	57	41	0.5	0.15
TBTR07190015-D068	●	6.8	7	2.8	6.3	35	19	0.6	0.15
TBTR07240015-D068	●	6.8	7	2.8	6.3	40	24	0.6	0.15
TBTR07290015-D068	●	6.8	7	2.8	6.3	45	29	0.6	0.15
TBTR07340015-D070	●	7	7	2.8	6.3	50	34	0.6	0.15
TBTR07390015-D070	●	7	7	2.8	6.3	55	39	0.6	0.15
TBTR07440015-D070	●	7	7	2.8	6.3	60	44	0.6	0.15
TBTR07490015-D070	●	7	7	2.8	6.3	65	49	0.6	0.15

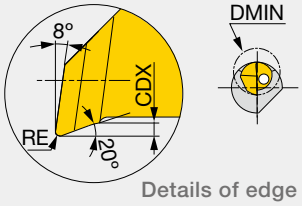
● : Line up

JBTR/L

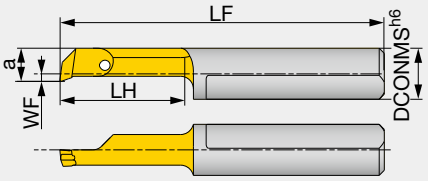
Solid boring bar for boring, profiling, and chamfering



with coolant hole



Details of edge



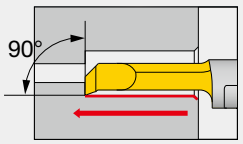
Right hand (R) shown.

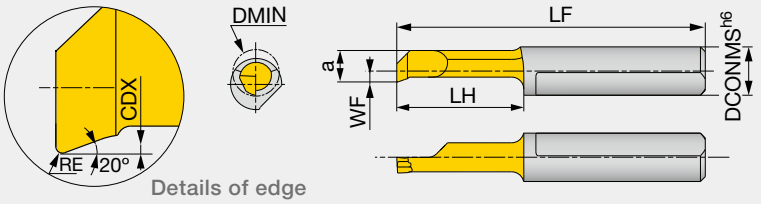
Metric	SH725	SH730	DMIN	DCONMS	WF	a	LF	LH	CDX	RE $^{+0.05}_{0}$
JBTR04020004-D006	●	▲	0.6	4	-1.5	0.5	18.5	2	0.08	0.04
JBTR04030004-D006	●	▲	0.6	4	-1.5	0.5	19.5	3	0.08	0.04
JBTR04045005-D010	●	▲	1	4	-1.1	0.9	21	4.5	0.1	0.05
JBTR04065005-D010	●	▲	1	4	-1.1	0.9	23	6.5	0.1	0.05
JBTR04040005-D020	●	▲	2	4	-0.3	1.7	20.5	4	0.1	0.05
JBTR04090005-D020	●	▲	2	4	-0.3	1.7	25.5	9	0.1	0.05
JBTR04140005-D020	●	▲	2	4	-0.3	1.7	30.5	14	0.1	0.05
JBTR/L04090010-D028	●	▲	2.8	4	0.9	2.6	25.5	9	0.2	0.1
JBTR/L04150010-D028	●	▲	2.8	4	0.9	2.6	31.5	15	0.2	0.1
JBTR/L04190010-D028	●	▲	2.8	4	0.9	2.6	35.5	19	0.2	0.1
JBTR/L04090010-D040	●	▲	4	4	1.5	3.5	25.5	9	0.3	0.1
JBTR/L04150010-D040	●	▲	4	4	1.5	3.5	31.5	15	0.3	0.1
JBTR/L04190010-D040	●	▲	4	4	1.5	3.5	35.5	19	0.3	0.1
JBTR04230010-D040	●	▲	4	4	1.5	3.5	39.5	23	0.3	0.1
JBTR04270010-D040	●	▲	4	4	1.5	3.5	43.5	27	0.3	0.1
JBTR/L07090015-D050	●	▲	5	7	0.9	4.4	25	9	0.5	0.15
JBTR/L07140015-D050	●	▲	5	7	0.9	4.4	30	14	0.5	0.15
JBTR/L07190015-D050	●	▲	5	7	0.9	4.4	35	19	0.5	0.15
JBTR/L07240015-D050	●	▲	5	7	0.9	4.4	40	24	0.5	0.15
JBTR07290015-D050	●	▲	5	7	0.9	4.4	45	29	0.5	0.15
JBTL07290015-D050		▲	5	7	0.9	4.4	45	29	0.5	0.15
JBTR07340015-D050	●	▲	5	7	0.9	4.4	50	34	0.5	0.15
JBTL07340015-D050	●		5	7	0.9	4.4	50	34	0.5	0.15
JBTR/L07140015-D060	●	▲	6	7	1.8	5.3	30	14	0.5	0.15
JBTR/L07210015-D060	●	▲	6	7	1.8	5.3	37	21	0.5	0.15
JBTR/L07240015-D060	●	▲	6	7	1.8	5.3	40	24	0.5	0.15
JBTR/L07290015-D060	●	▲	6	7	1.8	5.3	45	29	0.5	0.15
JBTR07340015-D060	●	▲	6	7	1.8	5.3	50	34	0.5	0.15
JBTR07410015-D060	●	▲	6	7	1.8	5.3	57	41	0.5	0.15
JBTR/L07190015-D068	●	▲	6.8	7	2.8	6.3	35	19	0.6	0.15
JBTR07240015-D068	●	▲	6.8	7	2.8	6.3	40	24	0.6	0.15
JBTR/L07290015-D068	●	▲	6.8	7	2.8	6.3	45	29	0.6	0.15
JBTR/L07340015-D070	●	▲	7	7	2.8	6.3	50	34	0.6	0.15
JBTR07390015-D070	●	▲	7	7	2.8	6.3	55	39	0.6	0.15
JBTR07440015-D070	●	▲	7	7	2.8	6.3	60	44	0.6	0.15
JBTR07490015-D070	●	▲	7	7	2.8	6.3	65	49	0.6	0.15

● : Line up
▲ : To be discontinued in April 2025

TBPR

Solid boring bar for boring and chamfering



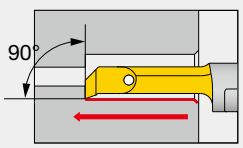


Metric	SH725	DMIN	DCONMS	WF	a	LF	LH	CDX	RE $^{+0.05}_{0}$
TBPR04090010-D028	●	2.8	4	0.9	2.6	25.5	9	0.2	0.1
TBPR04150010-D040	●	4	4	1.5	3.5	31.5	15	0.3	0.1
TBPR07140015-D050	●	5	7	0.9	4.4	30	14	0.5	0.15
TBPR07190015-D050	●	5	7	0.9	4.4	35	19	0.5	0.15

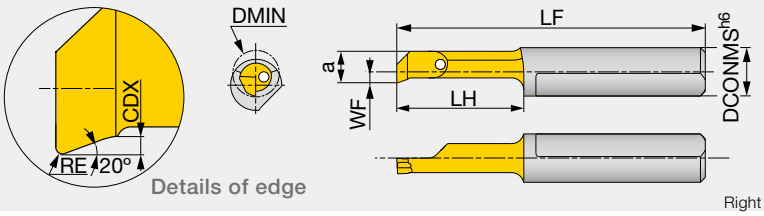
● : Line up

JBPR

Solid boring bar for boring and chamfering



with coolant hole



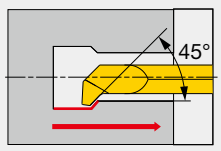
Right hand (R) shown.

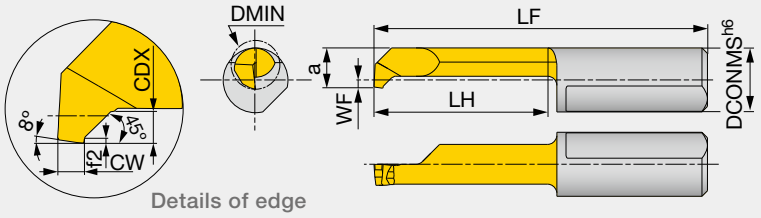
Metric	SH725	SH730	DMIN	DCONMS	WF	a	LF	LH	CDX	RE $^{+0.05}_{0}$
JBPR04090010-D028	●	▲	2.8	4	0.9	2.6	25.5	9	0.2	0.1
JBPR04150010-D028	●	▲	2.8	4	0.9	2.6	31.5	15	0.2	0.1
JBPR04090010-D040	●	▲	4	4	1.5	3.5	25.5	9	0.3	0.1
JBPR04150010-D040	●	▲	4	4	1.5	3.5	31.5	15	0.3	0.1
JBPR07140015-D050	●	▲	5	7	0.9	4.4	30	14	0.5	0.15
JBPR07190015-D050	●	▲	5	7	0.9	4.4	35	19	0.5	0.15

● : Line up
▲ : To be discontinued in April 2025

TBUR

Solid boring bar for back boring and chamfering



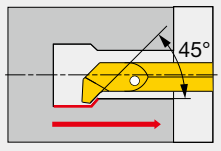


Metric	SH725	DMIN	DCONMS	WF	a	LF	LH	f2	CDX	CW $^{+0.05}_{0}$
TBUR07140010-D050	●	5	7	0.9	4.4	30	14	0.2	1	1
TBUR07190010-D050	●	5	7	0.9	4.4	35	19	0.2	1	1

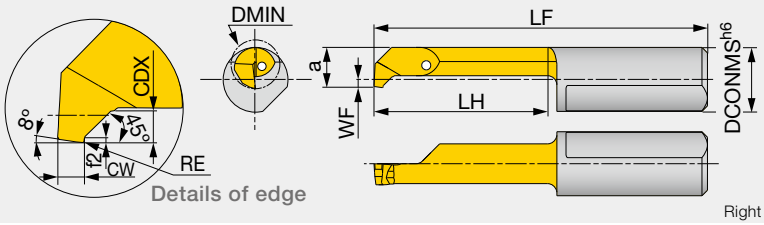
● : Line up

JBUR

Solid boring bar for back boring and chamfering



with coolant hole



Details of edge

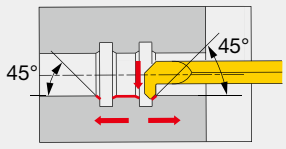
Right hand (R) shown.

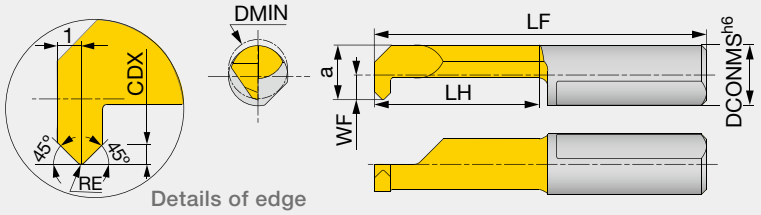
Metric	SH725	SH730	DMIN	DCONMS	WF	a	LF	LH	f2	CDX	CW $^{+0.05}_{0}$	RE
JBUR07140010-D050	●	▲	5	7	0.9	4.4	30	14	0.2	1	1	0.1
JBUR07190010-D050	●	▲	5	7	0.9	4.4	35	19	0.2	1	1	0.1

● : Line up
▲ : To be discontinued in April 2025

TBCR

Solid boring bar for boring and 45° chamfering





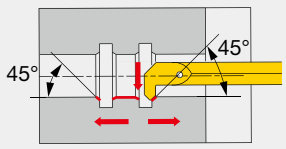
Details of edge

Metric	SH725	DMIN	DCONMS	WF	a	LF	LH	CDX	RE $^{+0.05}_{0}$
TBCR07140020-D050	●	5	7	0.9	4.4	30	14	0.7	0.2
TBCR07190020-D068	●	6.8	7	2.8	6.3	35	19	0.7	0.2

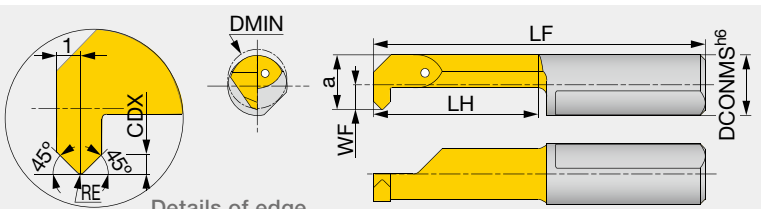
● : Line up

JBCR

Solid boring bar for boring and 45° chamfering



with coolant hole



Details of edge

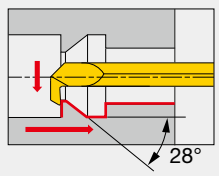
Right hand (R) shown.

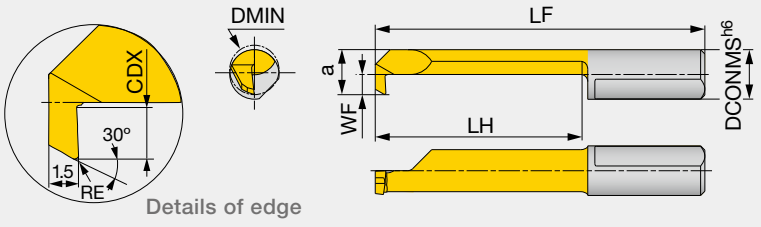
Metric	SH725	SH730	DMIN	DCONMS	WF	a	LF	LH	CDX	RE $^{\pm 0.05}$
JBCR07140020-D050	●	▲	5	7	0.9	4.4	30	14	0.7	0.2
JBCR07190020-D050	●	▲	5	7	0.9	4.4	35	19	0.7	0.2
JBCR07190020-D068	●	▲	6.8	7	2.8	6.3	35	19	0.7	0.2

● : Line up
▲ : To be discontinued in April 2025

TBBR

Solid boring bar for back boring



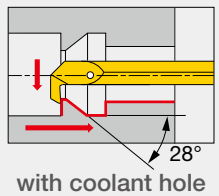


Metric	SH725	DMIN	DCONMS	WF	a	LF	LH	CDX	RE $^{+0.05}_{0}$
TBBR04140020-D030	●	3	4	0.6	2.6	30	14	0.5	0.2
TBBR04140015-D040	●	4	4	1.5	3.5	30	14	0.8	0.15
TBBR07190020-D050	●	5	7	0.9	4.4	35	19	1	0.2

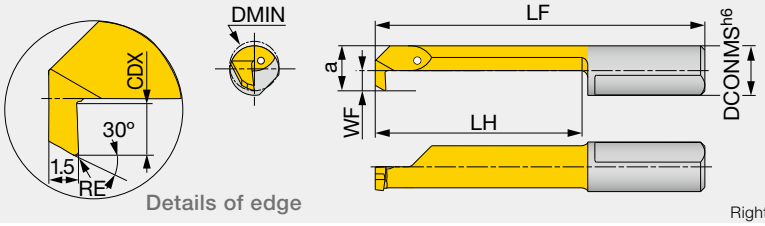
● : Line up

JBBR

Solid boring bar for back boring



with coolant hole



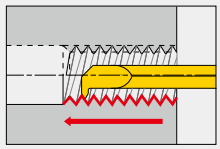
Right hand (R) shown.

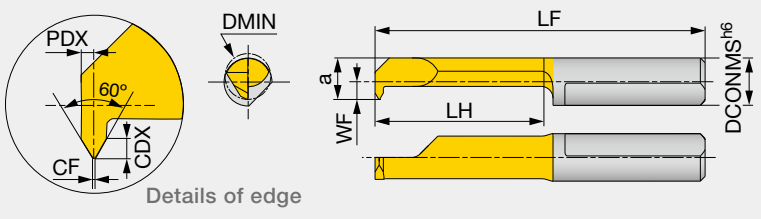
Metric	SH725	SH730	DMIN	DCONMS	WF	a	LF	LH	CDX	RE $^{+0.05}$
JBBR04140020-D030	●	▲	3	4	0.6	2.6	30	14	0.5	0.2
JBBR04190020-D030	●	▲	3	4	0.6	2.6	35	19	0.5	0.2
JBBR04140015-D040	●	▲	4	4	1.5	3.5	30	14	0.8	0.15
JBBR04240015-D040	●	▲	4	4	1.5	3.5	40	24	0.8	0.15
JBBR07190020-D050	●	▲	5	7	0.9	4.4	35	19	1	0.2
JBBR07290020-D050	●	▲	5	7	0.9	4.4	45	29	1	0.2
JBBR07190020-D060	●	▲	6	7	1.8	5.3	35	19	1.8	0.2
JBBR07290020-D060	●	▲	6	7	1.8	5.3	45	29	1.8	0.2
JBBR07190020-D070	●	▲	7	7	2.8	6.3	35	19	2.5	0.2
JBBR07290020-D070	●	▲	7	7	2.8	6.3	45	29	2.5	0.2

● : Line up
▲ : To be discontinued in April 2025

TBIR

Solid boring bar for threading (metric)



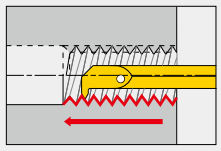


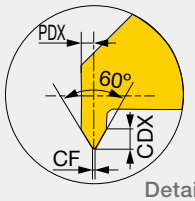
Metric	SH725	Pitch	DMIN	CF $^{0}_{-0.02}$	DCONMS	WF	a	LF	LH	CDX	PDX
TBIR04140050-D040	●	0.5	4	0.06	4	1.5	3.5	30	14	0.3	0.35
TBIR07140050-D050	●	0.5	5	0.06	7	0.9	4.4	30	14	0.3	0.35
TBIR07140075-D050	●	0.75	5	0.09	7	0.9	4.4	30	14	0.4	0.45
TBIR07140100-D048	●	1	4.8	0.12	7	0.9	4.4	30	14	0.6	0.55
TBIR07140100-D060	●	1	6	0.12	7	1.8	5.3	30	14	0.6	0.55
TBIR07140150-D060	●	1.5	6	0.18	7	1.8	5.3	30	14	0.8	0.75

● : Line up

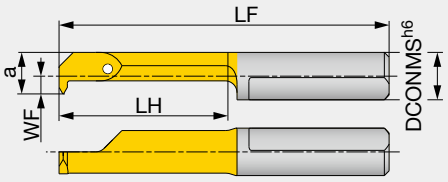
JBIR

Solid boring bar for threading (metric)





Details of edge



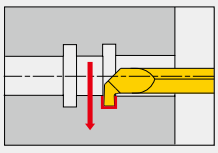
Right hand (R) shown.

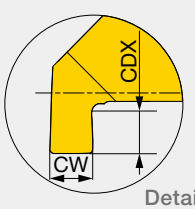
Metric	SH725	SH730	Pitch	DMIN	CF $^{0}_{-0.02}$	DCONMS	WF	a	LF	LH	CDX	PDX
JBIR04140050-D040	●	▲	0.5	4	0.06	4	1.5	3.5	30	14	0.3	0.35
JBIR07140050-D050	●	▲	0.5	5	0.06	7	0.9	4.4	30	14	0.3	0.35
JBIR07140075-D050	●	▲	0.75	5	0.09	7	0.9	4.4	30	14	0.4	0.45
JBIR07140100-D048	●	▲	1	4.8	0.12	7	0.9	4.4	30	14	0.6	0.55
JBIR07140100-D060	●	▲	1	6	0.12	7	1.8	5.3	30	14	0.6	0.55
JBIR07140125-D060	●	▲	1.25	6	0.15	7	1.8	5.3	30	14	0.7	0.65
JBIR07140150-D060	●	▲	1.5	6	0.18	7	1.8	5.3	30	14	0.8	0.75
JBIR07140150-D070	●	▲	1.5	7	0.18	7	2.8	6.3	30	14	0.8	0.75

● : Line up
▲ : To be discontinued in April 2025

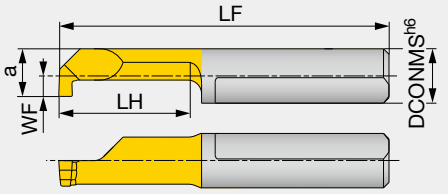
TBGR

Solid boring bar for internal grooving





Details of edge



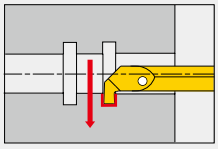
Metric	SH725	CW $^{+0.05}_{0}$	DMIN	DCONMS	WF	a	LF	LH	CDX
TBGR04100050-D020	●	0.5	2	4	-0.2	1.8	26	10	0.4
TBGR04090100-D040	●	1	4	4	1.5	3.5	25.5	9	0.8
TBGR04150100-D040	●	1	4	4	1.5	3.5	31.5	15	0.8
TBGR07090200-D050	●	2	5	7	0.9	4.4	25	9	1
TBGR07090100-D060	●	1	6	7	1.8	5.3	25	9	1.8
TBGR07140100-D060	●	1	6	7	1.8	5.3	30	14	1.8
TBGR07090150-D060	●	1.5	6	7	1.8	5.3	25	9	1.8
TBGR07090200-D060	●	2	6	7	1.8	5.3	25	9	1.8
TBGR07140200-D060	●	2	6	7	1.8	5.3	30	14	1.8
TBGR07090100-D068	●	1	6.8	7	2.7	6.2	25	9	2.5
TBGR07090150-D068	●	1.5	6.8	7	2.7	6.2	25	9	2.5
TBGR07140150-D068	●	1.5	6.8	7	2.7	6.2	30	14	2.5
TBGR07090200-D068	●	2	6.8	7	2.7	6.2	25	9	2.5
TBGR07140200-D068	●	2	6.8	7	2.7	6.2	30	14	2.5
TBGR07210200-D068	●	2	6.8	7	2.7	6.2	37	21	2.5
TBGR07290200-D068	●	2	6.8	7	2.7	6.2	45	29	2.5

Corner radius : less than 0.1 mm.

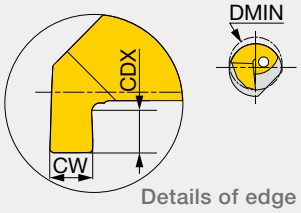
● : Line up

JBGR/L

Solid boring bar for internal grooving



with coolant hole



Details of edge

Right hand (R) shown.

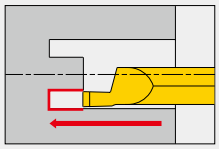
Metric	SH725	SH730	CW $^{+0.05}_{0}$	DMIN	DCONMS	WF	a	LF	LH	CDX
JBGR04050050-D020	●	▲	0.5	2	4	-0.2	1.8	21	5	0.4
JBGR04100050-D020	●	▲	0.5	2	4	-0.2	1.8	26	10	0.4
JBGR04050070-D030	●	▲	0.7	3	4	0.7	2.7	21	5	0.6
JBGR04100070-D030	●	▲	0.7	3	4	0.7	2.7	26	10	0.6
JBGR04090100-D040	●	▲	1	4	4	1.5	3.5	25.5	9	0.8
JBGR04150100-D040	●	▲	1	4	4	1.5	3.5	31.5	15	0.8
JBGR07090100-D050	●	▲	1	5	7	0.9	4.4	25	9	1
JBGR07140100-D050	●	▲	1	5	7	0.9	4.4	30	14	1
JBGR07090150-D050	●	▲	1.5	5	7	0.9	4.4	25	9	1
JBGR07140150-D050	●	▲	1.5	5	7	0.9	4.4	30	14	1
JBGR07090200-D050	●	▲	2	5	7	0.9	4.4	25	9	1
JBGR07190200-D050	●	▲	2	5	7	0.9	4.4	35	19	1
JBGR/L07090100-D060	●	▲	1	6	7	1.8	5.3	25	9	1.8
JBGR07140100-D060	●	▲	1	6	7	1.8	5.3	30	14	1.8
JBGR07210100-D060	●	▲	1	6	7	1.8	5.3	37	21	1.8
JBGR07290100-D060	●	▲	1	6	7	1.8	5.3	45	29	1.8
JBGR/L07090150-D060	●	▲	1.5	6	7	1.8	5.3	25	9	1.8
JBGR07140150-D060	●	▲	1.5	6	7	1.8	5.3	30	14	1.8
JBGR07210150-D060	●	▲	1.5	6	7	1.8	5.3	37	21	1.8
JBGR07240150-D060	●	▲	1.5	6	7	1.8	5.3	40	24	1.8
JBGR07290150-D060	●	▲	1.5	6	7	1.8	5.3	45	29	1.8
JBGR07090200-D060	●	▲	2	6	7	1.8	5.3	25	9	1.8
JBGR07140200-D060	●	▲	2	6	7	1.8	5.3	30	14	1.8
JBGR07210200-D060	●	▲	2	6	7	1.8	5.3	37	21	1.8
JBGR07240200-D060	●	▲	2	6	7	1.8	5.3	40	24	1.8
JBGR07290200-D060	●	▲	2	6	7	1.8	5.3	45	29	1.8
JBGR07090100-D068	●	▲	1	6.8	7	2.7	6.2	25	9	2.5
JBGR07140100-D068	●	▲	1	6.8	7	2.7	6.2	30	14	2.5
JBGR07210100-D068	●	▲	1	6.8	7	2.7	6.2	37	21	2.5
JBGR07090150-D068	●	▲	1.5	6.8	7	2.7	6.2	25	9	2.5
JBGR07140150-D068	●	▲	1.5	6.8	7	2.7	6.2	30	14	2.5
JBGR07210150-D068	●	▲	1.5	6.8	7	2.7	6.2	37	21	2.5
JBGR07290150-D068	●	▲	1.5	6.8	7	2.7	6.2	45	29	2.5
JBGR07090200-D068	●	▲	2	6.8	7	2.7	6.2	25	9	2.5
JBGR/L07140200-D068	●	▲	2	6.8	7	2.7	6.2	30	14	2.5
JBGR07210200-D068	●	▲	2	6.8	7	2.7	6.2	37	21	2.5
JBGR07250200-D068	●	▲	2	6.8	7	2.7	6.2	40	24	2.5
JBGR07290200-D068	●	▲	2	6.8	7	2.7	6.2	45	29	2.5

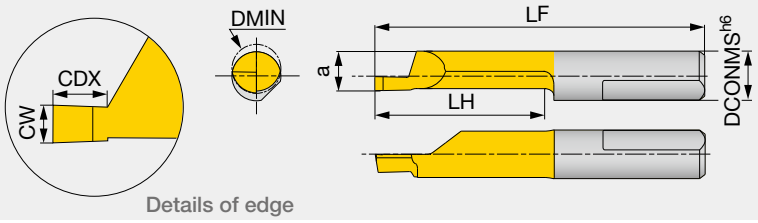
Corner radius: less than 0.1 mm

● : Line up
▲ : To be discontinued in April 2025

TBFR

Solid boring bar for face grooving





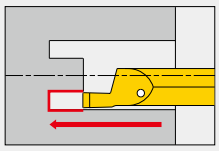
Metric	SH725	CW $^{+0.05}_{0}$	DMIN	DCONMS	a	LF	LH	CDX
TBFR07110100-D060	●	1	6	7	5.2	26	10	1.5
TBFR07110200-D060	●	2	6	7	5.2	26	10	3
TBFR07110100-D080	●	1	8	7	5.9	27	11	1.5
TBFR07110250-D080	●	2.5	8	7	5.9	27	11	3.5
TBFR07300300-D080	●	3	8	7	5.9	46	30	3.5
TBFR07200250-D150	●	2.5	15	7	5.9	36	20	20
TBFR07200300-D150	●	3	15	7	5.9	36	20	20
TBFR07300300-D150	●	3	15	7	5.9	46	30	30

Corner radius : less than 0.1 mm.

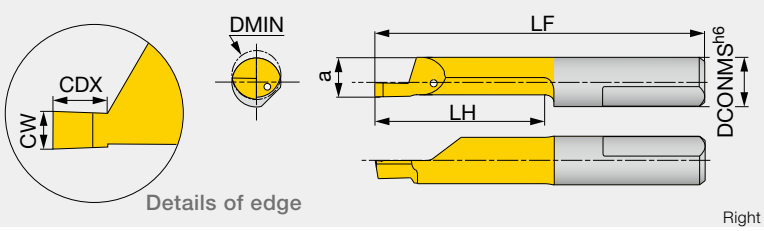
● : Line up

JBFR/L

Solid boring bar for face grooving



with coolant hole



Right hand (R) shown.

Metric	SH725	SH730	CW $^{+0.05}_{0}$	DMIN	DCONMS	a	LF	LH	CDX
JBFR07110100-D060	●	▲	1	6	7	5.2	27	10	1.5
JBFR07110150-D060	●	▲	1.5	6	7	5.2	27	10	2
JBFR07110200-D060	●	▲	2	6	7	5.2	27	10	3
JBFR07110100-D080	●	▲	1	8	7	5.9	27	11	1.5
JBFR07110150-D080	●	▲	1.5	8	7	5.9	27	11	2.5
JBFR07110200-D080	●	▲	2	8	7	5.9	27	11	3
JBFR07110250-D080	●	▲	2.5	8	7	5.9	27	11	3.5
JBFR07110300-D080	●	▲	3	8	7	5.9	27	11	3.5
JBFR/L07210150-D080	●	▲	1.5	8	7	5.9	36	21	2.5
JBFR07210200-D080	●	▲	2	8	7	5.9	36	21	3
JBFR07210250-D080	●	▲	2.5	8	7	5.9	36	21	3.5
JBFR07210300-D080	●	▲	3	8	7	5.9	36	21	3.5
JBFR/L07300200-D080	●	▲	2	8	7	5.9	46	30	3
JBFR07300300-D080	●	▲	3	8	7	5.9	46	30	3.5
JBFR07200200-D080	●	▲	2	8	7	5.9	36	20	3
JBFR07200250-D150	●	▲	2.5	15	7	5.9	36	20	20
JBFR07200300-D150	●	▲	3	15	7	5.9	36	20	20
JBFR07300300-D150	●	▲	3	15	7	5.9	46	30	30

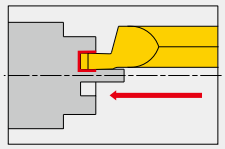
Corner radius: less than 0.1 mm

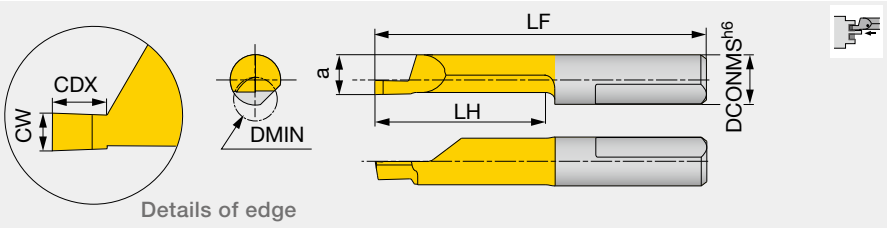
● : Line up

▲ : To be discontinued in April 2025

TBSR

Solid boring bar for face grooving (for shaft)





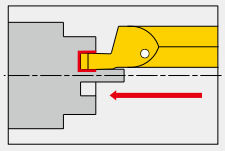
Metric	SH725	CW $^{+0.05}_{0}$	DMIN	DCONMS	a	LF	LH	CDX
TBSR07200200-D060	●	2	6	7	5.2	36	20	4

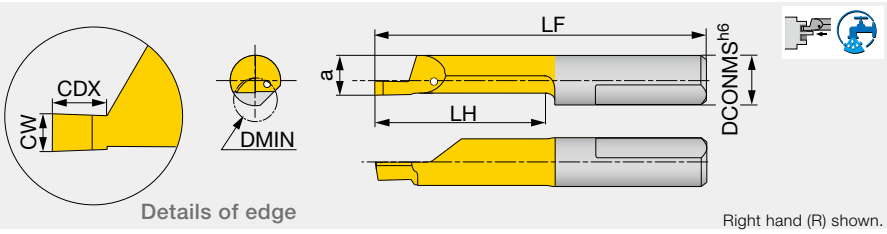
Corner radius : less than 0.1 mm.

● : Line up

JBSR

Solid boring bar for face grooving (for shaft)





Right hand (R) shown.

Metric	SH725	SH730	CW $^{+0.05}_{0}$	DMIN	DCONMS	a	LF	LH	CDX
JBSR07200200-D060	●	▲	2	6	7	5.2	36	20	4

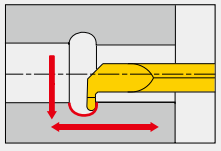
Corner radius: less than 0.1 mm

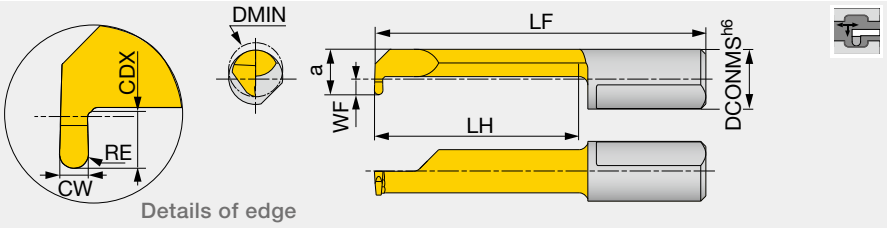
● : Line up

▲ : To be discontinued in April 2025

TBRR

Solid boring bar for boring and profiling



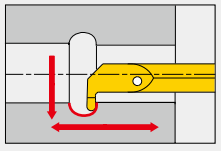


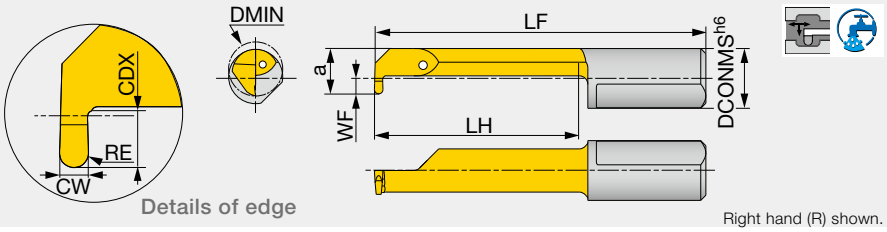
Metric	SH725	CW $^{+0.05}_{0}$	DMIN	DCONMS	WF	a	LF	LH	CDX	RE
TBRR07190050-D050	●	1	5	7	0.9	4.4	35	19	1	0.5
TBRR07240050-D060	●	1	6	7	1.8	5.3	40	24	1.8	0.5
TBRR07290050-D068	●	1	6.8	7	2.8	6.3	45	29	2.5	0.5

● : Line up

JBRR

Solid boring bar for boring and profiling





Right hand (R) shown.

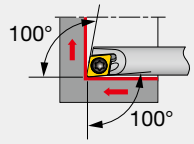
Metric	SH725	SH730	CW $^{+0.05}_{0}$	DMIN	DCONMS	WF	a	LF	LH	CDX	RE
JBRR07190050-D050	●	▲	1	5	7	0.9	4.4	35	19	1	0.5
JBRR07240050-D060	●	▲	1	6	7	1.8	5.3	40	24	1.8	0.5
JBRR07290050-D068	●	▲	1	6.8	7	2.8	6.3	45	29	2.5	0.5

● : Line up

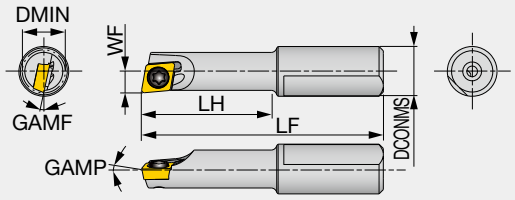
▲ : To be discontinued in April 2025

A/E-SEXPR

Screw-on boring bar, for positive 75° rhombic inserts



Cutting edge style **X**

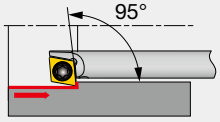


Metric	Material	DMIN	DCONMS	WF	LF	LH	GAMP	GAMF	RE**	Insert	Torque*
A07050-SEXPR03-3	Steel	5	7	2.5	31	15	0°	-13°	0.2	EPGT03X1...	0.6
A07060-SEXPR04-3	Steel	6	7	3.1	34	18	0°	-12°	0.2	EPGT0401...	0.6
E07050-SEXPR03-4	Carbide	5	7	2.5	37	20	0°	-13°	0.2	EPGT03X1...	0.6
E07050-SEXPR03-5	Carbide	5	7	2.5	42	25	0°	-13°	0.2	EPGT03X1...	0.6
E07060-SEXPR04-5	Carbide	6	7	3.1	46	30	0°	-12°	0.2	EPGT0401...	0.6

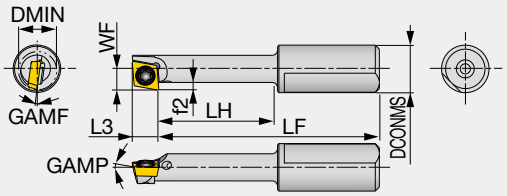
*Torque: Recommended clamping torque (N·m)
**RE : Standard corner radius
Note: Use right-hand toolholders (SEXPR**) with left-hand inserts (L).

A/E-SEZPR

Screw-on boring bar, for positive 75° rhombic inserts



Cutting edge style **Z**



Metric	Material	DMIN	DCONMS	WF	LF	LH	f2	L3	GAMP	GAMF	RE**	Insert	Torque*
A07055-SEZPR03-3	Steel	5.5	7	3.2	32.5	16.5	1.2	3.9	0°	-8°	0.2	EPGT03X1...	0.6
E07055-SEZPR03-5	Carbide	5.5	7	3.2	44.7	27.5	1.2	3.9	0°	-8°	0.2	EPGT03X1...	0.6

*Torque: Recommended clamping torque (N·m)
**RE : Standard corner radius
Note: Use right-hand toolholders (SEZPR**) with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Wrench
A/E070**03-...	CSTA-1.6	T-6F
A/E070**04-...	CSTB-2	T-6F

Reference pages: Insert → 2-34 -, CBN → 2-93, PCD → 2-122

STANDARD CUTTING CONDITIONS

Boring, profiling, chamfering, back boring

ISO	Workpiece material	Grade	Cutting speed *Vc* (m/min)	Cutting speed *Vc* (sfm)	Feed *f* (mm/rev)	Feed *f* (ipr)
P	Low carbon steel 1015, 1025, etc.	SH730, SH725	40 - 140	131 - 459	0.01 - 0.08 *	0.0004 - 0.003 *
P	Carbon steel, Alloy steel 1055, 4140, etc.	SH730, SH725	40 - 140	131 - 459	0.01 - 0.08 *	0.0004 - 0.003 *
P	Prehardened steels NAK80, PX5, etc.	SH730, SH725	40 - 140	131 - 459	0.01 - 0.08 *	0.0004 - 0.003 *
M	Stainless steel 304, 316, etc.	SH730, SH725	40 - 140	131 - 459	0.01 - 0.08 *	0.0004 - 0.003 *
K	Gray cast iron No.250B, No.300B, etc.	SH730, SH725	30 - 100	98 - 328	0.01 - 0.08 *	0.0004 - 0.003 *
K	Ductile cast iron 65-45-12, 80-55-06, etc.	SH730, SH725	30 - 100	98 - 328	0.01 - 0.08 *	0.0004 - 0.003 *
N	Aluminum alloys, Copper alloys Si < 12%	SH730, SH725	90 - 200	295 - 656	0.01 - 0.08 *	0.0004 - 0.003 *
S	Titanium alloys Ti-6Al-4V, etc.	SH730, SH725	30 - 100	98 - 328	0.01 - 0.08 *	0.0004 - 0.003 *
S	Superalloys Inconel718, etc.	SH730, SH725	30 - 100	98 - 328	0.01 - 0.08 *	0.0004 - 0.003 *

* JBTR/L04020004-D006, JBTR/L04030004-D006 : Max. f = 0.0004 ipr (0.01 mm/rev)

Threading (metric thread)

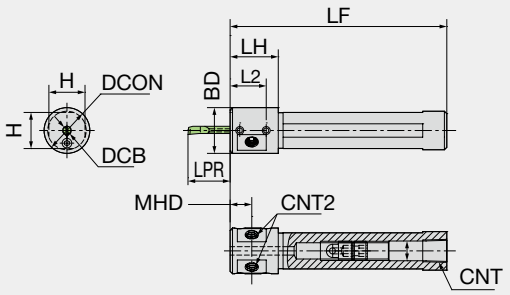
ISO	Workpiece material	Grade	Cutting speed *Vc* (m/min)	Cutting speed *Vc* (sfm)	Number of passes Pitch (mm) 0.5 (0.020")	0.75 (0.030")	1 (0.039")	1.25 (0.049")	1.5 (0.059")
P	Low carbon steel 1015, 1025, etc.	SH730, SH725	40 - 140	131 - 459	6 - 8	8 - 10	10 - 12	12 - 15	15 - 18
P	Carbon steel, Alloy steel 1055, 4140, etc.	SH730, SH725	40 - 140	131 - 459	6 - 8	8 - 10	10 - 12	12 - 15	15 - 18
P	Prehardened steels NAK80, PX5, etc.	SH730, SH725	40 - 140	131 - 459	6 - 8	8 - 10	10 - 12	12 - 15	15 - 18
M	Stainless steel 304, 316, etc.	SH730, SH725	40 - 140	131 - 459	8	10	12	15	18
K	Gray cast iron No.250B, No.300B, etc.	SH730, SH725	30 - 100	98 - 328	7	9	12	14	17
K	Ductile cast iron 65-45-12, 80-55-06, etc.	SH730, SH725	30 - 100	98 - 328	7	9	12	14	17
N	Aluminum alloys, Copper alloys Si < 12%	SH730, SH725	90 - 200	295 - 656	6	8	10	12	15

Internal and face grooving

ISO	Workpiece material	Grade	Cutting speed *Vc* (m/min)	Cutting speed *Vc* (sfm)	Internal grooving Feed: *f* (mm/rev)	Internal grooving Feed: *f* (ipr)	Face grooving Feed: *f* (mm/rev)	Face grooving Feed: *f* (ipr)
P	Low carbon steel 1015, 1025, etc.	SH730, SH725	40 - 140	131 - 459	0.01 - 0.03	0.0004 - 0.001	0.01 - 0.05	0.0004 - 0.002
P	Carbon steel, Alloy steel 1055, 4140, etc.	SH730, SH725	40 - 140	131 - 459	0.01 - 0.03	0.0004 - 0.001	0.01 - 0.05	0.0004 - 0.002
P	Prehardened steels NAK80, PX5, etc.	SH730, SH725	40 - 140	131 - 459	0.01 - 0.03	0.0004 - 0.001	0.01 - 0.05	0.0004 - 0.002
M	Stainless steel 304, 316, etc.	SH730, SH725	40 - 140	131 - 459	0.01 - 0.03	0.0004 - 0.001	0.01 - 0.05	0.0004 - 0.002
K	Gray cast iron No.250B, No.300B, etc.	SH730, SH725	30 - 100	98 - 328	0.01 - 0.03	0.0004 - 0.001	0.01 - 0.05	0.0004 - 0.002
K	Ductile cast iron 65-45-12, 80-55-06, etc.	SH730, SH725	30 - 100	98 - 328	0.01 - 0.03	0.0004 - 0.001	0.01 - 0.05	0.0004 - 0.002
N	Aluminum alloys, Copper alloys Si < 12%	SH730, SH725	90 - 200	295 - 656	0.01 - 0.03	0.0004 - 0.001	0.01 - 0.05	0.0004 - 0.002
S	Titanium alloys Ti-6Al-4V, etc.	SH730, SH725	30 - 100	98 - 328	0.01 - 0.03	0.0004 - 0.001	0.01 - 0.05	0.0004 - 0.002
S	Superalloys Inconel718, etc.	SH730, SH725	30 - 100	98 - 328	0.01 - 0.03	0.0004 - 0.001	0.01 - 0.05	0.0004 - 0.002

HY-NBH-OH

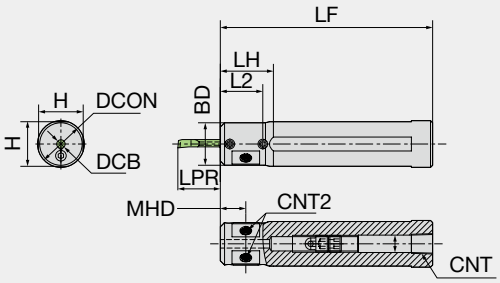
Sleeve for internal coolant supply, with adjustable overhang capability



Metric	DCON	DCB	H	BD	LF	LH	LPR	L2	MHD	CNT	CNT2	Applicable Insert bar
HY-NBH02016G-OH	16	2	15	19	90	19	5 - 18	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SSP..
HY-NBH02516G-OH	16	2.5	15	19	90	19	6.3 - 19.5	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH03016G-OH	16	3	15	19	90	19	7.5 - 21	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH03516G-OH	16	3.5	15	19	90	19	8.8 - 24.5	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH04016G-OH	16	4	15	19	90	24	10 - 28	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH05016G-OH	16	5	15	19	90	24	12.5 - 35	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..

HY-NBH-OH

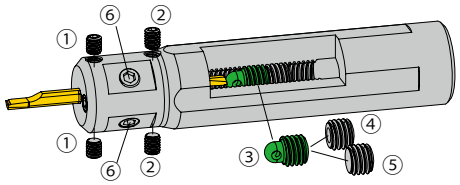
Sleeve for internal coolant supply, with adjustable overhang capability



Metric	DCON	DCB	H	BD	LF	LH	LPR	L2	MHD	CNT	CNT2	Applicable Insert bar
HY-NBH02019J-OH	19.05	2	18	19.05	110	–	5 - 18	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SSP..
HY-NBH02519J-OH	19.05	2.5	18	19.05	110	–	6.3 - 19.5	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH03019J-OH	19.05	3	18	19.05	110	–	7.5 - 21	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH03519J-OH	19.05	3.5	18	19.05	110	–	8.8 - 24.5	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH04019J-OH	19.05	4	18	19.05	110	–	10 - 28	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH05019J-OH	19.05	5	18	19.05	110	–	12.5 - 35	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH06019J-OH	19.05	6	18	19.05	110	–	15 - 42	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP../SFG..
HY-NBH02020J-OH	20	2	19	20	110	–	5 - 18	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SSP..
HY-NBH02520J-OH	20	2.5	19	20	110	–	6.3 - 19.5	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH03020J-OH	20	3	19	20	110	–	7.5 - 21	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH03520J-OH	20	3.5	19	20	110	–	8.8 - 24.5	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH04020J-OH	20	4	19	20	110	–	10 - 28	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH05020J-OH	20	5	19	20	110	–	12.5 - 35	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH06020J-OH	20	6	19	20	110	–	15 - 42	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP../SFG..
HY-NBH02022X-OH	22	2	21	20	120	25	5 - 18	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SSP..
HY-NBH02522X-OH	22	2.5	21	20	120	25	6.3 - 19.5	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH03022X-OH	22	3	21	20	120	25	7.5 - 21	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH03522X-OH	22	3.5	21	20	120	25	8.8 - 24.5	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH04022X-OH	22	4	21	20	120	25	10 - 28	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH05022X-OH	22	5	21	20	120	25	12.5 - 35	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH06022X-OH	22	6	21	20	120	25	15 - 42	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP../SFG..
HY-NBH02025.0K-OH	25	2	24	20	125	25	5 - 18	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SSP..
HY-NBH02525.0K-OH	25	2.5	24	20	125	25	6.3 - 19.5	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH03025.0K-OH	25	3	24	20	125	25	7.5 - 21	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH03525.0K-OH	25	3.5	24	20	125	25	8.8 - 24.5	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH04025.0K-OH	25	4	24	20	125	25	10 - 28	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH05025.0K-OH	25	5	24	20	125	25	12.5 - 35	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH06025.0K-OH	25	6	24	20	125	25	15 - 42	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP../SFG..
HY-NBH02025.4K-OH	25.4	2	24	20	125	25	5 - 18	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SSP..
HY-NBH02525.4K-OH	25.4	2.5	24	20	125	25	6.3 - 19.5	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH03025.4K-OH	25.4	3	24	20	125	25	7.5 - 21	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH03525.4K-OH	25.4	3.5	24	20	125	25	8.8 - 24.5	15	9.5	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH04025.4K-OH	25.4	4	24	20	125	25	10 - 28	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH05025.4K-OH	25.4	5	24	20	125	25	12.5 - 35	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP..
HY-NBH06025.4K-OH	25.4	6	24	20	125	25	15 - 42	20	12	Rc1/8	M6×P1.0	SB(H)F../SB*../SSP../SFG..

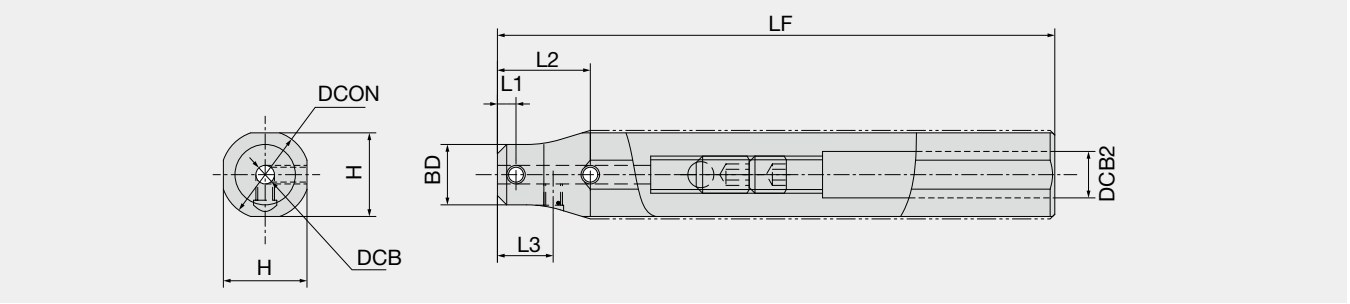
SPARE PARTS

Designation	Clamp screw ①	②	Overhang Adjustment ③	④	⑤	M6 Screw ⑥	Wrench ①②	③④⑤	⑥
HY-NBH**-OH	SS04045FS	SS0406F	SS0811R-OH	SS0806F-OH	SS0806F	SS0605SC	LW-2	LW-4*104	LW-3



HY-NBH

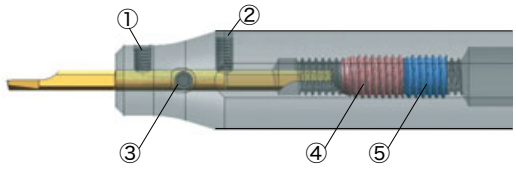
Sleeve for external coolant supply, with adjustable overhang capability



Metric	DCON	DCB	H	BD	LF	DCB2	L1	L2	L3	Applicable Insert bar
HY-NBH02016H	16	2	15	11	100	10	4	15	9.5	SB(H)F../SSP..
HY-NBH02516H	16	2.5	15	11.5	100	10	4	15	9.5	SB(H)F../SB*../SSP..
HY-NBH03016H	16	3	15	12	100	10	4	15	9.5	SB(H)F../SB*../SSP..
HY-NBH03516H	16	3.5	15	12.5	100	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH04016H	16	4	15	13	100	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH05016H	16	5	15	14	100	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH02019K	19.05	2	18	11	125	10	4	15	9.5	SB(H)F../SSP..
HY-NBH02519K	19.05	2.5	18	11.5	125	10	4	15	9.5	SB(H)F../SB*../SSP..
HY-NBH03019K	19.05	3	18	12	125	10	4	15	9.5	SB(H)F../SB*../SSP..
HY-NBH03519K	19.05	3.5	18	12.5	125	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH04019K	19.05	4	18	13	125	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH05019K	19.05	5	18	14	125	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH02020K	20	2	19	11	125	10	4	15	9.5	SB(H)F../SSP..
HY-NBH02520K	20	2.5	19	11.5	125	10	4	15	9.5	SB(H)F../SB*../SSP..
HY-NBH03020K	20	3	19	12	125	10	4	15	9.5	SB(H)F../SB*../SSP..
HY-NBH03520K	20	3.5	19	12.5	125	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH04020K	20	4	19	13	125	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH05020K	20	5	19	14	125	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH02022K	22	2	21	11	125	10	4	15	9.5	SB(H)F../SSP..
HY-NBH02522K	22	2.5	21	11.5	125	10	4	15	9.5	SB(H)F../SB*../SSP..
HY-NBH03022K	22	3	21	12	125	10	4	15	9.5	SB(H)F../SB*../SSP..
HY-NBH03522K	22	3.5	21	12.5	125	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH04022K	22	4	21	13	125	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH05022K	22	5	21	14	125	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH02025K-MET	25	2	24	11	125	10	4	15	9.5	SB(H)F../SSP..
HY-NBH02525K-MET	25	2.5	24	11.5	125	10	4	15	9.5	SB(H)F../SB*../SSP..
HY-NBH03025K-MET	25	3	24	12	125	10	4	15	9.5	SB(H)F../SB*../SSP..
HY-NBH03525K-MET	25	3.5	24	12.5	125	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH04025K-MET	25	4	24	13	125	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH05025K-MET	25	5	24	14	125	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH02025K	25.4	2	24	11	125	10	4	15	9.5	SB(H)F../SSP..
HY-NBH02525K	25.4	2.5	24	11.5	125	10	4	15	9.5	SB(H)F../SB*../SSP..
HY-NBH03025K	25.4	3	24	12	125	10	4	15	9.5	SB(H)F../SB*../SSP..
HY-NBH03525K	25.4	3.5	24	12.5	125	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH04025K	25.4	4	24	13	125	10	4	20	12	SB(H)F../SB*../SSP..
HY-NBH05025K	25.4	5	24	14	125	10	4	20	12	SB(H)F../SB*../SSP..

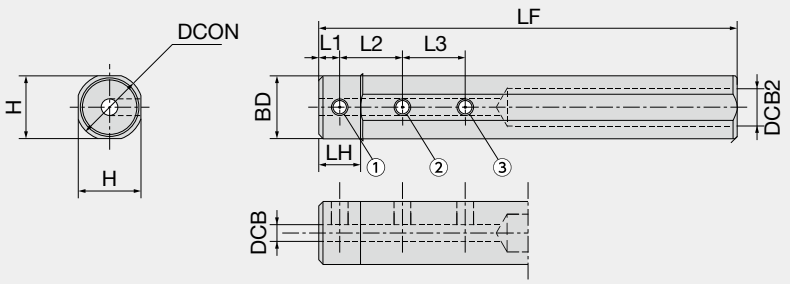
SPARE PARTS

Designation	Clamp screw		Overhang Adjustment			Wrench	
	①	②	③	④	⑤	①②③	④⑤
HY-NBH**	SS04045FS	SS0406F	SS0404F	SS0812R	SS0808F	LW-2	LW-4*104



NBH

Sleeve for external coolant supply



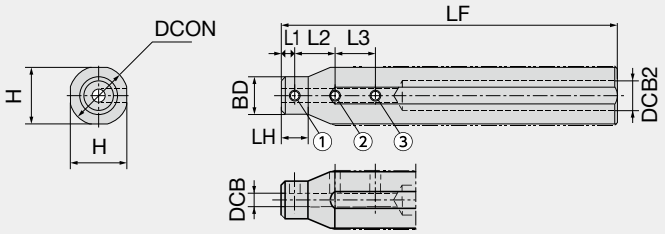
Metric	DCON	DCB	H	BD	LF	LH	DCB2	L1	L2	L3	Insert
NBH02015H	15.875	2	15	15	100	10	9	5	10	–	SB(H)F../SSP..
NBH02515H	15.875	2.5	15	15	100	10	9	5	10	–	SB(H)F../SB*../SSP..
NBH03015H	15.875	3	15	15	100	10	9	5	10	10	SB(H)F../SB*../SSP..
NBH03515H	15.875	3.5	15	15	100	10	9	5	10	10	SB(H)F../SB*../SSP..
NBH04015H	15.875	4	15	15	100	10	9	5	15	15	SB(H)F../SB*../SSP..
NBH04515H	15.875	4.5	15	15	100	10	9	5	15	15	–
NBH05015H	15.875	5	15	15	100	10	9	5	15	15	SB(H)F../SB*../SSP..
NBH06015H	15.875	6	15	15	100	10	9	5	20	20	SB(H)F../SB*../SSP.../SFG..
NBH08015H	15.875	8	15	15	100	10	9	5	20	20	SB(H)F../SB*../SSP../SFG..
NBH02016H	16	2	15	15	100	10	9	5	10	–	SB(H)F../SSP..
NBH02516H	16	2.5	15	15	100	10	9	5	10	–	SB(H)F../SB*../SSP..
NBH03016H	16	3	15	15	100	10	9	5	10	10	SB(H)F../SB*../SSP..
NBH03516H	16	3.5	15	15	100	10	9	5	10	10	SB(H)F../SB*../SSP..
NBH04016H	16	4	15	15	100	10	9	5	15	15	SB(H)F../SB*../SSP..
NBH04516H	16	4.5	15	15	100	10	9	5	15	15	–
NBH05016H	16	5	15	15	100	10	9	5	15	15	SB(H)F../SB*../SSP..
NBH06016H	16	6	15	15	100	10	9	5	20	20	SB(H)F../SB*../SSP.../SFG..
NBH07016H	16	7	15	15	100	10	9	5	20	20	SB(H)F../SB*..
NBH08016H	16	8	15	15	100	10	9	5	20	20	SB(H)F../SB*../SSP../SFG..
NBH02019K	19.05	2	18	18	125	10	11	5	10	–	SB(H)F../SSP..
NBH02519K	19.05	2.5	18	18	125	10	11	5	10	–	SB(H)F../SB*../SSP..
NBH03019K	19.05	3	18	18	125	10	11	5	10	10	SB(H)F../SB*../SSP..
NBH03519K	19.05	3.5	18	18	125	10	11	5	10	10	SB(H)F../SB*../SSP..
NBH04019K	19.05	4	18	18	125	10	11	5	15	15	SB(H)F../SB*../SSP..
NBH04519K	19.05	4.5	18	18	125	10	11	5	15	15	–
NBH05019K	19.05	5	18	18	125	10	11	5	15	15	SB(H)F../SB*../SSP..
NBH06019K	19.05	6	18	18	125	10	11	5	20	20	SB(H)F../SB*../SSP../SFG..
NBH07019K	19.05	7	18	18	125	10	11	5	20	20	SB(H)F../SB*..
NBH08019K	19.05	8	18	18	125	10	11	5	20	20	SB(H)F../SB*../SSP../SFG..
NBH10019K	19.05	10	18	18	125	10	11	5	20	20	–

SPARE PARTS

Designation	Clamp screw			Wrench (for Clamp screw)
	①	②	③	①②
NBH02015H	SS0406F	SS0406F	–	LW-2
NBH02515H	SS0406F	SS0406F	–	LW-2
NBH03015H	SS0404F	SS0404F	SS0404F	LW-2
NBH03515H	SS0404F	SS0404F	SS0404F	LW-2
NBH04015H	SS0404F	SS0404F	SS0404F	LW-2
NBH04515H	SS0404F	SS0404F	SS0404F	LW-2
NBH05015H	SS0404F	SS0404F	SS0404F	LW-2
NBH06015H	SS0404F	SS0404F	SS0404F	LW-2
NBH08015H	SS0403F	SS0403F	SS0403F	LW-2
NBH02016H	SS0406F	SS0406F	–	LW-2
NBH02516H	SS0406F	SS0406F	–	LW-2
NBH03016H	SS0404F	SS0404F	SS0404F	LW-2
NBH03516H	SS0404F	SS0404F	SS0404F	LW-2
NBH04016H	SS0404F	SS0404F	SS0404F	LW-2
NBH04516H	SS0404F	SS0404F	SS0404F	LW-2
NBH05016H	SS0404F	SS0404F	SS0404F	LW-2
NBH06016H	SS0404F	SS0404F	SS0404F	LW-2
NBH07016H	SS0403F	SS0404F	SS0404F	LW-2
NBH08016H	SS0403F	SS0403F	SS0403F	LW-2
NBH02019K	SS0408F	SS0408F	–	LW-2
NBH02519K	SS0408F	SS0408F	–	LW-2
NBH03019K	SS0406F	SS0406F	SS0406F	LW-2
NBH03519K	SS0406F	SS0406F	SS0406F	LW-2
NBH04019K	SS0406F	SS0406F	SS0406F	LW-2
NBH04519K	SS0406F	SS0406F	SS0406F	LW-2
NBH05019K	SS0406F	SS0406F	SS0406F	LW-2
NBH06019K	SS0406F	SS0406F	SS0406F	LW-2
NBH07019K	SS0404F	SS0404F	SS0404F	LW-2
NBH08019K	SS0404F	SS0404F	SS0404F	LW-2
NBH10019K	SS0403F	SS0404F	SS0404F	LW-2

NBH

Sleeve for external coolant supply



Metric	DCON	DCB	H	BD	LF	LH	DCB2	L1	L2	L3	Insert
NBH02020K	20	2	19	11	125	10	11	5	10	–	SB(H)F../SSP..
NBH02520K	20	2.5	19	11	125	10	11	5	10	–	SB(H)F../SB*../SSP..
NBH03020K	20	3	19	12	125	10	11	5	10	10	SB(H)F../SB*../SSP..
NBH03520K	20	3.5	19	12	125	10	11	5	10	10	SB(H)F../SB*../SSP..
NBH04020K	20	4	19	13	125	10	11	5	15	15	SB(H)F../SB*../SSP..
NBH04520K	20	4.5	19	13	125	10	11	5	15	15	–
NBH05020K	20	5	19	14	125	10	11	5	15	15	SB(H)F../SB*../SSP..
NBH06020K	20	6	19	15	125	10	11	5	20	20	SB(H)F../SB*../SSP../SFG..
NBH07020K	20	7	19	16	125	10	11	5	20	20	SB(H)F../SB*..
NBH08020K	20	8	19	17	125	10	11	5	20	20	SB(H)F../SBG../SSP../SFG..
NBH10020K	20	10	19	19	125	10	11	5	20	20	–
NBH12020K	20	12	19	19	125	10	14	5	25	25	–
NBH02022K	22	2	21	11	125	10	11	5	10	–	SB(H)F../SSP..
NBH02522K	22	2.5	21	11	125	10	11	5	10	–	SB(H)F../SB*../SSP..
NBH03022K	22	3	21	12	125	10	11	5	10	10	SB(H)F../SB*../SSP..
NBH03522K	22	3.5	21	12	125	10	11	5	10	10	SB(H)F../SB*../SSP..
NBH04022K	22	4	21	13	125	10	11	5	15	15	SB(H)F../SB*../SSP..
NBH04522K	22	4.5	21	13	125	10	11	5	15	15	–
NBH05022K	22	5	21	14	125	10	11	5	15	15	SB(H)F../SB*../SSP..
NBH06022K	22	6	21	15	125	10	11	5	20	20	SB(H)F../SB*../SSP../SFG..
NBH07022K	22	7	21	16	125	10	11	5	20	20	SB(H)F../SB*..
NBH08022K	22	8	21	17	125	10	11	5	20	20	SB(H)F../SBG../SSP../SFG..
NBH10022K	22	10	21	19	125	10	11	5	20	20	–
NBH12022K	22	12	21	21	125	10	14	5	25	25	–
NBH02023K	23	2	21	11	125	10	11	5	10	–	SB(H)F../SSP..
NBH02523K	23	2.5	21	11	125	10	11	5	10	–	SB(H)F../SB*../SSP..
NBH03023K	23	3	21	12	125	10	11	5	10	10	SB(H)F../SB*../SSP..
NBH03523K	23	3.5	21	12	125	10	11	5	10	10	SB(H)F../SB*../SSP..
NBH04023K	23	4	21	13	125	10	11	5	15	15	SB(H)F../SB*../SSP..
NBH04523K	23	4.5	21	13	125	10	11	5	15	15	–
NBH05023K	23	5	21	14	125	10	11	5	15	15	SB(H)F../SB*../SSP..
NBH06023K	23	6	21	15	125	10	11	5	20	20	SB(H)F../SB*../SSP../SFG..
NBH08023K	23	8	21	17	125	10	11	5	20	20	SB(H)F../SBG../SSP../SFG..
NBH10023K	23	10	21	19	125	10	11	5	20	20	–
NBH12023K	23	12	21	21	125	10	14	5	25	25	–
NBH02025K-MET	25	2	24	11	125	10	11	5	10	–	SB(H)F../SSP..
NBH02525K-MET	25	2.5	24	11	125	10	11	5	10	–	SB(H)F../SB*../SSP..
NBH03025K-MET	25	3	24	12	125	10	11	5	10	10	SB(H)F../SB*../SSP..
NBH03525K-MET	25	3.5	24	12	125	10	11	5	10	10	SB(H)F../SB*../SSP..
NBH04025K-MET	25	4	24	13	125	10	11	5	15	15	SB(H)F../SB*../SSP..
NBH04525K-MET	25	4.5	24	13	125	10	11	5	15	15	–
NBH05025K-MET	25	5	24	14	125	10	11	5	15	15	SB(H)F../SB*../SSP..
NBH06025K-MET	25	6	24	15	125	10	11	5	20	20	SB(H)F../SB*../SSP../SFG..
NBH07025K-MET	25	7	24	16	125	10	11	5	20	20	SB(H)F../SB*..
NBH08025K-MET	25	8	24	17	125	10	11	5	20	20	SB(H)F../SBG../SSP../SFG..
NBH10025K-MET	25	10	24	19	125	10	11	5	20	20	–
NBH12025K-MET	25	12	24	21	125	10	14	5	25	25	–
NBH02025K	25.4	2	24	11	125	10	11	5	10	–	SB(H)F../SSP..
NBH02525K	25.4	2.5	24	11	125	10	11	5	10	–	SB(H)F../SB*../SSP..
NBH03025K	25.4	3	24	12	125	10	11	5	10	10	SB(H)F../SB*../SSP..
NBH03525K	25.4	3.5	24	12	125	10	11	5	10	10	SB(H)F../SB*../SSP..
NBH04025K	25.4	4	24	13	125	10	11	5	15	15	SB(H)F../SB*../SSP..
NBH04525K	25.4	4.5	24	13	125	10	11	5	15	15	–
NBH05025K	25.4	5	24	14	125	10	11	5	15	15	SB(H)F../SB*../SSP..
NBH06025K	25.4	6	24	15	125	10	11	5	20	20	SB(H)F../SB*../SSP../SFG..
NBH07025K	25.4	7	24	16	125	10	11	5	20	20	SB(H)F../SB*..
NBH08025K	25.4	8	24	17	125	10	11	5	20	20	SB(H)F../SBG../SSP../SFG..
NBH10025K	25.4	10	24	19	125	10	11	5	20	20	–
NBH12025K	25.4	12	24	21	125	10	14	5	25	25	–

Metric	H	BD	LF	LH	DCB	DCB2	DCON	L1	L2	L3	Insert
NBH04532K	30	13	125	10	4.5	11	32	5	15	15	–
NBH05032K	30	14	125	10	5	11	32	5	15	15	SB(H)F../SB*../SSP..
NBH06032K	30	15	125	10	6	11	32	5	20	20	SB(H)F../SB*../SSP../SFG..
NBH07032K	30	16	125	10	7	11	32	5	20	20	SB(H)F..
NBH08032K	30	17	125	10	8	11	32	5	20	20	SB(H)F../SBG../SSP../SFG..
NBH10032K	30	19	125	10	10	11	32	5	20	20	–
NBH12032K	30	21	125	10	12	14	32	5	25	25	–
NBH14032K	30	23	125	10	14	16	32	5	25	25	–
NBH16032K	30	25	125	10	16	18	32	5	25	25	–

SPARE PARTS

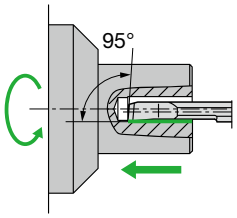
Designation	Clamp screw ①	Clamp screw ②	Clamp screw ③	Wrench (for Clamp screw) ①②
NBH02020K	SS0404F	SS0404F	–	LW-2
NBH02520K	SS0404F	SS0404F	–	LW-2
NBH03020K	SS0404F	SS0404F	SS0406F	LW-2
NBH03520K	SS0404F	SS0404F	SS0406F	LW-2
NBH04020K	SS0404F	SS0406F	SS0406F	LW-2
NBH04520K	SS0404F	SS0406F	SS0406F	LW-2
NBH05020K	SS0404F	SS0406F	SS0406F	LW-2
NBH06020K	SS0404F	SS0406F	SS0406F	LW-2
NBH07020K	SS0404F	SS0406F	SS0406F	LW-2
NBH08020K	SS0404F	SS0404F	SS0404F	LW-2
NBH10020K	SS0404F	SS0404F	SS0404F	LW-2
NBH12020K	SS0403F	SS0403F	SS0403F	LW-2
NBH02022K	SS0404F	SS0406F	–	LW-2
NBH02522K	SS0404F	SS0406F	–	LW-2
NBH03022K	SS0404F	SS0406F	SS0408F	LW-2
NBH03522K	SS0404F	SS0406F	SS0406F	LW-2
NBH04022K	SS0404F	SS0406F	SS0406F	LW-2
NBH04522K	SS0404F	SS0406F	SS0406F	LW-2
NBH05022K	SS0404F	SS0406F	SS0406F	LW-2
NBH06022K	SS0404F	SS0406F	SS0406F	LW-2
NBH07022K	SS0404F	SS0406F	SS0406F	LW-2
NBH08022K	SS0404F	SS0406F	SS0406F	LW-2
NBH10022K	SS0404F	SS0404F	SS0404F	LW-2
NBH12022K	SS0404F	SS0404F	SS0404F	LW-2
NBH02023K	SS0404F	SS0406F	–	LW-2
NBH02523K	SS0404F	SS0406F	–	LW-2
NBH03023K	SS0404F	SS0406F	SS0408F	LW-2
NBH03523K	SS0404F	SS0406F	SS0406F	LW-2
NBH04023K	SS0404F	SS0406F	SS0406F	LW-2
NBH04523K	SS0404F	SS0406F	SS0406F	LW-2
NBH05023K	SS0404F	SS0406F	SS0406F	LW-2
NBH06023K	SS0404F	SS0406F	SS0406F	LW-2
NBH08023K	SS0404F	SS0406F	SS0406F	LW-2
NBH10023K	SS0404F	SS0404F	SS0404F	LW-2
NBH12023K	SS0404F	SS0404F	SS0404F	LW-2
NBH02025K**	SS0404F	SS0406F	–	LW-2
NBH02525K**	SS0404F	SS0406F	–	LW-2
NBH03025K**	SS0404F	SS0406F	SS0408F	LW-2
NBH03525K**	SS0404F	SS0406F	SS0408F	LW-2
NBH04025K**	SS0404F	SS0408F	SS0408F	LW-2
NBH04525K**	SS0404F	SS0408F	SS0408F	LW-2
NBH05025K**	SS0404F	SS0408F	SS0408F	LW-2
NBH06025K**	SS0404F	SS0408F	SS0408F	LW-2
NBH07025K**	SS0404F	SS0408F	SS0408F	LW-2
NBH08025K**	SS0404F	SS0406F	SS0406F	LW-2
NBH10025K**	SS0404F	SS0406F	SS0406F	LW-2
NBH12025K**	SS0404F	SS0404F	SS0404F	LW-2
NBH04532K	SS0404F	SS0408F	SS0408F	LW-2
NBH05032K	SS0404F	SS0408F	SS0408F	LW-2
NBH06032K	SS0404F	SS0408F	SS0408F	LW-2
NBH07032K	SS0404F	SS0408F	SS0408F	LW-2
NBH08032K	SS0404F	SS0408F	SS0408F	LW-2
NBH10032K	SS0404F	SS0408F	SS0408F	LW-2
NBH12032K	SS0404F	SS0406F	SS0406F	LW-2
NBH14032K	SS0504	SS0506	SS0506	LW-2
NBH16032K	SS0504	SS0506	SS0506	LW-2

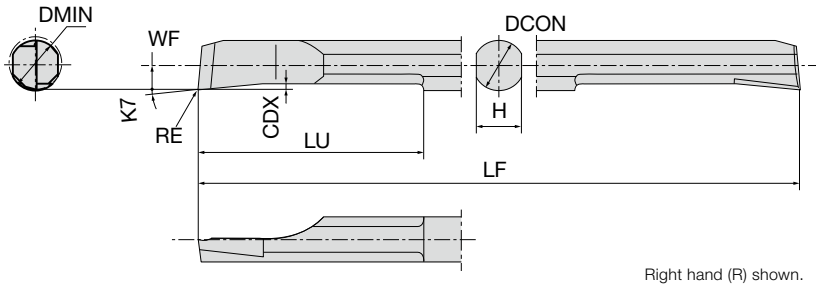
STICK DUO

INSERT BAR

SBFS-S with chipbreaker

Sharp cutting edge





Right hand (R) shown.

P	Steel	☆	★
M	Stainless	★	☆
N	Non-ferrous		★
S	Superalloys	★	
H	Hard materials		

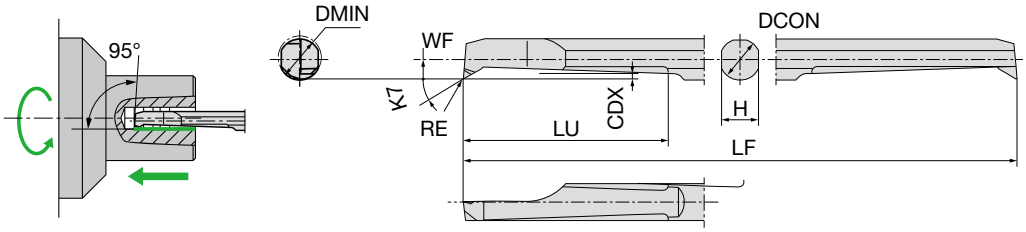
★ : First choice
☆ : Second choice

Designation	HAND	RE	Coated		DMIN	DCON	H	LF	CDX	LU	WF	K7
			DT4	ZM3								
SBFS020R005S	R	0.002	●	●	0.087	0.079	0.071	1.969	0.010	0.394	0.035	5°
SBFS025R005S	R	0.002	●	●	0.106	0.098	0.091	1.969	0.012	0.492	0.045	5°
SBFS025R015S	R	0.006	●	●	0.106	0.098	0.091	1.969	0.012	0.492	0.045	5°
SBFS030R005S	R	0.002	●	●	0.126	0.118	0.106	1.969	0.016	0.591	0.055	5°
SBFS030R015S	R	0.006	●	●	0.126	0.118	0.106	1.969	0.016	0.591	0.055	5°
SBFS035R005S	R	0.002	●	●	0.146	0.138	0.126	2.362	0.016	0.689	0.065	5°
SBFS035R015S	R	0.006	●	●	0.146	0.138	0.126	2.362	0.016	0.689	0.065	5°
SBFS040R005S	R	0.002	●	●	0.165	0.157	0.142	2.362	0.018	0.787	0.075	5°
SBFS040R015S	R	0.006	●	●	0.165	0.157	0.142	2.362	0.018	0.787	0.075	5°
SBFS050R005S	R	0.002	●	●	0.205	0.197	0.177	2.756	0.020	0.984	0.094	5°
SBFS050R015S	R	0.006	●	●	0.205	0.197	0.177	2.756	0.020	0.984	0.094	5°
SBFS060R005S	R	0.002	●	●	0.244	0.236	0.213	3.150	0.024	1.181	0.114	5°
SBFS060R015S	R	0.006	●	●	0.244	0.236	0.213	3.150	0.024	1.181	0.114	5°

● : Line up

SBFB-F with chipbreaker

Evacuates chips BACKWARD



Right hand (R) shown.

P	Steel	☆	★
M	Stainless	★	☆
N	Non-ferrous		★
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	RE	Coated		DMIN	DCON	H	LF	CDX	LU	WF	K7
			DT4	ZM3								
SBFB020R005F	R	0.002	●	●	0.087	0.079	0.071	1.969	0.010	0.315	0.037	30°
SBFB025R005F	R	0.002	●	●	0.106	0.098	0.091	1.969	0.012	0.492	0.047	30°
SBFB025R015F	R	0.006	●	●	0.106	0.098	0.091	1.969	0.012	0.492	0.047	30°
SBFB030R005F	R	0.002	●	●	0.126	0.118	0.106	1.969	0.018	0.591	0.055	30°
SBFB030R015F	R	0.006	●	●	0.126	0.118	0.106	1.969	0.018	0.591	0.055	30°
SBFB035R005F	R	0.002	●	●	0.146	0.138	0.126	2.362	0.020	0.689	0.065	30°
SBFB035R015F	R	0.006	●	●	0.146	0.138	0.126	2.362	0.020	0.689	0.065	30°
SBFB040R005F	R	0.002	●	●	0.165	0.157	0.142	2.362	0.020	0.787	0.075	30°
SBFB040R015F	R	0.006	●	●	0.165	0.157	0.142	2.362	0.020	0.787	0.075	30°
SBFB050R005F	R	0.002	●	●	0.205	0.197	0.177	2.756	0.028	0.984	0.094	30°
SBFB050R015F	R	0.006	●	●	0.205	0.197	0.177	2.756	0.028	0.984	0.094	30°
SBFB060R005F	R	0.002	●	●	0.244	0.236	0.213	3.150	0.035	1.181	0.114	30°
SBFB060R015F	R	0.006	●	●	0.244	0.236	0.213	3.150	0.035	1.181	0.114	30°

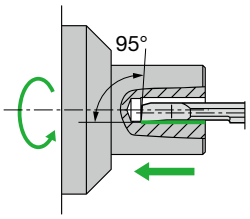
● : Line up

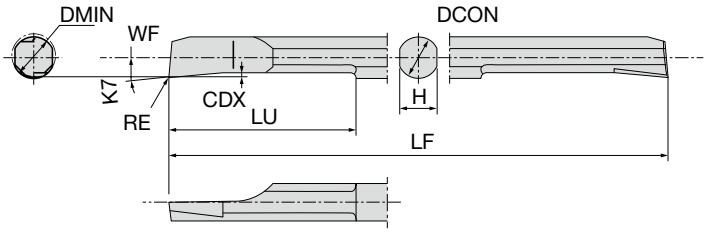
STICK DUO

INSERT BAR

SBFS-H without chipbreaker

Mirror finish edge





Right hand (R) shown.

P	Steel	☆	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

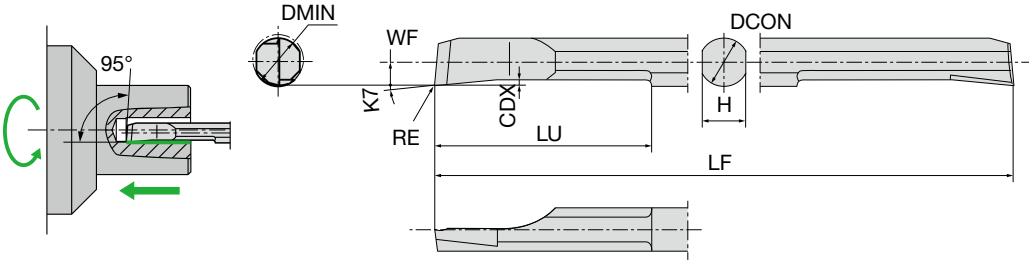
★ : First choice
☆ : Second choice

Designation	HAND	RE	Coated ZM3	Mirror finish	DMIN	DCON	H	LF	CDX	LU	WF	K7
SBFS020R005H	R	0.002	●	M	0.087	0.079	0.071	1.969	0.010	0.394	0.035	5°
SBFS025R005H	R	0.002	●	M	0.106	0.098	0.091	1.969	0.012	0.492	0.045	5°
SBFS025R015H	R	0.006	●	M	0.106	0.098	0.091	1.969	0.012	0.492	0.045	5°
SBFS030R005H	R	0.002	●	M	0.126	0.118	0.106	1.969	0.016	0.591	0.055	5°
SBFS030R015H	R	0.006	●	M	0.126	0.118	0.106	1.969	0.016	0.591	0.055	5°
SBFS035R005H	R	0.002	●	M	0.146	0.138	0.126	2.362	0.016	0.689	0.065	5°
SBFS035R015H	R	0.006	●	M	0.146	0.138	0.126	2.362	0.016	0.689	0.065	5°
SBFS040R005H	R	0.002	●	M	0.165	0.157	0.142	2.362	0.018	0.787	0.075	5°
SBFS040R015H	R	0.006	●	M	0.165	0.157	0.142	2.362	0.018	0.787	0.075	5°
SBFS050R005H	R	0.002	●	M	0.205	0.197	0.177	2.756	0.020	0.984	0.094	5°
SBFS050R015H	R	0.006	●	M	0.205	0.197	0.177	2.756	0.020	0.984	0.094	5°
SBFS060R005H	R	0.002	●	M	0.244	0.236	0.213	3.150	0.024	1.181	0.114	5°
SBFS060R015H	R	0.006	●	M	0.244	0.236	0.213	3.150	0.024	1.181	0.114	5°
SBFS080R005H	R	0.002	●	M	0.323	0.315	0.287	3.150	0.031	1.181	0.154	5°
SBFS080R015H	R	0.006	●	M	0.323	0.315	0.287	3.150	0.031	1.181	0.154	5°

● : Line up

SHFS-S with chipbreaker

Sharp cutting edge



Right hand (R) shown.

P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	RE	Coated TM4	DMIN	DCON	H	LF	CDX	LU	WF	K7
SHFS020R005S	R	0.002	●	0.087	0.079	0.071	1.969	0.010	0.394	0.035	5°
SHFS025R005S	R	0.002	●	0.106	0.098	0.091	1.969	0.012	0.492	0.045	5°
SHFS025R015S	R	0.006	●	0.106	0.098	0.091	1.969	0.012	0.492	0.045	5°
SHFS030R005S	R	0.002	●	0.126	0.118	0.106	1.969	0.016	0.591	0.055	5°
SHFS030R015S	R	0.006	●	0.126	0.118	0.106	1.969	0.016	0.591	0.055	5°
SHFS035R005S	R	0.002	●	0.146	0.138	0.126	2.362	0.016	0.689	0.065	5°
SHFS035R015S	R	0.006	●	0.146	0.138	0.126	2.362	0.016	0.689	0.065	5°
SHFS040R005S	R	0.002	●	0.165	0.157	0.142	2.362	0.018	0.787	0.075	5°
SHFS040R015S	R	0.006	●	0.165	0.157	0.142	2.362	0.018	0.787	0.075	5°
SHFS050R005S	R	0.002	●	0.205	0.197	0.177	2.756	0.020	0.984	0.094	5°
SHFS050R015S	R	0.006	●	0.205	0.197	0.177	2.756	0.020	0.984	0.094	5°

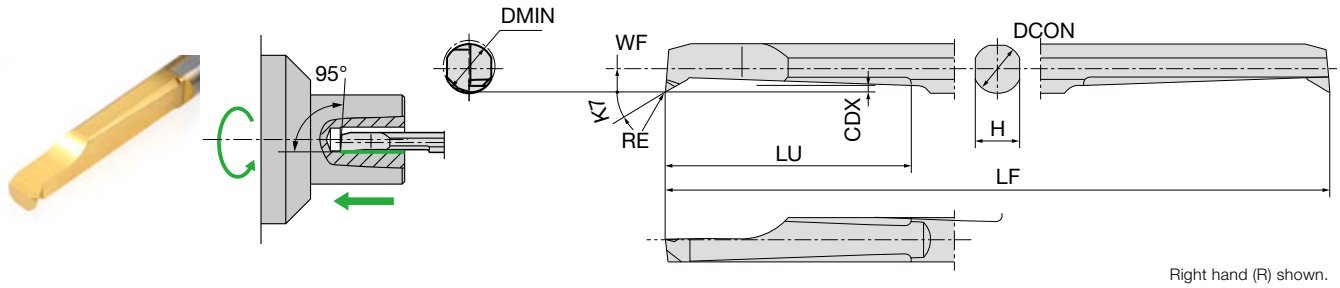
● : Line up

STICK DUO

INSERT BAR

SHFB-F with chipbreaker

Evacuates chips BACKWARD



Right hand (R) shown.

P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

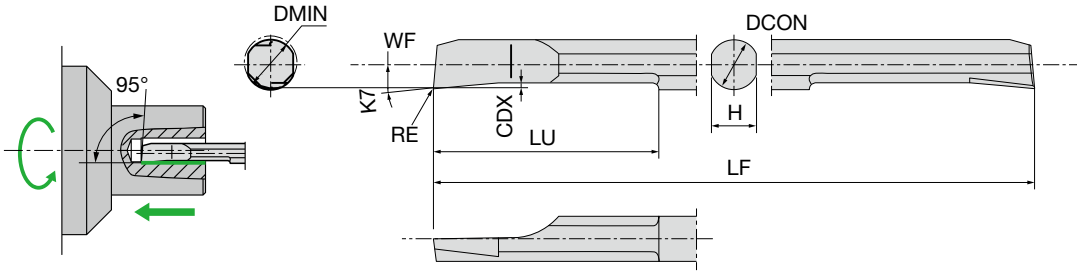
★ : First choice
☆ : Second choice

Designation	HAND	RE	Coated TM4	DMIN	DCON	H	LF	CDX	LU	WF	K7
SHFB020R005F	R	0.002	●	0.087	0.079	0.071	1.969	0.010	0.315	0.037	30°
SHFB025R005F	R	0.002	●	0.106	0.098	0.091	1.969	0.012	0.492	0.047	30°
SHFB025R015F	R	0.006	●	0.106	0.098	0.091	1.969	0.012	0.492	0.047	30°
SHFB030R005F	R	0.002	●	0.126	0.118	0.106	1.969	0.018	0.591	0.055	30°
SHFB030R015F	R	0.006	●	0.126	0.118	0.106	1.969	0.018	0.591	0.055	30°
SHFB035R005F	R	0.002	●	0.146	0.138	0.126	2.362	0.020	0.689	0.065	30°
SHFB035R015F	R	0.006	●	0.146	0.138	0.126	2.362	0.020	0.689	0.065	30°
SHFB040R005F	R	0.002	●	0.165	0.157	0.142	2.362	0.020	0.787	0.075	30°
SHFB040R015F	R	0.006	●	0.165	0.157	0.142	2.362	0.020	0.787	0.075	30°
SHFB050R005F	R	0.002	●	0.205	0.197	0.177	2.756	0.028	0.984	0.094	30°
SHFB050R015F	R	0.006	●	0.205	0.197	0.177	2.756	0.028	0.984	0.094	30°

● : Line up

SHFS-H without chipbreaker

Mirror finish edge



Right hand (R) shown.

P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	RE	Coated TM4	Mirror finish	DMIN	DCON	H	LF	CDX	LU	WF	K7
SHFS020R005H	R	0.002	●	M	0.087	0.079	0.071	1.969	0.010	0.394	0.035	5°
SHFS025R005H	R	0.002	●	M	0.106	0.098	0.091	1.969	0.012	0.492	0.045	5°
SHFS025R015H	R	0.006	●	M	0.106	0.098	0.091	1.969	0.012	0.492	0.045	5°
SHFS030R005H	R	0.002	●	M	0.126	0.118	0.106	1.969	0.016	0.591	0.055	5°
SHFS030R015H	R	0.006	●	M	0.126	0.118	0.106	1.969	0.016	0.591	0.055	5°
SHFS035R005H	R	0.002	●	M	0.146	0.138	0.126	2.362	0.016	0.689	0.065	5°
SHFS035R015H	R	0.006	●	M	0.146	0.138	0.126	2.362	0.016	0.689	0.065	5°
SHFS040R005H	R	0.002	●	M	0.165	0.157	0.142	2.362	0.018	0.787	0.075	5°
SHFS040R015H	R	0.006	●	M	0.165	0.157	0.142	2.362	0.018	0.787	0.075	5°
SHFS050R005H	R	0.002	●	M	0.205	0.197	0.177	2.756	0.020	0.984	0.094	5°
SHFS050R015H	R	0.006	●	M	0.205	0.197	0.177	2.756	0.020	0.984	0.094	5°

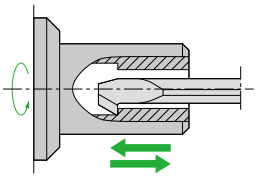
● : Line up

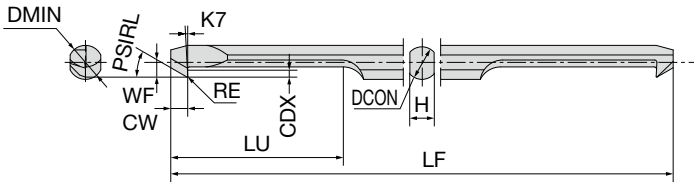
STICK DUO

INSERT BAR for ID Back Turning

SBB-S with chipbreaker

Short type / Two-sided





Right hand (R) shown.

P	Steel	☆
M	Stainless	★
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

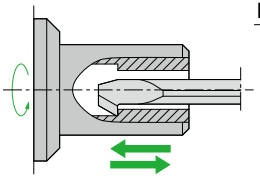
★ : First choice
☆ : Second choice

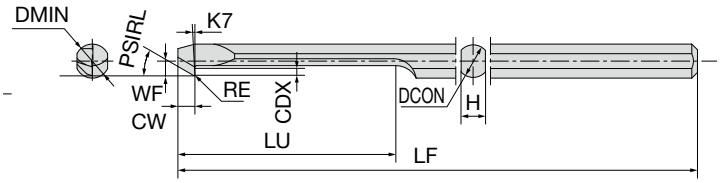
Designation	HAND	RE	Coated ZM3	DMIN	DCON	H	LF	CDX	LU	WF	K7	CW	PSIRL
SBB030RB005-S	R	0.002	●	0.118	0.118	0.106	1.969	0.020	0.591	0.051	3°	0.059	30°
SBB030RB010-S	R	0.004	●	0.118	0.118	0.106	1.969	0.020	0.591	0.051	3°	0.059	30°
SBB040RB005-S	R	0.002	●	0.157	0.157	0.142	2.362	0.031	0.709	0.071	3°	0.059	30°
SBB040RB015-S	R	0.006	●	0.157	0.157	0.142	2.362	0.031	0.709	0.071	3°	0.059	30°

● : Line up

SBB with chipbreaker

Long type / Single-sided





Right hand (R) shown.

P	Steel	☆
M	Stainless	★
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

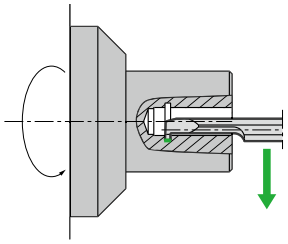
★ : First choice
☆ : Second choice

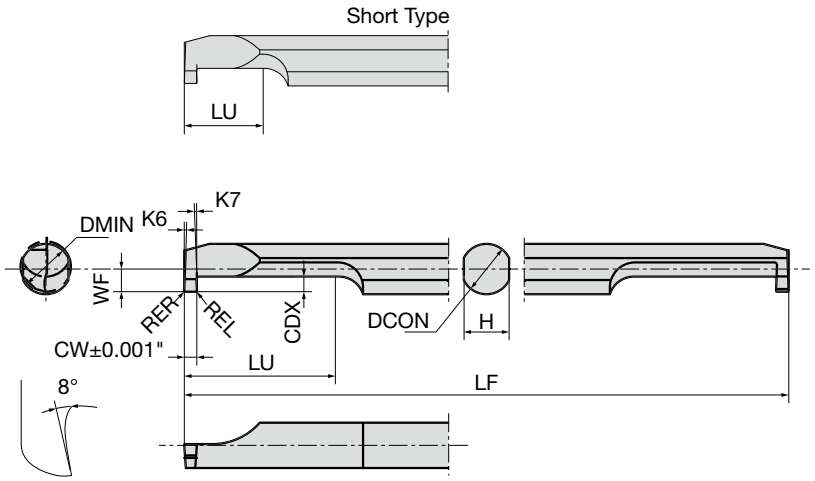
Designation	HAND	RE	Coated ZM3	DMIN	DCON	H	LF	CDX	LU	WF	K7	CW	PSIRL
SBB030RB005	R	0.002	●	0.118	0.118	0.106	1.969	0.020	0.748	0.051	3°	0.059	30°
SBB030RB010	R	0.004	●	0.118	0.118	0.106	1.969	0.020	0.748	0.051	3°	0.059	30°
SBB040RB005	R	0.002	●	0.157	0.157	0.142	2.362	0.031	0.945	0.071	3°	0.059	30°
SBB040RB015	R	0.006	●	0.157	0.157	0.142	2.362	0.031	0.945	0.071	3°	0.059	30°

● : Line up

SBG-S with chipbreaker

Short type / Two-sided





Right hand (R) shown.

P	Steel	☆	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	RE	Coated ZM3	DMIN	APMX	DCON	H	LF	CDX	LU	WF	K7	K6	CW
SBG030050RB-S	R	0.002	●	0.118	0.031	0.118	0.106	1.969	0.039	0.177	0.051	2°	2°	0.020
SBG030075RB-S	R	0.002	●	0.118	0.031	0.118	0.106	1.969	0.039	0.177	0.051	2°	2°	0.030
SBG030100RB-S	R	0.002	●	0.118	0.031	0.118	0.106	1.969	0.039	0.177	0.051	2°	2°	0.039
SBG030150RB-S	R	0.002	●	0.118	0.031	0.118	0.106	1.969	0.039	0.177	0.051	2°	2°	0.059
SBG040050RB-S	R	0.002	●	0.157	0.039	0.157	0.142	2.362	0.047	0.236	0.071	2°	2°	0.020
SBG040075RB-S	R	0.002	●	0.157	0.039	0.157	0.142	2.362	0.047	0.236	0.071	2°	2°	0.030
SBG040100RB-S	R	0.002	●	0.157	0.039	0.157	0.142	2.362	0.047	0.236	0.071	2°	2°	0.039
SBG040150RB-S	R	0.002	●	0.157	0.039	0.157	0.142	2.362	0.047	0.236	0.071	2°	2°	0.059
SBG050050RB-S	R	0.002	●	0.197	0.047	0.197	0.177	2.756	0.055	0.295	0.091	2°	2°	0.020
SBG050100RB-S	R	0.002	●	0.197	0.047	0.197	0.177	2.756	0.055	0.295	0.091	2°	2°	0.039
SBG050150RB-S	R	0.002	●	0.197	0.047	0.197	0.177	2.756	0.055	0.295	0.091	2°	2°	0.059
SBG050200RB-S	R	0.002	●	0.197	0.047	0.197	0.177	2.756	0.055	0.295	0.091	2°	2°	0.079
SBG060100RB-S	R	0.002	●	0.236	0.071	0.236	0.213	3.150	0.079	0.295	0.110	2°	2°	0.039
SBG060150RB-S	R	0.002	●	0.236	0.071	0.236	0.213	3.150	0.079	0.295	0.110	2°	2°	0.059
SBG060200RB-S	R	0.002	●	0.236	0.071	0.236	0.213	3.150	0.079	0.295	0.110	2°	2°	0.079
SBG080100RB-S	R	0.002	●	0.315	0.087	0.315	0.287	3.150	0.094	0.335	0.150	2°	2°	0.039
SBG080150RB-S	R	0.002	●	0.315	0.087	0.315	0.287	3.150	0.094	0.335	0.150	2°	2°	0.059
SBG080200RB-S	R	0.002	●	0.315	0.087	0.315	0.287	3.150	0.094	0.335	0.150	2°	2°	0.079

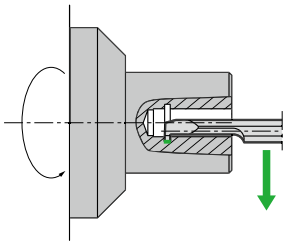
● : Line up

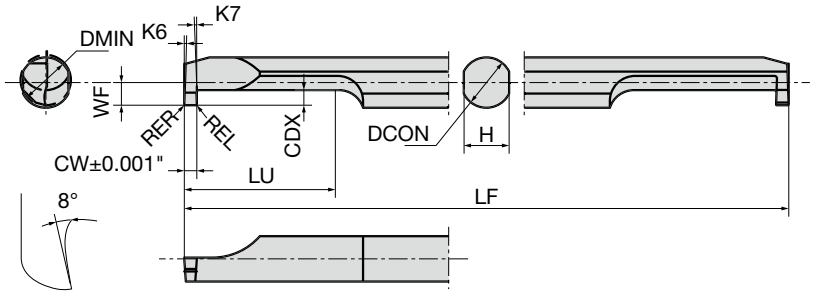
STICK DUO

INSERT BAR for ID Grooving

SBG with chipbreaker

Long type / Two-sided





Right hand (R) shown.

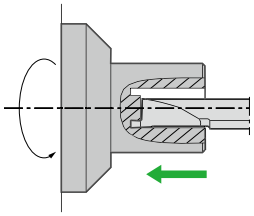
P	Steel	☆
M	Stainless	★
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

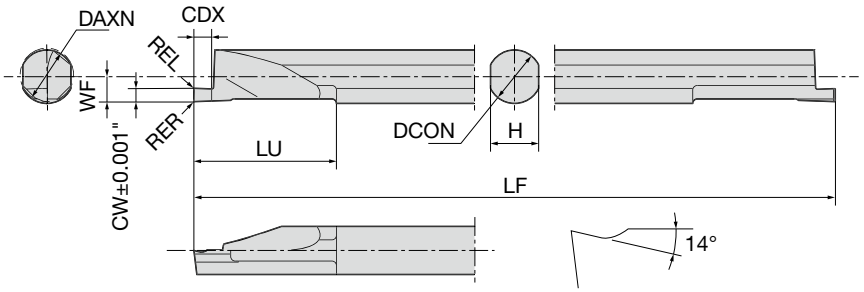
★ : First choice
☆ : Second choice

Designation	HAND	RE	Coated ZM3	DMIN	APMX	DCON	H	LF	CDX	LU	WF	K7	K6	CW
SBG030050RB	R	0.002	●	0.118	0.031	0.118	0.106	1.969	0.039	0.354	0.051	2°	2°	0.020
SBG030075RB	R	0.002	●	0.118	0.031	0.118	0.106	1.969	0.039	0.354	0.051	2°	2°	0.030
SBG030100RB	R	0.002	●	0.118	0.031	0.118	0.106	1.969	0.039	0.354	0.051	2°	2°	0.039
SBG040050RB	R	0.002	●	0.157	0.039	0.157	0.142	2.362	0.047	0.472	0.071	2°	2°	0.020
SBG040075RB	R	0.002	●	0.157	0.039	0.157	0.142	2.362	0.047	0.472	0.071	2°	2°	0.030
SBG040100RB	R	0.002	●	0.157	0.039	0.157	0.142	2.362	0.047	0.472	0.071	2°	2°	0.039
SBG050050RB	R	0.002	●	0.197	0.047	0.197	0.177	2.756	0.055	0.787	0.091	2°	2°	0.020
SBG050100RB	R	0.002	●	0.197	0.047	0.197	0.177	2.756	0.055	0.787	0.091	2°	2°	0.039
SBG050150RB	R	0.002	●	0.197	0.047	0.197	0.213	2.756	0.055	0.787	0.091	2°	2°	0.059
SBG060100RB	R	0.002	●	0.236	0.071	0.236	0.213	3.150	0.079	0.787	0.110	2°	2°	0.039
SBG060150RB	R	0.002	●	0.236	0.071	0.236	0.213	3.150	0.079	0.787	0.110	2°	2°	0.059
SBG060200RB	R	0.002	●	0.236	0.071	0.236	0.287	3.150	0.079	0.787	0.110	2°	2°	0.079
SBG080100RB	R	0.002	●	0.315	0.087	0.315	0.287	3.150	0.094	0.787	0.150	2°	2°	0.039
SBG080150RB	R	0.002	●	0.315	0.087	0.315	0.177	3.150	0.094	0.787	0.150	2°	2°	0.059
SBG080200RB	R	0.002	●	0.315	0.087	0.315	0.287	3.150	0.094	0.787	0.150	2°	2°	0.079

● : Line up

SFG with chipbreaker





Right hand (R) shown.

P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

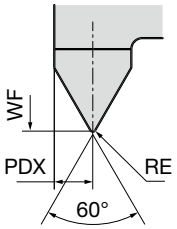
Designation	HAND	RE	Coated TM4	DMIN	APMX	DCON	H	LF	CDX	LU	WF	CW
SFG060R100B	R	0.002	●	0.236	0.059	0.236	0.213	3.150	0.067	0.630	0.110	0.039
SFG060R150B	R	0.002	●	0.236	0.079	0.236	0.213	3.150	0.087	0.630	0.110	0.059
SFG060R200B	R	0.002	●	0.236	0.118	0.236	0.213	3.150	0.126	0.630	0.110	0.079
SFG080R100B	R	0.002	●	0.315	0.059	0.315	0.287	3.150	0.067	0.630	0.150	0.039
SFG080R150B	R	0.002	●	0.315	0.079	0.315	0.287	3.150	0.087	0.630	0.150	0.059
SFG080R200B	R	0.002	●	0.315	0.118	0.315	0.287	3.150	0.126	0.630	0.150	0.079
SFG080R300B	R	0.002	●	0.315	0.118	0.315	0.287	3.150	0.126	0.630	0.150	0.118

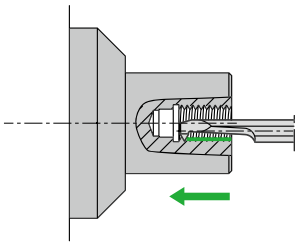
● : Line up

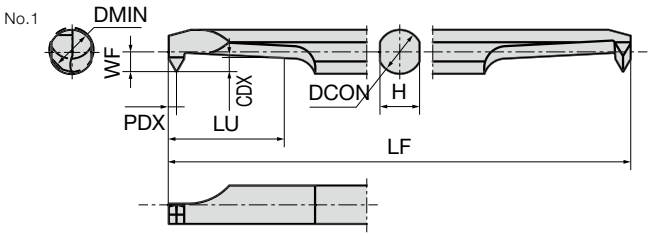
STICK DUO

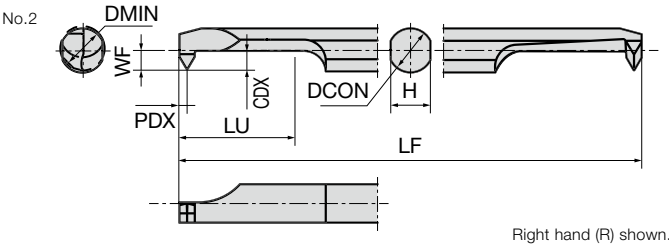
INSERT BAR for Internal Thread

SBT









Right hand (R) shown.

P	Steel	☆	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	RE	Coated ZM3	chip-breaker	DMIN	DCON	H	LF	WF	Pitch	CDX	LU	PDX	Figure
SBT025M3R	R	0.002MAX Flat	●	No	0.098	0.098	0.091	1.969	0.043	0.020	0.024	0.213	0.016	1
SBT030M4R	R	0.002MAX Flat	●	No	0.118	0.118	0.106	1.969	0.051	0.020 - 0.031	0.031	0.295	0.020	1
SBT030M4RB	R	0.002MAX Flat	●	Yes	0.118	0.118	0.106	1.969	0.051	0.020 - 0.031	0.031	0.295	0.020	1
SBT035M5RB	R	0.002MAX Flat	●	Yes	0.138	0.138	0.126	2.362	0.061	0.020 - 0.039	0.039	0.335	0.022	1
SBT040M6RB	R	0.002	●	Yes	0.157	0.157	0.142	2.362	0.071	0.030 - 0.049	0.047	0.413	0.028	1
SBT050M8RB	R	0.002	●	Yes	0.197	0.197	0.177	2.756	0.091	0.030 - 0.059	0.059	0.622	0.031	2
SBT060M10RB	R	0.002	●	Yes	0.236	0.236	0.213	3.150	0.110	0.030 - 0.069	0.071	0.724	0.037	2

No.1: Eccentric tapered shape

● : Line up

MEMO

5. Threading

Main products

Thread form

60° 5-12
55° 5-15
M (Metric) 5-16
UN (Unified) 5-20
W (Whitworth) 5-22
BSPT (R, PT) 5-23
NPT 5-24
NPTF 5-25
UNJ 5-26

TUNGTHREAD
Lay down insert, toolholder
Standard items cover a wide variety of threading inserts.
Standard tool series with double-clamp system for excellent insert stability in machining API-standard threads.

5-12 -

TETRAMINICUT
Standard tool with 4 corners for threading on Swiss lathes.
In small diameter threading using the center of the tool post on general NC lathes, interference with the center is less likely occur.

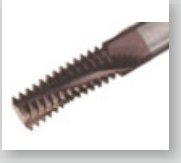
5-13 -

DUOJUSTCUT
Standard tool suitable for all types of threading on Swiss lathes.
The incomplete thread part from the workpiece face to the thread groove can be the shortest thanks to the excellent accessibility to the workpiece face.

5-14 -

MINIVLOCKGROOVE
High precision grooving and threading tool series for CNC automatic lathes.

5-29



SOLIDTHREAD
Solid threading tool series for machining small diameters, such as M1x0.25 and 0-80UNF.

5-46 -

TUNGMEISTER
Endmills with exchangeable heads for reduced tool change time
ø6 mm - ø20 mm

5-56 -

CSV Series
Best for machining with ultra small diameter of ϕ5 or less
Possible to use on cam-type automatic lates

5-27 -

TTP Series
Cover wide range with single point cutting
Achieve burr-free thread surface by high precision sharp edge

5-35 -

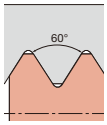
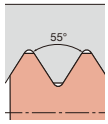
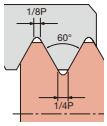
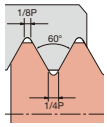
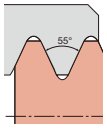
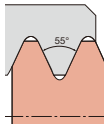
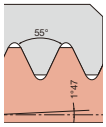
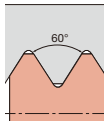
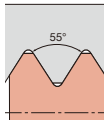
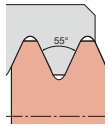
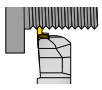
STICK DUO -SBT-
For internal threading minimum diameter ϕ2.5
Economical 2 corners solid bar with wide range of choice

5-37 -

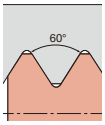
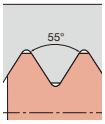
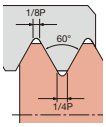
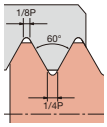
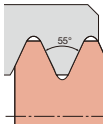
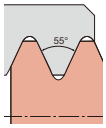
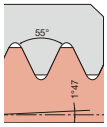
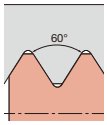
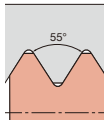
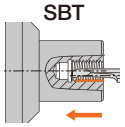
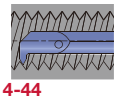
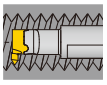
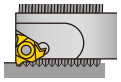
Thread whirling
High productivity for precision screw manufacturing,
like dental implant screws and bone screws

5-11, 5-46 -

Applicable tool for each external thread type

Applicable tool for each external thread type		General purpose, Machine parts for machine and automotive parts				For valve and pump parts; pneumatic, hydraulic, oil and gas pipes					Aerospace threads
Thread types		60°	55°	ISO metric threads, coarse and fine	Unified national threads series, 60° inch threads	- British standard whitworth - British standard fine	- British standard parallel pipe - British standard pipe - Parallel pipe thread (JIS B 9912) - 55° inch thread	- JIS tapered pipe thread - British standard pipe taper	National pipe taper thread	National pipe taper fuel thread	Unified inch screw threads
Thread symbols		M, UN, UNC, UNF, UNEF, UNS	G, BSP, PF, BSPP	M	UN, UNR, UNC, UNRC, UNF, UNRF, UNEF, UNREF, UNS, UNRS	BSW, BSF, W	G, BSP, PF, BSPP	R, PT, BSPT	NPT	NPTF	UNJ, UNJC, UNJF, UNUEF, UNJS
Thread form											
Tool type	Full profile With										
	Full profile With out										
CSVT 5-27		●	0.2 ~ 0.5 mm 127 ~ 51TPI 5-27	——	——	——	——	——	——	——	——	——
TTP 5-35		●	0.2 ~ 2 mm 127 ~ 13TPI 5-35	0.5 ~ 1.5 mm 48 ~ 16TPI 5-35	——	——	——	——	——	——	——	——
DUOJCUT 5-14		●	0.2 ~ 1.5 mm 127 ~ 16TPI 5-14	——	——	——	——	——	——	——	——	——
MINIVGROOVE 5-29		●	0.4 ~ 2 mm 64 ~ 12TPI 5-29	0.6 ~ 1.5 mm 40 ~ 16TPI 5-29	——	——	——	——	——	——	——	——
TETRAMCUT  5-13	●		——	——	0.5 - 1.5 mm 5-19	VN 32 - 16 TPI	W 28 - 11 TPI	55 28 - 11 TPI	——	——	——	UNJ 32 - 28 TPI
		●	0.4 ~ 3 mm 64 ~ 8TPI 5-13	0.9 ~ 3 mm 28 ~ 8TPI	——	——	——	——	——	——	——	——
ST type 5-12	●		——	——	0.35 - 3 mm 5-16	32 - 8 TPI 5-20	32 - 8 TPI 5-22	28 - 8 TPI 5-22	28 - 11 TPI 5-23	27 - 8 TPI 5-24	27 - 8 TPI 5-25	32 - 8 TPI 5-26
		●	0.5 ~ 3 mm 48 ~ 8TPI 5-12	0.5 ~ 3 mm 48 ~ 8TPI 5-15								

Applicable tool for each Internal thread type

Applicable tool for each external thread type		General purpose, Machine parts for machine and automotive parts				For valve and pump parts; pneumatic, hydraulic, oil and gas pipes				
Thread types		60°	55°	ISO metric threads, coarse and fine	Unified national threads series, 60° inch threads	- British standard whitworth - British standard fine	- British standard parallel pipe - British standard pipe - Parallel pipe thread (JIS B 9912) - 55° inch thread	- JIS tapered pipe thread - British standard pipe taper	National pipe taper thread	National pipe taper fuel thread
Thread symbols		M, UN, UNC, UNF, UNEF, UNS	G, BSP, PF, BSPP	M	UN, UNR, UNC, UNRC, UNF, UNRF, UNEF, UNREF, UNS, UNRS	BSW, BSF, W	G, BSP, PF, BSPP	R, PT, BSPT	NPT	NPTF
Thread form										
Tool type	Full profile: With									
	Full profile: With out									
SBT  4-72		●	0.5 ~ 1.75 mm 51 ~ 15TPI 4-72	—	—	—	—	—	—	—	—
TINYMTURN  4-44		●	0.5 ~ 1.5 mm 48 ~ 16TPI 4-44	60°	—	—	—	—	—	—	—
TINYICUT  5-45		●	0.5 ~ 1.25 mm 48 ~ 20TPI 5-45	60°	—	—	—	—	—	—	—
ST type  5-12	●		—	—	0.5 - 3 mm 5-16	32 - 8 TPI 5-20	32 - 8 TPI 5-22	28 - 8 TPI 5-22	19 - 11 TPI 5-23	27 - 8 TPI 5-24	14 - 8 TPI 5-25
		●	0.5 ~ 3 mm 48 ~ 8TPI 5-12	0.5 ~ 3 mm 48 ~ 8TPI 5-15							

Miniature Threading - Quick Guide

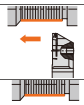
External Threading

Inch

CSV

Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x0.750	1.000 x 1.000	Corner R (in)	Pitch (mm) 0 1 2 3 4 5	Page
	CSVR/L	CSVT			●	●				0.0012 max	0.2 – 0.5	5-27

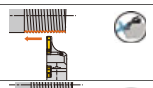
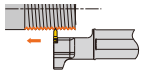
TTP series

Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x0.750	1.000 x 1.000	Corner R (in)	Holder: Through-coolant	Holder: Direct connection	Pitch (mm) 0 1 2 3 4 5	Page
	**TTPR/L-OH2/ OH3**	TTP				●	●				●	●	0.2 – 2.0	5-34
	TTPR/L	TTP			●	●	●						0.2 – 2.0	5-35

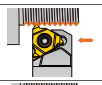
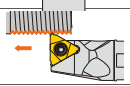
TetraMini-Cut

Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x0.750	1.000 x 1.000	Cylindrical shank (shank dia.) ø0.500	ø0.625	ø0.750	ø1.000	Corner R (in)
	STCR/L-18 Modular head	TCT18R/L...			●	●	●	●	●					0.002 - 0.008
	JS-STCL18 Modular head	TCT18R...									●	●	●	0.002 - 0.008

DuoJust-Cut

Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x0.750	1.000 x 1.000	Cylindrical shank (shank dia.) ø0.500	ø0.625	ø0.750	ø1.000	Corner R (in)
	**JSXXR/L-F/H/X-CHP**	JXTG12**				●	●							0.002Max. - 0.004
	JSXXR/L-F/X-S-CHP	JXTG12**				●	●							0.002Max. - 0.004
	**JS-SXXL09**	JXTG12R...										●	●	0.002Max. - 0.004

TungThread

Application	Designation	Insert	Square shank (height x width) 0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x0.750	1.000 x 1.000	1.250 x 1.250	Cylindrical shank (shank dia.) ø0.500	ø0.625	ø0.750	ø1.000	Corner R (in)
	**JSE2R16-CHP**	16ER...			●	●								0.002 - 0.0086
	CER/L	16ER/L...					●	●	●					0.002 - 0.0086
	**JS-SEL16**	16ER...										●	●	0.002 - 0.0086

	Pitch (mm) 0 1 2 3 4 5	Page
	0.4 — 3	5-32
	0.4 — 3	5-32

Holder: TUNGTJET NEW (Through-coolant)	Holder: Direct connection	Pitch (mm) 0 1 2 3 4 5	Page
●	●	0.2 — 1.5	5-39
●	●	0.2 — 1.5	5-39
●	●	0.2 — 1.5	5-40

Holder: TUNGTJET NEW (Through-coolant)	Holder: Direct connection	Pitch (mm) 0 1 2 3 4 5	Page
●	●	0.5 — 3	5-41
		0.5 — 3	5-42
		0.5 — 3	5-42

Miniature Threading - Quick Guide

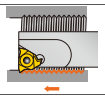
External Threading
Inch

MiniVLockGroove

Application	Designation	Insert	Square shank (height x width) 0.250 x 0.250	0.3125 x 0.3125	0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x0.750	1.000 x 1.000	Corner R (in)	Pitch (mm) 0 1 2 3 4 5	Page
	SVER/L Modular head	VGT10F...			●	●				0.002 - 0.004	0.4 — 2	5-29

Internal Threading
Inch

TungThread

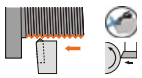
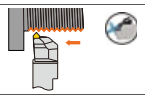
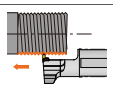
Application	Designation	Insert	Cylindrical shank (shank dia.) ø0.500	ø0.625	ø0.750	ø1.000	ø1.250	ø1.500	Min. bore diameter DMIN (in)	Corner R (in)	Pitch (mm) 0 1 2 3 4 5 6	Page
	**SIR**	11/16/22/27IR...		●	●	●	●	●	ø0.470 - ø1.800	0.002 - 0.017	0.5 — 6	5-43

External Threading
Metric

CSV

Application	Designation	Insert	Square shank (height x width) 7 x 7	8 x 8	9.5 x 9.5	10 x 10	12 x 12	Corner R (mm)	Pitch (mm) 0 1 2 3 4 5	Page
	CSVR/L	CSVT	●	●	●	●	●	0.03 Max	0.2 — 0.5	5-27

TetraMini-Cut

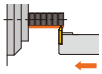
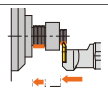
Application	Designation	Insert	Square shank (height x width) 10 x 10	12 x 12	12 x 16	16 x 16	16 x 20	20 x 20	Cylindrical shank (shank dia.) ø14	ø15.875	ø16	ø19.05	ø20	ø22
	**QC-STCR/L-Y-CHP** Modular head	TCT18R/L...		●	●	●	●							
	**QC-STCR/L-CHP** Modular head	TCT18R/L...		●	●	●	●							
	STCR/L-18	TCT18R/L...	●	●		●		●						
	JS-STCL18	TCT18R...							●	●	●	●	●	●
	**QR-STCL18-CHP**	TCT18R...									●	●	●	

				Holder											
	ø25	ø25.4	Corner R (mm)	Modular head	Y-axis feed	Through-coolant	Direct connection	Pitch (mm) 0	1	2	3	4	5	Page
			0.05 - 0.2	●	●	●	●	0.4			3			5-31
			0.05 - 0.2	●		●	●	0.4			3			5-31
			0.05 - 0.2					0.4			3			5-32
	●	●	0.05 - 0.2					0.4			3			5-32
			0.05 - 0.2	●		●		0.4			3			5-33

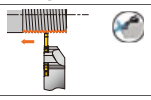
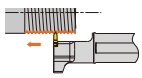
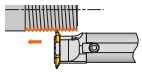
Miniature Threading - Quick Guide

External Threading
Metric

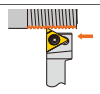
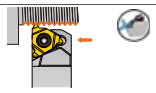
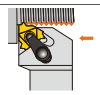
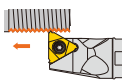
TTP series

Application	Designation	Insert	Square shank (height x width)							Cylindrical shank (shank dia.)					
			8 x 10	10 x 10	10 x 12	12 x 12	16 x 16	20 x 20	25 x 25	ø16	ø19.05	ø20	ø22	ø25	ø25.4
	TTPR/L-OH2/OH3	TTP			●	●	●								
	TTPR/L	TTP	●	●		●	●	●							
	TTPL-F	TTP				●	●								
	**CH-TTPL**	TTP					●	●							
	**DS-TTPL**	TTP								●	●	●	●	●	●

DuoJust-Cut

Application	Designation	Insert	Square shank (height x width)					Cylindrical shank (shank dia.)					
			10 x 10	10 x 12	12 x 12	16 x 16	20 x 20	ø16	ø19.05	ø20	ø22	ø25	ø25.4
	JSXXR/L*09-CHP	JXTG12...		●	●	●							
	**JSXXR/L*09-S-CHP**	JXTG12...			●	●							
	**JS-SXXL09**	JXTG12R...							●	●	●	●	●
	**QR-SXXL09-CHP**	JXTG12R...						●	●	●			

TungThread

Application	Designation	Insert	Square shank (height x width)									Cylindrical shank (shank dia.)				
			8 x 8	10 x 10	12 x 12	16 x 16	20 x 10	20 x 20	24 x 12	24 x 16	32 x 16	ø16	ø19.05	ø20	ø25	ø25.4
	**SER*11**	11ER...	●	●												
	**JSE2R16-CHP**	16ER...			●	●										
	**CER/L**	16ER/L...			●	●		●								
	**JS-SEL16**	16ER...										●	●	●	●	●

Corner R (mm)	Holder: Through-coolant	Holder: Direct connection	Pitch (mm) 0 1 2 3 4 5	Page
	●	●	0.2 – 2.0	5-34
			0.2 – 2.0	5-35
			0.2 – 2.0	5-36
			0.2 – 2.0	5-36
			0.2 – 2.0	5-37

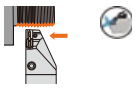
Corner R (mm)	Holder: TUNGTJET (Through-coolant)	Holder: Direct connection	Pitch (mm) 0 1 2 3 4 5	Page
0.05Max. - 0.1	●	●	0.2 – 1.5	5-39
0.05Max. - 0.1	●	●	0.2 – 1.5	5-39
0.05Max. - 0.1			0.2 – 1.5	5-40
0.05Max. - 0.1			0.2 – 1.5	5-40

Corner R (mm)	Holder: MODUMTURN (Modular head)	Holder: TUNGTJET (Through-coolant)	Holder: Direct connection	Pitch (mm) 1 2 3 4 5	Page
0.04 - 0.19				0.35 – 1.5	5-41
0.05 - 0.22	●	●	●	0.5 – 3	5-41
0.05 - 0.22				0.5 – 3	5-42
0.05 - 0.22				0.5 – 3	5-42

Miniature Threading - Quick Guide

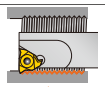
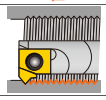
External Threading
Metric

MiniVLockGroove

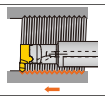
Application	Designation	Insert	Square shank (height x width) 10 x 10	10 x 12	12 x 12	12 x 16	Corner R (mm)	Holder: MODUMTURN (Modular head)	Holder: TUNGTJET (Through-coolant)	Holder: Direct connection	Pitch (mm) 0 1 2 3 4 5	Page
	**QC12-SVER/ L-CHP** Modular head	VGT10F...		●	●	●	0.05 - 0.1	●	●	●	0.4 — 2	5-29
	SVER/L	VGT10F...	●		●		0.05 - 0.1		●	●	0.4 — 2	5-29

Internal Threading
Metric

TungThread

Application	Designation	Insert	Min. bore diameter DMIN (mm)	Corner R (mm)	Pitch (mm) 0 1 2 3 4 5	Page
	**SIR**	6/8IR...	ø6.4 - ø8	0.04 - 0.17	0.5 — 2	5-43
	**SNR**	6IR...	ø8 - ø10	0.04 - 0.1	0.5 — 1.75	5-44

TinyInternalCut

Application	Designation	Insert	Min. bore diameter DMIN (mm)	Corner R (mm)	material	Pitch (mm) 0 1 2 3 4 5	Page
	**A/E-SMR**	M*R...	ø5 - ø7	0.03 - 0.07	steel	0.5 — 1.25	5-45

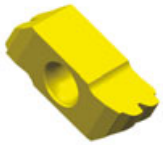
Thread Whirling

For high-efficiency thread cutting | Swiss CNC Lathes

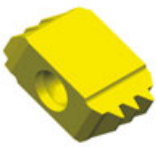
High productivity for precision screw manufacturing, like dental implant screws and bone screws

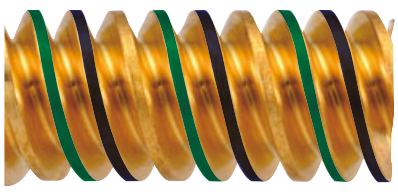
Ideal for medical screw thread forms that are becoming more complex
Single pass thread forming reduces cycle time

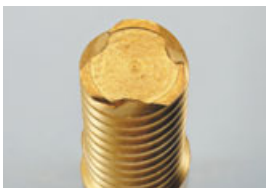
Double lead thread



Triple lead thread

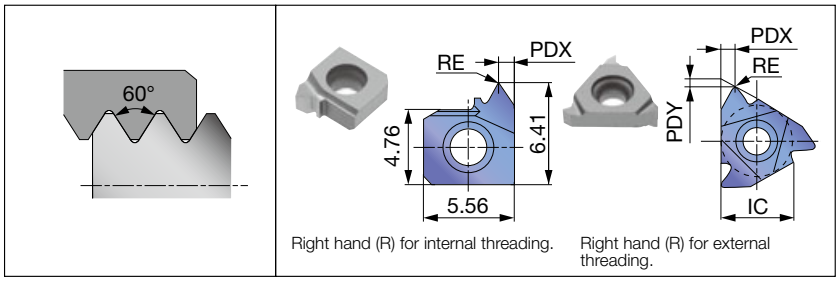






Reference pages: Inserts → 5-60

60° thread angle (General purpose)



Right hand (R) for internal threading.

Right hand (R) for external threading.

Applicable toolholder

Insert size	External	Internal
6		SNR/L000*K06SC... SNR/L000*H06...
06		SIR0005...
08		SIR0007...
11	SER**11	SNR/L**11...
16	CER/L**16... (C*CER/L...) JSER**16... JS**SEL16 SER**16-CHP B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...
22	CER/L**22... SER**22-CHP	TSNR/L**22 SNR/L**22... TCNR/L**22... CNR/L**22...
27	CER/L**27...	CNR/L**27...

Partial-profile insert

Insert size	Pitch (Reference) (mm)	TPI	Hand of cut	External insert (in)									Internal insert (in)								
				Designation	Grade					IC	PDX	PDY	RE	Designation	Grade					IC	PDX	PDY	RE
					Coated				Uncoated						Coated				Uncoated				
					AH8015	AH725	T313V	TH10							AH8015	AH725	GH330	T313V	TH10				
6	0.5 - 1.5	48 - 16	R											6IRA60	●	●			●	-	0.035	-	0.0016
06	0.5 - 1.25	48 - 20	R											06IRA60			●**			0.157	0.024	0.024	0.0020
08	0.5 - 1.5	48 - 16	R											08IRA60		●**				0.197	0.028	0.024	0.0020
11	0.5 - 1.5	48 - 16	R	11ERA60		●				0.250	0.035	0.031	0.0024	11IRA60	●	●		●	●	0.250	0.035	0.028	0.0016
11	0.5 - 1.5	48 - 16	L											11ILA60		●		●	●	0.250	0.035	0.028	0.0016
16	0.5 - 1.5	48 - 16	R	16ERA60	●	●	●	●		0.375	0.035	0.028	0.0024	16IRA60	●	●		●	●	0.375	0.035	0.028	0.0016
16	0.5 - 1.5	48 - 16	L	16ELA60		●	●	●		0.375	0.035	0.028	0.0024	16ILA60		●		●	●	0.375	0.035	0.028	0.0016
16	0.5 - 3	48 - 8	R	16ERAG60	●	●	●			0.375	0.063	0.047	0.0024	16IRAG60	●	●		●		0.375	0.063	0.047	0.0016
16	1.75 - 3	14 - 8	R	16ERG60	●	●	●	●		0.375	0.063	0.047	0.009	16IRG60	●	●		●	●	0.375	0.063	0.047	0.005
16	1.75 - 3	14 - 8	L	16ELG60		●	●			0.375	0.063	0.047	0.009	16ILG60		●		●	●	0.375	0.063	0.047	0.005
22	3.5 - 5	7 - 5	R	22ERN60	●	●	●	●		0.500	0.098	0.067	0.017	22IRN60	●	●		●	●	0.500	0.098	0.067	0.010
22	3.5 - 5	7 - 5	L	22ELN60		●	●			0.500	0.098	0.067	0.017	22ILN60		●		●		0.500	0.098	0.067	0.010
27	4 - 6	6 - 4	R	27ERZ60		●	●			0.625	0.126	0.087	0.020	27IRZ60		●		●		0.625	0.126	0.087	0.011

●** : Both ..06IR... and ..08IR... inserts have 3 cutting edges.

● : Line up / 5 pieces per package

Partial-profile insert

Insert size	Pitch (mm)	TPI	Hand of cut	External insert (in)					
				Designation	Grade	IC	PDX	PDY	RE
					CBN				
					BX330				
16	1 - 2	20 - 13	R	1QP-16ER60-014-SP	●	0.375	0.037	0.028	0.006
16	1.5 - 3	16 - 8	R	1QP-16ER60-020-SP	●	0.375	0.061	0.047	0.008

● : Line up / 1 piece per package

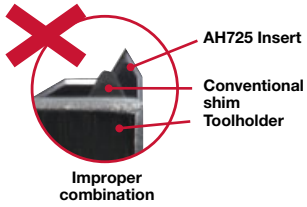
Reference pages: External toolholders → 5-41 - 5-42
Inernal toolholders → 5-43 - 5-44

Partial-profile insert with chipbreaker

Insert size	Pitch (Reference) (mm)	TPI	Hand of cut	External insert (in)								Internal insert (in)							
				Designation	Grade			IC	PDX	PDY	RE	Designation	Grade			IC	PDX	PDY	RE
					Coated		Cermet						Coated		Cermet				
					AH8015	AH725	NS9530						AH8015	AH725	NS9530				
11	0.5 - 1.5	48 - 16	R									11IRA60-B		●		0.250	0.035	0.028	0.0016
11	0.5 - 1.5	48 - 16	R									11IRA60-M	●		●	0.250	0.035	0.028	0.0016
16	0.5 - 1.5	48 - 16	R	16ERA60-B		●*		0.375	0.035	0.031	0.0020	16IRA60-B		●*		0.375	0.035	0.031	0.0020
16	0.5 - 1.5	48 - 16	R	16ERA60-M	●		●	0.375	0.035	0.028	0.0024	16IRA60-M	●		●	0.375	0.035	0.028	0.0016
16	0.5 - 3	48 - 8	R	16ERAG60-B		●*		0.375	0.067	0.047	0.0031	16IRAG60-B		●*		0.375	0.067	0.047	0.0020
16	0.5 - 3	48 - 8	R	16ERAG60-M	●	●	●	0.375	0.063	0.047	0.0024	16IRAG60-M	●	●	●	0.375	0.063	0.047	0.0016
16	1.75 - 3	14 - 8	R	16ERG60-B		●*		0.375	0.067	0.047	0.010	16IRG60-B		●*		0.375	0.067	0.047	0.004
16	1.75 - 3	14 - 8	R	16ERG60-M	●		●	0.375	0.063	0.047	0.009	16IRG60-M	●		●	0.375	0.063	0.047	0.006
22	3.5 - 5	7 - 5	R	22ERN60-B		●		0.500	0.098	0.067	0.013	22IRN60-B		●		0.500	0.098	0.067	0.007

- ●* : The cutting edge position needs adjusting for these inserts have different PDY and PDX dimensions (Note: for size 16 inserts only).
- requires the use of dedicated shim.
When using a new AH725 with chipbreaker, the conventional shim may need to be replaced with a new standard shim.

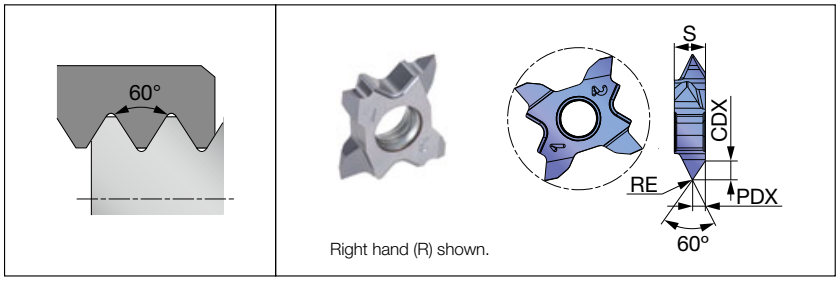
● : Line up / 5 pieces per package



TETRA MINI CUT

INSERT

60° thread angle (General purpose)



Applicable toolholder

External
STCR/L**-18
STCR/L**18-CHP
JS**-STCL18
C*STCFL**18-CHP
C*STCR/L**18-CHP
QC**STCR/L18 (-Y)
QC**STCR/L18 (-Y)-CHP

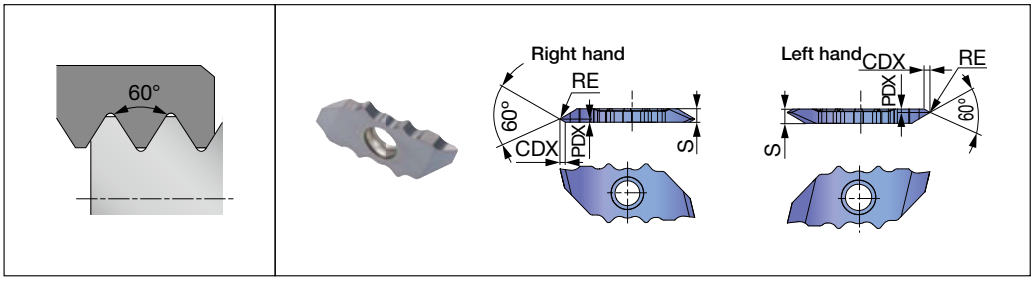
Partial-profile insert

Pitch (mm)	TPI	Hand of cut	External insert (in)						
			Designation	Grade		PDX	CDX	RE	S
				Coated					
				SH725	AH725				
0.4 - 1	25 - 64	R	TCT18FR-60A-005	●		0.024	0.039	0.0020	0.157
1 - 2	25 - 12	R	TCT18FR-60A-010	●		0.039	0.064	0.004	0.157
0.8 - 3	8 - 32	R/L	TCT18R/L-60N-010		●	0.063	0.105	0.004	0.157
1.5 - 3	8 - 16	R/L	TCT18R/L-60N-020		●	0.063	0.101	0.008	0.157

● : Line up / 5 pieces per package

Reference pages: Toolholders → 5-31 - 5-33

60° thread angle (General purpose)



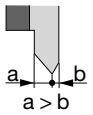
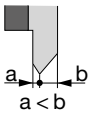
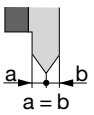
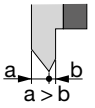
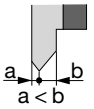
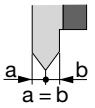
Applicable toolholder

External
JSXXR/L**09
JSXXR/L**09-CHP
JS**-SXXL09

Partial-profile insert

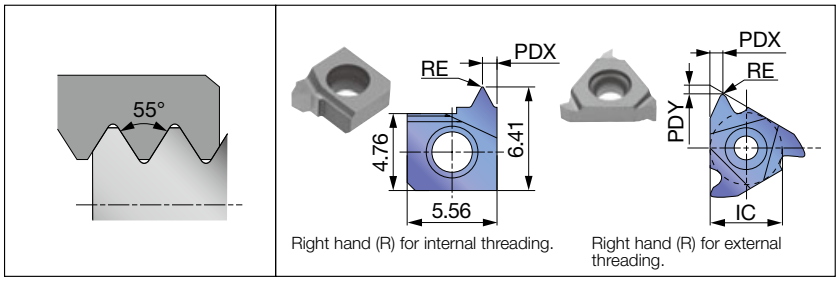
Insert size	Pitch (mm)	TPI	Hand of cut	External insert (in) Designation	Grade Coated SH725 R	Grade Coated SH725 L	PDX	CDX	RE	S
12	0.2 - 0.4	64 - 127	R/L	**JXTG12FR/L-60A-000**	●	●	0.010	0.016	0.0020 max flat	0.098
12	0.2 - 0.4	64 - 127	R/L	**JXTG12FR/L-60B-000**	●	●	0.089	0.016	0.0020 max flat	0.098
12	0.4 - 1	25 - 64	R/L	**JXTG12FR/L-60A-005**	●	●	0.024	0.039	0.0020	0.098
12	0.4 - 1	25 - 64	R/L	**JXTG12FR/L-60B-005**	●	●	0.075	0.039	0.0020	0.098
12	1 - 1.5	16 - 25	R/L	**JXTG12FR/L-60N-010**	●	●	0.049	0.081	0.004	0.098

● : Line up / 5 pieces per package

	Type A	Type B	Type N
Right hand			
Left hand			

Reference pages: Toolholders → 5-39 - 5-40

55° thread angle (General purpose)



Right hand (R) for internal threading.

Right hand (R) for external threading.

Applicable toolholder

Insert size	External	Internal
6		SNR/L000*K06SC... SNR/L000*H06...
06		SIR0005...
08		SIR0007...
11	SER**11	SNR/L**11...
16	CER/L**16... (C*CER/L...) JSER**16... JS**SEL16 SER**16-CHP B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...
22	CER/L**22... SER**22-CHP	TSNR/L**22 SNR/L**22... TCNR/L**22... CNR/L**22...

Partial-profile insert

Insert size	Pitch (Reference) (in)	TPI	Hand of cut	External insert (in)									Internal insert (in)								
				Designation	Grade				IC	PDX	PDY	RE	Designation	Grade					IC	PDX	PDY	RE
					Coated			Uncoated						Coated				Uncoated				
					AH8015	AH725	T313V	TH10						AH8015	AH725	GH330	T313V	TH10				
6	0.020 - 0.059	48 - 16	R										6IRA55		●			●	-	0.035	-	0.0028
06	0.020 - 0.049	48 - 20	R										06IRA55			●**			0.157	0.020	0.020	0.0031
08	0.020 - 0.059	48 - 16	R										08IRA55		●**				0.197	0.028	0.024	0.0031
11	0.020 - 0.059	48 - 16	R	11ERA55		●			0.250	0.035	0.031	0.0020	11IRA55	●	●		●	●	0.250	0.035	0.028	0.0028
16	0.020 - 0.059	48 - 16	R	16ERA55		●	●	●	0.375	0.035	0.028	0.0028	16IRA55		●		●	●	0.375	0.035	0.028	0.0028
16	0.020 - 0.118	48 - 8	R	16ERAG55		●			0.375	0.067	0.047	0.0028	16IRAG55		●				0.375	0.067	0.047	0.0028
16	0.069 - 0.118	14 - 8	R	16ERG55	●	●	●	●	0.375	0.063	0.047	0.010	16IRG55	●	●		●	●	0.375	0.067	0.047	0.010
22	0.138 - 0.197	7 - 5	R	22ERN55		●	●	●	0.500	0.098	0.067	0.020	22IRN55		●		●	●	0.500	0.098	0.067	0.020

● : Line up / 5 pieces per package

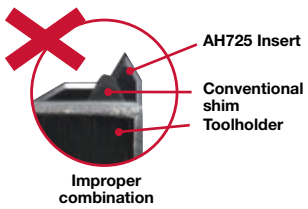
Partial-profile insert with chipbreaker

Insert size	Pitch (Reference) (in)	TPI	Hand of cut	External insert (in)						Internal insert (in)					
				Designation	Grade	IC	PDX	PDY	RE	Designation	Grade	IC	PDX	PDY	RE
					Coated						Coated				
					AH725						AH725				
16	0.020 - 0.118	48 - 16	R	16ERAG55-B	●*	0.375	0.067	0.047	0.0028	16IRAG55-B	●*	0.375	0.067	0.047	0.0020
16	0.069 - 0.118	14 - 8	R	16ERG55-B	●*	0.375	0.067	0.047	0.009	16IRG55-B	●*	0.375	0.067	0.047	0.008

● : Line up / 5 pieces per package

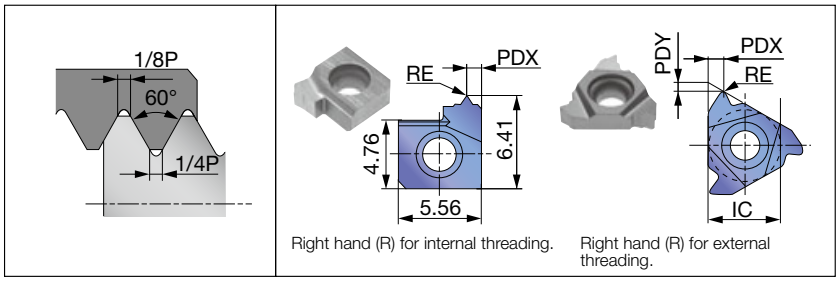
- ●* : The cutting edge position needs re-adjusting for these inserts have different PDY and PDX dimensions (Note: for size 16 inserts only).
- ●** : Both ..06IR... and ..08IR... inserts have 3 cutting edges.
- requires the use of dedicated shim.

When using a new AH725 with chipbreaker, the conventional shim may need to be replaced with a new standard shim.



Reference pages: External toolholders → 5-41 - 5-42
Inernal toolholders → 5-43 - 5-44

ISO metric (General purpose)



Right hand (R) for internal threading.

Right hand (R) for external threading.

Applicable toolholder

Insert size	External	Internal
6		SNR/L000*K06SC... SNR/L000*H06...
06		SIR0005...
08		SIR0007...
11	SER**11	SNR/L**11...
16	CER/L**16... (C*CER/L...) JSER**16... JS**SEL16 SER**16-CHP B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...
22	CER/L**22... SER**22-CHP	TSNR/L**22 SNR/L**22... TCNR/L**22... CNR/L**22...
27	CER/L**27...	CNR/L**27...

Full-profile insert

Insert size	Pitch (Reference) (mm)	Hand of cut	External insert (in)									Internal insert (in)								
			Designation	Grade				IC	PDX	PDY	RE	Designation	Grade				IC	PDX	PDY	RE
				Coated			Uncoated						Coated			Uncoated				
				AH8015	AH725	T313V	TH10						AH8015	AH725	T313V	TH10				
6	0.75	R										6IR075ISO		●		●	-	0.020	-	0.0020
6	1	R										6IR10ISO	●	●		●	-	0.035	-	0.0028
6	1.25	R										6IR125ISO	●	●		●	-	0.035	-	0.0035
6	1.5	R										6IR15ISO	●	●		●	-	0.035	-	0.004
6	1.75	R										6IR175ISO	●	●		●	-	0.035	-	0.005
6	2	R										6IR20ISO	●	●		●	-	0.035	-	0.006
06	0.5	R										06IR05ISO		●**			0.157	0.016	0.024	0.0016
06	0.75	R										06IR075ISO		●**			0.157	0.020	0.024	0.0024
06	1	R										06IR10ISO		●**			0.157	0.024	0.024	0.0020
06	1.25	R										06IR125ISO		●**			0.157	0.024	0.024	0.0028
08	1	R										08IR10ISO		●**			0.197	0.024	0.024	0.0028
08	1.25	R										08IR125ISO		●**			0.197	0.028	0.028	0.0035
08	1.5	R										08IR15ISO		●**			0.197	0.028	0.028	0.004
08	1.75	R										08IR175ISO		●**			0.197	0.031	0.024	0.006
11	0.35	R	11ER035ISO		●			0.250	0.016	0.024	0.0016									
11	0.5	R	11ER05ISO		●			0.250	0.024	0.024	0.0024	11IR05ISO		●		●	0.250	0.020	0.047	0.0016
11	0.7	R	11ER07ISO		●			0.250	0.024	0.024	0.004									
11	0.75	R	11ER075ISO		●			0.250	0.024	0.024	0.004	11IR075ISO	●	●			0.250	0.020	0.047	0.0020
11	0.8	R	11ER080ISO		●			0.250	0.024	0.024	0.005									
11	1	R	11ER10ISO		●			0.250	0.028	0.028	0.006	11IR10ISO	●	●	●	●	0.250	0.035	0.028	0.0028
11	1	L										11IL10ISO	●	●			0.250	0.035	0.028	0.0028
11	1.25	R	11ER125ISO		●			0.250	0.035	0.031	0.006	11IR125ISO		●			0.250	0.035	0.028	0.0035
11	1.25	L										11IL125ISO		●			0.250	0.035	0.028	0.0035
11	1.5	R	11ER15ISO		●			0.250	0.031	0.039	0.007	11IR15ISO	●	●	●	●	0.250	0.035	0.028	0.004
11	1.5	L										11IL15ISO	●	●			0.250	0.035	0.028	0.004
11	1.75	R										11IR175ISO		●	●		0.250	0.035	0.028	0.005
11	1.75	L										11IL175ISO		●			0.250	0.035	0.028	0.005
11	2	R										11IR20ISO	●	●	●		0.250	0.035	0.028	0.006
11	2	L										11IL20ISO	●	●			0.250	0.035	0.028	0.006

●** : Both ..06IR... and ..08IR... inserts have 3 cutting edges.

● : Line up / 5 pieces per package

Reference pages: External toolholders → 5-41 - 5-42
Inernal toolholders → 5-43 - 5-44

Insert size	Pitch (Reference) (mm)	Hand of cut	External insert (in)									Internal insert (in)								
			Designation	Grade				IC	PDX	PDY	RE	Designation	Grade				IC	PDX	PDY	RE
				Coated			Uncoated						Coated			Uncoated				
				AH8015	AH725	T313V	TH10						AH8015	AH725	T313V	TH10				
16	0.5	R	**16ER05ISO**	●	●		●	0.375	0.020	0.047	0.0024	**16IR05ISO**		●			0.375	0.020	0.047	0.0016
16	0.75	R	**16ER075ISO**	●	●	●	●	0.375	0.020	0.047	0.0035	**16IR075ISO**		●			0.375	0.020	0.047	0.0020
16	1	R	**16ER10ISO**	●	●	●	●	0.375	0.035	0.028	0.005	**16IR10ISO**	●	●	●	●	0.375	0.035	0.028	0.0028
16	1	L						0.000	0.000	0.000	0.000	**16IL10ISO**	●	●			0.375	0.035	0.028	0.0028
16	1.25	R	**16ER125ISO**	●	●	●		0.375	0.035	0.028	0.006	**16IR125ISO**		●			0.375	0.035	0.028	0.0035
16	1.25	L						0.000	0.000	0.000	0.000	**16IL125ISO**		●			0.375	0.035	0.028	0.0035
16	1.5	R	**16ER15ISO**	●	●	●	●	0.375	0.035	0.028	0.007	**16IR15ISO**	●	●	●	●	0.375	0.035	0.028	0.004
16	1.5	L	**16EL15ISO**	●				0.375	0.035	0.028	0.007	**16IL15ISO**	●	●			0.375	0.035	0.028	0.004
16	1.75	R	**16ER175ISO**	●	●	●		0.375	0.063	0.047	0.009	**16IR175ISO**		●	●		0.375	0.063	0.047	0.005
16	2	R	**16ER20ISO**	●	●	●	●	0.375	0.063	0.047	0.010	**16IR20ISO**	●	●	●	●	0.375	0.063	0.047	0.006
16	2	L	**16EL20ISO**	●	●			0.375	0.063	0.047	0.010	**16IL20ISO**		●			0.375	0.063	0.047	0.006
16	2.5	R	**16ER25ISO**	●	●	●	●	0.375	0.063	0.047	0.012	**16IR25ISO**	●	●	●	●	0.375	0.063	0.047	0.007
16	3	R	**16ER30ISO**	●	●	●	●	0.375	0.063	0.047	0.015	**16IR30ISO**	●	●	●	●	0.375	0.063	0.047	0.008
16	3	L						0.000	0.000	0.000	0.000	**16IL30ISO**		●			0.375	0.063	0.047	0.008
22	3.5	R	**22ER35ISO**	●	●	●		0.500	0.098	0.067	0.017	**22IR35ISO**	●	●	●		0.500	0.098	0.067	0.010
22	4	R	**22ER40ISO**	●	●	●		0.500	0.098	0.067	0.020	**22IR40ISO**	●	●	●		0.500	0.098	0.067	0.011
22	4.5	R	**22ER45ISO**	●	●			0.500	0.098	0.067	0.022	**22IR45ISO**	●	●			0.500	0.098	0.067	0.013
22	5	R	**22ER50ISO**		●	●		0.500	0.098	0.067	0.025	**22IR50ISO**		●	●		0.500	0.098	0.067	0.014
27	6	R	**27ER60ISO**		●	●		0.625	0.126	0.087	0.030	**27IR60ISO**		●	●		0.625	0.126	0.087	0.017

● : Line up / 5 pieces per package

Reference pages: External toolholders → 5-41 - 5-42
Inernal toolholders → 5-43 - 5-44

Full-profile insert with chipbreaker

Insert size	Pitch (Reference) (mm)	Hand of cut	External insert (in) Designation	Grade: Coated AH8015	Grade: Coated AH725	Grade: Cermet NS9530	IC	PDX	PDY	RE	Internal insert (in) Designation	Grade: Coated AH8015	Grade: Coated AH725	Grade: Cermet NS9530	IC	PDX	PDY	RE
11	0.5	R									11IR05ISO-B		●		0.250	0.020	0.047	0.0016
11	0.5	R									11IR05ISO-M			●	0.250	0.020	0.047	0.0016
11	0.75	R									11IR075ISO-B		●		0.250	0.020	0.047	0.0020
11	0.75	R									11IR075ISO-M			●	0.250	0.020	0.047	0.0020
11	1	R									11IR10ISO-B		●		0.250	0.035	0.028	0.0031
11	1	R									11IR10ISO-M	●		●	0.250	0.035	0.028	0.0031
11	1.25	R									11IR125ISO-B		●		0.250	0.035	0.028	0.004
11	1.25	R									11IR125ISO-M	●		●	0.250	0.035	0.028	0.004
11	1.5	R									11IR15ISO-B		●		0.250	0.035	0.028	0.005
11	1.5	R									11IR15ISO-M	●		●	0.250	0.035	0.028	0.005
11	1.75	R									11IR175ISO-B		●		0.250	0.035	0.028	0.005
11	1.75	R									11IR175ISO-M			●	0.250	0.035	0.028	0.005
11	2	R									11IR20ISO-B		●		0.250	0.035	0.028	0.006
11	2	R									11IR20ISO-M	●		●	0.250	0.035	0.028	0.006
16	0.5	R	16ER05ISO-M			●	0.375	0.020	0.047	0.0024								
16	0.75	R	16ER075ISO-B		●*		0.375	0.024	0.024	0.0031								
16	0.75	R	16ER075ISO-M	●		●	0.375	0.020	0.047	0.0035								
16	1	R	16ER10ISO-B		●*		0.375	0.028	0.028	0.004	16IR10ISO-B		●*		0.375	0.028	0.024	0.0020
16	1	R	16ER10ISO-M	●	●	●	0.375	0.035	0.028	0.005	16IR10ISO-M	●		●	0.375	0.035	0.028	0.0031
16	1.25	R	16ER125ISO-B		●*		0.375	0.035	0.031	0.006	16IR125ISO-B		●*		0.375	0.035	0.031	0.0024
16	1.25	R	16ER125ISO-M	●		●	0.375	0.035	0.028	0.006	16IR125ISO-M			●	0.375	0.035	0.028	0.004
16	1.5	R	16ER15ISO-B		●*		0.375	0.039	0.031	0.007	16IR15ISO-B		●*		0.375	0.039	0.031	0.0031
16	1.5	R	16ER15ISO-M	●	●	●	0.375	0.035	0.028	0.007	16IR15ISO-M	●	●	●	0.375	0.035	0.028	0.005
16	1.75	R	16ER175ISO-B		●*		0.375	0.047	0.035	0.010	16IR175ISO-B		●*		0.375	0.047	0.035	0.004
16	1.75	R	16ER175ISO-M	●		●	0.375	0.063	0.047	0.009	16IR175ISO-M			●	0.375	0.063	0.047	0.006
16	2	R	16ER20ISO-B		●*		0.375	0.051	0.039	0.011	16IR20ISO-B		●*		0.375	0.051	0.039	0.004
16	2	R	16ER20ISO-M	●	●	●	0.375	0.063	0.047	0.010	16IR20ISO-M	●		●	0.375	0.063	0.047	0.006
16	2.5	R	16ER25ISO-B		●*		0.375	0.059	0.043	0.012	16IR25ISO-B		●*		0.375	0.059	0.043	0.006
16	2.5	R	16ER25ISO-M	●		●	0.375	0.063	0.047	0.012	16IR25ISO-M			●	0.375	0.063	0.047	0.007
16	3	R	16ER30ISO-B		●*		0.375	0.063	0.047	0.015	16IR30ISO-B		●*		0.375	0.059	0.043	0.009
16	3	R	16ER30ISO-M	●		●	0.375	0.063	0.047	0.015	16IR30ISO-M	●		●	0.375	0.063	0.047	0.008
22	3.5	R	22ER35ISO-B		●		0.500	0.091	0.063	0.019								
22	4	R	22ER40ISO-B		●		0.500	0.091	0.063	0.020								

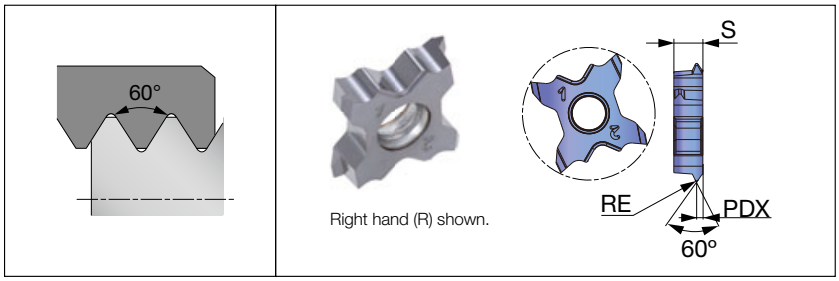
- ●* : The cutting edge position needs re-adjusting for these inserts have different PDY and PDX dimensions (Note: for size 16 inserts only).
- requires the use of dedicated shim.
When using a new AH725 with chipbreaker, the conventional shim may need to be replaced with a new standard shim.

● : Line up / 5 pieces per package

Thread form
60°
55°
M (Metric)
UN (Unified)
W (Whitworth)
BSPT (R, PT)
NPT
NPTF
UNJ

Reference pages: External toolholders → 5-41 - 5-42
Inernal toolholders → 5-43 - 5-44

ISO metric (General purpose)



Right hand (R) shown.

Applicable toolholder

External
STCR/L**-18
STCR/L**18-CHP
JS**-STCL18
C*STCFL**18-CHP
C*STCR/L**18-CHP
QC**STCR/L18 (-Y)
QC**STCR/L18 (-Y)-CHP

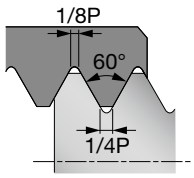
Partial-profile insert

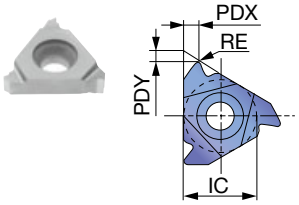
Pitch (mm)	Hand of cut	External insert (in) Designation	Grade Coated SH725	Grade Coated AH725	PDX	RE	S
0.5	R	**TCT18FR-05ISO**	●		0.014	0.0024	0.157
0.7	R	**TCT18FR-07ISO**	●		0.018	0.0035	0.157
0.75	R	**TCT18FR-075ISO**	●		0.020	0.0035	0.157
0.8	R	**TCT18FR-08ISO**	●		0.020	0.004	0.157
1	R	**TCT18R-10ISO**		●	0.024	0.005	0.157
1.25	R	**TCT18R-125ISO**		●	0.028	0.007	0.157
1.5	R	**TCT18R-15ISO**		●	0.031	0.008	0.157

● : Line up / 5 pieces per package

Reference pages: Toolholders → 5-31 - 5-33

Unified (General purpose)





Right hand (R) for external threading.

Applicable toolholder

Insert size	External	Internal
11	SER**11	SNR/L**11...
16	CER/L**16... (C*CER/L...) JSER**16... JS**SEL16 SER**16-CHP B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...
22	CER/L**22... SER**22-CHP	TSNR/L**22 SNR/L**22... TCNR/L**22... CNR/L**22...

Thread form

60°
55°
M (Metric)
UN (Unified)
W (Whitworth)
BSPT (R, PT)
NPT
NPTF
UNJ

Full-profile insert

Insert size	Pitch (Reference) (in)	TPI	Hand of cut	External insert (in) Designation	Grade: Coated AH8015	Grade: Coated AH725	Grade: Coated T313V	IC	PDX	PDY	RE	Internal insert (in) Designation	Grade: Coated AH8015	Grade: Coated AH725	Grade: Coated T313V	IC	PDX	PDY	RE
11	(0.031)	32	R									**11IR32UN**		●		0.250	0.020	0.047	0.0024
11	(0.036)	28	R									**11IR28UN**		●		0.250	0.020	0.047	0.0024
11	(0.042)	24	R									**11IR24UN**		●		0.250	0.035	0.028	0.0028
11	(0.050)	20	R									**11IR20UN**		●		0.250	0.035	0.028	0.0035
11	(0.056)	18	R									**11IR18UN**		●		0.250	0.035	0.028	0.004
11	(0.063)	16	R									**11IR16UN**	●	●		0.250	0.035	0.028	0.004
11	(0.071)	14	R									**11IR14UN**		●		0.250	0.035	0.028	0.005
16	(0.031)	32	R	**16ER32UN**	●	●		0.375	0.020	0.047	0.004	**16IR32UN**		●		0.375	0.020	0.047	0.0024
16	(0.036)	28	R	**16ER28UN**	●	●		0.375	0.020	0.047	0.004	**16IR28UN**		●		0.375	0.020	0.047	0.0024
16	(0.042)	24	R	**16ER24UN**	●	●		0.375	0.035	0.028	0.005	**16IR24UN**		●		0.375	0.035	0.028	0.0028
16	(0.050)	20	R	**16ER20UN**	●	●		0.375	0.035	0.028	0.006	**16IR20UN**		●		0.375	0.035	0.028	0.0035
16	(0.056)	18	R	**16ER18UN**	●	●		0.375	0.035	0.028	0.007	**16IR18UN**		●		0.375	0.035	0.028	0.004
16	(0.063)	16	R	**16ER16UN**	●	●	●	0.375	0.035	0.028	0.008	**16IR16UN**		●	●	0.375	0.035	0.028	0.004
16	(0.071)	14	R	**16ER14UN**	●	●	●	0.375	0.063	0.047	0.009	**16IR14UN**		●	●	0.375	0.063	0.047	0.005
16	(0.077)	13	R	**16ER13UN**		●		0.375	0.063	0.047	0.009	**16IR13UN**		●		0.375	0.063	0.047	0.006
16	(0.083)	12	R	**16ER12UN**	●	●	●	0.375	0.063	0.047	0.011	**16IR12UN**		●	●	0.375	0.063	0.047	0.006
16	(0.091)	11	R	**16ER11UN**		●		0.375	0.063	0.047	0.011	**16IR11UN**		●		0.375	0.063	0.047	0.006
16	(0.100)	10	R	**16ER10UN**	●	●		0.375	0.063	0.047	0.013	**16IR10UN**		●		0.375	0.063	0.047	0.007
16	(0.111)	9	R	**16ER9UN**		●		0.375	0.063	0.047	0.014	**16IR9UN**		●		0.375	0.063	0.047	0.008
16	(0.125)	8	R	**16ER8UN**	●	●	●	0.375	0.063	0.047	0.016	**16IR8UN**		●	●	0.375	0.063	0.047	0.009
22	(0.143)	7	R	**22ER7UN**		●		0.500	0.098	0.067	0.018	**22IR7UN**		●		0.500	0.098	0.067	0.010
22	(0.167)	6	R	**22ER6UN**		●		0.500	0.098	0.067	0.021	**22IR6UN**		●		0.500	0.098	0.067	0.012
22	(0.200)	5	R	**22ER5UN**		●		0.500	0.098	0.067	0.025	**22IR5UN**		●		0.500	0.098	0.067	0.014

● : Line up / 5 pieces per package

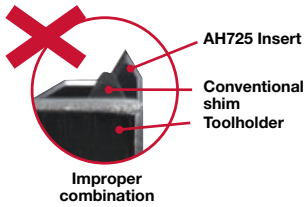
Reference pages: External toolholders → 5-41 - 5-42
Inernal toolholders → 5-43 - 5-44

Full-profile insert with chipbreaker

Insert size	Pitch (Reference) (in)	TPI	Hand of cut	External insert (in)								Internal insert (in)							
				Designation	Grade			IC	PDX	PDY	RE	Designation	Grade			IC	PDX	PDY	RE
					Coated		Cermet						Coated		Cermet				
					AH8015	AH725	NS9530						AH8015	AH725	NS9530				
16	(0.042)	24	R	**16ER24UN-B**		●*		0.375	0.031	0.028	0.004								
16	(0.042)	24	R	**16ER24UN-M**			●	0.375	0.035	0.028	0.005								
16	(0.050)	20	R	**16ER20UN-B**		●*		0.375	0.035	0.031	0.006	**16IR20UN-B**		●*		0.375	0.035	0.031	0.0024
16	(0.050)	20	R	**16ER20UN-M**	●		●	0.375	0.035	0.028	0.006	**16IR20UN-M**			●	0.375	0.035	0.028	0.0035
16	(0.056)	18	R	**16ER18UN-B**		●*		0.375	0.039	0.031	0.006	**16IR18UN-B**		●*		0.375	0.039	0.031	0.0031
16	(0.056)	18	R	**16ER18UN-M**	●		●	0.375	0.035	0.028	0.007	**16IR18UN-M**	●		●	0.375	0.035	0.028	0.004
16	(0.063)	16	R	**16ER16UN-B**		●*		0.375	0.043	0.035	0.007	**16IR16UN-B**		●*		0.375	0.043	0.035	0.0035
16	(0.063)	16	R	**16ER16UN-M**	●		●	0.375	0.035	0.028	0.008	**16IR16UN-M**			●	0.375	0.035	0.028	0.004
16	(0.071)	14	R	**16ER14UN-B**		●*		0.375	0.047	0.039	0.009	**16IR14UN-B**		●*		0.375	0.047	0.035	0.004
16	(0.071)	14	R	**16ER14UN-M**	●		●	0.375	0.063	0.047	0.009	**16IR14UN-M**			●	0.375	0.063	0.047	0.005
16	(0.077)	13	R	**16ER13UN-B**		●*		0.375	0.051	0.039	0.009								
16	(0.083)	12	R	**16ER12UN-B**		●*		0.375	0.055	0.043	0.010	**16IR12UN-B**		●*		0.375	0.055	0.043	0.005
16	(0.083)	12	R	**16ER12UN-M**	●		●	0.375	0.063	0.047	0.011	**16IR12UN-M**	●		●	0.375	0.063	0.047	0.006
16	(0.125)	8	R	**16ER8UN-B**		●*		0.375	0.063	0.047	0.016	**16IR8UN-B**		●*		0.375	0.059	0.043	0.008
16	(0.125)	8	R	**16ER8UN-M**			●	0.375	0.063	0.047	0.016	**16IR8UN-M**			●	0.375	0.063	0.047	0.009

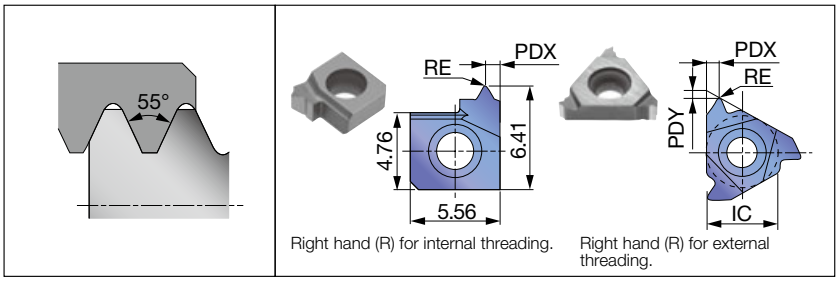
● : Line up / 5 pieces per package

- ●* : The cutting edge position needs re-adjusting for these inserts have different PDY and PDX dimensions (Note: for size 16 inserts only).
- requires the use of dedicated shim.
When using a new AH725 with chipbreaker, the conventional shim may need to be replaced with a new standard shim.



Reference pages: External toolholders → 5-41 - 5-42
Inernal toolholders → 5-43 - 5-44

Whitworth, Parallel pipe thread



Right hand (R) for internal threading.

Right hand (R) for external threading.

Applicable toolholder

Insert size	External	Internal
6		SNR/L000*K06SC... SNR/L000*H06...
11	SER**11	SNR/L**11...
16	CER/L**16... (C*CER/L...) JSER**16... JS**SEL16 SER**16-CHP B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...
22	CER/L**22... SER**22-CHP	TSNR/L**22 SNR/L**22... TCNR/L**22... CNR/L**22...

Thread form: 60° | 55° | M (Metric) | UN (Unified) | W (Whitworth) | BSPT (R, PT) | NPT | NPTF | UNJ

Full-profile insert

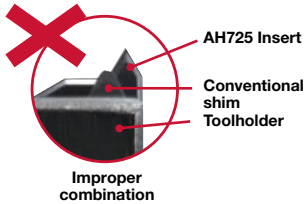
Insert size	Pitch (Reference) (in)	TPI	Hand of cut	External insert (in) Designation	Grade: Coated AH8015	Coated AH725	Coated T313V	Uncoated TH10	IC	PDX	PDY	RE	Internal insert (in) Designation	Grade: Coated AH8015	Coated AH725	Coated T313V	Uncoated TH10	IC	PDX	PDY	RE
6	(0.053)	19	R										6IR19W	●	●		●	-	0.035	-	0.007
11	(0.053)	19	R										11IR19W	●	●	●	●	0.250	0.035	0.028	0.007
11	(0.071)	14	R										11IR14W	●	●	●	●	0.250	0.035	0.028	0.009
16	(0.036)	28	R	16ER28W		●	●		0.375	0.035	0.028	0.004	16IR28W		●			0.375	0.035	0.028	0.004
16	(0.038)	26	R	16ER26W		●			0.375	0.035	0.028	0.005	16IR26W		●			0.375	0.035	0.028	0.005
16	(0.050)	20	R	16ER20W		●			0.375	0.035	0.028	0.006	16IR20W		●			0.375	0.035	0.028	0.006
16	(0.053)	19	R	16ER19W	●	●	●		0.375	0.035	0.028	0.007	16IR19W		●			0.375	0.035	0.028	0.007
16	(0.056)	18	R	16ER18W		●			0.375	0.035	0.028	0.007	16IR18W		●			0.375	0.035	0.028	0.007
16	(0.063)	16	R	16ER16W		●	●		0.375	0.035	0.028	0.008	16IR16W		●	●		0.375	0.035	0.028	0.008
16	(0.071)	14	R	16ER14W	●	●	●	●	0.375	0.063	0.047	0.009	16IR14W	●	●	●	●	0.375	0.063	0.047	0.009
16	(0.071)	14	L	16EL14W		●			0.375	0.063	0.047	0.009									
16	(0.083)	12	R	16ER12W		●	●		0.375	0.063	0.047	0.011	16IR12W		●	●		0.375	0.063	0.047	0.011
16	(0.091)	11	R	16ER11W	●	●	●	●	0.375	0.063	0.047	0.011	16IR11W	●	●	●	●	0.375	0.063	0.047	0.011
16	(0.100)	10	R	16ER10W		●	●		0.375	0.063	0.047	0.013	16IR10W		●	●		0.375	0.063	0.047	0.013
16	(0.111)	9	R	16ER9W		●			0.375	0.063	0.047	0.014	16IR9W		●			0.375	0.063	0.047	0.014
16	(0.125)	8	R	16ER8W		●	●		0.375	0.063	0.047	0.016	16IR8W		●	●		0.375	0.063	0.047	0.016
22	(0.143)	7	R	22ER7W		●			0.500	0.098	0.067	0.018	22IR7W		●			0.500	0.098	0.067	0.018
22	(0.167)	6	R	22ER6W		●			0.500	0.098	0.067	0.021	22IR6W		●			0.500	0.098	0.067	0.021
22	(0.200)	5	R	22ER5W		●			0.500	0.098	0.067	0.025	22IR5W		●			0.500	0.098	0.067	0.025

Full-profile insert with chipbreaker

Insert size	Pitch (Reference) (in)	TPI	Hand of cut	External insert (in) Designation	Grade: Coated AH8015	Coated AH725	Cermet NS9530	IC	PDX	PDY	RE	Internal insert (in) Designation	Grade: Coated AH8015	Coated AH725	Cermet NS9530	IC	PDX	PDY	RE
16	(0.053)	19	R	16ER19W-B		●*		0.375	0.039	0.031	0.006								
16	(0.053)	19	R	16ER19W-M	●		●	0.375	0.035	0.028	0.007	16IR19W-M			●	0.375	0.035	0.028	0.007
16	(0.063)	16	R	16ER16W-B		●*		0.375	0.043	0.035	0.008	16IR16W-B		●*		0.375	0.043	0.035	0.007
16	(0.071)	14	R	16ER14W-B		●*		0.375	0.047	0.039	0.009	16IR14W-B		●*		0.375	0.047	0.039	0.008
16	(0.071)	14	R	16ER14W-M	●		●	0.375	0.063	0.047	0.009	16IR14W-M	●		●	0.375	0.063	0.047	0.009
16	(0.091)	11	R	16ER11W-B		●*		0.375	0.059	0.043	0.011	16IR11W-B		●*		0.375	0.059	0.043	0.011
16	(0.091)	11	R	16ER11W-M	●		●	0.375	0.063	0.047	0.011	16IR11W-M	●		●	0.375	0.063	0.047	0.011

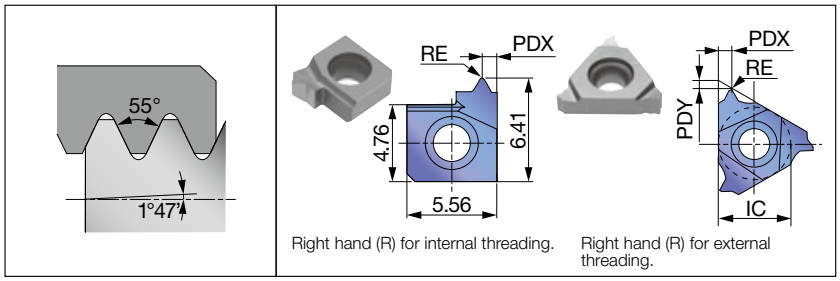
- ●* : The cutting edge position needs re-adjusting for these inserts have different PDY and PDX dimensions (Note: for size 16 inserts only).
- requires the use of dedicated shim.
When using a new AH725 with chipbreaker, the conventional shim may need to be replaced with a new standard shim.

● : Line up / 5 pieces per package



Reference pages: External toolholders → 5-41 - 5-42
Inernal toolholders → 5-43 - 5-44

BSPT (for Pipe)



Right hand (R) for internal threading.

Right hand (R) for external threading.

Applicable toolholder

Insert size	External	Internal
6		SNR/L000*K06SC... SNR/L000*H06...
11	SER**11	SNR/L**11...
16	CER/L**16... (C*CER/L...) JSER**16... JS**SEL16 SER**16-CHP B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...

Full-profile insert

Insert size	Pitch (Reference) (in)	TPI	Hand of cut	External insert (in)									Internal insert (in)							
				Designation	Grade				IC	PDX	PDY	RE	Designation	Grade				IC	PDX	PDY	RE
					Coated			Uncoated						Coated			Uncoated				
					AH8015	AH725	T313V	TH10						AH8015	AH725	T313V	TH10				
6	(0.053)	19	R										**6IR19PT**	●	●		●	-	0.035	-	0.006
11	(0.053)	19	R										**11IR19PT**	●	●	●	●	0.250	0.035	0.028	0.006
11	(0.071)	14	R										**11IR14PT**	●	●	●	●	0.250	0.035	0.028	0.006
16	(0.036)	28	R	**16ER28PT**		●	●		0.375	0.035	0.028	0.0035									
16	(0.053)	19	R	**16ER19PT**	●	●	●		0.375	0.035	0.028	0.006	**16IR19PT**		●			0.375	0.035	0.028	0.006
16	(0.071)	14	R	**16ER14PT**	●	●	●		0.375	0.063	0.047	0.006	**16IR14PT**	●	●	●	●	0.375	0.063	0.047	0.006
16	(0.091)	11	R	**16ER11PT**	●	●	●		0.375	0.063	0.047	0.010	**16IR11PT**	●	●	●	●	0.375	0.063	0.047	0.010

● : Line up / 5 pieces per package

Full-profile insert with chipbreaker

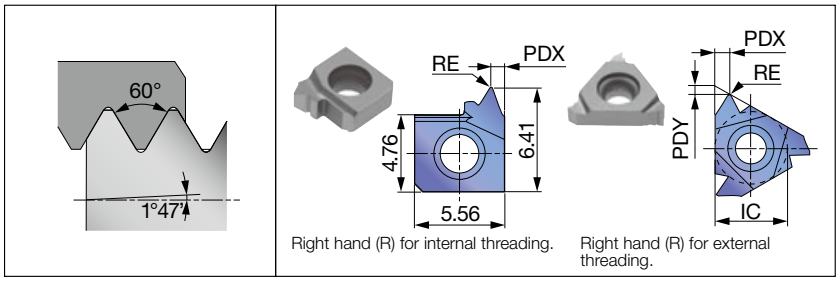
Insert size	Pitch (Reference) (in)	TPI	Hand of cut	External insert (in)								Internal insert (in)							
				Designation	Grade			IC	PDX	PDY	RE	Designation	Grade			IC	PDX	PDY	RE
					Coated		Cermet						Coated		Cermet				
					AH8015	AH725	NS9530						AH8015	AH725	NS9530				
16	(0.053)	19	R	**16ER19PT-M**			●	0.375	0.035	0.028	0.007	**16IR19PT-M**			●	0.375	0.035	0.028	0.007
16	(0.071)	14	R	**16ER14PT-B**		●*		0.375	0.047	0.039	0.009	**16IR14PT-B**		●*		0.375	0.047	0.039	0.008
16	(0.071)	14	R	**16ER14PT-M**	●		●	0.375	0.063	0.047	0.010	**16IR14PT-M**	●		●	0.375	0.063	0.047	0.010
16	(0.091)	11	R	**16ER11PT-B**		●*		0.375	0.059	0.043	0.011	**16IR11PT-B**		●*		0.375	0.059	0.043	0.012
16	(0.091)	11	R	**16ER11PT-M**	●		●	0.375	0.063	0.047	0.013	**16IR11PT-M**	●		●	0.375	0.063	0.047	0.013

- ●* : The cutting edge position needs re-adjusting for these inserts have different PDY and PDX dimensions (Note: for size 16 inserts only).
- ▭ requires the use of dedicated shim.
  When using a new AH725 with chipbreaker, the conventional shim may need to be replaced with a new standard shim.

● : Line up / 5 pieces per package

Reference pages: External toolholders → 5-41 - 5-42
Inernal toolholders → 5-43 - 5-44

NPT (for Pipe)



Right hand (R) for internal threading.

Right hand (R) for external threading.

Applicable toolholder

Insert size	External	Internal
6		SNR/L000*K06SC... SNR/L000*H06...
16	CER/L**16... (C*CER/L...) JSER**16... JS**SEL16 SER**16-CHP B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...

Thread form

60° | 55° | M (Metric) | UN (Unified) | W (Whitworth) | BSPT (R, PT) | NPT | NPTF | UNJ

Full-profile insert

Insert size	Pitch (Reference) (in)	TPI	Hand of cut	External insert (in)									Internal insert (in)								
				Designation	Grade				IC	PDX	PDY	RE	Designation	Grade				IC	PDX	PDY	RE
					Coated			Uncoated						Coated			Uncoated				
					AH8015	AH725	T313V	TH10						AH8015	AH725	T313V	TH10				
6	(0.056)	18	R										6IR18NPT		●		●	-	0.035	-	0.0012
16	(0.037)	27	R	16ER27NPT		●			0.375	0.020	0.047	0.0008	16IR27NPT		●			0.375	0.020	0.047	0.0008
16	(0.056)	18	R	16ER18NPT		●	●		0.375	0.035	0.028	0.0012	16IR18NPT		●			0.375	0.035	0.028	0.0012
16	(0.071)	14	R	16ER14NPT		●			0.375	0.063	0.047	0.0016	16IR14NPT	●	●		●	0.375	0.063	0.047	0.0016
16	(0.087)	11.5	R	16ER115NPT		●			0.375	0.063	0.047	0.0020	16IR115NPT		●		●	0.375	0.063	0.047	0.0020
16	(0.125)	8	R	16ER8NPT		●			0.375	0.063	0.047	0.0028	16IR8NPT		●		●	0.375	0.063	0.047	0.0028

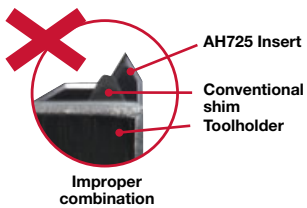
● : Line up / 5 pieces per package

Full-profile insert with chipbreaker

Insert size	Pitch (Reference) (in)	TPI	Hand of cut	External insert (in)								Internal insert (in)							
				Designation	Grade			IC	PDX	PDY	RE	Designation	Grade			IC	PDX	PDY	RE
					Coated		Cermet						Coated		Cermet				
					AH8015	AH725	NS9530						AH8015	AH725	NS9530				
16	(0.056)	18	R	16ER18NPT-B		●*		0.375	0.039	0.031	0.0020								
16	(0.056)	18	R	16ER18NPT-M	●		●	0.375	0.035	0.028	0.0028	16IR18NPT-M			●	0.375	0.035	0.028	0.0028
16	(0.071)	14	R	16ER14NPT-B		●*		0.375	0.047	0.035	0.0020	16IR14NPT-B		●*		0.375	0.047	0.035	0.0020
16	(0.071)	14	R	16ER14NPT-M	●		●	0.375	0.063	0.047	0.0031	16IR14NPT-M	●		●	0.375	0.063	0.047	0.0031
16	(0.087)	11.5	R	16ER115NPT-B		●*		0.375	0.059	0.043	0.0035	16IR115NPT-B		●*		0.375	0.059	0.043	0.0035
16	(0.087)	11.5	R	16ER115NPT-M			●	0.375	0.063	0.047	0.0035	16IR115NPT-M	●		●	0.375	0.063	0.047	0.0035
16	(0.125)	8	R	16ER8NPT-B		●*		0.375	0.071	0.051	0.005	16IR8NPT-B		●*		0.375	0.071	0.051	0.005

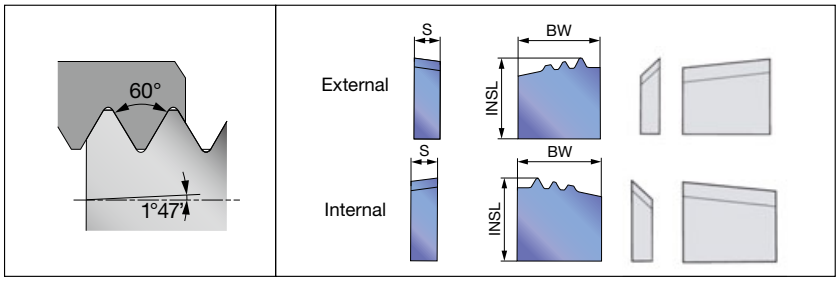
- ●* : The cutting edge position needs re-adjusting for these inserts have different PDY and PDX dimensions (Note: for size 16 inserts only).
- requires the use of dedicated shim.
When using a new AH725 with chipbreaker, the conventional shim may need to be replaced with a new standard shim.

● : Line up / 5 pieces per package



Reference pages: External toolholders → 5-41 - 5-42
Inernal toolholders → 5-43 - 5-44

NPT (for Pipe)



Applicable toolholder

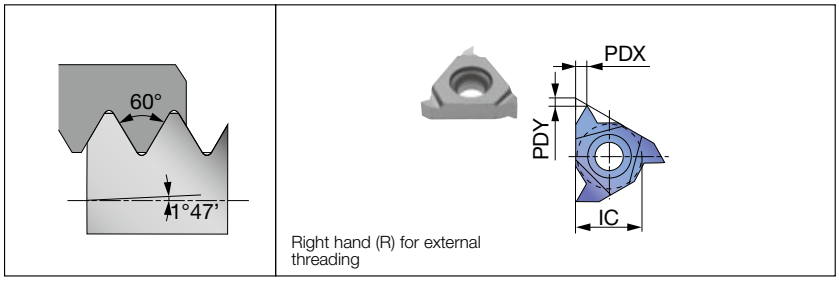
External	Internal
CLVOR-**M...	SI-CLHOR...

Full-profile insert (chaser)

Pitch (Reference) (mm)	TPI	Taper		External insert (in)						Internal insert (in)					
		mm/ mm	TPF	Designation	Grade Coated AH725	BW	INSL	S	Chip breaking attachment	Designation	Grade Coated AH725	BW	INSL	S	Chip breaking attachment
(2.209)	11.5	1/16	0.75	**CR-11.5NPT-4E**	●	0.630	0.618	0.205	CR-8R / 10R-3E / 4E-CB	**CR-11.5NPT-4I**	●	0.630	0.618	0.205	CR-8R / 10R-3I / 4I-CB
(3.175)	8	1/16	0.75	**CR-8NPT-4E**	●	0.630	0.618	0.205	CR-8R / 10R-3E / 4E-CB	**CR-8NPT-4I**	●	0.630	0.618	0.205	CR-8R / 10R-3I / 4I-CB

● : Line up / 5 pieces per package

NPTF (for Pipe)



Applicable toolholder

Insert size	External	Internal
16	CER/L**16... (C*CER/L...)	TSNR/L**16
	JSER**16...	SNR/L**16...
	JS**SEL16	TCNR/L**16...
	SER**16-CHP	CNR/L**16...
	B-SER/L**16	
	B-CER/L**16	
	BC-SER/L**16	

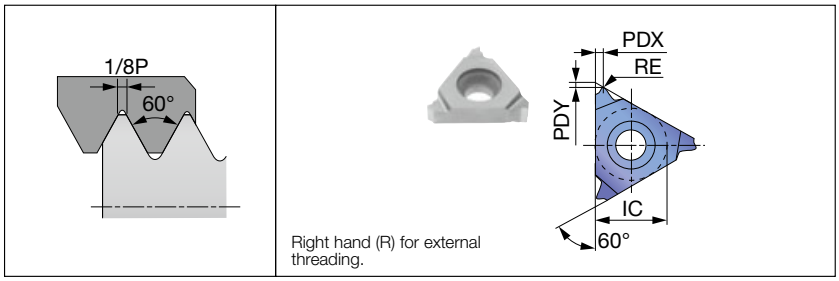
Full-profile insert

Insert size	Pitch (Reference) (in)	TPI	Hand of cut	External insert (in)						Internal insert (in)					
				Designation	Grade Coated AH725	IC	PDX	PDY	RE	Designation	Grade Coated AH725	IC	PDX	PDY	RE
16	(0.037)	27	R	**16ER27NPTF**	●	0.375	0.020	0.047	-						
16	(0.056)	18	R	**16ER18NPTF**	●	0.375	0.035	0.028	-						
16	(0.071)	14	R	**16ER14NPTF**	●	0.375	0.063	0.047	-	**16IR14NPTF**	●	0.375	0.063	0.047	-
16	(0.087)	11.5	R	**16ER115NPTF**	●	0.375	0.063	0.047	-	**16IR115NPTF**	●	0.375	0.063	0.047	-
16	(0.125)	8	R	**16ER8NPTF**	●	0.375	0.063	0.047	-	**16IR8NPTF**	●	0.375	0.063	0.047	-

● : Line up / 5 pieces per package

Reference pages: Toolholders → 5-41 - 5-42

UNJ (for Aerospace industry)



Right hand (R) for external threading.

Applicable toolholder

Insert size	External
16	CER/L**16... (C*CER/L...) JSER**16... JS**SEL16 SER**16-CHP B-SER/L**16 B-CER/L**16 BC-SER/L**16

Full-profile insert

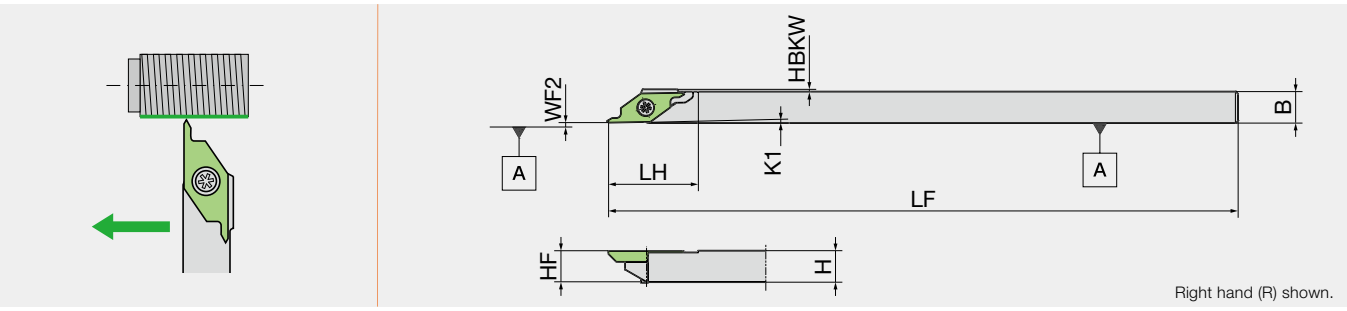
Insert size	Pitch (Reference) (in)	TPI	Hand of cut	External insert (in) Designation	Grade Coated AH8015	Grade Coated AH725	IC	PDX	PDY	RE
16	(0.031)	32	R	**16ER32UNJ**	●	●	0.375	0.020	0.047	0.005
16	(0.036)	28	R	**16ER28UNJ**	●	●	0.375	0.020	0.047	0.006
16	(0.042)	24	R	**16ER24UNJ**	●	●	0.375	0.035	0.028	0.007
16	(0.050)	20	R	**16ER20UNJ**	●	●	0.375	0.035	0.028	0.008
16	(0.056)	18	R	**16ER18UNJ**	●	●	0.375	0.035	0.028	0.009
16	(0.063)	16	R	**16ER16UNJ**	●	●	0.375	0.035	0.028	0.010
16	(0.071)	14	R	**16ER14UNJ**	●	●	0.375	0.063	0.047	0.012
16	(0.083)	12	R	**16ER12UNJ**	●	●	0.375	0.063	0.047	0.014
16	(0.100)	10	R	**16ER10UNJ**	●	●	0.375	0.063	0.047	0.017
16	(0.125)	8	R	**16ER8UNJ**	●	●	0.375	0.063	0.047	0.021

● : Line up / 5 pieces per package

Thread form
60°
55°
M (Metric)
UN (Unified)
W (Whitworth)
BSPT (R, PT)
NPT
NPTF
UNJ

Reference pages: Toolholders → 5-41 - 5-42

For Cam-style machine



Right hand (R) shown.

Inch	H	B	LF	LH	HBKW	HF	K1	WF2	Insert
CSVL06-IN-NC	0.375	0.375	4.724	0.787	0	0.375	1°	0.004	CSV series CSVF.. CSVB.. CSVC.. CSVG.. CSVT..
CSVL08-IN-NC	0.500	0.500	4.724	0.787	0	0.500	1°	0.004	
CSVR06-IN-NC	0.375	0.375	4.724	0.787	0	0.375	1°	0.004	
CSVR08-IN-NC	0.500	0.500	4.724	0.787	0	0.500	1°	0.004	

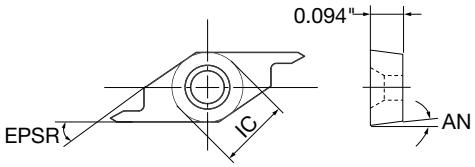
Metric	H	B	LF	LH	HBKW	HF	K1	WF2	Insert
CSVR07	7	7	140	20	0.5	7	1°	0.1	
CSVR07GX	7	7	85	20	0.5	7	1°	0.1	
CSVR08	8	8	140	20	0	8	1°	0.1	
CSVR08GX	8	8	85	20	0	8	1°	0.1	
CSVR095	9.5	9.5	140	20	0	9.5	1°	0.1	
CSVR10	10	10	140	20	0	10	1°	0.1	
CSVR12	12	12	140	20	0	12	1°	0.1	CSV series
CSVR12GX	12	12	85	20	0	12	1°	0.1	CSVF..
CSVL07	7	7	140	20	0.5	7	1°	0.1	CSVB..
CSVL08	8	8	140	20	0	8	1°	0.1	CSVC..
CSVL10	10	10	140	20	0	10	1°	0.1	CSVG..
CSVL08NC	8	8	120	20	0	8	1°	0.1	CSVT..
CSVL10NC	10	10	120	20	0	10	1°	0.1	
CSVL12NC	12	12	120	20	0	12	1°	0.1	
CSVR08NC	8	8	120	20	0	8	1°	0.1	
CSVR08NC-F	8	8	120	20	0	8	1°	0.1	
CSVR10GXNC	10	10	85	20	0	10	1°	0.1	
CSVR10NC	10	10	120	20	0	10	1°	0.1	
CSVR12NC	12	12	120	20	0	12	1°	0.1	

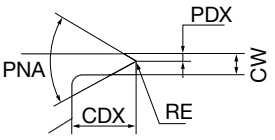
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CSVR/L**	LRIS-2.5*7	CLR-15S

Reference pages: Inserts → 5-28

CSVT-A without chipbreaker





Right hand (R) shown.

P	Steel	★
M	Stainless	☆
N	Non-ferrous	
S	Superalloys	
H	Hard materials	

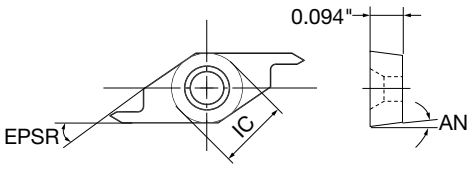
★ : First choice
☆ : Second choice

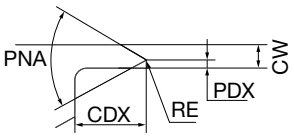
Designation	HAND	Coated VM1	Mirror finish	Pitch (mm)	PNA	CW (in)	PDX (in)	CDX (in)	IC (in)	AN	EPSR	RE (in)
CSVT11FRP60-035A	R	●	Ⓜ	0.2 - 0.5	60°	0.039	0.014	0.118	0.250	7°	35°	0.001MAX
CSVT11FLP60-035A	L	●	Ⓜ	0.2 - 0.5	60°	0.039	0.014	0.118	0.250	7°	35°	0.001MAX

All angles shown are obtained when insert is set in the holder.

● : Line up

CSVT-B without chipbreaker





Right hand (R) shown.

P	Steel	★
M	Stainless	☆
N	Non-ferrous	
S	Superalloys	
H	Hard materials	

★ : First choice
☆ : Second choice

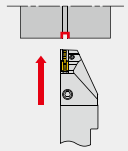
Designation	HAND	Coated VM1	Mirror finish	Pitch (mm)	PNA	CW (in)	PDX (in)	CDX (in)	IC (in)	AN	EPSR	RE (in)
CSVT11FRP60-035B	R	●	Ⓜ	0.2 - 0.5	60°	0.039	0.014	0.118	0.250	7°	35°	0.001MAX
CSVT11FLP60-035B	L	●	Ⓜ	0.2 - 0.5	60°	0.039	0.014	0.118	0.250	7°	35°	0.001MAX

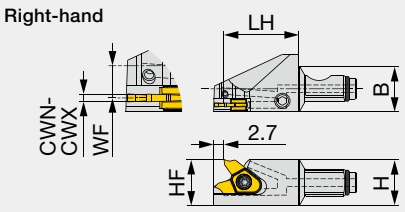
All angles shown are obtained when insert is set in the holder.

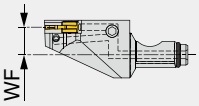
● : Line up

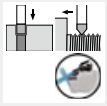
QC12-SVER/L-CHP

Modular head for external grooving and threading, with high pressure coolant capability









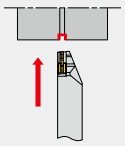
Metric	Pitch	TPI	H	B	LH	HF	WF (1)	Insert	Torque
QC12-SVER/L10-CHP	0.4 - 1.5	64 - 12	12 (0.750")	12 (0.750")	19.5 (0.768")	12 (0.472")	4.19/7.19 (0.165"/0.283")	VG*10...	1.3 (0.96)

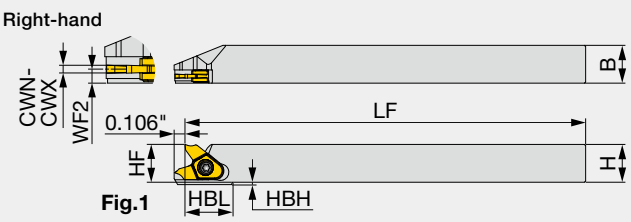
Torque: Recommended clamping torque: N·m (lbs·ft)

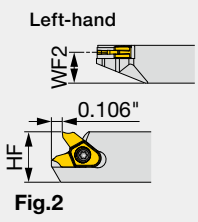
(1) "WF" indicates the distance from the reference position to the center of the cutting edge width. The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.

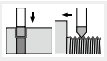
SVER/L

External grooving and threading toolholder









Inch	Pitch	TPI	H	B	LF	HF	WF2 (1)	HBL	HBH	Insert	Torque	Fig.
SVER/L06-10	0.4 - 1.5	64 - 12	0.375	0.375	4.750	0.375	0.070/0.304	0.472	0.024	VG*10...	0.96	1
SVER/L08-10	0.4 - 1.5	64 - 12	0.500	0.500	4.750	0.500	0.070/0.430	-	-	VG*10...	0.96	2

Metric	Pitch	TPI	H	B	LF	HF	WF2 (1)	HBL	HBH	Insert	Torque*	Fig.
SVER/L0808H08	0.4 - 1.5	64 - 12	8	8	100	8	1.23/6.78	-	-	VGP08...	1.1	2
SVER/L1010H10	0.4 - 1.5	64 - 12	10	10	100	10	1.78/8.23	-	-	VG*10...	1.3	1
SVER/L1212X10	0.4 - 1.5	64 - 12	12	12	120	12	1.78/10.23	-	-	VG*10...	1.3	1

Torque: Recommended clamping torque: lbs·ft (*N·m)

(1) "WF" indicates the distance from the reference position to the center of the cutting edge width. The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.

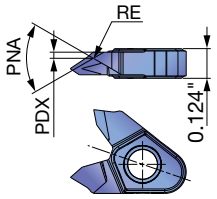
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QC12-SVER10-CHP	CSTB-2.5L054DL	T-7F	ORSS-0454.5X1.0NBR70
QC12-SVEL10-CHP	CSTB-2.5L054DR	T-7F	ORSS-0454.5X1.0NBR70
SVER0808...	CSTB-2.2L053DL	T-7F	-
SVEL0808...	CSTB-2.2L053DR	T-7F	-
SVER06/08-10, SVER1010/1212...	CSTB-2.5L054DL	T-7F	-
SVEL06/08-10, SVEL1010/1212...	CSTB-2.5L054DR	T-7F	-

Reference pages: Inserts, Standard cutting condition → 5-30

INSERT

VGT10 (For threading / sharp edge)



P	Steel	★
M	Stainless	★
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	★
H	Hard materials	

★ : First choice

Designation	RE (in)	Coated SH725	Pitch (mm)	TPI	PDX (in)	PNA
VGT10F-60A-005	0.002	●	0.4 - 1	64 - 25	0.026	60°
VGT10F-60A-010	0.004	●	1 - 2	25 - 12	0.038	60°
VGT10F-55A-005	0.002	●	0.6 - 1.5	40 - 16	0.033	55°

● : Line up

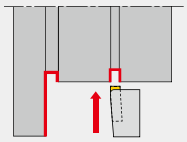
STANDARD CUTTING CONDITIONS

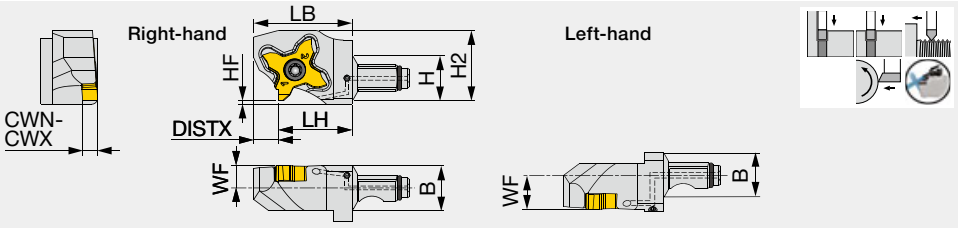
Threading

ISO	Workpiece materials	Grade	Cutting speed *Vc* (sfm)	Pitch (mm)	TPI
P	Low carbon steels 1015, 1020, etc.	SH725	164 - 492	0.4 - 2	64 - 12
	Carbon steels, Alloy steels 1055, 4140, etc.	SH725	164 - 492	0.4 - 2	64 - 12
	Free cutting steels SUH22, SUH23, etc.	SH725	164 - 492	0.4 - 2	64 - 12
M	Stainless steels 304, etc.	SH725	164 - 328	0.4 - 2	64 - 12
N	Aluminum alloys 5056, 6061, etc.	SH725	492 - 656	0.4 - 2	64 - 12
	Copper alloy C2600, C280C, etc.	SH725	328 - 656	0.4 - 2	64 - 12
S	Titanium alloys Ti-6Al-4V, etc.	SH725	98 - 262	0.4 - 2	64 - 12
	Superalloys Inconel718, etc.	SH725	98 - 262	0.4 - 2	64 - 12

QC**-STCR/L-Y-CHP

Y-axis turning modular head for external grooving and threading, with high pressure coolant capability



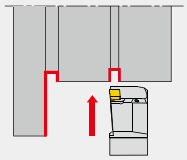


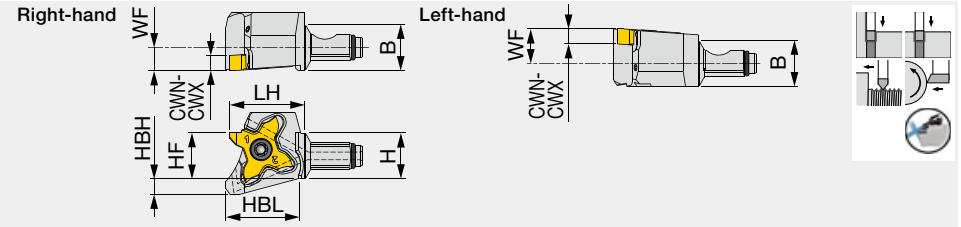
Metric	Pitch	H	B	LH	HF	WF**	LB	H2	DISTX	Insert	Torque*
QC12-STCR/L18-Y-CHP	0.4 - 3	12 (0.750")	12 (0.750")	19.5 (0.768")	0	6 / 9 (0.236" / 0.354")	26 (1.024")	18.6 (0.732")	6.5 (0.256")	TC*18...	1.2 (0.89)
QC16-STCR/L18-Y-CHP	0.4 - 3	16 (1.000")	16 (1.000")	21 (0.827")	0	8 / 13 (0.315" / 0.512")	27.5 (1.083")	18.6 (0.732")	6.5 (0.256")	TC*18...	1.2 (0.89)

Torque* : Recommended clamping torque: lbs·ft (N·m)
WF** : The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.
Through-coolant head
Note: Use the right-hand insert (TC*18R...) for a right-hand holder (QC**-STCR...); the left-hand insert (TC*18L...) for a left-hand holder (QC**-STCL...).

QC12-STCR/L-CHP

Modular head for external grooving and threading, with high pressure coolant capability





Metric	Pitch	H	B	LH*	HF	HBH	HBL	WF**	Insert	Torque*
QC12-STCR/L18-CHP	0.4 - 3	12 (0.750")	12 (0.750")	19.5 / 21 (0.768" / 0.827")	12 (0.472")	4.2 (0.165")	19.3 (0.760")	6 / 9 (0.236" / 0.354")	TC*18...	1.2 (0.89)
QC16-STCR/L18-CHP	0.4 - 3	16 (1.000")	16 (1.000")	21 (0.827")	16 (0.630")	-	-	13 (0.512")	TC*18...	1.2 (0.89)

Torque* : Recommended clamping torque: lbs·ft (N·m)
LH*, WF** : The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.
Through-coolant head
Note: Use the right-hand insert (TC*18R...) for a right-hand holder (QC**-STCR...); the left-hand insert (TC*18L...) for a left-hand holder (QC**-STCL...).

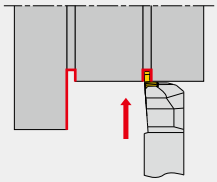
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QC12-STCR18...	CSTC-4L100DL	T-1008/5	ORSS-0454.5X1.0NBR70
QC12-STCL18...	CSTC-4L100DR	T-1008/5	ORSS-0454.5X1.0NBR70
QC16-STCR18...	CSTC-4L100DL	T-1008/5	ORSS-0757.5X1.0NBR70
QC16-STCL18...	CSTC-4L100DR	T-1008/5	ORSS-0757.5X1.0NBR70

Reference pages: Inserts → 5-13, 5-19
Standard cutting conditions → 5-33

STCR/L-18

External grooving and threading toolholder



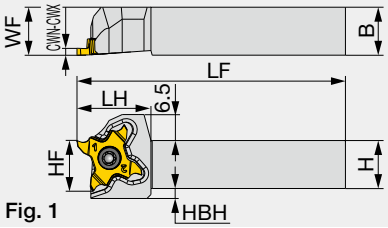


Fig. 1

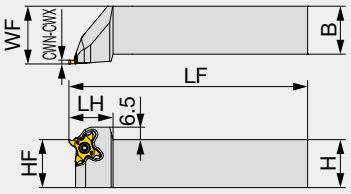
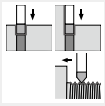


Fig. 2



Right-hand (R) shown.

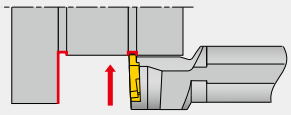
Inch	Pitch	H	B	LF	LH	HF	WF	HBH	Insert	Torque	Fig.
STCR/L06-18	0.4 - 3	0.375	0.375	4.750	0.730	0.375	0.375	0.177	TC*18...	0.89	1
STCR/L08-18	0.4 - 3	0.500	0.500	4.750	0.730	0.500	0.500	0.098	TC*18...	0.89	1
STCR/L10-18	0.4 - 3	0.625	0.625	4.750	0.730	0.625	0.625	-	TC*18...	0.89	1
STCR/L12-18	0.4 - 3	0.750	0.750	4.750	0.900	0.750	1.000	-	TC*18...	0.89	2
STCR/L16-18	0.4 - 3	1.000	1.000	5.500	0.900	1.000	1.250	-	TC*18...	0.89	2

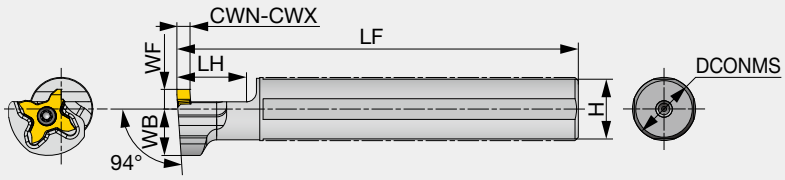
Metric	Pitch	H	B	LF	LH	HF	WF	HBH	Insert	Torque*	Fig.
STCR/L1010X18	0.4 - 3	10	10	120	18.5	10	10	4.5	TC*18...	1.2	1
STCR/L1212F18	0.4 - 3	12	12	85	18.5	12	12	2.5	TC*18...	1.2	1
STCR/L1212X18	0.4 - 3	12	12	120	18.5	12	12	2.5	TC*18...	1.2	1
STCR/L1616X18	0.4 - 3	16	16	120	18.5	16	16	-	TC*18...	1.2	1
STCR/L2020H18	0.4 - 3	20	20	100	18.5	20	20	-	TC*18...	1.2	1
STCR/L2020X18	0.4 - 3	20	20	120	23	20	25	-	TC*18...	1.2	2

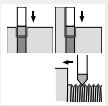
Torque: Recommended clamping torque: lbs·ft (*N·m)
Note: Use the right-hand insert (TC*18R...) for a right-hand holder (STCR...); the left-hand insert (TC*18L...) for a left-hand holder (STCL...).

JS-STCL18

External grooving and threading toolholder with round shank, for Swiss lathes







Left-hand (L) shown.

Metric	Pitch	DCONMS	LF	LH	H	WB	WF	Insert	Torque*
JS14H-STCL18	0.4 - 3	14	100	20	13	14	6	TC*18R...	1.2
JS159F-STCL18	0.4 - 3	15.875	85	20	15	14	6	TC*18R...	1.2
JS16F-STCL18	0.4 - 3	16	85	20	15	14	6	TC*18R...	1.2
JS19G-STCL18	0.4 - 3	19.05	90	20	18	14	6	TC*18R...	1.2
JS19X-STCL18	0.4 - 3	19.05	120	20	18	14	6	TC*18R...	1.2
JS20G-STCL18	0.4 - 3	20	90	20	19	14	6	TC*18R...	1.2
JS20X-STCL18	0.4 - 3	20	120	20	19	14	6	TC*18R...	1.2
JS22X-STCL18	0.4 - 3	22	120	20	21	12.25	10	TC*18R...	1.2
JS25H-STCL18	0.4 - 3	25	100	20	24	12.25	10	TC*18R...	1.2
JS254X-STCL18	0.4 - 3	25.4	120	20	24	12.25	10	TC*18R...	1.2

The left hand toolholder (STCL...) is used with the right hand inserts (TC*18R...)
*Torque: Recommended clamping torque: N·m

SPARE PARTS

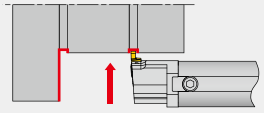
Designation	Clamping screw	Wrench	Coolant plug	Wrench	DirectJet plug	Wrench
STCR**18, JS...STCL18	CSTC-4L100DL	T-1008/5	-	-	-	-
STCL**18	CSTC-4L100DR	T-1008/5	-	-	-	-

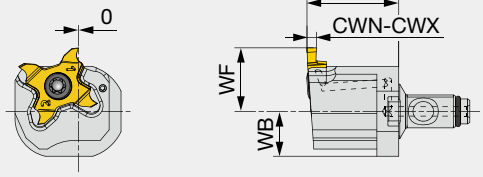
Threading pitch range: 0.8 ~ 3 mm

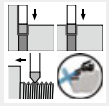
Reference pages : Inserts → 5-13, 5-19, Standard cutting conditions → 5-33

QR12-STCL-CHP

Modular head for external grooving and threading, with high pressure coolant capability







Left hand (L) shown.

Metric	CWN	CWX	LH	WF	WB	Insert	Torque*	Shank
QR12E-STCL18-CHP	0.33 (0.013")	3.18 (0.125")	19.5 (0.768")	11.5 (0.453")	7 (0.276")	TC*18R...	1.2 (0.89")	A16*-QR12
QR12G-STCL18-CHP	0.33 (0.013")	3.18 (0.125")	19.5 (0.768")	13.5 (0.531")	8 (0.315")	TC*18R...	1.2 (0.89")	A19/20*-QR12

Use left-hand toolholders (L) with right-hand inserts (R).
Torque*: Recommended clamping torque: N·m (lbf·ft)
Assembled dimensions with shank are shown on page 9.

SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QR12*-STCL18-CHP	CSTC-4L100DL	T-1008/5	ORSS-0454.5X1.0NBR70

STANDARD CUTTING CONDITIONS

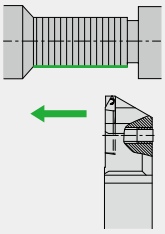
TCT18FR/R-ISO (Full profile threading insert) / TCT18FR (Threading insert)

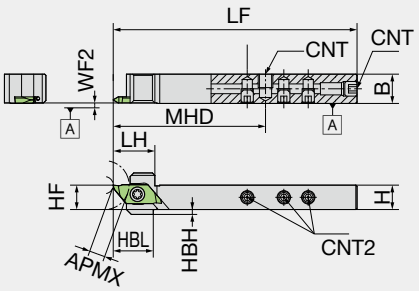
ISO	Workpiece materials	Priority	Grades	Cutting speed *Vc* (sfm)	Pitch (mm)	TPI
P	Low carbon steel 1015, 1020, etc.	First choice	SH725	197 - 492	0.4 - 2	64 - 18
		Toughness	AH725	197 - 492	0.8 - 3	32 - 8
	Carbon steels, Alloy steel 1045, 1055 etc.	First choice	SH725	197 - 492	0.4 - 2	64 - 18
		Toughness	AH725	197 - 492	0.8 - 3	32 - 8
	Prehardened steel NAK80, PX5, etc.	First choice	SH725	197 - 492	0.4 - 2	64 - 18
		Toughness	AH725	197 - 492	0.8 - 3	32 - 8
M	Stainless steel 304SS, etc	First choice	SH725	164 - 262	0.4 - 2	64 - 18
		Toughness	AH725	164 - 262	0.8 - 3	32 - 8
K	Gray cast iron Class 25, etc.	First choice	AH725	164 - 328	0.8 - 3	32 - 8
		Sharpness	SH725	164 - 328	0.4 - 2	64 - 18
	Ductile cast iron 60-40-18, 80-55-06, etc.	First choice	AH725	164 - 328	0.8 - 3	32 - 8
		Sharpness	SH725	164 - 328	0.4 - 2	64 - 18
S	Titanium alloys Ti-6Al-4V, etc.	First choice	SH725	98 - 328	0.4 - 2	64 - 18
		Toughness	AH725	98 - 328	0.8 - 3	32 - 8
	Superalloys Inconel718, etc.	First choice	SH725	98 - 328	0.4 - 2	64 - 18
		Toughness	AH725	98 - 328	0.8 - 3	32 - 8

Reference pages : Inserts → 5-13, 5-19, Standard cutting conditions → 5-33

TTP-OH3

Direct connect coolant port 3-hole type





Right hand (R) shown.

Metric	Pitch	H	B	LF	LH	APMX	HBH	HBL	HF	MHD	WF2	CNT	CNT2	Insert
TTPR1012H-OH3	0.2 - 1.5	10	12	100	17.15	6.5	2	16.5	10	62.5	0	M6*1	M5	TTP..
TTPL1012H-OH3	0.2 - 1.5	10	12	100	17.15	6.5	2	16.5	10	62.5	0	M6*1	M5	TTP..

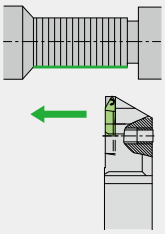
NOTE: Reference Chart of OH3 Hole Position→A011

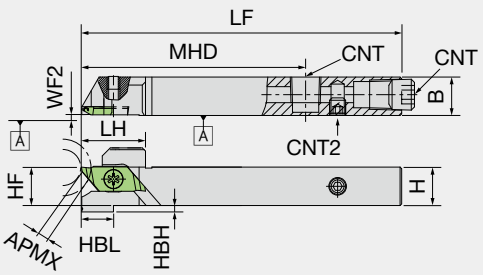
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
TTPR/L1012H-OH3	LRIS-4*12PW	SS0605SC	SS0505SC	CLR-15S	LW-2.5

TTPR/L-OH2

Direct connect coolant port 1-hole type





Right hand (R) shown.

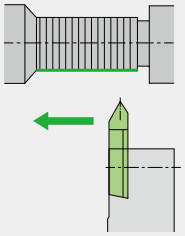
Inch	Pitch	H	B	LF	LH	APMX	HBH	HBL	HF	MHD	WF2	CNT	CNT2	Insert
TTPR08H-IN-OH2	0.2 - 1.5	0.500	0.500	3.937	0.787	0.217	-	-	0.500	2.756	0.008	NPT1/8	M5	TTP..
TTPR10X-IN-OH2	0.2 - 1.5	0.625	0.625	4.724	0.768	0.217	-	-	0.625	2.756	0.008	NPT1/8	M5	TTP..
TTPL08H-IN-OH2	0.2 - 1.5	0.500	0.500	3.937	0.787	0.217	-	-	0.500	2.756	0.008	NPT1/8	M5	TTP..
TTPL10X-IN-OH2	0.2 - 1.5	0.625	0.625	4.724	0.768	0.217	-	-	0.625	2.756	0.008	NPT1/8	M5	TTP..

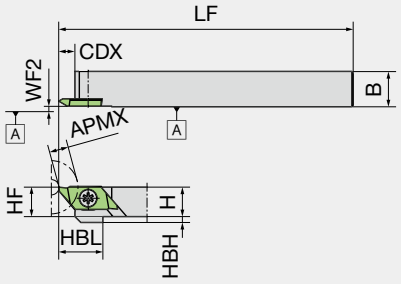
Metric	Pitch	H	B	LF	LH	APMX	HBH	HBL	HF	MHD	WF2	CNT	CNT2	Insert
TTPR12H-OH2	0.2 - 1.5	12	12	100	20	5.5	2	10	12	70	0.2	Rc1/8	M5	TTP..
TTPR16X-OH2	0.2 - 1.5	16	16	120	19.5	5.5	–	–	16	70	0.2	Rc1/8	M5	TTP..
TTPL12H-OH2	0.2 - 1.5	12	12	100	20	5.5	2	10	12	70	0.2	Rc1/8	M5	TTP..
TTPL16X-OH2	0.2 - 1.5	16	16	120	19.5	5.5	–	–	16	70	0.2	Rc1/8	M5	TTP..

SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
TTPR/L**-IN-OH2	LRIS-4*12PW	SPNPT1/8	SS0505SC	CLR-15S	LW-2.5
TTPR/L**-OH2	LRIS-4*12PW	SPR1/8	SS0505SC	CLR-15S	LW-2.5

Reference pages : Inserts → 5-37





Right hand (R) shown.

Inch	Pitch	H	B	LF	APMX	CDX	HBH	HBL	HF	WF2	Insert
TTPR06-IN	0.2 - 1.5	0.375	0.375	4.724	0.256	0.276	0.079	0.591	0.375	0.008	TTP..
TTPR08-IN	0.2 - 1.5	0.500	0.500	4.724	0.256	0.276	-	-	0.500	0.008	TTP..
TTPR10-IN	0.2 - 1.5	0.625	0.625	4.724	0.256	0.276	-	-	0.625	0.008	TTP..
TTPL06-IN	0.2 - 1.5	0.375	0.375	4.724	0.256	0.276	0.079	0.591	0.375	0.008	TTP..
TTPL08-IN	0.2 - 1.5	0.500	0.500	4.724	0.256	0.276	-	-	0.500	0.008	TTP..
TTPL10-IN	0.2 - 1.5	0.625	0.625	4.724	0.256	0.276	-	-	0.625	0.008	TTP..

Metric	Pitch	H	B	LF	APMX	CDX	HBH	HBL	HF	WF2	Insert
TTPR08	0.2 - 1.5	8	10	120	6.5	7	4	15	8	0.2	TTP..
TTPR10	0.2 - 1.5	10	10	120	6.5	7	2	15	10	0.2	TTP..
TTPR12	0.2 - 1.5	12	12	120	6.5	7	–	–	12	0.2	TTP..
TTPR12GX	0.2 - 1.5	12	12	85	6.5	7	–	–	12	0.2	TTP..
TTPR16	0.2 - 1.5	16	16	120	6.5	7	–	–	16	0.2	TTP..
TTPR16H	0.2 - 1.5	16	16	100	6.5	7	–	–	16	0.2	TTP..
TTPR20F	0.2 - 1.5	20	20	80	6.5	7	–	–	20	0.2	TTP..
TTPL08	0.2 - 1.5	8	10	120	6.5	7	4	15	8	0.2	TTP..
TTPL10	0.2 - 1.5	10	10	120	6.5	7	2	15	10	0.2	TTP..
TTPL12	0.2 - 1.5	12	12	120	6.5	7	–	–	12	0.2	TTP..
TTPL12GX	0.2 - 1.5	12	12	85	6.5	7	–	–	12	0.2	TTP..
TTPL16	0.2 - 1.5	16	16	120	6.5	7	–	–	16	0.2	TTP..
TTPL16H	0.2 - 1.5	16	16	100	6.5	7	–	–	16	0.2	TTP..
TTPL20F	0.2 - 1.5	20	20	80	6.5	7	–	–	20	0.2	TTP..

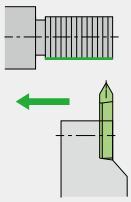
SPARE PARTS

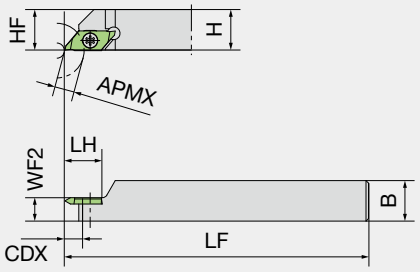
Designation	Clamp screw	Wrench (for Clamp screw)
TTPR/L06-IN	LRIS-4 × 10PW	CLR-15S
TTPR/L08-IN	LRIS-4 × 10PW	CLR-15S
TTPR/L10-IN	LRIS-4 × 12PW	CLR-15S
TTPR/L08	LRIS-4*10PW	CLR-15S
TTPR/L10	LRIS-4*10PW	CLR-15S
TTPR/L12**	LRIS-4*12PW	CLR-15S
TTPR/L16**	LRIS-4*12PW	CLR-15S
TTPR/L20**	LRIS-4*10	LLR-25S-20*65

Reference pages : Inserts → 5-37

TTPR/L-F

Shifted





Left hand (L) shown.

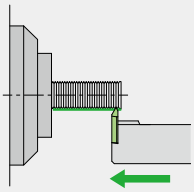
Metric	Pitch	H	B	LF	LH	APMX	CDX	HF	WF	WF2	Insert
TTPL12-F06	0.2 - 1.5	12	12	120	16	6.5	5.5	12	7.25	–	TTP..
TTPL16-F08	0.2 - 1.5	16	16	120	16	6.5	5.5	16	9.25	–	TTP..

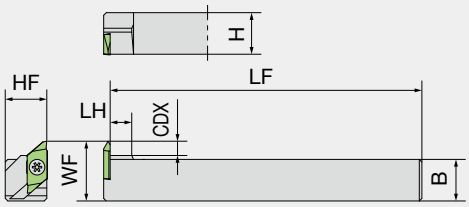
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
TTPL**	LRIS-4*6	LLR-25S

CH-TTPL

For horizontal gang style tool post





Left hand (L) shown.

Metric	Pitch	H	B	LF	LH	CDX	HF	WF	Insert
CH-TTPL16	0.2 - 1.5	16	16	120	9	5.5	16	23	TTP..
CH-TTPL20	0.2 - 1.5	20	20	120	9	5.5	20	27	TTP..

NOTE: Use a right-handed (R) insert.

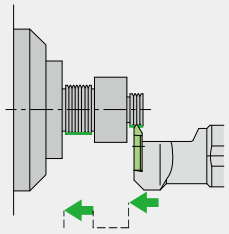
SPARE PARTS

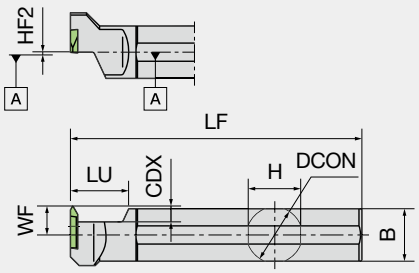
Designation	Clamp screw	Wrench (for Clamp screw)
CH-TTPL**	LRIS-4*10	LLR-25S

Reference pages : Inserts → 5-37

DS-TTPL

DS Toolholders / For sleeve tool post





Left hand (L) shown.

Metric	Pitch	H	B	LF	CDX	DCON	HF2	LU	WF	Insert
DS-TTPL16F	0.2 - 1.5	15	15	80	5.5	16	0	20	10	TTP..
DS-TTPL19	0.2 - 1.5	18	18	120	5.5	19.05	0	20	10	TTP..
DS-TTPL20	0.2 - 1.5	19	19	120	5.5	20	0	20	10	TTP..
DS-TTPL22	0.2 - 1.5	21	21	120	5.5	22	0	20	10	TTP..
DS-TTPL25	0.2 - 1.5	24	24	150	5.5	25.4	0	20	10	TTP..
DS-TTPL25-MET	0.2 - 1.5	24	24	150	5.5	25	0	20	10	TTP..

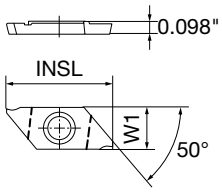
NOTE: Use a right-handed (R) insert.

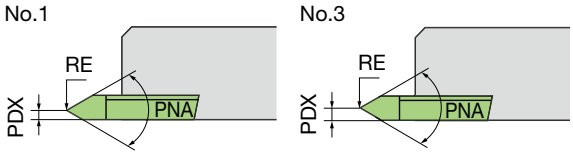
SPARE PARTS

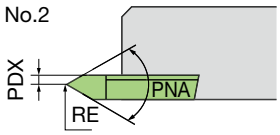
Designation	Clamp screw	Wrench (for Clamp screw)
DS-TTPL**	LRIS-4*10	LLR-25S-20*65

INSERT

TTP-R





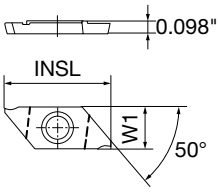


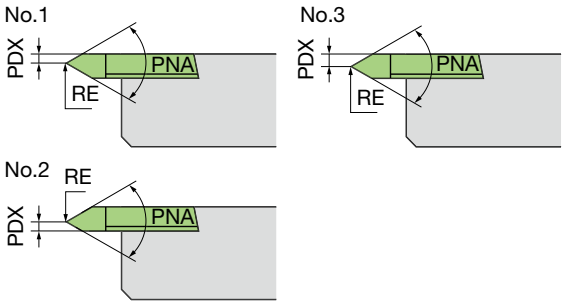
P	Steel	★	☆	
M	Stainless	☆	★	
N	Non-ferrous		☆	★
S	Superalloys	☆		
H	Hard materials	★		

★ : First choice
☆ : Second choice

Designation	HAND	Coated		Uncoated	Mirror finish	Pitch (mm)	TPI (mm)	PNA	PDX (in)	INSL (in)	W1 (in)	RE (in)	Figure
		QM3	ZM3	KM1									
TTP60FR2A	R		●			0.2 - 0.35	127 - 72	60°	0.008	0.783	0.315	0.002MAX Flat	1
TTP60FR4A	R	●	●			0.2 - 0.75	127 - 34	60°	0.016	0.783	0.315	0.002MAX Flat	1
TTP60FR4AS	R			●	Ⓜ	0.2 - 0.75	127 - 34	60°	0.016	0.783	0.315	0.002MAX Flat	1
TTP60FR8A	R	●	●			0.4 - 1.25	63 - 21	60°	0.031	0.783	0.315	0.002	1
TTP60FR8AS	R			●	Ⓜ	0.4 - 1.25	63 - 21	60°	0.031	0.783	0.315	0.002	1
TTP55FR8A	R		●			–	48 - 16	55°	0.031	0.783	0.315	0.002	1
TTP60FR2B	R		●			0.2 - 0.35	127 - 72	60°	0.008	0.783	0.315	0.002MAX Flat	2
TTP60FR4B	R	●	●			0.2 - 0.75	127 - 34	60°	0.016	0.783	0.315	0.002MAX Flat	2
TTP60FR4BS	R			●	Ⓜ	0.2 - 0.75	127 - 34	60°	0.016	0.783	0.315	0.002MAX Flat	2
TTP60FR8B	R	●	●			0.4 - 1.25	63 - 21	60°	0.031	0.783	0.315	0.002	2
TTP60FR8BS	R			●	Ⓜ	0.4 - 1.25	63 - 21	60°	0.031	0.783	0.315	0.002	2
TTP55FR8B	R		●			–	48 - 16	55°	0.031	0.783	0.315	0.002	2
TTP60FR-N	R	●	●			1 - 1.5	25 - 17	60°	0.049	0.783	0.315	0.004	3
TTP60FR-NS	R			●	Ⓜ	1 - 1.5	25 - 17	60°	0.049	0.783	0.315	0.004	3
TTP60FR-N02	R	●	●			1.5 - 2	16 - 13	60°	0.049	0.783	0.315	0.008	3

● : Line up





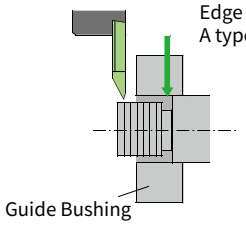
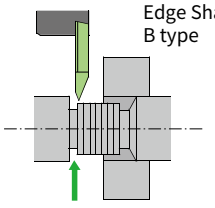
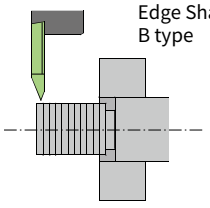
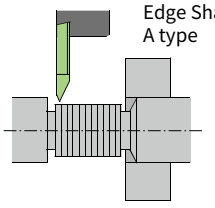
P	Steel	★	☆		
M	Stainless	☆	★		
N	Non-ferrous		☆	★	
S	Superalloys	☆			
H	Hard materials	★			

★ : First choice
☆ : Second choice

Designation	HAND	Coated		Uncoated	Mirror finish	Pitch (mm)	TPI (mm)	PNA	PDX (in)	INSL (in)	W1 (in)	RE (in)	Figure
		QM3	ZM3	KM1									
TTP60FL2A	L		●			0.2 - 0.35	127 - 72	60°	0.008	0.783	0.315	0.002MAX Flat	1
TTP60FL4A	L	●	●			0.2 - 0.75	127 - 34	60°	0.016	0.783	0.315	0.002MAX Flat	1
TTP60FL4AS	L			●	Ⓜ	0.2 - 0.75	127 - 34	60°	0.016	0.783	0.315	0.002MAX Flat	1
TTP60FL8A	L	●	●			0.4 - 1.25	63 - 21	60°	0.031	0.783	0.315	0.002	1
TTP60FL8AS	L			●	Ⓜ	0.4 - 1.25	63 - 21	60°	0.031	0.783	0.315	0.002	1
TTP55FL8A	L		●			–	48 - 16	55°	0.031	0.783	0.315	0.002	1
TTP60FL2B	L		●			0.2 - 0.35	127 - 72	60°	0.008	0.783	0.315	0.002MAX Flat	2
TTP60FL4B	L	●	●			0.2 - 0.75	127 - 34	60°	0.016	0.783	0.315	0.002MAX Flat	2
TTP60FL4BS	L			●	Ⓜ	0.2 - 0.75	127 - 34	60°	0.016	0.783	0.315	0.002MAX Flat	2
TTP60FL8B	L	●	●			0.4 - 1.25	63 - 21	60°	0.031	0.783	0.315	0.002	2
TTP60FL8BS	L			●	Ⓜ	0.4 - 1.25	63 - 21	60°	0.031	0.783	0.315	0.002	2
TTP55FL8B	L		●			–	48 - 16	55°	0.031	0.783	0.315	0.002	2
TTP60FL-N	L	●	●			1 - 1.5	25 - 17	60°	0.049	0.783	0.315	0.004	3
TTP60FL-NS	L			●	Ⓜ	1 - 1.5	25 - 17	60°	0.049	0.783	0.315	0.004	3
TTP60FL-N02	L	●	●			1.5 - 2	16 - 13	60°	0.049	0.783	0.315	0.008	3

● : Line up

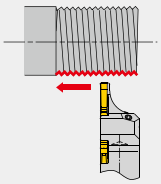
General Information

Right Hand Toolholders				Left Hand Toolholders			
Guide bushing side		Sub spindle side / Part shoulder		Guide bushing side		Sub spindle side / Part shoulder	
							
Toolholder	TTPR	Toolholder	TTPR	Toolholder	TTPL	Toolholder	TTPL
Insert	TTP..FR..A	Insert	TTP..FR..B	Insert	TTP..FL..B	Insert	TTP..FL..A

JSXXR/L-F/H/X-CHP

Parting-off toolholders with high pressure coolant capability, for swiss lathes

Direct connection **Tube connection**



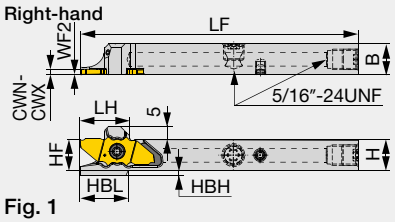


Fig. 1

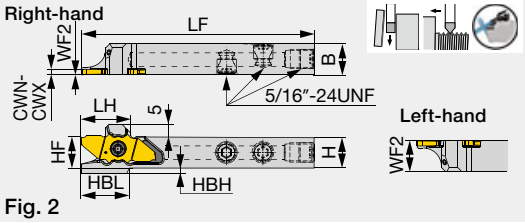


Fig. 2

Inch	CWN	CWX	H	B	WF	LF**	HF	HBH	LH**	HBL**	Insert	Torque	Fig.
JSXXR/L083X-CHP	0.024	0.098	0.500	0.500	0.008/0.492	4.750	0.500	0.051	0.764	0.736	JX*G06...,12...,16..., 20...	0.890	1
JSXXR/L103X-CHP	0.024	0.098	0.625	0.625	0.008/0.617	4.750	0.625	-	0.764	-	JX*G06...,12...,16..., 20...	0.890	1
JSXXR/L083F-CHP	0.024	0.098	0.500	0.500	0.008/0.492	3.344	0.500	0.051	≤ 0.764	0.736	JX*G06...,12...,16..., 20...	0.890	1

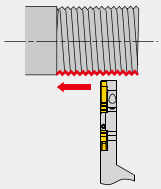
Metric	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBL(1)	HBH	Insert	Torque*	Fig.
JSXXR/L1012H09-CHP(3)	0.6	2.5	10	12	102	19.2	10	0.2/11.8	18.7	3	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212F09-CHP	0.6	2.5	12	12	85	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212X09-CHP(3)	0.6	2.5	12	12	120	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09B-CHP(3)	0.6	2.5	16	16	120	19.4	16	0.2/15.8	18.7	-	JX**06...,12...,16..., 20...	1.2	1

Torque: Recommended clamping torque: lbs·ft (*N·m)
(1) LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... insert. LF, LH, and HBL will all be 0.079" (2 mm) shorter than the above values with JX**12... and JX**20... inserts, and 4 mm shorter for JX**06... insert.
(2) The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.
(3) Compatible to the direct internal coolant supply system without the use of external coolant hose.
Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

JSXXR/L-F/X-S-CHP

Parting-off toolholders with high pressure coolant capability, for swiss lathes (for sub spindle)

Direct connection **Tube connection**



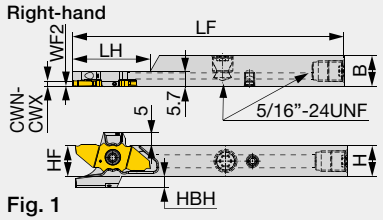


Fig. 1

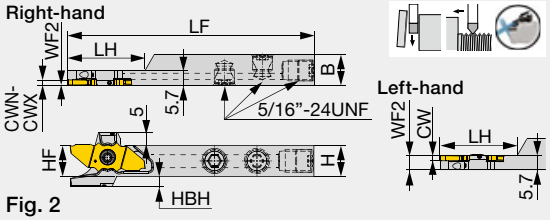


Fig. 2

Inch	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBH	Insert	Torque*	Fig.
JSXXR/L083F-S-CHP	0.024	0.098	0.5	0.5	3.344	1.024	0.5	0.008/0.217	0.051	JX**06...,12...,16..., 20...	0.89	2
JSXXR/L083X-S-CHP	0.024	0.098	0.5	0.5	4.75	1.181	0.5	0.008/0.217	0.051	JX**06...,12...,16..., 20...	0.89	1
JSXXR/L103X-S-CHP	0.024	0.098	0.625	0.625	4.75	1.181	0.625	0.008/0.217	-	JX**06...,12...,16..., 20...	0.89	1

Metric	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBH	Insert	Torque*	Fig.
JSXXR1212F09-S-CHP(4)	0.6	2.5	12	12	85	26	12	0.2	4	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212F09B-S-CHP	0.6	2.5	12	12	85	30	12	0.2/5.5	2	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212X09-S-CHP(3),(4)	0.6	2.5	12	12	120	30	12	0.2/5.5	4	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212X09B-S-CHP(3)	0.6	2.5	12	12	120	30	12	0.2/5.5	2	JX**06...,12...,16..., 20...	1.2	1
JSXXR1616X09-S-CHP(3),(4)	0.6	2.5	16	16	120	30	16	0.2	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09B-S-CHP(3)	0.6	2.5	16	16	120	30	16	0.2/5.5	-	JX**06...,12...,16..., 20...	1.2	1

Torque: Recommended clamping torque: lbs·ft (*N·m)
(1) LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... insert. LF, LH, and HBL will all be 0.079" (2 mm) shorter than the above values with JX**12... and JX**20... inserts, and 4 mm shorter for JX**06... insert.
(2) The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.
(3) Compatible to the direct internal coolant supply system without the use of external coolant hose.
(4) To be replaced with the new design
Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

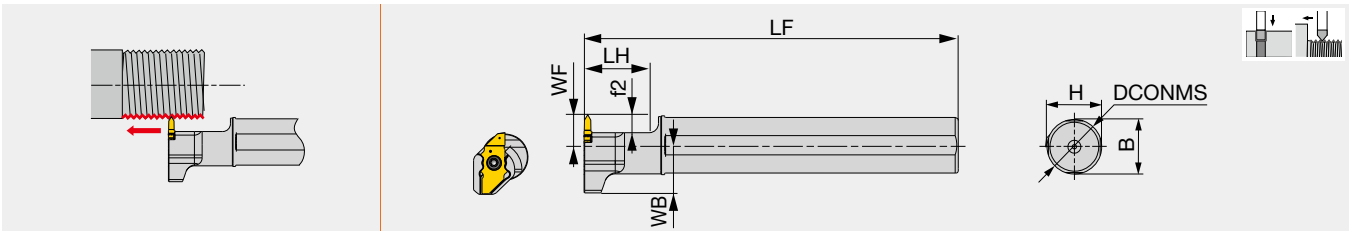
SPARE PARTS

Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JSXXR**F...	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXL**F...	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXR**H/X...	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
JSXXL**H/X...	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

Reference pages: Inserts → 5-14

JS-SXXL09

Round shanks, for threading

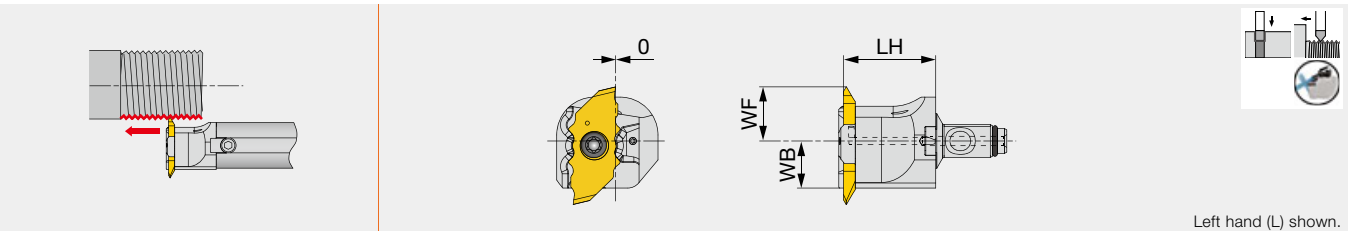


Metric	DCONMS	H	B	LF	LH	WB	WF(1)	f2(1)	Insert	Torque*
JS19G-SXXL09	19.05	18	18	90	21	15.43	10	6	JX**06,12*R	1.2
JS19X-SXXL09	19.05	18	18	120	21	15.43	10	6	JX**06,12*R	1.2
JS20G-SXXL09	20	19	19	90	21	15.4	10	6	JX**06,12*R	1.2
JS20X-SXXL09	20	19	19	120	21	15.4	10	6	JX**06,12*R	1.2
JS22X-SXXL09	22	21	21	120	21	15.4	10	6	JX**06,12*R	1.2
JS25H-SXXL09	25	24	24	100	21	15.4	10	6	JX**06,12*R	1.2
JS254X-SXXL09	25.4	24	24	120	21	15.4	10	6	JX**06,12*R	1.2

Torque*: Recommended clamping torque (N·m)
(1) When using JX..06... insert, both WF and f2 sizes will be 2 mm shorter than the values provided above.

QR12-SXXL-CHP

Modular head for external grooving and threading, with high pressure coolant capability



Left hand (L) shown.

Metric	LH	WF(1)	WB	Insert	Torque*	Shank
QR12E-SXXL09-CHP	19.5 (0.768")	11.5 (0.453")	8 (0.315")	JX*G**R...	1.2 (0.89")	A16*-QR12
QR12G-SXXL09-CHP	19.5 (0.768")	13.5 (0.531")	10 (0.394")	JX*G**R...	1.2 (0.89")	A19/20*-QR12

Use left-hand toolholders (L) with right-hand inserts (R).
Torque*: Recommended clamping torque: N·m (lbf·ft)
(1) WF (Functional Width) values shown above are true with JX**16... insert. WF will be 2 mm shorter than the above value with JX**12... insert; 4 mm shorter with JX**06... insert; 2 mm longer with JX**20... insert.
Assembled dimensions with shank are shown on page 9.

SPARE PARTS

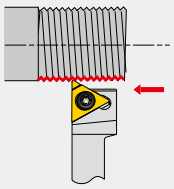
Designation	Clamping screw	Wrench	O-ring
JS***-SXXL09	CSTC-4L100DL	T-1008/5	-
QR12*-SXXL09-CHP	CSTC-4L100DL	T-1008/5	ORSS-0454.5X1.0NBR70

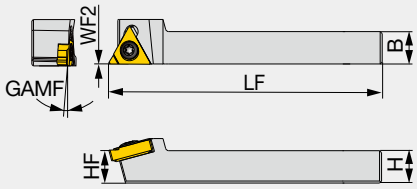
STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Grades	Cutting speed *Vc* (sfm)
P	Low carbon steels S15C, SS400, etc. C15E4, E275A, etc.	SH725	164 - 656
P	Carbon steels, Alloy steels S55C, SCM440, etc. C55, 42CrMo4, etc.	SH725	164 - 656
P	Free cutting steels SUH22, SUH23, etc.	SH725	164 - 656
M	Stainless steels SUS304, X5CrNi18-9, etc.	SH725	164 - 656
N	Aluminium alloys A5056, A6061, etc.	SH725	492 - 656
N	Copper alloy C2600, C280C, etc.	SH725	328 - 656
S	Titanium alloys Ti-6Al-4V, etc.	SH725	98 - 262
S	Superalloys Inconel718, etc.	SH725	98 - 262

SER

Screw-on external threading toolholders





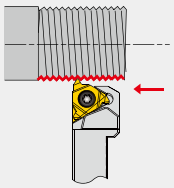
Metric	H	B	LF	HF	WF2	GAMF	Insert
SER0808H11	8	8	100	8	0	1.5°	11ER...
SER1010H11	10	10	100	10	0	1.5°	11ER...

SPARE PARTS

Designation	Clamping screw	Wrench 1
SER**H11	SR M2.6-L6.7-S11	T-8/5

JSE2R16-CHP

Screw-on external threading toolholders-High-pressure coolant capability with tube and direct connection



Tube connection

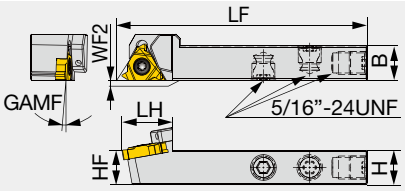


Fig. 1

Direct connection

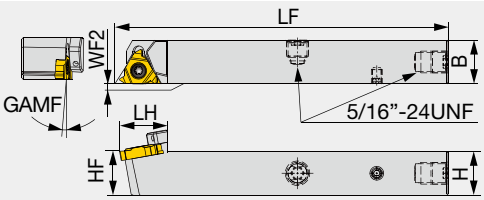


Fig. 2

Inch	H	B	LF	LH	HF	WF	GAMF	Type	Insert
JSE2R08F16-CHP	0.500	0.500	3.344	0.748	0.500	0	1°	1	16ER...
JSE2R08X16-CHP	0.500	0.500	4.750	0.748	0.500	0	1°	2	16ER...
JSE2R10X16-CHP	0.625	0.625	4.750	0.748	0.625	0	1°	2	16ER...

Metric	H	B	LF	LH	HF	WF2	GAMF	Fig.	Insert
JSE2R1212F16-CHP	12	12	85	19	12	0	1°	1	16ER...
JSE2R1212X16-CHP	12	12	120	19	12	0	1°	2	16ER...
JSE2R1616X16-CHP	16	16	120	19	16	0	1°	2	16ER...

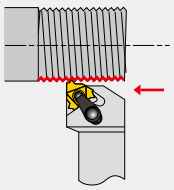
SPARE PARTS

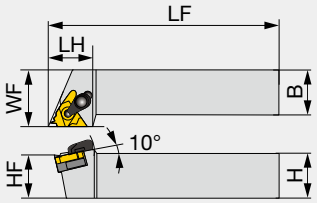
Designation	Clamping screw	Wrench	Shim screw	Shim	Coolant unit	Coolant plug	Wrench
JSE2R**16-CHP	CSTB-3.5	T-15F	-	-	-	SR5/16UNFTL360	P-4

Reference pages: Inserts → 5-12 -, Standard cutting conditions → 5-44

CER/L

External threading toolholder, alternative clamping of screw-on or clamp-on only for DT type





Right hand (R) shown.

Inch	H	B	LF	LH	HF	WF	Insert
CER/L123DT	0.750	0.750	5.000	0.870	0.750	1.000	16ER/L...
CER/L163DT	1.000	1.000	6.000	1.000	1.000	1.250	16ER/L...
CER203DT	1.250	1.250	6.000	1.250	1.250	1.500	16ER...
CER164DT	1.000	1.000	6.000	1.000	1.000	1.250	22ER...
CER204DT	1.250	1.250	6.000	1.250	1.250	1.500	22ER...

Metric	H	B	LF	LH	HF	WF	Insert
CER/L1212H16DT	12	12	100	24	12	16	16ER/L...
CER/L1616H16DT	16	16	100	24	16	20	16ER/L...
CER/L2020K16DT	20	20	125	24	20	25	16ER/L...

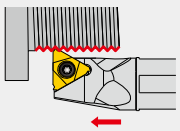
Note: A clamp set consists of a clamp and a clamping screw. A shim set consists of a shim and a shim screw to secure the shim to the shank.
Standard shims can be used on both right- and left-hand toolholders. Please use either of the sides depending on the tool hand.
When using DT type, please remove either the clamp set or the insert clamping screw.

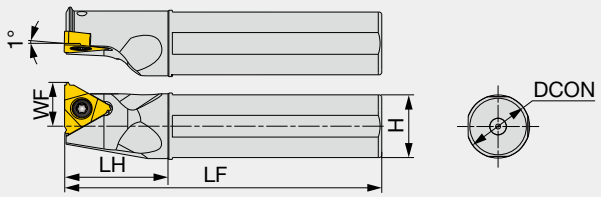
SPARE PARTS

Designation	Clamp set	Clamping screw	Shim screw	Shim	Wrench 1	Wrench 2
CER/L**16DT	CSP16	CSTB-3.5ST	DTS5-3.5	A16-1DT	P-3.5	T-15F

JS-SEL16

External threading toolholder, for Swiss lathes





Right hand (R) shown.

Metric	DCON	H	LF	LH	WF	Insert
JS16F-SEL16	16	15	85	25	11	16ER...
JS19G-SEL16	19.05	18	90	30	12.5	16ER...
JS19X-SEL16	19.05	18	120	30	12.5	16ER...
JS20G-SEL16	20	19	90	30	13	16ER...
JS20X-SEL16	20	19	120	30	13	16ER...
JS25H-SEL16	25	24	100	30	15.5	16ER...
JS254X-SEL16	25.4	24	120	30	15.7	16ER...

Note: Use left-hand toolholders (L) with right-hand inserts (R).

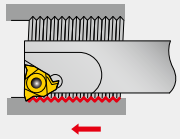
SPARE PARTS

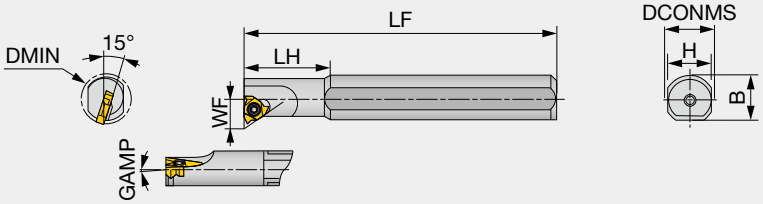
Designation	Clamping screw	Wrench
JS***-SEL16, B-SER**16	CSTB-3.5	T-15F

Reference pages: Inserts → 5-12 -, Standard cutting conditions → 5-44

SIR

Internal threading bars, Screw-on clamp





Inch	Material	DMIN	DCONMS	WF	LF	LH	H	B	GAMP	Coolant hole	Insert
SIR0375K11	Steel	0.470	0.620	0.260	5.000	1.000	0.574	-	1.5°	Without	11IR...
SIR0375K11B	Steel	0.470	0.625	0.280	5.000	0.980	0.574	-	1.5°	With	11IR...
SIR0500M16B	Steel	0.640	0.625	0.390	6.000	1.260	0.472	-	1.5°	With	16IR...
SIR0625P16B	Steel	0.750	0.750	0.450	7.000	1.570	0.709	-	1.5°	With	16IR...
SIR0750P16	Steel	1.000	0.750	0.510	7.000	-	0.984	-	1.5°	Without	16IR...
SIR0750P16B	Steel	0.900	0.750	0.900	7.000	-	1.181	-	1.5°	With	16IR...
SIR0750P22	Steel	0.950	0.750	0.510	7.000	-	1.260	-	1.5°	Without	22IR...
SIR1000R16B	Steel	1.160	1.000	0.650	8.000	-	1.570	-	1.5°	With	16IR...
SIR1000R22	Steel	1.200	1.000	0.710	8.000	-	-	-	1.5°	Without	22IR...
SIR1250S16	Steel	1.420	1.250	0.770	10.00	-	-	-	1.5°	Without	16IR...
SIR1250S22	Steel	1.500	1.250	0.850	10.00	-	-	-	1.5°	Without	22IR...
SIR 1500 T27	Steel	1.800	1.500	1.000	12.00	-	-	-	1.5°	Without	27IR...

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	B	GAMP	Coolant hole	Insert
SIR0005H06	STEEL	6.4	12	4.3	100	12	11	-	1.5°	Without	06IR...
SIR0007K08	STEEL	8	16	5.3	125	18	15	-	1.5°	Without	08IR...
SIR0005H06CB	CARBIDE	6.4	6	4.3	100	25	5	-	1.5°	With	06IR...
SIR0007K08CB	CARBIDE	7.8	8	5.3	125	30	7	-	1.5°	With	08IR...

Note: Use the right-hand insert (**IR...) for a right-hand holder (SIR...).
Recommend over 1 mm clearance between internal diameter of thread and each tools DMIN.

Applicable thread size

Description	ISO metric	Unified IRA60 Insert	Parallel pipe IRA55 Insert
SIR0005H06...	≥ M9	≥ 3/8-24 UNF	≥ G1/8
SIR0007K08...	≥ M11	≥ 7/16-20 UNF	≥ G1/4

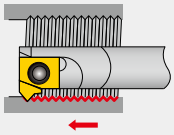
SPARE PARTS

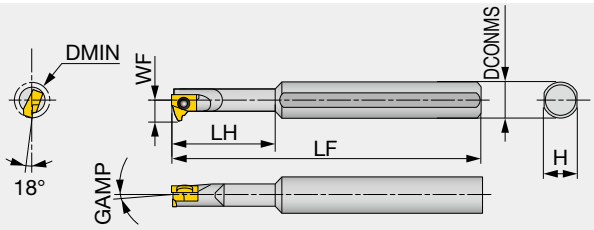
Designation	Clamping screw	Shim	Shim screw	Wrench	Seal cap
SIR0500M16B	SR5-40-L9.7-S16S	-	-	T-10/5	PL062
SIR0625P16B	SR 5-40-L9.7-S16S	-	-	T-10/5	PL 075
SIR0750P16	SR5-40-L12.2S16	AI16	SR5-40-L6.8-A16	T-10/5	-
SIR0750P16B	SR 5-40-L12.2-S16	AI16	SR 5-40-L6.8-A16	T-10/5	PL 075
SIR0750P22	SR8-32-L12-S22S	-	-	T-20/5	-
SIR1000R16B	SR 5-40-L12.2-S16	AI16	SR 5-40-L6.8-A16	T-10/5	PL 100
SIR1000R22	SR8-32-L15-S22	AI22	SR8-32-L5.8-A22	T-20/5	-
SIR1250S16	SR 5-40-L12.2-S16	AI16	SR 5-40-L6.8-A16, SR 8-32-L5.8-A22	T-10/5	-
SIR1250S22	SR8-32-L15-S22	AI22	SR8-32-L5.8-A22	T-20/5	-
SIR 1500 T27	SRM5-L22-S40	AI27	SRM5-L5.8-A27	T-25/3	-
SIR0005H06...	SR 14-552	-	-	T-6F-S	-
SIR0007K08...	SR 14-558	-	-	T-6F-S	-

Reference pages: SIR : Inserts → 5-12, 5-15, 5-16
SNR-2/3 : Inserts → 5-12, 5-15, 5-16, 5-24

SNR-2/3

Screw-on internal threading toolholder





Carbide shank

Metric	Material	DMIN	DCONMS	WF	LF	LH	H	GAMP	Insert
SNR0006H06-2	Steel	8	8	4.7	100	18	7	2°	6IR...
SNR0006H06-3	Steel	8	8	4.7	100	18	7	3°	6IR...
SNR0008H06-2	Steel	10	8	5.7	100	18	7	2°	6IR...
SNR0008H06-3	Steel	10	8	5.7	100	18	7	3°	6IR...
SNR0006K06SC-2	Carbide	8	8	4.7	125	30	7	2°	6IR...
SNR0006K06SC-3	Carbide	8	8	4.7	125	30	7	3°	6IR...
SNR0008K06SC-2	Carbide	10	8	5.7	125	18	7	2°	6IR...
SNR0008K06SC-3	Carbide	10	8	5.7	125	18	7	3°	6IR...

Note: Use the right-hand insert (6IR...) for a right-hand holder (SNR...).

SPARE PARTS

Designation	Clamping screw	Wrench
SNR0006H06...	CSTB-2L040	T-6F
SNR0008H06...	CSTB-2L	T-6F
SNR0006K06SC...	CSTB-2L040	T-6F
SNR0008K06SC...	CSTB-2L	T-6F

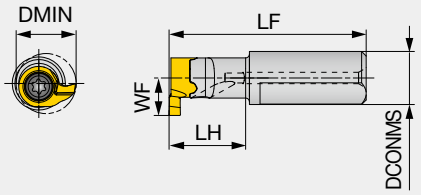
STANDARD CUTTING CONDITIONS

TUNGTHREAD

ISO	Workpiece material	Hardness	Cutting speed: *Vc* (sfm)						
			AH8015	T05HP	AH725	T313V	NS9530	TH10	BX330
P	Steel / Alloy steel 1045, 4140, etc.	< 200HB	262 - 591	328 - 656	262 - 591	328 - 656	492 - 656	-	-
		> 200HB	197 - 525	328 - 492	197 - 525	328 - 492	328 - 558	-	-
M	Stainless steel 304SS, etc.	-	164 - 427	230 - 427	164 - 427	230 - 427	-	-	-
K	Cast iron Class 25, Class 30, etc.	-	197 - 492	230 - 492	164 - 328	230 - 492	-	230 - 295	-
N	Non-ferrous metal	-	-	-	-	-	-	328 - 1640	-
S	Superalloys Ti-6Al-4V, Inconel718, etc.	-	66 - 262	-	-	-	-	33 - 131	-
H	Hardened steel	50 - 60HRC	-	-	-	-	-	33 - 98	164 - 656

A/E-SMR

Screw-on boring bar



Metric	Material	DCONMS	LH	LF	Insert	Torque*
A07080-SMR4	Steel	7	8	24	M*R4...	0.5
E07120-SMR4	Carbide	7	12	29	M*R4...	0.5
A07100-SMR5	Steel	7	10	26	M*R5...	1.3
E07180-SMR5	Carbide	7	18	34	M*R5...	1.3

SPARE PARTS

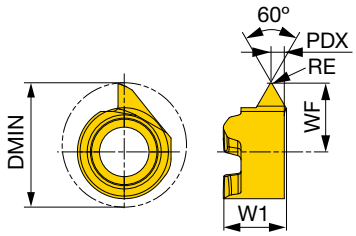
Designation	Clamping screw	Wrench
A/E07**-SMR4	CSPB-1.8L3.6	IP-6F
A/E07**-SMR5	CSTB-2.5L054DR	T-7F

Torque: Recommended clamping torque: lbs·ft (*N·m)
For A/E-SMR4, the above LF and LH dimensions are true with MGR4100F000-D05 insert assembled.
For A/E-SMR5, the above LF and LH dimensions are true with MGR5150F003-D07 insert assembled.
The DMIN and WF sizes vary depending on the insert sizes used.

INSERT

MTR

Threading



P	Steel	★					
M	Stainless	★					
K	Cast iron	★					
N	Non-ferrous						
S	Superalloys	★					
H	Hard materials						

★ : First choice

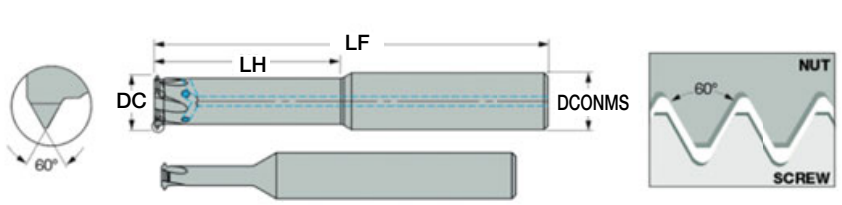
Designation	RE (in)	Coated			Pitch min (mm)	Pitch max (mm)	DMIN (in)	PDX (in)	WF (in)	W1 (in)
		SH7025								
MTR460F003-D05	0.0012	●			0.5	0.75	0.197	0.026	0.114	0.083
MTR560F007-D07	0.0027	●			1	1.25	0.276	0.035	0.154	0.142

●: Line up

SOLIDTHREAD

ISO metric (M), Unified (UN, UNC, UNF, UNFE, UNS)

MTECI-A60

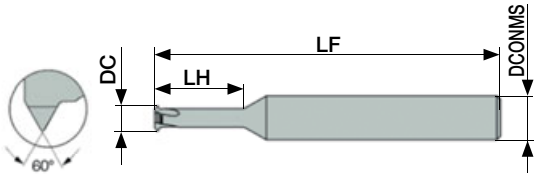


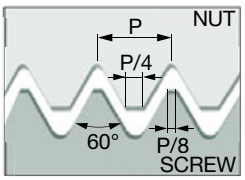
Designation	ISO Metric					Unified					DCONMS (mm)	DC (mm)	NOF	LH (mm)	LF (mm)	Coolant hole	Grade
	Internal			External		Internal			External								
	Pitch (mm)		Application range	Pitch (mm)		TPI		Application range	TPI								
	min.	max.		min.	max.	min.	max.		min.	max.							
MTECI03019C5A60	0.35	0.6	≥M2.5x0.35 ≥M2.5x0.4 ≥M2.5x0.45 ≥M3x0.5 ≥M3x0.6	0.35	0.6	40	72	≥#8-48UN ≥#8-44UN ≥#8-40UN ≥#8-36UN ≥#8-48UN ≥#10-28UN ≥#10-24UN	40	72	3	1.9	3	5.2	39	Without	AH710
MTECI06032C9A60	0.5	1.0	≥M4x0.5 ≥M4x0.6 ≥M4x0.7 ≥M4.5x0.75 ≥M4.5x0.8 ≥M5x1	0.5	1.0	24	48	≥#3-72UN ≥#3-64UN ≥#3-56UN ≥#3-48UN ≥#4-44UN ≥#4-40UN	24	48	6	3.2	3	9.5	57	Without	AH710
MTECI0604C12A60	0.5	1.0	≥M5x0.5 ≥M5x0.6 ≥M5x0.7 ≥M5x0.75 ≥M5x0.8 ≥M6x1	0.5	1.0	24	48	≥#10-48UN ≥#10-44UN ≥#10-40UN ≥#10-36UN ≥#12-32UN ≥#12-28UN ≥#12-24UN	24	48	6	4	3	12.5	58	Without	AH710
MTECI0605D20A60	0.5	0.8	≥M6	0.4	0.8	28	56	≥M1/4	32	64	6	5	4	20	58	With	AH725
MTECI0808D28A60	0.5	0.8	≥M9	0.4	0.8	28	56	≥M3/8	32	64	8	8	4	28	64	With	AH725
MTECI0808D30A60	1.0	1.75	≥M10	0.8	1.5	14	28	≥M7/16	16	32	8	8	4	30	64	With	AH725
MTECI1010D35A60	1.0	1.75	≥M12	0.8	1.5	14	28	≥M1/2	16	32	10	10	4	35	73	With	AH725
MTECI1212E40A60	2.0	3.0	≥M16	1.75	2.5	8	13	≥M11/16	10	15	12	12	5	40	84	With	AH725
MTECI1616E50A60	2.0	3.0	≥M20	1.75	2.5	8	13	≥M13/16	10	15	16	16	5	50	101	With	AH725

ISO metric (M)

MTECI-ISO

Solid carbide internal threading endmill, for ISO metric profile



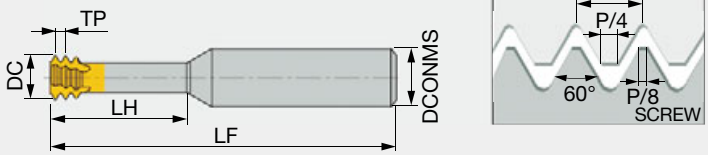


Metric	Pitch	Application range	DCONMS	DC	NOF	LH	LF	Coolant hole	Grade
MTECI03007C30.25ISO	0.25	≥M1	6	0.72	3	3.6	39	Without	AH710
MTECI03009C40.25ISO	0.25	≥M1.2	6	0.9	3	4.3	39	Without	AH710
MTECI03011C50.3ISO	0.3	≥M1.4	6	1.05	3	5.0	39	Without	AH710
MTECI03012C60.35ISO	0.35	≥M1.6	6	1.2	3	5.7	39	Without	AH710
MTECI03016C70.4ISO	0.4	≥M2	6	1.55	3	7.1	39	Without	AH710
MTECI03024C100.5ISO	0.5	≥M3	6	2.37	3	10.6	39	Without	AH710

Reference pages: Standard cutting conditions → 5-52 - 5-53

MTECS-ISO

Small diameter solid carbide internal threading endmill, short edge type, for ISO metric profile

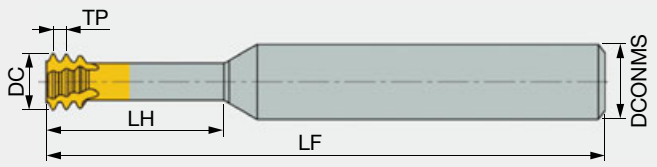


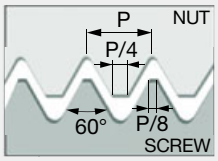
Metric	TP	Application range	DCONMS	DC	NOF	LH	LF	Coolant hole	Grade
MTECS03007C20.25ISO	0.25	≥M1	3	0.72	3	2.5	39	Without	AH725
MTECS03009C30.25ISO	0.25	≥M1.2	3	0.9	3	3	39	Without	AH725
MTECS03011C40.3ISO	0.3	≥M1.4	3	1.05	3	4	39	Without	AH725
MTECS03012C50.35ISO	0.35	≥M1.6	3	1.2	3	4.8	39	Without	AH725
MTECS03016C60.4ISO	0.4	≥M2	3	1.53	3	6	39	Without	AH725
MTECS06016C40.4ISO	0.4	≥M2	6	1.53	3	4.5	58	Without	AH725
MTECS03017C70.45ISO	0.45	≥M2.2	3	1.65	3	7	39	Without	AH725
MTECS06017C50.45ISO	0.45	≥M2.2	6	1.65	3	5	58	Without	AH725
MTECS0602C50.45ISO	0.45	≥M2.5	6	1.95	3	5.5	58	Without	AH725
MTECS0602C70.45ISO	0.45	≥M2.5	6	1.95	3	7.5	58	Without	AH725
MTECS06024C60.5ISO	0.5	≥M3	6	2.37	3	6.5	58	Without	AH725
MTECS06024C90.5ISO	0.5	≥M3	6	2.37	3	9.5	58	Without	AH725
MTECS06024C90.5ISOL	0.5	≥M3	6	2.37	3	9.5	105	Without	AH725
MTECS03024C120.5ISO	0.5	≥M3	3	2.4	3	12.5	39	Without	AH725
MTECS03024C150.5ISO	0.5	≥M3	3	2.4	3	15.5	39	Without	AH725
MTECS06054D200.5ISO	0.5	≥M6	6	5.35	4	20	58	Without	AH725
MTECS06028C100.6ISO	0.6	≥M3.5	6	2.75	3	10.5	58	Without	AH725
MTECS06028C70.6ISO	0.6	≥M3.5	6	2.75	3	7.5	58	Without	AH725
MTECS06031C120.7ISO	0.7	≥M4	6	3.1	3	12.5	58	Without	AH725
MTECS06031C120.7ISOL	0.7	≥M4	6	3.1	3	12.5	105	Without	AH725
MTECS06031C160.7ISO	0.7	≥M4	6	3.1	3	16.7	58	Without	AH725
MTECS06031C90.7ISO	0.7	≥M4	6	3.1	3	9	58	Without	AH725
MTECS0808D250.75ISO	0.75	≥M10	8	8	4	25	64	Without	AH725
MTECS06038C120.8ISO	0.8	≥M5	6	3.8	3	12.5	58	Without	AH725
MTECS06038C160.8ISO	0.8	≥M5	6	3.8	3	16	58	Without	AH725
MTECS06038C160.8ISOL	0.8	≥M5	6	3.8	3	16	105	Without	AH725
MTECS06047C141.0ISO	1	≥M6	6	4.65	3	14	58	Without	AH725
MTECS06047C201.0ISO	1	≥M6	6	4.65	3	20	58	Without	AH725
MTECS06047C201.0ISOL	1	≥M6	6	4.65	3	20	105	Without	AH725
MTECS0606C181.25ISO	1.25	≥M8	6	6	3	18	58	Without	AH725
MTECS0606C241.25ISO	1.25	≥M8	6	6	3	24	58	Without	AH725
MTECS08078C231.5ISO	1.5	≥M10	8	7.8	3	23	64	Without	AH725
MTECS08078C311.5ISO	1.5	≥M10	8	7.8	3	31.5	64	Without	AH725
MTECS1009C261.75ISO	1.75	≥M12	10	9	3	26	73	Without	AH725
MTECS12118D352.0ISO	2	≥M16	12	11.8	4	35	84	Without	AH725
MTECS12118D502.0ISO	2	≥M16	12	11.8	4	50	105	Without	AH725

Reference pages: Standard cutting conditions → 5-52 - 5-53

MTECSH-ISO

Small diameter solid carbide internal threading endmill, short edge type, left hand cutting, for ISO metric profile

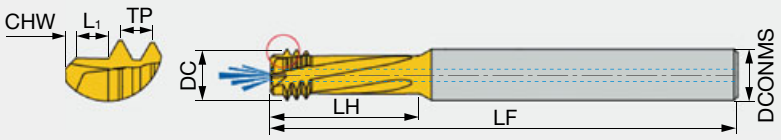


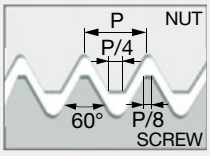


Metric	TP	Application range	DCONMS	DC	NOF	LH	LF	Coolant hole	Grade
MTECSH03012C50.35ISO	0.35	≥M1.6	3	1.2	3	4.8	39	Without	AH750
MTECSH03016C60.4ISO	0.4	≥M2	3	1.55	3	6	39	Without	AH750
MTECSH06016C40.4ISO	0.4	≥M2	6	1.55	3	4.5	58	Without	AH750
MTECSH06017C50.45ISO	0.45	≥M2.2	6	1.65	3	5	58	Without	AH750
MTECSH0602C50.45ISO	0.45	≥M2.5	6	1.95	3	5.5	58	Without	AH750
MTECSH0602C70.45ISO	0.45	≥M2.5	6	1.95	3	7.5	58	Without	AH750
MTECSH06024C60.5ISO	0.5	≥M3	6	2.35	3	6.5	58	Without	AH750
MTECSH06024C90.5ISO	0.5	≥M3	6	2.35	3	9.5	58	Without	AH750
MTECSH06028C70.6ISO	0.6	≥M3.5	6	2.75	3	7.5	58	Without	AH750
MTECSH06031C120.7ISO	0.7	≥M4	6	3.1	3	12.5	58	Without	AH750
MTECSH06038C120.8ISO	0.8	≥M5	6	3.8	3	12.5	58	Without	AH750
MTECSH06047C141.0ISO	1	≥M6	6	4.65	3	14	58	Without	AH750
MTECSH06047C201.0ISO	1	≥M6	6	4.65	3	20	58	Without	AH750
MTECSH0606C181.25ISO	1.25	≥M8	6	5.95	3	18	58	Without	AH750
MTECSH0606C241.25ISO	1.25	≥M8	6	5.95	3	24	58	Without	AH750
MTECSH08078C231.5ISO	1.5	≥M10	8	7.8	3	23	64	Without	AH750
MTECSH1009C261.75ISO	1.75	≥M12	10	9	3	26	73	Without	AH750
MTECSH12118D352.0ISO	2	≥M16	12	11.8	4	35	84	Without	AH750

MTECD-ISO

Small diameter solid carbide endmill for internal threading, drilling, and chamfering, short edge type, left hand cutting, for ISO metric profile



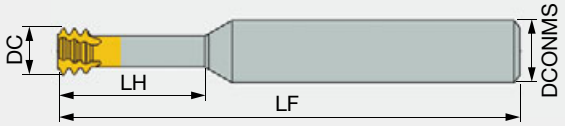


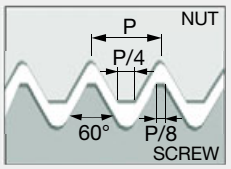
Metric	TP	Application range	DCONMS	DC	NOF	LH	LF	CHW	L1	Coolant hole	Grade
MTECD06032C110.7ISO	0.7	M4	6	3.15	3	11.6	58	0.2	0.7	Without	AH725
MTECD0604C140.8ISO	0.8	M5	6	4	3	14.4	58	0.3	0.8	Without	AH725
MTECD08047C141.0ISO	1	M6-M7	8	4.7	3	14	64	0.4	1	With	AH725
MTECD08061D181.25ISO	1.25	M8-M9	8	6.1	4	18	64	0.5	1.3	With	AH725
MTECD08078D231.5ISO	1.5	M10-M12	8	7.8	4	23	64	0.6	1.5	With	AH725
MTECD1009D261.75ISO	1.75	M12-M14	10	9	4	26	73	0.6	1.8	With	AH725
MTECD12118D352.0ISO	2	M16-M19	12	11.8	4	35	84	0.6	2	With	AH725

Reference pages: Standard cutting conditions → 5-52 - 5-53

MTECS-UN

Small diameter solid carbide internal threading endmill, short edge type, for UN profile



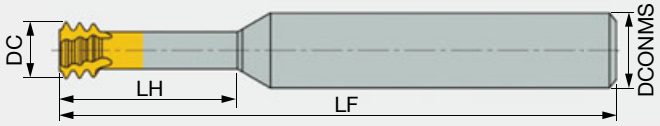


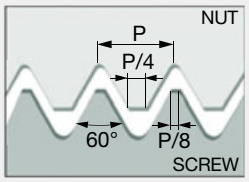
Metric	TPI	Application range	DCONMS	DC	NOF	LH	LF	Coolant hole	Grade
MTECS03012C880UN	80	≤ #0 (0.060)	3	1.15	3	8	39	Without	AH725
MTECS03015C672UN	72	≤ #1 (0.073)	3	1.45	3	6	39	Without	AH725
MTECS06016C656UN	56	≤ #2 (0.086)	6	1.65	3	6.6	58	Without	AH725
MTECS06016C456UN	56	≤ #2 (0.086)	6	1.65	3	4.4	58	Without	AH725
MTECS06019C548UN	48	≤ #3 (0.099)	6	1.9	3	5.2	58	Without	AH725
MTECS03021C1240UN	40	≤ #4 (0.112)	3	2.1	3	12	39	Without	AH725
MTECS06021C840UN	40	≤ #4 (0.112)	6	2.1	3	8	58	Without	AH725
MTECS06021C640UN	40	≤ #4 (0.112)	6	2.1	3	6.3	58	Without	AH725
MTECS06024C940UN	40	≤ #5 (0.125)	6	2.45	3	9.6	58	Without	AH725
MTECS06033C936UN	36	≤ #8 (0.164)	6	3.3	3	9	58	Without	AH725
MTECS06025C732UN	32	≤ #6 (0.138)	6	2.55	3	7.1	58	Without	AH725
MTECS06025C1032UN	32	≤ #6 (0.138)	6	2.55	3	10.5	58	Without	AH725
MTECS06032C932UN	32	≤ #8 (0.164)	6	3.2	3	9.5	58	Without	AH725
MTECS06032C1232UN	32	≤ #8 (0.164)	6	3.2	3	12.5	58	Without	AH725
MTECS06037C1032UN	32	≤ #10 (0.190)	6	3.7	3	10.5	58	Without	AH725
MTECS06037C1532UN	32	≤ #10 (0.190)	6	3.7	3	15	58	Without	AH725
MTECS0605C1428UN	28	≤ 1/4	6	5	3	14.5	58	Without	AH725
MTECS0605C1928UN	28	≤ 1/4	6	5	3	19	58	Without	AH725
MTECS08066C1724UN	24	≤ 5/16	8	6.6	3	17	64	Without	AH725
MTECS08066C2424UN	24	≤ 5/16	8	6.6	3	24	64	Without	AH725
MTECS06047C1420UN	20	≤ 1/4	6	4.75	3	14	58	Without	AH725
MTECS06047C1920UN	20	≤ 1/4	6	4.75	3	19	58	Without	AH725
MTECS06047C1920UN-L	20	≤ 1/4	6	4.75	3	19	105	Without	AH725
MTECS0808C2520UN	20	≤ 7/16	8	8	3	25	64	Without	AH725
MTECS0606C1718UN	18	≤ 5/16	6	6	3	17	58	Without	AH725
MTECS0606C2318UN	18	≤ 5/16	6	6	3	23	58	Without	AH725
MTECS1212D3518UN	18	≤ 5/8	12	12	4	35	84	Without	AH725
MTECS08067C2216UN	16	≤ 3/8	8	6.7	3	22	64	Without	AH725
MTECS08067C3016UN	16	≤ 3/8	8	6.7	3	30.2	64	Without	AH725
MTECS08077C2514UN	14	≤ 7/16	8	7.7	3	25	64	Without	AH725
MTECS10092C2713UN	13	≤ 1/2	10	9.2	3	27.5	73	Without	AH725
MTECS12114C3411UN	11	≤ 5/8	12	11.4	3	34.5	84	Without	AH725
MTECS12114C5011UN	11	≤ 5/8	12	11.4	3	50	105	Without	AH725

Reference pages: Standard cutting conditions → 5-52 - 5-53

MTECSH-UN

Small diameter solid carbide internal threading endmill, short edge type, left hand cutting, for UN profile, for hardened steel

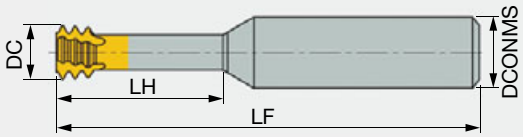


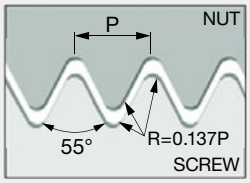


Metric	TPI	Application range	DCONMS	DC	NOF	LH	LF	Coolant hole	Grade
MTECSH06012C480UN	80	≥ #0 (0.060)	6	1.15	3	4	58	Without	AH725
MTECSH06016C656UN	56	≥ #2 (0.086)	6	1.65	3	6.6	58	Without	AH725
MTECSH06019C548UN	48	≥ #3 (0.099)	6	1.9	3	5.2	58	Without	AH725
MTECSH06021C640UN	40	≥ #4 (0.112)	6	2.1	3	6.3	58	Without	AH725
MTECSH06021C840UN	40	≥ #4 (0.112)	6	2.1	3	8	58	Without	AH725
MTECSH06024C740UN	40	≥ #5 (0.125)	6	2.45	3	7	58	Without	AH725
MTECSH06024C940UN	40	≥ #5 (0.125)	6	2.45	3	9.6	58	Without	AH725
MTECSH06025C1032UN	32	≥ #6 (0.138)	6	2.55	3	10.5	58	Without	AH725
MTECSH06032C932UN	32	≥ #8 (0.164)	6	3.2	3	9.5	58	Without	AH725
MTECSH06037C1032UN	32	≥ #10 (0.190)	6	3.7	3	10.5	58	Without	AH725
MTECSH06037C1532UN	32	≥ #10 (0.190)	6	3.7	3	15	58	Without	AH725
MTECSH06042C1128UN	28	≥ #12 (0.216)	6	4.2	3	11	58	Without	AH725
MTECSH0605C1428UN	28	≥ 1/4	6	5	3	14.5	58	Without	AH725
MTECSH06035C1024UN	24	≥ #10 (0.190)	6	3.5	3	10.6	58	Without	AH725
MTECSH08066C1724UN	24	≥ 5/16	8	6.6	3	17	64	Without	AH725
MTECSH08066C2424UN	24	≥ 5/16	8	6.6	3	24	64	Without	AH725
MTECSH06047C1920UN	20	≥ 1/4	6	4.75	3	19	58	Without	AH725
MTECSH0808C2520UN	20	≥ 7/16	8	8	3	25	64	Without	AH725
MTECSH0606C1718UN	18	≥ 5/16	6	6	3	17	58	Without	AH725
MTECSH0606C2318UN	18	≥ 5/16	6	6	3	23	58	Without	AH725
MTECSH08067C2216UN	16	≥ 3/8	8	6.7	3	22	64	Without	AH725
MTECSH08077C2514UN	14	≥ 7/16	8	7.7	3	25	64	Without	AH725
MTECSH10092C2713UN	13	≥ 1/2	10	9.2	3	27.5	73	Without	AH725
MTECSH12114C3411UN	11	≥ 5/8	12	11.4	3	34.5	84	Without	AH725

MTECS-W

Solid carbide internal and external threading endmill, short edge type, for G, BSP profile





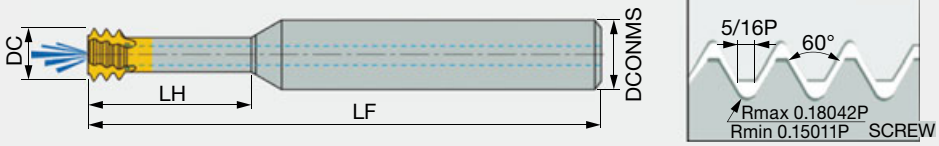
Metric	TPI	Application range	DCONMS	DC	NOF	LH	LF	Coolant hole	Grade
MTECS08078C1928W	28	1/8	8	7.8	3	19.5	64	Without	AH725
MTECS1010D3019W	19	1/4, 3/8	10	10	4	30	73	Without	AH725
MTECS1212D3714W	14	1/2, 5/8, 3/4, 7/8	12	12	4	37	84	Without	AH725

Reference pages: Standard cutting conditions → 5-52 - 5-53

MJ

MTECS-MJ

Small diameter solid carbide internal threading endmill, short edge type, with coolant hole, for MJ profile

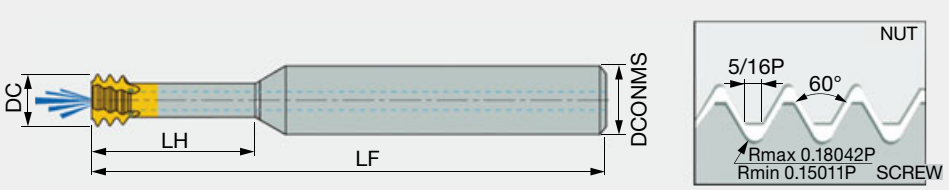


Metric	TP	Application range	DCONMS	DC	NOF	LH	LF	Coolant hole	Grade
MTECS06032C100.7MJ	0.7	≥ 4	6	3.2	3	10	58	Without	AH725
MTECS06039C120.8MJ	0.8	≥ 5	6	3.9	3	12.5	58	Without	AH725
MTECS06048C151.0MJ	1	≥ 6	6	4.8	3	15	58	Without	AH725
MTECS08061C201.25MJ	1.25	≥ 8	8	6.1	3	20	64	With	AH725
MTECS0808C251.5MJ	1.5	≥ 10	8	8	3	25	64	With	AH725
MTECS10092C301.75MJ	1.75	≥ 12	10	9.2	3	30	73	With	AH725
MTECS1010C352.0MJ	2	≥ 14	10	10	3	35	73	With	AH725

UNJ (UNJ, UNJC, UNJF, UNJEF)

MTECS-UNJ

Small diameter solid carbide internal threading endmill, short edge type, with coolant hole, for UNJ profile



Metric	TPI	Application range	DCONMS	DC	NOF	LH	LF	Coolant hole	Grade
MTECS06033C1032UNJ	32	≥ #8	6	3.3	3	10.5	58	Without	AH725
MTECS08051C1628UNJ	28	≥ 1/4	8	5.1	3	16	64	With	AH725
MTECS08067C2024UNJ	24	≥ 5/16	8	6.7	3	20	64	With	AH725
MTECS06049C1620UNJ	20	≥ 1/4	6	4.9	3	16	58	Without	AH725
MTECS0808C2820UNJ	20	≥ 7/16	8	8	3	28	64	With	AH725
MTECS08061C2018UNJ	18	≥ 5/16	8	6.15	3	20	64	With	AH725
MTECS08069C2416UNJ	16	≥ 3/8	8	6.9	3	24	64	With	AH725
MTECS10094C2713UNJ	13	≥ 1/2	10	9.4	3	27.5	73	With	AH725

Reference pages: Standard cutting conditions → 5-52 - 5-53

STANDARD CUTTING CONDITIONS

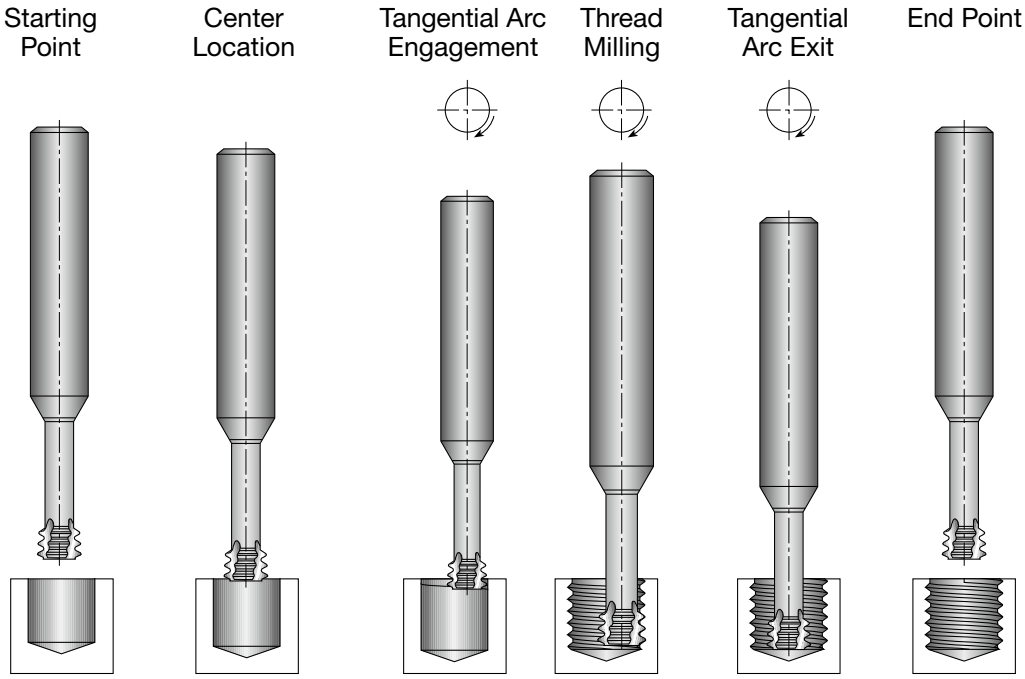
ISO	Material		Condition	Tensile strength [N/mm²]	Hardness HB	Cutting speed (sfm) AH725
P	Non-alloy steel and cast steel, free cutting steel	< 0.25 %C	Annealed	420	125	328 - 820
		≥ 0.25 %C	Annealed	650	190	262 - 689
		< 0.55 %C	Quenched and tempered	850	250	213 - 558
		≥ 0.55 %C	Annealed	750	220	361 - 591
			Quenched and tempered	1000	300	312 - 525
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	295 - 525
			Quenched and tempered	930	275	213 - 656
				1000	300	230 - 689
				1200	350	312 - 525
	High alloyed steel, cast steel, and tool steel		Annealed	680	200	427 - 558
			Quenched and tempered	1100	325	246 - 328
	Stainless steel and cast steel		Ferritic/martensitic	680	200	361 - 558
			Martensitic	820	240	230 - 509
M	Stainless steel		Annealed	600	180	279 - 328
K	Cast iron nodular (GGG)		Ferritic/martensitic	-	180	394 - 525
			Pearlitic	-	260	246 - 525
	Gray cast iron (GG)		Ferritic	-	160	230 - 492
			Pearlitic	-	250	361 - 459
	Malleable cast iron		Ferritic	-	130	394 - 525
			Pearlitic	-	230	361 - 459
N	Aluminum- wrought alloy		Not cureable	-	60	525 - 984
			Cured	-	100	-
	Aluminum-cast, alloyed	≤12% Si	Not cureable	-	75	492 - 1148
			Cured	-	90	-
		>12% Si	High temperature	-	130	328 - 820
	Copper alloys	>1% Pb	Free cutting	-	110	-
			Brass	-	90	-
			Electrolitic copper	-	100	-
	Non-metallic		Duroplastics, fiber plastics	-	-	328 - 1312
			Hard rubber	-	-	-
S	High temp. alloys	Fe based	Annealed	-	200	-
			Cured	-	280	-
		Ni or Co based	Annealed	-	250	66 - 262
			Cured	-	350	-
			Cast	-	320	-
	Titanium Ti alloys			RM 400	-	-
			Alpha+beta alloys cured	RM 1050	-	66 - 262
H	Hardened steel		Hardened	-	55 HRC	180 - 213
			Hardened	-	60 HRC	148 - 180
	Chilled cast iron		Cast	-	400	295 - 344
	Cast iron		Hardened	-	55 HRC	180 - 213

Tool dia. : mm (in)											
Feed (ipr)											
ø2 (0.079")	ø3 (0.118")	ø4 (0.157")	ø6 (0.236")	ø8 (0.315")	ø10 (0.394")	ø12 (0.472")	ø14 (0.551")	ø16 (0.630")	ø20 (0.787")	ø25 (0.984")	ø30 (1.181")
0.0012	0.0016	0.0016	0.0024	0.0028	0.0031	0.0035	0.0043	0.0047	0.0059	0.0071	0.0083
0.0012	0.0016	0.0016	0.0024	0.0028	0.0031	0.0035	0.0043	0.0047	0.0059	0.0071	0.0083
-	-	-	-	-	-	-	-	-	-	-	-
0.0008	0.0012	0.0012	0.002	0.0024	0.0028	0.0031	0.0035	0.0039	0.0047	0.0059	0.0071
0.0008	0.0012	0.0012	0.002	0.0024	0.0028	0.0031	0.0035	0.0039	0.0047	0.0059	0.0071
0.0008	0.0008	0.0012	0.0012	0.0016	0.002	0.002	0.0024	0.0028	0.0031	0.0039	0.0043
0.0008	0.0008	0.0012	0.0012	0.0016	0.002	0.002	0.0024	0.0028	0.0031	0.0039	0.0043
0.0008	0.0008	0.0012	0.0012	0.0016	0.002	0.002	0.0024	0.0028	0.0031	0.0039	0.0043
0.0008	0.0008	0.0012	0.0012	0.0016	0.002	0.002	0.0024	0.0028	0.0031	0.0039	0.0043
0.0008	0.0008	0.0012	0.0012	0.0016	0.002	0.002	0.0024	0.0028	0.0031	0.0039	0.0043
0.0008	0.0008	0.0012	0.0012	0.0016	0.002	0.002	0.0024	0.0028	0.0031	0.0039	0.0043
0.0008	0.0008	0.0012	0.0012	0.0016	0.002	0.002	0.0024	0.0028	0.0031	0.0039	0.0043
0.0008	0.0008	0.0012	0.0012	0.0016	0.002	0.002	0.0024	0.0028	0.0031	0.0039	0.0043
0.0012	0.0016	0.0016	0.0024	0.0028	0.0031	0.0035	0.0043	0.0047	0.0059	0.0071	0.0083
0.0012	0.0016	0.0016	0.0024	0.0028	0.0031	0.0035	0.0043	0.0047	0.0059	0.0071	0.0083
0.0012	0.0016	0.0016	0.0024	0.0028	0.0031	0.0035	0.0043	0.0047	0.0059	0.0071	0.0083
0.0012	0.0016	0.0016	0.0024	0.0028	0.0031	0.0035	0.0043	0.0047	0.0059	0.0071	0.0083
0.0012	0.0016	0.0016	0.0024	0.0028	0.0031	0.0035	0.0043	0.0047	0.0059	0.0071	0.0083
0.0012	0.0016	0.0016	0.0024	0.0028	0.0031	0.0035	0.0043	0.0083	0.0059	0.0071	0.0083
0.0012	0.0016	0.0016	0.0024	0.0028	0.0031	0.0035	0.0043	0.0047	0.0059	0.0071	0.0083
-	-	-	-	-	-	-	-	-	-	-	-
0.0012	0.0016	0.0016	0.0024	0.0028	0.0031	0.0035	0.0043	0.0047	0.0059	0.0071	0.0083
-	-	-	-	-	-	-	-	-	-	-	-
0.0008	0.0008	0.0012	0.0012	0.0016	0.002	0.002	0.0024	0.0028	0.0031	0.0039	0.0047
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
0.002	0.0024	0.0028	0.0035	0.0039	0.0043	0.0047	0.0051	0.0059	0.0071	0.0087	0.0098
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
0.0008	0.0008	0.0008	0.0012	0.0012	0.0012	0.0012	0.0016	0.0016	0.0016	0.002	0.002
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
0.0008	0.0008	0.0008	0.0012	0.0012	0.0012	0.0012	0.0016	0.0016	0.0016	0.002	0.002
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

When using long edge type tools, Feed should be reduced to 40% of above table.

MTECS
Small Diameter, Short edge type

Thread Milling - Procedure

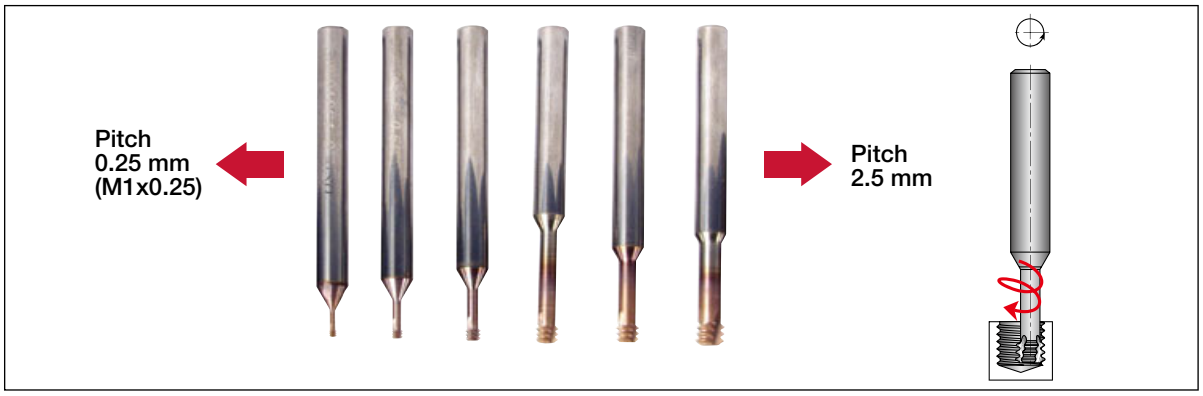


STANDARD CUTTING CONDITIONS

ISO	Material	Cutting speed (sfm)	ø0.059" (ø1.5 mm)	ø0.079" (ø2 mm)	ø0.118" (ø3 mm)	ø0.157" (ø4 mm)	ø0.197" (ø5 mm)	ø0.236" (ø6 mm)	ø0.276" (ø7 mm)	ø0.315" (ø8 mm)	ø0.354" (ø9 mm)	ø0.394" (ø10 mm)	ø0.472" (ø12 mm)	ø0.551" (ø14 mm)	ø0.591" (ø15 mm)
			Feed (ipr)												
P	Low & medium carbon steels	197 - 394	0.002	0.002	0.0028	0.0035	0.0043	0.0051	0.0055	0.0059	0.0063	0.0063	0.0067	0.0071	0.0071
P	High carbon steels	197 - 295	0.0016	0.002	0.0024	0.0031	0.0035	0.0039	0.0047	0.0051	0.0055	0.0055	0.0063	0.0067	0.0071
P	Alloy steels, treated steels	164 - 262	0.0016	0.0016	0.002	0.002	0.0024	0.0028	0.0028	0.0031	0.0035	0.0039	0.0047	0.0051	0.0055
P	Cast steels	230 - 295	0.0016	0.0016	0.002	0.002	0.0024	0.0028	0.0028	0.0031	0.0035	0.0039	0.0047	0.0051	0.0055
M	Stainless steels	197 - 295	0.0012	0.0012	0.0016	0.002	0.0024	0.0024	0.0028	0.0031	0.0035	0.0039	0.0043	0.0047	0.0051
K	Cast iron	131 - 262	0.002	0.002	0.0028	0.0035	0.0043	0.0051	0.0055	0.0059	0.0063	0.0063	0.0067	0.0071	0.0071
N	Aluminum	262 - 492	0.002	0.002	0.0028	0.0035	0.0043	0.0051	0.0055	0.0059	0.0063	0.0063	0.0067	0.0071	0.0071
N	Synthetics, duroplastics, thermoplastics	164 - 656	0.0039	0.0043	0.0047	0.0055	0.0063	0.0071	0.0075	0.0075	0.0075	0.0075	0.0075	0.0079	0.0079
S	Nickel alloys, titanium alloys	66 - 131	0.0012	0.0012	0.0016	0.0016	0.002	0.0024	0.0024	0.0024	0.0028	0.0028	0.0028	0.0031	0.0031

MTECS Small Diameter, Short edge type

SolidThread MTECS is used for the production of small internal threads. These thread mills feature a short 3-tooth cutting zone with 3 flutes and a released neck between the cutting zone and the shank. This unique tool design offers very precise profiles and a high performance AH725 submicron carbide grade with PVD titanium aluminum nitride coating. The very short profile exerts a low force which minimizes tool bending. This facilitates parallel and high thread precision for the entire length.



Compared to taps, the **SOLIDTHREAD** is more accurate, thread machining is substantially faster and there is no danger of a broken tap being stuck in the hole.

SolidThread vs. Tap

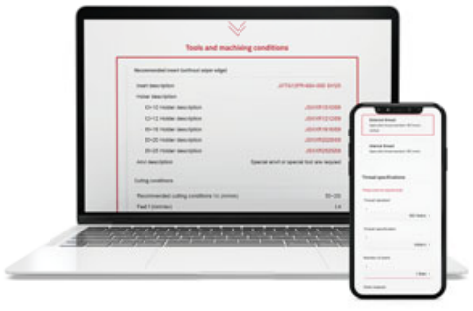
Criteria	Thread mill	Taps
Thread surface quality	High	Medium
Thread geometry	Very accurate	Medium
Thread tolerance	4H, 5H, 6H with std. cutter	6H with standard tap, 4H with special tap
Machining time	Shorter or same as tap	Short
Machining load	Very low	High
Range of thread diameters	Wide range of diameters (able to thread a wide range of hole sizes)	Specific tap for each thread size
Right-/Left-hand threading	Same cutter	Specific tap for right- and left-hand

Features

- Minimum thread size of MTECS: **M1x0.25** (0.75 mm pre hole diameter) up to M20x2.50
- 2xD and 3xD threading lengths
- High cutting speeds
- Short cycle time
- Low cutting forces due to the short contact profile resulting in accurate and parallel thread
- Prevents oval threads near thin walls
- No more dealing with broken taps
- Reliable threading in blind holes
- Excellent performance on hardened steel, high temperature alloys and titanium

Thread Tool Selector

- Tungaloy´s advanced selector empowers you to identify the ideal thread tool by inputting both the thread specifications and details about the work material.
- Navigate through the dropdown options to access comprehensive tool information and recommended machining conditions tailored to the specific thread specifications you've chosen.
- It's important to note that this selector is tailored specifically for right-hand thread machining.

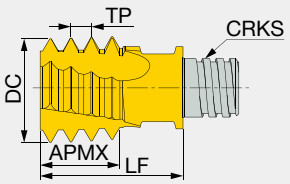


ISO metric (M)

VMT***IS

3 - 6 flute, full profile, for internal thread

Threading



CRKS = Connection screw size

Metric	AH725	TP	Application range	DC	NOF	APMX	LF	CRKS	Wrench	Torque*
VMT100L06IS07-4S05	●	0.75	≥ M12	10	4	6	12.8	S05	KEYV-S05	7
VMT100L06IS10-4S05	●	1	≥ M12	10	4	6	12.8	S05	KEYV-S05	7
VMT100L06IS15-4S05	●	1.5	≥ M13	10	4	6	12.8	S05	KEYV-S05	7
VMT120L08IS15-4S06	●	1.5	≥ M16	12	4	7.6	14.3	S06	KEYV-S06	10
VMT120L08IS20-4S06	●	2	≥ M16	12	4	8	14.3	S06	KEYV-S06	10
VMT160L12IS15-6S08	●	1.5	≥ M20	16	6	12	19	S08	KEYV-T30L	15
VMT160L12IS20-5S08	●	2	≥ M19	16	5	12	19	S08	KEYV-T30L	15
VMT154L13IS25-5S08	●	2.5	≥ M20	15.4	5	12.7	20	S08	KEYV-S08	15
VMT160L12IS30-3S08	●	3	≥ M20	16	3	12	19	S08	KEYV-T30L	15

Torque*: Recommended clamping torque (N·m)
2 pieces per package

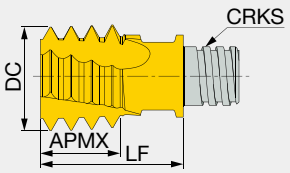
● : Line up

Unified (UN, UNC, UNF, UNEF, UNS)

VMT***UN

3, 4, 5 flute, full profile, for internal thread

Threading



CRKS = Connection screw size

Metric	AH725	TPI	Application range	DC	NOF	APMX	LF	CRKS	Wrench	Torque*
VMT100L06UN24-4S05	●	24	≥ 1/2	10	4	5.3	12.8	S05	KEYV-S05	7
VMT100L06UN20-4S05	●	20	≥ 1/2	10	4	5.1	12.8	S05	KEYV-S05	7
VMT120L08UN16-4S06	●	16	≥ 5/8	12	4	8	14.3	S06	KEYV-S06	10
VMT120L10UN14-4S06	●	14	≥ 5/8	12	4	9	14.3	S06	KEYV-T25	10
VMT160L13UN12-5S08	●	12	≥ 13/16	16	5	12.7	19	S08	KEYV-T30L	15
VMT150L13UN10-4S08	●	10	≥ 3/4	15.4	4	12.7	19	S08	KEYV-T30L	15
VMT160L11UN09-3S08	●	9	≥ 7/8	16	3	11.3	19	S08	KEYV-T30L	15
VMT160L13UN08-3S08	●	8	≥ 15/16	16	3	12.7	20	S08	KEYV-S08	15

Torque*: Recommended clamping torque (N·m)
2 pieces per package

● : Line up

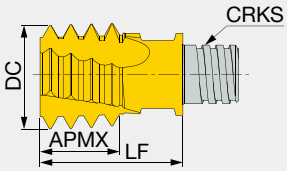
Reference pages: Standard cutting conditions → 8-58

Whitworth (G, Rp, BSP, PF, PS)

VMT***W

4 flute, full profile, for internal/external thread

Threading



CRKS = Connection screw size

Metric	AH725	TPI	Application range	DC	NOF	APMX	LF	CRKS	Wrench	Torque*
VMT100L06W19-4S05	●	19	1/4, 3/8	10	4	5.3	12.8	S05	KEYV-S05	7
VMT160L13W14-4S08	●	14	1/2, 5/8, 3/4, 7/8	16	4	12.7	20	S08	KEYV-S08	15
VMT160L11W11-4S08	●	11	≥1	16	4	11.6	19	S08	KEYV-T30L	15

Torque*: Recommended clamping torque (N·m)
2 pieces per package

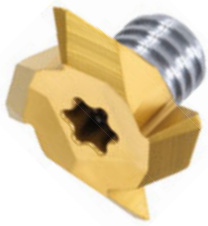
● : Line up

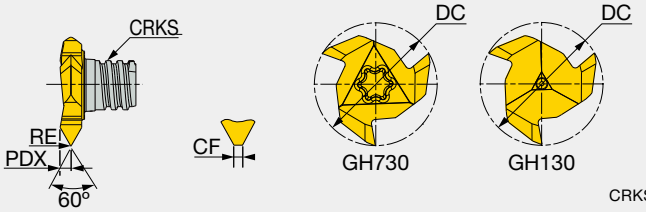
60° partial profile

VTR***IS

3, 4 flute, partial profile, for internal/external thread

Threading





CRKS = Connection screw size

Metric	GH730	GH130	TP TPN	TP TPX	Smallest Possible thread	DC	NOF	RE	CF	PDX	CRKS	Wrench	Torque*
VTR160L12IS05-3S06	●	▲	0.5	2	M20	15.7	3	-	0.05	1.4	S06	KEYV-177(1) / KEYV-T25(2)	10
VTR160L12IS15-3S06	●	▲	1.5	2	M22	15.7	3	0.05	-	1.4	S06	KEYV-177(1) / KEYV-T25(2)	10
VTR220L28IS30-4S08	●	▲	3	4.5	M36	21.7	4	0.2	-	2.8	S08	KEYV-217(1) / KEYV-T30L(2)	15

(1) Applicable for GH130
(2) Applicable for GH730
Torque*: Recommended clamping torque (N·m)
2 pieces per package

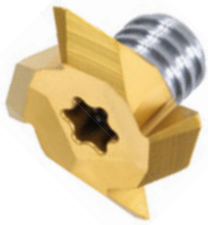
● : Line up
▲ : To be discontinued

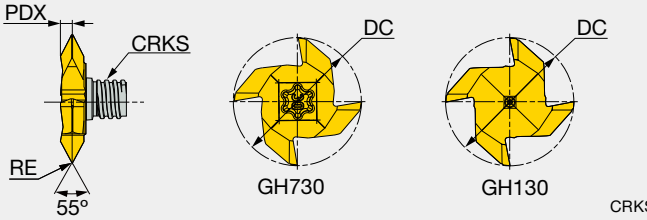
55° partial profile

VTR***W

4 flute, partial profile, for internal/external thread

Threading





CRKS = Connection screw size

Metric	GH730	GH130	TPI TPIN	TPI TPIX	Smallest Possible thread	DC	NOF	RE	PDX	CRKS	Wrench	Torque*
VTR220L24W14-4S08	●	▲	14	11	3/4	21.7	4	0.2	2.4	S08	KEYV-217(1) / KEYV-T30L(2)	15

(1) Applicable for GH130
(2) Applicable for GH730
Torque*: Recommended clamping torque (N·m)
2 pieces per package

● : Line up
▲ : To be discontinued

Reference pages: Standard cutting conditions → 8-58

STANDARD CUTTING CONDITIONS

Threading

VMT, VTR

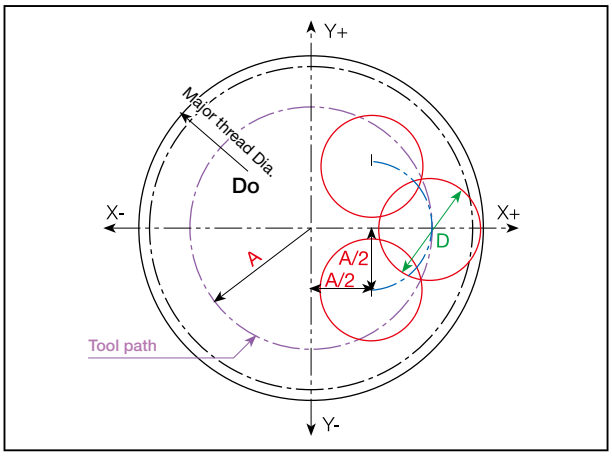
ISO	Material		Condition	Tensile strength [N/mm²]	Hardness HB	Cutting speed (sfm)	Tool dia. (in) Feed (ipt) ø10 (0.394")	ø12 (0.472")	ø15.4 (0.606"), ø15.7 (0.618"), ø16 (0.630")	ø21.7 (0.787")
P	Non-alloy steel and cast steel, free cutting steel	< 0.25 %C	Annealed	420	125	328 - 820	0.0031	0.0035	0.0047	0.0059
		≥ 0.25 %C	Annealed	650	190	262 - 689	0.0031	0.0035	0.0047	0.0059
		< 0.55 %C	Quenched and tempered	850	250	213 - 558	-	-	-	-
		≥ 0.55 %C	Annealed	750	220	361 - 591	0.0028	0.0031	0.0039	0.0047
			Quenched and tempered	1000	300	312 - 525	0.0028	0.0031	0.0039	0.0047
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	295 - 525	0.002	0.002	0.0028	0.0031
			Quenched and tempered	930	275	213 - 656	0.002	0.002	0.0028	0.0031
				1000	300	230 - 689	0.002	0.002	0.0028	0.0031
				1200	350	312 - 525	0.002	0.002	0.0028	0.0031
	High alloyed steel, cast steel, and tool steel		Annealed	680	200	427 - 558	0.002	0.002	0.0028	0.0031
			Quenched and tempered	1100	325	246 - 328	0.002	0.002	0.0028	0.0031
	Stainless steel and cast steel		Ferritic/martensitic	680	200	361 - 558	0.002	0.002	0.0028	0.0031
			Martensitic	820	240	230 - 509	0.002	0.002	0.0028	0.0031
M	Stainless steel		Annealed	600	180	279 - 328	0.002	0.002	0.0028	0.0031
K	Cast iron nodular (GGG)		Ferritic/martensitic	-	180	394 - 525	0.0031	0.0035	0.0047	0.0059
			Pearlitic	-	260	246 - 525	0.0031	0.0035	0.0047	0.0059
	Gray cast iron (GG)		Ferritic	-	160	230 - 492	0.0031	0.0035	0.0047	0.0059
			Pearlitic	-	250	361 - 459	0.0031	0.0035	0.0047	0.0059
	Malleable cast iron		Ferritic	-	130	394 - 525	0.0031	0.0035	0.0047	0.0059
			Pearlitic	-	230	361 - 459	0.0031	0.0035	0.0083	0.0059
N	Aluminum-wrought alloy		Not cureable	-	60	525 - 984	0.0031	0.0035	0.0047	0.0059
			Cured	-	100	-	-	-	-	-
	Aluminum-cast, alloyed	≤12% Si	Not cureable	-	75	492 - 1148	0.0031	0.0035	0.0047	0.0059
			Cured	-	90	-	-	-	-	-
		>12% Si	High temperature	-	130	328 - 820	0.002	0.002	0.0028	0.0031
	Copper alloys	>1% Pb	Free cutting	-	110	-	-	-	-	-
			Brass	-	90	-	-	-	-	-
			Electrolitic copper	-	100	-	-	-	-	-
	Non-metallic		Duroplastics, fiber plastics	-	-	328 - 1312	0.0043	0.0047	0.0059	0.0071
			Hard rubber	-	-	-	-	-	-	-
S	High temp. alloys	Fe based	Annealed	-	200	-	-	-	-	-
			Cured	-	280	-	-	-	-	-
		Ni or Co based	Annealed	-	250	66 - 262	0.0012	0.0012	0.0016	0.0016
			Cured	-	350	-	-	-	-	-
			Cast	-	320	-	-	-	-	-
	Titanium Ti alloys			RM 400	-	-	-	-		-
			Alpha+beta alloys cured	RM 1050	-	66 - 262	0.0012	0.0012	0.0016	0.0016
H	Hardened steel		Hardened	-	55 HRC	180 - 213	-	-	-	-
			Hardened	-	60 HRC	148 - 180	-	-	-	-
	Chilled cast iron		Cast	-	400	295 - 344	-	-	-	-
	Cast iron		Hardened	-	55 HRC	180 - 213	-	-	-	-

Thread Milling CNC Program for Internal Thread

Right-hand thread (climb milling) from bottom up. Program is based on tool center.
This method of programming needs no tool radius compensation value, other than an offset for wear.

General Program

G90 G00 G54 G43 H1X0 Y0 Z10 S (n : Number of revolutions)
G00 Z-(to thread depth)
G01 G91 G41 D1 X (A/2) Y-(A/2) Z0 F (Center of tool)
G03 X(A/2) Y(A/2) R (A/2) Z(1/8 pitch) F (Cutting edge)
G03 X0 Y0 I -(A) J0 Z (pitch)
G03 X-(A/2) Y(A/2) R (A/2) Z(1/8 pitch)
G01 G40 X -(A/2) Y-(A/2) Z0
G90 X0 Y0 Z0



$$A = \frac{Do - D}{2}$$

A = Radius of tool path
Do = Major thread diameter
D = Cutting diameter

F (Center of tool) = n x *f* x z
F (Cutting edge) = $\frac{Do - D}{Do}$ x n x *f* x z

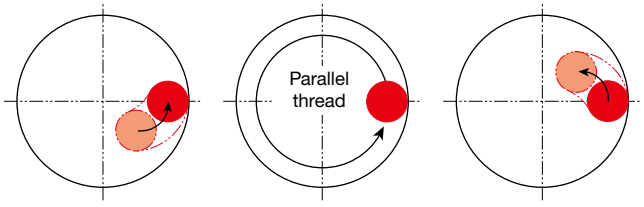
n : Number of revolutions
f : rev / tooth
z : Number of edge

Internal Thread

Example: M20x2.0 **IN-RH** (Thread depth 20 mm)
Tool : **MTEC1010C27 2.0ISO**
(Cutting dia. 10 mm)
A=(**Do**-**D**)/2=(20-10)/2=5
A/2=2.5
(Tool compensation of radius=0)

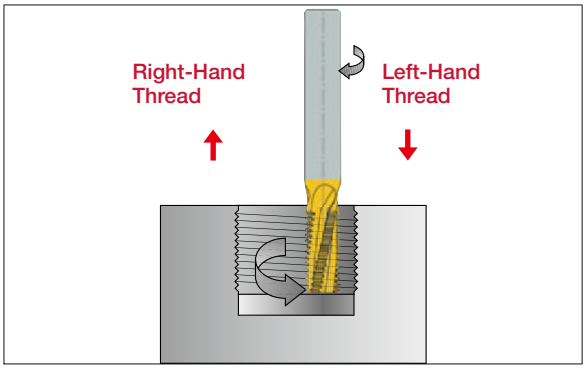
G90 G0 G54 G43 G17 H1X0 Y0 Z10 S4000
G0 Z-20
G01 G91 G41 **D1X** 2.5 **Y**-2.5 Z0 F840
G03 X2.5 Y2.5 R2.5 Z0.25 F420
G03 X0 Y0 I-5.0 J0 Z2.0
G03 X-2.5 Y2.5 R2.5 Z0.25
G01 G40 X-2.5 Y-2.5 Z0
G90 G0 X0 Y0 Z0
M30
%

Machining procedure

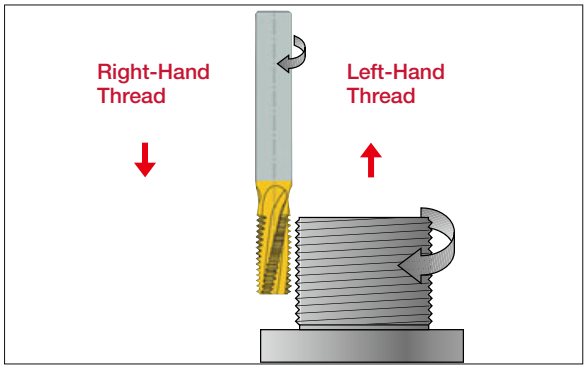


(a) Tool approach (b) Machining thread (c) Tool retraction

Internal Thread



External Thread



A thread milling operation is applicable for thread cutting in non-symmetrical parts utilizing the advantage of helical interpolation programs on modern machining centers.

For more details, please check ThreadMilling advisor.

Thread Whirling

For high-efficiency thread cutting

High productivity for precision screw manufacturing, like implant screws and bone screws

Ideal for medical screw thread forms that are becoming more complex
Single pass thread forming reduces cycle time

Features

NTK's insert design technology creates precise inserts matching even the most complex thread forms
Sharp cutting edges and PVD coated inserts generate superior surface finishes and achieves long tool life

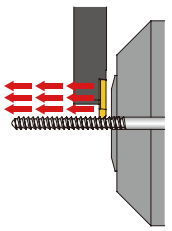
	Double-lead threads	Triple-lead threads
Work	Bone screw	Worm screw
Work material	Ti-6Al-4V ELI	brass
Workpiece		
Insert shape		
Major Dia.	ϕ4.0	ϕ7.0
Minor Dia.	ϕ2.4	ϕ4.7
Lead [Pitch×No. of Lead]	3.42mm	4.9mm

Machining multi-lead tread forms has many process requirements.
So it is important to contact us to discuss: mechanical specifications, spindle specifications, insert specifications, tooling specifications.

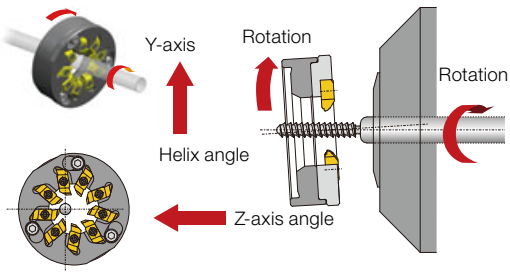
Thread whirling process vs. single point threading

In thread whirling, the whirling head is tilted to a specific helix angle, the cutter is rotated at high speed, the bar stock (c axis) is rotated at a low speed, and the pitch (z axis) is the feed.
The inserts shear the material which enables single pass thread forming.

Single point threading



Thread whirling



Special Item Capability

- Even though almost all bone screw shapes are special, NTK thread whirling inserts can make the correct shape of thread the first time, without any redesign or remanufacturing
- The combination of a sharp cutting edge and PVD coating achieves an excellent finish and long tool life.

Instructions

1. Refer to our chart and find your machine and spindle model. Select the suitable whirling cutter.
2. Submit the machine , spindle model information, workpiece drawing, material, and bar stock diameter to NTK. NTK calculates the lead angle and insert geometry from the work drawing and manufactures a dedicated insert.
3. Set the whirling cutter at the specified lead angle and set the cutting conditions.

Recommended Cutting Conditions

Conditions / No. of teeth		9	6	4	
Main spindle	min-1	10-40	10-25	7-15	Faster RPM reduces machining time
Whirling cutter	min-1	1500-4000			
Feed Rate		Same as thread lead = pitch			
Bar stock	mm	-ϕ10	-ϕ10	-ϕ8	
Work Material		Ti-6Al-4V EL / SUS316 / 17-4PH / Titanium / brass			

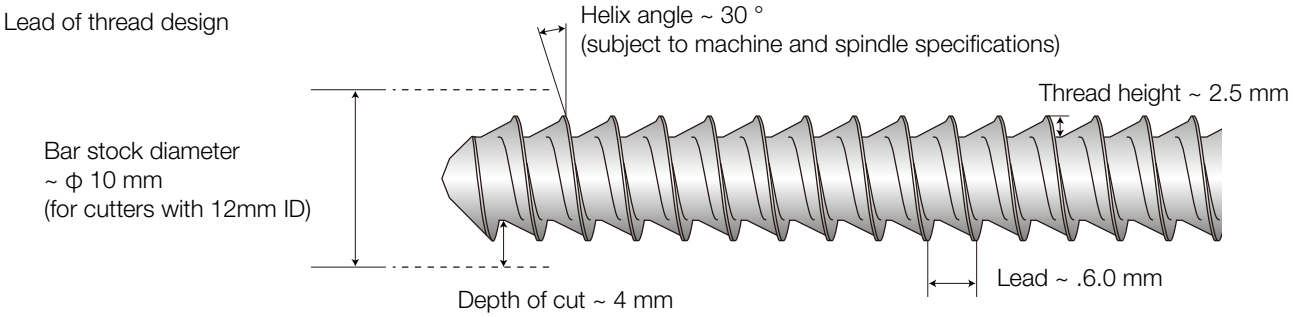
Formula for calculating thread whirling process time

$$T\ (\text{Seconds}) = \frac{60 \times \text{Thread length}}{\text{Main spindle rpm} \times \text{Feed rate (Thread lead)}}$$

Ex.) Double lead / 50㎜ length / 2㎜ lead (2×1㎜ pitch) / 30 rpm

$$T\ (\text{Seconds}) = \frac{60 \times 50\text{㎜}}{30\text{rpm} \times 2\text{㎜}} = 40\ \text{Seconds}$$

Applicable Thread Geometry (Approximated)



The geometries shown above are approximated and could vary by actual applications

Double-lead Bone Screw Process Example

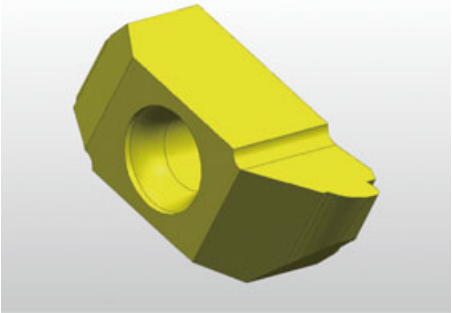
1. 1st thread whirl at taper area
2. Rotate the bar 180°and whirl the 2nd thread on same area as 1
3. Thread whirl the straight section
4. To obtain two exits on the screw, back up half a lead (one pitch) and rotate 180 degrees. Additional machining is performed at the exit.

Basic Insert Grade : ZM3

ZM3 is the common grade for NTK thread whirling

ZM3 offers excellent surface finish

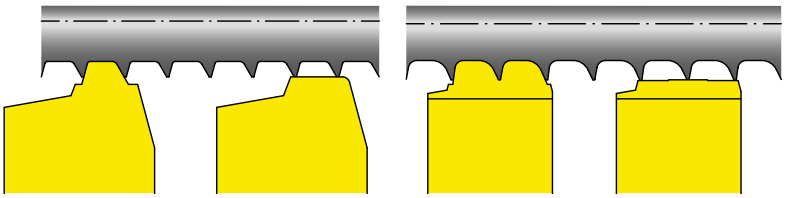
NTK can make inserts with other coatings to meet customers demands



NTK Thread Machining Examples

For absolute flat on OD

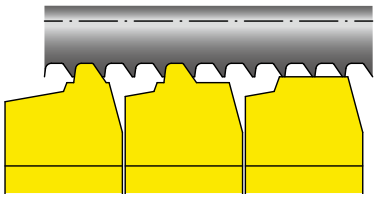
Single-lead **Double-lead**



Two insert combination brings absolute flat on OD to meet drawing specifications.

For tiny thread

Double-lead



NTK's Thread Whirling system can machine small diameter multi-lead screws to spec, with lower tool pressure, by using several types of specially designed and accurately ground inserts on the cutter.

NTK's Unique Attachment System

NTK's whirling insert holder can be attached and detached without removing mounting screws

①Loosen the Mounting Screws

②Rotate the Insert Holder 10 degrees

③Detach the Insert Holder without removing the Mounting Screws

Application Examples

Double-lead Bone Screw			
Work Material : Ti - 6Al - 4v ELI			
Bar Stock Dia.	Φ9.5	Number of start	2
Major Dia.	Φ4.0	Helix Angle	28.5°
Minor Dia.	Φ2.5	Hand of thread	Right
Cutting condition			
Main Spindle Speed (rpm)	15	Speed of whirling cutter (rpm)	3,500
Lead = Feed (mm/rev)	5.5	Result	OK
NTK Thread Whirling	**Dramatically improved productivity**		
Competitor's Thread Whirling		Cannot complete with single pass. Requires feeding stock multiple times and two passes for threading each time.	

NTK thread whirling succeeded in double lead screw machining when one of the major thread whirling suppliers has failed many times.

Single - lead Bone Screw			
Work Material: 316SS			
Bar Stock Dia.	$8.0	Number of start	1
Major Dia.	Φ3.45	Helix Angle	7.5°
Minor Dia.	Φ2.67	Hand of thread	Right
Cutting condition			
Main Spindle Speed (rpm)	23	Speed of whirling cutter (rpm)	2,000
Lead = Feed (mm/rev)	1.24	Result	OK
NTK Thread Whirling	**2,600 pcs**		
Competitor's Thread Whirling		1,000 pcs	

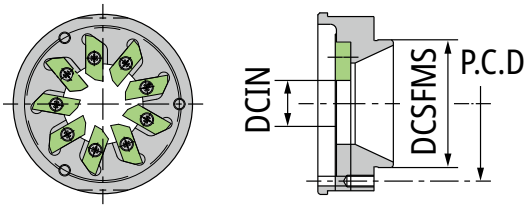
Some thread whirling manufacturers offer 6-teeth or 12-teeth systems, too many teeth cause chip packing issues and more tool pressure.Fewer teeth means greater cycle time. NTK concluded that 9-teeth is the best configuration. Our customers can run 1.5 times faster and get longer tool life.

Triple - lead Worm Gear			
Work Material: Brass			
Bar Stock Dia.	Φ8.0	Number of start	3
Major Dia.	Φ7.0	Helix Angle	14.6°
Minor Dia.	Φ4.7	Hand of thread	Left
Cutting condition			
Main Spindle Speed (rpm)	20	Speed of whirling cutter (rpm)	3,500
Lead = Feed (mm/rev)	4.8	Result	OK

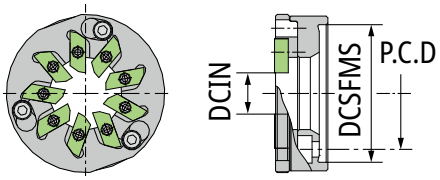
Multi-lead threads, common in the Worm Gear industry are made by a forming or cutting process. The large helix angle is difficult to machine with single-point threading.
NTK now makes thread whiling inserts for multi-lead threads.
Cycle time is reduced with a one pass process and thread form dimensions are stable with the low tool pressure.

Thread Whirling System

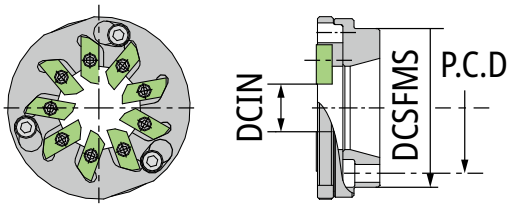
No.1



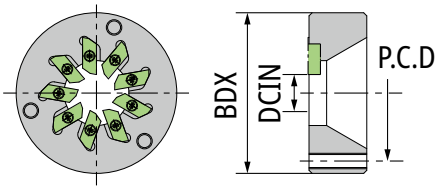
No.2



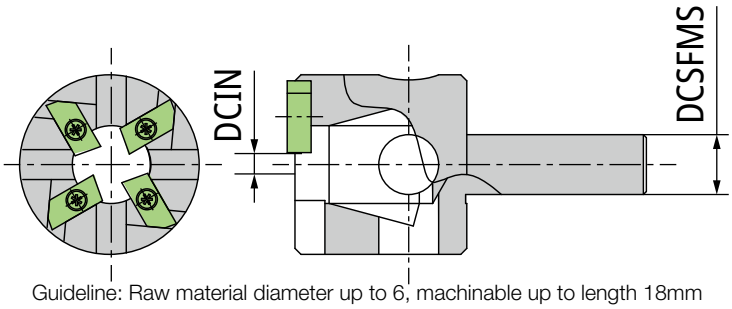
No.3



No.4

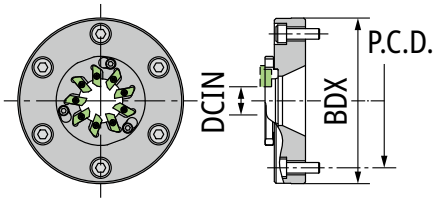


No.5

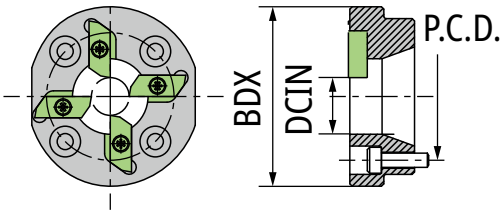


Guideline: Raw material diameter up to 6, machinable up to length 18mm
(Contact CD for further information)

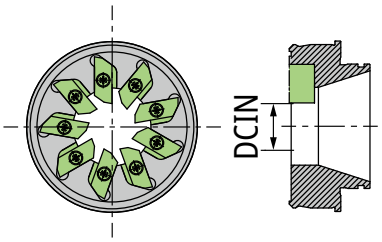
No.6



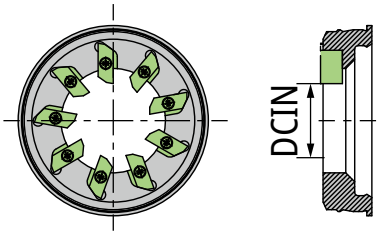
No.7



No.8



No.9



Spare Insert Holder (Cartridge)

Item number	No. of tooth	ϕDm	Compatible cutters
TWC6HP2	6	12	No,2,No.3※
TWC9HP2	9	12	No,2,No.3※
TWC9HP2-D16	9	12	No,6※

※Cannot be used for TWC9TS20550P2, TWC9TO12050P2-D18 and TWC9HA22594P2

Note(s): Note: Insert holder comes with insert screws and wrench
Insert holder mounting screw is not included

Spare Parts

Description		Item number
Insert Screw	for 4mm thick inserts	FSI17-2.2×6.0
	for 6.5mm thick inserts	FSI24-2.2×7.9
Wrench		T-07
Insert Holder Mounting Bolt		CS0309-TW

Thread Whirling System

Machine make	Model	Location	Spindle make	Spindle model	Helix angle	No.	NTK Whirling cutter	No. of tooth	ϕDm (mm)	ϕDs	P.C.D.	Mount adapter bolt
CITIZEN	M432-VII	Gang	CITIZEN	BTW-4000	0°- 15°	1	TWC9C0746HP1	9	ϕ12	ϕ46	ϕ35	M3
	L20/L20E/L20X	Gang		BTW-3000	0°- 15°							
	L32/L32X			BTW-3100	0°- 15°							
	D25	Gang		BTW-3100	0°- 15°		TWC9C1040HP1 TWC6C1040HP1 TWC9C1040HP1-D16	9 6 9	ϕ12 ϕ12 ϕ16	ϕ33	ϕ40	M3 (Provided with spindle)
	L32X			BTW-6000	±25°							
	L20X											
	M16			BTW-5000	±25°							
	A20				0°- 15°							
	A32			BTW-2000	±25°							
	L20/L20X											
	L32/L32X											
	M20											
	M32											
	C32			BTW-1000	±25°							
	L20											
	M20				+20°- -25°							
	M332				±25°							
	C12/16	Gang	CITIZEN	LTRO170	±15°	2	TWC9C1037P2	9	ϕ12	ϕ37	ϕ30.5	CS0310 (M3)
	M2/16	Turret		LTR0128/ LTRO168								
	M2/16III			MSW105								
	M20/32III			KSW110								
	L20	Gang		LTRO183	±15°	2	TWC9J1040P2	9	ϕ12	ϕ40	ϕ32.5	H-M4 × 12
	M20/32			LTRO183								
	M20/32	Turret		LTRO169								
	K16	Attachment	PCM	GSW-101	±15°	1	TWC6P1620HP1-D9	6	ϕ9	ϕ32	ϕ26	M4 (Provided with spindle)
	L20	Gang		LSW-101-L20	±10°	2	TWC9P1340P2	9	ϕ12	ϕ40	ϕ32	M4 (Provided with spindle
	M20/16	Turret		NSW-101								
	M20/M32	Turret		KSW-101								
STAR	SW-12	Attachment	STAR	10159	±20°	7	TWC4S1433HP1	4	ϕ8	ϕ38	ϕ27	CS0310 (M3)
	ECAS-12/20			54178	±10°	3	TWC9S1640P2	9	ϕ12	ϕ40	ϕ33	CS04148S (M4)
	SB-20R			0M171	-20°- 0°							
	SR-20J/20RIII 20RIV/32JII			68172	-20°- 0°							
	ECAS-20T	Turret		59172								
	ECAS-32T			58171	±20°							
	SR-38	Attachment		10172	±10°							
	ST-38	Turret		43156	±20°							
	SV-12			45172	±10°							
	SV-20/SV-20R			42173	±10°							
	SV-32			43172	±10°							
	SV-38R			43156	±20°							

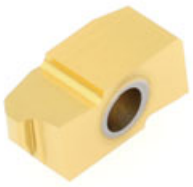
Thread Whirling System

Machine make	Model	Location	Spindle make	Spindle model	Helix angle	No.	NTK Whirling cutter	No. of tooth	φDm (mm)	φDs	P.C.D.	Mount adapter bolt
TSUGAMI	BH20/BH38	Turret	TSUGAMI	3263-Y481	±10°	3	TWC9TS2252P2	9	φ12	φ52	φ42	CS0515 (M5)
	B038T			3263-Y2481	±10°	3	TWC9TS2252P2	9	φ12	φ52	φ42	CS0515 (M5)
	BS20	Attachment		3214-Y1371	±10°	3	TWC9TS20550P2	9	φ16	φ50	φ40	CS0515 (M5)
	SS20/SS26/SS32 B0265/B0266-II B0325/B0326-II B0265/B0266(V)-III B0325/B0326(V)-III BW269Z/BW329Z			3268-Y451	0°-10°	4	TWC9TS2244HP1	9	φ12	φ52	φ44	CS0520 (M5)
					0°-20°	4	TWC9TS1944HP1	9	φ12	φ52	φ44	CS0520 (M5)
	S205/S206			3281-Y451	0°-25°	4	TWC9TS1644HP1	9	φ12	φ52	φ44	CS0515 (M5)
	S205/S206-II			3281-Y2451	0°-30°	4	TWC9TS1044HP1	9	φ12	φ52	φ44	CS0515 (M5)
	B0123/124/126-II B0203/204 /205/205-III/206-II			3220-Y6541								
	SS20/SS26/SS32			3268-Y271	0°-15°	4	TWC9TS1952P2BK	9	φ12	φ52	φ38	CS0515 (M5)
	SS20/SS26/SS32			3268-Y271	0°-20°	4	TWC9TS1652P2BK	9	φ12	φ52	φ38	CS0515 (M5)
	SS207/SS267/ SS327	B-axis		Using B-axis	0°-15°	5	TWC4TS3010HP1	4	φ7	φ10	For single-corner inserts only	
	SS267/SS327-III	Attachment		3293-Y3031	0°-15°	4	TWC9TS1944HP1	9	φ12	φ52	φ44	CS0520 (M5)
TORNOS	DECO 10/10a		TORNOS	224-1900	±15°	4	TWC6TO11542HP1	6	φ12	φ42	φ32	CS0410 (M4)
	Evo DECO 10/10			242-1900								
	DECO 13a/13e			226-1900	±15°	3	TWC9TO10540P2	9	φ12	φ40	φ31	CS0410 (M4)
	Evo DECO 16/10			243-1900					φ12			
	Swiss ST26			246-1900					φ12			
	DECO 20a			223-1900					φ12			
	DECO 26a			225-1900					φ12			
	Sigma 20			234-2750	±25°	3	TWC9TO12050P2-D18	9	φ18	φ50	φ40	CS0410 (M4)
	Sigma 32			236-2750								
HASEGA-WA	JS-1W	–	HASEGA-WA	–	0° -20°	6	TWC9HA22594P2	9	φ16	φ94	φ76	CS0620 (M6)
Various Machines	-	-	WTO	42BJ	-22°	8	TWC9WT42BJ20D12RH	9	φ12	-	-	-
	-	-		54BJ	30°	9	TWC9WT54BJ30D12RH	9	φ12	-	-	-
	-	-		54BJ	30°	9	TWC9WT54BJ25D22RH	9	φ12	-	-	-

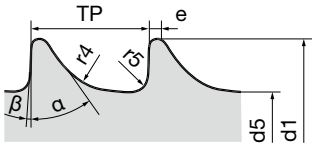
※ Screws for insert-thickness 4.0/6.0mm are supplied with the cutter body.
Use screws for the thickness of the insert you are using.

ISO5835 with chipbreaker

Standard Thread Whirling Inserts (2corners) for Medical ISO Style Threads
TWC.. series/Inserts Carbide

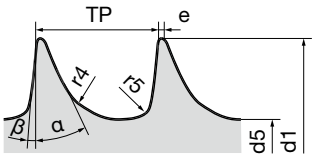


No.1



ISO5835 HA

No.2



ISO5835 HB

P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	Coated ZM3	ISO	Pitch	d1	d5	e	r4	r5	α	β	Figure
TW5835-HA1.5-D12	R	●	HA1.5	0.020	0.059	0.043	0.004	0.012	0.004	1.378	3°	1
TW5835-HA2.0-D12	R	●	HA2.0	0.024	0.079	0.051	0.004	0.016	0.004	1.378	3°	1
TW5835-HA2.7-D12	R	●	HA2.7	0.039	0.106	0.075	0.004	0.024	0.008	1.378	3°	1
TW5835-HA3.5-D12	R	●	HA3.5	0.049	0.138	0.094	0.004	0.031	0.008	1.378	3°	1
TW5835-HA4.0-D12	R	●	HA4.0	0.059	0.157	0.114	0.004	0.031	0.008	1.378	3°	1
TW5835-HA4.5-D12	R	●	HA4.5	0.069	0.177	0.118	0.004	0.039	0.012	1.378	3°	1
TW5835-HA5.0-D12	R	●	HA5.0	0.069	0.197	0.138	0.004	0.039	0.012	1.378	3°	1
TW5835-HB4.0-D12	R	●	HB4.0	0.069	0.157	0.075	0.004	0.031	0.012	0.984	5°	2
TW5835-HB6.5-D12	R	●	HB6.5	0.108	0.256	0.118	0.008	0.047	0.031	0.984	5°	2

Must use Thread whirling cutters with 0.472" øDm dimension

● : Line up

6. Parting, Grooving

Main products

DUOJCUT UST

Innovative clamping system for high rigidity in parting

CW = 1 - 2 mm (0.039" - 0.079")

6-109

TUNGCUT / TUNGSCUT SHORT

Multi-functional tool series for various grooving operations

CW = 1.4 - 6 mm (0.055" - 0.236")

6-79, 6-114

TETRAMCUT MINI

Unique insert pocket geometry for grooving with high quality and precision

CW = 0.33 - 3 mm (0.013" - 0.118")

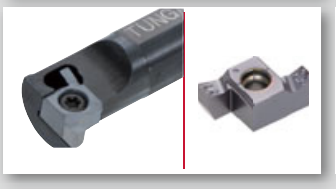
6-46

TETRAFCUT FORCE

4-cornered insert with good clamping rigidity for highly precise grooving and parting

CW = 0.5 - 3.18 mm (0.020" - 0.125")

6-58



SNG

Internal grooving

CW = 1 - 3.5 mm (0.039" - 0.138")

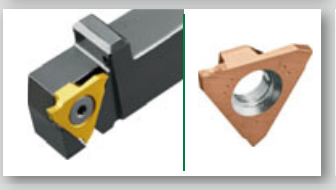
6-72

CSV Series

Best for machining with ultra small diameter of ϕ5 or less

CW = 0.2 - 1.5 mm (0.008" - 0.059")

6-28



GTMH32/43 Series

Wide range lineup not only width but also chipbreaker and grade

CW = 0.3 - 5.5 mm (0.012" - 0.217")

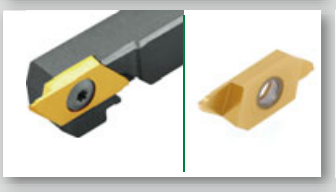
6-33

SATURN Duo

Unique tool for face grooving with swiss machine

CW = 1.0 - 2.0 mm (0.039" - 0.079")

6-83

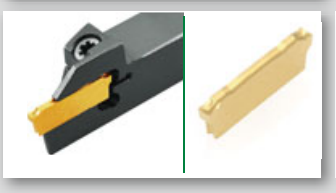


CTP/CTPA/CTPW Series

High precision sharp edge and wide range for parting

CW = 0.5 - 3.0 mm (0.020" - 0.118")

6-91



Cut Duo

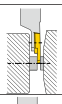
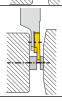
Achieve stable chip evacuation with ground finished chipbreaker

CW = 2.0 - 3.0 mm (0.079" - 0.118")

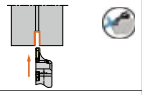
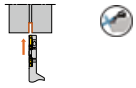
6-125 -

Parting
Inch

CTP

Application	Designation	Insert	Square shank (height x width) 0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Groove width (in)	Holder: Through-coolant	Holder: Direct connection
	CTPR/L-OH2	CTP		●				0.020 - 0.079	●	●
	CTPR/L-OH	CTP	●					0.020 - 0.079	●	
	CTPR/L	CTP	●	●	●			0.020 - 0.079		
	**CTPR/L-SUB-OH3**	CTP		●				0.020 - 0.079	●	●
	**CTPR/L-SUB**	CTP		●	●			0.020 - 0.079		
	CTPAR/L-OH2	CTPA		●	●			0.028 - 0.118	●	●
	CTPAR/L	CTPA	●	●	●			0.028 - 0.118		
	CTPAR/L-SUB	CTPA	●	●	●			0.028 - 0.118		
	CTPWR/L	CTPW		●	●			0.098		

DuoJustCut

Application	Designation	Insert	Square shank (height x width) 0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Groove width (in)	Holder: Modular head	Holder: Through-coolant	Holder: Direct connection
	**JSXXR/L-F/H/X-CHP**	JXPS...	●	●			0.024 - 0.098		●	●
	**JSXXR/L-F/X-S-CHP**	JXPS...	●	●			0.024 - 0.098		●	●

CSV

Application	Designation	Insert	Square shank (height x width) 0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	Groove width (in)	Max. parting diameter (in) 0 0.394 0.787 1.181 1.575 1.969	Page
	CSVR/L	CSVC		●	●	0.024 - 0.059	ø0.118 ø0.197	6-89

Max. parting diameter (in)

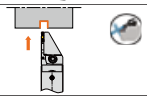
0	0.394	0.787	1.181	1.575	1.969	Page
	ø0.472					6-92
	ø0.472					6-92
	ø0.472					6-93
	ø0.472					6-91
	ø0.472					6-94
		ø0.630				6-91
		ø0.630				6-102
		ø0.630				6-102 6-103
			ø0.787			6-107

Max. parting diameter (in)

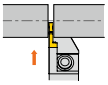
0	0.394	0.787	1.181	1.575	1.969	Page
ø0.236		ø0.787				6-109
ø0.236		ø0.787				6-109

Parting
Inch

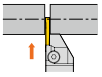
TungCut

Application	Designation	Insert	Square shank (height x width) 0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Groove width (in)	Holder: Modular head	Through-coolant	Direct connection
	JCTER/L	DG.../SG...	●	●			0.079 - 0.118			
	**JCTER/L-CHP**	DG.../SG...	●	●	●		0.079		●	●

CTDP

Application	Designation	Insert	Square shank (height x width) 0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Groove width (in)	Holder: Through-coolant	Direct connection
	**CTDPR/L-OH2/OH3**	CTDP		●	●	●		0.079 - 0.098	●	●
	CTDPR/L	CTDP	●	●	●	●		0.079 - 0.098		

CTWP

Application	Designation	Insert	Square shank (height x width) 0.750 x 0.750	1.000 x 1.000	Groove width (in)	Max. parting diameter (in) 0 0.984 1.969 2.953 3.937 4.921	Page
	**CTWPR/L**	GWPFM	●	●	0.118	ø1.654	6-128

AddForceCut

Application	Designation	Insert	Square shank (height x width) 0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Groove width (in)	Max. parting diameter (in) 0 0.984 1.969 2.953 3.937 4.921	Page
	QSER/L	QG...			●	●	0.079 - 0.197	ø2.048 ø2.598	6-129

Max. parting diameter (in)						
0	0.984	1.969	2.953	3.937	4.921	Page
ø0.945	ø1.260					6-115
ø0.980	ø1.260					6-116

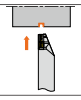
Max. parting diameter (in)						
0	0.984	1.969	2.953	3.937	4.921	Page
ø1.000	ø1.330					6-125
ø0.787	ø1.260					6-126

External Grooving
Inch

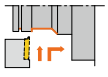
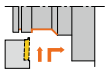
CSV

Application	Designation	Insert	Square shank (height x width) 0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	Groove width (in) 0 0.039 0.079	Max. groove depth (in)	Page
	CSVR/L	CSVG		●	●		0.010 0.059	0.006 - 0.102	6-28

MiniVLockGroove

Application	Designation	Insert	Square shank (height x width) 0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	Groove width (in) 0 0.039 0.079	Max. groove depth (in)	CUTDIA (in)	Page
	**SVER/L** Modular head	VGP...	●	●			0.020 0.039	0.079 - 0.157	0.157 - 0.315	6-30

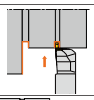
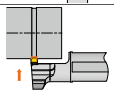
GTM32

Application	Designation	Insert	Square shank (height x width) 0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Holder Y-axis feed	Through-coolant	Direct connection	Groove width (in) 0 0.039 0.079 0.118 0.157 0.197
	GTTR-OH2	GTMH32		●	●				●	●	0.012 0.118
	GTTR/L	GTMH32	●	●	●	●					0.012 0.118
	**Y-GTTR-OH/OH2**	GTMH32		●				●	●		0.012 0.118
	**Y-GTTR**	GTMH32	●	●	●			●			0.012 0.118

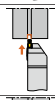
	Max. groove depth (in)	Page
	0.010 - 0.106	6-33
	0.010 - 0.106	6-34
	0.010 - 0.106	6-35
	0.010 - 0.106	6-36

External Grooving
Inch

TetraMini-Cut

Application	Designation	Insert	Square shank (height x width) 0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Cylindrical shank (shank dia.) ø0.625	ø0.750	ø1.000
	**STCR/L-18** Modular head	TC*18R/L...	●	●	●	●	●			
	**JS-STCL18** Modular head	TC*18R...						●	●	●

TetraForce-Cut

Application	Designation	Insert	Square shank (height x width) 0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	1.250 x 1.250	Holder Through-coolant	Direct connection
	STCR/L-27	TC*27...	●	●	●	●	●			
	STCR/L1212-27-CHP	TC*27...		●					●	●
	**STCR/L2020-27-CHP**	TC*27...				●			●	
	STCR/L-38	TCL38...				●	●	●		

SCRUM DUO

Application	Designation	Insert	Square shank (height x width) 0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	Groove width (in) 0	0.079	0.157	0.236	0.315	Max. groove depth (in)	Page
	GTWPR	GWPG		●	●			0.118			0.236	0.276 - 0.354	6-68

TungHeavyGroove

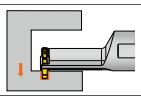
Application	Designation	Insert	Square shank (height x width) 0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Groove width (in) 0	0.394	0.787	Max. groove depth (in)	Page
	FPGN	PSGB...		●	●	●			0.394	0.787	0.984 - 1.456	6-70

Groove width (in) 0 0.394 0.787 1.181 1.575 1.969	Max. groove depth (in)	Page
0.013 0.125	0.031 - 0.138	6-47
0.013 0.125	0.031 - 0.138	6-48

Groove width (in) 0 0.394 0.787 1.181 1.575 1.969	Max. groove depth (in)	CUTDIA (in)	Page
0.020 0.125	0.039 - 0.252	0.079 - 0.504	6-58
0.020 0.125	0.039 - 0.252	0.079 - 0.504	6-58
0.020 0.125	0.039 - 0.252	0.079 - 0.504	6-59
0.059 0.157	0.354 - 0.394	0.709 - 0.787	6-64

Internal Grooving
Inch

AddInternalCut

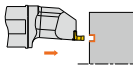
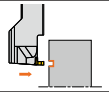
Application	Designation	Insert	Cylindrical shank (shank dia.) ø0.375	ø0.500	ø0.625	ø0.750	ø1.000	Groove width (in)	Max. groove depth (in)	Through coolant	Material
	**A/E-STCIR/L**	TCIG10/12...		●	●			0.020 - 0.118	0.039 - 0.118	●	Steel Carbide

TungShortCut

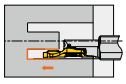
Application	Designation	Insert	Cylindrical shank (shank dia.) ø0.375	ø0.500	ø0.625	ø0.750	ø1.000	Groove width (in)	Max. groove depth (in)	Through coolant	Material
	CTIR**S**	DGS*S/ DTR*S	●	●	●			0.079 - 0.118	0.118 - 0.236	●	Steel

Face Grooving
Inch

TetraMini-Cut

Application	Designation	Insert	Square shank (height x width) 0.375 x 0.375	0.500 x 0.500	0.625 x 0.625	0.750 x 0.750	1.000 x 1.000	Cylindrical shank (shank dia.) ø0.375	ø0.500	ø0.625	ø0.750	ø1.000	Groove width (in)	Max. groove depth (in)
	**JS-STCFL18**	TCF18L...									●	●	0.020 - 0.098	0.039 - 0.118
	**STCFVR-18**	TCF18L...	●	●	●								0.020 - 0.098	0.039 - 0.118

FaceMiniCut

Application	Designation	Insert	Cylindrical shank (shank dia.) ø0.500	ø0.625	ø0.750	ø1.000	Groove width (in)	Max. groove depth (in)	Through coolant	Material
	**A-MFR/O**	MFGR10	●	●			0.079 - 0.098	0.354	●	Steel

Min. bore diameter DMIN (in)

0	0.197	0.394	0.591	0.787	0.984	Page
		ø0.438		ø0.688		6-77
			ø0.625		ø0.813	

Min. bore diameter DMIN (in)

0	0.197	0.394	0.591	0.787	0.984	Page
			ø0.500		ø0.750	6-79

Min. face groove outside diameter (in)

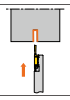
0	0.197	0.394	0.591	0.787	0.984	Page
	ø0.236					6-81
	ø0.236					6-81

Min. face groove outside diameter (in)

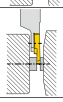
0	0.197	0.394	0.591	0.787	0.984	Page
		ø0.394				6-86

Parting
Metric

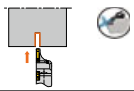
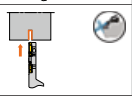
DuoForceCut

Application	Designation	Insert	Square shank (height x width) 6 x 6	7 x 7	8 x 8	10 x 10	Groove width (mm)	Max. parting diameter (mm) 0 10 20 30 40 50	Page
	**JSXXR/L*05**	JVPN...	●	●	●	●	0.5 - 1	ø4 ø12	6-87

CTP

Application	Designation	Insert	Square shank (height x width) 8 x 8	8 x 10	10 x 10	10 x 12	10 x 16	12 x 12	12 x 16	13 x 13	16 x 16	20 x 20	Groove width (mm)
	CTPR/L-OH2	CTP						●					0.5 - 2.0
	CTPR/L-OH	CTP				●		●			●		0.5 - 2.0
	CTPR/L	CTP		●	●			●			●		0.5 - 2.0
	CTPR/L-SUB-OH3	CTP						●					0.5 - 2.0
	**CTPR/L-SUB**	CTP	●		●			●					0.5 - 2.0
	CTPAR/L-OH2	CTPA						●			●		0.7 - 3.0
	CTPAR/L	CTPA			●			●			●	●	0.7 - 3.0
	CTPAR/L-SUB	CTPA			●			●			●		0.7 - 3.0
	CTPWR/L	CTPW				●	●	●	●		●	●	2.5

DuoJustCut

Application	Designation	Insert	Square shank (height x width) 10 x 10	10 x 12	12 x 12	16 x 16	20 x 20	Groove width (mm)	Holder Through-coolant
	**JSXXR/L*09-CHP**	JXP...		●	●	●		0.6 - 2	●
	**JSXXR/L*09-S-CHP**	JXP...	●		●	●		0.6 - 2	●

CSV

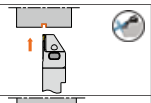
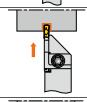
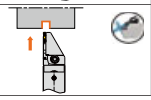
Application	Designation	Insert	Square shank (height x width) 7 x 7	8 x 8	9.5 x 9.5	10 x 10	12 x 12	Groove width (mm)	Max. parting diameter (mm) 0 10 20 30 40 50	Page
	CSVR/L	CSVC	●	●	●	●	●	0.6 - 1.5	ø3 ø5	6-89

Holder: Through-coolant	Holder: Direct connection	Max. parting diameter (mm) 0 10 20 30 40 50	Page
●	●	ø5 ø12	6-92
●		ø5 ø12	6-92
		ø5 ø12	6-93
●	●	ø5 ø12	6-91
		ø5 ø12	6-94
●	●	ø6.5 ø16	6-101
		ø6.5 ø16	6-102
		ø6.5 ø16	6-102 6-103
		ø20	6-107

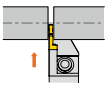
Max. parting diameter (mm) 0 10 20 30 40 50	Page
ø6 ø20	6-109
ø6 ø20	6-109

Parting
Metric

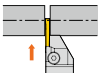
TungCut

Application	Designation	Insert	Square shank (height x width) 10 x 10	10 x 12	12 x 12	12 x 16	16 x 16	16 x 20	20 x 12	20 x 20	Groove width (mm)	Holder: Modular head	Through-coolant	Direct connection
	**QC12-JTTER/L-CHP**	DG.../SG...		●	●	●	●	●			1.2 - 2.39	●	●	●
	**J*TER/L**	DG.../SG...	●		●		●		●	●	1.2 - 3.18			
	**JCTER/L-CHP**	DG.../SG...			●		●			●	2 - 2.39		●	●

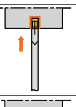
CTDP

Application	Designation	Insert	Square shank (height x width) 10 x 10	12 x 12	16 x 16	20 x 12	20 x 20	Groove width (mm)	Holder: Through-coolant	Direct connection
	**CTDPR/L-OH2/OH3**	CTDP		●	●		●	2.0 - 2.5	●	●
	CTDPR/L	CTDP	●	●	●	●	●	2.0 - 2.5		

CTWP

Application	Designation	Insert	Square shank (height x width) 10 x 10	12 x 12	Groove width (mm)	Holder: Through-coolant	Direct connection	Max. parting diameter (mm) 0 25 50 75 100 125	Page
	**CTWPR/L**	GWPFM	●	●	3			ø42	6-128

AddForceCut

Application	Designation	Insert	Square shank 20 x 20	Groove width (mm)	Max. parting diameter (mm) 0 25 50 75 100 125	Page
	QSER/L	QG...	●	2 - 4	ø52 ø66	6-129
	**QSG**	QG...	●	2 - 4	ø52 ø82	6-129
	QSP	QG...	●	2 - 5	ø50 ø120	6-129

Max. parting diameter (mm)

0 25 50 75 100 125	Page
ø12 ø32	6-114
ø12 ø42	6-114 6-115
ø25 ø32	6-116

Max. parting diameter (mm)

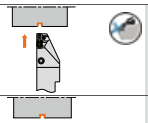
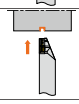
0 25 50 75 100 125	Page
ø25.4 ø34	6-125
ø20 ø34	6-126

External Grooving
Metric

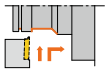
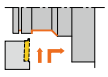
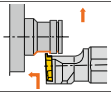
CSV

Application	Designation	Insert	Square shank (height x width) 7 x 7	8 x 8	9.5 x 9.5	10 x 10	12 x 12	Holder: Modular head	Through-coolant	Direct connection	Groove width (mm) 0	1	2	Max. groove depth (mm)	Page
	CSVR/L	CSVG	●	●	●	●	●				0.25	1.5		0.15 - 2.6	6-28

MiniVLockGroove

Application	Designation	Insert	Square shank (height x width) 8 x 8	10 x 10	10 x 12	12 x 12	12 x 16	Holder: Modular head	Through-coolant	Direct connection	Groove width (mm) 0	1	2	Max. groove depth (mm)	Page
	**QC-SVER/L-CHP** Modular head	VGP...			●	●	●	●	●	●	0.33	1		2.5 - 4	6-30
	**SVER/L**	VGP...	●	●		●					0.5	1		2 - 4	6-30

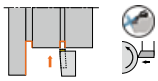
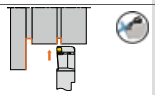
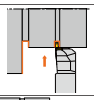
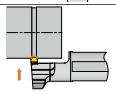
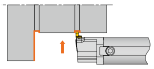
GTM32

Application	Designation	Insert	Square shank (height x width) 8 x 8	8 x 10	10 x 10	10 x 12	12 x 12	12 x 16	16 x 16	20 x 20	Cylindrical shank (shank dia.) ø14	ø15.875	ø16	ø19.05	ø20
	GTTR-OH2/OH3	GTMH32				●	●		●						
	GTTR/L	GTMH32	●		●		●		●	●					
	CH-GTTL	GTMH32			●		●		●						
	**Y-GTTR-OH**	GTMH32					●		●						
	**Y-GTTR**	GTMH32			●		●								
	**DS-GTTL**	GTMH32										●	●	●	●

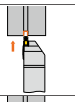
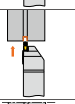
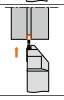
	Holder															
	ø22	ø25	ø25.4	ø32	Modular head	Y-axis feed	Through-coolant	Direct connection	Groove width (mm) 0 1 2 3 4 5						Max. groove depth (mm)	Page
							●	●	0.3			3			0.25 - 2.7	6-33
									0.3			3			0.25 - 2.7	6-34
									0.3			3			0.25 - 2.7	6-35
						●	●		0.3			3			0.25 - 2.7	6-35
						●			0.3			3			0.25 - 2.7	6-36
	●	●	●	●					0.3			3			0.25 - 2.7	6-36

External Grooving
Metric

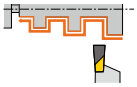
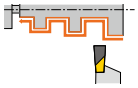
TetraMini-Cut

Application	Designation	Insert	Square shank (height x width)							Cylindrical shank (shank dia.)					
			10 x 10	10 x 12	12 x 12	12 x 16	16 x 16	16 x 20	20 x 20	ø14	ø15.875	ø16	ø19.05	ø20	ø22
	**QC-STCR/L-Y-CHP** Modular head	TC*18R/L...			●	●	●	●							
	**QC-STCR/L-CHP** Modular head	TC*18R/L...			●	●	●	●							
	**STCR/L-18**	TC*18R/L...	●		●		●		●						
	**JS-STCL18**	TC*18R...								●	●	●	●	●	●
	**QR-STCL18-CHP**	TC*18R...										●	●	●	

TetraForce-Cut

Application	Designation	Insert	Square shank (height x width)				Holder		Groove width (mm) 0 1 2 3 4 5	Max. groove depth (mm)	Page
			10 x 10	12 x 12	16 x 16	20 x 20	Through-coolant	Direct connection			
	**STCR/L-27**	TC*27...	●	●	●	●			0.5 — 3.18	1 - 6.4	6-58
	**STCR/L-27-CHP**	TC*27...		●		●	●	●	0.5 — 3.18	1 - 6.4	6-58
	**STCR/L-38**	TCL38...				●			0.5 — 4	9 - 10	6-64

GTPA

Application	Designation	Insert	Square shank (height x width)							Holder			
			10 x 10	10 x 14	12 x 12	12 x 14	12 x 16	16 x 16	20 x 20	Modular head	Y-axis feed	Through-coolant	Direct connection
	**GTPAR-OH**	GTPA				●						●	
	**GTPAR**	GTPA	●		●			●					
	Y-GTPAR-OH	GTPA		●			●	●			●	●	

	Holder								
	ø25	ø25.4	Modular head	Y-axis feed	Through-coolant	Direct connection	Groove width (mm) 0 1 2 3 4 5	Max. groove depth (mm)	Page
			●	●	●	●	0.33 — 3.18	0.8 - 3.5	6-46
			●		●	●	0.33 — 3.18	0.8 - 3.5	6-47
							0.33 — 3.18	0.8 - 3.5	6-47
	●	●					0.33 — 3.18	0.8 - 3.5	6-48
			●		●		0.33 — 3.18	0.8 - 3.5	6-48

	Groove width (mm) 1 2 3 4 5	Max. groove depth (mm)	Page
	2 — 2.5	3.0 - 6.0	6-65
	2 — 2.5	3.0 - 6.0	6-65
	2 — 2.5	3.0 - 6.0	6-66

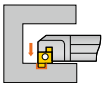
External Grooving
Metric

SCRUM DUO

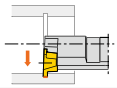
Application	Designation	Insert	Square shank (height x width) 10 x 10	12 x 12	16 x 16	20 x 20	Holder Through-coolant	Direct connection	Groove width (mm) 0 2 4 6 8 10	Max. groove depth (mm)	Page
	GTWPR/L	GWPG	●	●	●	●			3 — 6	7.0 - 9.0	6-68

Internal Grooving
Metric

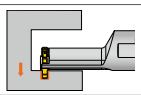
SNG

Application	Designation	Insert	Cylindrical shank (shank dia.) ø8	ø10	ø12	ø16	ø20	Groove width (mm)	Max. groove depth (mm)	Through coolant
	**A/E-SNGR**	*GR/L... *GMR...	●	●	●	●	●	1 - 3.5	1.5 - 3	●

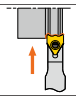
Mogul Bar S-BG

Application	Designation	Insert	Cylindrical shank (shank dia.) ø8	ø10	ø12	ø14	ø16	ø20	Groove width (mm)	Max. groove depth (mm)	Through coolant
	**S-BGR**	GTG10...		●	●				0.5 - 3	1 - 3	

AddInternalCut

Application	Designation	Insert	Cylindrical shank ø12	ø16	Groove width (mm)	Max. groove depth (mm)	Through coolant
	**A/E-STCIR/L**	TCIG10/12...	●	●	0.5 - 3	1 - 3	●

TungHeavyGroove

Application	Designation	Insert	Square shank (height x width) 12 x 12	16 x 16	20 x 20	Groove width (mm) 0 10 20 30 40 50	Max. groove depth (mm)	Page
	**FPGN**	PSGB...	●	●	●	10 — 25	-	6-70

Min. bore diameter DMIN (mm) 0 5 10 15 20 25	Page
ø8 — ø24	6-72

Min. bore diameter DMIN (mm) 0 5 10 15 20 25	Page
ø10 — ø20.5	6-76

Min. bore diameter DMIN (mm) 0 5 10 15 20 25	Page
ø10.5 — ø20	6-77

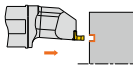
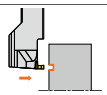
Internal Grooving
Metric

TungShortCut

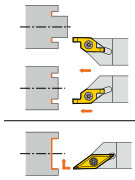
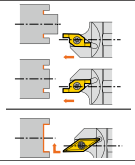
Application	Designation	Insert	Cylindrical shank ø10	Cylindrical shank ø12	Cylindrical shank ø16	Groove width (mm)	Max. groove depth (mm)	Through coolant
	CTIR/L-S	DGS*S/ DTR*S	●	●	●	2 - 3	3 - 6	●

Face Grooving
Metric

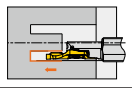
TetraMini-Cut

Application	Designation	Insert	Square shank (height x width) 10 x 10	12 x 12	16 x 16	Cylindrical shank (shank dia.) ø14	ø15.875	ø16	ø19.05	ø20	ø22	ø25	ø25.4
	**JS-STCFL18**	TCF18L...				●	●	●	●	●	●	●	●
	**STCFVR-18**	TCF18L...	●	●	●								

SATURN DUO

Application	Designation	Insert	Square shank (height x width) 10 x 10	10 x 16	12 x 12	12 x 16	16 x 16	Cylindrical shank (shank dia.) ø14	ø15.875	ø16	ø19.05	ø20	ø22	ø25	ø25.4
	**FGVR**	FGV FBV		●		●	●								
	CH-FGVR/L	FGV FBV	●		●		●								
	**DS-FGVR/L**	FGV FBV								●	●	●	●	●	●

FaceMiniCut

Application	Designation	Insert	Cylindrical shank (shank dia.) ø12	ø12.7	ø15.875	ø16	Groove width (mm)	Max. groove depth (mm)	Min. face groove outside diameter (mm) 0	5	10	15	20	25	Page
	**A-MFR/O**	MFGR10	●	●	●	●	2 - 2.5	9	ø10						6-86

Min. bore diameter DMIN (mm)						
	5	10	15	20	25	Page
		ø12		ø16		6-79

Groove width (mm)	Max. groove depth (mm)	Min. face groove outside diameter (mm)						
		0	5	10	15	20	25	Page
0.5 - 2.5	1 - 3		ø6					6-81
0.5 - 2.5	1 - 3		ø6					6-81

Groove width (mm)	Max. groove depth (mm)	Min. face groove outside diameter (mm)						
		0	5	10	15	20	25	Page
1.0 - 2.0	1.5 - 3		ø6					6-83
1.0 - 2.0	1.5 - 3		ø6					6-83
1.0 - 2.0	1 - 3		ø6					6-84

TUNGCUT

Multi-functional grooving tool series with excellent versatility

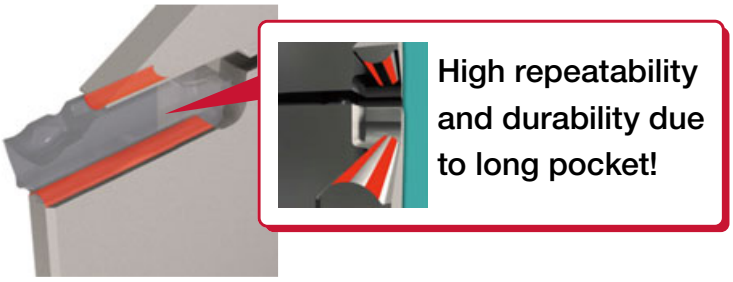
New modular holder system enhances versatility of existing monoblock holder and TungCap (PSC) lines.

High-pressure coolant system improves chip flow and tool life.

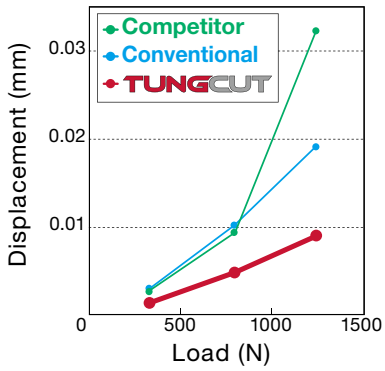
High clamping rigidity
For stable tool life and accuracy

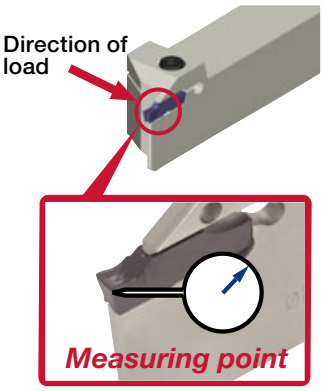
Clamping system

Stable and safe contact areas



Minimizes cutting edge displacement





Reference pages: 6-114

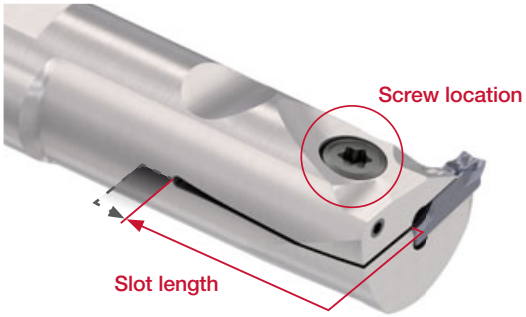
New double-ended small-size internal grooving inserts with exceptional features

Robust toolholder design

CTIRS**
(Toolholder that accommodates downsized internal grooving insert)

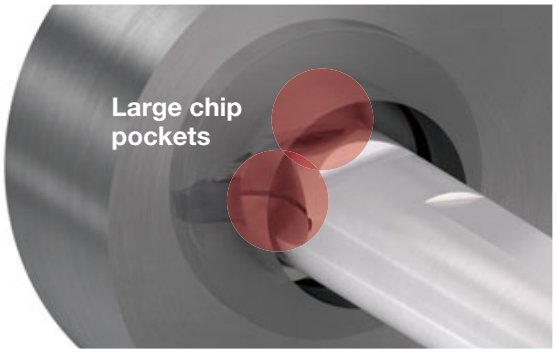
1 Improved chatter resistance

- Optimized screw location enhances insert clamping capability
- Shorter slot length



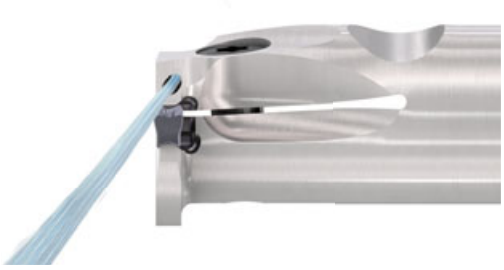
2 Effective chip evacuation

- Larger pockets promote smooth chip evacuation



3 Internal coolant system

- Precision coolant delivered from the top to the cutting point for best performance and smooth chip evacuation.



Reference pages: 6-79

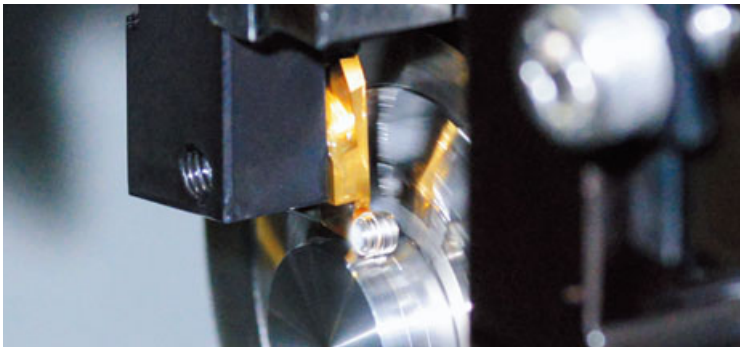
GTMH-GX Chipbreaker

For Grooving | Swiss CNC Lathes

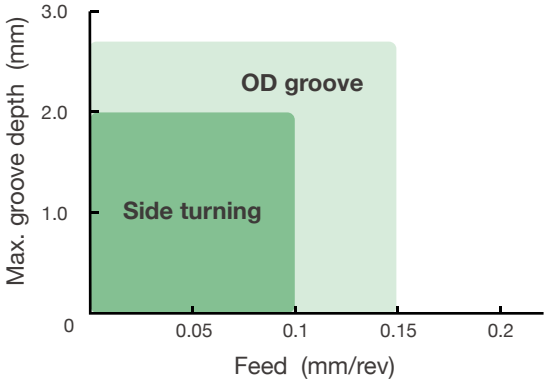
Groove widths from: 0.33 mm - 3.0 mm
Grooving & side turning with excellent chip control

Groove width 1.5mm

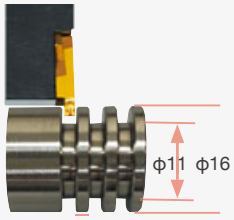
Groove width 1.0mm



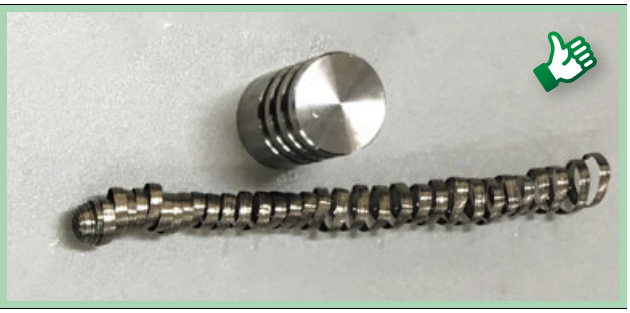
Functioning range



Excellent chip control



Cutting conditions
Material: AISI 316L
vc=80m/min
f=0.02mm/rev
ap=2.5mm
WET

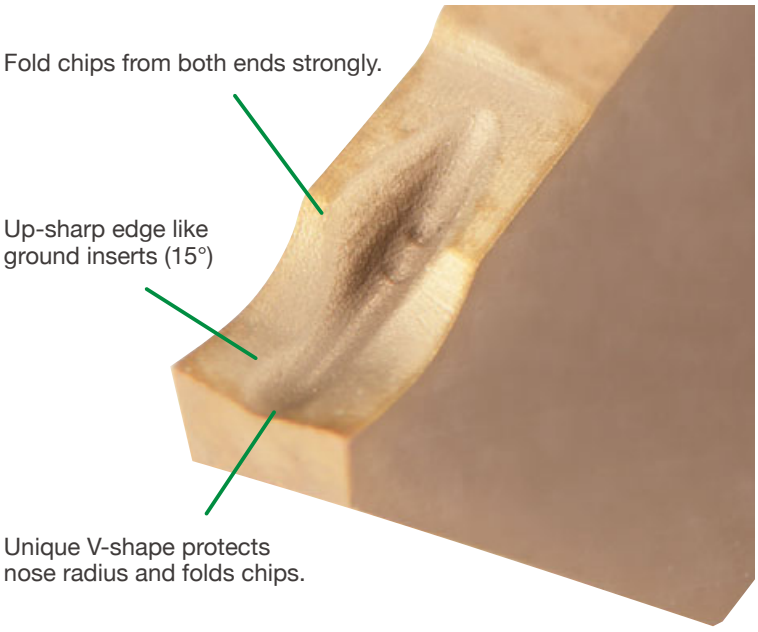
GX Chipbreaker	
Competitor	

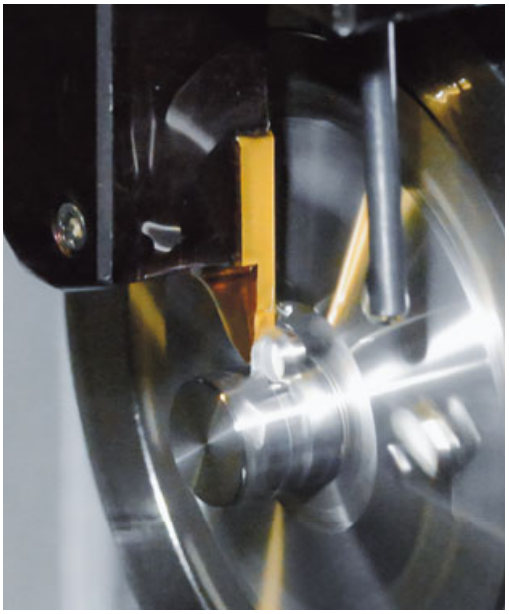
Reference pages: Inserts → 6-37 - 6-43, Toolholders → 6-33 - 6-36

CTP/CTPA-CX Chipbreaker

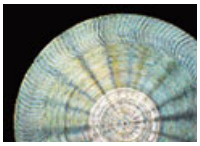
For Parting off | Swiss CNC Lathes

Curls and controls chips. Achieves good surface finish





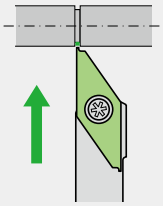
Cutting performance

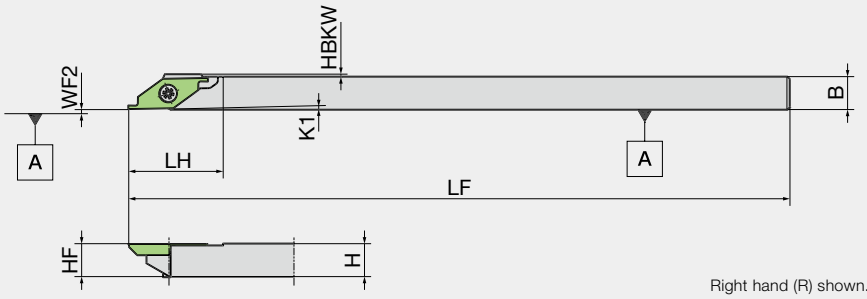
Feed (mm/rev)	CX Chipbreaker		Conventional (ground chipbreaker)		Competitor (3D chipbreaker)	
	Chip	Surface finish	Chip	Surface finish	Chip	Surface finish
0.02						
0.05						
	Excellent machined surface finish		Rough surface finish		Vibration occurred due to rigidity issue	

Reference pages: Inserts → 6-95 - 6-100, Toolholders → 6-91 - 6-94

CSV

For Cam-style machine





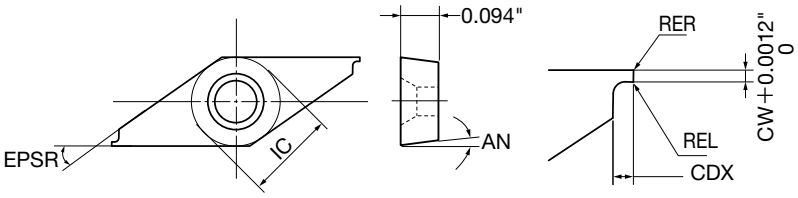
Right hand (R) shown.

Inch	H	B	LF	LH	HBKW	HF	K1	WF2	Insert
CSVR06-IN-NC	0.375	0.375	4.724	0.787	-	0.375	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08-IN-NC	0.500	0.500	4.724	0.787	-	0.500	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL06-IN-NC	0.375	0.375	4.724	0.787	-	0.375	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL08-IN-NC	0.500	0.500	4.724	0.787	-	0.500	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
Metric	**H**	**B**	**LF**	**LH**	**HBKW**	**HF**	**K1**	**WF2**	**Insert**
CSVR07	7	7	140	20	0.5	7	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR07GX	7	7	85	20	0.5	7	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08	8	8	140	20	0	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08GX	8	8	85	20	0	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR095	9.5	9.5	140	20	0	9.5	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR10	10	10	140	20	0	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR12	12	12	140	20	0	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR12GX	12	12	85	20	0	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL07	7	7	140	20	0.5	7	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL08	8	8	140	20	0	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL10	10	10	140	20	0	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08NC	8	8	120	20	-	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08NC-F	8	8	120	20	-	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR10GXNC	10	10	85	20	-	10	1°	0 - 0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR10NC	10	10	120	20	-	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR12NC	12	12	120	20	-	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL08NC	8	8	120	20	-	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL10NC	10	10	120	20	-	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL12NC	12	12	120	20	-	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CSVR/L**	LRIS-2.5*7	CLR-15S

CSVG without Chipbreaker (For Grooving)



Right hand (R) shown.

P	Steel	★	
M	Stainless	☆	
N	Non-ferrous		
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

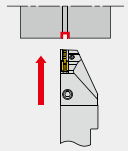
Designation	HAND	Coated VM1	Mirror finish	CW (mm)	CW (in)	APMX* (in)	CDX (in)	IC (in)	AN	EPSR	REL (in)	RER (in)
CSVG11FRV025	R	●	Ⓜ	0.25	0.010	0.006	0.020	0.250	7°	35°	0	0
CSVG11FRV030	R	●	Ⓜ	0.3	0.012	0.006	0.020	0.250	7°	35°	0	0
CSVG11FRV035	R	●	Ⓜ	0.35	0.014	0.006	0.020	0.250	7°	35°	0	0
CSVG11FRV040	R	●	Ⓜ	0.4	0.016	0.006	0.020	0.250	7°	35°	0	0
CSVG11FRV045	R	●	Ⓜ	0.45	0.018	0.018	0.039	0.250	7°	35°	0	0
CSVG11FRV050	R	●	Ⓜ	0.5	0.020	0.018	0.039	0.250	7°	35°	0	0
CSVG11FRV055	R	●	Ⓜ	0.55	0.022	0.018	0.039	0.250	7°	35°	0	0
CSVG11FRV060	R	●	Ⓜ	0.6	0.024	0.018	0.039	0.250	7°	35°	0	0
CSVG11FRV065	R	●	Ⓜ	0.65	0.026	0.018	0.039	0.250	7°	35°	0	0
CSVG11FRV070	R	●	Ⓜ	0.7	0.028	0.018	0.039	0.250	7°	35°	0	0
CSVG11FRV075	R	●	Ⓜ	0.75	0.030	0.055	0.079	0.250	7°	35°	0	0
CSVG11FRV080	R	●	Ⓜ	0.8	0.031	0.055	0.079	0.250	7°	35°	0	0
CSVG11FRV085	R	●	Ⓜ	0.85	0.033	0.055	0.079	0.250	7°	35°	0	0
CSVG11FRV090	R	●	Ⓜ	0.9	0.035	0.055	0.079	0.250	7°	35°	0	0
CSVG11FRV095	R	●	Ⓜ	0.95	0.037	0.055	0.079	0.250	7°	35°	0	0
CSVG11FRV100	R	●	Ⓜ	1	0.039	0.055	0.079	0.250	7°	35°	0	0
CSVG11FRV110	R	●	Ⓜ	1.1	0.043	0.102	0.118	0.250	7°	35°	0	0
CSVG11FRV120	R	●	Ⓜ	1.2	0.047	0.102	0.118	0.250	7°	35°	0	0
CSVG11FRV130	R	●	Ⓜ	1.3	0.051	0.102	0.118	0.250	7°	35°	0	0
CSVG11FRV140	R	●	Ⓜ	1.4	0.055	0.102	0.118	0.250	7°	35°	0	0
CSVG11FRV150	R	●	Ⓜ	1.5	0.059	0.102	0.118	0.250	7°	35°	0	0
CSVG11FLV075	R	●	Ⓜ	0.75	0.030	0.055	0.079	0.250	7°	35°	0	0
CSVG11FLV095	R	●	Ⓜ	0.95	0.037	0.055	0.079	0.250	7°	35°	0	0
CSVG11FLV120	R	●	Ⓜ	1.2	0.047	0.102	0.118	0.250	7°	35°	0	0

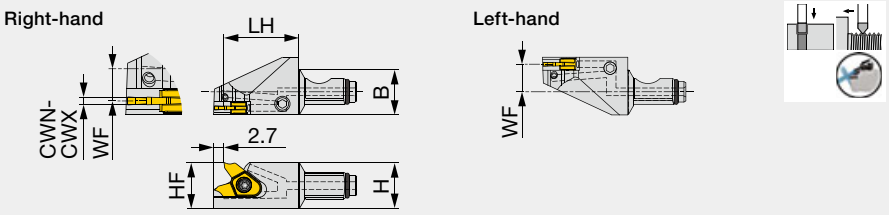
● : Line up

NOTE: All angles shown are obtained when insert is set in the holder.
* Depth of cut maximum

QC12-SVER/L-CHP

Modular head for external grooving and threading, with high pressure coolant capability





Metric	CWN	CWX	H	B	LH	HF	WF (1)	Insert	Torque
QC10-SVER/L10-CHP	0.5 (0.020")	1 (0.039")	10 (0.625")	10 (0.625")	17 (0.669")	10 (0.394")	3.19/6.19 (0.126"/0.244)	VG*10...	1.3 (0.96)
QC12-SVER/L10-CHP	0.5 (0.020")	1 (0.039")	12 (0.750")	12 (0.750")	19.5 (0.768")	12 (0.472")	4.19/7.19 (0.165"/0.283")	VG*10...	1.3 (0.96)

Torque: Recommended clamping torque: N·m (lbs·ft)

(1) "WF" indicates the distance from the reference position to the center of the cutting edge width. The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.

External

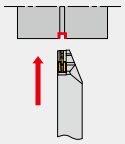
Internal

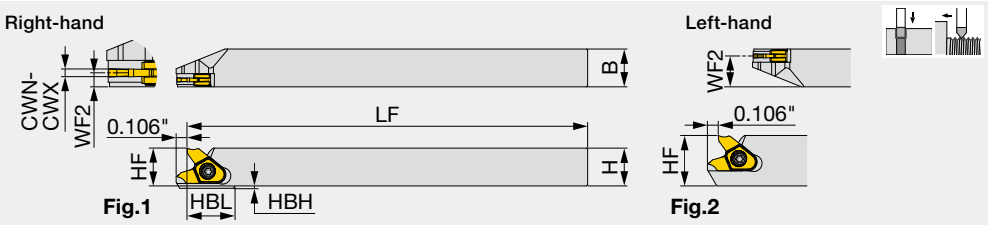
Face

Parting

SVER/L

External grooving and threading toolholder





Inch	CWN	CWX	H	B	LF	HF	WF2 (1)	HBL	HBH	Insert	Torque	Fig.
SVER/L06-10	0.020	0.039	0.375	0.375	4.750	0.375	0.070/0.304	0.472	0.024	VG*10...	0.96	1
SVER/L08-10	0.020	0.039	0.500	0.500	4.750	0.500	0.070/0.430	-	-	VG*10...	0.96	2

Metric	CWN	CWX	H	B	LF	HF	WF2 (1)	HBL	HBH	Insert	Torque*	Fig.
SVER/L0808H08	0.33	1	8	8	100	8	1.23/6.78	-	-	VGP08...	1.1	2
SVER/L1010H10	0.5	1	10	10	100	10	1.78/8.23	-	-	VG*10...	1.3	1
SVER/L1212X10	0.5	1	12	12	120	12	1.78/10.23	-	-	VG*10...	1.3	1

Torque: Recommended clamping torque: lbs·ft (*N·m)

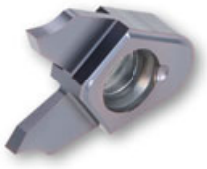
(1) "WF" indicates the distance from the reference position to the center of the cutting edge width. The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.

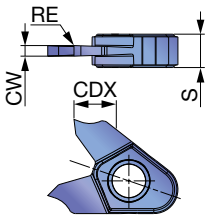
SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QC10-SVER10-CHP	CSTB-2.5L054DL	T-7F	ORSS-0353.5X1.0NBR70
QC10-SVEL10-CHP	CSTB-2.5L054DR	T-7F	ORSS-0353.5X1.0NBR70
QC12-SVER10-CHP	CSTB-2.5L054DL	T-7F	ORSS-0454.5X1.0NBR70
QC12-SVEL10-CHP	CSTB-2.5L054DR	T-7F	ORSS-0454.5X1.0NBR70
SVER0808...	CSTB-2.2L053DL	T-7F	-
SVEL0808...	CSTB-2.2L053DR	T-7F	-
SVER06/08-10, SVER1010/1212...	CSTB-2.5L054DL	T-7F	-
SVEL06/08-10, SVEL1010/1212...	CSTB-2.5L054DR	T-7F	-

Reference pages: QC12-SVER/L-CHP: Shank, Accessary → 3-130 - 3-132
Standard cutting conditions → 6-32

VGP08/10 (For grooving / sharp edge)





P	Steel	★
M	Stainless	★
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	★
H	Hard materials	

★ : First choice

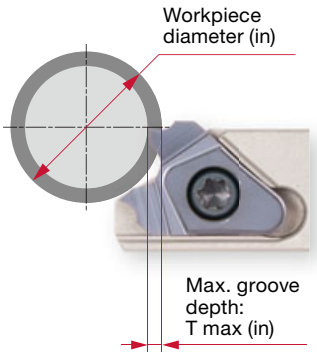
Designation	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated SH725	CDX* (in)	CUTDIA (in)	S (in)
VGP08-033F-000	0.33	0.013	0	●	0.079	0.157	0.087
VGP08-050F-000	0.5	0.020	0	●	0.079	0.157	0.087
VGP08-075F-000	0.75	0.030	0	●	0.098	0.197	0.087
VGP08-100F-000	1	0.039	0	●	0.098	0.197	0.087
VGP10-050F-000	0.5	0.020	0	●	0.098	0.197	0.124
VGP10-050F-005	0.5	0.020	0.002	●	0.098	0.197	0.124
VGP10-075F-000	0.75	0.030	0	●	0.118	0.236	0.124
VGP10-075F-005	0.75	0.030	0.002	●	0.118	0.236	0.124
VGP10-100F-000	1	0.039	0	●	0.157	0.315	0.124
VGP10-100F-005	1	0.039	0.002	●	0.157	0.315	0.124

*Max grooving depth varies depending on workpiece diameters.
See below for details.

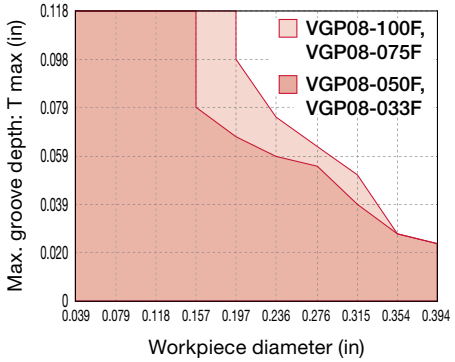
● : Line up

Note: Max grooving depths vs workpiece diameters

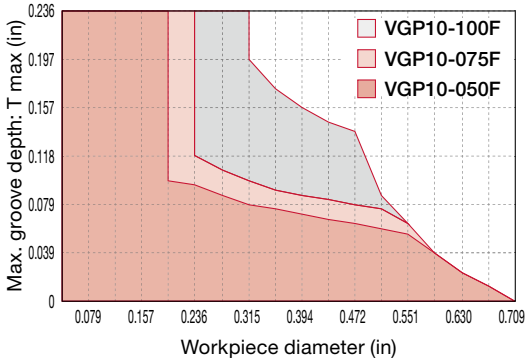
To avoid tool interference with the workpiece, max grooving depths (T max) for the insert used may be smaller than the CDX values listed above depending on the workpiece diameter.



VGP08



VGP10



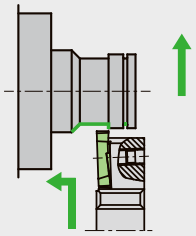
STANDARD CUTTING CONDITIONS

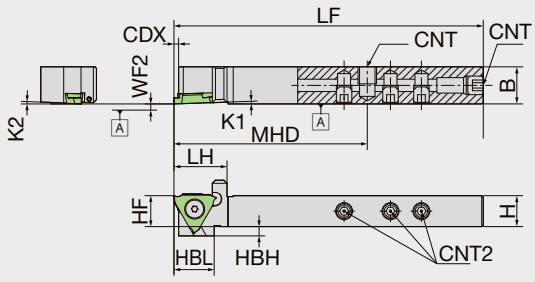
Grooving

ISO	Workpiece materials	Grade	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Low carbon steels 1015, 1020, etc.	SH725	164 - 492	0.0002 - 0.004
P	Carbon steels, Alloy steels 1055, 4140, etc.	SH725	164 - 492	0.0002 - 0.004
P	Free cutting steels SUH22, SUH23, etc.	SH725	164 - 492	0.0002 - 0.004
M	Stainless steels 304, etc.	SH725	164 - 328	0.0002 - 0.004
N	Aluminum alloys 5056, 6061, etc.	SH725	492 - 722	0.0002 - 0.004
N	Copper alloy C2600, C280C, etc.	SH725	328 - 656	0.0002 - 0.004
S	Titanium alloys Ti-6Al-4V, etc.	SH725	98 - 262	0.0002 - 0.004
S	Superalloys Inconel718, etc.	SH725	98 - 262	0.0002 - 0.004

GTT-OH3

Coolant through (direct connect compatible)





Right hand (R) shown.

Inch	CW	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert	
GTTR10XB-IN-OH3	0.012 - 0.118	0.625	0.625	4.724	0.787	0.063	–	–	0.625	2°	2°	3.100	0	NPT1/8	M5	GT**32..	TBMH32..
Metric	**CW**	**H**	**B**	**LF**	**LH**	**CDX**	**HBH**	**HBL**	**HF**	**K1**	**K2**	**MHD**	**WF2**	**CNT**	**CNT2**	**Insert**	
GTTR1012H00-OH3	0.3 - 3	10	12	100	17.15	1.6	3	13	10	2°	2°	62.5	0	Rc1/8	M5	GT**32..	TBMH32..
GTTR16X00-OH3	0.3 - 3	16	16	120	20	1.6	–	–	16	2°	2°	78.75	0	Rc1/8	M5	GT**32..	TBMH32..

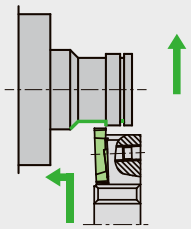
NOTE: Reference Chart of OH3 Hole Position→10-1

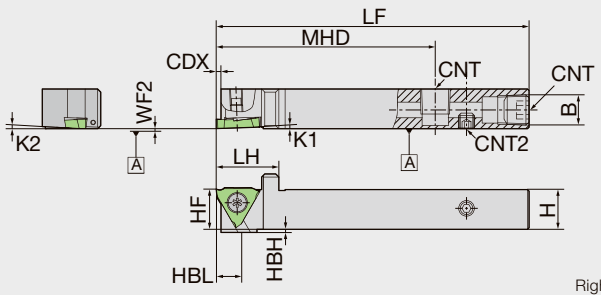
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
GTTR10XB-IN-OH3	LR-S-4*10PW	SPNPT1/8	SS0505SC	CLR-15S	LW-2.5
GTTR1012H00-OH3	LR-S-4*10PW	SS0605SC	SS0505SC	CLR-15S	LW-2.5
GTTR16X00-OH3	LR-S-4*10PW	SPR1/8	SS0505SC	CLR-15S	LW-2.5

GTT-OH2

Coolant through (direct connect compatible)





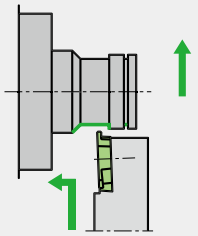
Right hand (R) shown.

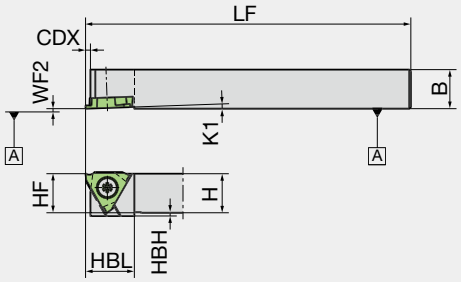
Inch	CW	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert	
GTTR08HA-IN-OH2	0.012 - 0.118	0.500	0.500	3.937	0.787	0.071	0.039	0.512	0.500	2°	2°	2.756	0	NPT1/8	M5	GT**32..	TBMH32..
GTTR08HB-IN-OH2	0.012 - 0.118	0.500	0.500	3.937	0.787	0.106	0.039	0.512	0.500	2°	2°	2.756	0	NPT1/8	M5	GT**32..	TBMH32..
GTTR10XA-IN-OH2	0.012 - 0.118	0.625	0.625	3.937	0.787	0.071	-	-	0.625	2°	2°	2.756	0	NPT1/8	M5	GT**32..	TBMH32..
GTTR10XB-IN-OH2	0.012 - 0.118	0.625	0.625	4.724	0.787	0.106	-	-	0.625	2°	2°	2.756	0	NPT1/8	M5	GT**32..	TBMH32..
Metric	**CW**	**H**	**B**	**LF**	**LH**	**CDX**	**HBH**	**HBL**	**HF**	**K1**	**K2**	**MHD**	**WF2**	**CNT**	**CNT2**	**Insert**	
GTTR12H00-OH2	0.3 - 3	12	12	100	19.5	1.6	1	13	12	2°	2°	70	0	Rc1/8	M5	GT**32..	TBMH32..
GTTR16X00-OH2	0.3 - 3	16	16	120	19.5	1.6	–	–	16	2°	2°	70	0	Rc1/8	M5	GT**32..	TBMH32..

SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
GTTR08HA-IN-OH2	LR-S-4*10PW	SPNPT1/8	SS0505SC	CLR-15S	LW-2.5
GTTR08HB-IN-OH2	LR-S-4*10PW	SPNPT1/8	SS0505SC	CLR-15S	LW-2.5
GTTR10XA-IN-OH2	LR-S-4*10PW	SPNPT1/8L	SS0505SC	CLR-15S	LW-2.5
GTTR10XB-IN-OH2	LR-S-4*10PW	SPNPT1/8L	SS0505SC	CLR-15S	LW-2.5
GTTR**H00-OH2	LR-S-4*10PW	SPR1/8	SS0505SC	CLR-15S	LW-2.5

Reference pages: Inserts → 6-37 - 6-43





Right hand (R) shown.

Inch	CW	H	B	LF	CDX	HBH	HBL	HF	K1	K2	WF2		Insert
GTTR06A-IN	0.012 - 0.118	0.375	0.375	4.724	0.071	0.118	0.591	0.375	2°	2°	0	GT**32..	TBMH32..
GTTR06B-IN	0.012 - 0.118	0.375	0.375	4.724	0.106	0.118	0.591	0.375	2°	2°	0	GT**32..	TBMH32..
GTTR08A-IN	0.012 - 0.118	0.500	0.500	4.724	0.071	0.039	0.591	0.500	2°	2°	0	GT**32..	TBMH32..
GTTR08B-IN	0.012 - 0.118	0.500	0.500	4.724	0.106	0.039	0.591	0.500	2°	2°	0	GT**32..	TBMH32..
GTTR10A-IN	0.012 - 0.118	0.625	0.625	4.724	0.071	-	-	0.625	2°	2°	0	GT**32..	TBMH32..
GTTR10B-IN	0.012 - 0.118	0.625	0.625	4.724	0.106	-	-	0.625	2°	2°	0	GT**32..	TBMH32..
GTTR12A-IN	0.012 - 0.118	0.750	0.750	4.724	0.071	-	-	0.750	2°	2°	0	GT**32..	TBMH32..
GTTR12B-IN	0.012 - 0.118	0.750	0.750	4.724	0.106	-	-	0.750	2°	2°	0	GT**32..	TBMH32..
GTTL06A-IN	0.012 - 0.118	0.375	0.375	4.724	0.071	0.118	0.591	0.375	2°	2°	0	GT**32..	TBMH32..
GTTL06B-IN	0.012 - 0.118	0.375	0.375	4.724	0.106	0.118	0.591	0.375	2°	2°	0	GT**32..	TBMH32..
GTTL08A-IN	0.012 - 0.118	0.500	0.500	4.724	0.071	0.039	0.591	0.500	2°	2°	0	GT**32..	TBMH32..
GTTL08B-IN	0.012 - 0.118	0.500	0.500	4.724	0.106	0.039	0.591	0.500	2°	2°	0	GT**32..	TBMH32..
GTTL10A-IN	0.012 - 0.118	0.625	0.625	4.724	0.071	-	-	0.625	2°	2°	0	GT**32..	TBMH32..
GTTL10B-IN	0.012 - 0.118	0.625	0.625	4.724	0.106	-	-	0.625	2°	2°	0	GT**32..	TBMH32..

Metric	CW	H	B	LF	CDX	HBH	HBL	HF	K1	K2	WF2		Insert
GTTR08F00	0.3 - 3	8	8	80	1.6	5	15	8	2°	2°	0	GT**32..	TBMH32..
GTTR08K00	0.3 - 3	8	8	120	1.6	5	15	8	2°	2°	0	GT**32..	TBMH32..
GTTR10F00	0.3 - 3	10	10	80	1.6	3	15	10	2°	2°	0	GT**32..	TBMH32..
GTTR10F15	1.45 - 3	10	10	80	2.7	3	15	10	2°	2°	0	GT**32..	TBMH32..
GTTR10F25	2.5 - 3	10	10	80	2.7	3	15	10	2°	2°	0	GT**32..	TBMH32..
GTTR10K00	0.3 - 3	10	10	120	1.6	3	15	10	2°	2°	0	GT**32..	TBMH32..
GTTR10K15	1.45 - 3	10	10	120	2.7	3	15	10	2°	2°	0	GT**32..	TBMH32..
GTTR10K25	2.5 - 3	10	10	120	2.7	3	15	10	2°	2°	0	GT**32..	TBMH32..
GTTR12F00	0.3 - 3	12	12	80	1.6	1	15	12	2°	2°	0	GT**32..	TBMH32..
GTTR12F15	1.45 - 3	12	12	80	2.7	1	15	12	2°	2°	0	GT**32..	TBMH32..
GTTR12F25	2.5 - 3	12	12	80	2.7	1	15	12	2°	2°	0	GT**32..	TBMH32..
GTTR12K00	0.3 - 3	12	12	120	1.6	1	15	12	2°	2°	0	GT**32..	TBMH32..
GTTR12K15	1.45 - 3	12	12	120	2.7	1	15	12	2°	2°	0	GT**32..	TBMH32..
GTTR12K25	2.5 - 3	12	12	120	2.7	1	15	12	2°	2°	0	GT**32..	TBMH32..
GTTR16H00	0.3 - 3	16	16	100	1.6	–	–	16	2°	2°	0	GT**32..	TBMH32..
GTTR16H15	1.45 - 3	16	16	100	2.7	–	–	16	2°	2°	0	GT**32..	TBMH32..
GTTR16H25	2.5 - 3	16	16	100	2.7	–	–	16	2°	2°	0	GT**32..	TBMH32..
GTTR16K00	0.3 - 3	16	16	120	1.6	–	–	16	2°	2°	0	GT**32..	TBMH32..
GTTR16K15	1.45 - 3	16	16	120	2.7	–	–	16	2°	2°	0	GT**32..	TBMH32..
GTTR16K25	2.5 - 3	16	16	120	2.7	–	–	16	2°	2°	0	GT**32..	TBMH32..
GTTR20K00	0.3 - 3	20	20	125	2.7	–	–	20	2°	2°	0	GT**32..	TBMH32..
GTTR25M00	0.3 - 3	25	25	150	2.7	–	–	25	2°	2°	0	GT**32..	TBMH32..
GTTL08F00	0.3 - 3	8	8	80	1.6	5	15	8	2°	2°	0	GT**32..	
GTTL08K00	0.3 - 3	8	8	120	1.6	5	15	8	2°	2°	0	GT**32..	
GTTL10F00	0.3 - 3	10	10	80	1.6	3	15	10	2°	2°	0	GT**32..	
GTTL10F15	1.45 - 3	10	10	80	2.7	3	15	10	2°	2°	0	GT**32..	
GTTL10F25	2.5 - 3	10	10	80	2.7	3	15	10	2°	2°	0	GT**32..	
GTTL10K00	0.3 - 3	10	10	120	1.6	3	15	10	2°	2°	0	GT**32..	
GTTL10K15	1.45 - 3	10	10	80	2.7	3	15	10	2°	2°	0	GT**32..	
GTTL10F25	2.5 - 3	10	10	80	2.7	3	15	10	2°	2°	0	GT**32..	
GTTL10K00	0.3 - 3	10	10	120	1.6	3	15	10	2°	2°	0	GT**32..	
GTTL10K15	1.45 - 3	10	10	120	2.7	3	15	10	2°	2°	0	GT**32..	
GTTL10K25	2.5 - 3	10	10	120	2.7	3	15	10	2°	2°	0	GT**32..	
GTTL12F00	0.3 - 3	12	12	80	1.6	1	15	12	2°	2°	0	GT**32..	
GTTL12F15	1.45 - 3	12	12	80	2.7	1	15	12	2°	2°	0	GT**32..	
GTTL12F25	2.5 - 3	12	12	80	2.7	1	15	12	2°	2°	0	GT**32..	
GTTL12K00	0.3 - 3	12	12	120	1.6	1	15	12	2°	2°	0	GT**32..	
GTTL12K15	1.45 - 3	12	12	120	2.7	1	15	12	2°	2°	0	GT**32..	
GTTL12K25	2.5 - 3	12	12	120	2.7	1	15	12	2°	2°	0	GT**32..	
GTTL16H00	0.3 - 3	16	16	100	1.6	–	–	16	2°	2°	0	GT**32..	
GTTL16H15	1.45 - 3	16	16	100	2.7	–	–	16	2°	2°	0	GT**32..	
GTTL16H25	2.5 - 3	16	16	100	2.7	–	–	16	2°	2°	0	GT**32..	
GTTL16K00	0.3 - 3	16	16	120	1.6	–	–	16	2°	2°	0	GT**32...	
GTTL16K15	1.45 - 3	16	16	120	2.7	–	–	16	2°	2°	0	GT**32..	
GTTL16K25	2.5 - 3	16	16	120	2.7	–	–	16	2°	2°	0	GT**32..	
GTTL20K00	0.3 - 3	20	20	125	1.6	–	–	20	2°	2°	0	GT**32..	
GTTL25M00	0.3 - 3	25	25	150	1.6	–	–	25	2°	2°	0	GT**32..	

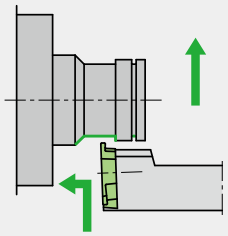
SPARE PARTS

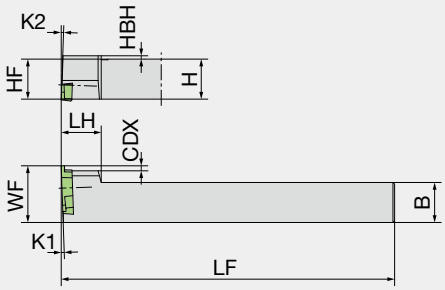
Designation	Clamp screw	Wrench (for Clamp screw)
GTTR/L**A-IN, GTTR/L**B-IN, GTTR/L**	LR-S-4*10PW	CLR-15S
GTTL08**	LR-S-4*5.8	CLR-15S

Reference pages: Inserts → 6-37 - 6-43

CH-GTT

For horizontal gang style tool post





Left hand (L) shown.

Metric	CW	H	B	LF	LH	CDX	HBH	HF	K1	K2	WF	Insert	
CH-GTTL10H00	0.3 - 3	10	10	100	12	1.5	3	10	2°	2°	15	GT**32..	TBMH32..
CH-GTTL12H00	0.3 - 3	12	12	100	12	1.5	1	12	2°	2°	17	GT**32..	TBMH32..
CH-GTTL16H00	0.3 - 3	16	16	100	12	1.5	–	16	2°	2°	21	GT**32..	TBMH32..

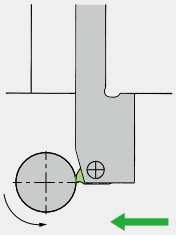
Use a right-handed (R) insert

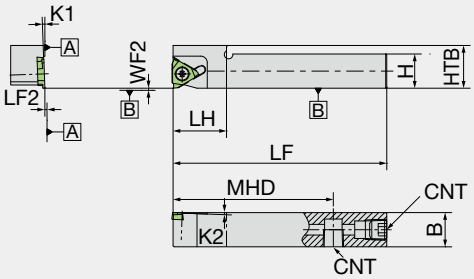
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CH-GTTL**	LR-S-4*9	RLR-20S

Y-GTT-OH

Y-axis coolant through holders





Right hand (R) shown.

Inch	CW	H	B	LF	LH	HTB	K1	K2	LF2	MHD	WF2	CNT	Insert	
Y-GTTR08H-IN-OH	0.012 - 0.118	0.500	0.500	3.937	0.984	0.787	2°	2°	0	2.953	0	Rc1/8	GT**32..	TBMH32..
Y-GTTR08H-IN-OH2	0.012 - 0.118	0.500	0.500	3.937	0.984	0.787	2°	2°	0	2.756	0	Rc1/8	GT**32..	TBMH32..
Metric	**CW**	**H**	**B**	**LF**	**LH**	**HTB**	**K1**	**K2**	**LF2**	**MHD**	**WF2**	**CNT**	**Insert**	
Y-GTTR12H00S-OH	0.3 - 3	12	12	100	20	20	2°	2°	0	75	0	Rc1/8	GT**32..	TBMH32..
Y-GTTR16H00-OH	0.3 - 3	16	16	100	25	20	2°	2°	0	75	0	Rc1/8	GT**32..	TBMH32..

NOTE: Use a right-handed (R) insert.
NOTE: There is a risk of interference with the Y-axis holder depending on the combination of the maximum workpiece diameter and machining diameter.
→10-1

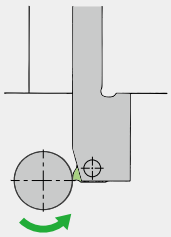
SPARE PARTS

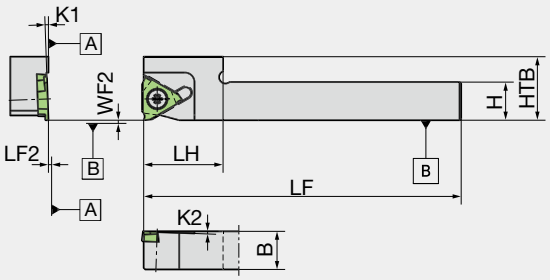
Designation	Clamp screw	Screw (for CNT)	Wrench (for Clamp screw)
Y-GTTR08H-IN-OH	LR-S-4*10PW	SPNPT1/8	CLR-15S
Y-GTTR08H-IN-OH2	LR-S-4*10PW	SPNPT1/8	CLR-15S
Y-GTTR**H00S-OH	LR-S-4*10PW	SPR1/8	CLR-15S

Reference pages: Inserts → 6-37 - 6-43

Y-GTT

Y-axis





Right hand (R) shown.

Inch	CW	H	B	LF	LH	CDX	HTB	K1	K2	LF2	WF2	Insert	
Y-GTTR06-IN	0.012 - 0.118	0.375	0.375	4.724	0.984	0.063	0.787	2°	2°	0	0	GT**32..	TBMH32..
Y-GTTR08-IN	0.012 - 0.118	0.500	0.500	4.724	0.984	0.063	0.787	2°	2°	0	0	GT**32..	TBMH32..
Y-GTTR10-IN	0.012 - 0.118	0.625	0.625	4.724	0.984	0.063	0.787	2°	2°	0	0	GT**32..	TBMH32..

Metric	CW	H	B	LF	LH	CDX	HTB	K1	K2	LF2	WF2	Insert	
Y-GTTR10MS	0.3 - 3	10	10	120	22	1.6	20	2°	2°	0	0	GT**32..	TBMH32..
Y-GTTR10S	0.3 - 3	10	10	120	20	1.6	20	2°	2°	0	0	GT**32..	TBMH32..
Y-GTTR12MS	0.3 - 3	12	12	120	22	1.6	20	2°	2°	0	0	GT**32..	TBMH32..
Y-GTTR12S	0.3 - 3	12	12	120	20	1.6	20	2°	2°	0	0	GT**32..	TBMH32..

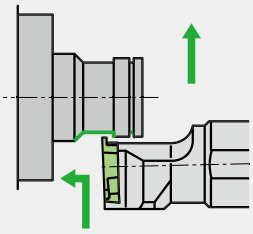
NOTE: Use a right-handed (R) insert.
NOTE: There is a risk of interference with the Y-axis holder depending on the combination of the maximum workpiece diameter and machining diameter.
→10-1

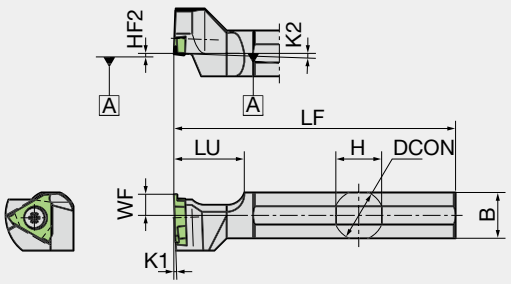
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
Y-GTTR**	LR-S-4*10PW	CLR-15S

DS-GTT

DS Toolholders / For sleeve tool post





Left hand (L) shown.

Metric	CW	H	B	LF	CDX	DCON	HF2	K1	K2	LU	WF	Insert	
DS-GTTL15H	0.3 - 3	15	15	100	1.6	15.875	0	2°	2°	19	6	GT**32..	TBMH32..
DS-GTTL16X	0.3 - 3	15	15	95	1.6	16	0	2°	2°	19	6	GT**32..	TBMH32..
DS-GTTL19	0.3 - 3	18	18	120	1.6	19.05	0	2°	2°	19	6	GT**32..	TBMH32..
DS-GTTL20	0.3 - 3	19	19	120	1.6	20	0	2°	2°	19	6	GT**32..	TBMH32..
DS-GTTL22	0.3 - 3	21	21	120	1.6	22	0	2°	2°	19	6	GT**32..	TBMH32..
DS-GTTL25	0.3 - 3	24	24	120	1.6	25.4	0	2°	2°	19	10	GT**32..	TBMH32..
DS-GTTL25-MET	0.3 - 3	24	24	150	1.6	25	0	2°	2°	19	10	GT**32..	TBMH32..
DS-GTTL32	0.3 - 3	30	30	150	1.6	32	0	2°	2°	19	10	GT**32..	TBMH32..

NOTE: Use a right-handed (R) insert.

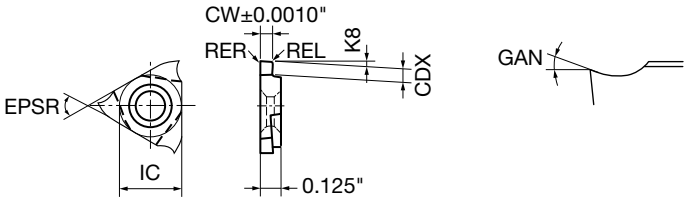
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
DS-GTTL**	LR-S-4*9	RLR-20S

Reference pages: Inserts → 6-37 - 6-43

GTMH32-GX

Side Turning / 3D mold chipbreaker



Right hand (R) shown.

		DM4	ST4	TM4
P	Steel	★		☆
M	Stainless	☆	★	☆
N	Non-ferrous			★
S	Superalloys	★		☆
H	Hard materials	★		☆

★ : First choice
☆ : Second choice

Designation	HAND	Coated			CW (mm)	CW (in)	APMX* (in)	CDX (in)	IC (in)	EPSR	GAN	K8	REL (in)	RER (in)
		DM4	ST4	TM4										
GTMH32033RGX	R	●	●	●	0.33	0.013	0.010	0.024	0.375	60°	17°	2°	0.002	0.002
GTMH32043RGX	R	●	●	●	0.43	0.017	0.035	0.047	0.375	60°	17°	2°	0.002	0.002
GTMH32050RGX	R	●	●	●	0.5	0.020	0.035	0.047	0.375	60°	17°	2°	0.002	0.002
GTMH32053RGX	R	●	●	●	0.53	0.021	0.035	0.047	0.375	60°	17°	2°	0.002	0.002
GTMH32075RGX	R	●	●	●	0.75	0.030	0.063	0.079	0.375	60°	17°	2°	0.002	0.002
GTMH32095RGX	R	●	●	●	0.95	0.037	0.063	0.079	0.375	60°	17°	2°	0.002	0.002
GTMH32100RGX	R	●	●	●	1	0.039	0.063	0.079	0.375	60°	17°	2°	0.002	0.002
GTMH32100RGX01	R	●	●	●	1	0.039	0.063	0.079	0.375	60°	17°	2°	0.004	0.004
GTMH32150RGX	R	●	●	●	1.5	0.059	0.106	0.118	0.375	60°	17°	2°	0.002	0.002
GTMH32150RGX01	R	●	●	●	1.5	0.059	0.106	0.118	0.375	60°	17°	2°	0.004	0.004
GTMH32150RGX02	R	●	●	●	1.5	0.059	0.106	0.118	0.375	60°	17°	2°	0.008	0.008
GTMH32200RGX	R	●	●	●	2	0.079	0.106	0.118	0.375	60°	17°	2°	0.002	0.002
GTMH32200RGX01	R	●	●	●	2	0.079	0.106	0.118	0.375	60°	17°	2°	0.004	0.004
GTMH32200RGX02	R	●	●	●	2	0.079	0.106	0.118	0.375	60°	17°	2°	0.008	0.008
GTMH32300RGX	R	●	●	●	3	0.118	0.106	0.118	0.375	60°	17°	2°	0.002	0.002
GTMH32300RGX02	R	●	●	●	3	0.118	0.106	0.118	0.375	60°	17°	2°	0.008	0.008

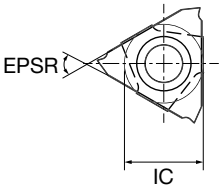
* Depth of cut maximum

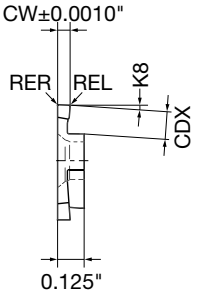
● : Line up

Reference pages: Toolholders → 6-33 - 6-36

GTMX32-T

Side Turning





Right hand (R) shown.

P	Steel	★	☆
M	Stainless	☆	★
N	Non-ferrous		
S	Superalloys	☆	★
H	Hard materials	★	☆

★ : First choice
☆ : Second choice

External
Internal
Face
Parting

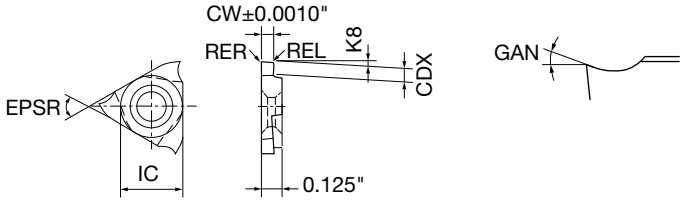
Designation	HAND	Coated		CW (mm)	CW (in)	APMX* (in)	CDX (in)	IC (in)	EPSR	GAN	K8	REL (in)	RER (in)
		QM3	DT4										
GTMX32030RT	R	●	●	0.3	0.012	0.010	0.024	0.375	60°	14°	2°	0.002	0.002
GTMX32033RT	R	●		0.33	0.013	0.010	0.024	0.375	60°	14°	2°	0.002	0.002
GTMX32043RT	R	●	●	0.43	0.017	0.035	0.047	0.375	60°	14°	2°	0.002	0.002
GTMX32050RT	R	●	●	0.5	0.020	0.035	0.047	0.375	60°	14°	2°	0.002	0.002
GTMX32053RT	R	●		0.53	0.021	0.035	0.047	0.375	60°	14°	2°	0.002	0.002
GTMX32065RT	R	●	●	0.65	0.026	0.035	0.047	0.375	60°	14°	2°	0.002	0.002
GTMX32075RT	R	●	●	0.75	0.030	0.063	0.079	0.375	60°	14°	2°	0.002	0.002
GTMX32080RT	R	●	●	0.8	0.031	0.063	0.079	0.375	60°	14°	2°	0.002	0.002
GTMX32095RT	R	●	●	0.95	0.037	0.063	0.079	0.375	60°	14°	2°	0.002	0.002
GTMX32100RT	R	●	●	1	0.039	0.063	0.079	0.375	60°	14°	2°	0.002	0.002
GTMX32110RT	R	●		1.1	0.043	0.063	0.079	0.375	60°	14°	2°	0.002	0.002
GTMX32120RT	R	●	●	1.2	0.047	0.063	0.079	0.375	60°	14°	2°	0.002	0.002
GTMX32125RT	R	●	●	1.25	0.049	0.063	0.079	0.375	60°	14°	2°	0.002	0.002
GTMX32130RT	R	●	●	1.3	0.051	0.063	0.079	0.375	60°	14°	2°	0.002	0.002
GTMX32140RT	R	●	●	1.4	0.055	0.063	0.079	0.375	60°	14°	2°	0.002	0.002
GTMX32145RT	R	●		1.45	0.057	0.106	0.118	0.375	60°	14°	2°	0.002	0.002
GTMX32150RT	R	●	●	1.5	0.059	0.106	0.118	0.375	60°	14°	2°	0.002	0.002
GTMX32160RT	R	●	●	1.6	0.063	0.106	0.118	0.375	60°	14°	2°	0.002	0.002
GTMX32175RT	R	●	●	1.75	0.069	0.106	0.118	0.375	60°	14°	2°	0.002	0.002
GTMX32180RT	R	●	●	1.8	0.071	0.106	0.118	0.375	60°	14°	2°	0.002	0.002
GTMX32200RT	R	●	●	2	0.079	0.106	0.118	0.375	60°	14°	2°	0.002	0.002
GTMX32250RT	R	●	●	2.5	0.098	0.106	0.118	0.375	60°	14°	2°	0.002	0.002
GTMX32300RT	R	●	●	3	0.118	0.106	0.118	0.375	60°	14°	2°	0.002	0.002
GTMX32100RT01	R	●	●	1	0.039	0.063	0.079	0.375	60°	14°	2°	0.004	0.004
GTMX32120RT01	R	●	●	1.2	0.047	0.063	0.079	0.375	60°	14°	2°	0.004	0.004
GTMX32150RT01	R	●	●	1.5	0.059	0.106	0.118	0.375	60°	14°	2°	0.004	0.004
GTMX32200RT01	R	●	●	2	0.079	0.106	0.118	0.375	60°	14°	2°	0.004	0.004
GTMX32250RT01	R	●	●	2.5	0.098	0.106	0.118	0.375	60°	14°	2°	0.004	0.004
GTMX32150RT02	R	●	●	1.5	0.059	0.106	0.118	0.375	60°	14°	2°	0.008	0.008
GTMX32200RT02	R	●	●	2	0.079	0.106	0.118	0.375	60°	14°	2°	0.008	0.008
GTMX32250RT02	R	●	●	2.5	0.098	0.106	0.118	0.375	60°	14°	2°	0.008	0.008
GTMX32300RT02	R	●	●	3	0.118	0.106	0.118	0.375	60°	14°	2°	0.008	0.008
GTMX32050LT	L			0.5	0.020	0.035	0.047	0.375	60°	14°	2°	0.002	0.002
GTMX32075LT	L	●	●	0.75	0.030	0.063	0.079	0.375	60°	14°	2°	0.002	0.002
GTMX32095LT	L	●	●	0.95	0.037	0.063	0.079	0.375	60°	14°	2°	0.002	0.002
GTMX32150LT	L	●	●	1.5	0.059	0.106	0.118	0.375	60°	14°	2°	0.002	0.002
GTMX32200LT	L	●	●	2	0.079	0.106	0.118	0.375	60°	14°	2°	0.002	0.002
GTMX32250LT	L	●	●	2.5	0.098	0.106	0.118	0.375	60°	14°	2°	0.002	0.002
GTMX32200LT01	L	●	●	2	0.079	0.106	0.118	0.375	60°	14°	2°	0.004	0.004

* Depth of cut maximum

● : Line up

Reference pages: Toolholders → 6-33 - 6-36

GTMH32-E



Right hand (R) shown.

P	Steel	☆	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	Coated ZM3	CW (mm)	CW (in)	APMX* (in)	CDX (in)	IC (in)	EPSR	GAN	K8	REL (in)	RER (in)
GTMH32033RE	R	●	0.33	0.013	0.012	0.024	0.375	60°	20°	2°	0.001	0.001
GTMH32043RE	R	●	0.43	0.017	0.035	0.047	0.375	60°	20°	2°	0.001	0.001
GTMH32053RE	R	●	0.53	0.021	0.035	0.047	0.375	60°	20°	2°	0.002	0.002
GTMH32075RE	R	●	0.75	0.030	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32077RE	R	●	0.77	0.030	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32095RE	R	●	0.95	0.037	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32097RE	R	●	0.97	0.038	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32100RE	R	●	1	0.039	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32103RE	R	●	1.03	0.041	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32120RE	R	●	1.2	0.047	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32125RE	R	●	1.25	0.049	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32140RE	R	●	1.4	0.055	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32145RE	R	●	1.45	0.057	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32150RE	R	●	1.5	0.059	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32175RE	R	●	1.75	0.069	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32180RE	R	●	1.8	0.071	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32200RE	R	●	2	0.079	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32225RE	R	●	2.25	0.089	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32250RE	R	●	2.5	0.098	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32275RE	R	●	2.75	0.108	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32300RE	R	●	3	0.118	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32100RE01	R	●	1	0.039	0.063	0.079	0.375	60°	20°	2°	0.004	0.004
GTMH32120RE01	R	●	1.2	0.047	0.063	0.079	0.375	60°	20°	2°	0.004	0.004
GTMH32150RE01	R	●	1.5	0.059	0.106	0.118	0.375	60°	20°	2°	0.004	0.004
GTMH32200RE01	R	●	2	0.079	0.106	0.118	0.375	60°	20°	2°	0.004	0.004
GTMH32033LE	L	●	0.33	0.013	0.012	0.024	0.375	60°	20°	2°	0.001	0.001
GTMH32043LE	L	●	0.43	0.017	0.035	0.047	0.375	60°	20°	2°	0.001	0.001
GTMH32053LE	L	●	0.53	0.021	0.035	0.047	0.375	60°	20°	2°	0.002	0.002
GTMH32075LE	L	●	0.75	0.030	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32077LE	L	●	0.77	0.030	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32095LE	L	●	0.95	0.037	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32097LE	L	●	0.97	0.038	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32100LE	L	●	1	0.039	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32103LE	L	●	1.03	0.041	0.063	0.079	0.375	60°	20°	2°	0.002	0.002

* Depth of cut maximum

● : Line up

Reference pages: Toolholders → 6-33 - 6-36

GTMH32-E

P	Steel	☆	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

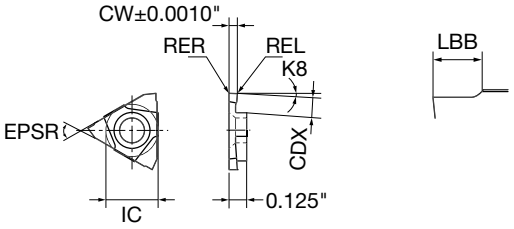
Designation	HAND	Coated ZM3	CW (mm)	CW (in)	APMX* (in)	CDX (in)	IC (in)	EPSR	GAN	K8	REL (in)	RER (in)
GTMH32120LE	L	●	1.2	0.047	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32140LE	L	●	1.4	0.055	0.063	0.079	0.375	60°	20°	2°	0.002	0.002
GTMH32150LE	L	●	1.5	0.059	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32180LE	L	●	1.8	0.071	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32200LE	L	●	2	0.079	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32225LE	L	●	2.25	0.089	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32250LE	L	●	2.5	0.098	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32275LE	L	●	2.75	0.108	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32300LE	L	●	3	0.118	0.106	0.118	0.375	60°	20°	2°	0.002	0.002
GTMH32100LE01	L	●	1	0.039	0.063	0.079	0.375	60°	20°	2°	0.004	0.004
GTMH32120LE01	L	●	1.2	0.047	0.063	0.079	0.375	60°	20°	2°	0.004	0.004
GTMH32150LE01	L	●	1.5	0.059	0.106	0.118	0.375	60°	20°	2°	0.004	0.004
GTMH32200LE01	L	●	2	0.079	0.106	0.118	0.375	60°	20°	2°	0.004	0.004

* Depth of cut maximum

● : Line up

GTMH32-SSH

Short type / Flat top chipbreaker



P	Steel		
M	Stainless		
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	Uncoated KM1	Mirror finish	CW (mm)	CW (in)	APMX* (in)	CDX (in)	IC (in)	EPSR	GAN	K8	LBB (in)	REL (in)	RER (in)
GTMH32100RSSH	R	●		1	0.039	0.063	0.079	0.375	60°	20°	2°	0.059	0.002	0.002
GTMH32150RSSH	R	●	Ⓜ	1.5	0.059	0.106	0.118	0.375	60°	20°	2°	0.059	0.002	0.002
GTMH32200RSSH	R	●		2	0.079	0.106	0.118	0.375	60°	20°	2°	0.059	0.002	0.002

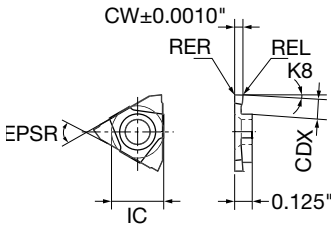
* Depth of cut maximum

● : Line up

Reference pages: Toolholders → 6-33 - 6-36

GTMX32-SS

Short type / Flat top chipbreaker



Right hand (R) shown.

P	Steel	☆
M	Stainless	★
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

★ : First choice
☆ : Second choice

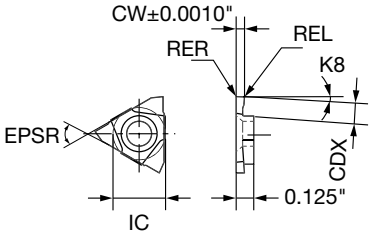
Designation	HAND	Coated ZM3	CW (mm)	CW (in)	APMX* (in)	CDX (in)	IC (in)	EPSR	GAN	K8	LBB (in)	REL (in)	RER (in)
GTMX32100RSS	R	●	1	0.039	0.063	0.079	0.375	60°	0°	2°	0.059	0.002	0.002
GTMX32150RSS	R	●	1.5	0.059	0.106	0.118	0.375	60°	0°	2°	0.059	0.002	0.002
GTMX32200RSS	R	●	2	0.079	0.106	0.118	0.375	60°	0°	2°	0.059	0.002	0.002

* Depth of cut maximum

● : Line up

GTMX32-LS

Long type / Flat top chipbreaker



Right hand (R) shown.

P	Steel	☆
M	Stainless	★
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	HAND	Coated ZM3	CW (mm)	CW (in)	APMX* (in)	CDX (in)	IC (in)	EPSR	GAN	K8	LBB (in)	REL (in)	RER (in)
GTMX32100RLS	R	●	1	0.039	0.063	0.079	0.375	60°	0°	2°	0.118	0.002	0.002
GTMX32150RLS	R	●	1.5	0.059	0.106	0.118	0.375	60°	0°	2°	0.118	0.002	0.002
GTMX32200RLS	R	●	2	0.079	0.106	0.118	0.375	60°	0°	2°	0.118	0.002	0.002

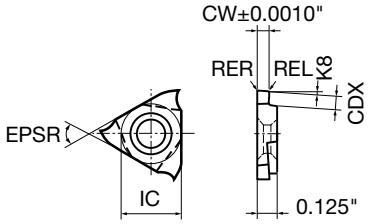
* Depth of cut maximum

● : Line up

Reference pages: Toolholders → 6-33 - 6-36

GTMH32-VT

Side Turning



Right hand (R) shown.

P	Steel	★	
M	Stainless	☆	
N	Non-ferrous		
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

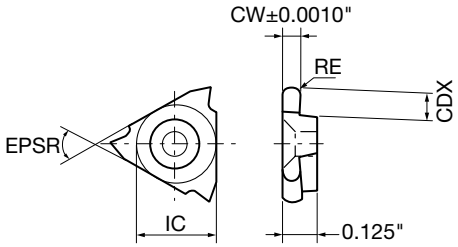
Designation	HAND	Coated VM1	Mirror finish	CW (mm)	CW (in)	APMX* (in)	CDX (in)	IC (in)	EPSR	GAN	K8	REL (in)	RER (in)
GTMH32033RVT	R	●	Ⓜ	0.33	0.013	0.010	0.024	0.375	60°	14°	2°	0	0
GTMH32043RVT	R	●	Ⓜ	0.43	0.017	0.035	0.047	0.375	60°	14°	2°	0	0
GTMH32053RVT	R	●	Ⓜ	0.53	0.021	0.063	0.079	0.375	60°	14°	2°	0	0
GTMH32065RVT	R	●	Ⓜ	0.65	0.026	0.063	0.079	0.375	60°	14°	2°	0	0
GTMH32075RVT	R	●	Ⓜ	0.75	0.030	0.063	0.079	0.375	60°	14°	2°	0	0
GTMH32080RVT	R	●	Ⓜ	0.8	0.031	0.063	0.079	0.375	60°	14°	2°	0	0
GTMH32085RVT	R	●	Ⓜ	0.85	0.033	0.063	0.079	0.375	60°	14°	2°	0	0
GTMH32095RVT	R	●	Ⓜ	0.95	0.037	0.063	0.079	0.375	60°	14°	2°	0	0
GTMH32100RVT	R	●	Ⓜ	1	0.039	0.063	0.079	0.375	60°	14°	2°	0	0
GTMH32110RVT	R	●	Ⓜ	1.1	0.043	0.063	0.079	0.375	60°	14°	2°	0	0
GTMH32120RVT	R	●	Ⓜ	1.2	0.047	0.063	0.079	0.375	60°	14°	2°	0	0
GTMH32130RVT	R	●	Ⓜ	1.3	0.051	0.063	0.079	0.375	60°	14°	2°	0	0
GTMH32140RVT	R	●	Ⓜ	1.4	0.055	0.063	0.079	0.375	60°	14°	2°	0	0
GTMH32150RVT	R	●	Ⓜ	1.5	0.059	0.106	0.118	0.375	60°	14°	2°	0	0
GTMH32200RVT	R	●	Ⓜ	2	0.079	0.106	0.118	0.375	60°	14°	2°	0	0

* Depth of cut maximum

● : Line up

GTMH32

Full radius style



Right hand (R) shown.

P	Steel	☆	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

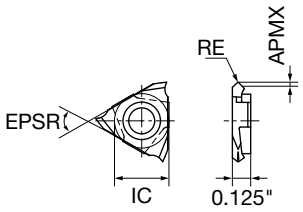
Designation	HAND	Coated ZM3	CW (mm)	CW (in)	APMX* (in)	CDX (in)	IC (in)	EPSR	GAN	RE (in)
GTMH32050RE025	R	●	0.5	0.020	0.035	0.047	0.375	60°	20°	0.010
GTMH32070RE035	R	●	0.7	0.028	0.063	0.079	0.375	60°	20°	0.014
GTMH32100RE05	R	●	1	0.039	0.063	0.079	0.375	60°	20°	0.020
GTMH32150RE075	R	●	1.5	0.059	0.106	0.118	0.375	60°	20°	0.030
GTMH32200RE10	R	●	2	0.079	0.106	0.118	0.375	60°	20°	0.039
GTMH32250RE125	R	●	2.5	0.098	0.106	0.118	0.375	60°	20°	0.049
GTMH32300RE15	R	●	3	0.118	0.106	0.118	0.375	60°	20°	0.059

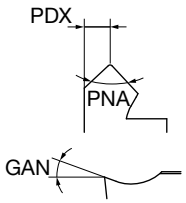
* Depth of cut maximum

● : Line up

GTMX32-V90

90 Degree V-style





Right hand (R) shown.

P	Steel	☆	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

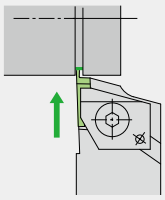
★ : First choice
☆ : Second choice

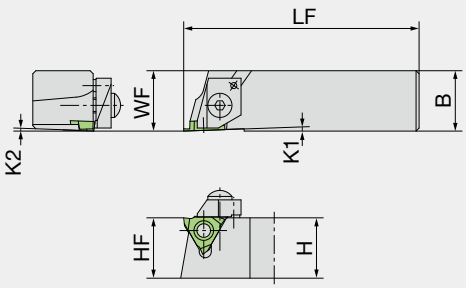
Designation	HAND	Coated TM4	APMX* (in)	IC (in)	EPSR	GAN	PDX (in)	PNA	RE (in)
GTMX32V90R005	R	●	0.014	0.375	60°	20°	0.020	90°	0.002
GTMX32V90R010	R	●	0.028	0.375	60°	20°	0.039	90°	0.004

* Depth of cut maximum

● : Line up

NGTN





Right hand (R) shown.

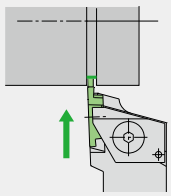
Metric	CW	H	B	LF	CDX	HF	K1	K2	WF	Insert
NGTNR161643-20	2 - 5.5	16	16	78	4.5	16	2°	2°	16	GT**43..
NGTNR161643-35	3.5 - 5.5	16	16	78	4.5	16	2°	2°	16	GT**43..
NGTNL161643-20	2 - 5.5	16	16	78	4.5	16	2°	2°	16	GT**43..
NGTNL161643-35	3.5 - 5.5	16	16	78	4.5	16	2°	2°	16	GT**43..

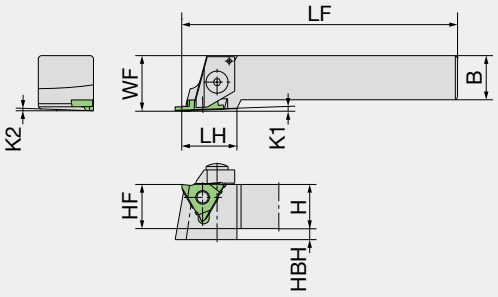
SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Wrench (for Clamp screw)
NGTNR/L161643-**	CPR5S	AOS-5*25	ASG-5	LW-2.5

Reference pages: GTMX32-V90: Toolholders → 6-33 - 6-36
NGTN: Inserts → 6-45 - 6-46

NGTB





Right hand (R) shown.

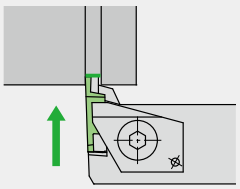
Metric	CW	H	B	LF	LH	CDX	HBH	HF	K1	K2	WF	Insert
NGTBR161643-00S	1 - 5.5	16	16	100	25	3	9	16	2°	2°	20	GT**43..
NGTBR161643-20S	2 - 5.5	16	16	100	25	4.5	9	16	2°	2°	20	GT**43..
NGTBR161643-35S	3.5 - 5.5	16	16	100	25	4.5	9	16	2°	2°	20	GT**43..
NGTBR202043-00S	1 - 5.5	20	20	125	25	3	5	20	2°	2°	25	GT**43..
NGTBR202043-20S	2 - 5.5	20	20	125	25	4.5	5	20	2°	2°	25	GT**43..
NGTBR202043-35S	3.5 - 5.5	20	20	125	25	4.5	5	20	2°	2°	25	GT**43..
NGTBR252543-00S	1 - 5.5	25	25	150	25	3.5	–	25	2°	2°	30	GT**43..
NGTBR252543-20S	2 - 5.5	25	25	150	25	5.5	–	25	2°	2°	30	GT**43..
NGTBR252543-35S	3.5 - 5.5	25	25	150	25	5.5	–	25	2°	2°	30	GT**43..
NGTBR322543-20S	2 - 5.5	32	25	170	25	5.5	–	32	2°	2°	30	GT**43..
NGTBR322543-35S	3.5 - 5.5	32	25	170	25	5.5	–	32	2°	2°	30	GT**43..
NGTBL161643-00S	1 - 5.5	16	16	100	25	3	9	16	2°	2°	20	GT**43..
NGTBL161643-20S	2 - 5.5	16	16	100	25	4.5	9	16	2°	2°	20	GT**43..
NGTBL161643-35S	3.5 - 5.5	16	16	100	25	4.5	9	16	2°	2°	20	GT**43..
NGTBL202043-00S	1 - 5.5	20	20	125	25	3	5	20	2°	2°	25	GT**43..
NGTBL202043-20S	2 - 5.5	20	20	125	25	4.5	5	20	2°	2°	25	GT**43..
NGTBL202043-35S	3.5 - 5.5	20	20	125	25	4.5	5	20	2°	2°	25	GT**43..
NGTBL252543-00S	1 - 5.5	25	25	150	25	3.5	–	25	2°	2°	30	GT**43..
NGTBL252543-20S	2 - 5.5	25	25	150	25	5.5	–	25	2°	2°	30	GT**43..
NGTBL252543-35S	3.5 - 5.5	25	25	150	25	5.5	–	25	2°	2°	30	GT**43..
NGTBL322543-20S	2 - 5.5	32	25	170	25	5.5	–	32	2°	2°	30	GT**43..
NGTBL322543-35S	3.5 - 5.5	32	25	170	25	5.5	–	32	2°	2°	30	GT**43..

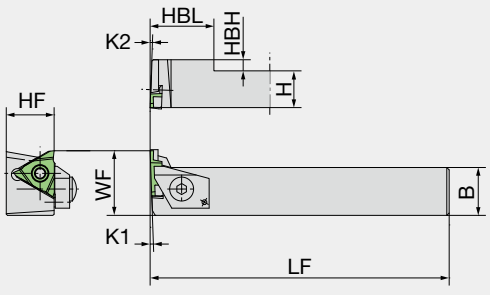
SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Wrench (for Clamp screw)
NGTBR/L161643-**	CPR5	AOS-5*25	ASG-5	LW-2.5
NGTBR/L2**	CPR6	AOS-6*30	ASG-6	LW-3
NGTBR/L3**	CPR6	AOS-6*30	ASG-6	LW-3

NGTA

For horizontal gang style tool post





Left hand (L) shown.

Metric	CW	H	B	LF	CDX	HBH	HBL	HF	K1	K2	WF	Insert
NGTAL161643-00S	1 - 5.5	16	16	100	3	4	20	16	2°	2°	23	GT**43..
NGTAL202043-00S	1 - 5.5	20	20	125	3	–	–	20	2°	2°	27	GT**43..

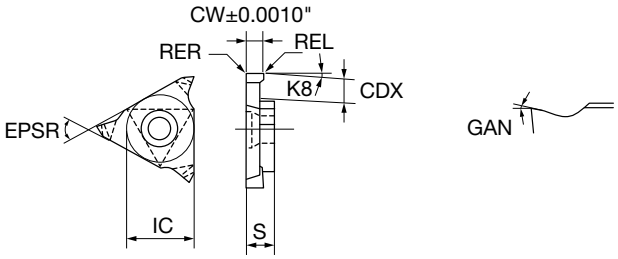
NOTE: Use a right-handed (R) insert.

SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Wrench (for Clamp screw)
NGTAL161643-00S	CPL5S	AOS-5*20	ASG-5	LW-2.5
NGTAL202043-00S	CPL6	AOS-6*30	ASG-6	LW-3

Reference pages: Inserts → 6-45 - 6-46

GTMT43



Right hand (R) shown.

P	Steel	☆	★
M	Stainless	★	☆
N	Non-ferrous		
S	Superalloys	★	☆
H	Hard materials	☆	★

★ : First choice
☆ : Second choice

Designation	HAND	Coated		CW (mm)	CW (in)	APMX* (in)	CDX (in)	IC (in)	S (in)	EPSR	GAN	K8	REL (in)	RER (in)
		DM4	QM3											
GTMT43145R	R	●	●	1.45	0.057	0.118	0.138	0.500	0.187	60°	11°	2°	0.008	0.008
GTMT43150R	R	●	●	1.5	0.059	0.118	0.138	0.500	0.187	60°	11°	2°	0.008	0.008
GTMT43175R	R	●	●	1.75	0.069	0.118	0.138	0.500	0.187	60°	11°	2°	0.008	0.008
GTMT43185R	R	●	●	1.85	0.073	0.118	0.138	0.500	0.187	60°	11°	2°	0.008	0.008
GTMT43200R	R	●	●	2	0.079	0.118	0.138	0.500	0.187	60°	11°	2°	0.008	0.008
GTMT43230R	R	●	●	2.3	0.091	0.118	0.138	0.500	0.187	60°	11°	2°	0.008	0.008
GTMT43250R	R	●	●	2.5	0.098	0.169	0.217	0.500	0.187	60°	11°	2°	0.012	0.012
GTMT43265R	R	●	●	2.65	0.104	0.169	0.217	0.500	0.187	60°	11°	2°	0.012	0.012
GTMT43280R	R	●	●	2.8	0.110	0.169	0.217	0.500	0.187	60°	11°	2°	0.012	0.012
GTMT43300R	R	●	●	3	0.118	0.169	0.217	0.500	0.187	60°	11°	2°	0.012	0.012
GTMT43330R	R		●	3.3	0.130	0.169	0.217	0.500	0.187	60°	11°	2°	0.012	0.012
GTMT43350R	R	●	●	3.5	0.138	0.169	0.217	0.500	0.187	60°	11°	2°	0.012	0.012
GTMT43400R	R	●	●	4	0.157	0.169	0.217	0.500	0.187	60°	11°	2°	0.016	0.016
GTMT43450R	R	●	●	4.5	0.177	0.169	0.217	0.500	0.187	60°	11°	2°	0.016	0.016
GTMT43500R	R	●	●	5	0.197	0.169	0.217	0.500	0.227	60°	11°	2°	0.016	0.016
GTMT43550R	R	●	●	5.5	0.217	0.169	0.217	0.500	0.227	60°	11°	2°	0.016	0.016
GTMT43145L	L	●	●	1.45	0.057	0.118	0.138	0.500	0.187	60°	11°	2°	0.008	0.008
GTMT43150L	L	●	●	1.5	0.059	0.118	0.138	0.500	0.187	60°	11°	2°	0.008	0.008
GTMT43175L	L	●	●	1.75	0.069	0.118	0.138	0.500	0.187	60°	11°	2°	0.008	0.008
GTMT43185L	L	●	●	1.85	0.073	0.118	0.138	0.500	0.187	60°	11°	2°	0.008	0.008
GTMT43200L	L	●	●	2	0.079	0.118	0.138	0.500	0.187	60°	11°	2°	0.008	0.008
GTMT43230L	L	●	●	2.3	0.091	0.118	0.138	0.500	0.187	60°	11°	2°	0.008	0.008
GTMT43280L	L	●	●	2.8	0.110	0.169	0.217	0.500	0.187	60°	11°	2°	0.012	0.012
GTMT43300L	L	●	●	3	0.118	0.169	0.217	0.500	0.187	60°	11°	2°	0.012	0.012
GTMT43330L	L		●	3.3	0.130	0.169	0.217	0.500	0.187	60°	11°	2°	0.012	0.012
GTMT43350L	L	●	●	3.5	0.138	0.169	0.217	0.500	0.187	60°	11°	2°	0.012	0.012
GTMT43400L	L	●	●	4	0.157	0.169	0.217	0.500	0.187	60°	11°	2°	0.016	0.016
GTMT43450L	L	●	●	4.5	0.177	0.169	0.217	0.500	0.187	60°	11°	2°	0.016	0.016
GTMT43500L	L	●	●	5	0.197	0.169	0.217	0.500	0.227	60°	11°	2°	0.016	0.016
GTMT43550L	L	●	●	5.5	0.217	0.169	0.217	0.500	0.227	60°	11°	2°	0.016	0.016

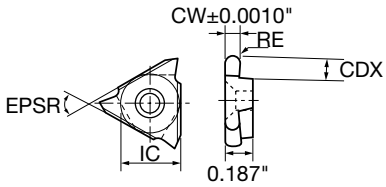
* Depth of cut maximum

● : Line up

Reference pages: Toolholders → 6-43 - 6-44

GTMA43

Full radius style



Right hand (R) shown.

P	Steel	★	
M	Stainless	☆	
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials	☆	

★ : First choice
☆ : Second choice

Designation	HAND	Coated QM3	CW (mm)	CW (in)	APMX* (in)	CDX (in)	IC (in)	EPSR	GAN	RE (in)
GTMA43200R10R	R	●	2	0.079	0.118	0.138	0.500	60°	11°	0.039
GTMA43300R15R	R	●	3	0.118	0.177	0.217	0.500	60°	11°	0.059
GTMA43400R20R	R	●	4	0.157	0.177	0.217	0.500	60°	11°	0.079

* Depth of cut maximum

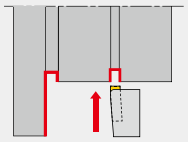
● : Line up

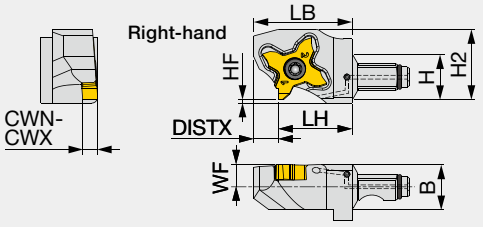
External
Internal
Face
Parting

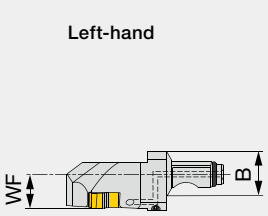
TETRAMINI CUT

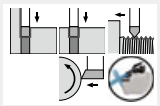
QC12-STCR/L-Y-CHP

Y-axis turning modular head for external grooving and threading, with high pressure coolant capability









Metric	CWN	CWX	H	B	LH	HF	WF**	LB	H2	DISTX	Insert	Torque*
QC12-STCR/L18-Y-CHP	0.33 (0.013")	3.18 (0.125")	12 (0.750")	12 (0.750")	19.5 (0.768")	0 (0")	6 (0.236")	26 (1.024")	18.6 (0.732")	6.5 (0.256")	TC*18...	1.2 (0.89)
QC16-STCR/L18-Y-CHP	0.33 (0.013")	3.18 (0.125")	16 (1.000")	16 (1.000")	21 (0.827")	0 (0")	8/13 (0.315"/0.512)	27.5 (1.083")	18.6 (0.732")	6.5 (0.256")	TC*18...	1.2 (0.89)

Torque* : Recommended clamping torque: N·m (lbs·ft)
WF** : The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.
Through-coolant head
Note: Use the right-hand insert (TC*18R...) for a right-hand holder (QC12-STCR...); the left-hand insert (TC*18L...) for a left-hand holder (QC12-STCL...).

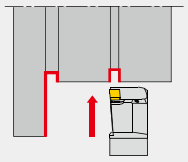
SPARE PARTS

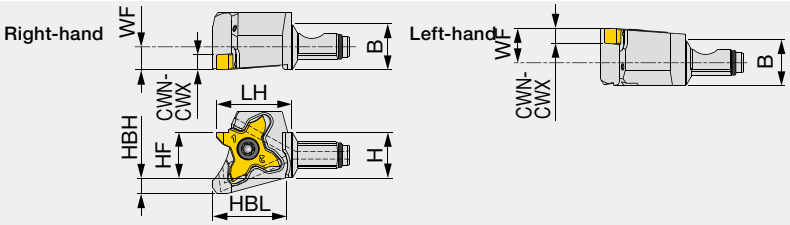
Designation	Clamping screw	Wrench	O-ring
QC12-STCR18-Y-CHP	CSTC-4L100DL	T-1008/5	ORSS-0454.5X1.0NBR70
QC12-STCL18-Y-CHP	CSTC-4L100DR	T-1008/5	ORSS-0454.5X1.0NBR70
QC16-STCR18-Y-CHP	CSTC-4L100DL	T-1008/5	ORSS-0757.5X1.0NBR70
QC16-STCL18-Y-CHP	CSTC-4L100DR	T-1008/5	ORSS-0757.5X1.0NBR70

Reference pages : GTMA43: Toolholders → 6-43, 6-44
QC12-STCR/L-Y-CHP, QC12-STCR/L-CHP: Inserts → 6-49 - 6-55
Shank, Accessory → 3-130 - 3-132, Standard cutting conditions → 6-56, 6-57

QC12-STCR/L-CHP

Modular head for external grooving and threading, with high pressure coolant capability



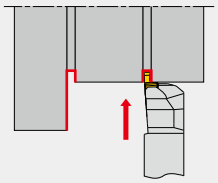


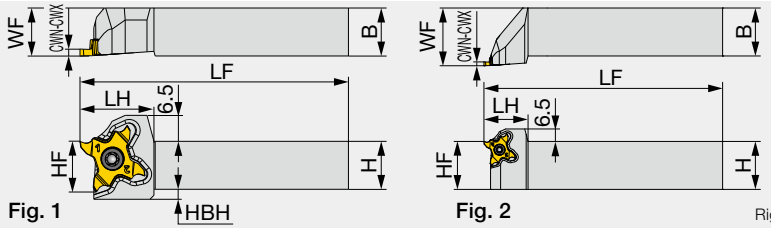
Metric	CWN	CWX	H	B	LH	HF	HBH	HBL	WF	Insert	Torque*
QC12-STCR18-CHP	0.33 (0.013")	3.18 (0.125")	12 (0.750")	12 (0.750")	19.5 (0.768")	12 (0.472")	4.2 (0.165")	19.3 (0.760")	6 (0.236")	TC*18R...	1.2 (0.89)
QC12-STCL18-CHP	0.33 (0.013")	3.18 (0.125")	12 (0.750")	12 (0.750")	21 (0.827")	12 (0.472")	4.2 (0.165")	19.3 (0.760")	9 (0.354")	TC*18L...	1.2 (0.89)
QC16-STCR18-CHP	0.33 (0.013")	3.18 (0.125")	16 (1.000")	16 (1.000")	21 (0.827")	16 (0.630")	0 (0")	22 (0.866")	8 (0.315")	TC*18R...	1.2 (0.89)
QC16-STCL18-CHP	0.33 (0.013")	3.18 (0.125")	16 (1.000")	16 (1.000")	21 (0.827")	16 (0.630")	-	-	13 (0.512")	TC*18L...	1.2 (0.89)

Torque* : Recommended clamping torque: N·m (lbs·ft)
Through-coolant head
Note: Use the right-hand insert (TC*18R...) for a right-hand holder (QC12-STCR...); the left-hand insert (TC*18L...) for a left-hand holder (QC12-STCL...).

STCR/L-18

External grooving and threading toolholder





Inch	CWN	CWX	H	B	LF	LH	HF	WF	HBH	Insert	Torque	Fig.
STCR/L06-18	0.013	0.125	0.375	0.375	4.750	0.730	0.375	0.375	0.177	TC*18...	0.89	1
STCR/L08-18	0.013	0.125	0.500	0.500	4.750	0.730	0.500	0.500	0.098	TC*18...	0.89	1
STCR/L10-18	0.013	0.125	0.625	0.625	4.750	0.730	0.625	0.625	-	TC*18...	0.89	1
STCR/L12-18	0.013	0.125	0.750	0.750	4.750	0.900	0.750	1.000	-	TC*18...	0.89	2
STCR/L16-18	0.013	0.125	1.000	1.000	5.500	0.900	1.000	1.250	-	TC*18...	0.89	2

Metric	CWN	CWX	H	B	LF	LH	HF	WF	HBH	Insert	Torque*	Fig.
STCR/L1010X18	0.33	3.18	10	10	120	18.5	10	10	4.5	TC*18...	1.2	1
STCR/L1212F18	0.33	3.18	12	12	85	18.5	12	12	2.5	TC*18...	1.2	1
STCR/L1212X18	0.33	3.18	12	12	120	18.5	12	12	2.5	TC*18...	1.2	1
STCR/L1616X18	0.33	3.18	16	16	120	18.5	16	16	-	TC*18...	1.2	1
STCR/L2020H18	0.33	3.18	20	20	100	18.5	20	20	-	TC*18...	1.2	1
STCR/L2020X18	0.33	3.18	20	20	120	23	20	25	-	TC*18...	1.2	2

Torque: Recommended clamping torque: lbs·ft (*N·m)
Note: Use the right-hand insert (TC*18R...) for a right-hand holder (STCR...); the left-hand insert (TC*18L...) for a left-hand holder (STCL...).

SPARE PARTS

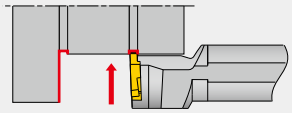
Designation	Clamping screw	Wrench	O-ring
QC12-STCR18-CHP	CSTC-4L100DL	T-1008/5	ORSS-0454.5X1.0NBR70
QC12-STCL18-CHP	CSTC-4L100DR	T-1008/5	ORSS-0454.5X1.0NBR70
QC16-STCR18-CHP	CSTC-4L100DL	T-1008/5	ORSS-0757.5X1.0NBR70
QC16-STCL18-CHP	CSTC-4L100DR	T-1008/5	ORSS-0757.5X1.0NBR70
STCR**18	CSTC-4L100DL	T-1008/5	-
STCL**18	CSTC-4L100DR	T-1008/5	-

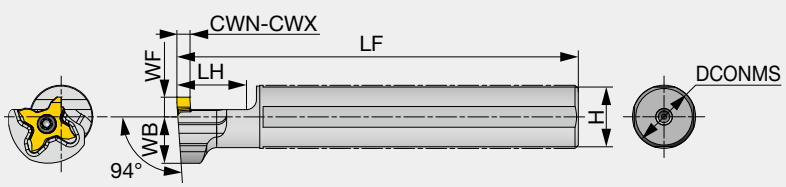
Threading pitch range: 0.8 ~ 3 mm

Reference pages : STCR/L-18, JS-STCL18: Inserts → 6-49 - 6-55, Standard cutting conditions → 6-56, 6-57

JS-STCL18

External grooving and threading toolholder with round shank, for Swiss lathes





Left-hand (L) shown.

Metric	CWN	CWX	DCONMS	LF	LH	H	WB	WF	Insert	Torque*
JS14H-STCL18	0.33	3.18	14	100	20	13	14	6	TC*18R...	1.2
JS159F-STCL18	0.33	3.18	15.875	85	20	15	14	6	TC*18R...	1.2
JS16F-STCL18	0.33	3.18	16	85	20	15	14	6	TC*18R...	1.2
JS19G-STCL18	0.33	3.18	19.05	90	20	18	14	6	TC*18R...	1.2
JS19X-STCL18	0.33	3.18	19.05	120	20	18	14	6	TC*18R...	1.2
JS20G-STCL18	0.33	3.18	20	90	20	19	14	6	TC*18R...	1.2
JS20X-STCL18	0.33	3.18	20	120	20	19	14	6	TC*18R...	1.2
JS22X-STCL18	0.33	3.18	22	120	20	21	12.25	10	TC*18R...	1.2
JS25H-STCL18	0.33	3.18	25	100	20	24	12.25	10	TC*18R...	1.2
JS254X-STCL18	0.33	3.18	25.4	120	20	24	12.25	10	TC*18R...	1.2

The left hand toolholder (STCL...) is used with the right hand inserts (TC*18R...)
*Torque: Recommended clamping torque: N·m

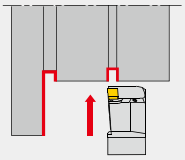
SPARE PARTS

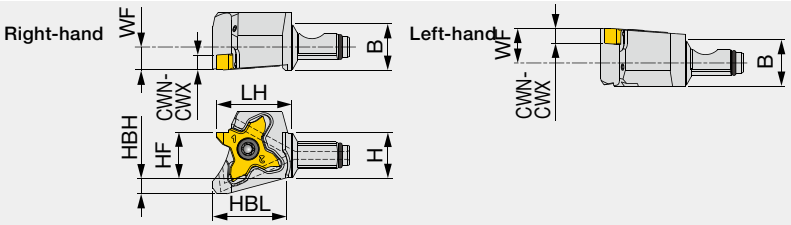
Designation	Clamping screw	Wrench	Coolant plug	Wrench
JS...STCL18	CSTC-4L100DL	T-1008/5	-	-

Threading pitch range: 0.8 - 3 mm

QC12-STCR/L-CHP

Modular head for external grooving and threading, with high pressure coolant capability





Metric	CWN	CWX	H	B	LH	HF	HBH	HBL	WF	Insert	Torque*
QC12-STCR18-CHP	0.33 (0.013")	3.18 (0.125")	12 (0.750")	12 (0.750")	19.5 (0.768")	12 (0.472")	4.2 (0.165")	19.3 (0.760")	6 (0.236")	TC*18R...	1.2 (0.89)
QC12-STCL18-CHP	0.33 (0.013")	3.18 (0.125")	12 (0.750")	12 (0.750")	21 (0.827")	12 (0.472")	4.2 (0.165")	19.3 (0.760")	9 (0.354")	TC*18L...	1.2 (0.89)
QC16-STCR18-CHP	0.33 (0.013")	3.18 (0.125")	16 (1.000")	16 (1.000")	21 (0.827")	16 (0.630")	0 (0")	22 (0.866")	8 (0.315")	TC*18R...	1.2 (0.89)
QC16-STCL18-CHP	0.33 (0.013")	3.18 (0.125")	16 (1.000")	16 (1.000")	21 (0.827")	16 (0.630")	-	-	13 (0.512")	TC*18L...	1.2 (0.89)

Torque* : Recommended clamping torque: N·m (lbs·ft)
Through-coolant head
Note: Use the right-hand insert (TC*18R...) for a right-hand holder (QC12-STCR...); the left-hand insert (TC*18L...) for a left-hand holder (QC12-STCL...).

SPARE PARTS

Designation	Clamping screw	Wrench	O-ring
QC12-STCR18-CHP	CSTC-4L100DL	T-1008/5	ORSS-0454.5X1.0NBR70
QC12-STCL18-CHP	CSTC-4L100DR	T-1008/5	ORSS-0454.5X1.0NBR70
QC16-STCR18-CHP	CSTC-4L100DL	T-1008/5	ORSS-0757.5X1.0NBR70
QC16-STCL18-CHP	CSTC-4L100DR	T-1008/5	ORSS-0757.5X1.0NBR70

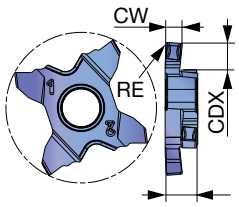
Reference pages : Inserts → 6-49 - 6-55
Standard cutting conditions → 6-56, 6-57

Selection guide for TetraMini-Cut inserts

Groove width		Corner rad.		TCL18R/L (6-50 page)	TCS18R/L (6-50 page -)	TCG18R/L (6-52 page -)	TCP18R/L (6-54 page)	TCP18R/L-F (6-55 page)
CW (mm)	CW (in)	RE (mm)	RE (in)	AH7025	AH7025	AH7025	AH725	SH725
0.013	0.33	0.002	0.05				●	●
0.017	0.43	0.002	0.05				●	●
0.020	0.50	0.002	0.05				●	●
0.030	0.75	0.002	0.05				●	●
0.037	0.95	0.002	0.05				●	●
0.039	1.00	0.002	0.05					●
		0.004	0.1		●	●	●	●
		0.020	0.5			●		
0.047	1.20	0.002	0.05					●
		0.004	0.1		●	●	●	●
0.049	1.25	0.002	0.05					●
		0.004	0.1		●	●	●	●
		0.008	0.2		●	●		
0.051	1.30	0.008	0.2		●	●		
0.055	1.40	0.004	0.1		●	●	●	●
		0.008	0.2		●	●		
0.057	1.45	0.002	0.05					●
		0.004	0.1		●	●	●	●
		0.008	0.2			●		
0.059	1.50	0.002	0.05					●
		0.004	0.1	●	●	●	●	●
		0.008	0.2	●	●	●		
0.062	1.58	0.031	0.79			●		
0.063	1.60	0.008	0.2		●	●		
0.067	1.70	0.008	0.2		●	●		
0.069	1.75	0.002	0.05					●
		0.004	0.1		●	●	●	●
		0.008	0.2	●	●	●		
0.073	1.85	0.008	0.2		●	●		
0.077	1.95	0.008	0.2		●	●		
0.079	2.00	0.002	0.05					●
		0.004	0.1	●	●	●	●	●
		0.008	0.2	●	●	●		
		0.039	1.0			●		
0.089	2.25	0.008	0.2		●	●		
0.091	2.30	0.008	0.2		●	●		
0.094	2.39	0.047	1.2			●		
0.098	2.50	0.004	0.1		●	●	●	●
		0.008	0.2		●	●		
		0.012	0.3	●	●	●		
0.104	2.65	0.012	0.3		●	●		
0.110	2.80	0.012	0.3		●	●		
0.118	3.00	0.004	0.1	●	●	●	●	●
		0.008	0.2	●	●	●		
		0.012	0.3	●	●	●		
		0.059	1.5			●		
0.125	3.18	0.063	1.59			●		

● : Line up

TCL18R/L (3D chipbreaker, honed edge)



Right-hand (R) shown.

P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

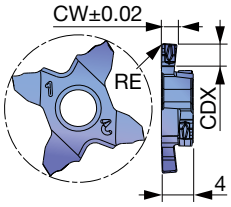
★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)
TCL18R150-010	R	1.5	0.059	0.004	●	0.138
TCL18L150-010	L	1.5	0.059	0.004	●	0.138
TCL18R150-020	R	1.5	0.059	0.008	●	0.138
TCL18L150-020	L	1.5	0.059	0.008	●	0.138
TCL18R175-020	R	1.75	0.069	0.008	●	0.138
TCL18L175-020	L	1.75	0.069	0.008	●	0.138
TCL18R200-010	R	2	0.079	0.004	●	0.138
TCL18L200-010	L	2	0.079	0.004	●	0.138
TCL18R200-020	R	2	0.079	0.008	●	0.138
TCL18L200-020	L	2	0.079	0.008	●	0.138
TCL18R250-030	R	2.5	0.098	0.012	●	0.138
TCL18L250-030	L	2.5	0.098	0.012	●	0.138
TCL18R300-010	R	3	0.118	0.004	●	0.138
TCL18L300-010	L	3	0.118	0.004	●	0.138
TCL18R300-020	R	3	0.118	0.008	●	0.138
TCL18L300-020	L	3	0.118	0.008	●	0.138
TCL18R300-030	R	3	0.118	0.012	●	0.138
TCL18L300-030	L	3	0.118	0.012	●	0.138

5 pieces per package

● : Line up

TCS18R (honed edge) (3D chipbreaker, honed edge)



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice

☆ : Second choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)
TCS18R100-010	R	1	0.039	0.004	●	0.079
TCS18L100-010	L	1	0.039	0.004	●	0.079
TCS18R120-010	R	1.2	0.047	0.004	●	0.079
TCS18L120-010	L	1.2	0.047	0.004	●	0.079
TCS18R125-010	R	1.25	0.049	0.004	●	0.079
TCS18L125-010	L	1.25	0.049	0.004	●	0.079

5 pieces per package

● : Line up

P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

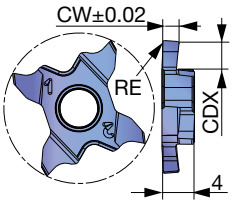
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated	CDX (in)
					AH7025	
TCS18R125-020	R	1.25	0.049	0.008	●	0.079
TCS18L125-020	L	1.25	0.049	0.008	●	0.079
TCS18R130-020	R	1.3	0.051	0.008	●	0.138
TCS18L130-020	L	1.3	0.051	0.008	●	0.138
TCS18R140-010	R	1.4	0.055	0.004	●	0.138
TCS18L140-010	L	1.4	0.055	0.004	●	0.138
TCS18R140-020	R	1.4	0.055	0.008	●	0.138
TCS18L140-020	L	1.4	0.055	0.008	●	0.138
TCS18R145-010	R	1.45	0.057	0.004	●	0.138
TCS18L145-010	L	1.45	0.057	0.004	●	0.138
TCS18R150-010	R	1.5	0.059	0.004	●	0.138
TCS18L150-010	L	1.5	0.059	0.004	●	0.138
TCS18R150-020	R	1.5	0.059	0.008	●	0.138
TCS18L150-020	L	1.5	0.059	0.008	●	0.138
TCS18R160-020	R	1.6	0.063	0.008	●	0.138
TCS18L160-020	L	1.6	0.063	0.008	●	0.138
TCS18R170-020	R	1.7	0.067	0.008	●	0.138
TCS18L170-020	L	1.7	0.067	0.008	●	0.138
TCS18R175-010	R	1.75	0.069	0.004	●	0.138
TCS18L175-010	L	1.75	0.069	0.004	●	0.138
TCS18R175-020	R	1.75	0.069	0.008	●	0.138
TCS18L175-020	L	1.75	0.069	0.008	●	0.138
TCS18R185-020	R	1.85	0.073	0.008	●	0.138
TCS18L185-020	L	1.85	0.073	0.008	●	0.138
TCS18R195-020	R	1.95	0.077	0.008	●	0.138
TCS18L195-020	L	1.95	0.077	0.008	●	0.138
TCS18R200-010	R	2	0.079	0.004	●	0.138
TCS18L200-010	L	2	0.079	0.004	●	0.138
TCS18R200-020	R	2	0.079	0.008	●	0.138
TCS18L200-020	L	2	0.079	0.008	●	0.138
TCS18R225-020	R	2.25	0.089	0.008	●	0.138
TCS18L225-020	L	2.25	0.089	0.008	●	0.138
TCS18R230-020	R	2.3	0.091	0.008	●	0.138
TCS18L230-020	L	2.3	0.091	0.008	●	0.138
TCS18R250-010	R	2.5	0.098	0.004	●	0.138
TCS18L250-010	L	2.5	0.098	0.004	●	0.138
TCS18R250-020	R	2.5	0.098	0.008	●	0.138
TCS18L250-020	L	2.5	0.098	0.008	●	0.138
TCS18R250-030	R	2.5	0.098	0.012	●	0.138
TCS18L250-030	L	2.5	0.098	0.012	●	0.138
TCS18R265-030	R	2.65	0.104	0.012	●	0.138
TCS18L265-030	L	2.65	0.104	0.012	●	0.138
TCS18R280-030	R	2.8	0.110	0.012	●	0.138
TCS18L280-030	L	2.8	0.110	0.012	●	0.138
TCS18R300-010	R	3	0.118	0.004	●	0.138
TCS18L300-010	L	3	0.118	0.004	●	0.138
TCS18R300-020	R	3	0.118	0.008	●	0.138
TCS18L300-020	L	3	0.118	0.008	●	0.138
TCS18R300-030	R	3	0.118	0.012	●	0.138
TCS18L300-030	L	3	0.118	0.012	●	0.138

5 pieces per package
● : Line up

Reference pages : Toolholders → 6-46 - 6-48, Standard cutting conditions → 6-56

TCG18R/L (honed edge)



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	Coated NS9530	CDX (in)
TCG18R100-010	R	1	0.039	0.004	●	●	0.079
TCG18L100-010	L	1	0.039	0.004	●	●	0.079
TCG18R120-010	R	1.2	0.047	0.004	●		0.079
TCG18L120-010	L	1.2	0.047	0.004	●		0.079
TCG18R125-010	R	1.25	0.049	0.004	●	●	0.079
TCG18L125-010	L	1.25	0.049	0.004	●	●	0.079
TCG18R125-020	R	1.25	0.049	0.008	●	●	0.079
TCG18L125-020	L	1.25	0.049	0.008	●	●	0.079
TCG18R130-020	R	1.3	0.051	0.008	●		0.079
TCG18L130-020	L	1.3	0.051	0.008	●		0.079
TCG18R140-010	R	1.4	0.055	0.004	●		0.138
TCG18L140-010	L	1.4	0.055	0.004	●		0.138
TCG18R140-020	R	1.4	0.055	0.008	●		0.138
TCG18L140-020	L	1.4	0.055	0.008	●		0.138
TCG18R145-010	R	1.45	0.057	0.004	●		0.138
TCG18L145-010	L	1.45	0.057	0.004	●		0.138
TCG18R145-020	R	1.45	0.057	0.008	●	●	0.138
TCG18L145-020	L	1.45	0.057	0.008	●	●	0.138
TCG18R150-010	R	1.5	0.059	0.004	●	●	0.138
TCG18L150-010	L	1.5	0.059	0.004	●	●	0.138
TCG18R150-020	R	1.5	0.059	0.008	●	●	0.138
TCG18L150-020	L	1.5	0.059	0.008	●	●	0.138
TCG18R160-020	R	1.6	0.063	0.008	●		0.138
TCG18L160-020	L	1.6	0.063	0.008	●		0.138
TCG18R170-020	R	1.7	0.067	0.008	●		0.138
TCG18L170-020	L	1.7	0.067	0.008	●		0.138
TCG18R175-010	R	1.75	0.069	0.004	●		0.138
TCG18L175-010	L	1.75	0.069	0.004	●		0.138
TCG18R175-020	R	1.75	0.069	0.008	●	●	0.138
TCG18L175-020	L	1.75	0.069	0.008	●	●	0.138
TCG18R185-020	R	1.85	0.073	0.008	●	●	0.138
TCG18L185-020	L	1.85	0.073	0.008	●	●	0.138
TCG18R195-020	R	1.95	0.077	0.008	●		0.138
TCG18L195-020	L	1.95	0.077	0.008	●		0.138
TCG18R200-010	R	2	0.079	0.004	●	●	0.138
TCG18L200-010	L	2	0.079	0.004	●	●	0.138
TCG18R200-020	R	2	0.079	0.008	●	●	0.138
TCG18L200-020	L	2	0.079	0.008	●	●	0.138
TCG18R225-020	R	2.25	0.089	0.008	●		0.138
TCG18L225-020	L	2.25	0.089	0.008	●		0.138
TCG18R230-020	R	2.3	0.091	0.008	●	●	0.138
TCG18L230-020	L	2.3	0.091	0.008	●	●	0.138
TCG18R250-010	R	2.5	0.098	0.004	●		0.138
TCG18L250-010	L	2.5	0.098	0.004	●		0.138

5 pieces per package
● : Line up

Reference pages : Toolholders → 6-46 - 6-48, Standard cutting conditions → 6-56

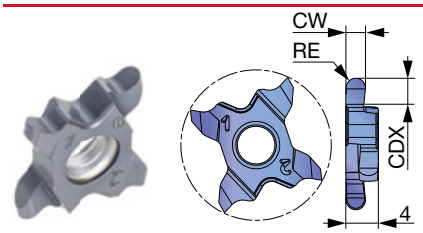
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)
TCG18R250-020	R	2.5	0.098	0.008	●	0.138
TCG18L250-020	L	2.5	0.098	0.008	●	0.138
TCG18R250-030	R	2.5	0.098	0.012	●	0.138
TCG18L250-030	L	2.5	0.098	0.012	●	0.138
TCG18R265-030	R	2.65	0.104	0.012	●	0.138
TCG18L265-030	L	2.65	0.104	0.012	●	0.138
TCG18R280-030	R	2.8	0.110	0.012	●	0.138
TCG18L280-030	L	2.8	0.110	0.012	●	0.138
TCG18R300-010	R	3	0.118	0.004	●	0.138
TCG18L300-010	L	3	0.118	0.004	●	0.138
TCG18R300-020	R	3	0.118	0.008	●	0.138
TCG18L300-020	L	3	0.118	0.008	●	0.138
TCG18R300-030	R	3	0.118	0.012	●	0.138
TCG18L300-030	L	3	0.118	0.012	●	0.138

5 pieces per package
● : Line up

TCG18R/L (Full R, honed edge)



Right-hand (R) shown.

P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

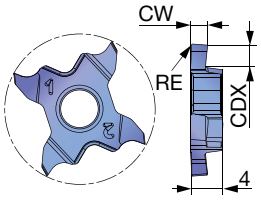
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)
TCG18R100-050	R	1	0.039	0.020	●	0.079
TCG18L100-050	L	1	0.039	0.020	●	0.079
TCG18R158-079	R	1.58	0.062	0.031	●	0.138
TCG18L158-079	L	1.58	0.062	0.031	●	0.138
TCG18R200-100	R	2	0.079	0.039	●	0.138
TCG18L200-100	L	2	0.079	0.039	●	0.138
TCG18R239-120	R	2.39	0.094	0.047	●	0.138
TCG18L239-120	L	2.39	0.094	0.047	●	0.138
TCG18R300-150	R	3	0.118	0.059	●	0.138
TCG18L300-150	L	3	0.118	0.059	●	0.138
TCG18R318-159	R	3.18	0.125	0.063	●	0.138
TCG18L318-159	L	3.18	0.125	0.063	●	0.138

5 pieces per package
● : Line up

Reference pages : Toolholders → 6-46 - 6-48, Standard cutting conditions → 6-56

TCP18R/L (lightly honed edge)



P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

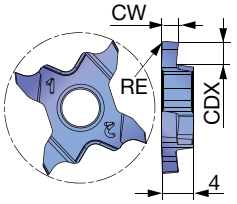
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)
TCP18R033-005	R	0.33	0.013	0.002	●	0.031
TCP18L033-005	L	0.33	0.013	0.002	●	0.031
TCP18R043-005	R	0.43	0.017	0.002	●	0.047
TCP18L043-005	L	0.43	0.017	0.002	●	0.047
TCP18R050-005	R	0.50	0.020	0.002	●	0.047
TCP18L050-005	L	0.50	0.020	0.002	●	0.047
TCP18R075-005	R	0.75	0.030	0.002	●	0.079
TCP18L075-005	L	0.75	0.030	0.002	●	0.079
TCP18R095-005	R	0.95	0.037	0.002	●	0.079
TCP18L095-005	L	0.95	0.037	0.002	●	0.079
TCP18R100-010	R	1	0.039	0.004	●	0.079
TCP18L100-010	L	1	0.039	0.004	●	0.079
TCP18R120-010	R	1.2	0.047	0.004	●	0.079
TCP18L120-010	L	1.2	0.047	0.004	●	0.079
TCP18R125-010	R	1.25	0.049	0.004	●	0.079
TCP18L125-010	L	1.25	0.049	0.004	●	0.079
TCP18R140-010-35	R	1.4	0.055	0.004	●	0.138
TCP18L140-010-35	L	1.4	0.055	0.004	●	0.138
TCP18R145-010	R	1.45	0.057	0.004	●	0.079
TCP18L145-010	L	1.45	0.057	0.004	●	0.079
TCP18R145-010-35	R	1.45	0.057	0.004	●	0.138
TCP18L145-010-35	L	1.45	0.057	0.004	●	0.138
TCP18R150-010	R	1.5	0.059	0.004	●	0.079
TCP18L150-010	L	1.5	0.059	0.004	●	0.079
TCP18R150-010-35	R	1.5	0.059	0.004	●	0.138
TCP18L150-010-35	L	1.5	0.059	0.004	●	0.138
TCP18R175-010	R	1.75	0.069	0.004	●	0.079
TCP18L175-010	L	1.75	0.069	0.004	●	0.079
TCP18R175-010-35	R	1.75	0.069	0.004	●	0.138
TCP18L175-010-35	L	1.75	0.069	0.004	●	0.138
TCP18R200-010	R	2	0.079	0.004	●	0.098
TCP18L200-010	L	2	0.079	0.004	●	0.098
TCP18R200-010-35	R	2	0.079	0.004	●	0.138
TCP18L200-010-35	L	2	0.079	0.004	●	0.138
TCP18R250-010	R	2.5	0.098	0.004	●	0.098
TCP18L250-010	L	2.5	0.098	0.004	●	0.098
TCP18R250-010-35	R	2.5	0.098	0.004	●	0.138
TCP18L250-010-35	L	2.5	0.098	0.004	●	0.138
TCP18R300-010	R	3	0.118	0.004	●	0.098
TCP18L300-010	L	3	0.118	0.004	●	0.098
TCP18R300-010-35	R	3	0.118	0.004	●	0.138
TCP18L300-010-35	L	3	0.118	0.004	●	0.138

5 pieces per package
● : Line up

Reference pages : Toolholders → 6-46 - 6-48, Standard cutting conditions → 6-56

TCP18R/L-F (sharp edge)



P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated SH725	CDX (in)
TCP18R033F-005	R	0.33	0.013	0.002	●	0.031
TCP18L033F-005	L	0.33	0.013	0.002	●	0.031
TCP18R043F-005	R	0.43	0.017	0.002	●	0.047
TCP18L043F-005	L	0.43	0.017	0.002	●	0.047
TCP18R050F-005	R	0.5	0.020	0.002	●	0.047
TCP18L050F-005	L	0.5	0.020	0.002	●	0.047
TCP18R075F-005	R	0.75	0.030	0.002	●	0.079
TCP18L075F-005	L	0.75	0.030	0.002	●	0.079
TCP18R095F-005	R	0.95	0.037	0.002	●	0.079
TCP18L095F-005	L	0.95	0.037	0.002	●	0.079
TCP18R100F-005	R	1	0.039	0.002	●	0.079
TCP18R100F-010	R	1	0.039	0.004	●	0.079
TCP18L100F-010	L	1	0.039	0.004	●	0.079
TCP18R120F-005	R	1.2	0.047	0.002	●	0.079
TCP18R120F-010	R	1.2	0.047	0.004	●	0.079
TCP18L120F-010	L	1.2	0.047	0.004	●	0.079
TCP18R125F-005	R	1.25	0.049	0.002	●	0.079
TCP18R125F-010	R	1.25	0.049	0.004	●	0.079
TCP18L125F-010	L	1.25	0.049	0.004	●	0.079
TCP18R140F-010-35	R	1.4	0.055	0.004	●	0.138
TCP18R145F-005-35	R	1.45	0.057	0.002	●	0.138
TCP18R145F-010	R	1.45	0.057	0.004	●	0.079
TCP18L145F-010	L	1.45	0.057	0.004	●	0.079
TCP18R145F-010-35	R	1.45	0.057	0.004	●	0.138
TCP18L145F-010-35	L	1.45	0.057	0.004	●	0.138
TCP18R150F-005-35	R	1.5	0.059	0.002	●	0.138
TCP18R150F-010	R	1.5	0.059	0.004	●	0.079
TCP18L150F-010	L	1.5	0.059	0.004	●	0.079
TCP18R150F-010-35	R	1.5	0.059	0.004	●	0.138
TCP18L150F-010-35	L	1.5	0.059	0.004	●	0.138
TCP18R175F-005-35	R	1.75	0.069	0.002	●	0.138
TCP18R175F-010	R	1.75	0.069	0.004	●	0.079
TCP18L175F-010	L	1.75	0.069	0.004	●	0.079
TCP18R175F-010-35	R	1.75	0.069	0.004	●	0.138
TCP18L175F-010-35	L	1.75	0.069	0.004	●	0.138
TCP18R200F-005-35	R	2	0.079	0.002	●	0.138
TCP18R200F-010	R	2	0.079	0.004	●	0.098
TCP18L200F-010	L	2	0.079	0.004	●	0.098
TCP18R200F-010-35	R	2	0.079	0.004	●	0.138
TCP18L200F-010-35	L	2	0.079	0.004	●	0.138
TCP18R250F-010	R	2.5	0.098	0.004	●	0.098
TCP18L250F-010	L	2.5	0.098	0.004	●	0.098
TCP18R250F-010-35	R	2.5	0.098	0.004	●	0.138
TCP18L250F-010-35	L	2.5	0.098	0.004	●	0.138
TCP18R300F-010	R	3	0.118	0.004	●	0.098
TCP18L300F-010	L	3	0.118	0.004	●	0.098
TCP18R300F-010-35	R	3	0.118	0.004	●	0.138
TCP18L300F-010-35	L	3	0.118	0.004	●	0.138

5 pieces per package
● : Line up

Reference pages : Toolholders → 6-46 - 6-48, Standard cutting conditions → 6-56

STANDARD CUTTING CONDITIONS

TCS18R (3D chipbreaker) , TCG18R/L (honed edge)

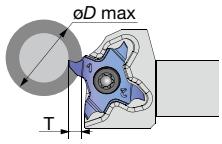
ISO	Workpiece materials	Grades	Cutting speed *Vc* (sfm)	Feed: *f* (ipr)	
				TCG	TCS
P	Low carbon steel 1015, 1020, etc.	AH7025	262 - 591	0.001 - 0.005	0.001 - 0.006
P	Carbon steels, Alloy steel 1055, 4140, etc.	AH7025	262 - 591	0.001 - 0.005	0.001 - 0.006
P	Prehardened steel NAK80, PX5, etc.	AH7025	262 - 591	0.001 - 0.005	0.001 - 0.006
M	Stainless steel 304SS, 316SS, etc.	AH7025	164 - 394	0.001 - 0.005	0.001 - 0.006
K	Gray cast iron Class 25, Class 30, etc.	AH7025	164 - 591	0.001 - 0.005	0.001 - 0.006
K	Ductile cast iron 60-40-18, 80-55-06, etc.	AH7025	164 - 591	0.001 - 0.005	0.001 - 0.006
S	Titanium alloys Ti-6Al-4V, etc.	AH7025	98 - 262	0.001 - 0.005	0.001 - 0.006
S	Superalloys Inconel718, etc.	AH7025	66 - 197	0.001 - 0.005	0.001 - 0.006

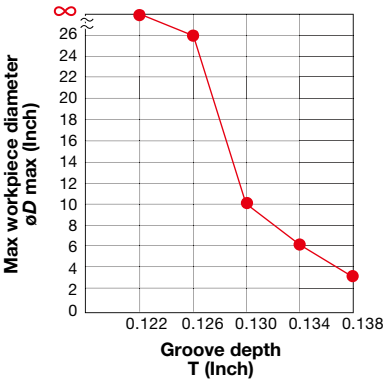
TCL18R (3D chipbreaker), TCG18R/L (Full R, honed edge)

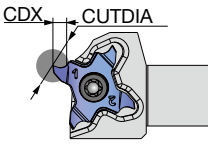
ISO	Workpiece materials	Grades	Cutting speed *Vc* (sfm)	Feed: *f* (ipr)	
				TCL18	TCG18
P	Low carbon steel 1015, 1020, etc.	AH7025	262 - 591	0.001 - 0.005	0.002 - 0.006
P	Carbon steels, Alloy steel 1055, 4140, etc.	AH7025	262 - 591	0.001 - 0.005	0.002 - 0.006
P	Prehardened steel NAK80, PX5, etc.	AH7025	262 - 591	0.001 - 0.005	0.002 - 0.006
M	Stainless steel 304SS, 316SS, etc.	AH7025	164 - 394	0.001 - 0.005	0.002 - 0.006
K	Gray cast iron Class 25, Class 30, etc.	AH7025	164 - 591	0.001 - 0.005	0.002 - 0.006
K	Ductile cast iron 60-40-18, 80-55-06, etc.	AH7025	164 - 591	0.001 - 0.005	0.002 - 0.006
S	Titanium alloys Ti-6Al-4V, etc.	AH7025	98 - 262	0.001 - 0.005	0.002 - 0.006
S	Superalloys Inconel718, etc.	AH7025	66 - 197	0.001 - 0.005	0.002 - 0.006

TCP18R/L (lightly honed edge) / TCP18R/L-F (sharp edge)

ISO	Workpiece materials	Priority	Grades	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Low carbon steel 1015, 1020, etc.	First choice	SH725	262 - 591	0.001 - 0.004
P	Low carbon steel 1015, 1020, etc.	Toughness	AH725	262 - 591	0.001 - 0.004
P	Carbon steels, Alloy steel 1055, 4140, etc.	First choice	SH725	262 - 591	0.001 - 0.004
P	Carbon steels, Alloy steel 1055, 4140, etc.	Toughness	AH725	262 - 591	0.001 - 0.004
P	Prehardened steel NAK80, PX5, etc.	First choice	SH725	262 - 591	0.001 - 0.004
P	Prehardened steel NAK80, PX5, etc.	Toughness	AH725	262 - 591	0.001 - 0.004
M	Stainless steel 304SS, 316SS, etc.	First choice	SH725	164 - 394	0.001 - 0.004
M	Stainless steel 304SS, 316SS, etc.	Toughness	AH725	164 - 394	0.001 - 0.004
K	Gray cast iron Class 25, Class 30, etc.	First choice	AH725	164 - 591	0.001 - 0.004
K	Gray cast iron Class 25, Class 30, etc.	Sharpness	SH725	164 - 591	0.001 - 0.004
K	Ductile cast iron 60-40-18, 80-55-06, etc.	First choice	AH725	164 - 591	0.001 - 0.004
K	Ductile cast iron 60-40-18, 80-55-06, etc.	Sharpness	SH725	164 - 591	0.001 - 0.004
S	Titanium alloys Ti-6Al-4V, etc.	First choice	SH725	98 - 262	0.001 - 0.004
S	Titanium alloys Ti-6Al-4V, etc.	Toughness	AH725	98 - 262	0.001 - 0.004
S	Superalloys Inconel718, etc.	First choice	SH725	66 - 197	0.001 - 0.004
S	Superalloys Inconel718, etc.	Toughness	AH725	66 - 197	0.001 - 0.004







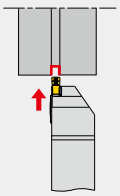
Max workpiece diameter CUTDIA (Inch)
0.276

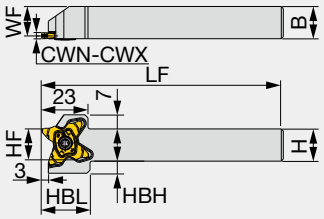
*Groove depth and max workpiece diameter (øDmax)

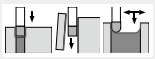
Maximum workpiece diameter is limited relative to depth of cut in order to avoid collision between insert and workpiece.

STCR/L-27

External grooving toolholder







Right-hand (R) shown.

Inch	CWN	CWX	H	B	LF	HF	WF	HBH	HBL	Insert	Torque
STCR/L06-27	0.020	0.125	0.375	0.375	5.000	0.375	0.315	0.374	0.945	TC*27...	1.84
STCR/L08-27	0.020	0.125	0.500	0.500	5.000	0.500	0.440	0.287	0.945	TC*27...	1.84
STCR/L10-27	0.020	0.125	0.625	0.625	5.000	0.625	0.570	0.236	0.945	TC*27...	1.84
STCR/L12-27	0.020	0.125	0.750	0.750	5.000	0.750	0.690	0.118	0.945	TC*27...	1.84
STCR/L16-27	0.020	0.125	1.000	1.000	5.500	1.000	0.940	-	-	TC*27...	1.84

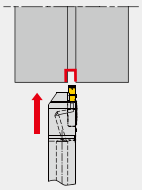
Metric	CWN	CWX	H	B	LF	HF	WF	HBH	HBL	Insert	Torque*
STCR/L1010-27	0.5	3.18	10	10	120	10	8.5	9.5	24	TC*27...	2.5
STCR/L1212-27	0.5	3.18	12	12	120	12	10.5	8	24	TC*27...	2.5
STCR/L1616-27	0.5	3.18	16	16	120	16	14.5	6	24	TC*27...	2.5
STCR/L2020-27	0.5	3.18	20	20	120	20	18.5	2	24	TC*27...	2.5

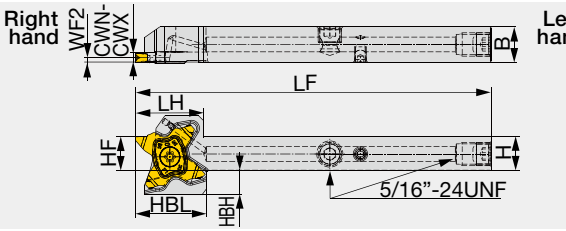
Torque: Recommended clamping torque: lbs·ft (*N·m)

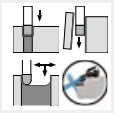
STCR/L1212-27-CHP

Direct connection

Grooving and parting-off toolholder. High pressure coolant capability.







Inch	CWN	CWX	H	B	LF	LH	HF	WF2(1)	HBH	HBL	Insert	Torque
STCR/L08-27-CHP	0.020	0.125	0.500	0.500	4.750	0.906	0.500	0.059/0.413	0.287	0.945	TC*27...	1.84

Metric	CWN	CWX	H	B	LF	LH	HF	WF2(1)	HBH	HBL	Insert	Torque*
STCR/L1212-27-CHP	0.5	3.18	12	12	120	23	12	1.5/10.5	8	24	TC*27...	2.5

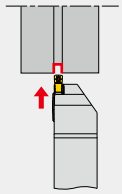
(1) The above WF value is valid when an insert width of CW = 0.118" is mounted.
Torque: Recommended clamping torque: lbs·ft (*N·m)
Make sure to avoid tool interferences when used on Swiss machines

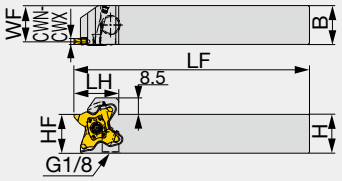
SPARE PARTS

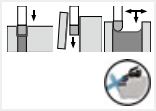
Designation	Screw	Wrench
STCR****-27, STCR...-27-CHP	SR16-212-01397L	T-2010/5
STCL****-27, STCL...-27-CHP	SR16-212-01397	T-2010/5

Reference pages : STCR/L-27, STCR/L1212-27-CHP, STCR/L2020-27-CHP:
Inserts → 6-59 - 6-63, Standard cutting conditions → 6-63

External grooving and parthing-off toolholder with high pressure coolant supply







Right-hand (R) shown.

Inch	CWN	CWX	H	B	LF	LH	HF	WF	Insert	Torque
STCR/L12-27-CHP	0.020	0.125	0.750	0.750	5.000	0.906	0.750	0.690	TC*27...	1.84

Metric	CWN	CWX	H	B	LF	LH	HF	WF	Insert	Torque*
STCR/L2020-27-CHP	0.5	3.18	20	20	120	23	20	18.5	TC*27...	2.5

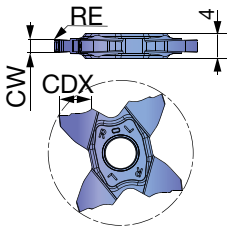
Torque*: Recommended clamping torque (N·m)

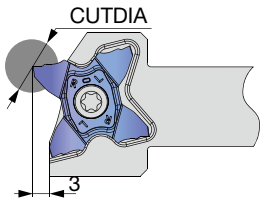
SPARE PARTS

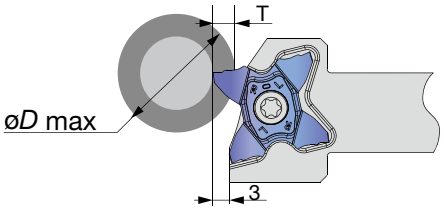
Designation	Screw	Wrench
STCR...-27-CHP	SR16-212-01397L	T-2010/5
STCL...-27-CHP	SR16-212-01397	T-2010/5

INSERT - FOR GROOVING AND PARTING OFF

TCL27







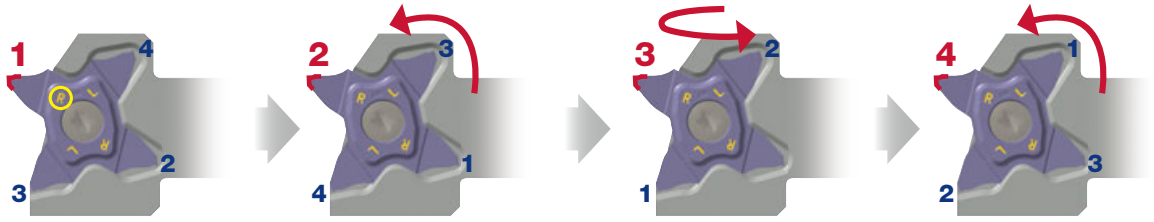
P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

★ : First choice
☆ : Second choice

Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	CUTDIA (in)	Relation of groove depth (T) and Max. diameter (øD max) (in)									
							T≤0.118	T≤0.138	T≤0.157	T≤0.177	T≤0.197	T≤0.217	T≤0.224	T≤0.236	T≤0.244	T≤0.252
TCL27-150-015	1.5	0.059	0.006	●	0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCL27-200-020	2	0.079	0.008	●	0.252	0.504	∞	23.622	11.024	7.087	5.118	4.134	3.346	2.362	1.969	1.181
TCL27-250-020	2.5	0.098	0.008	●	0.252	0.504	∞	23.622	11.024	7.087	5.118	4.134	3.346	2.362	1.969	1.181
TCL27-300-020	3	0.118	0.008	●	0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165

5 pieces per package
● : Line up

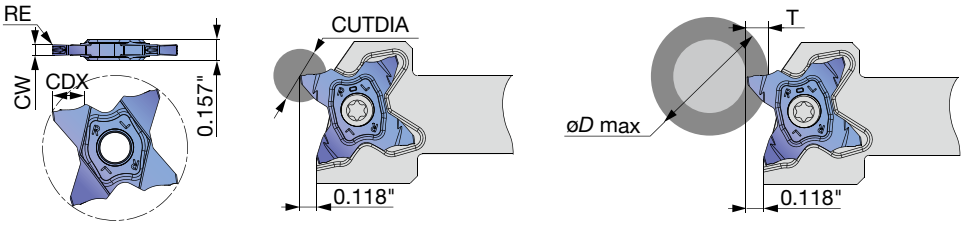
HOW TO INDEX INSERTS



1. Right-hand edge (R) is used for the right- hand toolholders.
2. Rotate the insert
3. Flip over the insert
4. Rotate the insert

Reference pages : Toolholders → 6-58, 6-59, Standard cutting conditions → 6-63

TCS27



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice
☆ : Second choice

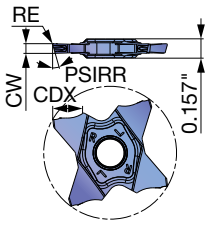
Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	CUTDIA (in)	Relation of groove depth (T) and Max. diameter (øD max) (in)											
							T≤0.039	T≤0.079	T≤0.118	T≤0.138	T≤0.157	T≤0.177	T≤0.197	T≤0.217	T≤0.224	T≤0.236	T≤0.244	T≤0.252
TCS27-050-000	0.5	0.020	0	●	0.039	0.079	∞	-	-	-	-	-	-	-	-	-	-	-
TCS27-050-004	0.5	0.020	0.0016	●	0.098	0.197	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-075-010	0.75	0.030	0.004	●	0.098	0.197	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-080-000	0.8	0.031	0	●	0.063	0.126	∞	-	-	-	-	-	-	-	-	-	-	-
TCS27-100-006	1	0.039	0.0024	●	0.138	0.276	∞	∞	∞	23.622	-	-	-	-	-	-	-	-
TCS27-100-010	1	0.039	0.004	●	0.138	0.276	∞	∞	∞	23.622	-	-	-	-	-	-	-	-
TCS27-104-000	1.04	0.041	0	●	0.079	0.157	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-120-000	1.2	0.047	0	●	0.079	0.157	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-125-010	1.25	0.049	0.004	●	0.138	0.276	∞	∞	∞	23.622	-	-	-	-	-	-	-	-
TCS27-125-020	1.25	0.049	0.008	●	0.138	0.276	∞	∞	∞	23.622	-	-	-	-	-	-	-	-
TCS27-140-000	1.4	0.055	0	●	0.079	0.157	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-147-000	1.47	0.058	0	●	0.098	0.197	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-150-010	1.5	0.059	0.004	●	0.224	0.449	∞	∞	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-150-020	1.5	0.059	0.008	●	0.224	0.449	∞	∞	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-157-015	1.57	0.062	0.006	●	0.118	0.236	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-170-010	1.7	0.067	0.004	●	0.118	0.236	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-175-010	1.75	0.069	0.004	●	0.118	0.236	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-175-020	1.75	0.069	0.008	●	0.118	0.236	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-178-018	1.78	0.070	0.007	●	0.118	0.236	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-185-020	1.85	0.073	0.008	●	0.118	0.236	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-196-015	1.96	0.077	0.006	●	0.118	0.236	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-200-010	2	0.079	0.004	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.118	4.134	3.346	2.362	1.969	1.181
TCS27-200-020	2	0.079	0.008	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.118	4.134	3.346	2.362	1.969	1.181
TCS27-222-015	2.22	0.087	0.006	●	0.138	0.276	∞	∞	∞	23.622	-	-	-	-	-	-	-	-
TCS27-230-020	2.3	0.091	0.008	●	0.138	0.276	∞	∞	∞	23.622	-	-	-	-	-	-	-	-
TCS27-239-015	2.39	0.094	0.006	●	0.224	0.449	∞	∞	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-247-020	2.47	0.097	0.008	●	0.224	0.449	∞	∞	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-250-010	2.5	0.098	0.004	●	0.224	0.449	∞	∞	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-250-030	2.5	0.098	0.012	●	0.224	0.449	∞	∞	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-270-010	2.7	0.106	0.004	●	0.244	0.488	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	-
TCS27-287-020	2.87	0.113	0.008	●	0.244	0.488	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	-
TCS27-300-000	3	0.118	0	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCS27-300-020	3	0.118	0.008	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCS27-300-030	3	0.118	0.012	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCS27-300-040	3	0.118	0.016	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCS27-315-015	3.15	0.124	0.006	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.677
TCS27-318-020	3.18	0.125	0.008	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.677

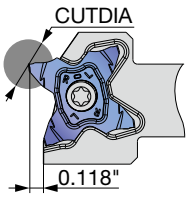
5 pieces per package
● : Line up

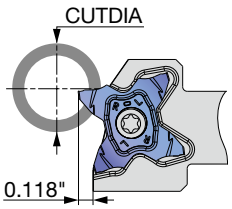
Reference pages : Toolholders → 6-58, 6-59, Standard cutting conditions → 6-63

INSERT- FOR PARTING OFF

TCS27-R/L







Right hand (R) shown.

P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

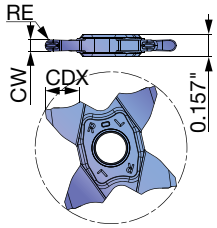
★ : First choice
☆ : Second choice

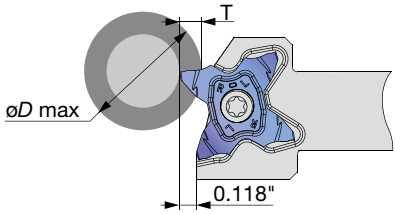
Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	PSIRL	PSIRR	Max. parting off dia. CUTDIA (in) Solid bar	Max. parting off dia. CUTDIA (in) Tube
TCS27-100-15R	R	1	0.039	0.0024	●	0.138	0°	15°	0.276	23.622
TCS27-100-15L	L	1	0.039	0.0024	●	0.138	15°	0°	0.276	23.622
TCS27-150-6R	R	1.5	0.059	0.0024	●	0.224	0°	6°	0.449	1.378
TCS27-150-6L	L	1.5	0.059	0.0024	●	0.224	6°	0°	0.449	1.378
TCS27-150-15R	R	1.5	0.059	0.0024	●	0.224	0°	15°	0.449	1.378
TCS27-150-15L	L	1.5	0.059	0.0024	●	0.224	15°	0°	0.449	1.378
TCS27-200-6R	R	2	0.079	0.004	●	0.252	0°	6°	0.504	1.181
TCS27-200-6L	L	2	0.079	0.004	●	0.252	6°	0°	0.504	1.181
TCS27-200-15R	R	2	0.079	0.004	●	0.252	0°	15°	0.504	1.181
TCS27-200-15L	L	2	0.079	0.004	●	0.252	15°	0°	0.504	1.181

5 pieces per package
● : Line up

INSERT- FOR GROOVING AND PROFILING

TCS27 (Full R)





P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice
☆ : Second choice

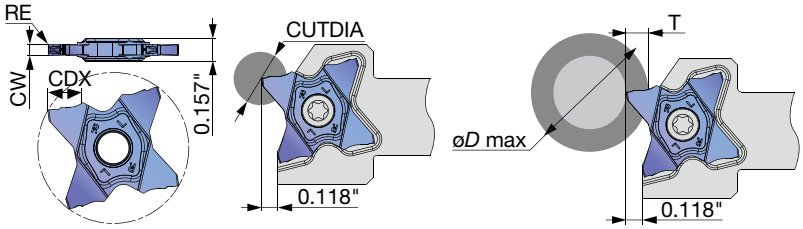
Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	Relation of groove depth (T) and Max. diameter (øD max) (in) T≤0.039 T≤0.079 T≤0.118	T≤0.138	T≤0.157	T≤0.177	T≤0.197	T≤0.217	T≤0.224	T≤0.236	T≤0.244	T≤0.252
TCS27-157-079	1.57	0.062	0.031	●	0.118	∞	-	-	-	-	-	-	-	-	-
TCS27-200-100	2	0.079	0.039	●	0.118	∞	-	-	-	-	-	-	-	-	-
TCS27-239-120	2.39	0.094	0.047	●	0.224	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-300-150	3	0.118	0.059	●	0.252	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165

5 pieces per package
● : Line up

Reference pages : Toolholders → 6-58, 6-59, Standard cutting conditions → 6-63

INSERT- FOR GROOVING AND PARTING OFF

TCM27



P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

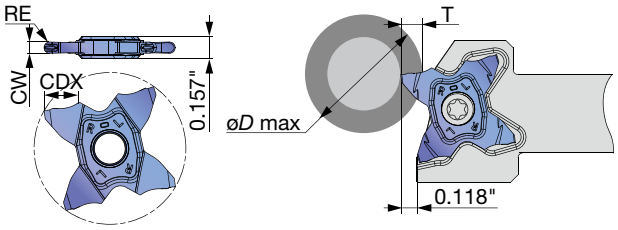
Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	CUTDIA (in)	Relation of groove depth (T) and Max. diameter (øD max) (in)								
							T≤0.039 T≤0.079 T≤0.118	T≤0.138	T≤0.157	T≤0.177	T≤0.197	T≤0.217	T≤0.224	T≤0.236	T≤0.244	T≤0.252
TCM27-150-010	1.5	0.059	0.004	●	0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-150-020	1.5	0.059	0.008	●	0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-157-015	1.57	0.062	0.006	●	0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-170-010	1.7	0.067	0.004	●	0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-175-010	1.75	0.069	0.004	●	0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-175-020	1.75	0.069	0.008	●	0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-178-018	1.78	0.070	0.007	●	0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-185-020	1.85	0.073	0.008	●	0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-196-015	1.96	0.077	0.006	●	0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-200-010	2	0.079	0.004	●	0.252	0.504	∞	23.622	11.024	7.087	5.118	4.134	3.346	2.362	1.969	1.181
TCM27-200-020	2	0.079	0.008	●	0.252	0.504	∞	23.622	11.024	7.087	5.118	4.134	3.346	2.362	1.969	1.181
TCM27-222-015	2.22	0.087	0.006	●	0.138	0.276	∞	23.622	-	-	-	-	-	-	-	-
TCM27-230-020	2.3	0.091	0.008	●	0.138	0.276	∞	23.622	-	-	-	-	-	-	-	-
TCM27-239-015	2.39	0.094	0.006	●	0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-247-020	2.47	0.097	0.008	●	0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-250-010	2.5	0.098	0.004	●	0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-250-030	2.5	0.098	0.012	●	0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-270-010	2.7	0.106	0.004	●	0.244	0.488	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	-
TCM27-287-020	2.87	0.113	0.008	●	0.244	0.488	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	-
TCM27-300-000	3	0.118	0	●	0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCM27-300-020	3	0.118	0.008	●	0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCM27-300-030	3	0.118	0.012	●	0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCM27-300-040	3	0.118	0.016	●	0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCM27-315-015	3.15	0.124	0.006	●	0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.677
TCM27-318-020	3.18	0.125	0.008	●	0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.677

5 pieces per package
● : Line up

Reference pages : Toolholders → 6-58, 6-59, Standard cutting conditions → 6-63

INSERT - FOR GROOVING AND PROFILING

TCM27 (Full R)



P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

★ : First choice
☆ : Second choice

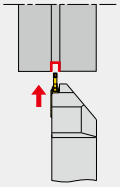
Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725		CDX (in)	CUTDIA (in)	Relation of groove depth (T) and Max. diameter (øD max) (in)									
								T≤0.039 T≤0.079 T≤0.118	T≤0.138	T≤0.157	T≤0.177	T≤0.197	T≤0.217	T≤0.224	T≤0.236	T≤0.244	T≤0.252
TCM27-157-079	1.57	0.059	0.031	●		0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-200-100	2	0.059	0.039	●		0.118	0.236	∞	23.622	-	-	-	-	-	-	-	-
TCM27-239-120	2.39	0.062	0.047	●		0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-300-150	3	0.125	0.059	●		0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165

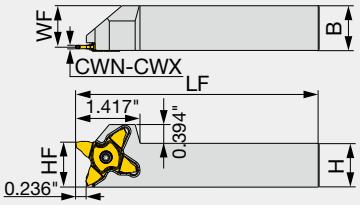
5 pieces per package
● : Line up

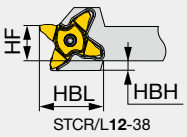
STANDARD CUTTING CONDITIONS

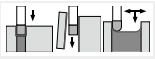
ISO	Workpiece material	Grades	Cutting speed *Vc* (sfm)	Feed: *f* (ipr)						Depth of cut for profiling (with full radius insert)
				Grooving, parting-off			Parting-off (with hand)	Profiling (with full radius insert)		
				TCL27	TCS27	TCM27	TCS27	TCS27	TCM27	
P	Steel 1045, etc.	AH725	328 - 656	0.001 - 0.005	0.002 - 0.006	0.002 - 0.010	0.002 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
	Alloy steel 4137, etc.	AH725	164 - 591	0.001 - 0.005	0.002 - 0.006	0.002 - 0.010	0.002 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
M	Stainless steel 304, etc.	AH725	328 - 492	0.001 - 0.005	0.002 - 0.006	0.002 - 0.008	0.002 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
K	Gray cast iron No.250, etc.	AH725	164 - 591	0.001 - 0.005	0.002 - 0.006	0.002 - 0.010	0.002 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
	Ductile cast iron 60-40-18, etc.	AH725	164 - 394	0.001 - 0.005	0.002 - 0.006	0.002 - 0.008	0.002 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
S	Titanium alloys Ti-6Al-4V, etc.	AH725	98 - 197	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006	0.002 - 0.005	0.002 - 0.004	0.002 - 0.004	0.020
	Superalloys Inconel718, etc.	AH725	66 - 164	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006	0.002 - 0.005	0.002 - 0.004	0.002 - 0.004	0.020

Reference pages : Toolholders → 6-58, 6-59









Right hand (R) shown.

Inch	CWN	CWX	H	B	LF	HF	WF	HBH	HBL	Insert	Torque
STCR/L12-38	0.059	0.157	0.750	0.750	5.000	0.750	0.670	0.234	1.378	TCL38…	1.84
STCR/L16-38	0.059	0.157	1.000	1.000	5.500	1.000	0.920	-	-	TCL38…	1.84
STCR/L20-38	0.059	0.157	1.250	1.250	5.500	1.250	1.170	-	-	TCL38…	1.84

Metric	CWN	CWX	H	B	LF	HF	WF	HBH	HBL	Insert	Torque*
STCR/L2020-38	1.5	4	20	20	120	20	18.1	5	35	TCL38…	2.5
STCR/L2525-38	1.5	4	25	25	135	25	23.1	-	-	TCL38…	2.5
STCR/L3232-38	1.5	4	32	32	135	32	30.1	-	-	TCL38…	2.5

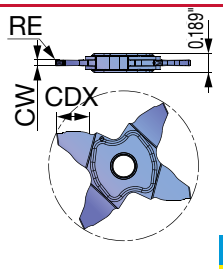
Torque: Recommended clamping torque: lbs·ft (*N·m)

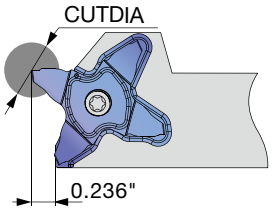
SPARE PARTS

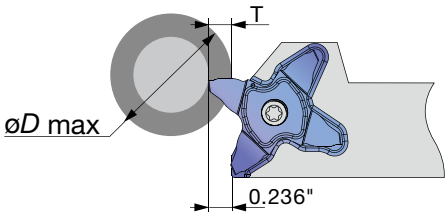
Designation	Screw	Wrench
STCR****-38 (-CHP)	SR16-212-01397L	T-2010/5
STCL****-38 (-CHP)	SR16-212-01397	T-2010/5

INSERT - FOR GROOVING AND PARTING OFF

TCL38







P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice

Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)	CUTDIA (in)	Relation of groove depth (T) and Max. diameter (øD max) T ≤ 0.197"	T ≤ 0.236"	T ≤ 0.276"	T ≤ 0.315"	T ≤ 0.354"	T ≤ 0.394"
TCL38-150-020	1.5	0.059	0.008	●	0.354	0.709	∞	37.402	12.402	7.480	1.772	-
TCL38-200-020	2	0.079	0.008	●	0.354	0.709	∞	37.402	12.402	7.480	1.772	-
TCL38-300-020	3	0.118	0.008	●	0.394	0.787	∞	37.402	12.402	7.480	5.118	1.969
TCL38-400-030	4	0.157	0.012	●	0.394	0.787	∞	37.402	12.402	7.480	5.118	1.969

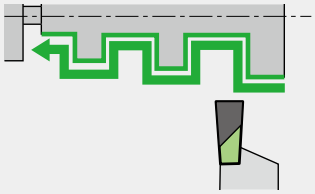
5 pieces per package
● : Line up

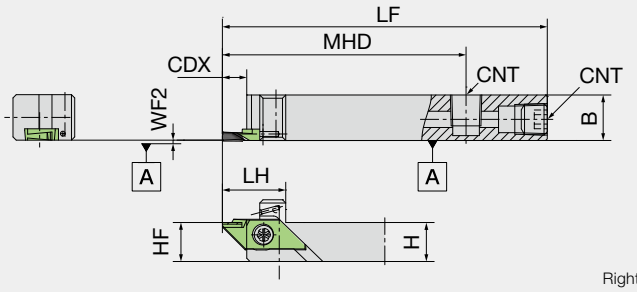
STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Grades	Cutting speed Vc (sfm)	Feed: f (ipr) Grooving, Parting TCL38
P	Carbon steel (1045, etc.)	AH7025	262 - 591	0.001 - 0.007
	Alloy steel (4140, etc.)	AH7025	164 - 591	0.001 - 0.007
M	Alloy steel (304SS, etc.)	AH7025	164 - 492	0.001 - 0.006
K	Grey cast iron (Class 25, etc.)	AH7025	164 - 591	0.001 - 0.006
	Ductile cast iron (60-40-18, etc.)	AH7025	164 - 394	0.001 - 0.006
S	Titanium alloys (Ti-6Al-4V, etc.)	AH7025	98 - 197	0.001 - 0.006
	Superalloys (Inconel718, etc.)	AH7025	66 - 164	0.001 - 0.006

GTPA-OH

Coolant through





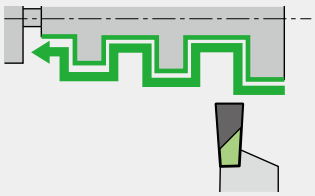
Right hand (R) shown.

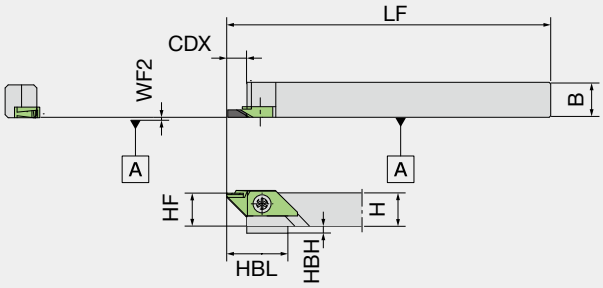
Metric	CW	H	B	LF	LH	CDX	HF	MHD	WF2	CNT	Insert
GTPAR1214H-OH	2 - 2.5	12	14	100	19.5	7.5	12	75	0.1	Rc1/8	GTPA..

SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Wrench (for Clamp screw)
GTPAR1214H-OH	LRIS-4*12PW	SPR1/8	CLR-15S

GTPA





Metric	CW	H	B	LF	HF	CDX	HBH	HBL	WF2	Insert
GTPAR1010	2 - 2.5	10	10	120	10	7.5	2	19.5	0.1	GTPA..
GTPAR1212	2 - 2.5	12	12	120	12	7.5	–	–	0.1	GTPA..
GTPAR1616	2 - 2.5	16	16	120	16	7.5	–	–	0.1	GTPA..

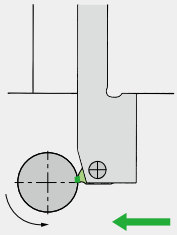
SPARE PARTS

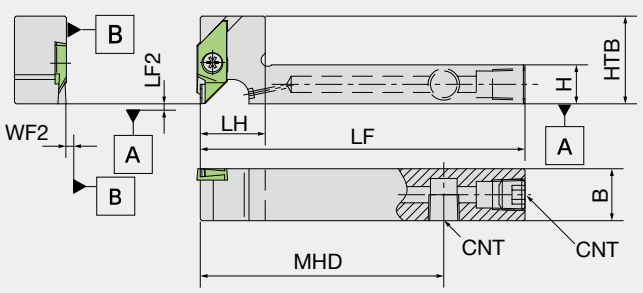
Designation	Clamp screw	Wrench (for Clamp screw)
GTPAR1010	LRIS-4*10PW	CLR-15S
GTPAR1212	LRIS-4*12PW	CLR-15S
GTPAR1616	LRIS-4*12PW	CLR-15S

Reference pages : Inserts → 6-67

Y-GTPA-OH

Y-axis coolant through





Right hand (R) shown.

Metric	CW	H	B	LH	LF	HTB	LF2	MHD	WF2	CNT	Insert
Y-GTPAR1014FSS-OH	2 - 2.5	10	14	15	80	27	0	55	0.1	M6*1	GTPA..
Y-GTPAR1216HS-OH	2 - 2.5	12	16	20	100	27	0	75	0.1	Rc1/8	GTPA..
Y-GTPAR1616H-OH	2 - 2.5	16	16	25	100	27	0	75	0.1	Rc1/8	GTPA..

NOTE: Use a right-handed (R) insert.
NOTE: There is a risk of interference with the Y-axis holder depending on the combination of the maximum workpiece diameter and machining diameter. →10-1

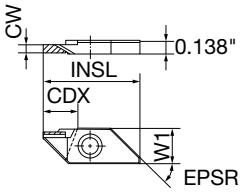
SPARE PARTS

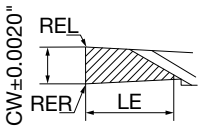
Designation	Clamp screw	Screw (for CNT)	Wrench (for Clamp screw)
Y-GTPAR1014FSS-OH	LRIS-4*12PW	SS0605SC	CLR-15S
Y-GTPAR1216HS-OH	LRIS-4*12PW	SPR1/8	CLR-15S
Y-GTPAR1616H-OH	LRIS-4*12PW	SPR1/8	CLR-15S

Reference pages : Inserts → 6-67

INSERT

GTPA.. PCD





Right hand (R) shown.

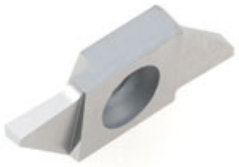
P	Steel	
M	Stainless	
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

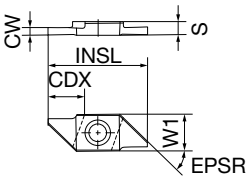
★ : First choice
☆ : Second choice

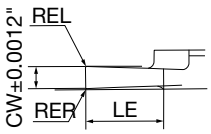
Designation	HAND	PCD	CW (mm)	CW (in)	APMX (in)	CDX (in)	INSL (in)	W1 (in)	EPSR	LE (in)	REL (in)	RER (in)
		PD1										
GTPA20FRN01	R	●	2	0.079	0.236	0.362	(0.984)	0.370	45°	0.276	0.004MAX	0.004MAX
GTPA20FRN01-SH	R	●	2	0.079	0.118	0.362	1.012	0.370	45°	0.157	0.004MAX	0.004MAX
GTPA25FRN01	R	●	2.5	0.098	0.236	0.362	(0.984)	0.370	45°	0.276	0.004MAX	0.004MAX
GTPA25FRN01-081	R	●	2.5	0.098	0.118	0.362	1.012	0.370	45°	0.157	0.004MAX	0.004MAX

● : Line up

GTPA.. Carbide







Right hand (R) shown.

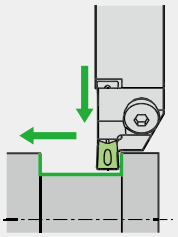
P	Steel	
M	Stainless	
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

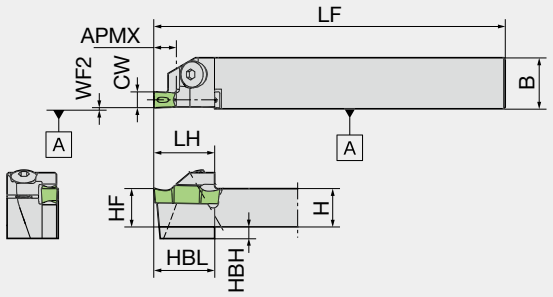
★ : First choice
☆ : Second choice

Designation	HAND	Uncoated	CW (mm)	CW (in)	APMX (in)	CDX (in)	INSL (in)	W1 (in)	EPSR	LE (in)	REL (in)	RER (in)
		KM1										
GTPA20FRN01	R	●	2	0.079	0.236	0.362	(0.984)	0.370	45°	0.276	0.004MAX	0.004MAX
GTPA25FRN01	R	●	2.5	0.098	0.236	0.362	(0.984)	0.370	45°	0.276	0.004MAX	0.004MAX

● : Line up

Reference pages : Toolholders → 6-65, 6-66





Right hand (R) shown.

Inch	CW	H	B	LF	LH	APMX	HBH	HBL	HF	WF2	Insert
GTWPR08-IN-3D07	0.118	0.500	0.630	4.724	0.748	-	-	-	0.500	0.012	GWPG(M)300..
GTWPR08-IN-4E07	0.157	0.500	0.630	4.724	0.748	-	-	-	0.500	0.012	GWPG(M)300..
GTWPR10-IN-3D09	0.118	0.625	0.630	4.724	0.866	-	-	-	0.625	0.012	GWPG(M)300..
GTWPR10-IN-4E09	0.157	0.625	0.630	4.724	0.866	-	-	-	0.625	0.012	GWPG(M)400..
Metric	**CW**	**H**	**B**	**LF**	**LH**	**APMX**	**HBH**	**HBL**	**HF**	**WF2**	**Insert**
GTWPR1016-3D07	3	10	16	120	19	7	2	18	10	0.3	GWPG(M)300..
GTWPR1216-3D07	3	12	16	120	19.5	7	–	–	12	0.3	GWPG(M)300..
GTWPR1616-3D09	3	16	16	120	22	9	–	–	16	0.3	GWPG(M)300..
GTWPR1016-4E07	4	10	16	120	19	7	2	18	10	0.3	GWPG(M)400..
GTWPR1216-4E07	4	12	16	120	19.5	7	–	–	12	0.3	GWPG(M)400..
GTWPR1616-4E09	4	16	16	120	22	9	–	–	16	0.3	GWPG(M)400..
GTWPR1016-5F07	5	10	16	120	19	7	2	18	10	0.3	GWPG(M)500..
GTWPR1216-5F07	5	12	16	120	19.5	7	–	–	12	0.3	GWPG(M)500..
GTWPR1616-5F09	5	16	16	120	22	9	–	–	16	0.3	GWPG(M)500..
GTWPR1020-6G07	6	10	20	120	22	7	2	21	10	0.3	GWPG(M)600..
GTWPR1220-6G07	6	12	20	120	22.5	7	–	–	12	0.3	GWPG(M)600..
GTWPR1620-6G09	6	16	20	120	25	9	–	–	16	0.3	GWPG(M)600..
GTWPL1216-3D07	3	12	16	120	19.5	7	–	–	12	0.3	GWPG(M)300..
GTWPL1616-3D09	3	16	16	120	22	9	–	–	16	0.3	GWPG(M)300..
GTWPL1216-4E07	4	12	16	120	19.5	7	–	–	12	0.3	GWPG(M)400..
GTWPL1616-4E09	4	16	16	120	22	9	–	–	16	0.3	GWPG(M)400..
GTWPL1216-5F07	5	12	16	120	19.5	7	–	–	12	0.3	GWPG(M)500..
GTWPL1616-5F09	5	16	16	120	22	9	–	–	16	0.3	GWPG(M)500..
GTWPL1620-6G09	6	16	20	120	25	9	–	–	16	0.3	GWPG(M)600..

Note: Max. Bar Dia. ϕ42

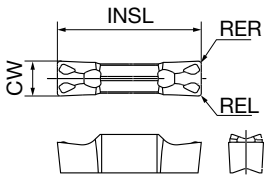
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
GTWPR08-IN-3D07	AOB-5*14	LW-3S
GTWPR08-IN-4E07	AOB-5*14	LW-3S
GTWPR10-IN-3D09	AOB-5*16	LW-3S
GTWPR10-IN-4E09	AOB-5*16	LW-3S
GTWPR10**	AOB-5*14	LW-3S
GTWPR/12L**	AOB-5*16	LW-3S
GTWPR/L16**	AOB-5*16	LW-3S

INSERT

GWPG(M)-GW with chipbreaker

Best for side turning



P	Steel	★	
M	Stainless	☆	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials	☆	

★ : First choice
☆ : Second choice

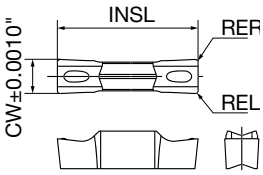
Designation	Coated DM4	CW (mm)	CW (in)	INSL (in)	REL (in)	RER (in)
GWPG300N02D-GW	●	3	0.118	0.811	0.008	0.008
GWPG300N04D-GW	●	3	0.118	0.811	0.016	0.016
GWPG400N02E-GW	●	4	0.157	0.811	0.008	0.008
GWPG400N04E-GW	●	4	0.157	0.811	0.016	0.016
GWPG400N08E-GW	●	4	0.157	0.811	0.031	0.031
GWPG500N02F-GW	●	5	0.197	0.811	0.008	0.008
GWPG500N04F-GW	●	5	0.197	0.811	0.016	0.016
GWPG500N08F-GW	●	5	0.197	0.811	0.031	0.031
GWPG600N02G-GW	●	6	0.236	1.008	0.008	0.008
GWPG600N04G-GW	●	6	0.236	1.008	0.016	0.016
GWPG600N08G-GW	●	6	0.236	1.008	0.031	0.031
GWPM300N04D-GW	●	3	0.118	0.811	0.016	0.016
GWPM400N04E-GW	●	4	0.157	0.811	0.016	0.016
GWPM500N04F-GW	●	5	0.197	0.811	0.016	0.016
GWPM600N04G-GW	●	6	0.236	1.008	0.016	0.016

GWPG.. : Outside ground
Width tolerance ±0.025
GWPM.. : Full-molded
Width tolerance ±0.05

● : Line up

GWPG-GV with chipbreaker

Less tool pressure design



P	Steel	★	
M	Stainless	☆	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials	☆	

★ : First choice
☆ : Second choice

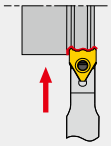
Designation	Coated DM4	CW (mm)	CW (in)	INSL (in)	REL (in)	RER (in)
GWPG300N02D-GV	●	3	0.118	0.811	0.008	0.008
GWPG300N04D-GV	●	3	0.118	0.811	0.016	0.016
GWPG400N02E-GV	●	4	0.157	0.811	0.008	0.008
GWPG400N04E-GV	●	4	0.157	0.811	0.016	0.016
GWPG500N02F-GV	●	5	0.197	0.811	0.008	0.008
GWPG500N04F-GV	●	5	0.197	0.811	0.016	0.016
GWPG600N02G-GV	●	6	0.236	1.008	0.008	0.008
GWPG600N04G-GV	●	6	0.236	1.008	0.016	0.016

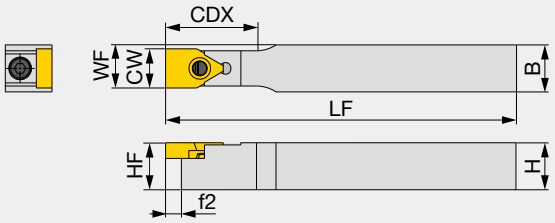
● : Line up

TUNGHEAVY GROOVE

FPGN

Lever-lock toolholder for external wide grooving and profiling





Inch	CW	CDX	H	B	LF	HF	WF	f2	Insert	Torque
FPGN08-10T20	0.394	0.984	0.500	0.500	4.946	0.500	0.450	0.216	PSGB10...	1.62
FPGN10-10T20	0.394	0.984	0.625	0.625	4.946	0.625	0.510	0.216	PSGB10...	1.62
FPGN12-10T20	0.394	0.984	0.750	0.750	5.196	0.750	0.570	0.216	PSGB10...	1.62
FPGN10-15T25	0.590	1.181	0.625	0.625	4.946	0.625	0.610	0.216	PSGB15...	1.62
FPGN12-15T25	0.590	1.181	0.750	0.750	5.196	0.750	0.670	0.216	PSGB15...	1.62
FPGN12-20T32	0.787	1.456	0.750	0.750	5.196	0.750	0.770	0.216	PSGB20...	6.27

Metric	CW	CDX	H	B	LF	HF	WF	f2	Insert	Torque*
FPGN1212X-10T20	10	25	12	12	125	12	11	5.5	PSGB10...	2.2
FPGN1616X-10T20	10	25	16	16	125	16	13	5.5	PSGB10...	2.2
FPGN2020K-10T20	10	25	20	20	130	20	15	5.5	PSGB10...	2.2
FPGN1616X-15T25	15	30	16	16	125	16	15.5	5.5	PSGB15...	2.2
FPGN2020K-15T25	15	30	20	20	130	20	17.5	5.5	PSGB15...	2.2
FPGN2020K-20T32	20	37	20	20	130	20	20	5.5	PSGB20...	8.5

PSGB insert blank is available for tailored inserts.
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS

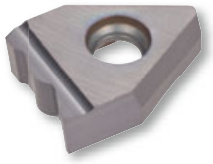
Designation	Lever	Clamping screw	Spring	Wrench
FPGN*****-10T..., 15T...	FCL4	FCS3	BP-5	P-2.5
FPGN*****-20T..., 25T...	FCL8	FCS6	BP-9	P-5

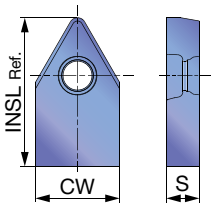
Reference pages : GWPG-GV with chipbreaker: Toolholders → 6-68

INSERT

PSGB (Blank for wide profile grooving inserts*)

Specially tailored profile insert





P	Steel	☆	★
M	Stainless		★
K	Cast iron	★	
N	Non-ferrous	★	
S	Superalloys	☆	
H	Hard materials		

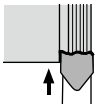
★ : First choice
☆ : Second choice

Designation	CW±0.025 (mm)	CW±0.001 (in)	Uncoated TH10	Uncoated UX30	INSL (in)	S (in)
PSGB10	10.2	0.402	●	●	0.709	0.157
PSGB15	15.2	0.598	●	●	0.787	0.197
PSGB20	20.2	0.795	●	●	1.063	0.256
PSGB25	25.2	0.992	●	●	1.063	0.256

These are blanks (semi-finished products) for wide profile grooving inserts that can be tailored.

Package quantity = 5pcs.
● : Line up

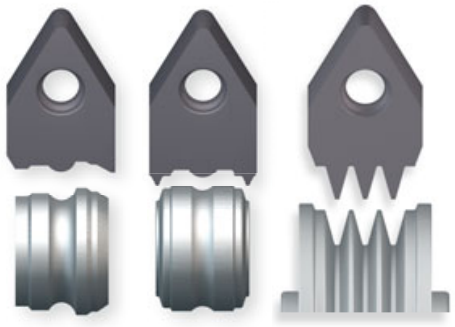
STANDARD CUTTING CONDITIONS



Wide profile grooving

ISO	Workpiece material	Hardness (HB)	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 1055, etc.	< 200	UX30	165 - 490
	Alloy steel 4140, 8620, etc.	< 300	UX30	165 - 390
M	Stainless steel 304SS, 316SS, 17-4 PH, etc.	< 200	UX30	165 - 390
K	Gray cast iron Class 25, Class 30, etc.	-	TH10	165 - 490
	Ductile cast iron 60-40-18, 60-55-06, etc.	-	TH10	165 - 390
N	Aluminum alloys Si < 12%, etc.	-	TH10	330 - 1640

- Custom shaped inserts can be supplied on customer's request, according to the designated final shape on part drawing.
- Semi-finished blanks PSGB types are offered for purchase.



Toolholders for internal grooving, with through coolant

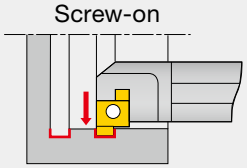
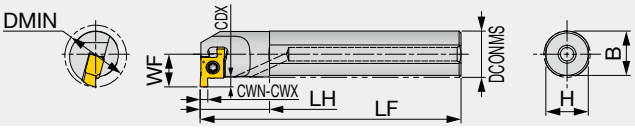


Fig. 1

Fig. 2



Right hand (R) shown.

Metric	Material	CWN	CWX	DMIN	CDX	DCONMS	H	B	LF	LH	WF	Insert	Torque*	Fig.
A08H-SNGR06-D080	Steel	1	2	8	1.5	8	7	-	100	18	4.73	6GMR..., 6GR...	0.7	1
A08H-SNGR07-D100	Steel	1	2	10	1.5	8	7	-	100	23	5.8	7GMR..., 7GR...	1	1
A10K-SNGR07-D120	Steel	1	2	12	1.5	10	9	-	125	29	6.8	7GMR..., 7GR...	1	1
A10K-SNGR08-D140	Steel	1.5	3.5	14	2	10	9	-	125	15	7.6	8GMR..., 8GR...	1	2
A12M-SNGR08-D160	Steel	1.5	3.5	16	2	12	11	11.5	150	18	8.6	8GMR..., 8GR...	1	2
A16Q-SNGR09-D200	Steel	1.5	3.5	20	3	16	15	15.5	180	20	11.6	9GMR..., 9GR...	1.3	2
A20R-SNGR09-D240	Steel	1.5	3.5	24	3	20	18	19	200	25	13.6	9GMR..., 9GR...	1.3	2
E08X-SNGR07-D100	Carbide	1	2	10	1.5	8	7.5	-	120.5	35	5.8	7GMR..., 7GR...	1	1
E10X-SNGR07-D120	Carbide	1	2	12	1.5	10	9	-	143.5	45	6.8	7GMR..., 7GR...	1	1
E10X-SNGR08-D140	Carbide	1.5	3.5	14	2	10	9	-	146	-	7.6	8GMR..., 8GR...	1	2
E12X-SNGR08-D160	Carbide	1.5	3.5	16	2	12	11	-	174.8	-	8.6	8GMR..., 8GR...	1	2
E16X-SNGR09-D200	Carbide	1.5	3.5	20	3	16	15	-	194.6	-	11.6	9GMR..., 9GR...	1.5	2

Note: Use the right-hand insert (☐GR) with the right-hand holder (☐NGR).
Torque*: Recommended clamping torque (N·m)

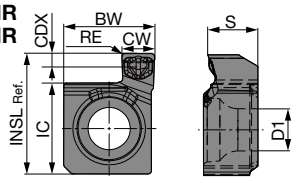
SPARE PARTS

Designation	Clamping screw	Wrench
A**-SNGR06-D...	CSTB-2L040	T-6F
A**-SNGR07-D...	CSTB-2.2S	T-7F
A**-SNGR08-D...	CSTB-2.2	T-7F
A**-SNGR09-D...	CSTB-2.5L080	T-8F
E**-SNGR07-D...	CSTB-2.2S	T-7F
E**-SNGR08-D...	CSTB-2.2	T-7F
E**-SNGR09-D...	CSTB-2.5L080	T-8F

INSERTS

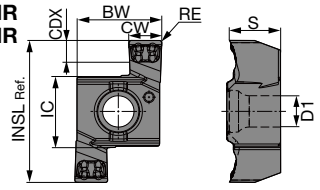
**GMR/L

6GMR
7GMR



Single edge

8GMR
9GMR



Double edge

Right hand (R) shown.

P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice
☆ : Second choice

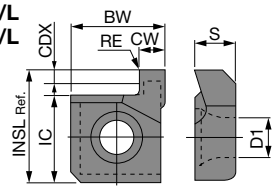
Designation	HAND	CW±0.001 (in)	CW±0.025 (mm)	RE (mm)	Coated AH7025	CDX (mm)	BW (in)	S (in)	IC (in)	INSL (in)	D1 (in)
6GMR100-015	R	0.039	1	0.15	●	1.5	0.219	0.092	0.187	0.254	0.091
7GMR200-020	R	0.079	2	0.2	●	1.5	0.219	0.121	0.219	0.290	0.102
8GMR150-020	R	0.059	1.5	0.2	●	2	0.242	0.152	0.219	0.400	0.102
9GMR200-020	R	0.079	2	0.2	●	3	0.305	0.183	0.250	0.510	0.113
9GMR300-020	R	0.118	3	0.2	●	3	0.305	0.183	0.250	0.510	0.113

● : Line up

Reference pages: A/E-SNGR: Standard cutting conditions → 6-74

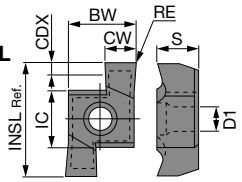
**GR/L

6GR/L
7GR/L



Single edge

8GR/L
9GR/L
15GR/L



Double edge

Right hand (R) shown.

		Cermet		Uncoated	
P	Steel	★		★	
M	Stainless			★	
K	Cast iron	☆		★	
N	Non-ferrous			★	
S	Superalloys			☆	
H	Hard materials				

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.001 (in)	CW±0.025 (mm)	RE (mm)	Cermet NS9530	Uncoated TH10	Uncoated UX30	CDX (mm)	BW (in)	S (in)	IC (in)	INSL (in)	D1 (in)
6GR100	R	0.039	1	0.2	●	●	●	1.5	0.220	0.092	0.187	0.254	0.091
6GL100	L	0.039	1	0.2			●	1.5	0.220	0.092	0.187	0.254	0.091
6GR150	R	0.059	1.5	0.2	●	●	●	1.5	0.220	0.092	0.187	0.254	0.091
6GL150	L	0.059	1.5	0.2		●	●	1.5	0.220	0.092	0.187	0.254	0.091
6GR200	R	0.079	2	0.2	●	●	●	1.5	0.220	0.092	0.187	0.254	0.091
6GL200	L	0.079	2	0.2		●	●	1.5	0.220	0.092	0.187	0.254	0.091
7GR100	R	0.039	1	0.2	●	●	●	1.5	0.220	0.121	0.219	0.290	0.102
7GR150	R	0.059	1.5	0.2	●	●	●	1.5	0.220	0.121	0.219	0.290	0.102
7GR200	R	0.079	2	0.2	●	●	●	1.5	0.220	0.121	0.219	0.290	0.102
7GL200	L	0.079	2	0.2		●	●	1.5	0.220	0.121	0.219	0.290	0.102
8GR150	R	0.059	1.5	0.2	●	●	●	2	0.244	0.152	0.219	0.400	0.102
8GR200	R	0.079	2	0.2	●	●	●	2	0.244	0.152	0.219	0.400	0.102
8GL200	L	0.079	2	0.2		●		2	0.244	0.152	0.219	0.400	0.102
8GR250	R	0.098	2.5	0.2	●	●	●	2	0.244	0.152	0.219	0.400	0.102
8GL250	L	0.098	2.5	0.2		●	●	2	0.244	0.152	0.219	0.400	0.102
8GR300	R	0.118	3	0.2	●	●	●	2	0.244	0.152	0.219	0.400	0.102
8GL300	L	0.118	3	0.2		●	●	2	0.244	0.152	0.219	0.400	0.102
8GR350	R	0.138	3.5	0.2		●	●	2	0.244	0.152	0.219	0.400	0.102
9GR150	R	0.059	1.5	0.2	●	●	●	2	0.303	0.183	0.250	0.510	0.113
9GL150	L	0.059	1.5	0.2	●		●	2	0.303	0.183	0.250	0.510	0.113
9GR200	R	0.079	2	0.2	●	●	●	3	0.303	0.183	0.250	0.510	0.113
9GL200	L	0.079	2	0.2	●	●	●	3	0.303	0.183	0.250	0.510	0.113
9GR250	R	0.098	2.5	0.2	●	●	●	3	0.303	0.183	0.250	0.510	0.113
9GL250	L	0.098	2.5	0.2	●		●	3	0.303	0.183	0.250	0.510	0.113
9GR300	R	0.118	3	0.2	●	●	●	3	0.303	0.183	0.250	0.510	0.113
9GL300	L	0.118	3	0.2	●	●	●	3	0.303	0.183	0.250	0.510	0.113
9GR350	R	0.138	3.5	0.2	●	●	●	3	0.303	0.183	0.250	0.510	0.113
9GL350	L	0.138	3.5	0.2	●		●	3	0.303	0.183	0.250	0.510	0.113
15GR200	R	0.079	2	0.2	●	●	●	3	0.425	0.201	0.362	0.819	0.189
15GR250	R	0.098	2.5	0.2	●	●	●	3	0.425	0.201	0.362	0.819	0.189
15GR300	R	0.118	3	0.2	●	●	●	3	0.425	0.201	0.362	0.819	0.189
15GL300	L	0.118	3	0.2			●	3	0.425	0.201	0.362	0.819	0.189
15GR350	R	0.138	3.5	0.2	●	●	●	3	0.425	0.201	0.362	0.819	0.189
15GR400	R	0.157	4	0.2	●	●	●	4	0.425	0.201	0.362	0.819	0.189
15GR450	R	0.177	4.5	0.2		●	●	4	0.425	0.201	0.362	0.819	0.189
15GL450	L	0.177	4.5	0.2		●		4	0.425	0.201	0.362	0.819	0.189
15GR500	R	0.197	5	0.2		●	●	5	0.425	0.201	0.362	0.819	0.189

Note: Use the right-hand insert (☐GR) with the right-hand holder (☐NGR), and use the left-hand insert (☐GL) with the left-hand holder (☐NGL).

● : Line up

Reference pages: Standard cutting conditions → 6-74

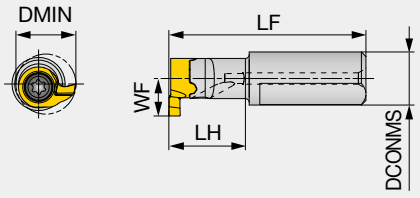
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed rate: *f* (ipr) **GMR...	Feed rate: *f* (ipr) **GR/L...
P	Carbon steel 1045, etc.	AH7025	262 - 591	0.0012 - 0.0047	-
		NS9530	262 - 656	-	0.002 - 0.0059
		UX30	131 - 492	-	0.002 - 0.0059
	Alloy steel 4137, etc.	AH7025	262 - 591	0.0012 - 0.0047	-
		NS9530	262 - 656	-	0.002 - 0.0059
		UX30	131 - 492	-	0.002 - 0.0059
M	Stainless steel 304SS, etc.	AH7025	164 - 394	0.0012 - 0.0047	-
		UX30	131 - 328	-	0.0012 - 0.0039
K	Gray cast irons Class 25, etc.	AH7025	164 - 722	0.0012 - 0.0047	-
		TH10	197 - 656	-	0.002 - 0.0059
	Ductile cast irons 60-40-18, etc.	AH7025	164 - 591	0.0012 - 0.0047	-
		TH10	131 - 525	-	0.002 - 0.0059
S	Titanium alloys Ti-6Al-4V, etc.	AH7025	98 - 262	0.0012 - 0.0047	-
		TH10	66 - 164	-	0.002 - 0.0031
	Superalloys Inconel718, etc.	AH7025	66 - 197	0.0012 - 0.0047	-
		TH10	33 - 98	-	0.0012 - 0.0031

TINY INTERNAL CUT

A/E-SMR

Screw-on boring bar



Metric	Material	DCONMS	LH	LF	Insert	Torque*
A07080-SMR4	Steel	7	8	24	M*R4...	0.5
E07120-SMR4	Carbide	7	12	29	M*R4...	0.5
A07100-SMR5	Steel	7	10	26	M*R5...	1.3
E07180-SMR5	Carbide	7	18	34	M*R5...	1.3

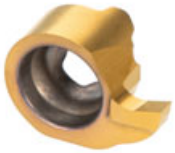
*Torque: Recommended clamping torque (N·m)
For A/E-SMR4, the above LF and LH dimensions are true with MGR4100F000-D05 insert assembled.
For A/E-SMR5, the above LF and LH dimensions are true with MGR5150F003-D07 insert assembled.
The DMIN and WF sizes vary depending on the insert sizes used.

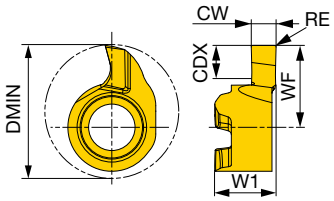
SPARE PARTS

Designation	Clamping screw	Wrench
A/E07**-SMR4	CSPB-1.8L3.6	IP-6F
A/E07**-SMR5	CSTB-2.5L054DR	T-7F

MGR

Grooving





P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

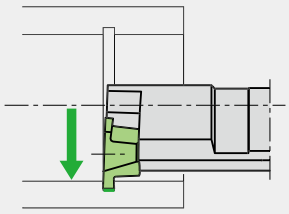
★ : First choice

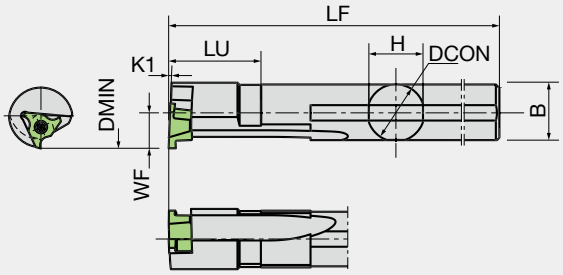
Designation	CW (mm)	CW (in)	RE (in)	Coated SH7025	CDX (in)	DMIN (in)	WF (in)	W1 (in)
MGR4100F000-D05	1	0.039	0	●	0.039	0.197	0.116	0.091
MGR5100F003-D07	1	0.039	0.001	●	0.039	0.276	0.156	0.146
MGR5150F003-D07	1.5	0.059	0.001	●	0.039	0.276	0.156	0.146
MGR5100F003-D08	1	0.039	0.001	●	0.079	0.315	0.195	0.146
MGR5150F010-D08	1.5	0.059	0.004	●	0.079	0.315	0.195	0.146
MGR5200F020-D08	2	0.079	0.008	●	0.079	0.315	0.195	0.146

● : Line up

S-BG

Mogul Bar / Steel shank





Right hand (R) shown.

Metric	CW	H	B	LF	DMIN	APMX	DCON	K1	LU	WF	Insert
S08H-BGR10D10	0.5 - 2	7.7	7.85	120	10	1	8	2°	20	5	GTG10..
S10K-BGR10D12	0.5 - 2	9.6	9.8	120	12	1	10	2°	25	6	GTG10..

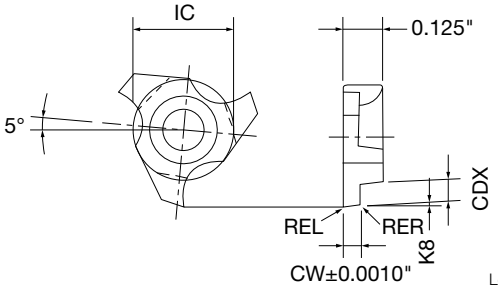
NOTE: Use a left-handed insert.

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
S**-BGR10**	LR-S-2.5*6.8	CLR-15S

INSERT

GTG..005



Left hand (L) shown.

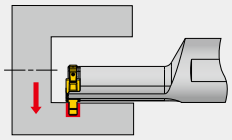
P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

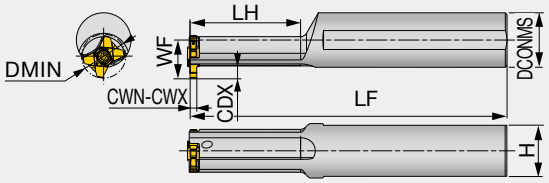
★ : First choice
☆ : Second choice

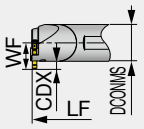
Designation	HAND	Coated TM4	CW (mm)	CW (in)	APMX (in)	CDX (in)	IC (in)	EPSR	K8	REL (in)	RER (in)
GTG10050FL005	L	●	0.5	0.020	0.039	0.047	0.219	60°	2°	0.002	0.002
GTG10075FL005	L	●	0.75	0.030	0.039	0.047	0.219	60°	2°	0.002	0.002
GTG10100FL005	L	●	1	0.039	0.039	0.047	0.219	60°	2°	0.002	0.002
GTG10150FL005	L	●	1.5	0.059	0.039	0.047	0.219	60°	2°	0.002	0.002
GTG10200FL005	L	●	2	0.079	0.039	0.047	0.219	60°	2°	0.002	0.002

● : Line up

Internal grooving toolholder







Right hand (R) shown.

Inch	Material	CWN	CWX	Seat size	DMIN	DCONMS	LH	LF	WF	H	Insert	Torque
A08-STCIR/L10-D07U	Steel	0.020	0.118	10	0.438	0.500	0.984	4.000	0.339	0.475	TCIG10...	0.74
A08-STCIR/L10-D08U	Steel	0.020	0.118	10	0.500	0.500	1.220	4.000	0.339	0.475	TCIG10...	0.74
E08-STCIR/L10-D10U	Carbide	0.020	0.118	10	0.625	0.500	-	5.000	0.339	0.475	TCIG10...	0.74
A10-STCIR/L12-D09U	Steel	0.039	0.118	12	0.563	0.625	1.299	4.500	0.441	0.600	TCIG12...	0.96
A10-STCIR/L12-D11U	Steel	0.039	0.118	12	0.688	0.625	1.614	4.500	0.441	0.600	TCIG12...	0.96
E10-STCIR/L12-D13U	Carbide	0.039	0.118	12	0.813	0.625	-	6.000	0.441	0.600	TCIG12...	0.96

Metric	Material	CWN	CWX	Seat size	DMIN	DCONMS	LH	LF	WF	H	Insert	Torque*
A12H-STCIR/L10-D105	Steel	1.5	3	10	10.5	12	25	100	8.3	11	TCIG10...	1
A12H-STCIR/L10-D120	Steel	1.5	3	10	12	12	31	100	8.3	11	TCIG10...	1
E12K-STCIR/L10-D150	Carbide	1.5	3	10	15	12	-	125	8.3	11	TCIG10...	1
A16J-STCIR/L12-D130	Steel	1.5	3	12	13	16	33	110	11.3	15	TCIG12...	1.3
A16J-STCIR/L12-D160	Steel	1.5	3	12	16	16	41	110	11.3	15	TCIG12...	1.3
E16M-STCIR/L12-D200	Carbide	1.5	3	12	20	16	-	150	11.3	15	TCIG12...	1.3

Torque: Recommended clamping torque: lbs·ft (*N·m)

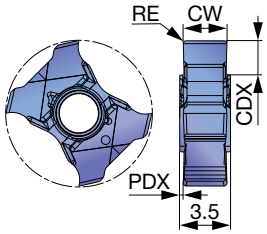
SPARE PARTS

Designation	Clamping screw
A/E-STCIR10-...	CSTB-2.2L053DR
A/E-STCIL10-...	CSTB-2.2L053DL
A/E-STCIR12-...	CSTB-2.5L054DR
A/E-STCIL12-...	CSTB-2.5L054DL

Reference pages: Inserts → 6-78, Standard cutting conditions → 6-78

INSERTS

TCIG



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

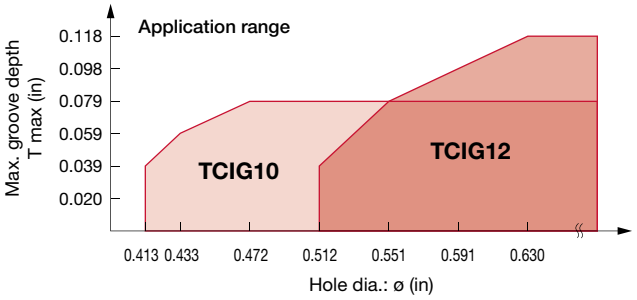
★ : First choice

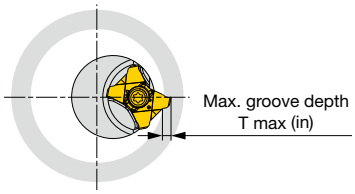
Designation	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	PDX (in)
TCIG10-050-005	0.5	0.020	0.0020	●	0.039	0.059
TCIG10-122-008	1.22	0.048	0.0031	●	0.079	0.045
TCIG10-142-008	1.42	0.056	0.0031	●	0.079	0.041
TCIG10-150-010	1.5	0.059	0.004	●	0.079	0.039
TCIG10-172-008	1.72	0.068	0.0031	●	0.079	0.035
TCIG10-200-010	2	0.079	0.004	●	0.079	0.030
TCIG10-250-020	2.5	0.098	0.008	●	0.079	0.020
TCIG10-300-020	3	0.118	0.008	●	0.079	0.010
TCIG12-100-010	1	0.039	0.004	●	0.098	0.049
TCIG12-150-010	1.5	0.059	0.004	●	0.118	0.039
TCIG12-197-008	1.97	0.078	0.0031	●	0.118	0.030
TCIG12-200-020	2	0.079	0.008	●	0.118	0.030
TCIG12-224-008	2.24	0.088	0.0031	●	0.118	0.025
TCIG12-250-020	2.5	0.098	0.008	●	0.118	0.020
TCIG12-277-015	2.77	0.109	0.006	●	0.118	0.015
TCIG12-300-020	3	0.118	0.008	●	0.118	0.010

● : Line up

Shallower groove depths (T max) for smaller bores

Maximum groove depths (T max) for TCIG10 inserts are smaller than the CDX value shown above when the grooving bore diameter is < 0.472" ; and for TCIG12, when the bore diameter is < 0.63".
See the chart below for T max values in relation to the given bore diameter.





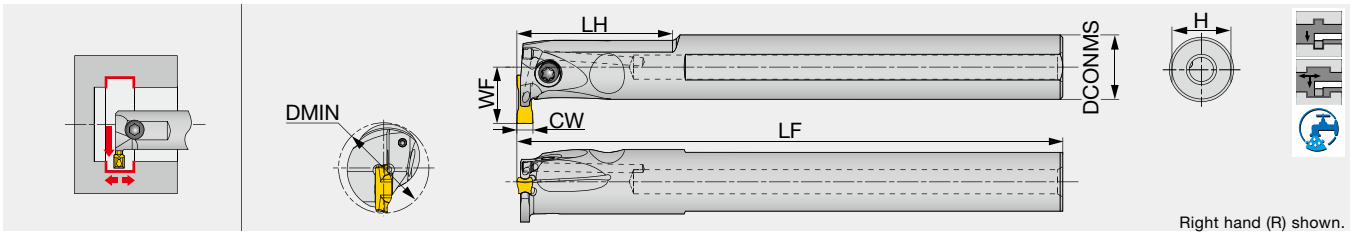
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Steel 1045,4140, etc.	< 300 HB	First choice	98 - 262	0.0004 - 0.002
M	Stainless steel 303SS, etc.	< 200 HB	First choice	98 - 164	0.0004 - 0.002
S	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	33 - 164	0.0004 - 0.002

Reference pages: Toolholders → 6-77

CTIR**S

Internal grooving and turning toolholder



Right hand (R) shown.

Inch	CW	DMIN	Seat size	CDX	DCONMS	H	LF (1)	LH	WF	Insert	Torque*
CTIR06S2T03-D08U	0.079	0.500	S2	0.118	0.375	0.350	4.000	0.875	0.319	D**2S...	0.96
CTIR08S2T04-D10U	0.079	0.625	S2	0.157	0.500	0.475	4.000	1.125	0.433	D**2S...	1.7
CTIR10S2T06-D12U	0.079	0.750	S2	0.236	0.625	0.591	4.500	1.438	0.571	D**2S...	2.58
CTIR08S3T04-D10U	0.118	0.625	S3	0.157	0.500	0.475	4.000	1.125	0.433	D**3S...	1.7
CTIR10S3T06-D12U	0.118	0.750	S3	0.236	0.625	0.591	4.500	1.438	0.571	D**3S...	2.58

Metric	CW	DMIN	Seat size	CDX	DCONMS	H	LF (1)	LH	WF	Insert	Torque*
CTIR10S2T03-D120	2	12	S2	3	10	9	100	22	8.4	D**2S...	1.3
CTIR12S2T04-D160	2	16	S2	4	12	11	100	28	10.5	D**2S...	2.3
CTIR16S2T06-D200	2	20	S2	6	16	15	110	36	14.5	D**2S...	3.5
CTIR12S3T04-D160	3	16	S3	4	12	11	100	28	10.5	D**3S...	2.3
CTIR16S3T06-D200	3	20	S3	6	16	15	110	36	14.5	D**3S...	3.5

(1) LF is calculated with the groove width CW in the above table.
Torque: Recommended clamping torque: lbs·ft (*N·m)

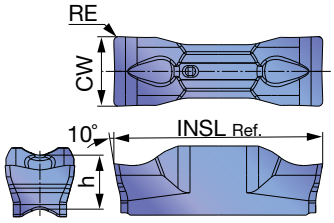
SPARE PARTS

Designation	Clamping screw	Wrench
CTIR10S2T03-D120	CSTB-2.5L080	T-8F
CTIR12S*T04-D160	CSTB-3.5D	T-9F
CTIR16S*T06-D200	CSTB-4	T-15F

INSERT

DGS*S

Internal grooving and parting



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice

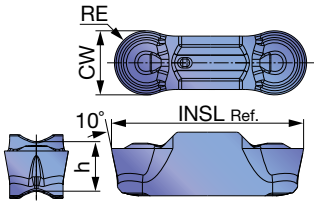
Designation	Seat size	CW±0.05 (mm)	CW±0.05 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
DGS2S-010	S2	2	0.079	0.004	●	0.354	0.087
DGS3S-020	S3	3	0.118	0.008	●	0.354	0.087

● : Line up

Reference pages: Standard cutting conditions → 6-80

DTR*S

Profiling and undercutting



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice

Designation	Seat size	CW±0.05 (mm)	CW±0.05 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
DTR2S-100	S2	2	0.079	0.039	●	0.354	0.087
DTR3S-150	S3	3	0.118	0.059	●	0.354	0.087

● : Line up

External
Internal
Face
Parting

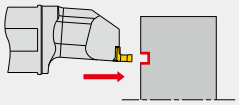
STANDARD CUTTING CONDITIONS

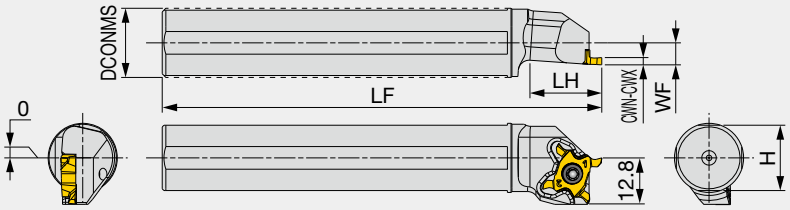
ISO	Workpiece material	Hardness	Grade	Cutting speed *Vc* (m/min)
P	Steel 1045,4140, etc.	< 300 HB	AH7025	164 - 591
M	Stainless steel 303SS, etc.	< 200 HB	AH7025	164 - 394
K	Gray cast irons Class 25, etc.	-	AH7025	164 - 591
	Ductile cast irons 60-40-18, etc.	-	AH7025	164 - 394
S	Superalloys Inconel718, etc.	< HRC 40	AH7025	66 - 197
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	AH7025	66 - 262

Reference pages: Toolholders → 6-79

JS-STCFL18

Face grooving toolholder with round shank





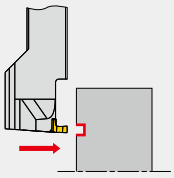
Left-hand (L) shown.

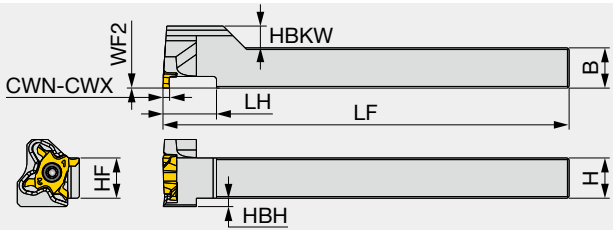
Metric	CWN	CWX	DCONMS	LF	LH	H	WF	Insert	Torque*
JS16F-STCFL18	0.5	2.5	16	85	20	15	6	TCF18L...	1.2
JS19G-STCFL18	0.5	2.5	19.05	90	20	18	6	TCF18L...	1.2
JS19X-STCFL18	0.5	2.5	19.05	120	20	18	6	TCF18L...	1.2
JS20G-STCFL18	0.5	2.5	20	90	20	19	6	TCF18L...	1.2
JS20X-STCFL18	0.5	2.5	20	120	20	19	6	TCF18L...	1.2
JS22X-STCFL18	0.5	2.5	22	120	20	21	6	TCF18L...	1.2
JS25H-STCFL18	0.5	2.5	25	100	20	24	6	TCF18L...	1.2
JS254X-STCFL18	0.5	2.5	25.4	120	20	24.5	6	TCF18L...	1.2

Note: The left hand insert (L) is used for the left hand toolholders (L).
Torque*: Recommended clamping torque (N·m)

STCFVR-18

Face grooving toolholder with square shank, for Swiss lathes





Right-hand (R) shown.

Inch	CWN	CWX	H	B	LF	LH	HF	WF	HBKW	HBH	Insert	Torque
STCFVR06-18	0.020	0.098	0.375	0.375	4.016	0.472	0.375	0	0.354	0.177	TCF18L...	0.89
STCFVR08-18	0.020	0.098	0.500	0.500	4.764	0.630	0.500	0	0.228	0.098	TCF18L...	0.89
STCFVR10-18	0.020	0.098	0.625	0.625	4.764	0.787	0.625	0	0.106	-	TCF18L...	0.89

Metric	CWN	CWX	H	B	LF	LH	HF	WF2	HBKW	HBH	Insert	Torque*
STCFVR1010H18	0.5	2.5	10	10	100	12	10	0	8.5	4.5	TCF18L...	1.2
STCFVR1212F18	0.5	2.5	12	12	85	16	12	0	6.5	2.5	TCF18L...	1.2
STCFVR1212X18	0.5	2.5	12	12	120	16	12	0	6.5	2.5	TCF18L...	1.2
STCFVR1616X18	0.5	2.5	16	16	120	20	16	0	2.5	0	TCF18L...	1.2

Note: The left hand insert (L) is used for the left hand toolholders (L).
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS

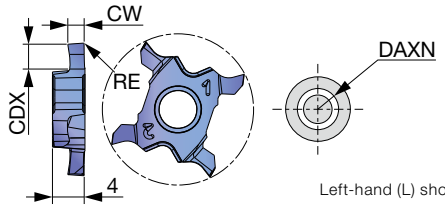
Designation	Clamping screw	Wrench
JS**-STCFL18, STCFVR**18	CSTC-4L100DR	T-1008/5

Threading pitch range: 0.8 ~ 3 mm

Reference pages : JS-STCFL18, STCFVR-18: Inserts, Standard cutting conditions → 6-82

INSERT

TCF18L (Face grooving)



Left-hand (L) shown.

P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★: First choice

Designation	HAND	CW±0.02 (mm)	CW±0.02 (in)	RE (in)	Coated SH725	CDX (in)	DAXN (in)
TCF18L050F-005	L	0.5	0.020	0.002	●	0.039	0.236
TCF18L100F-005	L	1	0.039	0.002	●	0.098	0.236
TCF18L150F-005	L	1.5	0.059	0.002	●	0.098	0.236
TCF18L200F-005	L	2	0.079	0.002	●	0.118	0.236
TCF18L250F-005	L	2.5	0.098	0.002	●	0.118	0.236

5 pieces per package
● : Line up

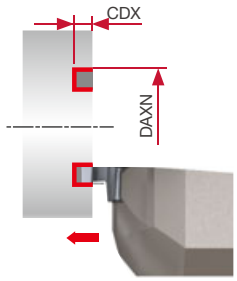
STANDARD CUTTING CONDITIONS

TCF18L (Face grooving)

ISO	Workpiece materials	Grades	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Low carbon steel 1015, 1020, etc.	SH725	98 - 328	0.0004 - 0.0016
	Carbon steels, Alloy steel 1055, 4140, etc.	SH725	98 - 328	0.0004 - 0.0016
	Prehardened steel NAK80, PX5, etc.	SH725	98 - 328	0.0004 - 0.0016
M	Stainless steel 304SS, 316SS, etc.	SH725	98 - 328	0.0004 - 0.0016
K	Gray cast iron Class25, Class30, etc.	SH725	98 - 328	0.0004 - 0.0016
	Ductile cast iron 60-40-18, 80-55-06, etc.	SH725	98 - 328	0.0004 - 0.0016
S	Titanium alloys Ti-6Al-4V, etc.	SH725	66 - 131	0.0004 - 0.0016
	Superalloys Inconel718, etc.	SH725	33 - 98	0.0004 - 0.0016

PRECAUTIONS OF PROCESSING

Minimum diameter for face grooving

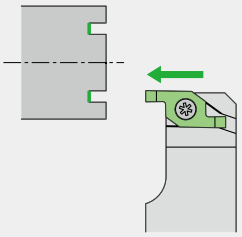


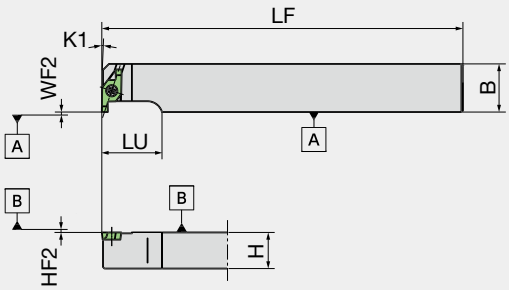
Minimum face diameter DAXN (in)	Maximum groove depth CDX (in)
2.559	0.118

Reference pages: Toolholders → 6-81

FGV

For Gang-style machine





Right hand (R) shown.

Metric	CW	H	B	LF	HF2	K1	LU	WF2	Insert
FGVR1016	1 - 2	10	16	120	0	1°	20	0	FGV..
FGVR1216	1 - 2	12	16	120	0	1°	20	0	FGV..
FGVR1616	1 - 2	16	16	120	0	1°	20	0	FGV..

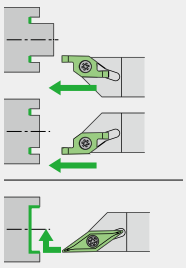
NOTE: Use a left-handed insert.

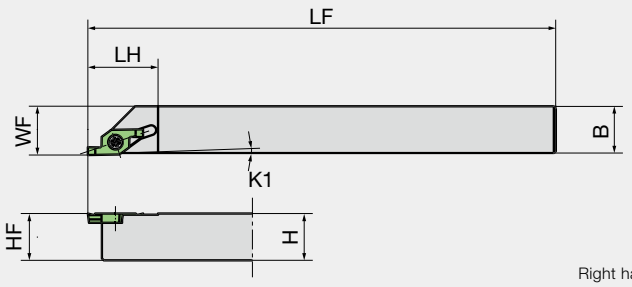
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
FGVR**	LRIS-2.5*7	CLR-15S

CH-FGV

For horizontal gang style tool post





Right hand (R) shown.

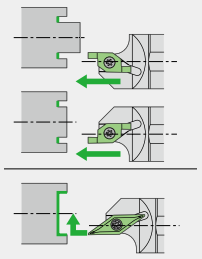
Metric	CW	H	B	LF	LH	K1	WF	Insert	
CH-FGVR1010	1 - 2	10	10	120	18	1°	10.5	FGV..	FBV..
CH-FGVR1212	1 - 2	12	12	120	18	1°	12.5	FGV..	FBV..
CH-FGVR1616	1 - 2	16	16	120	18	1°	16.5	FGV..	FBV..
CH-FGVL1010	1 - 2	10	10	120	18	1°	10.5	FGV..	–
CH-FGVL1212	1 - 2	12	12	120	18	1°	12.5	FGV..	–
CH-FGVL1616	1 - 2	16	16	120	18	1°	16.5	FGV..	–

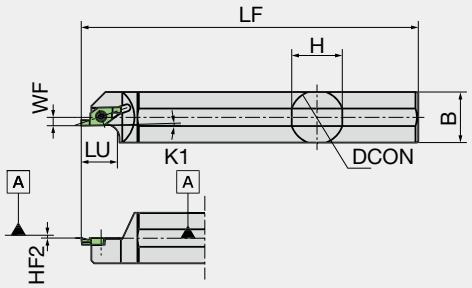
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CH-FGV**	LRIS-2.5*7	CLR-15S

Reference pages: Inserts → 6-85

DS Toolholders / For sleeve tool post





Right hand (R) shown.

Metric	CW	H	B	LF	DCON	HF2	K1	LU	WF	Insert	
DS-FGVR16-012	1 - 2	15	15	80	16	0	1°	11	3	FGV..	FBV..
DS-FGVR19	1 - 2	18	18	120	19.05	0	1°	11	3	FGV..	FBV..
DS-FGVR20	1 - 2	19	19	120	20	0	1°	11	3	FGV..	FBV..
DS-FGVR22	1 - 2	21	21	120	22	0	1°	11	3	FGV..	FBV..
DS-FGVR22M	1 - 2	21	21	150	22	0	1°	11	3	FGV..	FBV..
DS-FGVR25	1 - 2	24.5	24.5	120	25.4	0	1°	11	3	FGV..	FBV..
DS-FGVR25-MET	1 - 2	24	24	150	25	0	1°	11	3	FGV..	FBV..
DS-FGVL16-012	1 - 2	15	15	80	16	0	1°	11	3	FGV..	–
DS-FGVL19	1 - 2	18	18	120	19.05	0	1°	11	3	FGV..	–
DS-FGVL20	1 - 2	19	19	120	20	0	1°	11	3	FGV..	–
DS-FGVL22	1 - 2	21	21	120	22	0	1°	11	3	FGV..	–
DS-FGVL22M	1 - 2	21	21	150	22	0	1°	11	3	FGV..	–
DS-FGVL25	1 - 2	24.5	24.5	120	25.4	0	1°	11	3	FGV..	–
DS-FGVL25-MET	1 - 2	24	24	150	25	0	1°	11	3	FGV..	–

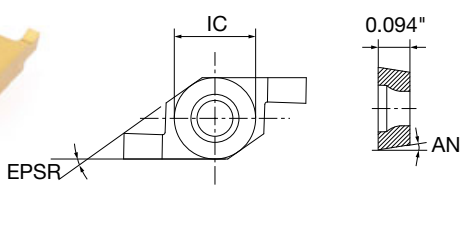
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
DS-FGVR/L**	LRIS-2.5*7	CLR-15S

Reference pages: Inserts → 6-85

INSERT

FGV with chipbreaker



Right hand (R) shown.

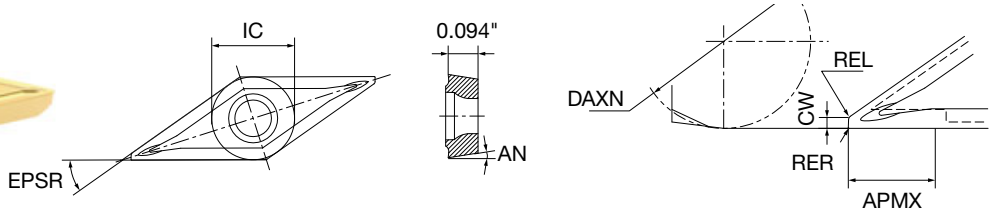
P	Steel	★	
M	Stainless	★	
N	Non-ferrous	☆	
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	Coated TM4	CW (mm)	CW (in)	APMX (in)	CDX (in)	DAXN (in)	IC (in)	AN	EPSR	REL (in)	RER (in)
FGV100RB00D6	R	●	1	0.039	0.059	0.069	0.236	0.250	7°	35°	0	0
FGV100RB05D6	R	●	1	0.039	0.059	0.071	0.236	0.250	7°	35°	0.002	0.002
FGV150RB00D6	R	●	1.5	0.059	0.079	0.087	0.236	0.250	7°	35°	0	0
FGV150RB05D6	R	●	1.5	0.059	0.079	0.091	0.236	0.250	7°	35°	0.002	0.002
FGV200RB00D6	R	●	2	0.079	0.118	0.126	0.236	0.250	7°	35°	0	0
FGV200RB05D6	R	●	2	0.079	0.118	0.130	0.236	0.250	7°	35°	0.002	0.002
FGV100LB00D6	L	●	1	0.039	0.059	0.069	0.236	0.250	7°	35°	0	0
FGV100LB05D6	L	●	1	0.039	0.059	0.071	0.236	0.250	7°	35°	0.002	0.002
FGV150LB00D6	L	●	1.5	0.059	0.079	0.087	0.236	0.250	7°	35°	0	0
FGV150LB05D6	L	●	1.5	0.059	0.079	0.091	0.236	0.250	7°	35°	0.002	0.002
FGV200LB00D6	L	●	2	0.079	0.118	0.126	0.236	0.250	7°	35°	0	0
FGV200LB05D6	L	●	2	0.079	0.118	0.130	0.236	0.250	7°	35°	0.002	0.002

● : Line up

FBV with chipbreaker



Right hand (R) shown.

P	Steel	★	
M	Stainless	★	
N	Non-ferrous	☆	
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	Coated TM4	CW (mm)	CW (in)	APMX (in)	DAXN (in)	IC (in)	AN	EPSR	REL (in)	RER (in)
FBV40R05D8AM3	R	●	(0.5)	(0.020)	0.157	0.315	0.250	7°	35°	0.008	0.002
FBV40R15D8AM3	R	●	(0.5)	(0.020)	0.157	0.315	0.250	7°	35°	0.008	0.006

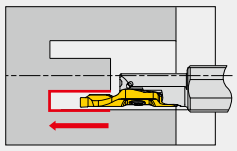
Note: Only CH-FGVR and DS-FGVR can take FBV Right hand insert.

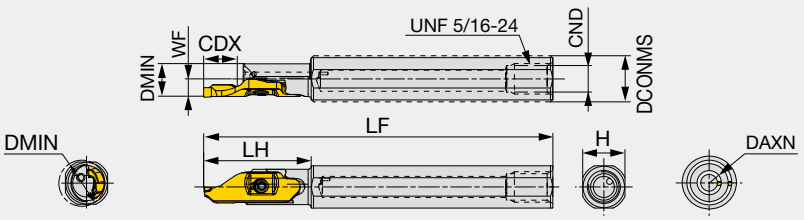
● : Line up

Reference pages: Toolholders → 6-83, 6-84

A-MFR10

Face grooving toolholder with round shank





Inch	CDX	DAXN	DCONMS	DMIN	WF	LH	LF	CND	H	Insert	Torque
A127G-MFR10-D100	0.354	0.394	0.500	0.394	0.197	1.063	3.543	0.272	0.461	MFGR10...	0.89
A159F-MFR10-D100	0.354	0.394	0.625	0.394	0.197	1.063	3.346	0.272	0.591	MFGR10...	0.89

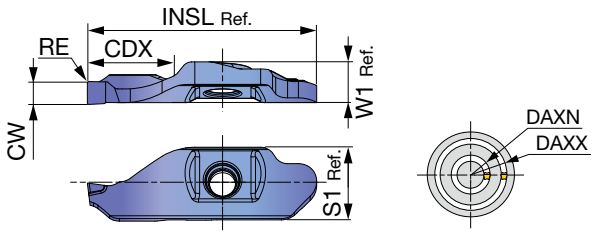
Metric	CDX	DAXN	DCONMS	DMIN	WF	LH	LF	CND	H	Insert	Torque*
A12G-MFR10-D100	9	10	12	10	5	27	90	6.9	11	MFGR10...	1.2
A127G-MFR10-D100	9	10	12.7	10	5	27	90	6.9	11.7	MFGR10...	1.2
A159F-MFR10-D100	9	10	15.875	10	5	27	85	6.9	15	MFGR10...	1.2
A16F-MFR10-D100	9	10	16	10	5	27	85	6.9	15	MFGR10...	1.2

SPARE PARTS

Designation	Clamping screw	Wrench
A***-MFR10...	CSTB-2.5	T-8F

INSERTS

MFGR10



P	Steel	★
M	Stainless	★
K	Cast iron	
N	Non-ferrous	
S	Superalloys	
H	Hard materials	

★ : First choice

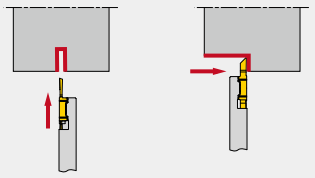
Designation	CW±0.025 (mm)	CW±0.025 (in)	RE (in)	Coated SH7025	CDX (in)	DAXN (in)	DAXX (in)	INSL (in)	W1 (in)	S1 (in)
MFGR10-200-020	2	0.079	0.008	●	0.354	0.394	-	0.984	0.181	0.311
MFGR10-200-100	2	0.079	0.039	●	0.354	0.394	-	0.984	0.181	0.311
MFGR10-250-020	2.5	0.098	0.008	●	0.354	0.394	0.630	0.984	0.181	0.311
MFGR10-250-125	2.5	0.098	0.049	●	0.354	0.394	-	0.984	0.181	0.311

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr)
P	Low carbon steel 1015, 1020, etc.	SH7025	1.181 - 4.724	0.0004 - 0.0028
P	Carbon steels, Alloy steel 1055, 4140, etc.	SH7025	1.181 - 4.724	0.0004 - 0.0028
P	Prehardened steel NAK80, PX5, etc.	SH7025	1.181 - 4.724	0.0004 - 0.0028
M	Stainless steel 304SS, 316SS, etc.	SH7025	1.181 - 4.724	0.0004 - 0.0028

Parting-off and front turning toolholders



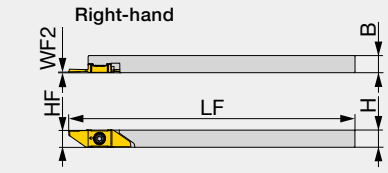


Fig. 1

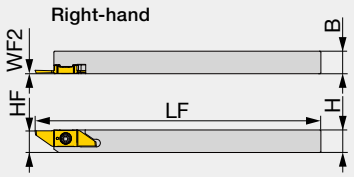
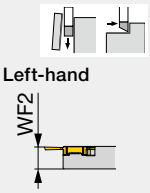


Fig. 2



Metric	H	B	LF	HF	WF2(1)	Insert	Torque*	Fig.
JSXXL0606X05	6	6	120	5.6	5.8	JV*N..., JVN...	1.3	1
JSXXR/L0707X05	7	7	120	6.6	0.2/6.8	JV*N..., JVN...	1.3	1
JSXXR/L0808F05	8	8	85	7.7	0.2/7.8	JV*N..., JVN...	1.3	2
JSXXR/L0808H05	8	8	100	7.7	0.2/7.8	JV*N..., JVN...	1.3	2
JSXXR/L1010H05	10	10	100	9.7	0.2/9.8	JV*N..., JVN...	1.3	2

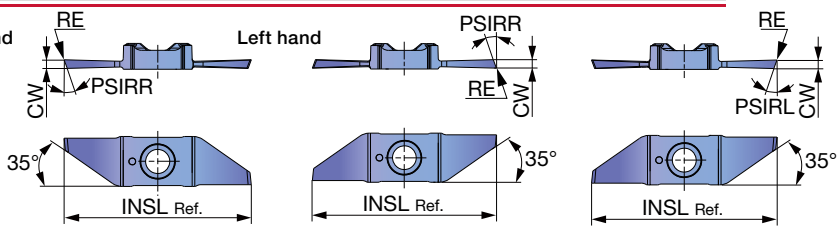
Torque*: Recommended clamping torque (N·m)
(1) The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.
Use the right-hand insert (JV****R...) for a right-hand holder (JSXXR...); the left-hand insert (JV****L...) for a left-hand holder (JSXXL...).

SPARE PARTS

Designation	Clamping screw	Wrench
JSXXR...05	CSTB-2.5L054DL	T-7F
JSXXL...05	CSTB-2.5L054DR	T-7F

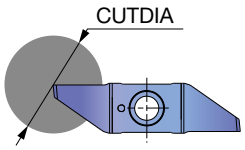
INSERTS

JVPN**R/L (For parting-off)



JVPN12L10F000-20L

P	Steel	★
M	Stainless	★
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	★
H	Hard materials	



★ : First choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated SH725	CUTDIA (in)	INSL (in)	PSIRR	PSIRL
JVPN04R05F000-20	R	0.5	0.020	0	●	0.157	1.685	20°	-
JVPN04L05F000-20	L	0.5	0.020	0	●	0.157	1.685	20°	-
JVPN04R05F005-20	R	0.5	0.020	0.002	●	0.157	1.677	20°	-
JVPN04L05F005-20	L	0.5	0.020	0.002	●	0.157	1.677	20°	-
JVPN07R06F000-20	R	0.6	0.024	0	●	0.276	1.685	20°	-
JVPN07L06F000-20	L	0.6	0.024	0	●	0.276	1.685	20°	-
JVPN07R06F005-20	R	0.6	0.024	0.002	●	0.276	1.685	20°	-
JVPN07L06F005-20	L	0.6	0.024	0.002	●	0.276	1.685	20°	-
JVPN12R08F000-20	R	0.8	0.031	0	●	0.472	1.701	20°	-
JVPN12L08F000-20	L	0.8	0.031	0	●	0.472	1.701	20°	-
JVPN12R08F005-20	R	0.8	0.031	0.002	●	0.472	1.693	20°	-
JVPN12L08F005-20	L	0.8	0.031	0.002	●	0.472	1.693	20°	-
JVPN12R10F000-20	R	1	0.039	0	●	0.472	1.709	20°	-
JVPN12L10F000-20	L	1	0.039	0	●	0.472	1.709	20°	-
JVPN12R10F005-20	R	1	0.039	0.002	●	0.472	1.709	20°	-
JVPN12L10F005-20	L	1	0.039	0.002	●	0.472	1.709	20°	-
JVPN12L10F000-20L	L	1	0.039	0	●	0.472	1.709	-	20°

● : Line up

Reference pages : Standard cutting conditions → 6-88

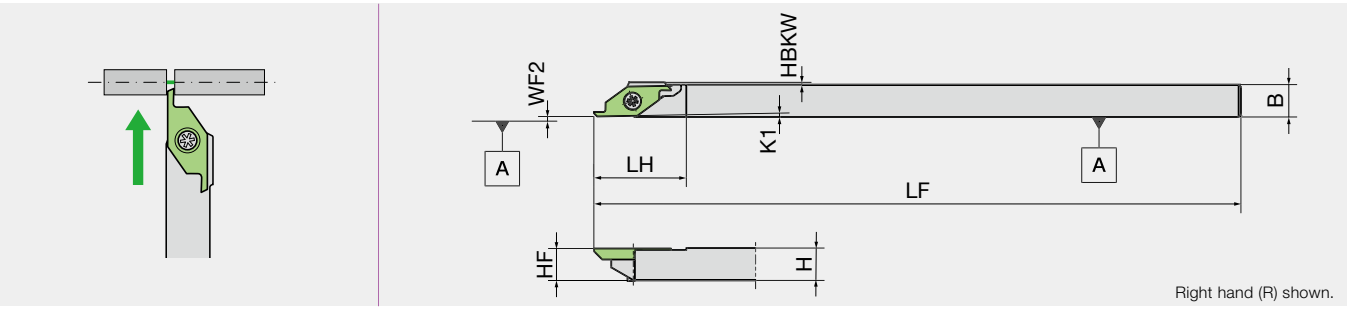
Parting-off

ISO	Workpiece materials	Grade	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Low carbon steels 1015, etc.	SH725	164 - 591	0.00039 - 0.0020
P	Carbon steels, Alloy steels 1055, etc.	SH725	164 - 591	0.00039 - 0.0020
P	Free cutting steels SUH22, SUH23, etc.	SH725	164 - 591	0.00039 - 0.0020
M	Stainless steels 304, etc.	SH725	164 - 394	0.00039 - 0.0020
N	Aluminum alloys 5056, 6061, etc.	SH725	492 - 656	0.00039 - 0.0020
N	Copper alloys C2600, C280C, etc.	SH725	328 - 656	0.00039 - 0.0020
S	Titanium alloys Ti-6Al-4V, etc.	SH725	98 - 262	0.00039 - 0.0020
S	Superalloys Inconel718, etc.	SH725	98 - 262	0.00039 - 0.0020

Reference pages : Toolholders, Inserts → 6-87

CSVR/L

For Cam-style machine



Right hand (R) shown.

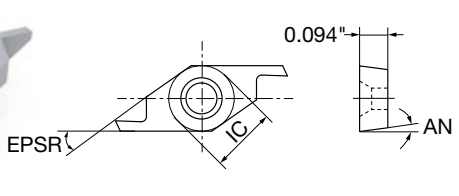
Inch	H	B	LF	LH	HBKW	HF	K1	WF2	Insert
CSVR06-IN-NC	0.375	0.375	4.724	0.787	-	0.375	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08-IN-NC	0.500	0.500	4.724	0.787	-	0.500	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL06-IN-NC	0.375	0.375	4.724	0.787	-	0.375	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL08-IN-NC	0.500	0.500	4.724	0.787	-	0.500	1°	0.004	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
Metric	**H**	**B**	**LF**	**LH**	**HBKW**	**HF**	**K1**	**WF2**	**Insert**
CSVR07	7	7	140	20	0.5	7	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR07GX	7	7	85	20	0.5	7	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08	8	8	140	20	0	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08GX	8	8	85	20	0	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR095	9.5	9.5	140	20	0	9.5	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR10	10	10	140	20	0	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR12	12	12	140	20	0	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR12GX	12	12	85	20	0	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL07	7	7	140	20	0.5	7	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL08	8	8	140	20	0	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL10	10	10	140	20	0	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08NC	8	8	120	20	-	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR08NC-F	8	8	120	20	-	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR10GXNC	10	10	85	20	-	10	1°	0 - 0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR10NC	10	10	120	20	-	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVR12NC	12	12	120	20	-	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL08NC	8	8	120	20	-	8	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL10NC	10	10	120	20	-	10	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..
CSVL12NC	12	12	120	20	-	12	1°	0.1	CSV series, CSVF../CSVB../CSVC../CSVG../CSVT..

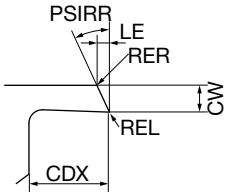
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CSVR/L**	LRIS-2.5*7	CLR-15S

Reference pages : Inserts → 6-90

CSVC-V without Chipbreaker





Right hand (R) shown.

P	Steel	★	
M	Stainless	☆	
N	Non-ferrous		
S	Superalloys		
H	Hard materials		

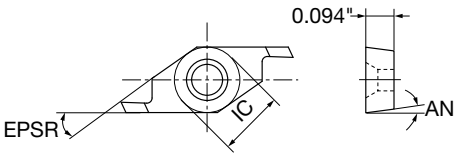
★ : First choice
☆ : Second choice

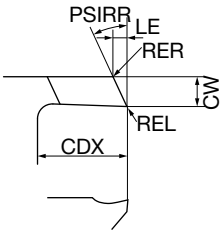
Designation	HAND	Coated VM1	Mirror finish	CUTDIA (in)	CW (mm)	CW (in)	IC (in)	AN	EPSR	CDX (in)	LE (in)	PSIRR	REL (in)	RER (in)
CSVC11FRV06	R	●	Ⓜ	0.118	0.6	0.024	0.250	7°	35°	0.079	0.012	25°	0	0
CSVC11FRV07	R	●	Ⓜ	0.157	0.7	0.028	0.250	7°	35°	0.098	0.014	25°	0	0
CSVC11FRV08	R	●	Ⓜ	0.157	0.8	0.031	0.250	7°	35°	0.098	0.016	25°	0	0
CSVC11FRV09	R	●	Ⓜ	0.157	0.9	0.035	0.250	7°	35°	0.098	0.018	25°	0	0
CSVC11FRV10	R	●	Ⓜ	0.197	1	0.039	0.250	7°	35°	0.118	0.020	25°	0	0
CSVC11FRV13	R	●	Ⓜ	0.197	1.3	0.051	0.250	7°	35°	0.118	0.026	25°	0	0
CSVC11FRV15	R	●	Ⓜ	0.197	1.5	0.059	0.250	7°	35°	0.118	0.029	25°	0	0
CSVC11FLV07	L	●	Ⓜ	0.157	0.7	0.028	0.250	7°	35°	0.098	0.014	25°	0	0
CSVC11FLV08	L	●	Ⓜ	0.157	0.8	0.031	0.250	7°	35°	0.098	0.016	25°	0	0
CSVC11FLV10	L	●	Ⓜ	0.197	1	0.039	0.250	7°	35°	0.118	0.020	25°	0	0
CSVC11FLV13	L	●	Ⓜ	0.197	1.3	0.051	0.250	7°	35°	0.118	0.026	25°	0	0
CSVC11FLV15	L	●	Ⓜ	0.197	1.5	0.059	0.250	7°	35°	0.118	0.029	25°	0	0

All angles shown are obtained when insert is set in the holder.

● : Line up

CSVC-VB with Chipbreaker





Right hand (R) shown.

P	Steel	★	
M	Stainless	☆	
N	Non-ferrous		
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	Coated VM1	Mirror finish	CUTDIA (in)	CW (mm)	CW (in)	IC (in)	AN	EPSR	CDX (in)	LE (in)	PSIRR	REL (in)	RER (in)
CSVC11FRVB06	R	●	Ⓜ	0.118	0.6	0.024	0.250	7°	35°	0.079	0.012	25°	0	0
CSVC11FRVB07	R	●	Ⓜ	0.157	0.7	0.028	0.250	7°	35°	0.098	0.014	25°	0	0
CSVC11FRVB08	R	●	Ⓜ	0.157	0.8	0.031	0.250	7°	35°	0.098	0.016	25°	0	0
CSVC11FRVB09	R	●	Ⓜ	0.157	0.9	0.035	0.250	7°	35°	0.098	0.018	25°	0	0
CSVC11FRVB10	R	●	Ⓜ	0.197	1	0.039	0.250	7°	35°	0.118	0.020	25°	0	0
CSVC11FRVB13	R	●	Ⓜ	0.197	1.3	0.051	0.250	7°	35°	0.118	0.026	25°	0	0
CSVC11FRVB15	R	●	Ⓜ	0.197	1.5	0.059	0.250	7°	35°	0.118	0.029	25°	0	0

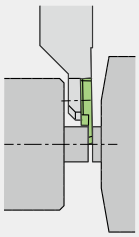
All angles shown are obtained when insert is set in the holder.

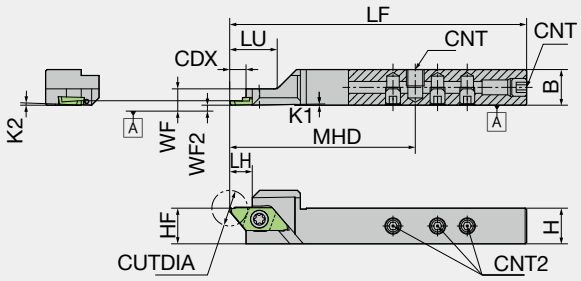
● : Line up

Reference pages : Toolholders → 6-89

CTPR-SUB-OH3

Coolant through (direct connect compatible) for Sub-Spindle





Right hand (R) shown.

Inch	CUTDIA	H	B	LF	LH	CDX	HF	K1	K2	LU	MHD	WF	WF2	CNT	CNT2	Insert
CTPR08-IN-SUB-OH3	0.472	0.500	0.500	3.937	0.299	0.217	0.500	1°	2°	0.630	2.461	0.217	0	M6*1	M5	CTP..
Metric	**CUTDIA**	**H**	**B**	**LF**	**LH**	**CDX**	**HF**	**K1**	**K2**	**LU**	**MHD**	**WF**	**WF2**	**CNT**	**CNT2**	**Insert**
CTPR12H-SUB-OH3	12	12	12	100	7.6	5.5	12	1°	2°	16	62.5	5.5	0	M6*1	M5	CTP..

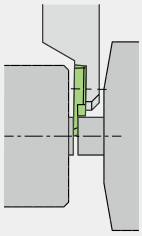
NOTE: Reference Chart of OH3 Hole Position→10-1

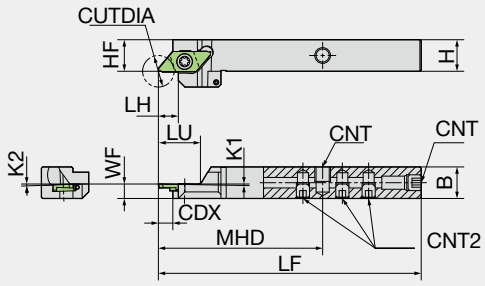
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CTPR08-IN-SUB-OH3	LRIS-4*5	LLR-25S
CTPR12H-SUB-OH3	LRIS-4*5	LLR-25S

CTPL-SUB-OH3

Coolant through (direct connect compatible) for Sub-spindle





Left hand (L) shown.

Inch	CUTDIA	H	B	LF	LH	CDX	HF	K1	K2	LU	MHD	WF	WF2	CNT	CNT2	Insert
CTPL08-IN-SUB-OH3	0.472	0.500	0.500	3.937	0.299	0.217	0.500	1°	2°	0.630	2.461	0.217	0	M6*1	M5	CTP..
Metric	**CUTDIA**	**H**	**B**	**LF**	**LH**	**CDX**	**HF**	**K1**	**K2**	**LU**	**MHD**	**WF**	**WF2**	**CNT**	**CNT2**	**Insert**
CTPL12H-SUB-OH3	12	12	12	100	7.6	5.5	12	1°	2°	16	62.5	5.5	0	M6*1	M5	CTP..

NOTE: Reference Chart of OH3 Hole Position→10-1

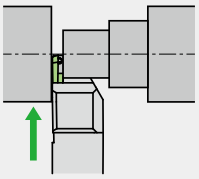
SPARE PARTS

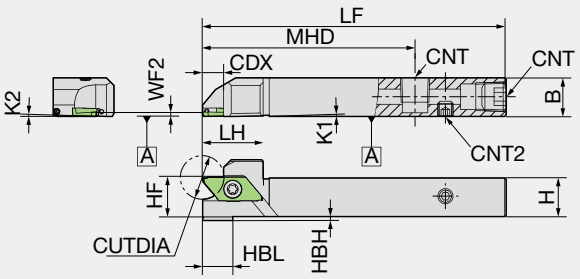
Designation	Clamp screw	Wrench (for Clamp screw)
CTPL08-IN-SUB-OH3	LRIS-4*5	LLR-25S
CTPL12H-SUB-OH3	LRIS-4*5	LLR-25S

Reference pages : Inserts → 6-95 - 6-100

CTPR/L-OH2

Coolant through (direct connect compatible)





Right hand (R) shown.

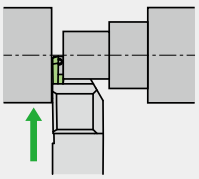
Inch	CUTDIA	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert
CTPR08H-IN-OH2	0.472	0.500	0.500	3.937	0.787	0.276	0.051	0.394	0.500	1°	2°	2.756	0.059	NPT1/8	M5	CTP..
CTPL08H-IN-OH2	0.472	0.500	0.500	3.937	0.787	0.276	0.051	0.394	0.500	1°	2°	2.756	0.059	NPT1/8	M5	CTP..
Metric	**CUTDIA**	**H**	**B**	**LF**	**LH**	**CDX**	**HBH**	**HBL**	**HF**	**K1**	**K2**	**MHD**	**WF2**	**CNT**	**CNT2**	**Insert**
CTPR12H-OH2	12	12	12	100	19.5	7	2	10	12	1°	2°	70	1.5	Rc1/8	M5	CTP..
CTPL12H-OH2	12	12	12	100	19.5	7	2	10	12	1°	2°	70	1.5	Rc1/8	M5	CTP..

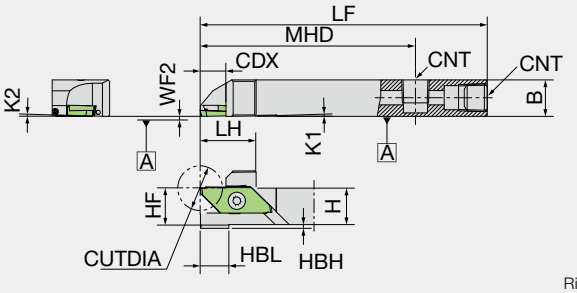
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
CTPR/L08H-IN-OH2	LRIS-4*12PW	SPNPT1/8	SS0505SC	CLR-15S	LW-2.5
CTPR/L12H-OH2	LRIS-4*12PW	SPR1/8	SS0505SC	CLR-15S	LW-2.5

CTPR/L-OH

Coolant through





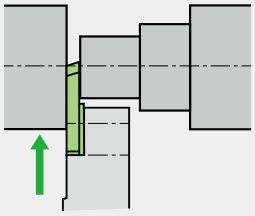
Right hand (R) shown.

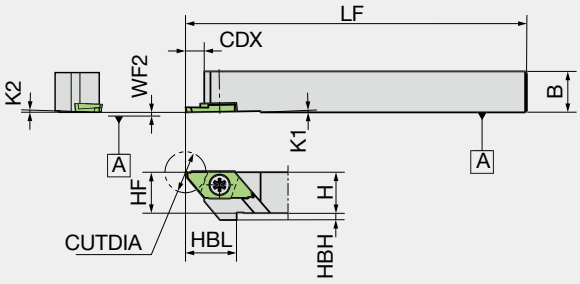
Inch	CUTDIA	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	Insert
CTPR06H-IN-OH	0.472	0.375	0.375	3.937	0.768	0.276	0.176	0.748	0.375	1°	2°	2.953	0	M6*1	CTP..
CTPR08H-IN-OH	0.472	0.500	0.500	3.937	0.768	0.276	0.051	0.394	0.500	1°	2°	2.953	0	NPT1/8	CTP..
CTPL06H-IN-OH	0.472	0.375	0.375	3.937	0.768	0.276	0.176	0.748	0.375	1°	2°	2.953	0	M6*1	CTP..
CTPL08H-IN-OH	0.472	0.500	0.500	3.937	0.768	0.276	0.051	0.394	0.500	1°	2°	2.953	0	NPT1/8	CTP..
Metric	**CUTDIA**	**H**	**B**	**LF**	**LH**	**CDX**	**HBH**	**HBL**	**HF**	**K1**	**K2**	**MHD**	**WF2**	**CNT**	**Insert**
CTPR1012H-OH	12	10	12	100	19.5	7	4	19	10	1°	2°	75	0	M6*1	CTP..
CTPR12H-OH	12	12	12	100	19.5	7	2	10	12	1°	2°	75	0	Rc1/8	CTP..
CTPR16H-OH	12	16	16	100	19.5	7	–	–	16	1°	2°	75	0	Rc1/8	CTP..
CTPL1012H-OH	12	10	12	100	19.5	7	4	19	10	1°	2°	75	0	M6*1	CTP..
CTPL12H-OH	12	12	12	100	19.5	7	2	10	12	1°	2°	75	0	Rc1/8	CTP..
CTPL16H-OH	12	16	16	100	19.5	7	–	–	16	1°	2°	75	0	Rc1/8	CTP..

SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Wrench (for Clamp screw)	Wrench (for CNT)
CTPR/L06H-IN-OH	LRIS-4*12PW	SS0605SC	CLR-15S	LW-3
CTPR/L08H-IN-OH	LRIS-4*12PW	SPNPT1/8	CLR-15S	-
CTPR/L1012H-OH	LRIS-4*12PW	SS0605SC	CLR-15S	LW-3
CTPR/L12H-OH	LRIS-4*12PW	SPR1/8	CLR-15S	–
CTPR/L16H-OH	LRIS-4*12PW	SPR1/8	CLR-15S	–

Reference pages : Inserts → 6-95 - 6-100





Right hand (R) shown.

Inch	CUTDIA	H	B	LF	CDX	HBH	HBL	HF	K1	K2	WF2	Insert
CTPR06-IN	0.472	0.375	0.375	4.724	0.217	0.078	0.591	0.375	1°	2°	0	CTP..
CTPR08-IN	0.472	0.500	0.500	4.724	0.217	-	-	0.500	1°	2°	0	CTP..
CTPR10-IN	0.472	0.625	0.625	4.724	0.217	-	-	0.625	1°	2°	0	CTP..
CTPL06-IN	0.472	0.375	0.375	4.724	0.217	0.078	0.591	0.375	1°	2°	0	CTP..
CTPL08-IN	0.472	0.500	0.500	4.724	0.217	-	-	0.500	1°	2°	0	CTP..
CTPL10-IN	0.472	0.625	0.625	4.724	0.217	-	-	0.625	1°	2°	0	CTP..

Metric	CUTDIA	H	B	LF	CDX	HBH	HBL	HF	K1	K2	WF2	Insert
CTPR08	12	8	10	120	5.5	4	15	8	1°	2°	0	CTP..
CTPR10	12	10	10	120	5.5	2	15	10	1°	2°	0	CTP..
CTPR10H	12	10	10	100	5.5	2	15	10	1°	2°	0	CTP..
CTPR12	12	12	12	120	5.5	–	–	12	1°	2°	0	CTP..
CTPR12GX	12	12	12	85	5.5	–	–	12	1°	2°	0	CTP..
CTPR16	12	16	16	120	5.5	–	–	16	1°	2°	0	CTP..
CTPR16H	12	16	16	100	5.5	–	–	16	1°	2°	0	CTP..
CTPL08	12	8	10	120	5.5	4	15	8	1°	2°	0	CTP..
CTPL10	12	10	10	120	5.5	2	15	10	1°	2°	0	CTP..
CTPL10H	12	10	10	100	5.5	2	15	10	1°	2°	0	CTP..
CTPL12	12	12	12	120	5.5	–	–	12	1°	2°	0	CTP..
CTPL12GX	12	12	12	85	5.5	–	–	12	1°	2°	0	CTP..
CTPL16	12	16	16	120	5.5	–	–	16	1°	2°	0	CTP..

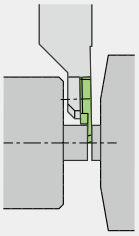
SPARE PARTS

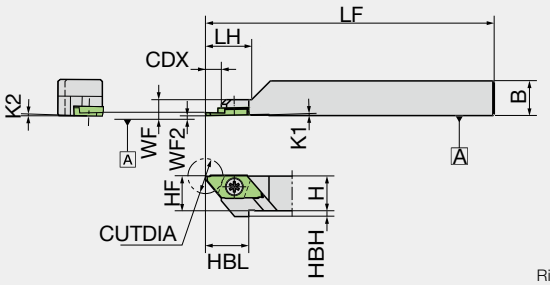
Designation	Clamp screw	Wrench (for Clamp screw)
CTPR06-IN	LRIS-4*10PW	CLR-15S
CTPR08-IN	LRIS-4*12PW	CLR-15S
CTPR10-IN	LRIS-4*12PW	CLR-15S
CTPL06-IN	LRIS-4*10PW	CLR-15S
CTPL08-IN	LRIS-4*12PW	CLR-15S
CTPL10-IN	LRIS-4*12PW	CLR-15S
CTPR/L08	LRIS-4*10PW	CLR-15S
CTPR/L10**	LRIS-4*10PW	CLR-15S
CTPR/L12**	LRIS-4*12PW	CLR-15S
CTPR/L16**	LRIS-4*12PW	CLR-15S

Reference pages : Inserts → 6-95 - 6-100

CTPR-SUB

For Sub-Spindle





Right hand (R) shown.

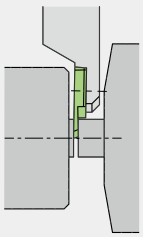
Inch	CUTDIA	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	WF	WF2	Insert
CTPR06-IN-SUB	0.472	0.375	0.375	4.724	0.630	0.217	0.097	0.591	0.375	1°	2°	0.217	0	CTP..
CTPR08-IN-SUB	0.472	0.500	0.500	4.724	0.630	0.217	-	-	0.500	1°	2°	0.217	0	CTP..
CTPR10-IN-SUB	0.472	0.625	0.625	4.724	0.630	0.217	-	-	0.625	1°	2°	0.217	0	CTP..
Metric	**CUTDIA**	**H**	**B**	**LF**	**LH**	**CDX**	**HBH**	**HBL**	**HF**	**K1**	**K2**	**WF**	**WF2**	**Insert**
CTPR08J-SUB	12	8	8	110	16	5.5	4	15	8	1°	2°	5.5	0	CTP..
CTPR08-SUB	12	8	8	120	16	5.5	4	15	8	1°	2°	5.5	0	CTP..
CTPR10F-SUB	12	10	10	80	16	5.5	2	15	10	1°	2°	5.5	0	CTP..
CTPR10KX-SUB	12	10	10	120	16	5.5	2	15	10	1°	2°	5.5	0	CTP..
CTPR12GX-SUB	12	12	12	85	16	5.5	–	–	12	1°	2°	5.5	0	CTP..
CTPR12-SUB	12	12	12	120	16	5.5	–	–	12	1°	2°	5.5	0	CTP..

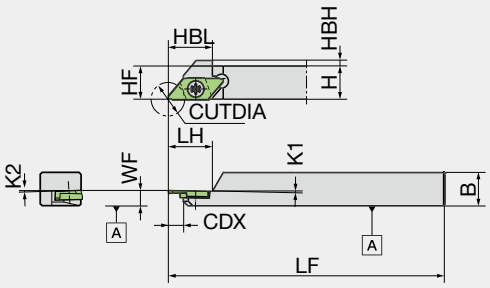
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CTPR**-SUB	LRIS-4*5	LLR-25S

CTPL-SUB

For Sub-Spindle





Left hand (L) shown.

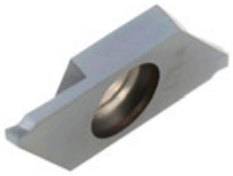
Metric	CUTDIA	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	WF	WF2	Insert
CTPL08J-SUB	12	8	8	110	16	5.5	4	15	8	1°	2°	5.5	CTP..	CTP..
CTPL08-SUB	12	8	8	120	16	5.5	4	15	8	1°	2°	5.5	CTP..	CTP..
CTPL10GX-SUB	12	10	10	85	16	5.5	2	15	10	1°	2°	5.5	CTP..	CTP..
CTPL12GX-SUB	12	12	12	85	16	5.5	–	–	12	1°	2°	5.5	CTP..	CTP..

SPARE PARTS

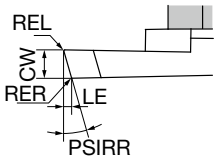
Designation	Clamp screw	Wrench (for Clamp screw)
CTPL**-SUB	LRIS-4*5	LLR-25S

Reference pages : Inserts → 6-95 - 6-100

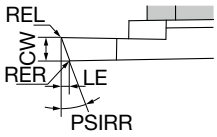
CTP-FR



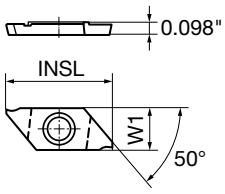
No.1



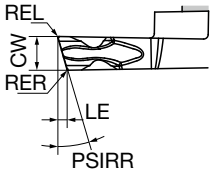
No.3



Without Chipbreaker



No.2



P	Steel	☆	☆	★		★	☆		
M	Stainless	★	☆	☆	★		☆		
N	Non-ferrous						☆	★	
S	Superalloys	★	☆	☆					
H	Hard materials	☆		★					

★ : First choice
☆ : Second choice

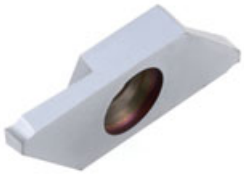
Designation	HAND	Coated						Uncoated		Mirror finish	CUTDIA (in)	CW (mm)	CW (in)	INSL (in)	W1 (in)	LE (in)	PSIRR	REL (in)	RER (in)	Figure
		DM4	DT4	QM3	ST4	VM1	ZM3	KM1												
CTP05FR-SH	R						●				0.197	0.5	0.020	0.787	0.315	0.007	16°	0.002	0.002	1
CTP07FR	R						●				0.315	0.7	0.028	0.787	0.315	0.009	16°	0.002	0.002	1
CTP10FR	R		●				●				0.472	1	0.039	0.787	0.315	0.013	16°	0.002	0.002	1
CTP10FR-CX	R	●			●						0.472	1	0.039	0.787	0.315	0.013	16°	0.002	0.002	2
CTP10FR-SH	R		●				●				0.276	1	0.039	0.787	0.315	0.013	16°	0.002	0.002	1
CTP10FR-TH	R				●						0.472	1	0.039	0.787	0.315	0.013	16°	0.002	0.002	1
CTP10FRV	R		●			●	●	●		Ⓜ	0.472	1	0.039	0.787	0.315	0.016	20°	0	–	3
CTP13FR	R		●				●				0.472	1.3	0.051	0.787	0.315	0.016	16°	0.002	0.002	1
CTP13FR-CX	R	●			●						0.472	1.3	0.051	0.787	0.315	0.016	16°	0.002	0.002	2
CTP15FR	R					●	●				0.472	1.5	0.059	0.787	0.315	0.018	16°	0.002	0.002	1
CTP15FR-CX	R	●			●						0.472	1.5	0.059	0.787	0.315	0.018	16°	0.002	0.002	2
CTP15FR-TH	R				●						0.472	1.5	0.059	0.787	0.315	0.018	16°	0.002	0.002	1
CTP15FRV	R					●	●	●		Ⓜ	0.472	1.5	0.059	0.787	0.315	0.023	20°	0	–	3
CTP15FRX	R						●				0.472	1.5	0.059	0.787	0.315	0.018	16°	0.002	0.002	1
CTP20FR	R					●	●				0.472	2	0.079	0.787	0.315	0.024	16°	0.002	0.002	1
CTP20FR-TH	R				●						0.472	2	0.079	0.787	0.315	0.024	16°	0.002	0.002	1
CTP20FRV	R					●	●	●		Ⓜ	0.472	2	0.079	0.787	0.315	0.03	20°	0	–	3
CTP20FRX	R						●				0.472	2	0.079	0.787	0.315	0.024	16°	0.002	0.002	1
CTPX15FR	R		●	●			●				0.472	1.5	0.059	0.787	0.315	0.018	16°	0.002	0.002	1
CTPX20FR	R		●	●			●				0.472	2	0.079	0.787	0.315	0.024	16°	0.002	0.002	1

NOTE: All angles shown are obtained when insert is set in the holder.

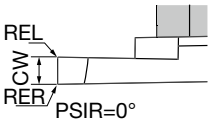
● : Line up

Reference pages : Toolholders → 6-91 - 6-94

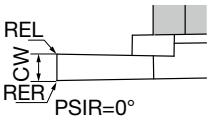
CTP-FRN



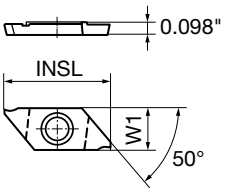
No.1



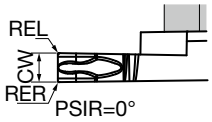
No.3



Without Chipbreaker



No.2



P	Steel	☆	☆	★		★	☆		
M	Stainless	★	☆	☆	★		☆		
N	Non-ferrous						☆	★	
S	Superalloys	★	☆	☆					
H	Hard materials	☆		★					

★ : First choice
☆ : Second choice

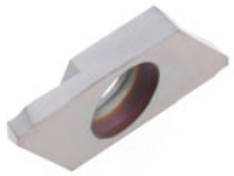
Designation	HAND	Coated						Uncoated		Mirror finish	CUTDIA (in)	CW (mm)	CW (in)	INSL (in)	W1 (in)	PSIR	REL (in)	RER (in)	Figure
		DM4	DT4	QM3	ST4	VM1	ZM3	KM1											
CTP05FRN-SH	R						●				0.197	0.5	0.020	0.787	0.315	0°	0.002	0.002	1
CTP10FRN	R		●				●				0.472	1	0.039	0.787	0.315	0°	0.002	0.002	1
CTP10FRN-CX	R	●			●						0.472	1	0.039	0.787	0.315	0°	0.002	0.002	2
CTP10FRN-SH	R		●				●				0.276	1	0.039	0.787	0.315	0°	0.002	0.002	1
CTP10FRN-TH	R				●						0.472	1	0.039	0.787	0.315	0°	0.002	0.002	1
CTP13FRN	R		●				●				0.472	1.3	0.051	0.787	0.315	0°	0.002	0.002	1
CTP13FRN02-CX	R	●			●						0.472	1.3	0.051	0.787	0.315	0°	0.008	0.008	2
CTP13FRN-CX	R	●			●						0.472	1.3	0.051	0.787	0.315	0°	0.002	0.002	2
CTP15FRN	R					●	●				0.472	1.5	0.059	0.787	0.315	0°	0.002	0.002	1
CTP15FRN02-CX	R	●			●						0.472	1.5	0.059	0.787	0.315	0°	0.008	0.008	2
CTP15FRN-CX	R	●			●						0.472	1.5	0.059	0.787	0.315	0°	0.002	0.002	2
CTP15FRN-TH	R				●						0.472	1.5	0.059	0.787	0.315	0°	0.002	0.002	1
CTP15FRNV	R							●		Ⓜ	0.472	1.5	0.059	0.787	0.315	0°	0	0	3
CTP15FRNX	R						●				0.472	1.5	0.059	0.787	0.315	0°	0.002	0.002	1
CTP20FRN	R					●	●				0.472	2	0.079	0.787	0.315	0°	0.002	0.002	1
CTP20FRN-TH	R				●						0.472	2	0.079	0.787	0.315	0°	0.002	0.002	1
CTP20FRNV	R							●		Ⓜ	0.472	2	0.079	0.787	0.315	0°	0	0	3
CTP20FRNX	R						●				0.472	2	0.079	0.787	0.315	0°	0.002	0.002	1
CTPX15FRN	R		●	●							0.472	1.5	0.059	0.787	0.315	0°	0.002	0.002	1
CTPX20FRN	R		●	●							0.472	2	0.079	0.787	0.315	0°	0.002	0.002	1

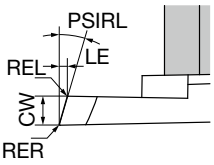
NOTE: All angles shown are obtained when insert is set in the holder.

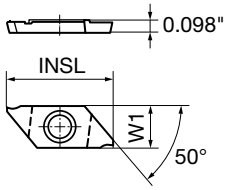
● : Line up

Reference pages : Toolholders → 6-91 - 6-94

CTP-FRK with Chipbreaker







P	Steel	★	★
M	Stainless	★	☆
N	Non-ferrous		★
S	Superalloys	★	
H	Hard materials	★	

★ : First choice
☆ : Second choice

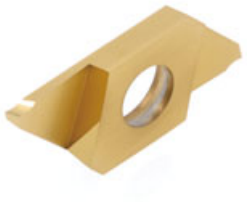
Designation	HAND	Coated		CUTDIA (in)	CW (mm)	CW (in)	INSL (in)	W1 (in)	LE (in)	PSIRR	REL (in)	RER (in)	Figure
		DT4	ZM3										
CTP10FRK	R		●	0.433	1	0.039	0.787	0.315	0.013	16°	0.002	0.002	1
CTP13FRK	R	●	●	0.472	1.3	0.051	0.787	0.315	0.016	16°	0.002	0.002	1
CTP15FRK	R		●	0.433	1.5	0.059	0.787	0.315	0.018	16°	0.002	0.002	1
CTP20FRK	R		●	0.433	2	0.079	0.787	0.315	0.024	16°	0.002	0.002	2

NOTE: All angles shown are obtained when insert is set in the holder.

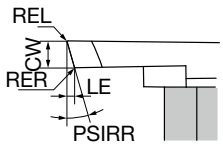
● : Line up

Reference pages : Toolholders → 6-91 - 6-94

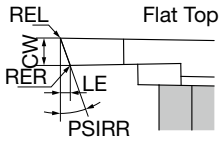
CTP-FLK

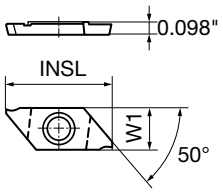


No.1

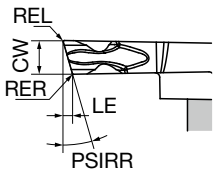


No.3





No.2



Without Chipbreaker

P	Steel	☆	☆	★		★	☆		
M	Stainless	★	☆	☆	★		☆		
N	Non-ferrous						☆	★	
S	Superalloys	★	☆	☆					
H	Hard materials	☆		★					

★ : First choice
☆ : Second choice

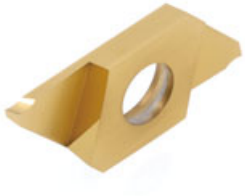
Designation	HAND	Coated						Uncoated		Mirror finish	CUTDIA (in)	CW (mm)	CW (in)	INSL (in)	W1 (in)	LE (in)	PSIRR	REL (in)	RER (in)	Figure
		DM4	DT4	QM3	ST4	VM1	ZM3	KM1												
CTP05FLK-SH	L						●				0.197	0.5	0.020	0.787	0.315	0.007	16°	0.002	0.002	1
CTP10FLK	L		●				●				0.433	1	0.039	0.787	0.315	0.013	16°	0.002	0.002	1
CTP10FLK-CX	L	●			●						0.433	1	0.039	0.787	0.315	0.013	16°	0.002	0.002	2
CTP10FLK-SH	L		●				●				0.276	1	0.039	0.787	0.315	0.013	16°	0.002	0.002	1
CTP10FLK-TH	L				●						0.433	1	0.039	0.787	0.315	0.013	16°	0.002	0.002	1
CTP13FLK	L		●				●				0.433	1.3	0.051	0.787	0.315	0.016	16°	0.002	0.002	1
CTP13FLK-CX	L	●			●						0.433	1.3	0.051	0.787	0.315	0.016	16°	0.002	0.002	2
CTP15FLK	L					●	●				0.433	1.5	0.059	0.787	0.315	0.018	16°	0.002	0.002	1
CTP15FLKB	L						●				0.433	1.5	0.059	0.787	0.315	0.018	16°	0.002	0.002	1
CTP15FLK-CX	L	●			●						0.433	1.5	0.059	0.787	0.315	0.018	16°	0.002	0.002	2
CTP15FLK-TH	L				●						0.433	1.5	0.059	0.787	0.315	0.018	16°	0.002	0.002	1
CTP15FLKV	L					●		●		Ⓜ	0.433	1.5	0.059	0.787	0.315	0.023	20°	0	0	3
CTP20FLK	L					●	●				0.433	2	0.079	0.787	0.315	0.024	16°	0.002	0.002	1
CTP20FLK-TH	L				●						0.433	2	0.079	0.787	0.315	0.024	16°	0.002	0.002	1
CTP20FLKV	L					●				Ⓜ	0.433	2	0.079	0.787	0.315	0.03	20°	0	0	3
CTPX15FLK	L		●	●							0.433	1.5	0.059	0.787	0.315	0.018	16°	0.002	0.002	1
CTPX20FLK	L		●	●							0.433	2	0.079	0.787	0.315	0.024	16°	0.002	0.002	1

NOTE: All angles shown are obtained when insert is set in the holder.

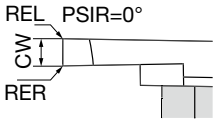
● : Line up

Reference pages : Toolholders → 6-91 - 6-94

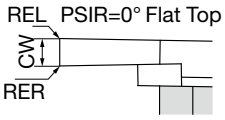
CTP-FLN



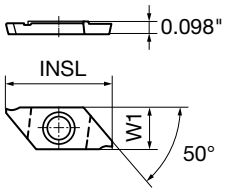
No.1



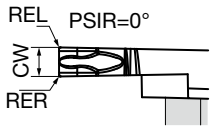
No.3



Without Chipbreaker



No.2



		Coated						Uncoated										
		DM4	DT4	QM3	ST4	VM1	ZM3	KM1		Mirror finish	CUTDIA (in)	CW (mm)	CW (in)	INSL (in)	W1 (in)	REL (in)	RER (in)	Figure
P	Steel	☆	☆	★		★	☆											
M	Stainless	★	☆	☆	★		☆											
N	Non-ferrous						☆	★										
S	Superalloys	★	☆	☆														
H	Hard materials	☆		★														

★ : First choice
☆ : Second choice

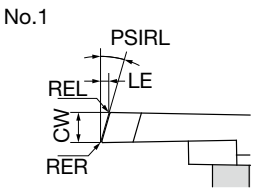
Designation	HAND	DM4	DT4	QM3	ST4	VM1	ZM3	KM1		Mirror finish	CUTDIA (in)	CW (mm)	CW (in)	INSL (in)	W1 (in)	REL (in)	RER (in)	Figure
CTP05FLN-SH	L						●				0.197	0.5	0.020	0.787	0.315	0.002	0.002	1
CTP10FLN	L		●				●				0.472	1	0.039	0.787	0.315	0.002	0.002	1
CTP10FLN-CX	L	●			●						0.472	1	0.039	0.787	0.315	0.002	0.002	2
CTP10FLN-SH	L		●				●				0.276	1	0.039	0.787	0.315	0.002	0.002	1
CTP10FLN-TH	L				●						0.472	1	0.039	0.787	0.315	0.002	0.002	1
CTP13FLN	L		●				●				0.472	1.3	0.051	0.787	0.315	0.002	0.002	1
CTP13FLN02-CX	L	●			●						0.472	1.3	0.051	0.787	0.315	0.008	0.008	2
CTP13FLN-CX	L	●			●						0.472	1.3	0.051	0.787	0.315	0.002	0.002	2
CTP15FLN	L					●	●				0.472	1.5	0.059	0.787	0.315	0.002	0.002	1
CTP15FLN02-CX	L	●			●						0.472	1.5	0.059	0.787	0.315	0.008	0.008	2
CTP15FLN-CX	L	●			●						0.472	1.5	0.059	0.787	0.315	0.002	0.002	2
CTP15FLN-TH	L				●						0.472	1.5	0.059	0.787	0.315	0.002	0.002	1
CTP15FLNV	L							●		Ⓜ	0.472	1.5	0.059	0.787	0.315	0	0	3
CTP20FLN	L					●	●				0.472	2	0.079	0.787	0.315	0.002	0.002	1
CTP20FLN-TH	L				●						0.472	2	0.079	0.787	0.315	0.002	0.002	1
CTP20FLNV	L							●		Ⓜ	0.472	2	0.079	0.787	0.315	0	0	3
CTPX15FLN	L		●	●							0.472	1.5	0.059	0.787	0.315	0.002	0.002	1
CTPX20FLN	L		●	●							0.472	2	0.079	0.787	0.315	0.002	0.002	1

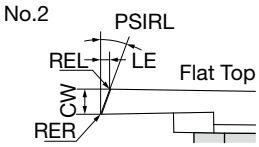
NOTE: All angles shown are obtained when insert is set in the holder.

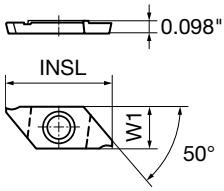
● : Line up

Reference pages : Toolholders → 6-91 - 6-94

CTP-FL







Without Chipbreaker

P	Steel	☆	★	★
M	Stainless	★		☆
N	Non-ferrous			★
S	Superalloys	★		
H	Hard materials	☆		

★ : First choice
☆ : Second choice

Designation	HAND	Coated			Mirror finish	CUTDIA (in)	CW (mm)	CW (in)	INSL (in)	W1 (in)	LE (in)	PSIRL	REL (in)	RER (in)	Figure
		DT4	VM1	ZM3											
CTP07FL	L			●		0.315	0.7	0.028	0.787	0.315	0.009	16°	0.002	0.002	1
CTP10FL	L			●		0.472	1	0.039	0.787	0.315	0.013	16°	0.002	0.002	1
CTP10FLV	L		●	●	Ⓜ	0.472	1	0.039	0.787	0.315	0.016	20°	0	0	2
CTP13FL	L	●		●		0.472	1.3	0.051	0.787	0.315	0.016	16°	0.002	0.002	1
CTP15FL	L			●		0.472	1.5	0.059	0.787	0.315	0.018	16°	0.002	0.002	1
CTP15FLV	L		●	●	Ⓜ	0.472	1.5	0.059	0.787	0.315	0.023	20°	0	0	2
CTP20FL	L			●		0.472	2	0.079	0.787	0.315	0.024	16°	0.002	0.002	1
CTP20FLV	L		●	●	Ⓜ	0.472	2	0.079	0.787	0.315	0.030	20°	0	0	2
CTPX15FL	L	●				0.472	1.5	0.059	0.787	0.315	0.018	16°	0.002	0.002	1
CTPX20FL	L	●				0.472	2	0.079	0.787	0.315	0.024	16°	0.002	0.002	1

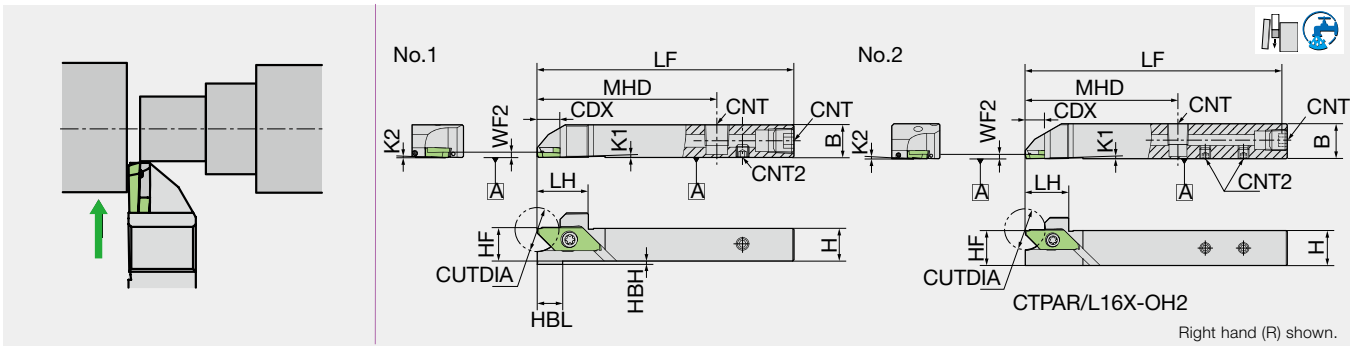
NOTE: All angles shown are obtained when insert is set in the holder.

● : Line up

Reference pages : Toolholders → 6-91 - 6-94

CTPA-OH2

Coolant through (direct connect compatible)



Inch	CUTDIA	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert		Figure
CTPAR08H-IN-OH2	0.630	0.500	0.500	3.937	0.787	0.354	0.051	0.394	0.500	1°	2°	2.756	0.079	NPT1/8	M5	CTPA..	TBPA..	1
CTPAR10X-IN-OH2	0.630	0.625	0.625	4.724	0.787	0.354	-	-	0.625	1°	2°	2.756	0.079	NPT1/8	M5	CTPA..	TBPA..	2
CTPAL08H-IN-OH2	0.630	0.500	0.500	3.937	0.787	0.354	0.051	0.394	0.500	1°	2°	2.756	0.079	NPT1/8	M5	CTPA..	TBPA..	1
CTPAL10X-IN-OH2	0.630	0.625	0.625	4.724	0.787	0.354	-	-	0.625	1°	2°	2.756	0.079	NPT1/8	M5	CTPA..	TBPA..	2

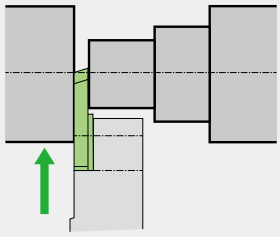
Metric	CUTDIA	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	CNT	CNT2	Insert		Figure
CTPAR12H-OH2	16	12	12	100	19.5	9	2	10	12	1°	2°	70	2	Rc1/8	M5	CTPA..	TBPA..	1
CTPAR16X-OH2	16	16	16	120	19.5	9	–	–	16	1°	2°	70	2	Rc1/8	M5	CTPA..	TBPA..	2
CTPAL12H-OH2	16	12	12	100	19.5	9	10	10	12	1°	2°	70	2	Rc1/8	M5	CTPA..	TBPA..	1
CTPAL16X-OH2	16	16	16	120	19.5	9	–	–	16	1°	2°	70	2	Rc1/8	M5	CTPA..	TBPA..	2

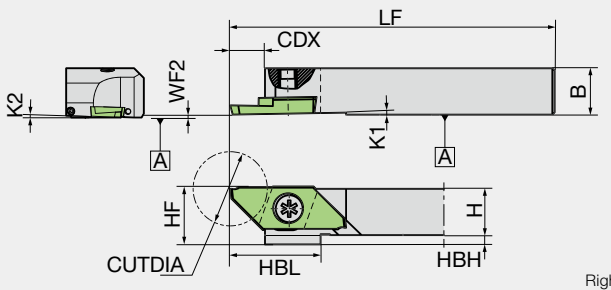
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
CTPAR/L08H-IN-OH2	LRIS-4*12PW	SPNPT1/8	SS0505SC	CLR-15S	LW-2.5
CTPAR/L10X-IN-OH2	LRIS-4*12PW	SPNPT1/8L	SS0505SC	CLR-15S	LW-2.5
CTPAR**-OH2	LRIS-4*12PW	SPR1/8	SS0505SC	CLR-15S	LW-2.5

Reference pages : Inserts → 6-103 - 6-106, 3-118 - 3-119

CTPAR/L





Right hand (R) shown.

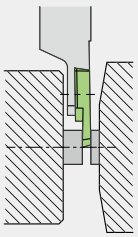
Inch	CUTDIA	H	B	LF	CDX	HBH	HBL	HF	K1	K2	WF2	Insert	
CTPAR06-IN	0.630	0.375	0.375	4.724	0.295	0.078	0.768	0.375	1°	2°	0	CTPA..	TBPA..
CTPAR08-IN	0.630	0.500	0.500	4.724	0.295	-	-	0.500	1°	2°	0	CTPA..	TBPA..
CTPAR10-IN	0.630	0.625	0.625	4.724	0.295	-	-	0.625	1°	2°	0	CTPA..	TBPA..
CTPAL06-IN	0.630	0.375	0.375	4.724	0.295	0.078	0.768	0.375	1°	2°	0	CTPA..	TBPA..
CTPAL08-IN	0.630	0.500	0.500	4.724	0.295	-	-	0.500	1°	2°	0	CTPA..	TBPA..
CTPAL10-IN	0.630	0.625	0.625	4.724	0.295	-	-	0.625	1°	2°	0	CTPA..	TBPA..
Metric	**CUTDIA**	**H**	**B**	**LF**	**CDX**	**HBH**	**HBL**	**HF**	**K1**	**K2**	**WF2**	**Insert**	
CTPAR10	16	10	10	120	7.5	2	19.5	10	1°	2°	0	CTPA..	TBPA..
CTPAR12	16	12	12	120	7.5	–	–	12	1°	2°	0	CTPA..	TBPA..
CTPAR12GX	16	12	12	85	7.5	–	–	12	1°	2°	0	CTPA..	TBPA..
CTPAR16	16	16	16	120	7.5	–	–	16	1°	2°	0	CTPA..	TBPA..
CTPAR20F	16	20	20	80	7.5	–	–	20	1°	2°	0	CTPA..	TBPA..
CTPAL10	16	10	10	120	7.5	2	19.5	10	1°	2°	0	CTPA..	TBPA..
CTPAL12	16	12	12	120	7.5	–	–	12	1°	2°	0	CTPA..	TBPA..
CTPAL12GX	16	12	12	85	7.5	–	–	12	1°	2°	0	CTPA..	TBPA..
CTPAL16	16	16	16	120	7.5	–	–	16	1°	2°	0	CTPA..	TBPA..
CTPAL20F	16	20	20	80	7.5	–	–	20	1°	2°	0	CTPA..	TBPA..

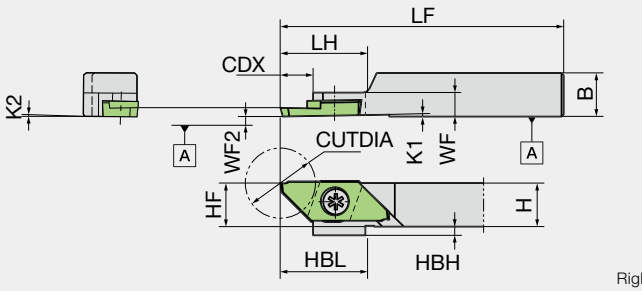
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CTPAR/L06-IN, CTPAR/L10	LRIS-4*10PW	CLR-15S
CTPAR/L08-IN, CTPAR/L10-IN, CTPAR/L12**, CTPAR/L16	LRIS-4*12PW	CLR-15S
CTPAR/L20F	LRIS-4*10	LLR-25S

CTPAR-SUB

For Sub-Spindle





Right hand (R) shown.

Inch	CUTDIA	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	MHD	WF2	Insert
CTPAR06-IN-SUB	0.630	0.375	0.375	4.724	0.787	0.295	0.078	0.768	0.375	1°	2°	-	0.217	CTPA..
CTPAR08-IN-SUB	0.630	0.500	0.500	4.724	0.787	0.295	-	-	0.500	1°	2°	-	0.217	CTPA..
CTPAR10-IN-SUB	0.630	0.625	0.625	4.724	0.787	0.295	-	-	0.625	1°	2°	-	0.217	CTPA..
Metric	**CUTDIA**	**H**	**B**	**LF**	**LH**	**CDX**	**HBH**	**HBL**	**HF**	**K1**	**K2**	**MHD**	**WF2**	**Insert**
CTPAR10GX-SUB	16	10	10	85	20	7.5	2	19.5	10	1°	2°	5.5	0	CTPA..
CTPAR12GX-SUB	16	12	12	85	20	7.5	–	–	12	1°	2°	5.5	0	CTPA..
CTPAR12KX-SUB	16	12	12	120	20	7.5	–	–	12	1°	2°	5.5	0	CTPA..

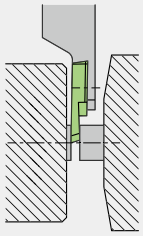
SPARE PARTS

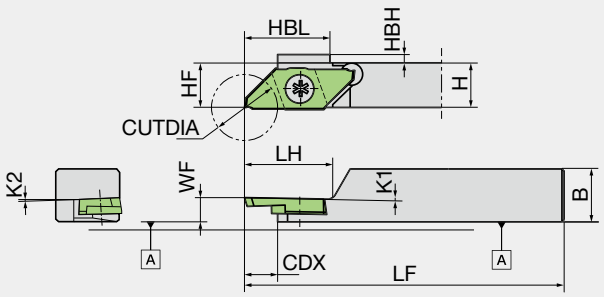
Designation	Clamp screw	Wrench (for Clamp screw)
CTPAR**-IN-SUB, CTPAR**-SUB	LRIS-4*5	LLR-25S

Reference pages : Inserts → 6-103 - 6-106, 3-118 - 3-119

CTPAL-SUB

For Sub-Spindle





Left hand (L) shown.

Inch	CUTDIA	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	WF	Insert
CTPAL06-IN-SUB	0.630	0.375	0.375	4.724	0.787	0.295	0.078	0.768	0.375	1°	2°	0.217	CTPA..
CTPAL08-IN-SUB	0.630	0.500	0.500	4.724	0.787	0.295	-	-	0.500	1°	2°	0.217	CTPA..
CTPAL10-IN-SUB	0.630	0.625	0.625	4.724	0.787	0.295	-	-	0.625	1°	2°	0.217	CTPA..

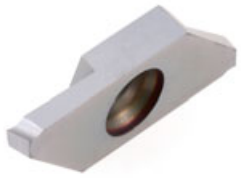
Metric	CUTDIA	H	B	LF	LH	CDX	HBH	HBL	HF	K1	K2	WF	Insert
CTPAL10GX-SUB	16	10	10	85	20	7.5	2	19.5	10	1°	2°	5.5	CTPA..
CTPAL12GX-SUB	16	12	12	85	20	7.5	–	–	12	1°	2°	5.5	CTPA..
CTPAL12KX-SUB	16	12	12	120	20	7.5	–	–	12	1°	2°	5.5	CTPA..
CTPAL16GX-SUB	16	16	16	85	28	7.5	–	–	16	1°	2°	5.5	CTPA..
CTPAL16KX-SUB	16	16	16	120	28	7.5	–	–	16	1°	2°	5.5	CTPA..

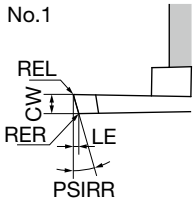
SPARE PARTS

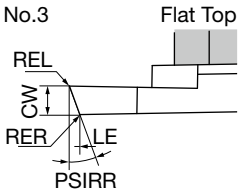
Designation	Clamp screw	Wrench (for Clamp screw)
CTPAL**-IN-SUB, CTPAL**-SUB	LRIS-4*5	LLR-25S

INSERT

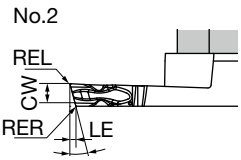
CTPA-FR

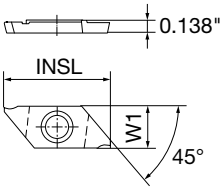






Without Chipbreaker





P	Steel	☆	☆	★		★	☆		
M	Stainless	★	☆	☆	★		☆		
N	Non-ferrous						☆	★	
S	Superalloys	★	☆	☆					
H	Hard materials	☆		★					

★ : First choice
☆ : Second choice

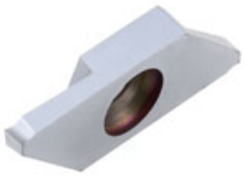
Designation	HAND	Coated						Uncoated		Mirror finish	CUTDIA (in)	CW (mm)	CW (in)	INSL (in)	W1 (in)	LE (in)	PSIRR	REL (in)	RER (in)	Figure
		DM4	DT4	QM3	ST4	VM1	ZM3	KM1												
CTPA07FR	R						●				0.315	0.7	0.028	0.984	0.370	0.009	16°	0.002	0.002	1
CTPA10FR	R						●				0.472	1	0.039	0.984	0.370	0.013	16°	0.002	0.002	1
CTPA15FR	R		●	●		●	●				0.630	1.5	0.059	0.984	0.370	0.018	16°	0.002	0.002	1
CTPA15FR-CX	R	●			●						0.630	1.5	0.059	0.984	0.370	0.018	16°	0.002	0.002	2
CTPA15FR-TH	R				●						0.630	1.5	0.059	0.984	0.370	0.018	16°	0.002	0.002	1
CTPA20FR	R		●	●		●	●				0.630	2	0.079	0.984	0.370	0.024	16°	0.002	0.002	1
CTPA20FR-TH	R				●						0.630	2	0.079	0.984	0.370	0.024	16°	0.002	0.002	1
CTPA20FRV	R					●		●		Ⓜ	0.630	2	0.079	0.984	0.370	0.030	20°	0	0	3

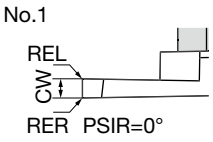
NOTE: All angles shown are obtained when insert is set in the holder.

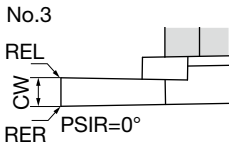
● : Line up

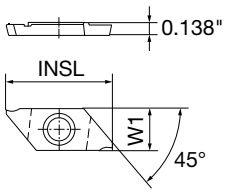
Reference pages : Toolholders → 6-101 - 6-103

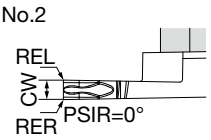
CTPA-FRN

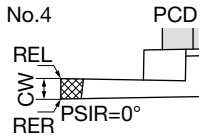












		DM4	DT4	QM3	ST4	VM1	ZM3	KM1	PD1
P	Steel	☆	☆	★		★	☆		
M	Stainless	★	☆	☆	★		☆		
N	Non-ferrous						☆	★	★
S	Superalloys	★	☆	☆					
H	Hard materials	☆		★					

★ : First choice
☆ : Second choice

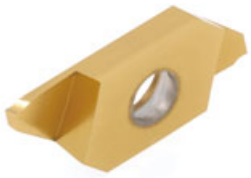
Designation	HAND	Coated						Uncoated		PCD		Mirror finish	CUTDIA (in)	CW (mm)	CW (in)	INSL (in)	W1 (in)	PSIR	REL (in)	RER (in)	Figure
		DM4	DT4	QM3	ST4	VM1	ZM3	KM1		PD1											
CTPA07FRN	R						●						0.315	0.7	0.028	0.984	0.370	0°	0.002	0.002	1
CTPA10FRN	R						●						0.472	1	0.039	0.984	0.370	0°	0.002	0.002	1
CTPA15FRN	R		●	●		●	●						0.630	1.5	0.059	0.984	0.370	0°	0.002	0.002	1
CTPA15FRN-CX	R	●			●								0.630	1.5	0.059	0.984	0.370	0°	0.002	0.002	2
CTPA15FRN-TH	R				●								0.630	1.5	0.059	0.984	0.370	0°	0.002	0.002	1
CTPA20FRN	R		●	●		●	●						0.630	2	0.079	0.984	0.370	0°	0.002	0.002	1
CTPA20FRN-P	R									●			0.630	2	0.079	0.984	0.370	0°	0.004	0.004	4
CTPA20FRN-TH	R				●								0.630	2	0.079	0.984	0.370	0°	0.002	0.002	1
CTPA20FRNV	R							●				Ⓜ	0.630	2	0.079	0.984	0.370	0°	0	0	3
CTPA20FRS	R						●						0.630	2	0.079	0.984	0.370	0°	0.002	0.002	3
CTPA30FRN	R			●									0.630	3	0.118	0.984	0.370	0°	0.002	0.002	1

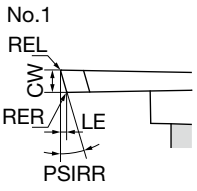
NOTE: All angles shown are obtained when insert is set in the holder.

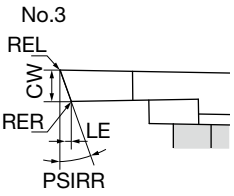
● : Line up

Reference pages : Toolholders → 6-101 - 6-103

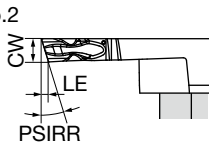
CTPA-FLK

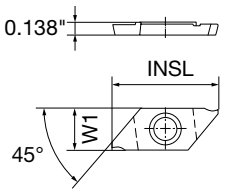






Without Chipbreaker





P	Steel	☆	☆	★		★	☆		
M	Stainless	★	☆	☆	★		☆		
N	Non-ferrous						☆	★	
S	Superalloys	★	☆	☆					
H	Hard materials	☆		★					

★ : First choice
☆ : Second choice

Designation	HAND	Coated						Uncoated	Mirror finish	CUTDIA (in)	CW (mm)	CW (in)	INSL (in)	W1 (in)	LE (in)	PSIRR	REL (in)	RER (in)	Figure
		DM4	DT4	QM3	ST4	VM1	ZM3	KM1											
CTPA07FLK	L						●			0.256	0.7	0.028	0.984	0.370	0.009	16°	0.002	0.002	1
CTPA10FLK	L						●			0.433	1	0.039	0.984	0.370	0.013	16°	0.002	0.002	1
CTPA10FLKD	L						●			0.630	1	0.039	0.984	0.370	0.013	16°	0.002	0.002	1
CTPA15FLK	L		●	●		●	●			0.571	1.5	0.059	0.984	0.370	0.018	16°	0.002	0.002	1
CTPA15FLK-CX	L	●			●					0.571	1.5	0.059	0.984	0.370	0.018	16°	0.002	0.002	2
CTPA15FLK-TH	L				●					0.571	1.5	0.059	0.984	0.370	0.018	16°	0.002	0.002	1
CTPA20FLK	L		●	●		●	●			0.571	2	0.079	0.984	0.370	0.024	16°	0.002	0.002	1
CTPA20FLK-TH	L				●					0.571	2	0.079	0.984	0.370	0.024	16°	0.002	0.002	1
CTPA20FLKV	L					●		●	Ⓜ	0.571	2	0.079	0.984	0.370	0.030	20°	0	0	3

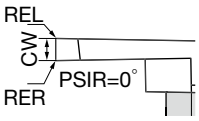
NOTE: All angles shown are obtained when insert is set in the holder.

● : Line up

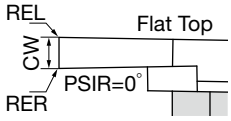
Reference pages : Toolholders → 6-101 - 6-103

CTPA-FLN

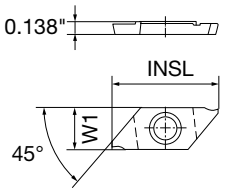
No.1



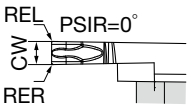
No.3



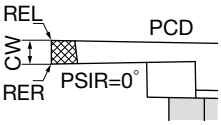
Without Chipbreaker



No.2



No.4



		DM4	DT4	QM3	ST4	VM1	ZM3	KM1		PD1
P	Steel	☆	☆	★		★	☆			
M	Stainless	★	☆	☆	★		☆			
N	Non-ferrous						☆	★		★
S	Superalloys	★	☆	☆						
H	Hard materials	☆		★						

★ : First choice
☆ : Second choice

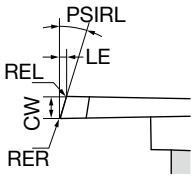
Designation	HAND	Coated						Uncoated		PCD	Mirror finish	CUTDIA (in)	CW (mm)	CW (in)	INSL (in)	W1 (in)	PSIR	REL (in)	RER (in)	Figure
		DM4	DT4	QM3	ST4	VM1	ZM3	KM1		PD1										
CTPA10FLN	L						●					0.472	1	0.039	0.984	0.370	0°	0.002	0.002	1
CTPA10FLND	L						●					0.630	1	0.039	0.984	0.370	0°	0.002	0.002	1
CTPA15FLN	L		●	●		●	●					0.630	1.5	0.059	0.984	0.370	0°	0.002	0.002	1
CTPA15FLN-CX	L	●			●							0.630	1.5	0.059	0.984	0.370	0°	0.002	0.002	2
CTPA15FLN-TH	L				●							0.630	1.5	0.059	0.984	0.370	0°	0.002	0.002	1
CTPA20FLN	L		●	●		●	●					0.630	2	0.079	0.984	0.370	0°	0.002	0.002	1
CTPA20FLN-P	L									●		0.630	2	0.079	0.984	0.370	0°	0.004	0.004	4
CTPA20FLN-TH	L				●							0.630	2	0.079	0.984	0.370	0°	0.002	0.002	1
CTPA20FLNV	L							●			Ⓜ	0.630	2	0.079	0.984	0.370	0°	0	0	3
CTPA20FLS	L						●					0.630	2	0.079	0.984	0.370	0°	0.002	0.002	3
CTPA30FLN	L			●								0.630	3	0.118	0.984	0.370	0°	0.002	0.002	1

NOTE: All angles shown are obtained when insert is set in the holder.

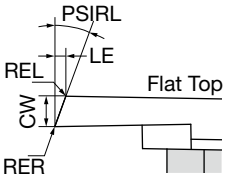
● : Line up

CTPA-FL

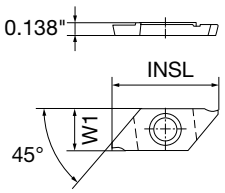
No.1



No.2



Without Chipbreaker



		DT4	VM1	ZM3
P	Steel	☆	★	★
M	Stainless	★		☆
N	Non-ferrous			★
S	Superalloys	☆		
H	Hard materials	☆		

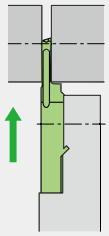
★ : First choice
☆ : Second choice

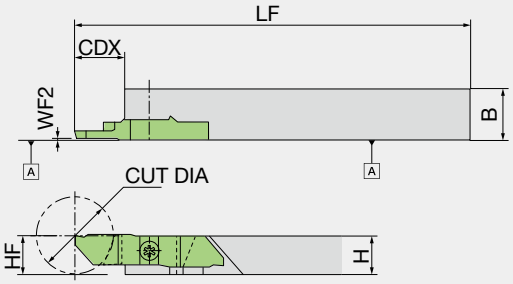
Designation	HAND	Coated			Mirror finish	CUTDIA (in)	CW (mm)	CW (in)	INSL (in)	W1 (in)	LE (in)	PSIRL	REL (in)	RER (in)	Figure
		DT4	VM1	ZM3											
CTPA07FL	L			●		0.315	0.7	0.028	0.984	0.370	0.009	16°	0.002	0.002	1
CTPA10FL	L			●		0.472	1	0.039	0.984	0.370	0.013	16°	0.002	0.002	1
CTPA15FL	L	●		●		0.630	1.5	0.059	0.984	0.370	0.018	16°	0.002	0.002	1
CTPA20FL	L	●		●		0.630	2	0.079	0.984	0.370	0.024	16°	0.002	0.002	1
CTPA20FLV	L		●		Ⓜ	0.630	2	0.079	0.984	0.370	0.030	20°	0	0	2

NOTE: All angles shown are obtained when insert is set in the holder.

● : Line up

Reference pages : Toolholders → 6-101 - 6-103





Right hand (R) shown.

Inch	CUTDIA	H	B	LF	CDX	HF	WF2	Insert
CTPWR08-IN	0.787	0.500	0.630	4.724	0.591	0.498	0.024	CTPW..
CTPWR10-IN	0.787	0.625	0.630	4.724	0.591	0.623	0.024	CTPW..
CTPWL08-IN	0.787	0.500	0.630	4.724	0.591	0.498	0.024	CTPW..
CTPWL10-IN	0.787	0.625	0.630	4.724	0.591	0.623	0.024	CTPW..

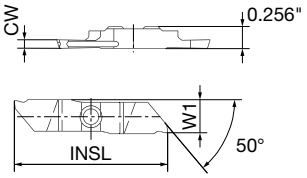
Metric	CUTDIA	H	B	LF	CDX	HF	WF2	Insert
CTPWR10	20	10	16	120	15	9.95	0.6	CTPW..
CTPWR12	20	12	16	120	15	11.95	0.6	CTPW..
CTPWR16	20	16	16	120	15	15.95	0.6	CTPW..
CTPWR20	20	20	20	120	15	19.95	0.6	CTPW..
CTPWL10A	20	10	12	120	15	9.95	0.6	CTPW..
CTPWL12A	20	12	12	120	15	11.95	0.6	CTPW..
CTPWL16	20	16	16	120	15	15.95	0.6	CTPW..
CTPWL20	20	20	20	120	15	19.95	0.6	CTPW..

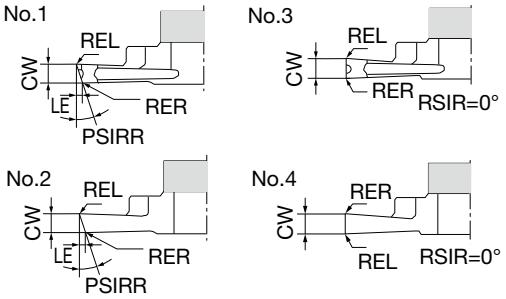
SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CTPWR/L**	LRIS-4*10	LLR-25S

Reference pages : Insers → 6-108

CTPW25-R





P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

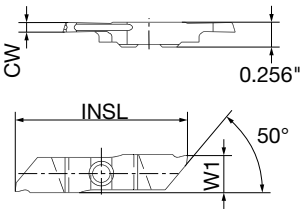
★ : First choice
☆ : Second choice

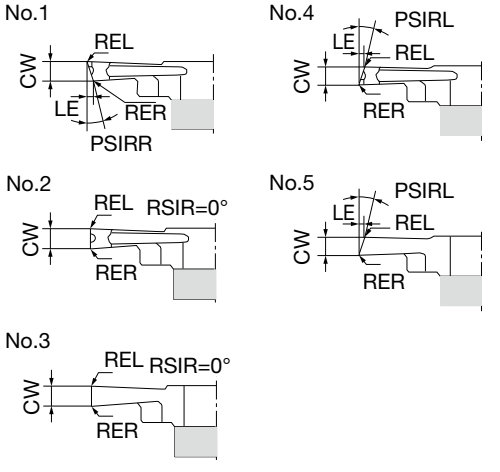
Designation	Coated ZM3	Mirror finish	CUTDIA (in)	Chip-breaker	CW (mm)	CW (in)	INSL (in)	W1 (in)	LE (in)	PSIR	PSIRL	PSIRR	REL (in)	RER (in)	Figure
CTPW25FR	●		0.787	Yes	2.5	0.098	(1.772)	0.382	0.032	–	–	17°	0.008	0.002	1
CTPW25FRP	●	Ⓜ	0.787	No	2.5	0.098	(1.772)	0.382	0.032	–	–	17°	0.008	0.002	2
CTPW25FRN	●		0.787	Yes	2.5	0.098	(1.772)	0.382	–	0°	–	–	0.002	0.002	3
CTPW25FRNV	●	Ⓜ	0.787	No	2.5	0.098	(1.772)	0.382	–	0°	–	–	0	0	4

NOTE: All angles shown are obtained when insert is set in the holder.

● : Line up

CTPW25-L





P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	Coated ZM3	Mirror finish	CUTDIA (in)	Chip-breaker	CW (mm)	CW (in)	INSL (in)	W1 (in)	LE (in)	PSIR	PSIRL	PSIRR	REL (in)	RER (in)	Figure
CTPW25FLK	●		0.787	Yes	2.5	0.098	(1.772)	0.382	0.032	–	–	17°	0.008	0.002	1
CTPW25FLN	●		0.787	Yes	2.5	0.098	(1.772)	0.382	–	0°	–	–	0.002	0.002	2
CTPW25FLNV	●	Ⓜ	0.787	No	2.5	0.098	(1.772)	0.382	–	0°	–	–	0	0	3
CTPW25FL	●		0.787	Yes	2.5	0.098	(1.772)	0.382	0.032	–	17°	–	0.008	0.002	4
CTPW25FLP	●	Ⓜ	0.787	No	2.5	0.098	(1.772)	0.382	0.032	–	17°	–	0.008	0.002	5

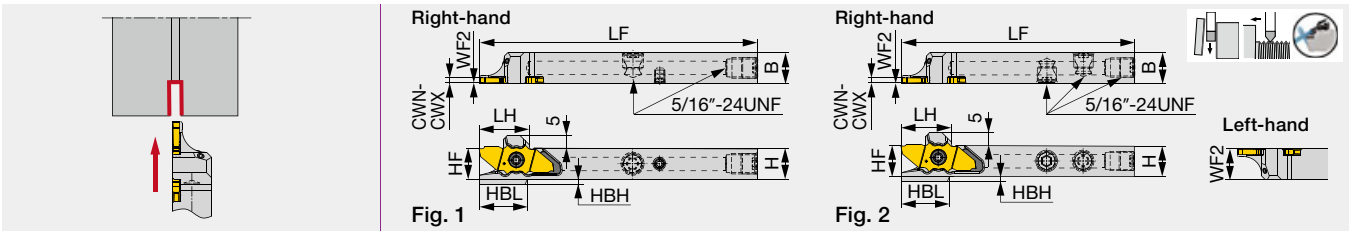
NOTE: All angles shown are obtained when insert is set in the holder.

● : Line up

Reference pages : Toolholders → 6-107

JSXXR/L-F/H/X-CHP

Parting-off toolholders with high pressure coolant capability, for swiss lathes



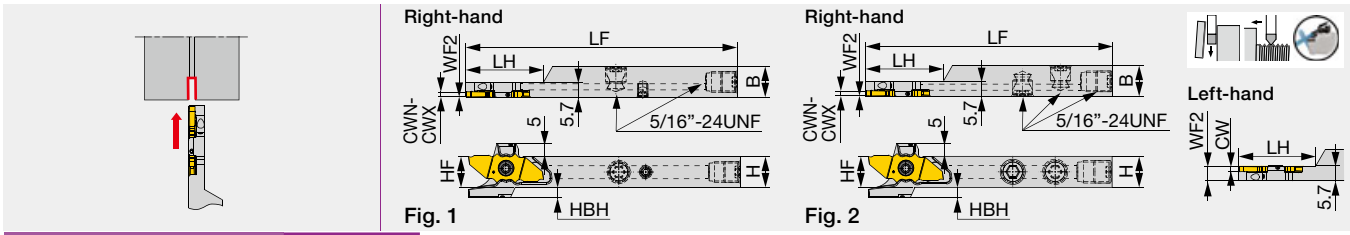
Inch	CWN	CWX	H	B	WF	LF**	HF	HBH	LH**	HBL**	Insert	Torque	Fig.
JSXXR/L083X-CHP	0.024	0.098	0.500	0.500	0.008/0.492	4.750	0.500	0.051	0.764	0.736	JX*G06...,12...,16..., 20...	0.890	1
JSXXR/L103X-CHP	0.024	0.098	0.625	0.625	0.008/0.617	4.750	0.625	-	0.764	-	JX*G06...,12...,16..., 20...	0.890	1
JSXXR/L083F-CHP	0.024	0.098	0.500	0.500	0.008/0.492	3.344	0.500	0.051	≤ 0.764	0.736	JX*G06...,12...,16..., 20...	0.890	1

Metric	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBL(1)	HBH	Insert	Torque*	Fig.
JSXXR/L1012H09-CHP(3)	0.6	2.5	10	12	102	19.2	10	0.2/11.8	18.7	3	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212F09-CHP	0.6	2.5	12	12	85	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212X09-CHP(3)	0.6	2.5	12	12	120	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09B-CHP(3)	0.6	2.5	16	16	120	19.4	16	0.2/15.8	18.7	-	JX**06...,12...,16..., 20...	1.2	1

Torque: Recommended clamping torque: lbs·ft (*N·m)
(1) LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... insert. LF, LH, and HBL will all be 0.079" (2 mm) shorter than the above values with JX**12... and JX**20... inserts, and 4 mm shorter for JX**06... insert.
(2) The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.
(3) Compatible to the direct internal coolant supply system without the use of external coolant hose.
Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

JSXXR/L-F/X-S-CHP

Parting-off toolholders with high pressure coolant capability, for swiss lathes (for sub spindle)



Inch	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBH	Insert	Torque*	Fig.
JSXXR/L083F-S-CHP	0.024	0.098	0.500	0.500	3.344	1.024	0.500	0.008/0.217	0.051	JX**06...,12...,16..., 20...	0.89	2
JSXXR/L083X-S-CHP	0.024	0.098	0.500	0.500	4.750	1.181	0.500	0.008/0.217	0.051	JX**06...,12...,16..., 20...	0.89	1
JSXXR/L103X-S-CHP	0.024	0.098	0.625	0.625	4.750	1.181	0.625	0.008/0.217	-	JX**06...,12...,16..., 20...	0.89	1

Metric	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBH	Insert	Torque*	Fig.
JSXXR1212F09-S-CHP(4)	0.6	2.5	12	12	85	26	12	0.2	4	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212F09B-S-CHP	0.6	2.5	12	12	85	30	12	0.2/5.5	2	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212X09-S-CHP(3),(4)	0.6	2.5	12	12	120	30	12	0.2/5.5	4	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212X09B-S-CHP(3)	0.6	2.5	12	12	120	30	12	0.2/5.5	2	JX**06...,12...,16..., 20...	1.2	1
JSXXR1616X09-S-CHP(3),(4)	0.6	2.5	16	16	120	30	16	0.2	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09B-S-CHP(3)	0.6	2.5	16	16	120	30	16	0.2/5.5	-	JX**06...,12...,16..., 20...	1.2	1

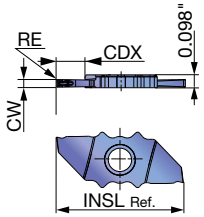
Torque: Recommended clamping torque: lbs·ft (*N·m)
(1) LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... insert. LF, LH, and HBL will all be 0.079" (2 mm) shorter than the above values with JX**12... and JX**20... inserts, and 4 mm shorter for JX**06... insert.
(2) The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.
(3) Compatible to the direct internal coolant supply system without the use of external coolant hose.
(4) To be replaced with the new design
Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

SPARE PARTS

Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JSXXR**F...	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXL**F...	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXR**H/X...	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
JSXXL**H/X...	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

Reference pages: JSXXR/L-F/H/X-CHP, JSXXR/L-F/X-S-CHP: Inserts → 6-110, 6-111
Standard cutting conditions → 6-112, 6-113

JXPS**R/L-F (with 3D chipbreaker, sharp edge)



Right-hand (R) shown.

P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

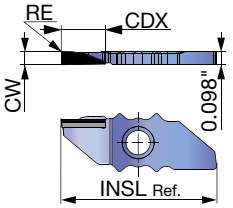
★ : First choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated SH725	CUTDIA (in)	CDX* (in)	INSL (in)
JXPS06R06F	R	0.6	0.024	0.002	●	0.236	0.138	0.827
JXPS06L06F	L	0.6	0.024	0.002	●	0.236	0.138	0.827
JXPS12R08F	R	0.8	0.031	0.002	●	0.472	0.256	0.984
JXPS12L08F	L	0.8	0.031	0.002	●	0.472	0.256	0.984
JXPS12R10F	R	1	0.039	0.002	●	0.472	0.256	0.984
JXPS12L10F	L	1	0.039	0.002	●	0.472	0.256	0.984
JXPS12R15F	R	1.5	0.059	0.002	●	0.472	0.256	0.984
JXPS12L15F	L	1.5	0.059	0.002	●	0.472	0.256	0.984
JXPS16R15F	R	1.5	0.059	0.002	●	0.630	0.335	1.142
JXPS16L15F	L	1.5	0.059	0.002	●	0.630	0.335	1.142
JXPS20R20F	R	2	0.079	0.002	●	0.787	0.413	1.299
JXPS20L20F	L	2	0.079	0.002	●	0.787	0.413	1.299

*Max grooving depth (CDX) varies depending on workpiece diameters.

● : Line up

JXDX**R-F (PCD insert)



P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

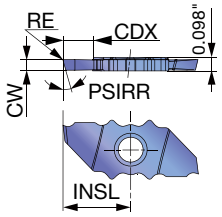
★ : First choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	PCD DX110	CDX (in)	INSL (in)
JXDX12R20F	R	2	0.079	< 0.004	●	0.236	0.492
JXDX12R25F	R	2.5	0.098	< 0.004	●	0.256	0.492
JXDX16R25F	R	2.5	0.098	< 0.004	●	0.276	0.571

● : Line up

Reference pages: Toolholders → 6-109, Standard cutting conditions → 6-112, 6-113

JXPG**R/L-F (sharp edge)



Right hand (R) shown.

P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	★
S	Superalloys	★
H	Hard materials	★

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated SH725	CUTDIA (in)	CDX* (in)	INSL (in)	PSIRR/L
JXPG06R10F	R	1	0.039	0.002	●	0.236	0.138	0.827	0°
JXPG06L10F	L	1	0.039	0.002	●	0.236	0.138	0.827	0°
JXPG06R15F	R	1.5	0.059	0.002	●	0.236	0.138	0.827	0°
JXPG06L15F	L	1.5	0.059	0.002	●	0.236	0.138	0.827	0°
JXPG06R10F-15	R	1	0.039	0.002	●	0.236	0.138	0.827	15°
JXPG06L10F-15	L	1	0.039	0.002	●	0.236	0.138	0.827	15°
JXPG06R15F-15	R	1.5	0.059	0.002	●	0.236	0.138	0.827	15°
JXPG06L15F-15	L	1.5	0.059	0.002	●	0.236	0.138	0.827	15°
JXPG12R15F	R	1.5	0.059	0.002	●	0.472	0.256	0.984	0°
JXPG12L15F	L	1.5	0.059	0.002	●	0.472	0.256	0.984	0°
JXPG12R20F	R	2	0.079	0.002	●	0.472	0.256	0.984	0°
JXPG12L20F	L	2	0.079	0.002	●	0.472	0.256	0.984	0°
JXPG12R15F-15	R	1.5	0.059	0.002	●	0.472	0.256	0.984	15°
JXPG12L15F-15	L	1.5	0.059	0.002	●	0.472	0.256	0.984	15°
JXPG12R20F-15	R	2	0.079	0.002	●	0.472	0.256	0.984	15°
JXPG12L20F-15	L	2	0.079	0.002	●	0.472	0.256	0.984	15°
JXPG16R15F	R	1.5	0.059	0.002	●	0.630	0.335	1.142	0°
JXPG16L15F	L	1.5	0.059	0.002	●	0.630	0.335	1.142	0°
JXPG16R20F	R	2	0.079	0.002	●	0.630	0.335	1.142	0°
JXPG16L20F	L	2	0.079	0.002	●	0.630	0.335	1.142	0°
JXPG16R15F-15	R	1.5	0.059	0.002	●	0.630	0.335	1.142	15°
JXPG16L15F-15	L	1.5	0.059	0.002	●	0.630	0.335	1.142	15°
JXPG16R20F-15	R	2	0.079	0.002	●	0.630	0.335	1.142	15°
JXPG16L20F-15	L	2	0.079	0.002	●	0.630	0.335	1.142	15°
JXPG20R15F	R	1.5	0.059	0.002	●	0.787	0.413	1.299	0°
JXPG20L15F	L	1.5	0.059	0.002	●	0.787	0.413	1.299	0°
JXPG20R20F	R	2	0.079	0.002	●	0.787	0.413	1.299	0°
JXPG20L20F	L	2	0.079	0.002	●	0.787	0.413	1.299	0°
JXPG20R15F-15	R	1.5	0.059	0.002	●	0.787	0.413	1.299	15°
JXPG20L15F-15	L	1.5	0.059	0.002	●	0.787	0.413	1.299	15°
JXPG20R20F-15	R	2	0.079	0.002	●	0.787	0.413	1.299	15°
JXPG20L20F-15	L	2	0.079	0.002	●	0.787	0.413	1.299	15°

● : Line-up
CUTDIA: Max. parting-off dia.
Packing quantity = 5 pcs.

Reference pages: Toolholders → 6-109, Standard cutting conditions → 6-112, 6-113

STANDARD CUTTING CONDITIONS

Parting, Grooving

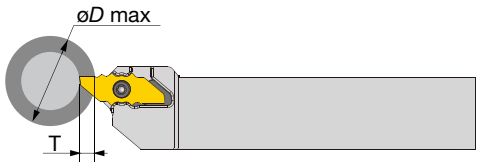
ISO	Workpiece materials	Grades	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Low carbon steels 1015, etc.	SH725	164 - 656	0.00039 - 0.0020
P	Carbon steels, Alloy steels 1055, etc.	SH725	164 - 656	0.00039 - 0.0020
P	Free cutting steels SUH22, SUH23, etc.	SH725	164 - 656	0.00039 - 0.0020
M	Stainless steels 304, etc.	SH725	164 - 656	0.00039 - 0.0020
N	Aluminum alloys 5056, 6061, etc.	SH725	492 - 656	0.00039 - 0.0020
N	Copper alloy C2600, C280C, etc.	SH725	328 - 656	0.00039 - 0.0020
S	Titanium alloys Ti-6Al-4V, etc.	SH725	98 - 262	0.00039 - 0.0020
S	Superalloys Inconel718, etc.	SH725	98 - 262	0.00039 - 0.0020

For aluminium and non-ferrous metal PCD insert

ISO	Workpiece materials	Grades	Operation	Cutting speed *Vc* (sfm)	Feed *f* (ipr)	Depth of cut *ap* (in)
N	Aluminum alloys 5056, 6061, etc.	DX110	Grooving	328 - 984	0.0012 - 0.0059	-
N		DX110	Turning	328 - 984	0.0012 - 0.0059	< 0.236"

Maximum grooving depths (T) in relation to workpiece diameters (ø*D* max) without interference

Maximum grooving depth (T) is limited relative to workpiece diameter (ø*D* max) to avoid interference between workpiece and insert.

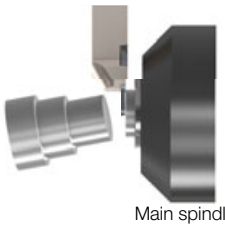
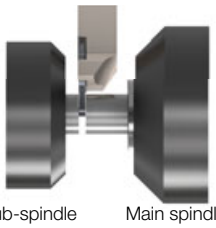
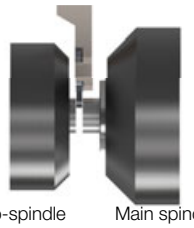


Grooving depths (T) and workpiece diameters (ø*D* max) for each insert

Designation	T≤0.039	T≤0.079	T≤0.098	T≤0.118	T≤0.138	T≤0.157	T≤0.197	T≤0.217	T≤0.236	T≤0.256	T≤0.276	T≤0.295	T≤0.315	T≤0.335	T≤0.354	T≤0.374	T≤0.394	T≤0.413
JXP*06...	∞	∞	7.874	2.362	1.181	-	-	-	-	-	-	-	-	-	-	-	-	-
JXP*12...	∞	∞	∞	∞	∞	∞	∞	3.937	2.362	1.378	-	-	-	-	-	-	-	-
JXP*16...	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	7.874	3.543	1.969	0.984	-	-	-	-
JXP*20...	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	7.874	3.150	1.969	0.984

(Unit: inch)

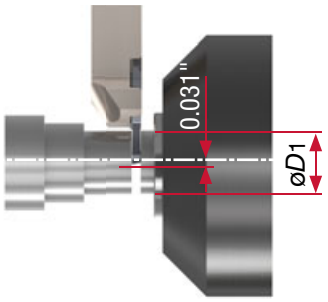
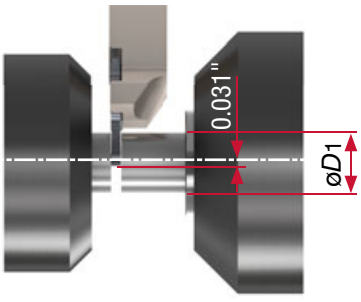
HOW TO SELECT TOOLS

	Large-diameter machining of workpiece with rigidity		Small-diameter machining of workpiece with short overhang	
			Sub-spindle tooling	
	Main-spindle tooling	Sub-spindle tooling	Workpiece with long overhang at the side of sub-spindle for the process after parting-off	Short workpiece with low rigidity
Application	 Main spindle Position of parting-off is at the side of the main spindle	 Sub-spindle Main spindle Position of parting-off is at the side of the sub-spindle	Sub-spindle Main spindle Position of parting-off is at the side of the main spindle	 Sub-spindle Main spindle Position of parting-off is at the side of the sub-spindle
Toolholder	R-hand (JSXXR type)	L-hand (JSXXL type)	R-hand (JSXXR-S type)	L-hand (JSXXL-S type)
Insert	Right-hand insert with lead angle to remove center core (JXPG**R***-15 type)	Left-hand insert (JXPG**L*** type)	Right-hand insert (JXPG**R*** type)	Left-hand insert (JXPG**L*** type)

HOW TO SELECT TOOLHOLDERS FOR SUB-SPINDLE

Sub-spindle dia.	Parting-off dia.	B	LF	Insert	Toolholder
ø1.575	- ø0.236	0.375	4.514	JXPG06*	JSXXR/L063-S
ø1.575	- ø0.236	0.500	4.514	JXPG06*	JSXXR/L083-S
ø1.575	- ø0.472	0.375	4.593	JXPG12*	JSXXR/L063-S
ø1.575	- ø0.472	0.500	4.593	JXPG12*	JSXXR/L083-S
ø1.575	- ø0.630	0.375	4.750	JXPG16*	JSXXR/L063-S
ø1.575	- ø0.630	0.500	4.750	JXPG16*	JSXXR/L083-S
ø1.575	- ø0.787	0.500	3.423	JXPG20*	JSXXR/L083F-S-CHP
ø1.969	- ø0.236	0.500	4.514	JXPG06*	JSXXR/L083-S
ø1.969	- ø0.236	0.625	4.514	JXPG06*	JSXXR/L103X-S-CHP
ø1.969	- ø0.472	0.500	4.593	JXPG12*	JSXXR/L083-S
ø1.969	- ø0.472	0.625	4.593	JXPG12*	JSXXR/L103X-S-CHP
ø1.969	- ø0.630	0.500	4.750	JXPG16*	JSXXR/L083-S
ø1.969	- ø0.630	0.500	4.750	JXPG16*	JSXXR/L083-S
ø1.969	- ø0.630	0.625	4.750	JXPG16*	JSXXR/L103X-S-CHP
ø1.969	- ø0.787	0.500	3.423	JXPG20*	JSXXR/L083F-S-CHP
ø1.969	- ø0.787	0.500	4.829	JXPG20*	JSXXR/L083X-S-CHP
ø1.969	- ø0.787	0.625	4.829	JXPG20*	JSXXR/L103X-S-CHP

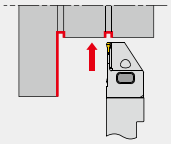
MAX. PARTING-OFF DIA. & DEPTH

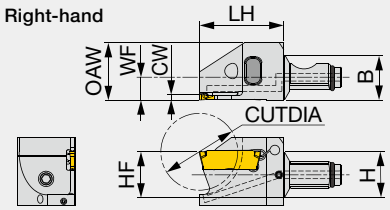
Main-spindle tooling	Sub-spindle tooling
 Main spindle	 Sub-spindle Main spindle

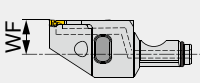
There will be no tool-workpiece interference when parting off the workpiece with the cutting edge position apart from the workpiece center by 0.031" or more.

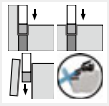
QC12-JTTER/L-CHP

Modular head for external grooving and parting, with high pressure coolant capability







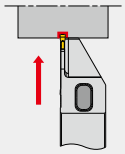


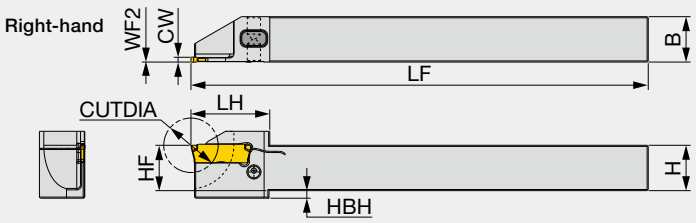
Metric	CW	Seat size	CUTDIA	H	B	LH	HF	WF (1)	OAW	Torque*
QC10-JTTER/L1.2D20-CHP	1.2 (0.047")	0.9	12 (0.472")	10 (0.625")	10 (0.625")	17/19 (0.669"/0.748")	10 (0.394")	5/8 (0.197"/0.315")	13 (0.512")	1.5 (1.11)
QC10-JTTER/L1.4D20-CHP	1.4 (0.055")	1	16 (0.630")	10 (0.625")	10 (0.625")	19 (0.748")	10 (0.394")	5/8 (0.197"/0.315")	13 (0.512")	1.5 (1.11)
QC12-JTTER/L1.2D20-CHP	1.2 (0.047")	0.9	20 (0.787")	12 (0.750")	12 (0.750")	22 (0.866")	12 (0.472")	6/9 (0.236"/0.354")	15 (0.591")	1.5 (1.11)
QC12-JTTER/L1.4D20-CHP	1.4 (0.055")	1	20 (0.787")	12 (0.750")	12 (0.750")	22 (0.866")	12 (0.472")	6/9 (0.236"/0.354")	15 (0.591")	1.5 (1.11)
QC12-JTTER/L2D20-CHP	2 (0.079")	2	20 (0.787")	12 (0.750")	12 (0.750")	22 (0.866")	12 (0.472")	6/9 (0.236"/0.354")	15 (0.591")	1.5 (1.11)

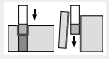
(1) "WF" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.
Torque: Recommended clamping torque: lbs·ft (*N·m)

JTTER/L

External grooving and parting toolholder, for Swiss lathes







Metric	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2(1)	HBH	Torque*
JTTER/L1010H1.2D12	1.2	0.9	12	10	10	100	17	10	0/10	-	1.5
JTTER/L1212F1.2D16	1.2	0.9	16	12	12	85	19	12	0/12	-	1.5
JTTER/L1212X1.2D16	1.2	0.9	16	12	12	120	19	12	0/12	-	1.5
JTTER/L1212X1.2D20	1.2	0.9	20	12	12	120	21	12	0/12	2	1.5
JTTER/L1616X1.2D20	1.2	0.9	20	16	16	120	21	16	0/16	-	2

(1) "WF" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF for the right-hand holder and the second value after "/" for the left-hand holder.
Torque*: Recommended clamping torque (N·m)

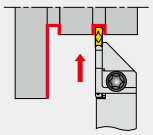
SPARE PARTS

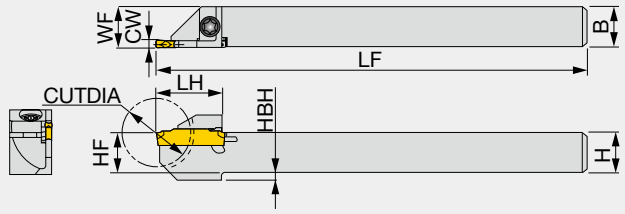
Designation	Clamping screw	Clamping pin	Wrench	O-ring
QC10-JTTER/L...	SSM3.5x0.35	PIN-SL-TC	P-2F	ORSS-0353.5X1.0NBR70
QC12-JTTER/L...	SSM3.5x0.35	PIN-SL-TC	P-2F	ORSS-0454.5X1.0NBR70
JTTER/L1010, 1212...	SSM3.5x0.35	PIN-SL-TC	P-2F	-
JTTER/L1616...	SRM5-24145-RL	PIN-32121	P-2.5F	-

Reference pages: QC12-JTTER/L-CHP, JCTER/L: Inserts → 6-116 - 6-123
Shank, Accessory → 3-130 - 3-132, Standard cutting conditions → 6-124

JCTER/L

External grooving and parting toolholder, for Swiss lathes





Right hand (R) shown.

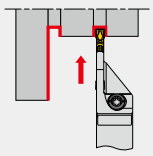
Inch	CW (in)	CW (mm)	Seat size	CUTDIA	H	B	LF	LH	HF	WF (1)	HBH	Torque
JCTER/L08-2T12	0.079	2	2	0.945	0.500	0.500	4.750	0.748	0.500	0.504	0.079	2.21
JCTER/L08-3T12	0.118	3	3	0.945	0.500	0.500	4.750	0.748	0.500	0.512	0.079	2.21
JCTER/L10-2T16	0.079	2	2	1.260	0.625	0.625	4.750	0.945	0.625	0.629	-	2.21
JCTER/L10-3T16	0.118	3	3	1.260	0.625	0.625	4.750	0.945	0.625	0.637	-	2.21

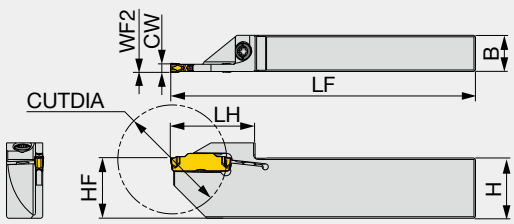
Metric	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF(1)	HBH	Torque*
JCTER/L1010X1.4T10	1.4	1	20	10	10	120	18	10	10.2	-	3
JCTER/L1212F1.4T12	1.4	1	24	12	12	85	19.5	12	12.2	-	3
JCTER/L1212X1.4T12	1.4	1	24	12	12	120	19.5	12	12.2	-	3
JCTER/L1414-1.4T12	1.4	1	24	14	14	125	19.5	14	14.2	-	3
JCTER/L1616X1.4T16	1.4	1	32	16	16	120	24	16	16.2	-	3
JCTER/L1010X2T10	2	2	20	10	10	120	19	10	10.1	2	3
JCTER/L1212F2T12	2	2	24	12	12	85	19	12	12.1	2	3
JCTER/L1212X2T12	2	2	24	12	12	120	19	12	12.1	2	3
JCTER/L1414-2T12	2	2	24	14	14	125	19	14	14.1	-	3
JCTER/L1616X2T16	2	2	32	16	16	120	24	16	16.1	-	3
JCTER/L1212F3T12	3	3	24	12	12	85	19	12	12.3	2	3
JCTER/L1212X3T12	3	3	24	12	12	120	19	12	12.3	2	3
JCTER/L1616X3T16	3	3	32	16	16	120	24	16	16.3	-	3
JCTER/L2020H3T16	3	3	32	20	20	100	24	20	20.3	-	3

(1) The value for "WF" is true when the insert with the width, indicated in "CW" in the table is mounted. • CUTDIA: Maximum parting-off diameter
Torque: Recommended clamping torque: lbs·ft (*N·m)

JCTER/L2012

External grooving and parting toolholder, for Swiss lathes





Right hand (R) shown.

Metric	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2(1)	Torque*
JCTER/L2012H2T18	2	2	36	20	12	100	25	20	0.1	3
JCTER/L2012H3T21	3	3	42	20	12	100	28	20	0.3	3

(1) "WF" value is calculated with groove width "CW" shown in the table. • CUTDIA: Max. parting diameter
Torque*: Recommended clamping torque (N·m)

SPARE PARTS

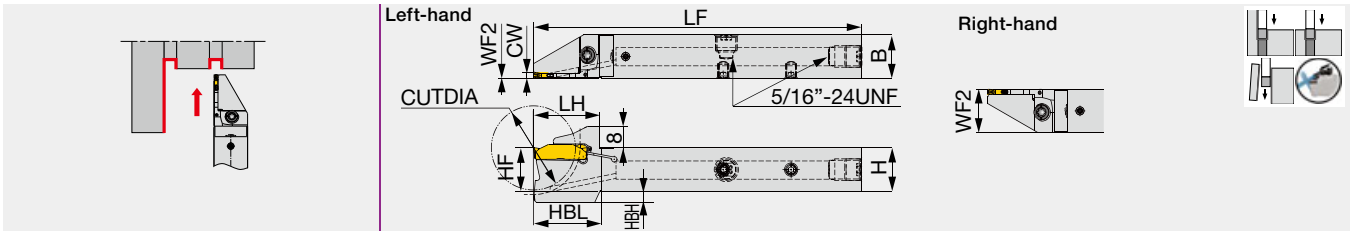
Designation	Clamping screw	Wrench
JCTER/L...,JCTER/L2012...	CSHB-4-A	T-15F

Reference pages: JCTER/L2012, CGER/L: Inserts → 6-116 - 6-123, Standard cutting conditions → 6-124

JCTER/L-CHP

Direct connection

External grooving and parting-off toolholder, high pressure coolant compatible



Inch	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2(1)	HBH	HBL	Torque
JCTER/L08X2T12-CHP	0.079	2	0.980	0.500	0.500	4.750	0.972	0.500	0 / 0.500	0.169	0.965	2.21
JCTER/L10X2T12-CHP	0.079	2	0.980	0.625	0.625	4.750	0.972	0.625	0 / 0.625	0.039	0.965	2.21
JCTER/L10X2T16-CHP	0.079	2	1.260	0.625	0.625	4.750	0.972	0.625	0 / 0.625	0.157	0.965	2.21
JCTER/L12X2T16-CHP	0.079	2	1.260	0.750	0.750	4.750	0.972	0.750	0 / 0.750	0.037	0.965	2.21

Metric	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2(1)	HBH	HBL	Torque*
JCTER/L1212X2T12-CHP	2	2	25	12	12	120	24.7	12	0/12	5	24.7	3
JCTER/L1616X2T12-CHP	2	2	25	16	16	120	24.7	16	0/16	1	24.5	3
JCTER/L1616X2T16-CHP	2	2	32	16	16	120	24.7	16	0/16	4	24.7	3
JCTER/L2020X2T16-CHP	2	2	32	20	20	120	24.7	20	0/20	-	-	3

(1) "WF2" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS

Designation	Clamping screw	Wrench	Coolant plug	Wrench	DirectJet plug	Wrench	Wrench (Option)
CGER/L2020-1.4T14	-	-	-	-	-	-	CRW23
CGER/L****-2T17 - 4T19	-	-	-	-	-	-	CRW33
JCTER/L...	CSHB-4-A	T-15F	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2	-

CHIPBREAKER GUIDE

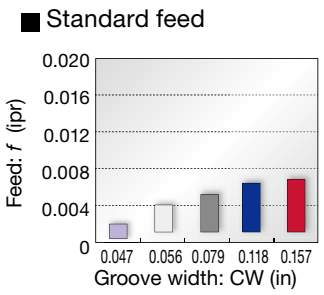
External grooving and parting

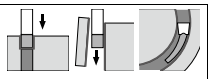
DGS type (2 corners)
SGS type (1 corner)

6-118, 6-121

For Swiss lathes

Unique-designed edge
and chipbreaker
Handed insert available
CW = 0.047" - 0.157"



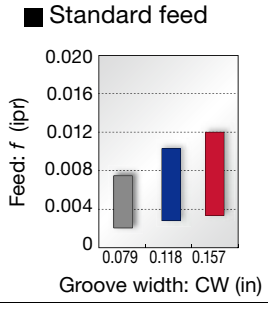


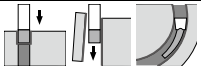
DGM type (2 corners)
SGM type (1 corner)

6-119, 6-120

High fracture resistance

Smooth chip evacuation
Well-designed edge with
high strength
Handed insert available
CW = 0.079" - 0.157"





Reference pages: JCTER/L-CHP: Inserts → 6-116 - 6-123
Standard cutting conditions → 6-119

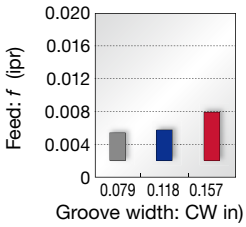
DGL type (2 corners)

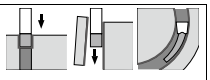
6-123

1st choice for mild steel

Chipbreaker with excellent chip control at low feed
Suitable for mild steel that often has difficulties in chip control
CW = 0.079" - 0.157"

■Standard feed





External grooving

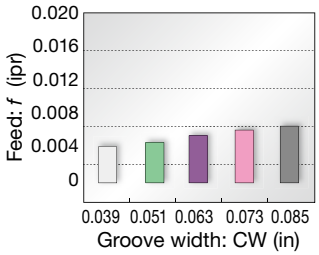
DGE type (2 corners)

6-122

For shallow grooves with high accuracy

Excellent chip control
CW = 1 - 2.15 mm
(0.039" - 0.085")

■Standard feed



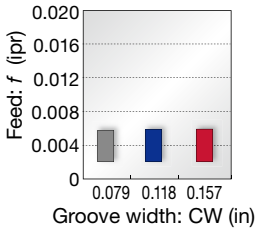
DGG type (2 corners)

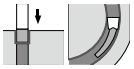
6-122

For non-ferrous materials and titanium alloys

Chipbreaker with low cutting force
Sharp cutting edge that prevents vibration and delivers fine surface finish
CW = 0.079" - 0.157"

■Standard feed





External grooving of hardened steels

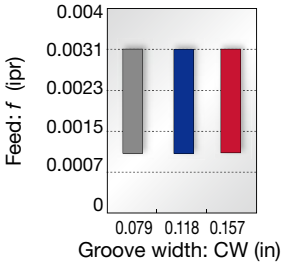
SGN-CBN type (1 corner)

6-123

For hardened steel cutting

Optimum cutting edge shape for grooving of hardened steels
Close tolerance width for finishing (W = ±0.001")
CW = 0.079" - 0.157"

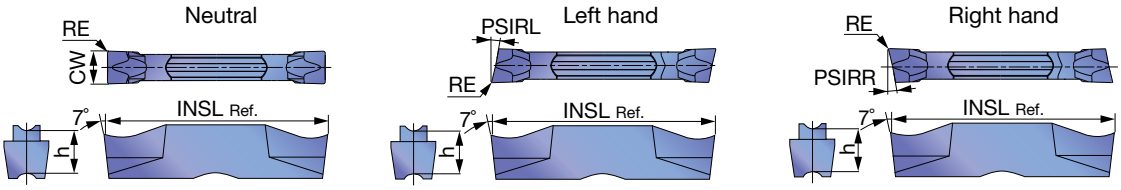
■Standard feed



Reference pages: Toolhoders → 6-114 - 6-116

DGS

External grooving and parting



		Coated						Cermet		Uncoated					
P	Steel	★	★	☆	★	☆	★	★							
M	Stainless		★	☆	★	★	★								
K	Cast iron		★		★	☆	★	☆		☆					
N	Non-ferrous									☆					
S	Superalloys		★	☆	★					★					
H	Hard materials														

★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530	KS05F	INSL (in)	h (in)	PSIRL	PSIRR
DGS1.2-003	0.9	N	1.2	0.047	0.001			●						0.630	0.185	0°	0°
DGS1.4-005	1	N	1.4	0.055	0.002			●						0.630	0.169	0°	0°
DGS1.4-010	1	N	1.4	0.055	0.004			●						0.630	0.169	0°	0°
DGS1.4-016	1	N	1.4	0.055	0.006		●	●		●				0.630	0.169	0°	0°
DGS2-005	2	N	2	0.079	0.002			●						0.787	0.197	0°	0°
DGS2-010	2	N	2	0.079	0.004			●						0.787	0.197	0°	0°
DGS2-020	2	N	2	0.079	0.008	●	●	●	●	●	●	●	●	0.787	0.197	0°	0°
DGS2-020-6R	2	R	2	0.079	0.008		●	●		●				0.787	0.197	0°	6°
DGS2-020-6L	2	L	2	0.079	0.008		●	●		●				0.787	0.197	6°	0°
DGS2-002-6R	2	R	2	0.079	0.001			●		●				0.768	0.197	0°	6°
DGS2-002-6L	2	L	2	0.079	0.001			●		●				0.768	0.197	6°	0°
DGS2-020-15R	2	R	2	0.079	0.008		●	●		●				0.787	0.197	0°	15°
DGS2-020-15L	2	L	2	0.079	0.008		●	●		●				0.787	0.197	15°	0°
DGS2-002-15R	2	R	2	0.079	0.001			●		●				0.768	0.197	0°	15°
DGS2-002-15L	2	L	2	0.079	0.001			●		●				0.768	0.197	15°	0°
DGS2.39-020	2	N	2.39	0.094	0.008		●		●		●			0.787	0.197	0°	0°
DGS3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	●	●	0.787	0.197	0°	0°
DGS3-020-6R	3	R	3	0.118	0.008		●	●		●				0.787	0.197	0°	6°
DGS3-020-6L	3	L	3	0.118	0.008		●	●		●				0.787	0.197	6°	0°
DGS3-002-6R	3	R	3	0.118	0.001			●		●				0.766	0.197	0°	6°
DGS3-002-6L	3	L	3	0.118	0.001			●		●				0.766	0.197	6°	0°
DGS3-020-15R	3	R	3	0.118	0.008		●	●		●				0.787	0.197	0°	15°
DGS3-020-15L	3	L	3	0.118	0.008		●	●		●				0.787	0.197	15°	0°
DGS3-002-15R	3	R	3	0.118	0.001			●		●				0.766	0.197	0°	15°
DGS3-002-15L	3	L	3	0.118	0.001			●		●				0.766	0.197	15°	0°
DGS3.18-020	3	N	3.18	0.125	0.008		●		●		●			0.787	0.197	0°	0°
DGS4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	●	●	0.787	0.197	0°	0°
DGS4-030-4R	4	R	4	0.157	0.012		●	●		●				0.787	0.197	0°	4°
DGS4-030-4L	4	L	4	0.157	0.012		●	●		●				0.787	0.197	4°	0°
DGS4.76-040	5	N	4.76	0.187	0.016		●		●		●			0.984	0.217	0°	0°
DGS5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	●	●	0.984	0.217	0°	0°
DGS6-030	6	N	6	0.236	0.012	●	●	●	●	●	●		●	0.984	0.217	0°	0°
DGS6.35-040	6	N	6.35	0.250	0.016		●		●		●			0.984	0.217	0°	0°
DGS8-040	8	N	8	0.315	0.016		●		●		●		●	1.181	0.264	0°	0°

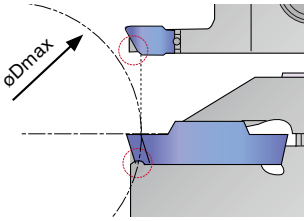
● : Line up

Caution

The tool will interfere with the workpiece when grooving larger diameters than øDmax.

Designation	øDmax (in)
DGM2-002-15R/L	1.102
DGM3-002-15R/L	1.142
DGM4-030-15R/L	1.181
SGM3-020-15R/L	4.055

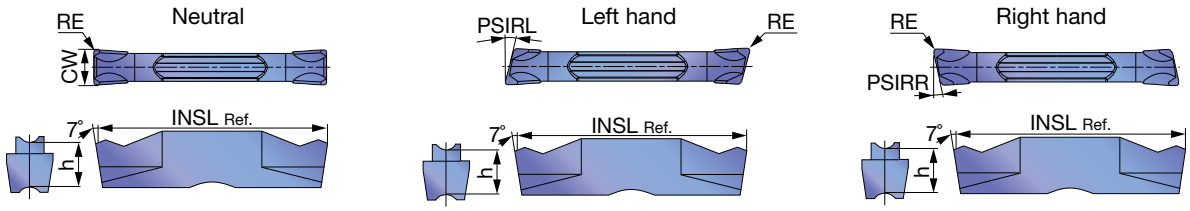
Designation	øDmax (in)
DGS2-002-15R/L	1.102
DGS3-002-15R/L	1.142
SGS3-020-15R/L	4.055
SGS3-002-15R/L	1.339



Reference pages: Toolhoders → 6-114 - 6-116, Standard cutting conditions → 6-124

DGM

External grooving and parting



P	Steel	★	★	☆	★		☆	★		★					
M	Stainless		★	☆	★		★	★							
K	Cast iron		★		★	☆	☆	★		☆			☆		
N	Non-ferrous												☆		
S	Superalloys		★	☆	★	★							★		
H	Hard materials														

★ : First choice
☆ : Second choice

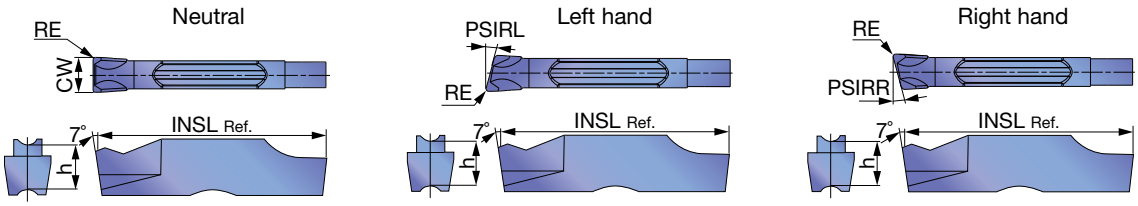
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet			Uncoated			INSL (in)	h (in)	PSIRL	PSIRR
						T9225	AH7025	AH725	AH8005	AH905	GH130	AH6235	NS9530			KS05F						
DGM2-020	2	N	2	0.079	0.008	●	●	●	●		●	●	●			●			0.787	0.197	0°	0°
DGM2-020-6R	2	R	2	0.079	0.008		●	●			●								0.787	0.197	0°	6°
DGM2-020-6L	2	L	2	0.079	0.008		●	●			●								0.787	0.197	6°	0°
DGM2-020-8R	2	R	2	0.079	0.008		●	●			●								0.787	0.197	0°	8°
DGM2-020-8L	2	L	2	0.079	0.008		●	●			●								0.787	0.197	8	0°
DGM2-020-15R	2	R	2	0.079	0.008		●	●			●								0.787	0.197	0°	15°
DGM2-020-15L	2	L	2	0.079	0.008		●	●			●								0.787	0.197	15°	0°
DGM2-002-15R	2	R	2	0.079	0.001			●			●								0.762	0.197	0°	15°
DGM2-002-15L	2	L	2	0.079	0.001			●			●								0.762	0.197	15°	0°
DGM2.39-020	2	N	2.39	0.094	0.008		●		●			●							0.787	0.197	0°	0°
DGM3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	●	●			●			0.787	0.197	0°	0°
DGM3-020-6R	3	R	3	0.118	0.008		●	●			●								0.787	0.197	0°	6°
DGM3-020-6L	3	L	3	0.118	0.008		●	●			●								0.787	0.197	6°	0°
DGM3-002-6R	3	R	3	0.118	0.001			●			●								0.766	0.197	0°	6°
DGM3-002-6L	3	L	3	0.118	0.001			●			●								0.766	0.197	6°	0°
DGM3-020-15R	3	R	3	0.118	0.008		●	●			●								0.787	0.197	0°	15°
DGM3-020-15L	3	L	3	0.118	0.008		●	●			●								0.787	0.197	15°	0°
DGM3.18-020	3	N	3.18	0.125	0.008		●		●			●							0.787	0.197	0°	0°
DGM4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	●	●			●			0.787	0.197	0°	0°
DGM4-030-4R	4	R	4	0.157	0.012		●	●			●								0.787	0.197	0°	4°
DGM4-030-4L	4	L	4	0.157	0.012		●	●			●								0.787	0.197	4°	0°
DGM4-030-15R	4	R	4	0.157	0.012		●	●			●								0.787	0.197	0°	15°
DGM4-030-15L	4	L	4	0.157	0.012		●	●			●								0.787	0.197	15°	0°
DGM4.76-040	5	N	4.76	0.187	0.016		●		●			●							0.984	0.217	0°	0°
DGM5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	●	●			●			0.984	0.217	0°	0°
DGM5-030-4R	5	R	5	0.197	0.012		●	●			●								0.984	0.217	0°	4°
DGM6-030	6	N	6	0.236	0.012	●	●	●	●	●	●	●				●			0.984	0.217	0°	0°
DGM6.35-040	6	N	6.35	0.250	0.016		●		●			●							0.984	0.217	0°	0°
DGM8-040	8	N	8	0.315	0.016	●	●	●	●		●	●				●			1.181	0.264	0°	0°

● : Line up

Reference pages: Toolhoders → 6-114 - 6-116, Standard cutting conditions → 6-124

SGM

External deep grooving and parting



P	Steel	★	☆	★	☆	☆						
M	Stainless	★	☆	★	★	★						
K	Cast iron	★		★	☆	☆		☆				
N	Non-ferrous							☆				
S	Superalloys	★	☆	★				★				
H	Hard materials											

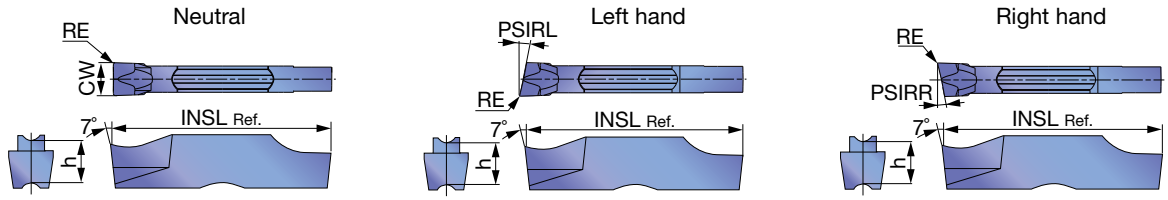
★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated					Uncoated				INSL (in)	h (in)	PSIRL	PSIRR
						AH7025	AH725	AH8005	GH130	AH6235	KS05F							
SGM2-020	2	N	2	0.079	0.008	●	●	●	●	●	●				0.787	0.197	0°	0°
SGM2-020-6R	2	R	2	0.079	0.008	●	●		●						0.787	0.197	0°	6°
SGM2-020-6L	2	L	2	0.079	0.008	●	●		●						0.787	0.197	6°	0°
SGM3-020	3	N	3	0.118	0.008	●	●	●	●	●	●				0.787	0.197	0°	0°
SGM3-020-6R	3	R	3	0.118	0.008	●	●		●						0.787	0.197	0°	6°
SGM3-020-6L	3	L	3	0.118	0.008	●	●		●						0.787	0.197	6°	0°
SGM3-020-15R	3	R	3	0.118	0.008	●	●		●						0.787	0.197	0°	15°
SGM3-020-15L	3	L	3	0.118	0.008	●	●		●						0.787	0.197	15°	0°
SGM4-030	4	N	4	0.157	0.012	●	●	●	●	●	●				0.787	0.197	0°	0°
SGM4-030-4R	4	R	4	0.157	0.012	●	●		●						0.787	0.197	0°	4°
SGM4-030-4L	4	L	4	0.157	0.012	●	●		●						0.787	0.197	4°	0°
SGM5-030	5	N	5	0.197	0.012	●	●	●	●	●	●				0.984	0.217	0°	0°
SGM6-030	6	N	6	0.236	0.012	●	●	●	●	●	●				0.984	0.217	0°	0°
SGM8-040	8	N	8	0.315	0.016	●		●		●	●				1.181	0.264	0°	0°

● : Line up

Reference pages: Toolhoders → 6-114 - 6-116, Standard cutting conditions → 6-124

External deep grooving and parting



		Coated					Uncoated											
		AH7025	AH725	AH8005	GH130	AH6235	KS05F											
P	Steel	★	☆	★	☆	★												
M	Stainless	★	☆	★	★	★												
K	Cast iron	★		★	☆	★	☆											
N	Non-ferrous						☆											
S	Superalloys	★	☆	★			★											
H	Hard materials																	

★ : First choice
☆ : Second choice

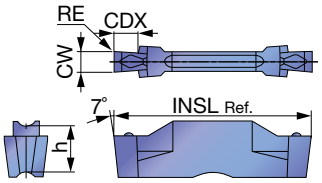
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	AH7025	AH725	AH8005	GH130	AH6235	KS05F	INSL (in)	h (in)	PSIRL	PSIRR
SGS2-020	2	N	2	0.079	0.008	●	●	●	●	●	●	0.787	0.197	0°	0°
SGS2-020-6R	2	R	2	0.079	0.008	●	●		●			0.787	0.197	0°	6°
SGS2-020-6L	2	L	2	0.079	0.008	●	●		●			0.787	0.197	6°	0°
SGS2-020-15R	2	R	2	0.079	0.008	●	●		●			0.787	0.197	0°	15°
SGS2-020-15L	2	L	2	0.079	0.008	●	●		●			0.787	0.197	15°	0°
SGS3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	0.787	0.197	0°	0°
SGS3-020-6R	3	R	3	0.118	0.008	●	●		●			0.787	0.197	0°	6°
SGS3-020-6L	3	L	3	0.118	0.008	●	●		●			0.787	0.197	6°	0°
SGS3-002-6R	3	R	3	0.118	0.001		●		●			0.780	0.197	0°	6°
SGS3-002-6L	3	L	3	0.118	0.001		●		●			0.780	0.197	6°	0°
SGS3-020-15R	3	R	3	0.118	0.008	●	●		●			0.787	0.197	0°	15°
SGS3-020-15L	3	L	3	0.118	0.008	●	●		●			0.787	0.197	15°	0°
SGS3-002-15R	3	R	3	0.118	0.001		●		●			0.780	0.197	0°	15°
SGS3-002-15L	3	L	3	0.118	0.001		●		●			0.780	0.197	15°	0°
SGS4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	0.787	0.197	0°	0°
SGS5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	0.984	0.217	0°	0°
SGS6-030	6	N	6	0.236	0.012	●	●	●	●	●	●	0.984	0.217	0°	0°
SGS8-040	8	N	8	0.315	0.016	●		●		●		1.181	0.264	0°	0°

● : Line up

Reference pages: Toolhoders → 6-114 - 6-116, Standard cutting conditions → 6-124

DGE

External grooving (for high precision)



P	Steel	★	☆	☆			★			
M	Stainless	★	☆	★						
K	Cast iron	★		☆			☆			
N	Non-ferrous									
S	Superalloys	★	☆							
H	Hard materials									

★ : First choice
☆ : Second choice

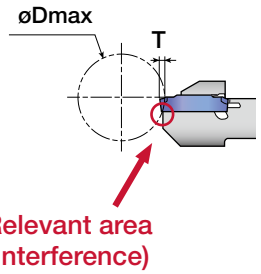
Designation	Seat size	CW±0.05 (mm)	CW±0.0008 (in)	RE (in)	Coated			Cermet		CDX (in)	INSL (in)	h (in)
					AH7025	AH725	GH130	NS9530				
DGE100-000	2	1	0.039	0		●	●	●		0.098	0.787	0.197
DGE130-000	2	1.3	0.051	0		●	●	●		0.098	0.787	0.197
DGE160-010	2	1.6	0.063	0.004	●	●	●	●		0.098	0.787	0.197
DGE185-010	2	1.85	0.073	0.004	●	●	●	●		0.138	0.787	0.197
DGE215-015	2	2.15	0.085	0.006	●	●	●	●		0.138	0.787	0.197

● : Line up

Caution

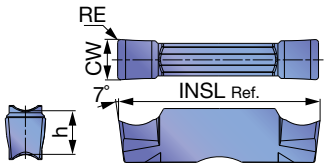
øDmax is limited as shown in the picture to the right according to the groove depth, G.D. Please refer to the following table. G.D = Groove depth

Designation	Max. groove depth (in)	øDmax (in)				
		T = 0.039	T = 0.059	T = 0.079	T = 0.098	T = 0.118
DGE100-000	0.079	∞	0.73	0.45	-	-
DGE130-000						
DGE160-010						
DGE185-010	0.118				0.35	0.28
DGE215-015						



DGG

External grooving (for high precision)



P	Steel	★			★					
M	Stainless	★								
K	Cast iron	★			☆		☆			
N	Non-ferrous						★			
S	Superalloys	★					☆			
H	Hard materials									

★ : First choice
☆ : Second choice

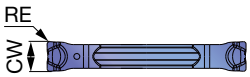
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated	Cermet	Uncoated			INSL (in)	h (in)
					AH7025	NS9530	KS05F				
DGG200-020	2	2	0.079	0.008	●	●	●			0.787	0.197
DGG300-020	3	3	0.118	0.008	●	●	●			0.787	0.197
DGG400-040	4	4	0.157	0.016	●	●	●			0.787	0.197
DGG500-040	5	5	0.197	0.016	●	●	●			0.984	0.217
DGG600-040	6	6	0.236	0.016	●	●	●			0.984	0.217

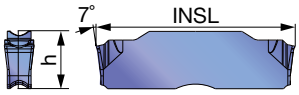
● : Line up

Reference pages: Toolhoders → 6-114 - 6-116, Standard cutting conditions → 6-124

DGL

External grooving and parting





P	Steel	★	★	★
M	Stainless	★	★	★
K	Cast iron	★	★	★
N	Non-ferrous			
S	Superalloys	★	★	
H	Hard materials			

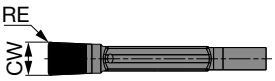
★ : First choice
☆ : Second choice

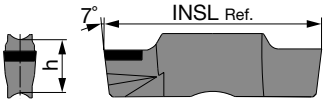
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH8005	Coated AH6235	INSL (in)	h (in)
DGL2-020	2	2	0.079	0.008	●	●	●	0.787	0.197
DGL3-025	3	3	0.118	0.010	●	●	●	0.787	0.197
DGL4-030	4	4	0.157	0.012	●	●	●	0.787	0.197
DGL5-030	5	5	0.197	0.012	●	●	●	0.984	0.217
DGL6-080	6	6	0.236	0.031	●	●	●	0.984	0.217

●: Line up

SGN

External grooving





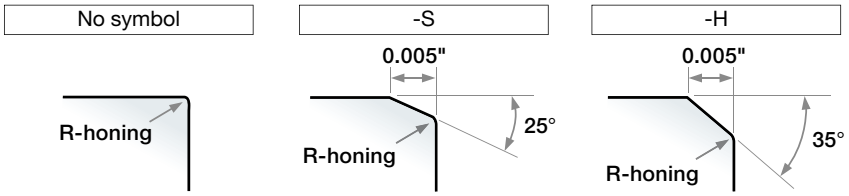
P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	
S	Superalloys	
H	Hard materials	★

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	CBN BX360	INSL (in)	h (in)	Edge prep. No symbol	Edge prep. S	Edge prep. H
SGN200-020	2	2	0.079	0.008	●	0.787	0.197	○		
SGN200-020-S	2	2	0.079	0.008	●	0.787	0.197		○	
SGN200-020-H	2	2	0.079	0.008	●	0.787	0.197			○
SGN300-020	3	3	0.118	0.008	●	0.787	0.197	○		
SGN300-020-S	3	3	0.118	0.008	●	0.787	0.197		○	
SGN300-020-H	3	3	0.118	0.008	●	0.787	0.197			○
SGN400-020	4	4	0.157	0.008	●	0.787	0.197	○		
SGN400-020-S	4	4	0.157	0.008	●	0.787	0.197		○	
SGN400-020-H	4	4	0.157	0.008	●	0.787	0.197			○
SGN500-020-S	5	5	0.197	0.008	●	0.984	0.217		○	
SGN500-020-H	5	5	0.197	0.008	●	0.984	0.217			○

●: Line up

■ Edge preparations



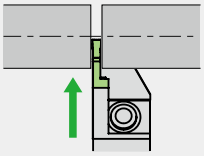
Reference pages: Toolhoders → 6-114 - 6-116, Standard cutting conditions → 6-124

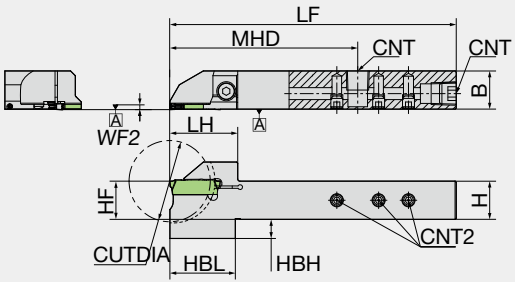
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 4135, etc.	< 300 HB	First choice	AH7025, AH725	164 - 591
		< 300 HB	Wear resistance	T9225, AH8005	262 - 984
		< 300 HB	Impact resistance	AH6235, GH130	164 - 394
		< 300 HB	Surface quality	NS9530	262 - 722
M	Stainless steel 304SS, 316SS, 17-4 PH, etc.	< 200 HB	First choice	AH7025, AH725	164 - 394
		< 200 HB	Wear resistance	AH8005	164 - 394
		< 200 HB	Impact resistance	AH6235, GH130	164 - 394
K	Gray cast iron Class 25, Class 30, etc.	-	First choice	T515	492 - 2297
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	164 - 591
	Ductile cast iron 60-40-18, 80-55-06, etc.	-	First choice	T515	492 - 984
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	164 - 394
N	Aluminum alloys Si < 12%	-	First choice	TH10	328 - 1640
		-	First choice	KS05F	328 - 1969
S	Superalloys Inconel718, etc.	< HRC 40	First choice	AH8005	66 - 197
		< HRC 40	Impact resistance	AH7025, AH725, AH6235	66 - 131
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	KS05F	66 - 328
		< HRC 40	Impact resistance	AH7025, AH725	66 - 262
H	Hardened steel 4137, etc.	> HRC 50	First choice	BX360	262 - 492

CTDPR/L-OH3 CUT DUO SPLASH

Direct connect coolant port 3-hole type





Right hand (R) shown.

Inch	CUTDIA	H	B	LF	LH	HBH	HBL	HF	MHD	WF2	CNT	CNT2	Insert
CTDPR10-IN-20D25-OH3	1.000	0.625	0.625	4.724	0.866	0.182	0.866	0.605	3.100	0.008	NPT1/8	M5	CTDP20..
CTDPR10-IN-25D34A-OH3	1.339	0.625	0.625	4.724	1.122	0.319	1.083	0.605	3.102	0.008	NPT1/8	M5	CTDP25..
CTDPL10-IN-20D25-OH3	1.000	0.625	0.625	4.724	0.866	0.182	0.866	0.605	3.100	0.008	NPT1/8	M5	CTDP20..
CTDPL10-IN-25D34A-OH3	1.339	0.625	0.625	4.724	1.122	0.319	1.083	0.605	3.102	0.008	NPT1/8	M5	CTDP25..

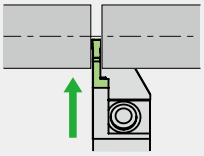
Metric	CUTDIA	H	B	LF	LH	HBH	HBL	HF	MHD	WF2	CNT	CNT2	Insert
CTDPR16-20D25-OH3	25.4	16	16	120	22	4.5	21	15.5	78.75	0.2	Rc1/8	M5	CTDP20..
CTDPR16-25D34A-OH3	34	16	16	120	28.5	8	27.5	15.5	78.8	0.2	Rc1/8	M5	CTDP25..
CTDPL16-20D25-OH3	25.4	16	16	120	22	4.5	21	16	78.75	0.2	Rc1/8	M5	CTDP20..
CTDPL16-25D34A-OH3	34	16	16	120	28.5	8	27.5	16	78.8	0.2	Rc1/8	M5	CTDP25..

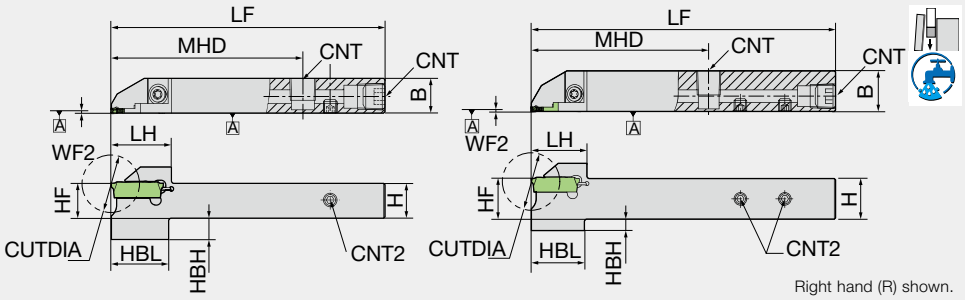
SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
CTDPR/L10-IN-20D25-OH3	LRIS-4*12	SPNPT1/8	SS0505SC	LLR-25S	LW-2.5
CTDPR/L10-IN-25D34A-OH3	CS0516LSH	SPNPT1/8	SS0505SC	LW-3	LW-2.5
CTDPR/L16-20D25-OH3	LRIS-4*12	SPR1/8L	SS0505SC	LLR-25S	LW-2.5
CTDPR/L16-25D34A-OH3	CS0516LSH	SPR1/8L	SS0505SC	LW-3	LW-2.5

CTDPR/L-OH2 CUT DUO SPLASH

Direct connect coolant port 1~2-hole type





Right hand (R) shown.

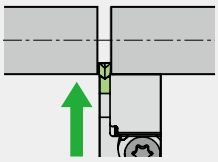
Inch	CUTDIA	H	B	LF	LH	HBH	HBL	HF	MHD	WF2	CNT	CNT2	Figure	Insert
CTDPR08-IN-20D25-OH2	1.000	0.500	0.500	3.937	0.866	0.307	0.827	0.500	2.756	0.008	NPT1/8	M5	1	CTDP20..
CTDPR10-IN-20D25-OH2	1.000	0.625	0.625	4.724	0.866	0.182	1.083	0.625	2.756	0.008	NPT1/8	M5	2	CTDP20..
CTDPR12-IN-25D32-OH2	1.260	0.750	0.750	4.724	1.122	0.157	1.083	0.750	2.953	0.008	-	-	1	CTDP25..
CTDPL08-IN-20D25-OH2	1.000	0.500	0.500	3.937	0.866	0.307	0.827	0.500	2.756	0.008	NPT1/8	M5	1	CTDP20..
CTDPL10-IN-20D25-OH2	1.000	0.625	0.625	4.724	0.866	0.182	1.083	0.625	2.756	0.008	NPT1/8	M5	2	CTDP20..
CTDPL12-IN-25D32-OH2	1.260	0.750	0.750	4.724	1.122	0.157	1.083	0.750	2.953	0.008	-	M5	1	CTDP25..

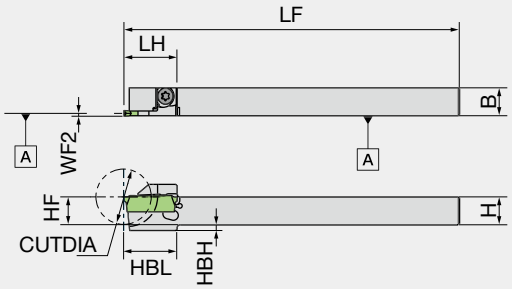
Metric	CUTDIA	H	B	LF	LH	HBH	HBL	HF	MHD	WF2	CNT	CNT2	Figure	Insert
CTDPR12-20D25-OH2	25.4	12	12	100	22	8.5	21	12	70	0.2	Rc1/8	M5	1	CTDP20..
CTDPR16-20D25-OH2	25.4	16	16	120	22	4.5	21	16	70	0.2	Rc1/8	M5	2	CTDP20..
CTDPR20-25D34A-OH2	34	20	20	120	28.5	4	27.5	20	75	0.2	Rc1/8	M5	1	CTDP25..
CTDPL12-20D25-OH2	25.4	12	12	100	22	8.5	21	12	70	0.2	Rc1/8	M5	1	CTDP20..
CTDPL16-20D25-OH2	25.4	16	16	120	22	4.5	21	16	70	0.2	Rc1/8	M5	2	CTDP20..
CTDPL20-25D34A-OH2	34	20	20	120	28.5	4	27.5	20	75	0.2	Rc1/8	M5	1	CTDP25..

SPARE PARTS

Designation	Clamp screw	Screw (for CNT)	Screw (for CNT2)	Wrench (for Clamp screw)	Wrench (for CNT2)
CTDPR/L08-IN-20D25-OH2	LRIS-4*12	SPNPT1/8	SS0505SC	LLR-25S	LW-2.5
CTDPR/L10-IN-20D25-OH2	LRIS-4*12	SPNPT1/8	SS0505SC	LLR-25S	LW-2.5
CTDPR/L12-IN-25D32-OH2	CS0516LSH	SPNPT1/8	SS0505SC	LW-3	LW-2.5
CTDPR/L12-20D25-OH2	LRIS-4*12	SPR1/8	SS0505SC	LLR-25S	LW-2.5
CTDPR/L16-20D25-OH2	LRIS-4*12	SPR1/8L	SS0505SC	LLR-25S	LW-2.5
CTDPR/L20-25D34A-OH2	CS0516LSH	SPR1/8	SS0505SC	LW-3	LW-2.5

Reference pages: Inserts → 6-127





Right hand (R) shown.

Inch	CUTDIA	H	B	LF	LH	HBH	HBL	HF	WF2	Insert
CTDPR06-IN-20D20	0.787	0.375	0.394	4.724	0.748	0.019	0.748	0.375	0.008	CTDP20..
CTDPR08-IN-20D25	1.000	0.500	0.500	4.724	0.866	-	-	0.500	0.008	CTDP25..
CTDPR10-IN-20D32	1.260	0.625	0.625	4.724	1.083	-	-	0.625	0.008	CTDP20..
CTDPR12-IN-20D32	1.260	0.750	0.750	4.724	1.083	-	-	0.750	0.008	CTDP25..
CTDPL06-IN-20D20	0.787	0.375	0.394	4.724	0.748	0.019	0.748	0.375	0.008	CTDP20..
CTDPL08-IN-20D25	1.000	0.500	0.500	4.724	0.866	-	-	0.500	0.008	CTDP20..
CTDPL10-IN-20D32	1.260	0.625	0.625	4.724	1.083	-	-	0.625	0.008	CTDP20..
CTDPL12-IN-20D32	1.260	0.750	0.750	4.724	1.083	-	-	0.750	0.008	CTDP20..

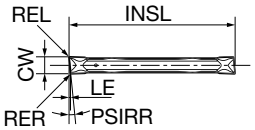
Metric	CUTDIA	H	B	LF	LH	HBH	HBL	HF	WF2	Insert
CTDPR10-20D20	20	10	10	120	19	2	19	10	0.2	CTDP20..
CTDPR12-20D20	20	12	12	120	19	–	–	12	0.2	CTDP20..
CTDPR12-20D25	25.4	12	12	120	22	–	–	12	0.2	CTDP20..
CTDPR16-20D25	25.4	16	16	120	22	–	–	16	0.2	CTDP20..
CTDPR16-20D32A	32	16	16	120	27.5	–	–	16	0.2	CTDP20..
CTDPR16-25D34A	34	16	16	120	28.5	–	–	16	0.2	CTDP25..
CTDPR2012-20D32A	32	20	12	120	29.5	–	–	20	0.2	CTDP20..
CTDPR2012-25D34A	34	20	12	120	29.5	–	–	20	0.2	CTDP25..
CTDPR20-20D32A	32	20	20	120	29.5	–	–	20	0.2	CTDP20..
CTDPR20-25D34A	34	20	20	120	29.5	–	–	20	0.2	CTDP25..
CTDPL10-20D20	20	10	10	120	19	2	19	10	0.2	CTDP20..
CTDPL12-20D20	20	12	12	120	19	–	–	12	0.2	CTDP20..
CTDPL12-20D25	25.4	12	12	120	22	–	–	12	0.2	CTDP20..
CTDPL16-20D25	25.4	16	16	120	22	–	–	16	0.2	CTDP20..
CTDPL16-20D32A	32	16	16	120	27.5	–	–	16	0.2	CTDP20..
CTDPL16-25D34A	34	16	16	120	28.5	–	–	16	0.2	CTDP25..
CTDPL2012-20D32A	32	20	12	120	29.5	–	–	20	0.2	CTDP20..
CTDPL2012-25D34A	34	20	12	120	29.5	–	–	20	0.2	CTDP25..
CTDPL20-20D32A	32	20	20	120	29.5	–	–	20	0.2	CTDP20..
CTDPL20-25D34A	34	20	20	120	29.5	–	–	20	0.2	CTDP25..

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CTDPR/L06-IN-20D20	LRIS-4*12	LLR-25S
CTDPR/L08-IN-20D25	LRIS-4*12	LLR-25S
CTDPR/L10-IN-20D32	LRIS-5*10	LLR-28S
CTDPR/L12-IN-20D32	LRIS-5*10	LLR-28S
CTDPR/L10-20D20	LRIS-4*12	LLR-25S
CTDPR/L12-20D20	LRIS-4*12	LLR-25S
CTDPR/L12-20D25	LRIS-4*12	LLR-25S
CTDPR/L16-20D25	LRIS-4*12	LLR-25S
CTDPR/L**D32A	LRIS-5*10	LLR-28S
CTDPR/L**D34A	CS0516LSH	LW-3

Reference pages: Inserts → 6-127

CTDP20/25 CUT DUO



P	Steel	☆	★	★	☆
M	Stainless	★	☆		☆
N	Non-ferrous				★
S	Superalloys	★	☆		
H	Hard materials	☆	★		

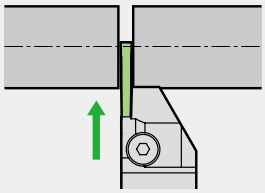
★ : First choice
☆ : Second choice

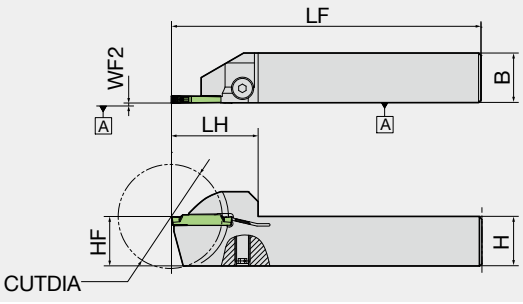
Designation	Coated				CW (mm)	CW (in)	INSL (in)	PSIRR	REL (in)	RER (in)	LE (in)
	DM4	QM3	ST4	TM4							
CTDP20N	●	●	●	●	2	0.079	0.752	–	0.002	0.002	–
CTDP20N02	●	●	●	●	2	0.079	0.752	–	0.008	0.008	–
CTDP25N	●	●	●	●	2.5	0.098	0.835	–	0.002	0.002	–
CTDP25N02	●	●	●	●	2.5	0.098	0.835	–	0.008	0.008	–
CTDP20R6	●	●	●	●	2	0.079	0.752	6°	0.002	0.002	0.009
CTDP25R6	●	●	●	●	2.5	0.098	0.835	6°	0.002	0.002	0.011
CTDP20R15	●	●	●	●	2	0.079	0.752	15°	0.002	0.002	0.022
CTDP25R15	●	●	●	●	2.5	0.098	0.835	15°	0.002	0.002	0.028

● : Line up

Reference pages: Toolholders → 6-125, 6-126

CTWPR/L CUT DUO EXTRA





Right hand (R) shown.

Inch	CUTDIA	H	B	LF	LH	HF	WF2	Insert
CTWPR12-IN-3D42	1.654	0.750	0.750	5.000	1.378	0.750	0.010	GWPFM300..
CTWPR16-IN-3D42	1.654	1.000	1.000	6.000	1.378	1.000	0.010	GWPFM300..
CTWPL12-IN-3D42	1.654	0.750	0.750	5.000	1.378	0.750	0.010	GWPFM300..
CTWPL16-IN-3D42	1.654	1.000	1.000	6.000	1.378	1.000	0.010	GWPFM300..

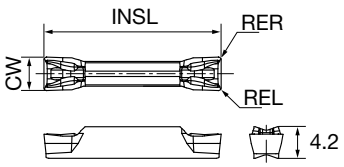
Metric	CUTDIA	H	B	LF	LH	HF	WF2	Insert
CTWPR2012K-3D42	42	20	12	125	35	20	0.25	GWPFM300..
CTWPR2020K-3D42	42	20	20	125	35	20	0.25	GWPFM300..
CTWPL2012K-3D42	42	20	12	125	35	20	0.25	GWPFM300..
CTWPL2020K-3D42	42	20	20	125	35	20	0.25	GWPFM300..

SPARE PARTS

Designation	Clamp screw	Wrench (for Clamp screw)
CTWPR/L12-IN-3D42	CS0619LSHW	LW-3
CTWPR/L16-IN-3D42	CS0623LSHW	LW-4
CTWPR20**-3D42	CS0623LSHW	LW-3

INSERT

GWPFM



P	Steel	★	
M	Stainless	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials	☆	

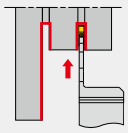
★ : First choice
☆ : Second choice

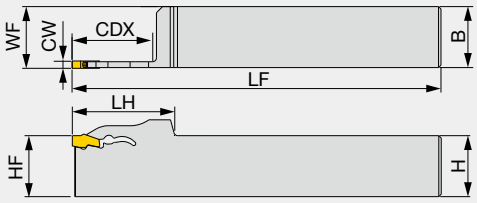
Designation	Coated DM4	CW (in)	CW (mm)	INSL (in)	REL (in)	RER (in)
GWPFM300N02-GT	●	3	0.118	0.965	0.008	0.008
GWPFM300N04-GT	●	3	0.118	0.965	0.016	0.016

● : Line up

QSER/L

External toolholders for grooving and parting





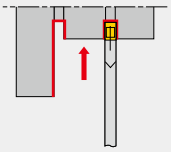
Right hand (R) shown.

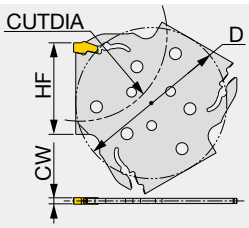
Inch	CW	CDX	Seat size	H	B	LF	LH	HF	WF
QSER/L12-2T26	0.079	1.024	2	0.750	0.750	5.000	1.417	0.750	0.756
QSER/L12-2T33	0.079	1.299	2	0.750	0.750	5.000	1.654	0.750	0.756
QSER/L16-2T26	0.079	1.024	2	1.000	1.000	6.000	1.417	1.000	1.004
QSER/L16-2T33	0.079	1.299	2	1.000	1.000	6.000	1.654	1.000	1.004
QSER/L12-3T26	0.118	1.024	3	0.750	0.750	5.000	1.417	0.750	0.764
QSER/L12-3T33	0.118	1.299	3	0.750	0.750	5.000	1.654	0.750	0.764
QSER/L16-3T26	0.118	1.024	3	1.000	1.000	6.000	1.417	1.000	1.012
QSER/L16-3T33	0.118	1.299	3	1.000	1.000	6.000	1.654	1.000	1.012
QSER/L12-4T33	0.157	1.299	4	0.750	0.750	5.000	1.654	0.750	0.768
QSER/L16-4T33	0.157	1.299	4	1.000	1.000	6.000	1.654	1.000	1.016
QSER/L16-5T33	0.197	1.299	5	1.000	1.000	6.000	1.654	1.000	1.020

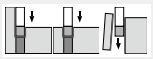
Metric	CW	CDX	Seat size	H	B	LF	LH	HF	WF
QSER/L2020-2T26	2	26	2	20	20	125	36	20	20.1
QSER/L2020-2T33	2	33	2	20	20	125	42	20	20.1
QSER/L2020-3T26	3	26	3	20	20	125	36	20	20.3
QSER/L2020-3T33	3	33	3	20	20	125	42	20	20.3
QSER/L2020-4T33	4	33	4	20	20	125	42	20	20.4

QSG

Parting-off and external grooving blade



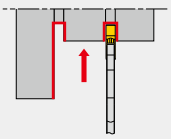


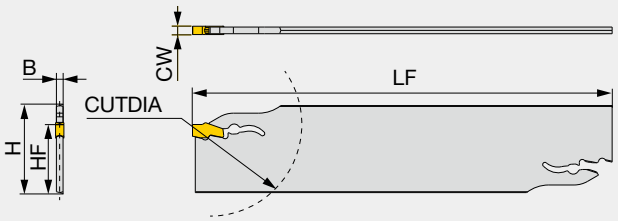


Metric	CW	Seat size	CUTDIA	HF	D
QSG52-2T	2	2	52	27	48.3
QSG82-2T	2	2	82	42	69.3
QSG52-3T	3	3	52	27	48.3
QSG82-3T	3	3	82	42	69.3
QSG52-4T	4	4	52	27	69.3
QSG82-4T	4	4	82	42	69.3

QSP

Blades for external deep grooving and parting





Metric	CW	CUTDIA	Seat size	H	B	LF	HF
QSP26-2D	2	50	2	26	1.8	150	21.4
QSP32-2D	2	66	2	32	1.8	150	24.8
QSP26-3D	3	75	3	26	2.4	150	21.4
QSP32-3D	3	120	3	32	2.4	150	24.8
QSP26-4D	4	80	4	26	3.2	150	21.4
QSP32-4D	4	120	4	32	3.2	150	24.9
QSP32-5D	5	120	5	32	4	150	24.9

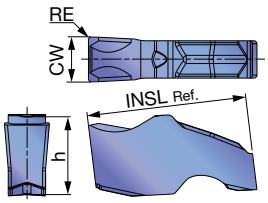
SPARE PARTS

Designation	Wrench
QSER/L..., QSG..., QSP...	QL-39

Reference pages: Inserts → 6-130, Standard cutting conditions → 6-131

QGM

External deep grooving and parting



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

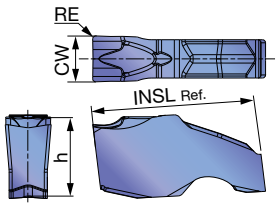
★ : First choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
QGM2-020	2	2	0.079	0.008	●	0.433	0.209
QGM3-020	3	3	0.118	0.008	●	0.433	0.209
QGM4-030	4	4	0.157	0.012	●	0.512	0.287
QGM5-030	5	5	0.197	0.012	●	0.512	0.287

●: Line up

QGS

External deep grooving and parting



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
QGS2-020	2	2	0.079	0.008	●	0.433	0.209
QGS3-020	3	3	0.118	0.008	●	0.433	0.209
QGS4-030	4	4	0.157	0.012	●	0.512	0.287
QGS5-030	5	5	0.197	0.012	●	0.512	0.287

●: Line up

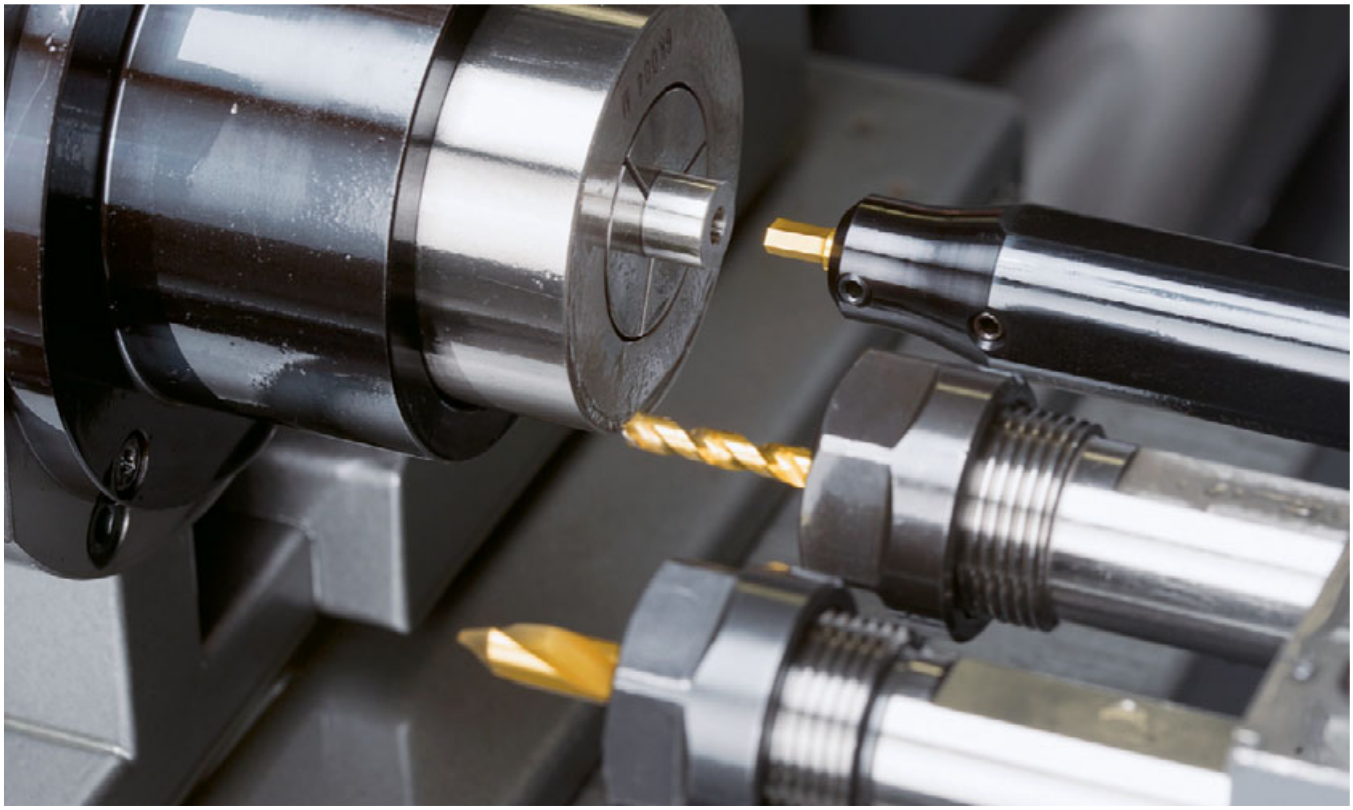
Reference pages: Toolholders → 6-129

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Grade	Cutting speed *Vc* (sfm)
P	Steels 1045, 4140, etc.	< 300 HB	AH7025	164 - 591
M	Stainless steel 304, etc.	< 200 HB	AH7025	164 - 394
K	Gray cast iron No.250B, etc.	-	AH7025	164 - 591
	Ductile cast irons 65-45-12, etc.	-	AH7025	164 - 394
S	Superalloys Inconel718, etc.	< HRC 40	AH7025	66 - 197
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	AH7025	66 - 262

7. Shaper

SHAPER DUO



For socket hole machining on CNC automatic lathes

Hexagon, square and hexalobular socket machining can be achieved at a low cost and without any special equipment.

Wide range of socket styles and sizes can be machined by using the sub-spindle of automatic lathes.

Features

- Machine square, hexagon, and hexalobular socket holes
- Less tool pressure than Rotary-Broaching. Ideal for machining small diameter work pieces
- Wide range of socket dimensions can be machined with one size of SHAPER DUO
- Special workpieces and small quantity part runs can be machined with less tool costs

Hexalobular Socket

Hexagon Socket

Square Socket

Features

Comparison Chart of Hexalobular Socket Machining

	Tool Pressure	Cycle Time	Tool Cost	High speed spindle	Programming	
SHAPER DUO	◎	◎	◎	Not necessary	Simple	• No high speed spindle needed • A lot less cycle time
End mill	○	×	△	Necessary	Complicated	• Need high speed spindle • Time consuming process

*Small diameter end mill driven by high-speed spindle is popular way to create Hexalobular(6-lobe) socket.
It has some flexibility but needs high speed spindle unit and it is a time consuming process.
*SHAPER DUO can make Hexalobular(6-lobe) socket faster and simpler.

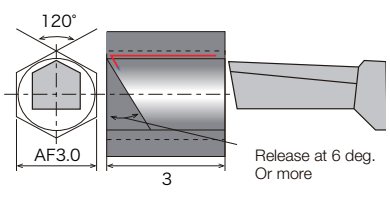
Comparison Chart of HEX Socket Machining

	Tool Pressure	Cycle Time	Tool Cost	High speed spindle	
SHAPER DUO	◎	△ ※Can be off-set by over-lapping operation	○	◎	• Less tool pressure-especially on small diameter parts • One size can cover several socket sizes
Rotary-broaching	△	○	×	○	• Need to have tools for each socket size

*Rotary-broaching is an efficient way to machine a Hexagon socket.
But tool pressure is high and often times it pushes part too hard.
*SHAPER DUO system enables less tool pressure and provides better tolerance with less cost.

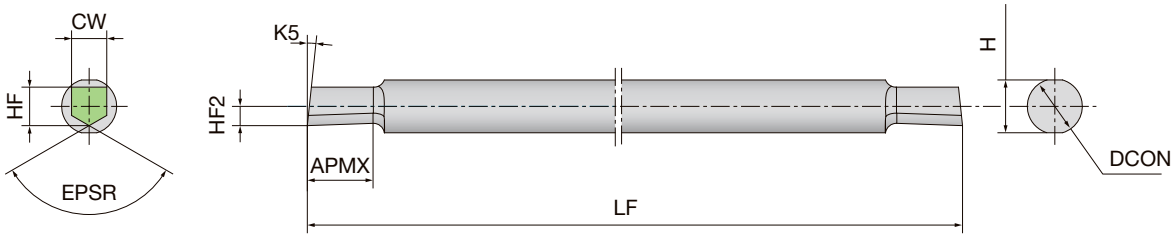
Example of machining Hexagon socket

SHAPER DUO has better tool life compared to the competitor which has an immediate worn and rounded cutting edge.
NTK's special grinding process and TM4 grade enable to:
① Keep good corner edge sharpness and long tool life
② Provide better tolerance and accuracy
③ Provide better surface quality

Work materials	SUS303		**TM4 SSP030N1940H**	**10,000 pcs / corner**
Feed	2,000 mm/min			
Depth of cut (ap)	Roughing 0.025mm			
	Finishing 0.005mm		Competitor's carbide inserts	300 pcs / corner
Coolant	WET			

SSP-H

Hexagon Socket



Inch

P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	Coated TM4	Base AF L4 (in)	AF range L5 (in)	EPSR (in)	DCON (in)	APMX (in)	H (in)	LF (in)	CW (in)	HF (in)	HF2 (in)	K5
SSP020N06515H	●	0.039	0.039 - 0.043	120°	0.079	0.059	0.071	1.969	0.026	0.028	0.014	15°
SSP020N07018H	●	0.043	0.043 - 0.047	120°	0.079	0.071	0.071	1.969	0.028	0.031	0.016	15°
SSP020N07518H	●	0.047	0.047 - 0.051	120°	0.079	0.071	0.071	1.969	0.030	0.035	0.018	15°
SSP020N08020H	●	0.051	0.051 - 0.055	120°	0.079	0.079	0.071	1.969	0.031	0.039	0.020	15°
SSP020N1130H	●	0.059	0.055 - 0.075	120°	0.079	0.118	0.071	1.969	0.043	0.035	0.018	6°
SSP020N1430H	●	0.079	0.071 - 0.098	120°	0.079	0.118	0.071	1.969	0.055	0.047	0.024	6°
SSP030N1940H	●	0.118	0.091 - 0.138	120°	0.118	0.157	0.110	1.969	0.075	0.059	0.030	6°
SSP040N2450H	●	0.157	0.130 - 0.177	120°	0.157	0.197	0.150	2.362	0.094	0.098	0.049	6°
SSP050N3260H	●	0.197	0.169 - 0.240	120°	0.197	0.236	0.189	2.756	0.126	0.130	0.065	6°
SSP060N42120H	●	0.236	0.209 - 0.319	120°	0.236	0.472	0.220	3.150	0.165	0.157	0.079	6°
SSP080N62160H	●	0.315	0.287 - 0.476	120°	0.315	0.630	0.299	3.150	0.244	0.193	0.096	6°

● : Line up

Metric

P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

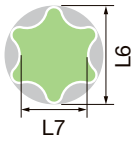
Designation	Coated TM4	Base AF (mm) L4	AF range (mm) L5	EPSR (mm)	DCON (mm)	APMX (mm)	H (mm)	LF (mm)	CW (mm)	HF (mm)	HF2 (mm)	K5
SSP020N06515H	●	1	1 - 1.1	120°	2	1.5	1.8	50	0.65	0.7	0.35	15°
SSP020N07018H	●	1.1	1.1 - 1.2	120°	2	1.8	1.8	50	0.7	0.8	0.4	15°
SSP020N07518H	●	1.2	1.2 - 1.3	120°	2	1.8	1.8	50	0.75	0.9	0.45	15°
SSP020N08020H	●	1.3	1.3 - 1.4	120°	2	2	1.8	50	0.8	1	0.5	15°
SSP020N1130H	●	1.5	1.4 - 1.9	120°	2	3	1.8	50	1.1	0.9	0.45	6°
SSP020N1430H	●	2	1.8 - 2.5	120°	2	3	1.8	50	1.4	1.2	0.6	6°
SSP030N1940H	●	3	2.3 - 3.5	120°	3	4	2.8	50	1.9	1.5	0.75	6°
SSP040N2450H	●	4	3.3 - 4.5	120°	4	5	3.8	60	2.4	2.5	1.25	6°
SSP050N3260H	●	5	4.3 - 6.1	120°	5	6	4.8	70	3.2	3.3	1.65	6°
SSP060N42120H	●	6	5.3 - 8.1	120°	6	12	5.6	80	4.2	4	2	6°
SSP080N62160H	●	8	7.3 - 12.1	120°	8	16	7.6	80	6.2	4.9	2.45	6°

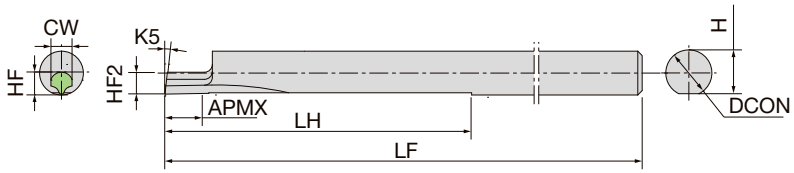
● : Line up

Reference pages: Toolholders → 4-47 - 4-53

SSP-T

Hexalobular Socket





Inch

P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	Coated TM4	Socket size	Socket number	L6 (in)	L7 (in)	Recommended Pilot bore Dia. (in)	DCON (in)	APMX (in)	H (in)	LF (in)	LH (in)	CW (in)	HF (in)	HF2 (in)	K5
SSP050N25T06	●	T6	6	0.069	0.050	0.045	0.197	0.098	0.187	2.756	1.378	0.047	0.043	0.094	6°
SSP050N31T07	●	T7	–	–	–	0.054	0.197	0.122	0.187	2.756	1.378	0.055	0.051	0.094	6°
SSP050N36T08	●	T8	8	0.094	0.069	0.064	0.197	0.142	0.187	2.756	1.378	0.063	0.059	0.094	6°
SSP050N41T10	●	T10	10	0.110	0.081	0.076	0.197	0.161	0.187	2.756	1.378	0.071	0.067	0.094	6°
SSP050N43T15	●	T15	15	0.132	0.094	0.091	0.197	0.169	0.187	2.756	1.378	0.087	0.083	0.094	6°
SSP050N46T20	●	T20	20	0.156	0.112	0.107	0.197	0.181	0.187	2.756	1.378	0.102	0.098	0.094	6°
SSP050N50T25	●	T25	25	0.177	0.128	0.123	0.197	0.197	0.187	2.756	1.378	0.118	0.114	0.094	6°
SSP050N55T27	●	T27	–	–	–	0.139	0.197	0.217	0.187	2.756	1.378	0.134	0.130	0.094	6°
SSP050N55T30	●	T30	30	0.220	0.159	0.154	0.197	0.217	0.187	2.756	1.378	0.150	0.146	0.094	6°

● : Line up

Metric

P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

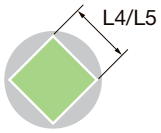
Designation	Coated TM4	Socket size	Socket number	L6 (mm)	L7 (mm)	Recommended Pilot bore Dia. (mm)	DCON (mm)	APMX (mm)	H (mm)	LF (mm)	LH (mm)	CW (mm)	HF (mm)	HF2 (mm)	K5
SSP050N25T06	●	T6	6	1.75	1.27	1.15	5	2.5	4.75	70	35	1.2	1.09	2.4	6°
SSP050N31T07	●	T7	–	–	–	1.38	5	3.1	4.75	70	35	1.4	1.29	2.4	6°
SSP050N36T08	●	T8	8	2.4	1.75	1.62	5	3.6	4.75	70	35	1.6	1.5	2.4	6°
SSP050N41T10	●	T10	10	2.8	2.05	1.92	5	4.1	4.75	70	35	1.8	1.7	2.4	6°
SSP050N43T15	●	T15	15	3.35	2.4	2.3	5	4.3	4.75	70	35	2.2	2.1	2.4	6°
SSP050N46T20	●	T20	20	3.95	2.85	2.71	5	4.6	4.75	70	35	2.6	2.5	2.4	6°
SSP050N50T25	●	T25	25	4.5	3.25	3.13	5	5	4.75	70	35	3	2.9	2.4	6°
SSP050N55T27	●	T27	–	–	–	3.52	5	5.5	4.75	70	35	3.4	3.3	2.4	6°
SSP050N55T30	●	T30	30	5.6	4.05	3.91	5	5.5	4.75	70	35	3.8	3.7	2.4	6°

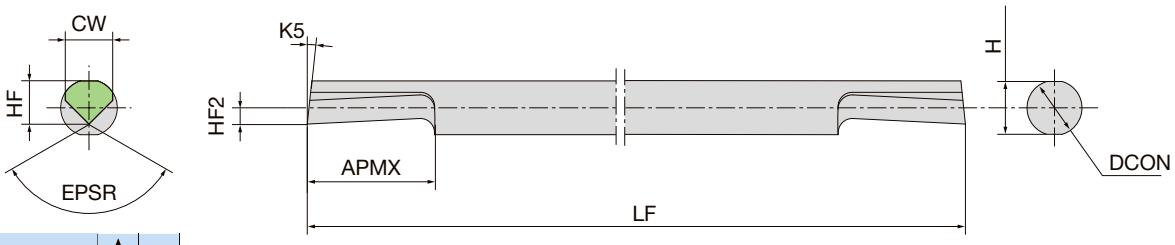
● : Line up

Reference pages: Toolholders → 4-47 - 4-53

SSP-S

Square Socket





Inch

P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	Coated TM4	Base AF L4 (in)	AF range L5 (in)	EPSR	DCON (in)	APMX (in)	H (in)	LF (in)	CW (in)	HF (in)	HF2 (in)	K5
SSP020N1740S	●	0.079	0.079 - 0.091	90°	0.079	0.157	0.071	1.969	0.067	0.063	0.028	6°
SSP025N1940S	●	0.098	0.091 - 0.102	90°	0.098	0.157	0.091	1.969	0.077	0.071	0.026	6°
SSP030N2260S	●	0.118	0.102 - 0.118	90°	0.118	0.236	0.110	1.969	0.087	0.081	0.026	6°
SSP035N2760S	●	0.138	0.114 - 0.146	90°	0.138	0.236	0.130	2.362	0.106	0.089	0.024	6°
SSP040N3380S	●	0.157	0.146 - 0.177	90°	0.157	0.315	0.150	2.362	0.132	0.120	0.045	6°
SSP050N39100S	●	0.197	0.177 - 0.209	90°	0.197	0.394	0.189	2.756	0.154	0.156	0.061	6°
SSP060N47120S	●	0.236	0.209 - 0.256	90°	0.315	0.472	0.220	3.150	0.187	0.177	0.067	6°
SSP080N58160S	●	0.315	0.256 - 0.315	90°	0.315	0.630	0.299	3.150	0.228	0.217	0.067	6°

● : Line up

Metric

P	Steel	★	
M	Stainless	★	
N	Non-ferrous	★	
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

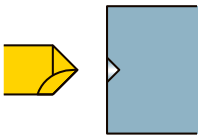
Designation	Coated TM4	Base AF (mm) L4	AF range (mm) L5	EPSR (mm)	DCON (mm)	APMX (mm)	H (mm)	LF (mm)	CW (mm)	HF (mm)	HF2 (mm)	K5
SSP020N1740S	●	2	2 - 2.3	90°	2	4	1.8	50	1.7	1.6	0.7	6°
SSP025N1940S	●	2.5	2.3 - 2.6	90°	2.5	4	2.3	50	1.95	1.8	0.65	6°
SSP030N2260S	●	3	2.6 - 3	90°	3	6	2.8	50	2.2	2.05	0.65	6°
SSP035N2760S	●	3.5	2.9 - 3.7	90°	3.5	6	3.3	60	2.7	2.25	0.6	6°
SSP040N3380S	●	4	3.7 - 4.5	90°	4	8	3.8	60	3.35	3.05	1.15	6°
SSP050N39100S	●	5	4.5 - 5.3	90°	5	10	4.8	70	3.9	3.95	1.55	6°
SSP060N47120S	●	6	5.3 - 6.5	90°	8	12	5.6	80	4.75	4.5	1.7	6°
SSP080N58160S	●	8	6.5 - 8	90°	8	16	7.6	80	5.8	5.5	1.7	6°

● : Line up

Reference pages: Toolholders → 4-47 - 4-53

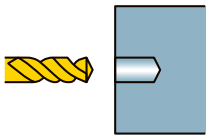
Machining Procedure

① Center drilling



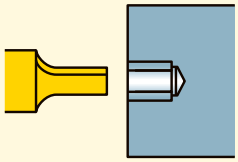
Make a center hole which is smaller than pilot hole drill.

② Drilling (Pilot hole)



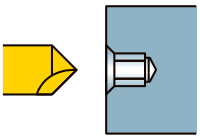
Select a drill with same or smaller (0 ～ -0.1mm) dia. as AF and machine a bit deeper because burrs may cause chipping on shaper insert

③ Shaper tool



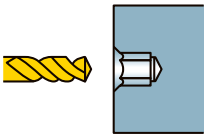
Machine socket rotating 60 degrees 6 times

④ Chamfering



Chamfer with the same pilot hole drill as ①

⑤ Deburring



Finish and deburr with the same drill as in process ②
☆Reduce cutting conditions due to heavy interruption

SHAPER DUO Process Chart -Hexalobular-

Socket Size	Tool	Pilot bore Dia. (mm)	Starting" X" position (mm)	Final" X" position (mm)	Number of passes		Estimated cycle time*		
					Roughing pass 0.025mm	Finishing pass 0.005mm	ISO10664 Standard depth of Hexalobular hole (mm)	Whole process ①-⑤	Shaper process ③
T6	SSP050N25T06	1.15	1.14	1.75	13	1	1.82	51 sec	23.2 sec
T7	SSP050N31T07	1.38	1.35	2.06	15	1	2.44	59 sec	28.2 sec
T8	SSP050N36T08	1.62	1.59	2.4	17	1	3.05	67 sec	33.8 sec
T10	SSP050N41T10	1.92	1.89	2.8	19	1	3.56	75 sec	39.5 sec
T15	SSP050N43T15	2.3	2.29	3.35	22	1	3.81	84 sec	46.2 sec
T20	SSP050N46T20	2.71	2.69	3.95	26	1	4.07	94 sec	55.4 sec
T25	SSP050N50T25	3.13	3.09	4.5	29	1	4.45	105 sec	63.8 sec
T27	SSP05S0N55T27	3.52	3.51	5.07	32	1	4.7	115 sec	71.8 sec
T30	SSP050N55T30	3.91	3.89	5.6	35	1	4.95	125 sec	80.2 sec

*Using carbide drills *Shaper cutting conditions Feed: 3000mm/min Depth of cut : Roughing 0.025mm / Finishing 0.005mm

SHAPER DUO Process Chart -Hexagonal-

HEX Standard	Tool	Pilot bore Dia. (mm)	Starting" X" position (mm)	Final" X" position (mm)	Number of passes		Estimated cycle time*		
					Roughing pass 0.025mm	Finishing pass 0.005mm	ISO10664 Standard depth of Hexalobular hole (mm)	Whole process ①-⑤	Shaper process ③
HEX 1.5	SSP020N1130H	1.5	1.47	1.73	6	1	2	39 sec	14 sec
HEX 2.0	SSP020N1430H	2	1.95	2.31	8	1	2.5	44 sec	16 sec
HEX 2.5	SSP030N1940H	2.5	2.48	2.89	9	1	3	50 sec	20 sec
HEX 3.0	SSP030N1940H	3	2.95	3.46	11	1	3.5	55 sec	23 sec
HEX 4.0	SSP040N2450H	4	3.96	4.62	14	1	5	73 sec	33 sec
HEX 5.0	SSP050N3260H	5	4.96	5.77	17	1	6	90 sec	46 sec
HEX 6.0	SSP060N42120H	6	5.97	6.93	20	1	8	117 sec	63 sec
HEX 8.0	SSP080N62160H	8	7.98	9.24	26	1	10	155 sec	92 sec

*Using carbide drills *Shaper cutting conditions Feed: 3000mm/min Depth of cut : Roughing 0.025mm / Finishing 0.005mm

Recommended cutting conditions

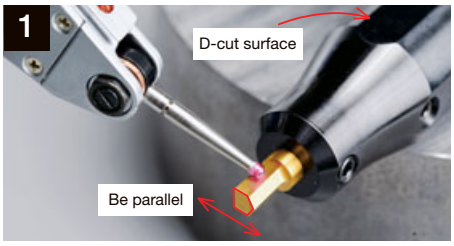
Feed : F1000 - F4000 mm/min(40-160 IPM) Depth of Cut : Roughing 0.025mm(0.001") / Finishing 0.005mm(0.0002")

Precautions when replacing the insert bar

The tool nose position dimensions (HF2) vary. Check the dimensions of the cutting tool after changing tools or indexing insert bar.

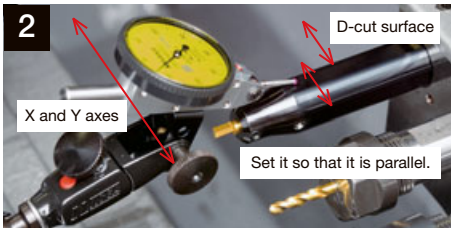
SHAPER DUO Set-up Instructions -Hexagonal

Outside machine



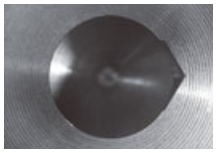
- Set the insert bar in the sleeve and check the parallelism of the flat portion of the sleeve and the insert bar.
- Minimize the overhang of the insert.

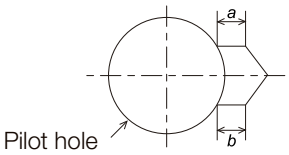
Inside machine



- Set the sleeve into the tool post and make sure the sleeve is set parallel.
- Minimize sleeve overhang.

3



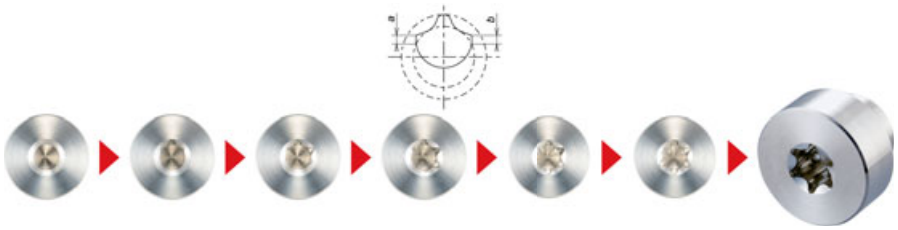


- Increase the number of machining passes with smaller depth of cut if the insert chips with large depth of cut.
  (0.025mm×5pass is recommended)
  No chamfering process is required for measuring purpose.
- Measure the length of both [a] and [b] with comparator or magnifier.
- Adjust centerline height by rotating the sleeve until you get the same length for [a] and [b].(The difference should be less than 0.02mm)
  *If the straight is not seen with increased passes, you need to reset the insert and the sleeve.Please make sure both the insert and the sleeve are set up correctly.

4 **Machine Hexagonal shape**

*Run full HEX machining program.

Machining hexalobular shape is basically the same as hexagon socket



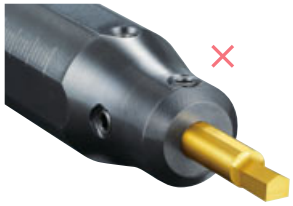
Important Note for Insert Set-up

When using the STICK DUO HYPER series, it is important that the insert is installed and oriented so the bar flat is lined up with the clamp screws. If installed in the wrong position, insert edge chipping may occur due to interference with the positioning and clamping screws. See diagram below.

Square

Hexagon

Square



Hexagon

Machining Program Code Explanation

Important: The programming codes and values will depend on the machine brands.For details, please contact the machine manufacturer.

Example machining piece : Hexagon socket dimensions
: AF 3.0mm, Diagonal 3.46mm, Socket depth 3.5mm, Pilot drill diameter φ3.0mm
DOC : Roughing 0.025mm / Finishing 0.005mm
Insert bar : TM4 SSP030N1940H

Programming tips

- Make a program considering final " X "position.
  - #1 Final " X "position : 3.46mm (AF)
  - #2 Finishing position of roughing : 3.46–0. 01 (Finishing) = 3.45mm
  - #3 Calculate total DOC for roughing : 3.45–3.0 (Pilot hole) = 0 .45mm
  - #4 Determine number of cuts : 0.45÷0.05 (DOC for Dia.) = 9.0 + 2 (round down to whole number and add "2" for program adjustment)
    → Roughing sequence runs 11 times
  - #5 Set starting point : 3.45–(0.05×(11–1)) = 2.95mm : must subtract by "1" for program adjustment

Main program

```
☆ : Rear spindle rotation stop
☆ : Back spindle indexing  0°  ..... ①
T○○○○ ( Shaper )
G50 U1.5  ..... ②
G0 X2.95 Z-2.0T ○○  call  ..... ③
☆ : Sub-program cal ( ○○○① ) Repeat 11 times  ..... ④
☆ : Sub-program cal ( ○○○② )  ..... ⑤

☆Back spindle indexing  60°  ..... ①
G0 X2.95  Z-2.0
☆ : Sub-program cal ( ○○○① ) Repeat 11 times  ..... ④
☆ : Sub-program cal ( ○○○② )  ..... ⑤

☆ : Back spindle indexing  120°  ..... ①
G0 X2.95  Z-2.0
☆ : Sub-program cal ( ○○○① ) Repeat 11 times  ..... ④
☆ : Sub-program cal ( ○○○② )  ..... ⑤

☆ : Back spindle indexing  180°  ..... ①
G0 X2.95  Z-2.0
☆ : Sub-program cal ( ○○○① ) Repeat 11 times  ..... ④
☆ : Sub-program cal ( ○○○② )  ..... ⑤

☆ : Back spindle indexing  240°  ..... ①
G0 X2.95  Z-2.0
☆ : Sub-program cal ( ○○○① ) Repeat 11 times  ..... ④
☆ : Sub-program cal ( ○○○② )  ..... ⑤

☆ : Back spindle indexing  300°  ..... ①
G0 X2.95  Z-2.0
☆ : Sub-program cal ( ○○○① ) Repeat 11 times  ..... ④
☆ : Sub-program cal ( ○○○② )  ..... ⑤

☆ : Spindle indexing release
G0  Z-2.0
G50  U-1.5
G0  U0  W0  T0
M1
```

☆ : Enter the program corresponding to your machine.

① = Index the sub-spindle 6 times in 60 degree increments.

② = Specify the coordinate system shift command (in X axis direction) for the tool.
* A positive direction shift is recommended for easier programming.
[2 x HF2 ; where HF2 is tool dimension located in the catalog].

③ = Execute the positioning of the tool.
- X position should be smaller than pilot drill diameter.
- Z position should be offset 2.0 mm from material to achieve program feed rate.

Sub-program ①

```
N○○○① ( Roughing )
G4  U0.02  ..... ⑥
G98  G1  Z3.5  F3000  ..... ⑦
G4  U0.02
U-0.2  W-0.018  ..... ⑧
G4  U0.02
G0  Z-2.0
G4  U0.02
U0.25  ..... ⑨
M99
```

Sub-program ②

```
N○○○② ( Finishing )
G98  G1  X3.46  Z-2.0  F1000
G4  U0.02
Z3.5  F3000
G4  U0.02
U-0.2  W-0.018
G4  U0.02
G0  Z-2.0
M99
```

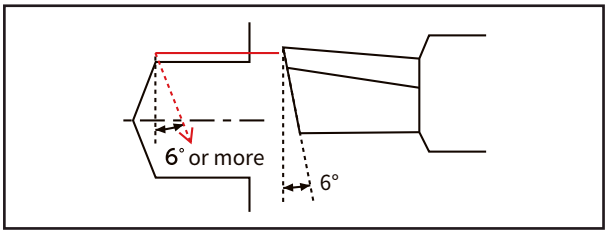
④ = Go to the Sub-Program #1.
- Sequence runs 11 times. First cutting point X2.95 and final cutting point X3.45, with 0.05 DOC (for diameter) each time.

⑤ = Go to the Sub-Program #2, for finishing sequence.
- Finishing operation with 0.005mm DOC (X 3.46) is recommended for better surface finish.

⑥ = Specify dwell time. This allows the program and machine to stay synchronized.

⑦ = Cut into part 3.5mm. F3000 is recommended feed to be used for most materials; including Titanium Alloy and Stainless Steel.

⑧ = This code backs off the tool with an angle greater than K5 degrees (10 degrees used in example). See page **7-3 ~ 7-5**.



⑨ = Return to the X position + 0.05mm (the DOC for diameter).

Hexagon Socket Programming Code Examples from Machine Builders in Metric

Important: The programming codes and values will depend on the machine brands.For details, please contact to the machine manufactures.

Example machining piece : Hexagon socket dimensions
: AF 3.0mm, Diagonal 3.46mm, Socket depth 3.5mm, Pilot drill diameter ϕ3.0mm
DOC : Roughing 0.025mm / Finishing 0.005mm
Insert bar : TM4 SSP030N1940H

| CITIZEN

Main program

```
M25
M78  S0  ..... ①
T○○○○ (Shaper)
G50  U1.5  ..... ②
G0  X2.95  Z-2.0  T○○  ..... ③
M98  P2100  L11  ..... ④
M98  P2200  ..... ⑤

M78  S60  ..... ①
G0  X2.95  Z-2.0
M98  P2100  L11
M98  P2200
                          ┐
                          ├ 《A》
                          ┘
  Repeat 《A》 at  S120,  S180,  S240,
  S300 with indexing at 60° increments

M20
G0  Z-2.0
G50  U-1.5
G0  U0  W0  T0
M1
```

Sub-program ①

```
N2100    (Roughing)
G4  U0.02  ..... ⑥
G98  G1  Z3.5  F3000  ..... ⑦
G4  U0.02
U-0.2  W-0.018  ..... ⑧
G4  U0.02
G0  Z-2.0
G4  U0.02
U0.25  ..... ⑨
M99
```

Sub-program ②

```
N2200    (Finishing)
G98  G1  X3.46  Z-2.0  F1000
G4  U0.02
Z3.5  F3000
G4  U0.02
U-0.2  W-0.018
G4  U0.02
G0  Z-2.0
M99
```

| STAR

Main program

```
M25
T○○○○  (Shaper)
G50  U1.5  ..... ②
M8
G0  X2.95  Z-2.0  C0  T○○  ..... ①③
M98  P2100  L11  ..... ④
M98  P2200  ..... ⑤

G0  C60.0  ..... ①
G0  X2.95  Z-2.0
M98  P2100  L11
M98  P2200
                          ┐
                          ├ 《A》
                          ┘
  Repeat 《A》 at S120, S180, S240, S300
  with indexing at 60° increments

G0  Z-2.0
G50  U-1.5
G0  T0
G28  W0
M1
```

Sub-program ①

```
O2100    (Roughing)
G4  U0.02  ..... ⑥
G98  G1  Z3.5  F3000  ..... ⑦
G4  U0.02
U-0.2  W-0.018  ..... ⑧
G4  U0.02
G0  Z-2.0
G4  U0.02
U0.25  ..... ⑨
M99
```

Sub-program ②

```
O2200    (Finishing)
G98  G1  X3.46  Z-2.0  F1000
G4  U0.02
Z3.5  F3000
G4  U0.02
U-0.2  W-0.018
G4  U0.02
G0  Z-2.0
M99
```

| TSUGAMI

Main program

```
M105
M150
G28  H0  ..... ①
M182
T○○○○  (Shaper)
G50  U1.5  ..... ②
G0  X2.95  Z2.0  T○○  ..... ③
M98  P2100  L11  ..... ④
M98  P2200  ..... ⑤
M183

G0  C60  ..... ①
M182
G0  X2.95  Z2.0
M98  P2100  L11
M98  P2200
M183
                          ┐
                          ├ 《A》
                          ┘
  Repeat 《A》 at S120, S180, S240, S300
  with indexing at 60° increments

M151
G0  Z2.0
G50  U-1.5
G0  U0  W0  T0
M1
```

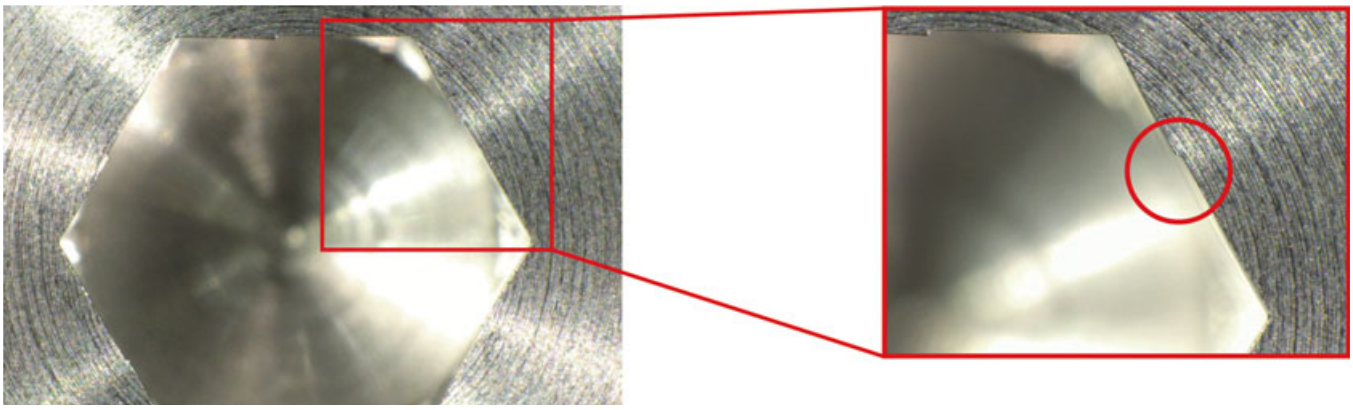
Sub-program ①

```
O2100    (Roughing)
G4  U0.02  ..... ⑥
G98  G1  Z-3.5  F3000  ..... ⑦
G4  U0.02
U-0.2  W0.018  ..... ⑧
G4  U0.02
G0  Z2.0
G4  U0.02
U0.25  ..... ⑨
M99
```

Sub-program ②

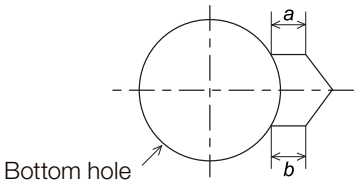
```
O2200    (Finishing)
G98  G1  X3.46  Z2.0  F1000
G4  U0.02
Z-3.5  F3000
G4  U0.02
U-0.2  W0.018
G4  U0.02
G0  Z2.0
M99
```

Problem: Step on sides

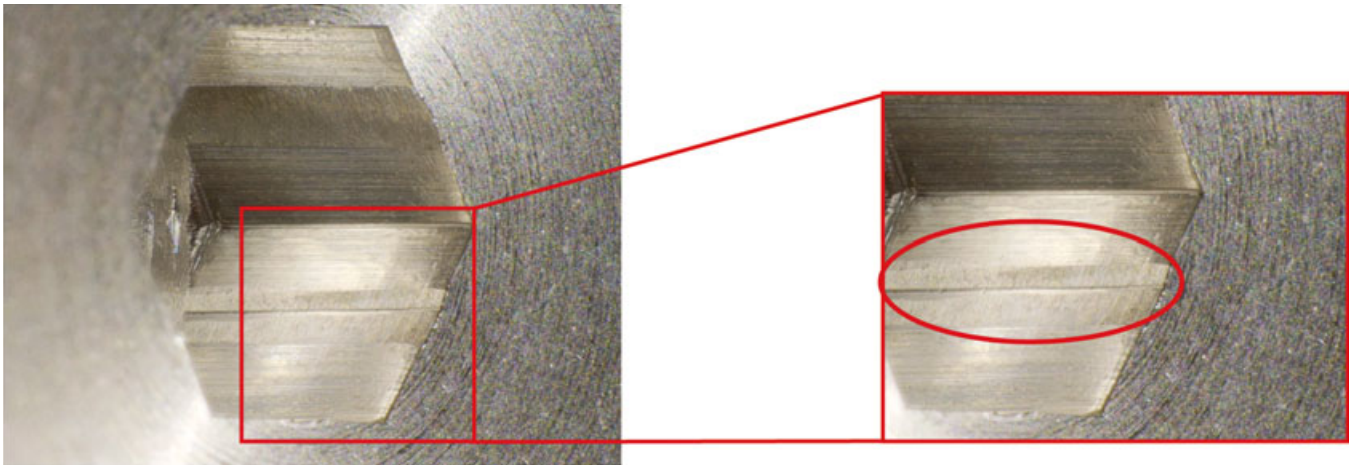


Cause: Incorrect tool set-up (Center-line shift)

Solution: Machine one angle and make sure both [a] and [b] lengths are identical, rotating the sleeve if necessary



Problem: Wall dented



Cause: Pilot hole remaining

Solution: Need pilot hole tool's offset

Problem: Wall tapered

Solution:

- Smaller depth of cut
- Less tool overhang

Problem: Chuck is slipping / Insert chipped

Solution:

- Run at 3000 mm/min feed rate
- Smaller depth of cut

- 3000 mm/min feed rate can cover most materials including Titanium alloy and Stainless steel.
- Too slow or too fast of a feed rate may cause excessive tool pressure for the workpiece and tool.

MEMO

8. Endmill

Endmill

TUNGFORCE MEC

Mini square shoulder milling cutters for high productivity

ø0.313" - ø1.000" (ø6 mm - ø16 mm)

8-4 -

P M N S H

TUNGMEISTER

Endmills with exchangeable heads for reduced tool change time

ø0.250" - ø0.500" (ø5 mm - ø25 mm)

8-2, 8-36 -

P M N S H

Optimal tool combination for maximum productivity

Significantly reduced tool indexing time improves machining efficiency

1 Wide range of geometries

45 kinds of geometries are available. The head indexing is easy and highly accurate with the precision thread.

2 Three kinds of shank material

Users can choose the most suitable combination according to the machining parameters, length and application required.

Steel: For general purpose
Carbide: For highly accurate machining due to excellent rigidity
Tungsten: Reduced chattering due to high vibration damping capacity

Straight shank & neck

Straight shank & taper neck

Straight shank & neck (carbide)

Straight (for slotting)

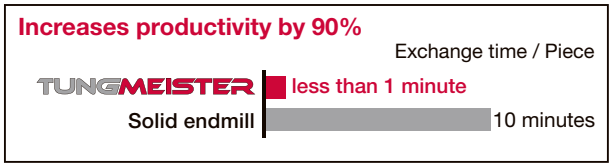
High rigidity shank

ER collet

Adaptor for TungFlex

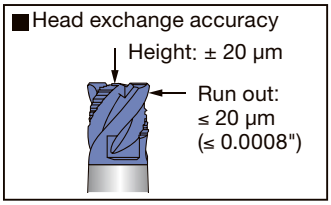
No setup time

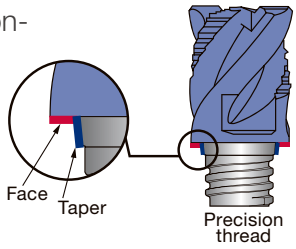
Machine downtime is decreased considerably. Simplified setup since only the head is indexed.



High accuracy and repeatability

Repeatability and accuracy are maintained due to full contact of both taper and face.

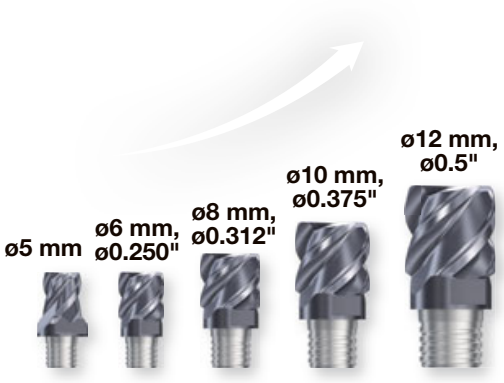




Reference pages: 8-36 -

Square

VEH, VEE, VED



Extensive tool diameter range from 5 to 12 mm 0.250" to 0.500".

Covers a broad range of applications from precision machining to large size parts.

Threading

VMT

ISO metric
VMT***IS

Unified
VMT***UN

Whitworth
VMT***W

Thread milling heads

With multiple teeth
for ISO, Unified, and Whitworth threads

Threading

VTR

ISO metric
60° partial profile
VTR***IS

Whitworth
55° partial profile
VTR***W

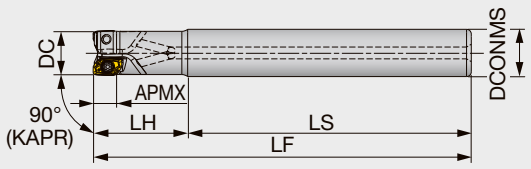
Thread milling heads

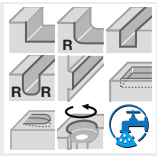
With single tooth
for ISO and Whitworth threads

EPAV04/06

Square shoulder endmill, shank type, with screw clamp system

EPAV04/12: GAMP = +6°~ +7.6°, GAMF = -37.1°~ -32.4°
EPAV06: GAMP = +6°~ +7.7°, GAMF = -37.1°~ -30°





Inch	APMX	DC	CICT	DCONMS	LS	LH	LF	WT(lb)	Air hole	Insert
EPAV06U0.31C0.37R01	0.236	0.313	1	0.375	2.463	0.787	3.250	0.09	With	AVGT06...
EPAV06U0.37C0.37R01	0.236	0.375	1	0.375	2.463	0.787	3.250	0.09	With	AVGT06...
EPAV06U0.37C0.37R01L	0.236	0.375	1	0.375	2.622	1.378	4.000	0.11	With	AVGT06...
EPAV06U0.50C0.50R02	0.236	0.500	2	0.500	2.463	0.787	3.250	0.15	With	AVGT06...
EPAV06U0.50C0.50R03	0.236	0.500	3	0.500	2.463	0.787	3.250	0.15	With	AVGT06...
EPAV06U0.50C0.50R02L	0.236	0.500	2	0.500	3.388	1.362	4.750	0.22	With	AVGT06...
EPAV06U0.62C0.62R03	0.236	0.625	3	0.625	2.713	0.787	3.500	0.26	With	AVGT06...
EPAV06U0.62C0.62R04	0.236	0.625	4	0.625	2.713	0.787	3.500	0.26	With	AVGT06...
EPAV06U0.62C0.62R03L	0.236	0.625	3	0.625	4.122	1.378	5.500	0.42	With	AVGT06...
EPAV06U0.75C0.62R04	0.236	0.750	4	0.625	2.815	1.185	4.000	0.33	With	AVGT06...
EPAV06U0.75C0.75R04	0.236	0.750	4	0.750	2.815	1.185	4.000	0.44	With	AVGT06...
EPAV06U0.75C0.75R05	0.236	0.750	5	0.750	2.815	1.185	4.000	0.44	With	AVGT06...
EPAV06U0.75C0.75R04L	0.236	0.750	4	0.750	6.500	1.375	7.875	0.90	With	AVGT06...
EPAV06U1.00C0.75R06	0.236	1.000	6	0.750	3.125	1.375	4.500	0.55	With	AVGT06...
EPAV06U1.00C1.00R05	0.236	1.000	5	1.000	3.125	1.375	4.500	0.93	With	AVGT06...
EPAV06U1.00C1.00R06	0.236	1.000	6	1.000	3.125	1.375	4.500	0.93	With	AVGT06...
EPAV06U1.00C1.00R04L	0.236	1.000	4	1.000	6.425	1.575	8.000	1.68	With	AVGT06...

Metric	APMX	DC	CICT	DCONMS	LS	LH	LF	WT(kg)	Air hole	Insert
EPAV04M006C06.0R01	4	6	1	6	48	12	60	0.01	With	AVMT04...
EPAV04M008C08.0R02	4	8	2	8	48	12	60	0.02	With	AVMT04...
EPAV04M008C08.0R02L	4	8	2	8	60	20	80	0.03	With	AVMT04...
EPAV06M008C10.0R01	6	8	1	10	60	20	80	0.04	With	AVGT06...
EPAV04M010C10.0R02	4	10	2	10	60	20	80	0.04	With	AVMT04...
EPAV04M010C10.0R03	4	10	3	10	60	20	80	0.04	With	AVMT04...
EPAV04M010C10.0R02L	4	10	2	10	65	35	100	0.05	With	AVMT04...
EPAV06M010C10.0R02	6	10	2	10	60	20	80	0.04	With	AVGT06...
EPAV06M010C10.0R02L	6	10	2	10	65	35	100	0.06	With	AVGT06...
EPAV06M010C08.0R02L	6	10	2	8	80	20	100	0.04	With	AVGT06...
EPAV04M012C12.0R03	4	12	3	12	60	20	80	0.06	With	AVMT04...
EPAV04M012C12.0R04	4	12	4	12	60	20	80	0.06	With	AVMT04...
EPAV04M012C12.0R03L	4	12	3	12	85	35	120	0.09	With	AVMT04...
EPAV06M012C12.0R02	6	12	2	12	60	20	80	0.06	With	AVGT06..
EPAV06M012C12.0R03	6	12	3	12	60	20	80	0.06	With	AVGT06...
EPAV06M012C12.0R02L	6	12	2	12	85	35	120	0.09	With	AVGT06...
EPAV06M012C10.0R02L	6	12	2	10	100	20	120	0.07	With	AVGT06...
EPAV06M012C10.0R03	6	12	3	10	60	20	80	0.04	With	AVGT06...
EPAV06M014C12.0R03	6	14	3	12	60	20	80	0.07	With	AVGT06...
EPAV06M014C12.0R03L	6	14	3	12	120	20	140	0.11	With	AVGT06...
EPAV04M016C16.0R04	4	16	4	16	70	20	90	0.12	With	AVMT04...
EPAV04M016C16.0R05	4	16	5	16	70	20	90	0.12	With	AVMT04...
EPAV04M016C16.0R04L	4	16	4	16	105	35	140	0.19	With	AVMT04...
EPAV06M016C16.0R03	6	16	3	16	70	20	90	0.12	With	AVGT06...
EPAV06M016C16.0R04	6	16	4	16	70	20	90	0.12	With	AVGT06...
EPAV06M016C16.0R03L	6	16	3	16	105	35	140	0.20	With	AVGT06...

Approach angle

7°-25°
41°-45°
60°-70°
85°-88°
90°
Others

INCH SPARE PARTS

Designation	Clamping screw	Lubricant	Wrench
EPAV06U...	CSPB-2H	M-1000	IP-6DB

Recommended clamping torque: CSPB-2H = 0.52 lbs·ft,

METRIC SPARE PARTS

Designation	Clamping screw	Lubricant	Wrench
EPAV04M006C06.0R01	CSPB-1.8L3.3	M-1000	IP-6DB
EPAV04M008... - EPAV04M016...	CSPB-1.8L3.6	M-1000	IP-6DB
EPAV06M...	CSPB-2H	M-1000	IP-6DB

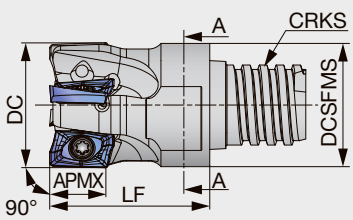
Recommended clamping torque: CSPB-1.8L3.3, CSPB-1.8L3.6 = 0.5 N·m, CSPB-2H = 0.7 N·m

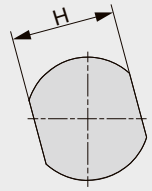
Reference pages: Inserts → 8-6, Standard cutting conditions → 8-6 - 8-7

HPAV06-S

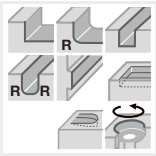
Square shoulder endmill, modular type (TungMeister), with screw clamp system

GAMP = +6.9°~ +7.6°, GAMF = -35.2°~ -32.4°





A-A cross section



Metric	APMX	DC	CICT	LF	H	DCSFMS	CRKS	WT(kg)	Insert
HPAV06M010S05R02	6	10	2	10	8	8	S05	0.01	AVGT06...
HPAV06M010S06R02	6	10	2	16	8	9.8	S06	0.01	AVGT06...
HPAV06M012S08R02	6	12	2	18	10	11.7	S08	0.02	AVGT06...
HPAV06M012S08R03	6	12	3	18	10	11.7	S08	0.02	AVGT06...
HPAV06M016S10R03	6	16	3	20	13	15.4	S10	0.03	AVGT06...
HPAV06M016S10R04	6	16	4	20	13	15.4	S10	0.03	AVGT06...

For connections between metric shank and TungMeister thread, please use VAD-M type connector

SPARE PARTS

Designation	Clamping screw	Lubricant	Wrench
HPAV06M...	CSPB-2H	M-1000	IP-6DB

Recommended clamping torque: 0.7 N·m

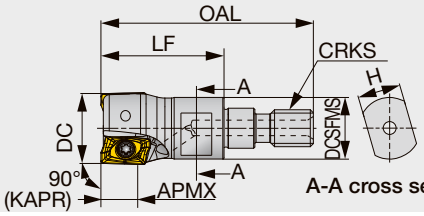
Designation	Wrench*
HPAV06M010S...	KEYV-S06
HPAV06M012S...	KEYV-S08
HPAV06M016S...	KEYV-S10

*sold separately

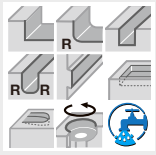
HPAV06-M

Square shoulder endmill, modular type (TungFlex), with screw clamp system

HPAV06-M: GAMP = +6.9°~ +7.6°, GAMF = -35.2°~ -32.4°
HPAV12-M: GAMP = +6°~ +7.6°, GAMF = -37.1°~ -32.4°



A-A cross section



Metric	APMX	DC	CICT	OAL	LF	H	DCSFMS	CRKS	WT(kg)	Air hole	Insert
HPAV06M010M06R02	6	10	2	34.5	20	7	9.5	M6	0.01	Without	AVGT06...
HPAV06M012M06R02	6	12	2	34.5	20	7	10	M6	0.01	Without	AVGT06...
HPAV06M012M06R03	6	12	3	34.5	20	7	10	M6	0.01	Without	AVGT06...
HPAV06M016M08R03	6	16	3	42	25	10	13	M8	0.03	Without	AVGT06...
HPAV06M016M08R04	6	16	4	42	25	10	13	M8	0.03	Without	AVGT06...

SPARE PARTS

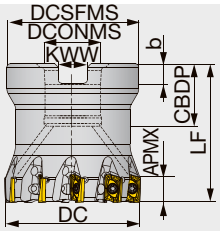
Designation	Clamping screw	Lubricant	Wrench
HPAV06M...	CSPB-2H	M-1000	IP-6DB

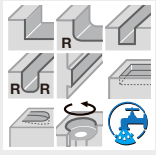
Recommended clamping torque: 1.3 N·m

TPAV06

Square shoulder mill, bore type, with screw clamp system

TPAV06: GAMP = +7.7°, GAMF = -29.8°
TPAV12: GAMP = +6° ~ +7.6°, GAMF = -37.1° ~ -32.4°





Metric	APMX	DC	CICT	DCSFMS	DCONMS	CBDP	LF	KWW	b	WT(kg)	Air hole	Insert
TPAV06M040B16.0R10	6	40	10	38	16	18	40	8.4	5.6	0.24	With	AVGT06...

SPARE PARTS

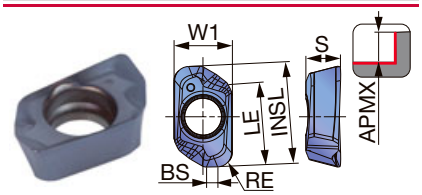
Designation	Clamping screw	Lubricant	Wrench	Shell locking bolt
TPAV06M040B16.0R10	CSPB-2H	M-1000	IP-6DB	CM8X30H

Recommended clamping torque: CSPB-2H = 0.52 lbs·ft

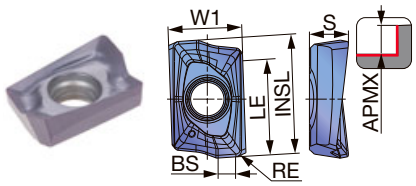
Reference pages: Inserts → 8-6, Standard cutting conditions → 8-6 - 8-7

INSERT

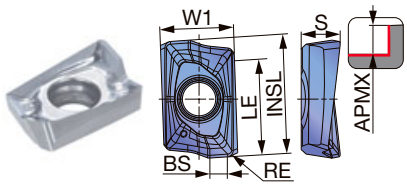
AVMT04-MM



AVGT06-MJ



AVGT06-AJ



P	Steel	☆		☆	★		★													
M	Stainless		☆	☆	★		☆													
K	Cast iron	★				☆														
N	Non-ferrous							★												
S	Superalloys	★	★		★															
H	Hard materials	★																		

★ : First choice
☆ : Second choice

Designation	RE	APMX	Coated						Carbide		W1	INSL	S	BS	LE
			AH120	AH130	AH3135	AH3225	T1215	T3225	KS05F						
AVMT040204PPER-MM	0.016	0.157	●		●						0.138	0.238	0.083	0.039	0.173
AVMT040208PPER-MM	0.031	0.157	●		●						0.138	0.238	0.083	0.024	0.173
AVGT060300PBER-MJ	0.000	0.236			●	●					0.197	0.315	0.106	0.063	0.256
AVGT060302PBER-MJ	0.008	0.236	●	●	●	●					0.197	0.315	0.106	0.059	0.256
AVGT060304PBER-MJ	0.016	0.236	●	●	●	●					0.197	0.315	0.106	0.051	0.256
AVGT060308PBER-MJ	0.031	0.236	●	●	●	●					0.197	0.315	0.102	0.035	0.256
AVGT060300PBFR-AJ	0.000	0.236							●		0.197	0.315	0.106	0.063	0.256
AVGT060302PBFR-AJ	0.008	0.236							●		0.197	0.315	0.106	0.059	0.256
AVGT060304PBFR-AJ	0.016	0.236							●		0.197	0.315	0.106	0.051	0.256
AVGT060308PBFR-AJ	0.031	0.236							●		0.197	0.315	0.102	0.035	0.256

● : Line up

Approach angle

7°-25°
41°-45°
60°-70°
85°-88°
90°
Others

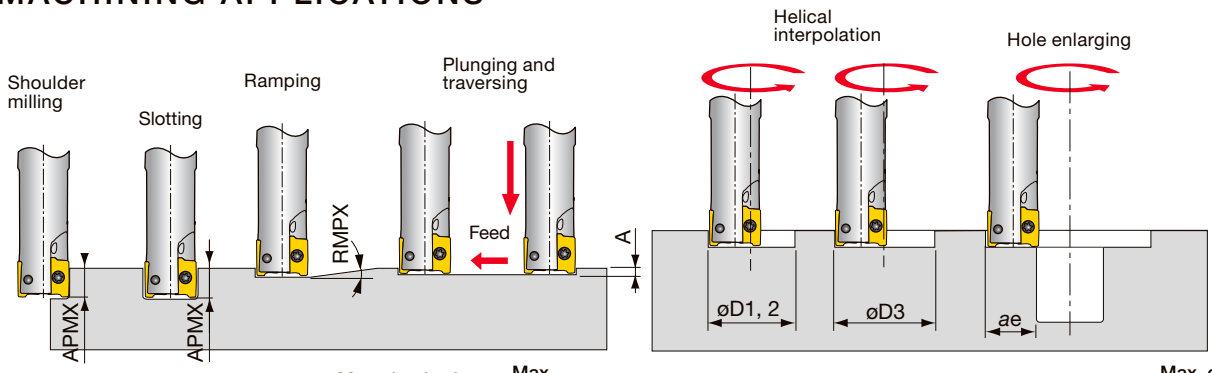
STANDARD CUTTING CONDITIONS

EPAV04

ISO	Workpiece meterials		Hardness	Priority	Grades	Cutting speed *Vc* (sfm)	Feed per tooth *fz* (ipt)
P	Low carbon steel 1015, etc.		- 200 HB	First choice	AH3225	328 - 984	0.002 - 0.005
	Carbon steel and alloy steel 1055, etc.		- 300 HB	First choice	AH3225	328 - 820	0.002 - 0.005
	Prehardened steel NAK80, PX5, etc.		30 - 40 HRC	First choice	AH3225	328 - 656	0.002 - 0.004
M	Stainless steel 304SS, etc.		- 200 HB	First choice	AH3225	262 - 591	0.002 - 0.004
K	Gray cast iron Class 25, etc.		150 - 250 HB	First choice	AH120	328 - 984	0.002 - 0.005
	Ductile cast iron 60-40-18, 80-55-06, etc.		150 - 250 HB	First choice	AH120	328 - 820	0.002 - 0.005
S	Titanium alloys Ti-6Al-4V, etc.		- 40 HRC	First choice	AH3225	66 - 197	0.002 - 0.003
	Superalloys Inconel718, etc.		- 40 HRC	First choice	AH120	66 - 131	0.002 - 0.003
H	Hardened steel	H13, etc.	40 - 50 HRC	First choice	AH120	164 - 492	0.002 - 0.003
		D2, etc.	50 - 60 HRC	First choice	AH120	131 - 230	0.002 - 0.003

ISO	Workpiece materials		Hardness	Priority	Grades	Cutting speed *Vc* (sfm)	Feed per tooth *fz* (ipt)
P	Low carbon steel 1015, etc.		- 200 HB	First choice	AH3225	755 - 1410	0.003 - 0.005
P	Carbon steel and alloy steel 1055, etc.		- 300 HB	First choice	AH3225	490 - 1150	0.003 - 0.005
P	Prehardened steel NAK80, PX5, etc.		30 - 40 HRC	First choice	AH3225	325 - 750	0.003 - 0.005
M	Stainless steel 304SS, etc.		- 200 HB	First choice	AH3135	490 - 720	0.003 - 0.004
K	Gray cast iron Class 25, etc.		150 - 250 HB	First choice	AH120	655 - 1080	0.003 - 0.005
K	Ductile cast iron 60-40-18, 80-55-06, etc.		150 - 250 HB	First choice	AH120	490 - 785	0.003 - 0.005
N	Aluminum alloys Si < 13%		-	First choice	KS05F	2130 - 3280	0.003 - 0.005
N	Aluminum alloys Si ≥ 13%		-	First choice	KS05F	325 - 750	0.003 - 0.005
S	Titanium alloys Ti-6Al-4V, etc.		- 40 HRC	First choice	AH130	130 - 295	0.0016 - 0.004
S	Superalloys Inconel718, etc.		- 40 HRC	First choice	AH130	145 - 210	0.0016 - 0.004
H	Hardened steel	H13, etc.	40 - 50 HRC	First choice	AH120	145 - 225	0.002 - 0.004
H	Hardened steel	D2, etc.	50 - 60 HRC	First choice	AH120	130 - 210	0.0016 - 0.003

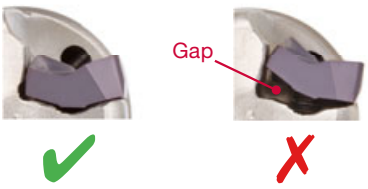
MACHINING APPLICATIONS



Inch	DC	Max. depth of cut APMX	Max. ramping angle RMPX	Max. plunging A	Min. machining øD1	Max. machining øD2	Max. machining øD3*	Max. cutting width in enlarging *ae*
EPAV06U0.31...	0.313	0.236	-	-	-	-	-	-
EPAV06U0.37...	0.375	0.236	3°	0.012	0.591	0.748	0.709	0.374
EPAV06U0.50...	0.500	0.236	3°	0.012	0.709	0.906	0.866	0.453
EPAV06U0.62...	0.625	0.236	2.3°	0.012	1.026	1.220	1.181	0.610
EPAV06U0.75...	0.750	0.236	2°	0.012	1.276	1.460	1.421	0.730
EPAV06U1.00...	1.000	0.236	1.6°	0.012	1.775	1.960	1.921	0.980

*Flat bottom hole

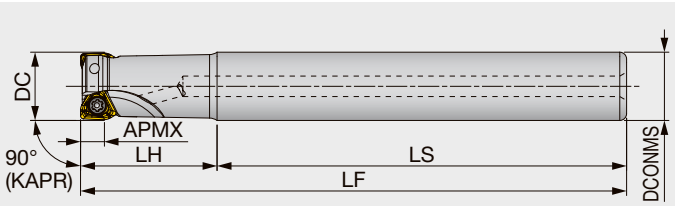
When clamping the insert, please confirm that there is no gap between the cutter body and the insert as shown in the picture.

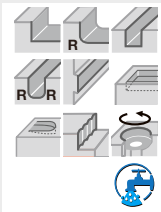


EPA04

High precision square shoulder endmill, shank type, with screw clamp system

EPA04: GAMP = +12.1°~ +12.2°, GAMF = -14.2°~ -18.3°, EPA06: GAMP = +8.5°~ +11.5°, GAMF = -5.5°~ -12.5°,
EPA10: GAMP = +9.5°~ +11°, GAMF = -4.5°~ -0.5°, EPA15: GAMP = +12°~ +13.5°, GAMF = -6°~ -3.5°





Metric	APMX	DC	CICT	DCONMS	LS	LH	LF	WT(kg)	Air hole	Insert
EPA04R008M08.0-01	3.5	8	1	8	48	12	60	0.02	with	TOMT04...
EPA04R010M10.0-02	3.5	10	2	10	60	20	80	0.04	with	TOMT04...
EPA04R010M10.0-02L	3.5	10	2	10	65	35	100	0.05	with	TOMT04...
EPA04R012M12.0-02	3.5	12	2	12	60	20	80	0.06	with	TOMT04...
EPA04R012M12.0-03	3.5	12	3	12	60	20	80	0.06	with	TOMT04...
EPA04R012M12.0-02L	3.5	12	2	12	85	35	120	0.09	with	TOMT04...
EPA04R016M16.0-03	3.5	16	3	16	70	20	90	0.12	with	TOMT04...
EPA04R016M16.0-04	3.5	16	4	16	70	20	90	0.12	with	TOMT04...
EPA04R016M16.0-03L	3.5	16	3	16	105	35	140	0.19	with	TOMT04...

SPARE PARTS

Designation	Clamping screw	Grip
EPA04R008M08.0-01	CSPB-1.8L3.3	IP-6DB
EPA04R010 - 025...	CSPB-1.8L3.6	IP-6DB

Recommended clamping torque：CSPB-1.8L3.6 = 0.5 N·m, CSPB-1.8L3.3 = 5 N·m

Approach angle

7°-25°

41°-45°

60°-70°

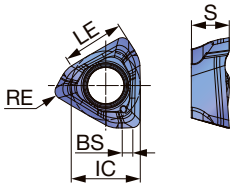
85°-88°

90°

Others

INSERTS

TOMT-MM



P	Steel	☆	★				
M	Stainless		★				
K	Cast iron	★					
N	Non-ferrous						
S	Superalloys	★	★	★			
H	Hard materials			★			

★ : First choice
☆ : Second choice

Designation	RE	APMX	Coated AH120	Coated AH3225	Coated AH8015	LE	IC	S	BS
TOMT040204PXER-MM	0.016	0.138	●	●	●	0.142	0.157	0.087	0.024
TOMT040208PXER-MM	0.031	0.138	●	●	●	0.142	0.157	0.087	0.008

● : Line up

STANDARD CUTTING CONDITIONS

EPA04

ISO	Workpiece materials		Hardness	Grades	Cutting speed *Vc* (sfm)	Feed per tooth *fz* (ipt)
P	Low carbon steel 1015, etc.		- 200 HB	AH3225	326 - 820	0.002 - 0.005
P	Carbon steel and alloy steel 1055, etc.		- 300 HB	AH3225	326 - 755	0.002 - 0.005
P	Prehardened steel NAK80, PX5, etc.		30 - 40 HRC	AH3225	326 - 591	0.002 - 0.004
M	Stainless steel 304SS, etc.		- 200 HB	AH3225	295 - 656	0.002 - 0.004
K	Gray cast iron Class 25, etc.		150 - 250 HB	AH120	326 - 984	0.002 - 0.005
K	Ductile cast iron 65-45-12, etc.		150 - 250 HB	AH120	326 - 656	0.002 - 0.005
S	Titanium alloys Ti-6Al-4V, etc.		- 40 HRC	AH3225	66 - 197	0.002 - 0.004
S	Heat-resistant alloys Inconel 718, etc.		- 40 HRC	AH8015	66 - 131	0.002 - 0.003
H	Hardened steel	H13, etc.	40 - 50 HRC	AH8015	164 - 492	0.002 - 0.003
H		D2, etc.	50 - 60 HRC	AH8015	131 - 230	0.002 - 0.003

· Remove excessive chip accumulation with an air blast.
· For an operation when the depth of cut varies (ex.casting skin) or machining of workpiece materials with interrupted surface, the feed per tooth (*fz*) should be set to the lower recommended value shown in the above table.
· Cutting conditions may be limited depending on machine power, workpiece rigidity, and spindle output. When the cutting width, depth, or overhang length is large, set *Vc* and *fz* to the lower recommended values and check the machine power and vibration.

Square, Face mill, High feed

Inch

★ : First choice ☆ : Second choice

Head geometry	Designation	Appearance	Application: Roughing	Application: Semifinishing	Application: Finishing	Tool dia.	No. of cutting edges	Cutting edge length: L/D	Cutting edge length: APMX	Corner geometry	Helix angle	Pitch	CRKS	Workpiece material: P	M	K	N	S	H	Remarks	Page
Square	VEE**-04... VED**-04...		✓	✓	✓	ø0.250" - ø0.500"	4	0.8XD	0.200" - 0.374"	R	30/45	Regular	S04 - S08	★	★	★	☆	★	☆	General	8-40
	VEE**I...		✓	✓	✓	ø0.312" - ø0.500"	4	0.6 - 0.8XD	0.220" - 0.374"	R/ Chamfered	38	Variable	S05 - S08	★	★	★	☆	★	☆		8-41
	VEE**-03...		✓	✓	✓	ø0.312" - ø0.500"	3	0.5XD	0.200" - 0.374"	Sharp edge	38/45	Regular	S05 - S08	★	★	★	☆	★	☆	For key way	8-41
	VEE**A02...		✓	✓	✓	ø0.375" - ø0.500"	2	0.7XD	0.270" - 0.374"	R	45	Regular	S06 - S08			☆	★				8-42
	VEE**A03...		✓	✓	✓	ø0.312" - ø0.500"	3	0.6XD	0.200" - 0.315"	R	45	Regular	S05 - S08			☆	★				8-42
	VEE**C...		✓	✓		ø0.312" - ø0.500"	4	0.6 - 0.8XD	0.200" - 0.369"	Chamfered	45	Regular	S05 - S08	★	★	★	☆	★	☆	Rough/ Finish combination geometry	8-43

Metric

★ : First choice ☆ : Second choice

Head geometry	Designation	Appearance	Application: Roughing	Application: Semifinishing	Application: Finishing	Tool dia.	No. of cutting edges	Cutting edge length: L/D	Cutting edge length: APMX	Corner geometry	Helix angle	Pitch	CRKS	Workpiece material: P	M	K	N	S	H	Remarks	Page
	VEH...		✓	✓	✓	ø8 - ø12 mm	4	0.6 - 0.8XD	5 - 9 mm	R	Variable	Variable	S05 - S08	★	★	★	☆	★	☆		8-39
	VEH...		✓	✓	✓	ø8 - ø12 mm	4	1.2 - 1.5XD	12 - 18 mm	R	Variable	Variable	S05 - S08	★	★	★	☆	★	☆	Long edge	8-39
	VEE**-04... VED**-04...		✓	✓	✓	ø5 - ø12 mm	4	0.8XD	4 - 9 mm	R	30/45	Regular	S04 - S08	★	★	★	☆	★	☆	General	8-40
Square	VEE**I...		✓	✓	✓	ø8 - ø12 mm	4	0.6 - 0.8XD	5 - 9 mm	R/ Chamfered	38	Variable	S05 - S08	★	★	★	☆	★	☆		8-41
	VEE**-03...		✓	✓	✓	ø7.7 - ø12 mm	3	0.5XD	4 - 9 mm	Sharp edge	38/45	Regular	S05 - S08	★	★	★	☆	★	☆	For key way	8-41
	VEE**A02...		✓	✓	✓	ø10 - ø12 mm	2	0.7XD	7 - 9 mm	R	45	Regular	S06 - S08			☆	★				8-42
	VEE**A03...		✓	✓	✓	ø8 - ø12 mm	3	0.6XD	5 - 8 mm	R	45	Regular	S05 - S08			☆	★				8-42
	VEE**C...		✓	✓		ø8 - ø12 mm	4	0.6 - 0.8XD	5 - 9 mm	Chamfered	45	Regular	S05 - S08	★	★	★	☆	★	☆	Rough/ Finish combination geometry	8-43
Face mill	VFM...		✓	✓	✓	ø12 - ø25 mm	6	0.3XD	3.6 - 7.5 mm	R	-	Regular	S05 - S10	★	★	★	☆	★	☆	With coolant hole	8-45

Multi-function (chamfering, spot drill, center hole, counterboring)

Inch

★ : First choice ☆ : Second choice

Head geometry	Designation	Appearance	Center edge (Z-feed capability)	Tool dia.	No. of cutting edges	Chamfering angle	Helix angle	Pitch	CRKS	Workpiece material P	M	K	N	S	H	Remarks	Page
Chamfering	VCA**-04...		Without	ø0.375"	4	45	0	Regular	S06	★	★	★	☆	★	☆		I086

Metric

★ : First choice ☆ : Second choice

Head geometry	Designation	Appearance	Center edge (Z-feed capability)	Tool dia.	No. of cutting edges	Chamfering angle	Helix angle	Pitch	CRKS	Workpiece material P	M	K	N	S	H	Remarks	Page
Chamfering	VCA**-04/06...		Without	ø10 - ø16 mm	4, 6	45	0	Regular	S06 - S10	★	★	★	☆	★	☆		I086
Chamfering Spot drill	VCP**-02...		With	ø8 - ø16.5 mm	2	30/45/60	0	Regular	S05 - S10	★	★	★	☆	★	☆		I088
	VDS...		With	ø8 - ø16 mm	2	45	10	Regular	S05 - S10	★	★	★	☆	★	☆	Low cutting force	I088
Center hole	VDP**-02...		With	ø1.07 - ø4.09 mm	2	-	0	Regular	S04 - S08	★	★	★	☆	★	☆	For center hole	I090

Slotting
Inch

★ : First choice ☆ : Second choice

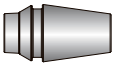
Head geometry	Designation	Appearance	Groove width (mm)	Tool dia. (mm)	No. of cutting edges	Edge shape	Helix angle	Pitch	CRKS	Workpiece material P	M	N	S	H	Remarks	Page
Slotting	VST**-3...		1.2 - 3.17	ø15.7 - ø17.7	3	R	0	Regular	S06	★	★	☆	★	☆		8-49
	VST**-4/6...		0.76 - 10	ø21.7 - ø27.7	4, 6	R	0	Regular	S08, S10	★	★	☆	☆	☆		8-50
	VST**A45...		3.4 - 5.5	ø17.7 - ø21.7	3, 4	Chamfered	0	Regular	S06, S08	★	★	☆	★	☆	For chamfering, 45° chamfer angle	8-50

Threading
Metric

★ : First choice ☆ : Second choice

Head geometry	Designation	Appearance	Feature	Wiper edge	No. of cutting edges	Tool dia. (mm)	Internal/ External	Thread type	Min. thread size	CRKS	Workpiece material P	M	N	S	H	Page
Threading	VMT***IS		Full profile	With	3 - 6	ø10 - ø16	Internal	ISO metric	M12X0.75	S05 - S08	★	★	☆	★	☆	5-52
	VMT***UN		Full profile	With	3, 4, 5	ø10 - ø16	Internal	Unified	9/16-24 UNEF	S05 - S08	★	★	☆	★	☆	5-52
	VMT***W		Full profile	With	4	ø10, 16	Internal/ External	Whitworth	G1/4	S05, S08	★	★	☆	★	☆	5-53
	VTR***IS		Partial profile	Without	3, 4	ø15.7 - ø21.7	Internal/ External	60° partial profile	M20X0.5	S06, S08	★	★	☆	★	☆	5-53
	VTR***W		Partial profile	Without	4	ø21.7	Internal/ External	55° partial profile	G3/4	S08	★	★	☆	★	☆	5-53

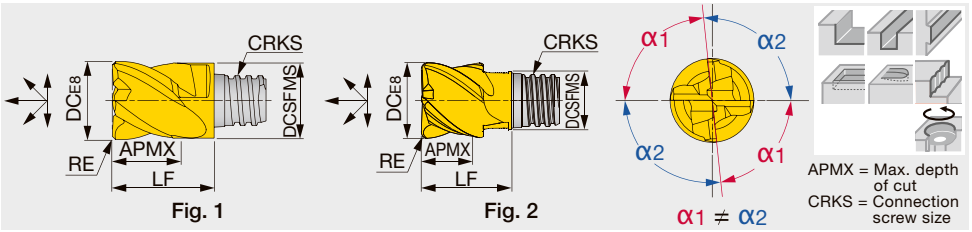
Shank

Shank	Neck	Appearance	Material Steel	Carbide	Carbide (with coolant hole)	Tungsten (with coolant hole)	Page
Straight	Straight		✓	✓	✓	✓	8-56
Weldon	Straight		✓	-	-	-	8-59
Straight	Taper		✓	✓	-	✓	8-58
High rigidity shank			✓	✓	-	-	8-56
Straight (slotting)			✓	✓	✓	-	8-59
Adaptor for TungFlex			✓	-	-	-	8-59
ER collet			✓	-	-	-	8-60

VEH...

4 flute, roughing - finishing, variable helix and pitch

Square



Metric	AH715	AH725	NOF	FHA	DC	DCSFMS	APMX	RE	CRKS	LF	Wrench	Torque*	Fig.
VEH080L05.0R05I04S05		●	4	41° - 45°	8	7.7	5	0.5	S05	10	KEYV-S05	7	1
VEH080L05.0R10I04S05		●	4	41° - 45°	8	7.7	5	1	S05	10	KEYV-S05	7	1
VEH100L07.0R10I04S05	●		4	41° - 45°	10	7.7	7	1	S05	12.8	KEYV-S05	7	2
VEH100L07.0R05I04S06		●	4	41° - 45°	10	9.7	7	0.5	S06	13	KEYV-S06	10	1
VEH100L07.0R10I04S06		●	4	41° - 45°	10	9.7	7	1	S06	13	KEYV-S06	10	1
VEH120L09.0R10I04S06	●		4	41° - 45°	12	9.3	9	1	S06	14.3	KEYV-S06	10	2
VEH120L09.0R05I04S08		●	4	41° - 45°	12	11.7	9	0.5	S08	16.5	KEYV-S08	15	1
VEH120L09.0R10I04S08		●	4	41° - 45°	12	11.7	9	1	S08	16.5	KEYV-S08	15	1

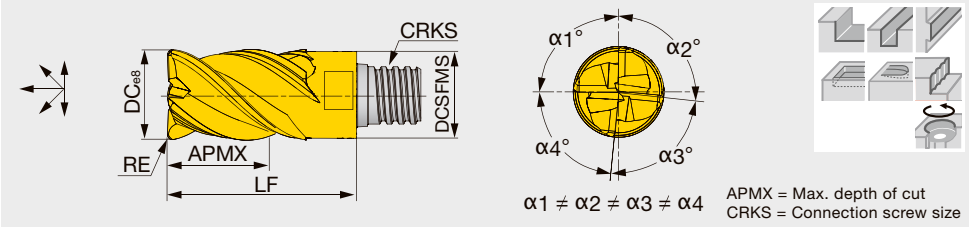
Torque*: Recommended clamping torque (N·m)
2 pieces per package

● : Line up

VEH...

4 flute, roughing - finishing, long edge, variable helix and pitch

Square



Metric	AH715	NOF	FHA	DC	DCSFMS	APMX	RE	CRKS	LF	Wrench	Torque*
VEH080L12.0R05I04S05	●	4	41° - 45°	8	7.7	12	0.5	S05	18	KEYV-S05	7
VEH080L12.0R10I04S05	●	4	41° - 45°	8	7.7	12	1	S05	18	KEYV-S05	7
VEH100L15.0R05I04S06	●	4	41° - 45°	10	9.7	15	0.5	S06	22	KEYV-S06	10
VEH100L15.0R10I04S06	●	4	41° - 45°	10	9.7	15	1	S06	22	KEYV-S06	10
VEH120L18.0R05I04S08	●	4	41° - 45°	12	11.7	18	0.5	S08	27	KEYV-S08	15
VEH120L18.0R10I04S08	●	4	41° - 45°	12	11.7	18	1	S08	27	KEYV-S08	15

Torque*: Recommended clamping torque (N·m)
VEH080 ~ VEH120: 2 pieces per package

● : Line up

Reference pages: Standard cutting conditions → 8-17 - 8-18

VEE**-04..., VED**-04...

4 flute, roughing - finishing, general

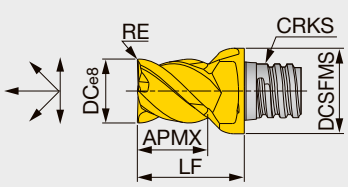


Fig. 1**

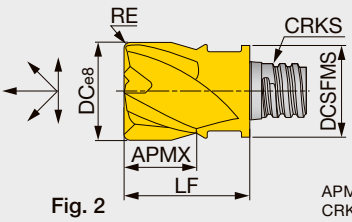
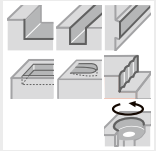


Fig. 2



APMX = Max. depth of cut
CRKS = Connection screw size

Inch	AH725	NOF	FHA	DC	DCSFMS	APMX	RE	CRKS	LF	Wrench	Torque	Fig.
VEE025L20R000-U04S05	●	4	45°	0.250	0.300	0.200	-	S05	0.390	KEYV-S05	5.16	1
VED031L20R015-U04S05	●	4	30°	0.312	0.300	0.200	0.015	S05	0.390	KEYV-S05	5.16	2
VED031L20R031-U04S05	●	4	30°	0.312	0.300	0.200	0.031	S05	0.390	KEYV-S05	5.16	2
VED031L20R062-U04S05	●	4	30°	0.312	0.300	0.200	0.062	S05	0.390	KEYV-S05	5.16	2
VEE031L20R000-U04S05	●	4	45°	0.312	0.300	0.200	-	S05	0.390	KEYV-S05	5.16	2
VEE031L20R015-U04S05	●	4	45°	0.312	0.300	0.200	0.015	S05	0.390	KEYV-S05	5.16	2
VEE031L20R031-U04S05	●	4	45°	0.312	0.300	0.200	0.031	S05	0.390	KEYV-S05	5.16	2
VEE031L20R062-U04S05	●	4	45°	0.312	0.300	0.200	0.062	S05	0.390	KEYV-S05	5.16	2
VED037L27R015-U04S06	●	4	30°	0.375	0.370	0.275	0.015	S06	0.512	KEYV-S06	7.38	2
VED037L27R031-U04S06	●	4	30°	0.375	0.370	0.275	0.031	S06	0.512	KEYV-S06	7.38	2
VEE037L27R000-U04S06	●	4	45°	0.375	0.370	0.275	-	S06	0.512	KEYV-S06	7.38	2
VEE037L27R015-U04S06	●	4	45°	0.375	0.370	0.275	0.015	S06	0.512	KEYV-S06	7.38	2
VEE037L27R030-U04S06	●	4	45°	0.375	0.370	0.275	0.031	S06	0.512	KEYV-S06	7.38	2
VEE037L27R062-U04S06	●	4	45°	0.375	0.370	0.275	0.062	S06	0.512	KEYV-S06	7.38	2
VEE037L47R000-U04S06	●	4	45°	0.375	0.370	0.470	-	S06	0.748	KEYV-S06	7.38	2
VED050L37R015-U04S08	●	4	30°	0.500	0.488	0.374	0.015	S08	0.650	KEYV-S08	11.06	2
VED050L37R031-U04S08	●	4	30°	0.500	0.488	0.374	0.031	S08	0.650	KEYV-S08	11.06	2
VEE050L37R000-U04S08	●	4	45°	0.500	0.488	0.374	-	S08	0.650	KEYV-S08	11.06	2
VEE050L37R015-U04S08	●	4	45°	0.500	0.488	0.374	0.015	S08	0.650	KEYV-S08	11.06	2
VEE050L37R031-U04S08	●	4	45°	0.500	0.488	0.374	0.031	S08	0.650	KEYV-S08	11.06	2
VEE050L37R062-U04S08	●	4	45°	0.500	0.488	0.374	0.062	S08	0.650	KEYV-S08	11.06	2

Metric	AH715	AH725	NOF	FHA	DC	DCSFMS	APMX	RE	CRKS	LF	Wrench	Torque*	Fig.
VEE050L04.0R05-04S04		●	4	45°	5	6	4	0.5	S04	8.5	KEYV-S05	4	1
VEE060L04.0R05-04S04		●	4	45°	6	5.8	4	0.5	S04	8.5	KEYV-S05	4	2
VEE060L05.0R00-04S05	●	●	4	45°	6	8	5	-	S05	10	KEYV-S05	7	1
VEE080L05.0R00-04S05		●	4	45°	8	7.7	5	-	S05	10	KEYV-S05	7	2
VED080L05.0R05-04S05		●	4	30°	8	7.7	5	0.5	S05	10	KEYV-S05	7	2
VED080L05.0R10-04S05		●	4	30°	8	7.7	5	1	S05	10	KEYV-S05	7	2
VED080L05.0R15-04S05		●	4	30°	8	7.7	5	1.5	S05	10	KEYV-S05	7	2
VEE100L07.0R00-04S06		●	4	45°	10	9.7	7	-	S06	13	KEYV-S06	10	2
VED100L07.0R05-04S06		●	4	30°	10	9.7	7	0.5	S06	13	KEYV-S06	10	2
VEE100L07.0R05-04S06		●	4	45°	10	9.7	7	0.5	S06	13	KEYV-S06	10	2
VED100L07.0R10-04S06		●	4	30°	10	9.7	7	1	S06	13	KEYV-S06	10	2
VEE100L07.0R10-04S06		●	4	45°	10	9.7	7	1	S06	13	KEYV-S06	10	2
VEE120L09.0R00-04S08	●	●	4	45°	12	11.7	9	-	S08	16.5	KEYV-S08	15	2
VED120L09.0R05-04S08		●	4	30°	12	11.7	9	0.5	S08	16.5	KEYV-S08	15	2
VEE120L09.0R05-04S08		●	4	45°	12	11.7	9	0.5	S08	16.5	KEYV-S08	15	2
VED120L09.0R10-04S08	●	●	4	30°	12	11.7	9	1	S08	16.5	KEYV-S08	15	2
VEE120L09.0R10-04S08		●	4	45°	12	11.7	9	1	S08	16.5	KEYV-S08	15	2

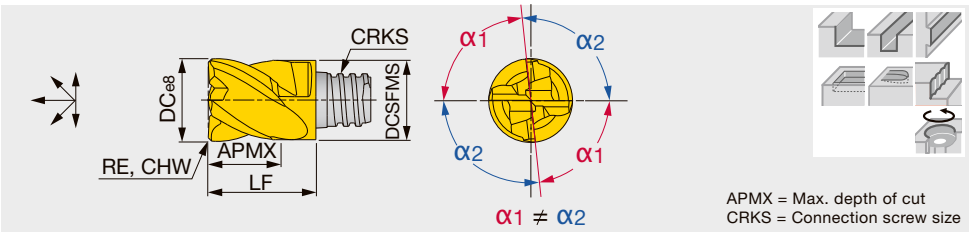
Torque: Recommended clamping torque: lbs·ft (*N·m)
● : Line up
**Fig. 1: Avoid interference with workpiece when using this cutting head. The shank diameter is larger than the cutter diameter when assembled.
2 pieces per package

Reference pages: Standard cutting conditions → 8-17 - 8-18

VEE**-I...

4 flute, roughing - finishing, variable pitch

Square



APMX = Max. depth of cut
CRKS = Connection screw size

Inch	AH725	NOF	FHA	DC	DCSFMS	APMX	RE	CHW	CRKS	LF	Wrench	Torque
VEE031L22C012IU04S05	●	4	38°	0.312	0.303	0.220	-	0.012	S05	0.393	KEYV-S05	5.16
VEE037L29C016IU04S06	●	4	38°	0.375	0.370	0.299	-	0.016	S06	0.512	KEYV-S06	7.38
VEE050L37C020IU04S08	●	4	38°	0.500	0.488	0.374	-	0.020	S08	0.650	KEYV-S08	11.06

Metric	AH725	NOF	FHA	DC	DCSFMS	APMX	RE	CHW	CRKS	LF	Wrench	Torque*
VEE080L05.0C30I04S05	●	4	38°	8	7.7	5	-	0.3	S05	10	KEYV-S05	7
VEE100L07.0C40I04S06	●	4	38°	10	9.7	7	-	0.4	S06	13	KEYV-S06	10
VEE120L09.0C50I04S08	●	4	38°	12	11.7	9	-	0.5	S08	16.5	KEYV-S08	15

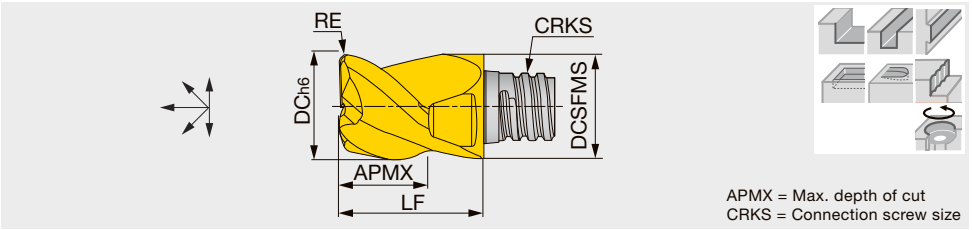
Torque: Recommended clamping torque: lbs·ft (*N·m)
VEE080 ~ VEE120: 2 pieces per package

● : Line up

VEE**-03...

3 flute, roughing - finishing, general, for key way

Square



APMX = Max. depth of cut
CRKS = Connection screw size

Inch	AH725	NOF	FHA	DC	DCSFMS	APMX	RE	CRKS	LF	Wrench	Torque
VEE031L20R000-U03S05	●	3	45°	0.312	0.300	0.200	-	S05	0.390	KEYV-S05	5.16
VEE037L27R000-U03S06	●	3	45°	0.375	0.370	0.275	-	S06	0.512	KEYV-S06	7.38
VEE050L37R000-U03S08	●	3	45°	0.500	0.488	0.374	-	S08	0.650	KEYV-S08	11.06

Metric	AH715	AH725	NOF	FHA	DC	DCSFMS	APMX	RE	CRKS	LF	Wrench	Torque*
VEE077L04.0R02-03S05		●	3	38°	7.7	7.7	4	0.2	S05	10	KEYV-S05	7
VEE080L05.0R00-03S05		●	3	45°	8	7.7	5	-	S05	10	KEYV-S05	7
VEE097L05.0R03-03S06		●	3	38°	9.7	9.7	5	0.3	S06	13	KEYV-S06	10
VEE100L07.0R00-03S06		●	3	45°	10	9.7	7	-	S06	13	KEYV-S06	10
VEE117L07.0R03-03S08	●	●	3	38°	11.7	11.7	7	0.3	S08	16.5	KEYV-S08	15
VEE120L09.0R00-03S08		●	3	45°	12	11.7	9	-	S08	16.5	KEYV-S08	15

Torque: Recommended clamping torque: lbs·ft (*N·m)
2 pieces per package

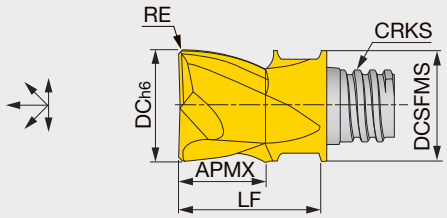
● : Line up

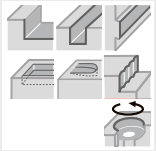
Reference pages: Standard cutting conditions → 8-17 - 8-18

VEE**A02...

2 flute, roughing - finishing, for non-ferrous metal, general

Square





APMX = Max. depth of cut
CRKS = Connection screw size

Inch	KS15F	NOF	FHA	DC	DCSFMS	APMX	RE	CRKS	LF	Wrench	Torque
VEE037L27R000AU02S06	●	2	45°	0.375	0.360	0.270	-	S06	0.510	KEYV-S06	7.38
VEE037L27R020AU02S06	●	2	45°	0.375	0.360	0.270	0.02	S06	0.512	KEYV-S06	7.38
VEE050L37R000AU02S08	●	2	45°	0.500	0.488	0.374	-	S08	0.650	KEYV-S08	11.06
VEE050L37R020AU02S08	●	2	45°	0.500	0.488	0.374	0.02	S08	0.650	KEYV-S08	11.06

Metric	KS15F	NOF	FHA	DC	DCSFMS	APMX	RE	CRKS	LF	Wrench	Torque*
VEE100L07.0R05A02S06	●	2	45°	10	9.7	7	0.5	S06	13	KEYV-S06	10
VEE100L07.0R10A02S06	●	2	45°	10	9.7	7	1	S06	13	KEYV-S06	10
VEE120L09.0R05A02S08	●	2	45°	12	11.7	9	0.5	S08	16.5	KEYV-S08	15

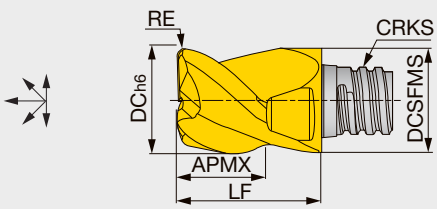
Torque: Recommended clamping torque: lbs·ft (*N·m)
2 pieces per package

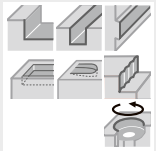
● : Line up

VEE**A03...

3 flute, roughing - finishing, for non-ferrous metal, general

Square





APMX = Max. depth of cut
CRKS = Connection screw size

Inch	KS15F	NOF	FHA	DC	DCSFMS	APMX	RE	CRKS	LF	Wrench	Torque
VEE031L20R020AU03S05	●	3	45°	0.312	0.300	0.200	0.020	S05	0.390	KEYV-S05	5.16
VEE037L23R031AU03S06	●	3	45°	0.375	0.360	0.230	0.031	S06	0.510	KEYV-S06	7.38
VEE037L23R062AU03S06	●	3	45°	0.375	0.360	0.230	0.062	S06	0.510	KEYV-S06	7.38
VEE050L31R031AU03S08	●	3	45°	0.500	0.488	0.315	0.031	S08	0.650	KEYV-S08	11.06
VEE050L31R062AU03S08	●	3	45°	0.500	0.488	0.315	0.062	S08	0.650	KEYV-S08	11.06
VEE050L31R094AU03S08	●	3	45°	0.500	0.488	0.315	0.094	S08	0.650	KEYV-S08	11.06
VEE050L31R125AU03S08	●	3	45°	0.500	0.488	0.315	0.125	S08	0.650	KEYV-S08	11.06

Metric	KS15F	NOF	FHA	DC	DCSFMS	APMX	RE	CRKS	LF	Wrench	Torque*
VEE080L05.0R05A03S05	●	3	45°	8	7.7	5	0.5	S05	10	KEYV-S05	7
VEE100L06.0R05A03S06	●	3	45°	10	9.7	6	0.5	S06	13	KEYV-S06	10
VEE100L06.0R10A03S06	●	3	45°	10	9.7	6	1	S06	13	KEYV-S06	10
VEE120L08.0R05A03S08	●	3	45°	12	11.7	8	0.5	S08	16.5	KEYV-S08	15
VEE120L08.0R10A03S08	●	3	45°	12	11.7	8	1	S08	16.5	KEYV-S08	15

Torque: Recommended clamping torque: lbs·ft (*N·m)
2 pieces per package

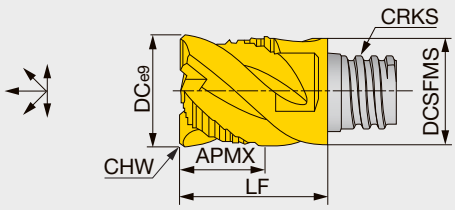
● : Line up

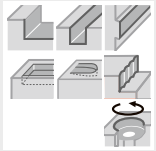
Reference pages: Standard cutting conditions → 8-17 - 8-18

VEE**C...

4 flute, roughing - semi finishing, roughing and finishing edge combination

Square





APMX = Max. depth of cut
CRKS = Connection screw size

Inch	AH725	NOF	FHA	DC	DCSFMS	APMX	CHW	CRKS	LF	Wrench	Torque
VEE031L20C012CU04S05	●	4	45°	0.312	0.300	0.200	0.012	S05	0.390	KEYV-S05	5.16
VEE037L27C012CU04S06	●	4	45°	0.375	0.360	0.275	0.012	S06	0.510	KEYV-S06	7.38
VEE050L36C016CU04S08	●	4	45°	0.500	0.488	0.369	0.016	S08	0.650	KEYV-S08	11.06

Metric	AH725	NOF	FHA	DC	DCSFMS	APMX	CHW	CRKS	LF	Wrench	Torque*
VEE080L05.0C30C04S05	●	4	45°	8	7.7	5	0.3	S05	10	KEYV-S05	7
VEE100L07.0C30C04S06	●	4	45°	10	9.7	7	0.3	S06	13	KEYV-S06	10
VEE120L09.0C40C04S08	●	4	45°	12	11.7	9	0.4	S08	16.5	KEYV-S08	15

Torque: Recommended clamping torque: lbs·ft (*N·m)
VEE080 ~ VEE120: 2 pieces per package

● : Line up

STANDARD CUTTING CONDITIONS

Shoulder milling

VEH, VEE: 3 flutes, VED / VEE: 4 flutes, VEE-A, VEE-I,
VEE-R, VED-R, VEE-C

ISO	Workpiece material	Hardness	Cutting speed *Vc* (sfm)	Feed per tooth: *fz* (ipt) Tool diameter: DC (in) 0.250"	0.312"	0.375"	0.500"	0.625"	0.750"	1.000"	Depth of cut *ap* (in)	Width of cut *ae* (in)
P	Low carbon steels 1045, 1055, etc.	- 300 HB	260 - 590	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.25 x DC
P	High carbon steels 4140, 5120, etc.	- 300 HB	200 - 460	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.25 x DC
P	Prehardened steel PX5, NAK80, etc.	30 - 40 HRC	200 - 400	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.25 x DC
M	Stainless steels S30400, S31600, etc.	- 200 HB	130 - 330	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.25 x DC
K	Grey cast irons No.250B, No.300B, etc.	150 - 250 HB	260 - 660	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.25 x DC
K	Ductile cast irons 60-40-18, etc.	150 - 250 HB	260 - 660	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.25 x DC
N	Aluminum alloys Si < 13%	-	660 - 2297	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.25 x DC
N	Aluminum alloys Si ≥13%	-	330 - 980	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.25 x DC
S	Titanium alloys Ti-6Al-4V, etc.	-	130 - 260	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.25 x DC
S	Heat-resistant alloys Inconel 718, etc.	-	66 - 130	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.25 x DC
H	Hardened steel H13, etc.	40 - 50 HRC	130 - 260	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.25 x DC
H	Hardened steel D2, etc.	50 - 60 HRC	66 - 200	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.25 x DC

STANDARD CUTTING CONDITIONS

VED / VEE: 6 flutes, VED / VEE: 8, 10 flutes, VED: 7, 9 flutes

ISO	Workpiece material	Hardness	Cutting speed *Vc* (sfm)	Tool diameter: DC (in)						Depth of cut *ap* (in)	Width of cut *ae* (in)
				0.312"	0.375"	0.500"	0.625"	0.750"	1.000"		
S	Titanium alloys Ti-6Al-4V, etc.	-	200 - 400	0.002 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.02 x DC
	Heat-resistant alloys Inconel 718, etc.	-	100 - 200	0.002 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.02 x DC
H	Hardened steel H13, etc.	40 - 50 HRC	260 - 530	0.002 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.02 x DC
	Hardened steel D2, etc.	50 - 60 HRC	130 - 300	0.002 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.6 x DC	0.02 x DC

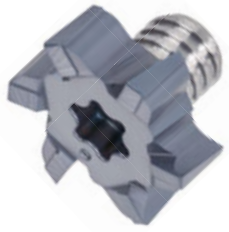
Slotting

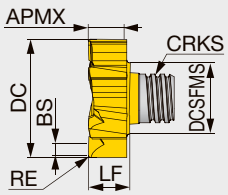
VEH, VEE: 3 flutes, VED/VEE: 4 flutes, VEE-A, VEE-I, VEE-R, VEE-C

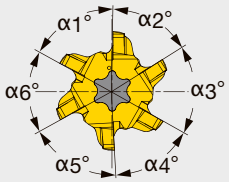
ISO	Workpiece material	Hard-ness	Cutting speed *Vc* (sfm)	Tool diameter: DC (in)						Depth of cut *ap* (in)
				0.250"	0.312"	0.375"	0.500"	0.625"	0.750"	1.000"	
P	Low carbon steels 1045, 1055, etc.	- 300 HB	260 - 590	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.003 - 0.004	0.5 x DC
	High carbon steels 4140, 5120, etc.	- 300 HB	200 - 460	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.003 - 0.004	0.5 x DC
	Prehardened steel PX5, NAK80, etc.	30 - 40 HRC	200 - 400	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.003 - 0.004	0.5 x DC
M	Stainless steels S30400, S31600, etc.	- 200 HB	130 - 330	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.003 - 0.004	0.5 x DC
K	Grey cast irons No.250B, No.300B, etc.	150 - 250 HB	260 - 660	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.003 - 0.004	0.5 x DC
	Ductile cast irons 60-40-18, etc.	150 - 250 HB	260 - 660	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.003 - 0.004	0.5 x DC
N	Aluminum alloys Si < 13%	-	660 - 2297	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.003 - 0.004	0.5 x DC
	Aluminum alloys Si ≥13%	-	330 - 980	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.003 - 0.004	0.5 x DC
S	Titanium alloys Ti-6Al-4V, etc.	-	130 - 260	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.003 - 0.004	0.5 x DC
	Heat-resistant alloys Inconel 718, etc.	-	66 - 130	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.003 - 0.004	0.5 x DC
H	Hardened steel H13, etc.	40 - 50 HRC	130 - 260	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.003 - 0.004	0.5 x DC
	Hardened steel D2, etc.	50 - 60 HRC	66 - 200	0.001 - 0.003	0.001 - 0.004	0.003 - 0.005	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.003 - 0.004	0.5 x DC

6 flute, roughing - finishing, for face milling

Face mill







α1 ≠ α2 ≠ α3 ≠ α4 ≠ α5 ≠ α6

APMX = Max. depth of cut
CRKS = Connection screw size

Metric	AH715	NOF	FHA	DC	DCSFMS	APMX	RE	BS	CRKS	LF	Wrench	Torque*
VFM120L03.6R02I06S05	●	6	10°	12	7.7	3.6	0.2	1.2	S05	4.4	KEYV-T20	7
VFM160L04.8R04I06S06	●	6	10°	16	9.7	4.8	0.4	2	S06	5.6	KEYV-T25	10
VFM200L06.0R04I06S08	●	6	10°	20	11.7	6	0.4	2	S08	7	KEYV-T40L	15
VFM250L07.5R04I06S10	●	6	10°	25	15.3	7.5	0.4	2	S10	8.55	KEYV-T50L	28

Torque*: Recommended clamping torque (N·m)
2 pieces per package

● : Line up

STANDARD CUTTING CONDITIONS

Face milling

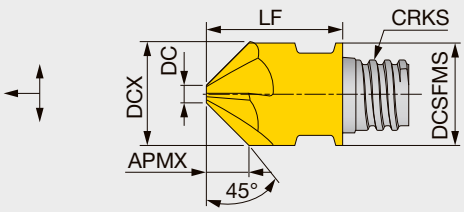
VFM

ISO	Workpiece material	Hardness	Cutting speed *Vc* (sfm)	Tool diameter: DC				Depth of cut *ap* (in)	Width of cut *ae* (in)
				ø12 mm	ø16 mm	ø20 mm	ø25 mm		
P	Low carbon steels 1045, 1055, etc.	- 300 HB	262 - 591	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.039	0.7 x DC
P	High carbon steels 4140, 5120, etc.	- 300 HB	197 - 459	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.039	0.7 x DC
P	Prehardened steel PX5, NAK80, etc.	30 - 40 HRC	197 - 394	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.039	0.7 x DC
M	Stainless steels S30400, S31600, etc.	- 200 HB	131 - 328	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.039	0.7 x DC
K	Grey cast irons No.250B, No.300B, etc.	150 - 250 HB	262 - 656	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.039	0.7 x DC
K	Ductile cast irons 60-40-18, etc.	150 - 250 HB	262 - 656	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.039	0.7 x DC
N	Aluminum alloys Si < 13%	-	656 - 2297	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.039	0.7 x DC
N	Aluminum alloys Si ≥ 13%	-	328 - 984	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.039	0.7 x DC
S	Titanium alloys Ti-6Al-4V, etc.	-	131 - 262	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.039	0.7 x DC
S	Heat-resistant alloys Inconel 718, etc.	-	66 - 131	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.039	0.7 x DC
H	Hardened steel H13, etc.	40 - 50 HRC	131 - 262	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.039	0.7 x DC
H	Hardened steel D2, etc.	50 - 60 HRC	66 - 197	0.003 - 0.005	0.004 - 0.006	0.004 - 0.007	0.004 - 0.007	0.039	0.7 x DC

VCA**-04/06...

4, 6 flute, chamfering angle: 45°

Chamfering



APMX = Max. depth of cut
CRKS = Connection screw size

Inch	AH725	NOF	FHA	DCX	DCSFMS	APMX	DC	CRKS	LF	Wrench	Torque
VCA0375L16A45-U04S06	●	4	0°	0.375	0.375	0.150	0.073	S06	0.512	KEYV-S06	7.38

Metric	AH715	AH725	NOF	FHA	DCX	DCSFMS	APMX	DC	CRKS	LF	Wrench	Torque*
VCA100L04.0A45-04S06	●	●	4	0°	10	10	4	1.95	S06	13	KEYV-S06	10
VCA120L05.0A45-04S08	●	●	4	0°	12	12	5	1.95	S08	16.5	KEYV-S08	15
VCA127L05.3A45-04S08		●	4	0°	12.7	12.7	5.3	1.98	S08	16.5	KEYV-S08	15
VCA160L06.5A45-06S10	●	●	6	0°	16	16	6.5	3	S10	20.3	KEYV-S10	28

Torque: Recommended clamping torque: lbs·ft (*N·m)
2 pieces per package

● : Line up

STANDARD CUTTING CONDITIONS

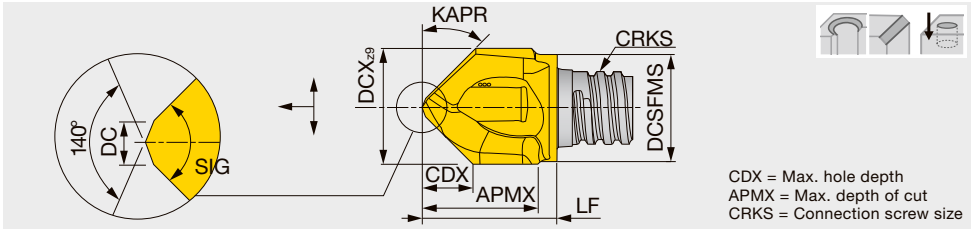
Chamfering and countersinking (Milling, Z-feed chamfering)

VCA

ISO	Workpiece material	Hardness	Cutting speed *Vc* (sfm)	Feed per tooth *fz* (ipt)
P	Low carbon steels 1045, 1055, etc.	- 300 HB	197 - 328	0.0024 - 0.0047
P	High carbon steels 4140,etc.	- 300 HB	164 - 262	0.0024 - 0.0047
P	Prehardened steel PX5, NAK80 etc	30 - 40 HRC	131 - 230	0.0024 - 0.0047
M	Stainless steels SUS304, SUS316, etc. 304, 316, etc.	- 200 HB	98 - 164	0.0024 - 0.0047
K	Grey cast irons 250, 300, etc.	150 - 250 HB	262 - 394	0.0024 - 0.0047
K	Ductile cast irons 400-15S, etc.	150 - 250 HB	262 - 394	0.0024 - 0.0047
N	Aluminum alloys	-	328 - 656	0.0031 - 0.0059
S	Titanium alloys Ti-6Al-4V, etc.	-	98 - 164	0.0020 - 0.0039
S	Heat-resistant alloys Inconel 718, etc.	-	66 - 131	0.0016 - 0.0031
H	Hardened steel H13, etc.	40 - 50 HRC	98 - 164	0.0020 - 0.0039
H	Hardened steel D2, etc.	50 - 60 HRC	66 - 131	0.0016 - 0.0031

VCP**-02...

2 flute, chamfering angle: 30°, 45°, 60°



CDX = Max. hole depth
APMX = Max. depth of cut
CRKS = Connection screw size

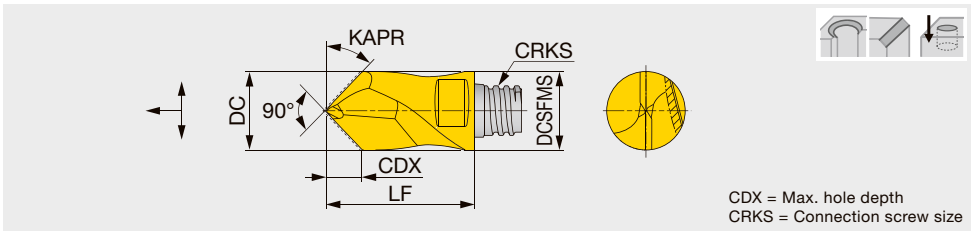
Metric	AH715	AH725	SIG	NOF	FHA	DCX	DCSFMS	APMX	CDX	CRKS	LF	DC	KAPR	Wrench	Torque*
VCP100L09.5A30-02S06		●	60°	2	0°	10	9.5	8.5	7.5	S06	11.75	1.5	60°	KEYV-S06	10
VCP120L12.0A30-02S08	●	●	60°	2	0°	12	11.5	11	9.2	S08	15.4	1.5	60°	KEYV-S08	15
VCP160L15.0A30-02S10	●	●	60°	2	0°	16	15.2	16	12	S10	20.2	2.5	60°	KEYV-S10	28
VCP080L07.7A45-02S05	●	●	90°	2	0°	8	7.6	7.5	3.7	S05	9.75	1	45°	KEYV-S05	7
VCP083L07.9A45-02S05		●	90°	2	0°	8.3	7.6	7.5	3.8	S05	10	1	45°	KEYV-S05	7
VCP100L09.0A45-02S06	●	●	90°	2	0°	10	9.5	9.5	4.4	S06	11.75	1.5	45°	KEYV-S06	10
VCP104L09.0A45-02S06		●	90°	2	0°	10.4	9.5	9.5	4.6	S06	11.75	1.5	45°	KEYV-S06	10
VCP120L12.0A45-02S08	●	●	90°	2	0°	12	11.5	11.5	5.4	S08	15.4	1.5	45°	KEYV-S08	15
VCP124L12.0A45-02S08		●	90°	2	0°	12.4	11.5	11.5	5.6	S08	15.4	1.5	45°	KEYV-S08	15
VCP160L15.0A45-02S10	●	●	90°	2	0°	16	15.2	15	7.1	S10	18.8	1.5	45°	KEYV-S10	28
VCP165L15.0A45-02S10		●	90°	2	0°	16.5	15.2	15	7.1	S10	18.8	1.5	45°	KEYV-S10	28
VCP100L09.5A60-02S06		●	120°	2	0°	10	9.5	9.5	2.7	S06	12.7	1.5	30°	KEYV-S06	10
VCP120L12.0A60-02S08	●	●	120°	2	0°	12	11.5	11.5	3.3	S08	15.2	1.5	30°	KEYV-S08	15
VCP160L15.5A60-02S10	●	●	120°	2	0°	16	15.2	16	4.4	S10	19.9	1.5	30°	KEYV-S10	28

Torque*: Recommended clamping torque (N·m)
2 pieces per package

● : Line up

VDS...

2 flute, chamfering angle: 45°, helix cutting edge



CDX = Max. hole depth
CRKS = Connection screw size

Metric	AH725	NOF	FHA	DC	DCSFMS	CDX	KAPR	CRKS	LF	Wrench	Torque*
VDS080A45-02S05	●	2	10°	8	7.7	3.7	45°	S05	15	KEYV-S05	7
VDS100A45-02S06	●	2	10°	10	9.7	4.4	45°	S06	19	KEYV-S06	10
VDS120A45-02S08	●	2	10°	12	11.7	5.4	45°	S08	23	KEYV-S08	15
VDS160A45-02S10	●	2	10°	16	15.3	7.1	45°	S10	28	KEYV-S10	28

Torque*: Recommended clamping torque (N·m)
2 pieces per package

● : Line up

Reference pages: Standard cutting conditions → 8-22

STANDARD CUTTING CONDITIONS

Spot drill

VCP, VDS

ISO	Workpiece material	Hardness	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Carbon steel 1045, 1055, etc.	- 300 HB	197 - 328	0.0024 - 0.0047
P	Alloy steel 4140, 8620, etc.	- 300 HB	164 - 262	0.0024 - 0.0047
P	Prehardened steel PX5, NAK80, etc.	30 - 40 HRC	131 - 230	0.0024 - 0.0047
M	Stainless steels 304, 316, etc.	- 200 HB	98 - 164	0.0024 - 0.0047
K	Gray cast irons 250, 300, etc.	150 - 250 HB	262 - 394	0.0024 - 0.0047
K	Ductile cast irons 400-15S, etc.	150 - 250 HB	262 - 394	0.0024 - 0.0047
N	Aluminum alloys	-	328 - 656	0.0031 - 0.0063
S	Titanium alloys Ti-6Al-4V, etc.	-	98 - 164	0.002 - 0.0039
S	Heat-resistant alloys Inconel 718, etc.	-	66 - 131	0.0016 - 0.0031
H	Hardened steel H13, etc.	40 - 50 HRC	98 - 164	0.002 - 0.0039
H	Hardened steel D2, etc.	50 - 60 HRC	66 - 131	0.0016 - 0.0031

VDP**-02...

2 flute, A/B type center

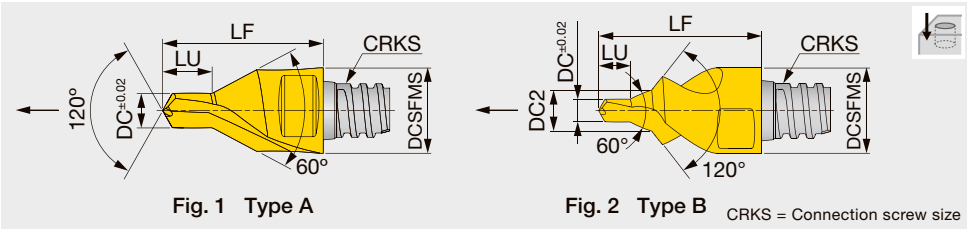


Fig. 1 Type A

Fig. 2 Type B

CRKS = Connection screw size

Metric	AH725	NOF	FHA	DC±0.02	DC2	DCSFMS	LU	CRKS	LF	Wrench	Torque*	Fig.
VDP107L1.60A30-02S04	●	2	0°	1.07	-	6	1.6	S04	10	KEYV-S05	4	1
VDP165L2.40A30-02S04	●	2	0°	1.65	-	6	2.4	S04	10	KEYV-S05	4	1
VDP207L2.90A30-02S04	●	2	0°	2.07	-	6	2.9	S04	10	KEYV-S05	4	1
VDP328L04.6A30-02S05	●	2	0°	3.28	-	8	4.6	S05	15	KEYV-S05	7	1
VDP412L05.9A30-02S06	●	2	0°	4.12	-	10	5.9	S06	19	KEYV-S06	10	1
VDP513L07.2A30-02S08	●	2	0°	5.13	-	12	7.2	S08	23	KEYV-S08	15	1
VDP646L08.9A30-02S10	●	2	0°	6.46	-	16	8.9	S10	28	KEYV-S10	28	1
VDP324L4.38B30-02S08	●	2	0°	3.24	6.77	12	4.4	S08	23	KEYV-S08	15	2
VDP409L5.60B30-02S08	●	2	0°	4.09	8.56	12.7	5.6	S08	23	KEYV-S08	15	2

Torque*: Recommended clamping torque (N·m)
2 pieces per package

● : Line up

STANDARD CUTTING CONDITIONS

Center drill

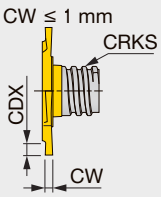
VDP

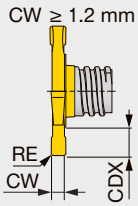
ISO	Workpiece material	Hardness	Cutting speed *Vc* (sfm)	Feed : *f* (ipt) VDP107	VDP165	VDP207	VDP324 / VDP328	VDP409 / VDP412	VDP509 / VDP513	VDP641
P	Carbon steel 1045, 1055, etc.	- 300 HB	131 - 262	0.0008 - 0.0016	0.001 - 0.002	0.001 - 0.002	0.0016 - 0.0031	0.002 - 0.0039	0.002 - 0.0039	0.0024 - 0.0047
P	Alloy steel 4140, 8620, etc.	- 300 HB	98 - 164	0.0008 - 0.0016	0.001 - 0.002	0.001 - 0.002	0.0016 - 0.0031	0.002 - 0.0039	0.002 - 0.0039	0.0024 - 0.0047
P	Prehardened steel PX5, NAK80, etc.	30 - 40 HRC	66 - 98	0.0008 - 0.0016	0.001 - 0.002	0.001 - 0.002	0.0016 - 0.0031	0.002 - 0.0039	0.002 - 0.0039	0.0024 - 0.0047
M	Stainless steels 304, 316, etc.	- 200 HB	49 - 82	0.0006 - 0.0012	0.0008 - 0.0016	0.0008 - 0.0016	0.0016 - 0.0031	0.002 - 0.0039	0.002 - 0.0039	0.0024 - 0.0047
K	Gray cast irons 250, 300, etc.	150 - 250 HB	197 - 328	0.0008 - 0.0016	0.001 - 0.002	0.001 - 0.002	0.002 - 0.0035	0.0028 - 0.0005	0.0028 - 0.0047	0.0047 - 0.0071
K	Ductile cast irons 400-15S, etc.	150 - 250 HB	197 - 328	0.0008 - 0.0016	0.001 - 0.002	0.001 - 0.002	0.0016 - 0.0031	0.002 - 0.0039	0.002 - 0.0039	0.0039 - 0.0059
S	Titanium alloys Ti-6Al-4V, etc.	-	49 - 82	0.0004 - 0.0008	0.0004 - 0.0008	0.0006 - 0.0012	0.0016 - 0.0028	0.0016 - 0.0028	0.0016 - 0.0028	0.0016 - 0.0028
S	Heat-resistant alloys Inconel 718, etc.	-	33 - 66	0.0004 - 0.0008	0.0004 - 0.0008	0.0006 - 0.0012	0.0012 - 0.0024	0.0012 - 0.0024	0.0012 - 0.0024	0.0012 - 0.0024
H	Hardened steel H13, etc.	40 - 50 HRC	49 - 82	-	-	-	0.0016 - 0.0028	0.0016 - 0.0028	0.0016 - 0.0028	0.0016 - 0.0028
H	Hardened steel D2, etc.	50 - 60 HRC	33 - 66	-	-	-	0.0012 - 0.0024	0.0012 - 0.0024	0.0012 - 0.0024	0.0012 - 0.0024

VST**-3...

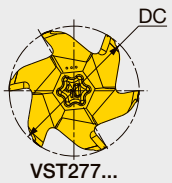
3 flute, for slotting

Slotting





VST157... - 217...
GH730



VST277...

CRKS = Connection screw size

Metric	GH730	AH735	NOF	FHA	DC	CW$^{\pm 0.02}$	RE	CRKS	CDX	Wrench	Torque*
VST157W1.50R010-3S06	●		3	0°	15.7	1.5	0.1	S06	2.8	KEYV-177(2) / KEYV-T20	10
VST157W1.57R020-3S06	●		3	0°	15.7	1.57	0.2	S06	2.8	KEYV-177(2) / KEYV-T20	10
VST157W2.00R020-3S06	●		3	0°	15.7	2	0.2	S06	2.8	KEYV-177(2) / KEYV-T20	10
VST157W2.39R020-3S06	●		3	0°	15.7	2.39	0.2	S06	2.8	KEYV-177(2) / KEYV-T20	10
VST157W2.50R020-3S06	●		3	0°	15.7	2.5	0.2	S06	2.8	KEYV-177(2) / KEYV-T20	10
VST157W3.00R020-3S06	●		3	0°	15.7	3	0.2	S06	2.8	KEYV-177(2) / KEYV-T25	10
VST157W3.17R020-3S06			3	0°	15.7	3.17	0.2	S06	2.8	KEYV-177	10
VST177W1.20R005-3S06	●		3	0°	17.7	1.2(1)	0.05	S06	3.8	KEYV-177(2) / KEYV-T20	10
VST177W1.40R005-3S06	●		3	0°	17.7	1.4(1)	0.05	S06	3.8	KEYV-177(2) / KEYV-T20	10
VST177W1.50R010-3S06	●		3	0°	17.7	1.5	0.1	S06	3.8	KEYV-177(2) / KEYV-T20	10
VST177W1.57R020-3S06	●		3	0°	17.7	1.57	0.2	S06	3.8	KEYV-177(2) / KEYV-T20	10
VST177W1.70R005-3S06	●		3	0°	17.7	1.7(1)	0.05	S06	3.8	KEYV-177(2) / KEYV-T20	10
VST177W2.00R020-3S06	●		3	0°	17.7	2	0.2	S06	3.8	KEYV-177(2) / KEYV-T20	10
VST177W2.20R110-3S06			3	0°	17.7	2.20	1.1	S06	3.8	KEYV-177	10
VST177W2.39R020-3S06			3	0°	17.7	2.39	0.2	S06	3.8	KEYV-177	10
VST177W2.50R020-3S06	●		3	0°	17.7	2.5	0.2	S06	3.8	KEYV-177(2) / KEYV-T20	10
VST177W3.00R020-3S06	●	▲	3	0°	17.7	3	0.2	S06	3.8	KEYV-177(2) / KEYV-T25	10
VST177W3.17R020-3S06			3	0°	17.7	3.17	0.2	S06	3.8	KEYV-177	10

(1) CW is based on DIN471 / 472
(2) Applicable for AH735
Torque*: Recommended clamping torque (N·m)
2 pieces per package

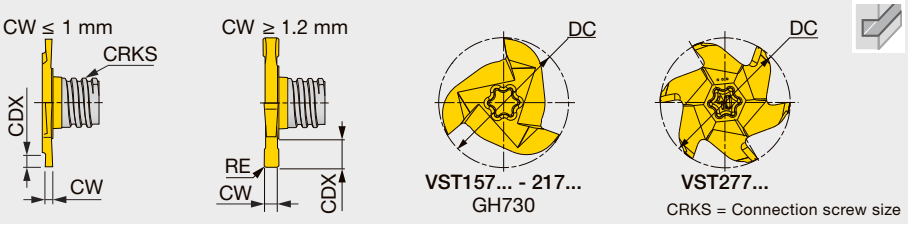
● : Line up
▲ : To be discontinued

Reference pages: Standard cutting conditions → 8-25

VST**-4/6...

4, 6 flute, for slotting

Slotting



Metric	GH730	AH735	NOF	FHA	DC	CW±0.02	RE	CRKS	CDX	Wrench	Torque*
VST217W0.76R000-4S08	●		4	0°	21.7	0.76(1)	-	S08	1.5	KEYV-217(2) / KEYV-T25	15
VST217W0.86R000-4S08			4	0°	21.7	0.86(1)	-	S08	1.7	KEYV-217	15
VST217W0.96R000-4S08	●		4	0°	21.7	0.96(1)	-	S08	1.9	KEYV-217(2) / KEYV-T25	15
VST217W1.00R005-4S08	●		4	0°	21.7	1	0.05	S08	2	KEYV-217(2) / KEYV-T25	15
VST217W1.20R005-4S08	●		4	0°	21.7	1.2(1)	0.05	S08	4.5	KEYV-217(2) / KEYV-T25	15
VST217W1.40R005-4S08	●		4	0°	21.7	1.4(1)	0.05	S08	4.5	KEYV-217(2) / KEYV-T25	15
VST217W1.57R000-4S08	●		4	0°	21.7	1.57	-	S08	4.5	KEYV-217(2) / KEYV-T25	15
VST217W1.70R010-4S08	●		4	0°	21.7	1.7(1)	0.1	S08	4.5	KEYV-217(2) / KEYV-T25	15
VST217W1.95R020-4S08	●		4	0°	21.7	1.95(1)	0.2	S08	4.5	KEYV-217(2) / KEYV-T25	15
VST217W2.00R020-4S08	●		4	0°	21.7	2	0.2	S08	4.5	KEYV-217(2) / KEYV-T25	15
VST217W2.25R020-4S08	●		4	0°	21.7	2.25(1)	0.2	S08	4.5	KEYV-217(2) / KEYV-T25	15
VST217W2.39R020-4S08	●		4	0°	21.7	2.39	0.2	S08	4.5	KEYV-217(2) / KEYV-T25	15
VST217W2.50R020-4S08	●	▲	4	0°	21.7	2.5	0.2	S08	4.5	KEYV-217(2) / KEYV-T25	15
VST217W2.75R020-4S08	●		4	0°	21.7	2.75(1)	0.2	S08	4.5	KEYV-217(2) / KEYV-T25	15
VST217W3.00R020-4S08	●	▲	4	0°	21.7	3	0.2	S08	4.5	KEYV-217(2) / KEYV-T30L	15
VST217W3.17R020-4S08	●		4	0°	21.7	3.17	0.2	S08	4.5	KEYV-217(2) / KEYV-T30L	15
VST217W3.25R020-4S08	●		4	0°	21.7	3.25(1)	0.2	S08	4.5	KEYV-217(2) / KEYV-T30L	15
VST217W4.00R020-4S08	●		4	0°	21.7	4	0.2	S08	4.5	KEYV-217(2) / KEYV-T30L	15
VST217W4.25R020-4S08	●		4	0°	21.7	4.25(1)	0.2	S08	4.5	KEYV-217(2) / KEYV-T30L	15
VST217W4.75R020-4S08	●		4	0°	21.7	4.75	0.2	S08	4.5	KEYV-217(2) / KEYV-T30L	15
VST217W5.25R020-4S08	●		4	0°	21.7	5.25(1)	0.2	S08	4.5	KEYV-217(2) / KEYV-T30L	15
VST277W2.50R020-6S10	●		6	0°	27.7	2.5	0.2	S10	6	KEYV-T40L	28
VST277W5.25R020-6S10	●		6	0°	27.7	5.25(1)	0.2	S10	6	KEYV-T40L	28
VST277W10.0R020-6S10	●		6	0°	27.7	10	0.2	S10	6	KEYV-T40L	28

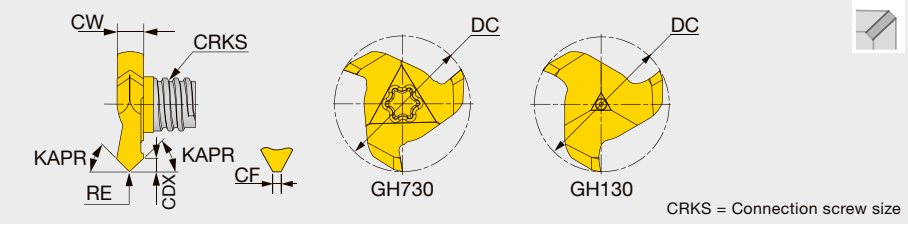
(1) CW is based on DIN471 / 472
(2) Applicable for AH735
Torque*: Recommended clamping torque (N·m)
2 pieces per package

● : Line up
▲ : To be discontinued

VST**A45...

3, 4 flute, for slotting with 45°chamfer

Slotting



Metric	GH730	GH130	NOF	FHA	DC	CW	KAPR	CRKS	CDX	CF	RE	Wrench	Torque*
VST177L01.40A45-3S06	●	▲	3	0°	17.7	3.4	45°	S06	1.4	-	0.1	KEYV-177(1) / KEYV-T25(2)	10
VST217L01.70A45-4S08	●	▲	4	0°	21.7	5.5	45°	S08	1.7	1.5	-	KEYV-217(1) / KEYV-T30L(2)	15

(1) Applicable for GH130
(2) Applicable for GH730
Torque*: Recommended clamping torque (N·m)
2 pieces per package

● : Line up
▲ : To be discontinued

Reference pages: Standard cutting conditions → 8-25

STANDARD CUTTING CONDITIONS

Slotting

VST

ISO	Workpiece material	Hardness	VST		VTB	
			Cutting speed *Vc* (sfm)	Feed per tooth *fz* (ipt)	Cutting speed *Vc* (sfm)	Feed per tooth *fz* (ipt)
P	Low carbon steels 1045, 1055, etc.	- 300 HB	262 - 591	0.002 - 0.006	262 - 591	0.003 - 0.007
	High carbon steels 4140,etc.	- 300 HB	197 - 394	0.002 - 0.005	197 - 394	0.002 - 0.006
M	Stainless steels 304, 316, etc.	- 200 HB	164 - 394	0.002 - 0.005	164 - 394	0.002 - 0.006
K	Grey cast irons 250, 300, etc.	150 - 250 HB	328 - 656	0.002 - 0.006	328 - 656	0.003 - 0.007
	Ductile cast irons 400-15S, etc.	150 - 250 HB	328 - 656	0.002 - 0.005	328 - 656	0.002 - 0.006
N	Aluminum alloys Si < 13%	-	656 - 1969	0.002 - 0.006	656 - 1969	0.003 - 0.007
	Aluminum alloys Si ≥13%	-	328 - 984	0.001 - 0.005	328 - 984	0.002 - 0.006
S	Titanium alloys Ti-6Al-4V, etc.	-	131 - 197	0.002 - 0.003	131 - 197	0.002 - 0.006
	Heat-resistant alloys Inconel 718, etc.	-	49 - 115	0.001 - 0.004	49 - 115	0.001 - 0.004

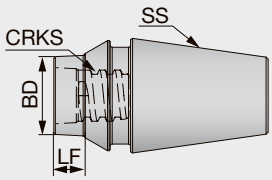
Tolerance of tool diameter

Basic dimensions (mm)		Permissible dimensional deviations (μm)						
>	≤	e8	e9	h6	h7	h9	h10	z9
6	10	-25 -47	-25 -61	0 -9	0 -15	0 -36	0 -58	+78 +42
10	14	-32 -59	-32 -75	0 -11	0 -18	0 -43	0 -70	+93 +50
14	18	-32 -59	-32 -75	0 -11	0 -18	0 -43	0 -70	+103 +60
18	30	-40 -73	-40 -92	0 -13	0 -21	0 -52	0 -84	-

JISB0401-2: 1998 (ISO286-2: 1988) extract

VER...

Straight neck with ER11/16 collet

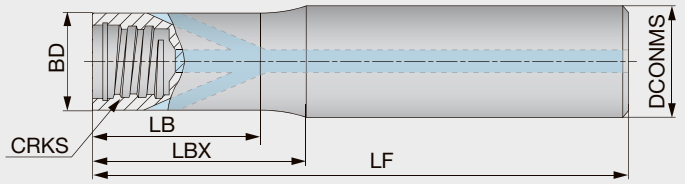


CRKS = Connection screw size

Metric	SS	BD	LF	CRKS	Shank material
VER11AL006S04-S	ER11	5.8	6	S04	Steel
VER11AL006S05-S	ER11	7.9	6	S05	Steel
VER11AL020S05-S	ER11	7.9	20	S05	Steel
VER16AL012S05-S	ER16	7.9	12	S05	Steel
VER16AL020S05-S	ER16	7.9	20	S05	Steel
VER16AL010S06-S	ER16	9.9	10	S06	Steel
VER16AL020S06-S	ER16	9.9	20	S06	Steel
VER16AL006S08-S	ER16	11.6	6	S08	Steel
VER16AL020S08-S	ER16	11.6	20	S08	Steel

VSSD**-W-A...

Straight shank and neck with coolant hole

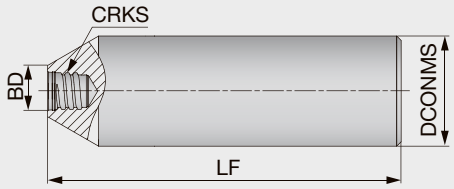


CRKS = Connection screw size

Metric	DCONMS	BD	LF	LBX	LB	CRKS	Shank material
VSSD10L070S06-W-A	10	9.6	70	20	19	S06	Tungsten
VSSD10L090S06-W-A	10	9.6	90	40	39	S06	Tungsten
VSSD10L110S06-W-A	10	9.6	110	60	59	S06	Tungsten
VSSD12L070S08-W-A	12	11.5	70	20	19	S08	Tungsten
VSSD12L090S08-W-A	12	11.5	90	40	39	S08	Tungsten
VSSD12L110S08-W-A	12	11.5	110	60	59	S08	Tungsten
VSSD12L130S08-W-A	12	11.5	130	80	79	S08	Tungsten
VSSD16L070S10-W-A	16	15.2	70	20	18.5	S10	Tungsten
VSSD16L090S10-W-A	16	15.2	90	40	36.5	S10	Tungsten
VSSD16L110S10-W-A	16	15.2	110	60	58.5	S10	Tungsten
VSSD16L130S10-W-A	16	15.2	130	80	78.5	S10	Tungsten

VSSD...

High rigidity shank



CRKS = Connection screw size

Metric	DCONMS	BD	LF	CRKS	Shank shape	Shank material
VSSD06L050S04-S	6	5.8	50	S04	Cylindrical	Steel
VSSD06L060S04-C	6	5.8	60	S04	Cylindrical	Carbide
VSSD08L050S04-S	8	5.8	50	S04	Cylindrical	Steel
VSSD08L060S04-C	8	5.8	60	S04	Cylindrical	Carbide
VSSD10L055S05-S	10	7.6	55	S05	Cylindrical	Steel
VSSD12L065S06-S	12	9.6	65	S06	Cylindrical	Steel
VSSD16L065S08-S	16	11.6	65	S08	Cylindrical	Steel
VSSD20L070S10-S	20	15.3	70	S10	Cylindrical	Steel

VSSD...

Straight neck and cylindrical shank

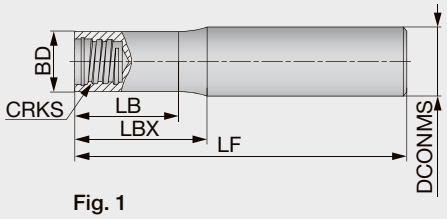


Fig. 1

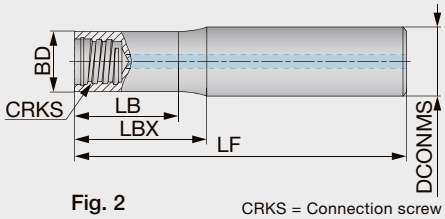


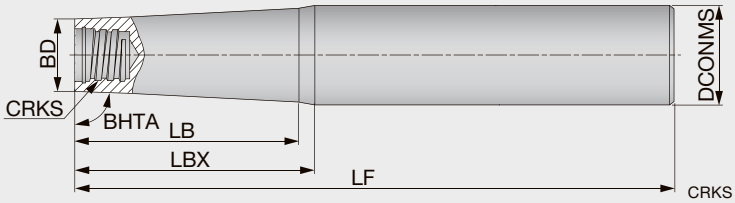
Fig. 2

CRKS = Connection screw size

Metric	DCONMS	BD	LF	LBX	LB	CRKS	Shank shape	Shank material	Fig.
VSSD08L060S05-S	8	7.6	60	15	12.8	S05	Cylindrical	Steel	1
VSSD08L070S05-C	8	7.6	70	20	19	S05	Cylindrical	Carbide	1
VSSD08L090S05-C	8	7.6	90	40	39	S05	Cylindrical	Carbide	1
VSSD08L110S05-C	8	7.6	110	60	59	S05	Cylindrical	Carbide	1
VSSD10L070S06-C	10	9.6	70	20	18.5	S06	Cylindrical	Carbide	1
VSSD10L075S06-S	10	9.6	75	20	19.4	S06	Cylindrical	Steel	1
VSSD10L090S06-C	10	9.6	90	40	38.5	S06	Cylindrical	Carbide	1
VSSD10L110S06-C	10	9.6	110	60	58.5	S06	Cylindrical	Carbide	1
VSSD10L150S06-C	10	9.6	150	100	98.5	S06	Cylindrical	Carbide	1
VSSD12L070S08-C	12	11.5	70	20	17	S08	Cylindrical	Carbide	1
VSSD12L070S08-C-A	12	11.5	70	20	17	S08	Cylindrical	Carbide	2
VSSD12L090S08-C	12	11.5	90	40	37	S08	Cylindrical	Carbide	1
VSSD12L090S08-S	12	11.5	90	16	13.6	S08	Cylindrical	Steel	1
VSSD12L090S08-S-A	12	11.5	90	16	13.6	S08	Cylindrical	Steel	2
VSSD12L090LS08-C-A	12	11.5	90	40	37	S08	Cylindrical	Carbide	2
VSSD12L090LS08-S-A	12	11.5	90	42	37	S08	Cylindrical	Steel	2
VSSD12L110S08-C	12	11.5	110	60	58	S08	Cylindrical	Carbide	1
VSSD12L110S08-C-A	12	11.5	110	60	57	S08	Cylindrical	Carbide	2
VSSD12L130S08-C	12	11.5	130	80	78	S08	Cylindrical	Carbide	1
VSSD12L130S08-C-A	12	11.5	130	80	77	S08	Cylindrical	Carbide	2
VSSD16L090S10-C	16	15.2	90	40	38	S10	Cylindrical	Carbide	1
VSSD16L090S10-C-A	16	15.2	90	40	38	S10	Cylindrical	Carbide	2
VSSD16L100S10-S	16	15.2	100	20	18	S10	Cylindrical	Steel	1
VSSD16L100S10-S-A	16	15.2	100	20	18	S10	Cylindrical	Steel	2
VSSD16L100LS10-S-A	16	15.2	100	42	38	S10	Cylindrical	Steel	2
VSSD16L110S10-C	16	15.2	110	60	58	S10	Cylindrical	Carbide	1
VSSD16L110S10-C-A	16	15.2	110	60	58	S10	Cylindrical	Carbide	2
VSSD16L130S10-C	16	15.2	130	80	78	S10	Cylindrical	Carbide	1
VSSD16L130S10-C-A	16	15.2	130	80	78	S10	Cylindrical	Carbide	2
VSSD16L150S10-C	16	15.2	150	100	98	S10	Cylindrical	Carbide	1

VTSD...

Taper neck and straight shank

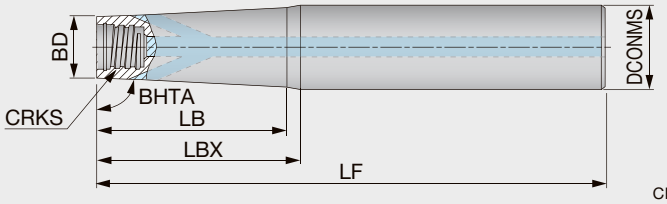


CRKS = Connection screw size

Metric	BHTA	DCONMS	BD	LF	LBX	LB	CRKS	Shank material
VTSD08L080S04-S	87.4°	8	5.8	80	24	-	S04	Steel
VTSD12L080S05-S	85°	12	7.6	80	25	-	S05	Steel
VTSD12L100S05-S	89°	12	7.6	100	35	29	S05	Steel
VTSD12L110S05-C	89°	12	7.6	110	60	56	S05	Carbide
VTSD12L130S05-C	89°	12	7.6	130	80	77	S05	Carbide
VTSD16L125S06-S	85°	16	9.6	125	34	31	S06	Steel
VTSD16L130S08-C	89°	16	11.5	130	80	76.5	S08	Carbide
VTSD16L140S08-S	85°	16	11.5	140	22	19	S08	Steel
VTSD16L150S05-C	89°	16	7.6	150	100	91	S05	Carbide
VTSD16L150S06-C	89°	16	9.6	150	100	94.5	S06	Carbide
VTSD16L150S08-C	89°	16	11.5	150	100	98	S08	Carbide
VTSD16L160S06-S	89°	16	9.6	160	55	46.5	S06	Steel
VTSD16L170S06-C	89°	16	9.6	170	120	116.5	S06	Carbide
VTSD20L140S10-S	85°	20	15.2	140	27.5	-	S10	Steel
VTSD20L170S08-C	89°	20	11.5	170	120	112	S08	Carbide
VTSD20L170S08-S	89°	20	11.5	170	80	69.5	S08	Steel
VTSD20L170S10-C	89°	20	15.2	170	120	119	S10	Carbide
VTSD20L190S10-C	89°	20	15.2	190	140	-	S10	Carbide
VTSD20L190S10-S	89°	20	15.2	190	80	73	S10	Steel
VTSD20L210S10-C	89°	20	15.2	210	160	-	S10	Carbide
VTSD25L160S12-S	85°	25	18.3	160	40	-	S12	Steel
VTSD25L170S10-S	85°	25	15.2	170	56	-	S10	Steel

VTSD**-W-A...

Straight shank and taper neck with coolant hole

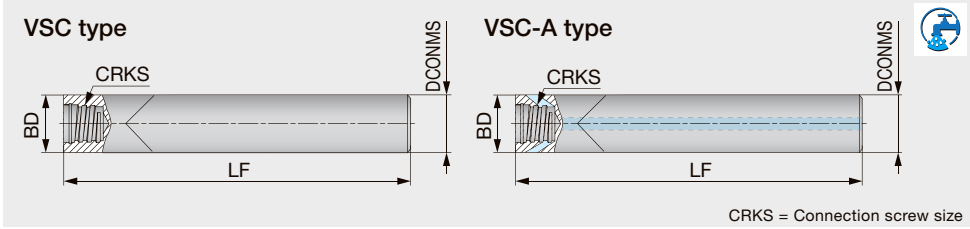


CRKS = Connection screw size

Metric	BHTA	DCONMS	BD	LF	LBX	LB	CRKS	Shank material
VTSD12L110S06-W-A	89°	12	9.6	110	60	59	S06	Tungsten
VTSD16L170S06-W-A	89°	16	9.6	170	120	116	S06	Tungsten

VSC...

Straight shank for VST type slotting heads



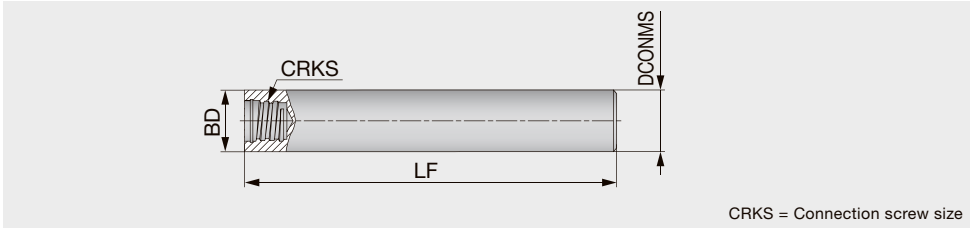
CRKS = Connection screw size

Inch	DCONMS	BD	LF	CRKS	Air hole	Shank material
VSC095L080S06-C	0.375	0.375	3.150	S06	without	Carbide
VSC127L120S08-C-A	0.500	0.500	4.724	S08	with	Carbide
Metric	**DCONMS**	**BD**	**LF**	**CRKS**	**Air hole**	**Shank material**
VSC100L100S06-C	10	10	100	S06	without	Carbide
VSC120L100S08-C-A	12	12	100	S08	with	Carbide

For VSC-C type shank, just VST slotting head is recommended.
If other heads are used on the VSC-C shank, the depth of cut must be smaller than the max. *ap* in each head.
The VSC-C type shank does not have external clearance, so the shank may interfere with the work piece.

VSTD...

Straight shank for VTB type T-slotting heads



CRKS = Connection screw size

Inch	DCONMS	BD	LF	CRKS	Shank material
VST031L275S05US	0.312	0.312	2.750	S05	Steel
VST037L325S06US	0.375	0.375	3.250	S06	Steel
VST050L375S08US	0.500	0.500	3.750	S08	Steel
VST062L400S10US	0.625	0.625	4.000	S10	Steel
Metric	**DCONMS**	**BD**	**LF**	**CRKS**	**Shank material**
VSTD06L070S04-S	6	6	70	S04	Steel
VSTD08L070S05-S	8	8	70	S05	Steel
VSTD10L080S06-S	10	10	80	S06	Steel
VSTD12L090S08-S	12	12	90	S08	Steel
VSTD16L100S10-S	16	16	100	S10	Steel

For VSTD type shank, just VTB T-slotting head is recommended.
If other heads are used on the VSTD shank, the depth of cut must be smaller than the max. *ap* in each head.
The VSTD type shank does not have external clearance, so the shank may interfere with the work piece.

Appearance	Designation	Connection screw size	Torque (lb·ft)	Torque (N·m)	Applicable head
	KEYV-S05	S04	2.95	4	Square Ball Radius Drilling Chamfering Counterboring Barrel Lens Bull nose Indexable modular head
		S05	5.16	7	
	KEYV-S06	S06	7.38	10	
	KEYV-S08	S08	11.06	15	
	KEYV-S10	S10	20.65	28	
	KEYV-177	S06	7.38	10	Slotting VST Threading VTR
	KEYV-217	S08	11.06	15	
	KEYV-T20	S05	5.16	7	Slotting VTB Face mill
		S06	7.38	10	
	KEYV-T25	S06	7.38	10	
	KEYV-T30L	S08	11.06	15	
	KEYV-T40L	S08	11.06	15	Slotting VST, VTB Face mill
		S10	20.65	28	
	KEYV-T50L	S08	11.06	15	Slotting VTB Face mill
		S10	20.65	28	

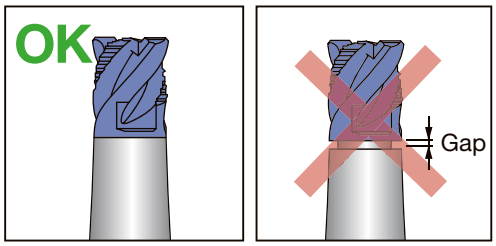
Note: Wrenches are sold separately.

TORQUE WRENCHES

Appearance		Designation	Stock	Connection screw size	TM Head description	Torque (lb·ft)	Torque (N·m)
Handle		TORQUEWRENCH5-50NM9x12	●	-	-	-	5 - 50
Open wrenches for cylindrical heads		TM-WRENCH-6-05	●	S05	VEH, VED, VEE, VEE-I, VEE-R, VEE-C, VEE-A, VFX**-04/06, VRD, VBD-BG, VBE-BG, VBE-BGA, VDP, VDS, VCA, VBO, VBL, VBN, HPAV06-S	5.16	7
		TM-WRENCH-8-06	●	S06		7.38	10
		TM-WRENCH-10-08	●	S08		11.06	15
		TM-WRENCH-13-10	●	S10		20.65	28
		TM-WRENCH-16-12	●	S12		20.65	28
Open wrenches for 2 flute heads		TM-WRENCH-4E-05	●	S05	VRB, VRC, VFX**-02, VBB-BM, VBB-BG, VBB-SG, VCP, VGC, VCW, VCR	5.16	7
		TM-WRENCH-5E-06	●	S06		7.38	10
		TM-WRENCH-7E-08	●	S08		11.06	15
		TM-WRENCH-8E-10	●	S10		20.65	28
		TM-WRENCH-9E-12	●	S12		20.65	28
90° adaptor for Torx bits		INSERT-TOOL-9X12MM	●	-	-	-	-
Torx bits sockets		BIT-SOCKET-T20-DRIVE	●	S05, S06	VFM120, VTB135, VTB160W2.00, VTB165W2.00	5.16, 7.38	7, 10
		BIT-SOCKET-T25-DRIVE	●	S06	VFM160, VTB160W3.00, VTB160W4.00, VTB165W3.00, VTB165W4.00	7.38	10
		BIT-SOCKET-T30-DRIVE	●	S08	VTB195	11.06	15
		BIT-SOCKET-T40-DRIVE	●	S08, S10	VFM200, VST277, VTB225	11.06, 20.65	15, 28
		BIT-SOCKET-T50-DRIVE	●	S08, S10	VFM250, VTB250	11.06, 20.65	15, 28

CAUTIONARY POINTS IN USE

· The cutting heads specified by Tungaloy must be used. Avoid using alternate heads that are not Tungaloy products as this will damage the shank and can cause severe accident or injury.
· Before setting the head, clean the connection screw with an air blast or a wiping cloth to remove chips and other foreign matter that may remain.
· Do not apply the lubricant to the connection screw.
· Please use the correct wrench with the correct cutting head. Tighten the head slowly until the face of the head contacts the shank. (Please refer to the picture shown on the right.) Do not re-tightening or over-tightening. Excessive tightening may cause the cutting head to break.
· Do not apply excessive force or a hammer when tightening or exchanging the cutting heads.



9. Drilling Tool

Drilling Tool

Exchangeable head drill

ADDMEISTERDRILL

Exchangeable head drill series

ø4 mm - ø5.9 mm
L/D = 3, 5

9-2, 9-4

DRILLMEISTER

Exchangeable head drill series

ø0.394" - ø0.665" , ø6 mm - ø16.9 mm
L/D = 1.5, 2, 3, 3.5, 5, 6

9-2, 9-5 -

Solid drill

SOLIDDRILL

High performance solid carbide drill

9 - 24 -

DSM

ø0.1 mm - ø3 mm / L/D = 5, 10, 15

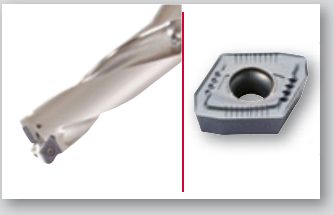
9-24 -

DSW

ø3 mm - ø12 mm / L/D = 3, 5

9-26 -

Indexable drill



TUNGDRILLTWISTED

Indexable drill with 4-corner inserts for various drilling applications

0.500" - 0.787" , ø12.5 mm - ø20 mm
L/D = 2, 3

9-30

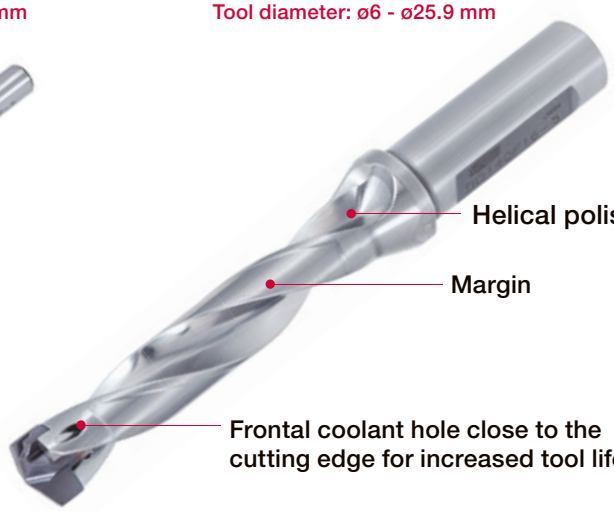
ADDMEISTER DRILL / DRILLMEISTER

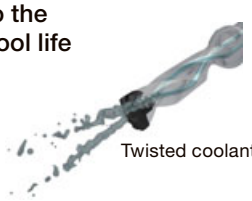
Exchangeable head drills for unparalleled tool life and machining performance

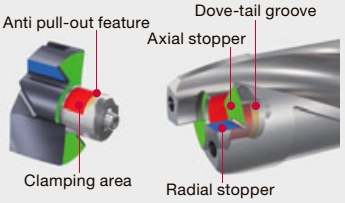
- Helical margin to prevent chip adhesion between the body and the hole during machining
- Tool body made from highest grade of steel with superior hardness for high wear resistance
- Wide variety of geometries for every drilling application
- Advanced grade options ensure stable, long tool life
- Internal coolant channels supply efficient cooling and lubrication during the drilling process

ADDMEISTER DRILL
Tool diameter: ø4 - ø5.9 mm

DRILLMEISTER
Tool diameter: ø6 - ø25.9 mm







Quick and precise head changing with advanced self-clamping system

- Drilling head pocket designed to withstand high machining cutting conditions
- Allows easy and fast head indexing, minimizing machine downtime

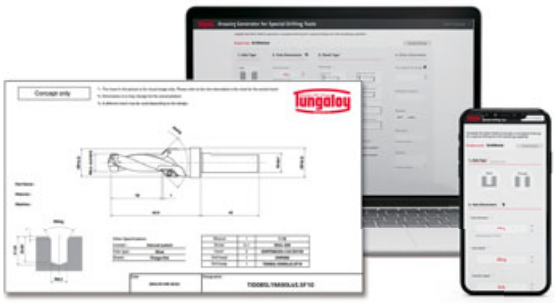
General drilling - Quick Guide

★ : First choice
☆ : Second choice

Tool series	Designation	Appearance	Tool diameter	Effective Cutting edge	L/D	Coolant supply	IT class	Workpiece material P	M	N	S	H	Remark	Page
ADDMEISTER DRILL	TID		ø4 - ø5.9 mm	2	3 5	Int.	8 - 10	★	★	★	★	★	Exchange-able head drill	9-4
DRILLMEISTER	TID TIDC TIDCF		ø0.394" - ø0.665" ø6 - ø16.9 mm	2	1.5 2 3 3.5 5 6	Int. / Ext.	8 - 10	★	★	★	★	★	Exchange-able head drill	9-5
SOLIDDRILL	DSM		ø0.1 mm - ø3 mm	2	5 10 15	Ext.	9 -10	★	★	☆	☆	☆	Solid drill	9-24
	DSW		ø3 mm - ø12 mm	2	3 5	Int. / Ext.	9 - 10	★	★	☆	★	☆	Solid drill	9-26 -
TUNGDRILL TWISTED	TDX		0.500" - 0.787", ø12.5 - ø20 mm	1	2 3	Int.	11 - 13	★	★	☆	★	★	Indexable drill	9-30 -

Introducing Special Drilling Tools and Their Drawing System

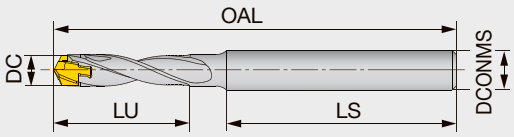
- Introducing an innovative solution for creating drawings of specialized drilling tools, which was previously a time-consuming process.
- Our newly developed service enables effortless creation of simple diagrams anytime, anywhere.
- Explore the “Drawing System for Special Drilling Tools”! By inputting essential tool details, you can swiftly generate straightforward diagrams illustrating special drilling tools with chamfering functions.



ADDMEISTER DRILL

TID-R L/D=3

Exchangeable head drill, L/D = 3, Cylindrical shank



Metric	DC	DCONMS	LU	LS	OAL DMP	OAL DMC	Pocket size	Head
TID040R06-3	4 - 4.4	6	13	35	57.7	58.1	4	DM*040 - DM*044
TID045R06-3	4.5 - 4.9	6	14	35	59.7	59.9	4.5	DM*045 - DM*049
TID050R06-3	5 - 5.4	6	16	35	61.4	61.8	5	DM*050 - DM*054
TID055R06-3	5.5 - 5.9	6	17	35	64	64.3	5.5	DM*055 - DM*059

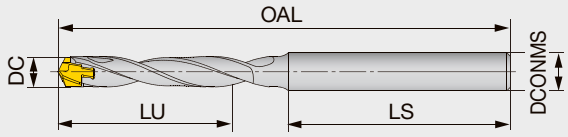
Tool diameter (mm)	Hole diameter tolerance*
ø4 - ø5.9	+0.04 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.

TID-R L/D=5

Exchangeable head drill, L/D = 5, Cylindrical shank



Metric	DC	DCONMS	LU	LS	OAL DMP	OAL DMC	Pocket size	Head
TID040R06-5	4 - 4.4	6	21	35	65.7	66.1	4	DM*040 - DM*044
TID045R06-5	4.5 - 4.9	6	23	35	68.7	68.9	4.5	DM*045 - DM*049
TID050R06-5	5 - 5.4	6	26	35	71.3	71.6	5	DM*050 - DM*054
TID055R06-5	5.5 - 5.9	6	28	35	74.2	74.5	5.5	DM*055 - DM*059

Tool diameter (mm)	Hole diameter tolerance*
ø4 - ø5.9	+0.05 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.

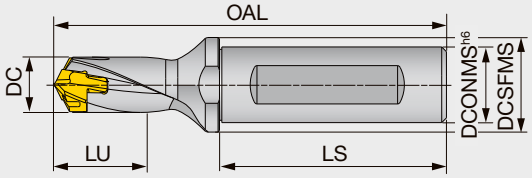
SPARE PARTS

Designation	Clamping key
TID040..., TID045...	K-TID4-4.99
TID050..., TID055...	K-TID5-5.99

Reference pages: Head → 9-16 - 9-21
Standard cutting conditions → 9-22

TIDU-F, TID-F L/D=1.5

Exchangeable head drill, L/D = 1.5, flange type



Inch	DC	DCONMS	DCSFMS	LU	LS	OAL DMP/H/N	OAL DMC	OAL DMF	Pocket size	Head
TIDU0394F0625-1.5	0.394 - 0.429	0.625	0.787	0.591	1.890	3.118	3.142	2.638	10	DM*100 - DM*109
TIDU0433F0625-1.5	0.433 - 0.468	0.625	0.787	0.669	1.890	3.193	3.217	2.678	11	DM*110 - DM*119
TIDU0472F0625-1.5	0.472 - 0.508	0.625	0.787	0.709	1.890	3.268	3.292	2.720	12	DM*120 - DM*129
TIDU0512F0625-1.5	0.512 - 0.547	0.625	0.787	0.787	1.890	3.350	3.381	2.749	13	DM*130 - DM*139
TIDU0551F0625-1.5	0.551 - 0.587	0.625	0.787	0.827	1.890	3.508	3.539	2.811	14	DM*140 - DM*149
TIDU0591F0750-1.5	0.591 - 0.625	0.750	0.984	0.906	1.969	3.787	3.822	2.878	15	DM*150 - DM*159
TIDU0630F0750-1.5	0.630 - 0.665	0.750	0.984	0.945	1.969	3.909	3.948	3.060	16	DM*160 - DM*169
TIDU0669F0750-1.5	0.669 - 0.705	0.750	0.984	1.024	1.969	4.031	4.07	3.126	17	DM*170 - DM*179
TIDU0709F1000-1.5	0.709 - 0.744	1.000	1.260	1.063	2.205	4.390	4.433	3.197	18	DM*180 - DM*189
TIDU0748F1000-1.5	0.748 - 0.783	1.000	1.260	1.142	2.205	4.508	4.551	3.269	19	DM*190 - DM*199
TIDU0787F1000-1.5	0.787- 0.823	1.000	1.260	1.181	2.205	4.630	4.677	3.424	20	DMP200 - DMP209
TIDU0827F1000-1.5	0.827- 0.862	1.000	1.260	1.240	2.205	4.752	4.800	3.698	21	DMP210 - DMP219
TIDU0866F1000-1.5	0.866 - 0.902	1.000	1.260	1.299	2.205	4.874	4.924	3.813	22	DMP220 - DMP229
TIDU0906F1250-1.5	0.906 - 0.941	1.250	1.654	1.358	2.362	5.150	5.204	3.923	23	DMP230 - DMP239
TIDU0945F1250-1.5	0.945 - 0.980	1.250	1.654	1.417	2.362	5.272	5.327	4.270	24	DMP240 - DMP249
TIDU0984F1250-1.5	0.984 - 1.020	1.250	1.654	1.476	2.362	5.394	5.453	4.381	25	DMP250 - DMP259

Tool diameter (in)	Hole diameter tolerance (in)*
ø0.394" - ø0.705"	+0.0012" / 0
ø0.709" - ø1.020"	+0.0014" / 0

*Just for reference

- An overall length (OAL) differs for when the DMP insert is mounted and when the DMC is mounted. (No difference for the drill shoulder)
- For drill diameters from ø0.315" - ø0.390", the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.012" shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

Metric	DC	DCONMS	DCSFMS	LU	LS	OAL DMP/H/N	OAL DMC	OAL DMF	Pocket size	Head
TID060F12-1.5	6 - 6.4	12	16	10	45	67.9	68	67	6	DM*060 - DM*064
TID065F12-1.5	6.5 - 6.9	12	16	11	45	68.9	69.1	68	6.5	DM*065 - DM*069
TID070F12-1.5	7 - 7.4	12	16	12	45	70	70.4	69.1	7	DM*070 - DM*074
TID075F12-1.5	7.5 - 7.9	12	16	13	45	70.7	71.2	69.8	7	DM*075 - DM*079
TID080F12-1.5	8 - 8.9	12	16	14	45	72.3	72.4	71.4	8	DM*080 - DM*089
TID090F12-1.5	9 - 9.9	12	16	16	45	74.2	74.3	73.1	9	DM*090 - DM*099
TID100F16-1.5	10 - 10.9	16	20	17	48	79.1	79.7	77.7	10	DM*100 - DM*109
TID110F16-1.5	11 - 11.9	16	20	19	48	81	81.6	79.4	11	DM*110 - DM*119
TID120F16-1.5	12 - 12.9	16	20	20	48	82.8	83.4	81.2	12	DM*120 - DM*129
TID130F16-1.5	13 - 13.9	16	20	22	48	84.9	85.7	83	13	DM*130 - DM*139
TID140F16-1.5	14 - 14.9	16	20	24	48	89	89.8	87	14	DM*140 - DM*149
TID150F20-1.5	15 - 15.9	20	25	26	50	96	96.9	93.9	15	DM*150 - DM*159
TID160F20-1.5	16 - 16.9	20	25	27	50	99.1	100.1	96.8	16	DM*160 - DM*169
TID170F20-1.5	17 - 17.9	20	25	29	50	102.2	103.2	99.7	17	DM*170 - DM*179

Tool diameter (mm)	Hole diameter tolerance*
ø6 - ø17.9	+0.03 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

SPARE PARTS

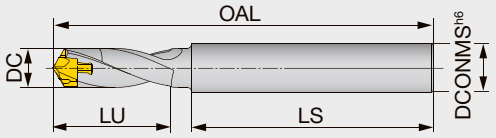
Designation	Clamping key
TIDU0394... - TIDU0748...	K-TID10-19.99
TIDU0787... - TIDU0984...	K-TID20-26.99
TID060... - TID090...	K-TID6-9.99
TID100... - TID160...	K-TID10-19.99

Reference pages: Head → 9-16 - 9-21, Sleeve → 9-23
Standard cutting conditions → 9-22

DRILLMEISTER

TID-R-2E L/D=2

Exchangeable head drill, L/D = 2, Cylindrical shank, for external coolant supply



Metric	DC	DCONMS	LU	LS	OAL			Pocket size	Head
					DMP/H/N	DMC	DMF		
TID060R8-2E	6 - 6.4	8	12	45	66.1	66.2	65.2	6	DM*060 - DM*064
TID065R8-2E	6.5 - 6.9	8	13	45	67.2	67.3	66.3	6.5	DM*065 - DM*069
TID070R8-2E	7 - 7.4	8	13	45	68	68.4	67.1	7	DM*070 - DM*074
TID075R8-2E	7.5 - 7.9	8	14	45	69	69.4	68.1	7	DM*075 - DM*079
TID080R10-2E	8 - 8.9	10	15	50	75.2	75.3	74.3	8	DM*080 - DM*089
TID090R10-2E	9 - 9.9	10	17	50	77.4	77.5	76.3	9	DM*090 - DM*099
TID100R12-2E	10 - 10.9	12	22	60	94.3	94.9	92.9	10	DM*100 - DM*109
TID110R12-2E	11 - 11.9	12	24	60	96.5	97.1	94.9	11	DM*110 - DM*119
TID120R14-2E	12 - 12.9	14	26	65	103.6	104.2	102	12	DM*120 - DM*129
TID130R14-2E	13 - 13.9	14	27	65	108.8	109.6	106.9	13	DM*130 - DM*139
TID140R16-2E	14 - 14.9	16	29	70	115	115.8	113	14	DM*140 - DM*149
TID150R16-2E	15 - 15.9	16	32	70	118	118.9	115.9	15	DM*150 - DM*159
TID160R18-2E	16 - 16.9	18	33	70	122.2	123.2	119.9	16	DM*160 - DM*169

Tool diameter (mm)	Hole diameter tolerance*
ø6 - ø16.9	+0.04 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

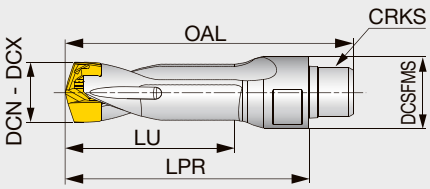
SPARE PARTS

Designation	Clamping key
TID060... - TID095...	K-TID6-9.99
TID100... - TID160...	K-TID10-19.99

Reference pages: Head → 9-16 - 9-21
Standard cutting conditions → 9-22

TID-S L/D=2

Modular body with "TungMeister" connection



Metric	DC	DCSFMS	LU	LPR	OAL			CRKS	Pocket size	H	Head
					DMP	DMC	DMF				
TID065S06-2	6.5 - 6.9	10	14.5	27.15	33.45	33.6	32.58	S06	6.5	8	DM*065
TID085S06-2	8.5 - 8.9	10	19.5	33.15	39.45	39.55	38.59	S06	8.5	8	DM*085
TID105S08-2	10.5 - 10.9	12	23.5	40.55	48.05	48.67	46.72	S08	10.5	10	DM*105

Tool diameter (mm)	Hole diameter tolerance*
ø6.5 - ø10.9	+0.04 / 0

*Just for reference

SPARE PARTS

Designation	Clamping key
TID065S06-2, TID085S06-2	K-TID6-9.99
TID105S08-2	K-TID10-19.99

Designation	Wrench*	
TID065S06-2, TID085S06-2	KEYV-S06	
TID105S08-2	KEYV-S08	

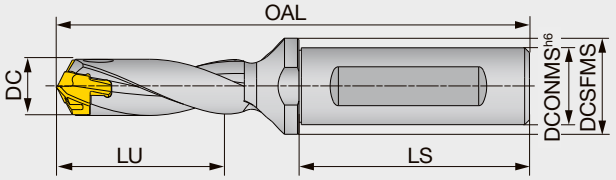
*Sold separately

Reference pages: Head → 9-16 - 9-21
Standard cutting conditions → 9-22

DRILLMEISTER

TIDU-F L/D=3

Exchangeable head drill, L/D = 3, flange type



Inch	DC	DCONMS	DCSFMS	LU	LS	OAL DMP/H/N	OAL DMC	OAL DMF	Pocket size	Head
TIDU0394F0625-3	0.394 - 0.409	0.625	0.787	1.181	1.890	3.709	3.733	2.993	10	DM*100 - DM*104
TIDU0413F0625-3	0.413 - 0.429	0.625	0.787	1.260	1.890	3.768	3.792	3.062	10	DM*105 - DM*109
TIDU0433F0625-3	0.433 - 0.449	0.625	0.787	1.299	1.890	3.843	3.867	3.133	11	DM*110 - DM*114
TIDU0453F0625-3	0.453 - 0.469	0.625	0.787	1.378	1.890	3.902	3.926	3.192	11	DM*115 - DM*119
TIDU0472F0625-3	0.472 - 0.488	0.625	0.787	1.417	1.890	3.976	4.000	3.283	12	DM*120 - DM*124
TIDU0492F0625-3	0.492 - 0.508	0.625	0.787	1.457	1.890	4.035	4.059	3.342	12	DM*125 - DM*129
TIDU0512F0625-3	0.512 - 0.528	0.625	0.787	1.535	1.890	4.118	4.149	3.410	13	DM*130 - DM*134
TIDU0532F0625-3	0.532 - 0.547	0.625	0.787	1.614	1.890	4.177	4.208	3.469	13	DM*135 - DM*139
TIDU0551F0625-3	0.551 - 0.567	0.625	0.787	1.654	1.890	4.335	4.366	3.650	14	DM*140 - DM*144
TIDU0571F0625-3	0.571 - 0.587	0.625	0.787	1.732	1.890	4.394	4.425	3.709	14	DM*145 - DM*149
TIDU0591F0750-3	0.591 - 0.626	0.750	0.984	1.772	1.969	4.673	4.708	3.776	15	DM*150 - DM*159
TIDU0630F0750-3	0.630 - 0.665	0.750	0.984	1.890	1.969	4.854	4.893	3.835	16	DM*160 - DM*169
TIDU0669F0750-3	0.669 - 0.705	0.750	0.984	2.008	1.969	5.035	5.074	3.906	17	DM*170 - DM*179
TIDU0709F1000-3	0.709 - 0.744	1.000	1.260	2.126	2.205	5.453	5.496	3.965	18	DM*180 - DM*189
TIDU0748F1000-3	0.748 - 0.783	1.000	1.260	2.244	2.205	5.630	5.673	4.037	19	DM*190 - DM*199
TIDU0787F1000-3	0.787 - 0.823	1.000	1.260	2.362	2.205	5.811	5.838	4.096	20	DMP200 - DMP209
TIDU0827F1000-3	0.827 - 0.862	1.000	1.260	2.480	2.205	5.992	6.040	4.250	21	DMP210 - DMP219
TIDU0866F1000-3	0.866 - 0.902	1.000	1.260	2.598	2.205	6.173	6.223	4.309	22	DMP220 - DMP229
TIDU0906F1250-3	0.906 - 0.941	1.250	1.654	2.718	2.362	6.508	6.562	4.584	23	DMP230 - DMP239
TIDU0945F1250-3	0.945 - 0.980	1.250	1.654	2.835	2.362	6.689	6.744	4.757	24	DMP240 - DMP249
TIDU0984F1250-3	0.984 - 1.020	1.250	1.654	2.953	2.362	6.870	6.939	4.927	25	DMP250 - DMP259

Tool diameter (in)	Hole diameter tolerance (in)*
ø0.394" - ø0.705"	+0.0015" / 0
ø0.709" - ø1.020"	+0.0018" / 0

*Just for reference

- An overall length (OAL) differs for when the DMP insert is mounted and when the DMC is mounted. (No difference for the drill shoulder)
- For drill diameters from ø0.315"- ø0.390", the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.012" shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

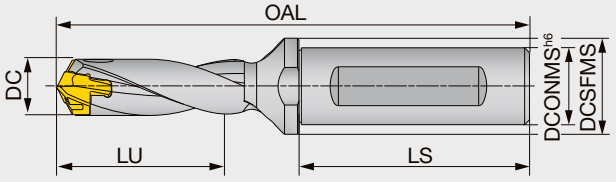
SPARE PARTS

Designation	Clamping key
TIDU0394 - TIDU0748	K-TID10-19.99
TIDU0787 - TIDU0984	K-TID20-26.99

Reference pages: Head → 9-16 - 9-21, Sleeve → 9-23
Standard cutting conditions → 9-22

TID L/D=3

Exchangeable head drill, L/D = 3, flange type



Metric	DC	DCONMS	DCSFMS	LU	LS	OAL			Pocket size	Head
						DMP/H/N	DMC	DMF		
TID060F12-3	6 - 6.4	12	16	19	45	76.9	77	76	6	DM*060 - DM*064
TID065F12-3	6.5 - 6.9	12	16	21	45	78.7	78.8	77.8	6.5	DM*065 - DM*069
TID070F12-3	7 - 7.4	12	16	22	45	80.5	80.9	79.6	7	DM*070 - DM*074
TID075F12-3	7.5 - 7.9	12	16	24	45	82	82.4	81.1	7	DM*075 - DM*079
TID080F12-3	8 - 8.4	12	16	26	45	84.3	84.4	83.4	8	DM*080 - DM*084
TID085F12-3	8.5 - 8.9	12	16	28	45	85.8	85.9	84.9	8	DM*085 - DM*089
TID090F12-3	9 - 9.4	12	16	29	45	87.7	87.8	86.6	9	DM*090 - DM*094
TID095F12-3	9.5 - 9.9	12	16	31	45	89.2	89.3	88.1	9	DM*095 - DM*099
TID100F16-3	10 - 10.4	16	20	32	48	94.1	94.7	92.7	10	DM*100 - DM*104
TID105F16-3	10.5 - 10.9	16	20	34	48	95.6	96.2	94.2	10	DM*105 - DM*109
TID110F16-3	11 - 11.4	16	20	35	48	97.5	98.1	95.9	11	DM*110 - DM*114
TID115F16-3	11.5 - 11.9	16	20	37	48	99	99.6	97.4	11	DM*115 - DM*119
TID120F16-3	12 - 12.4	16	20	38	48	100.8	101.4	99.2	12	DM*120 - DM*124
TID125F16-3	12.5 - 12.9	16	20	39	48	102.3	102.9	100.7	12	DM*125 - DM*129
TID130F16-3	13 - 13.4	16	20	41	48	104.4	105.2	102.5	13	DM*130 - DM*134
TID135F16-3	13.5 - 13.9	16	20	44	48	105.9	106.7	104	13	DM*135 - DM*139
TID140F16-3	14 - 14.4	16	20	45	48	110	110.8	108	14	DM*140 - DM*144
TID145F16-3	14.5 - 14.9	16	20	47	48	111.5	112.3	109.5	14	DM*145 - DM*149
TID150F20-3	15 - 15.9	20	25	48	50	118.5	119.4	116.4	15	DM*150 - DM*159
TID160F20-3	16 - 16.9	20	25	51	50	123.1	124.1	120.8	16	DM*160 - DM*169

Tool diameter (mm)	Hole diameter tolerance*
ø6 - ø16.9	+0.04 / 0

- An overall length (OAL) differs based on each head geometry.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

*Just for reference

SPARE PARTS

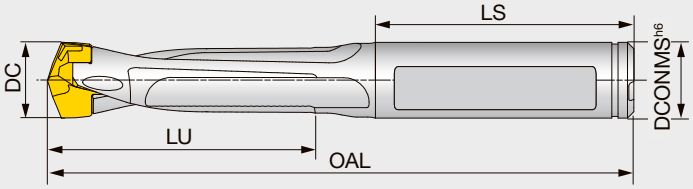
Designation	Clamping key
TID060... - TID095...	K-TID6-9.99
TID100... - TID160...	K-TID10-19.99

Reference pages: Head → 9-16 - 9-21, Sleeve → 9-23
Standard cutting conditions → 9-22

DRILLMEISTER

TIDC L/D=3

Exchangeable head drill, L/D = 3, Cylindrical shank, for chamfering adapter



Metric	DC	DCONMS	LU	LS	OAL			Pocket size	Head
					DMP/H/N	DMC	DMF		
TIDC075C8-3	7.5 - 7.9	8	23	36	70.1	70.6	69.2	7	DM*075 - DM*079
TIDC080C8-3	8 - 8.4	8	24	36	70.6	70.8	69.7	8	DM*080 - DM*084
TIDC085C9-3	8.5 - 8.9	9	26	36	72.8	73	71.9	8	DM*085 - DM*089
TIDC090C9-3	9 - 9.4	9	27	36	74.7	74.9	73.7	9	DM*090 - DM*094
TIDC095C10-3	9.5 - 9.9	10	29	36	76.2	76.4	75.2	9	DM*095 - DM*099
TIDC100C10-3	10 - 10.4	10	32	41	86.1	86.7	84.8	10	DM*100 - DM*104
TIDC105C11-3	10.5 - 10.9	11	33	41	87.6	88.2	86.3	10	DM*105 - DM*109
TIDC110C11-3	11 - 11.4	11	35	41	89.5	90.2	88	11	DM*110 - DM*114
TIDC115C12-3	11.5 - 11.9	12	37	41	91	91.7	89.5	11	DM*115 - DM*119
TIDC120C12-3	12 - 12.4	12	38	41	92.8	93.4	91.2	12	DM*120 - DM*124
TIDC125C13-3	12.5 - 12.9	13	40	46	98.3	98.9	96.7	12	DM*125 - DM*129
TIDC130C13-3	13 - 13.4	13	41	47	102.4	103.2	100.5	13	DM*130 - DM*134
TIDC135C14-3	13.5 - 13.9	14	43	43	99.9	100.7	98	13	DM*135 - DM*139
TIDC140C14-3	14 - 14.4	14	45	44	103	103.8	101	14	DM*140 - DM*144
TIDC145C15-3	14.5 - 14.9	15	46	45	105.5	106.3	103.5	14	DM*145 - DM*149
TIDC150C15-3	15 - 15.9	15	48	45	107.5	108.4	105.4	15	DM*150 - DM*159
TIDC160C16-3	16 - 16.9	16	51	48	117.5	118.5	115.2	16	DM*160 - DM*169

Tool diameter (mm)	Hole diameter tolerance*
ø7.5 - ø16.9	+0.04 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.

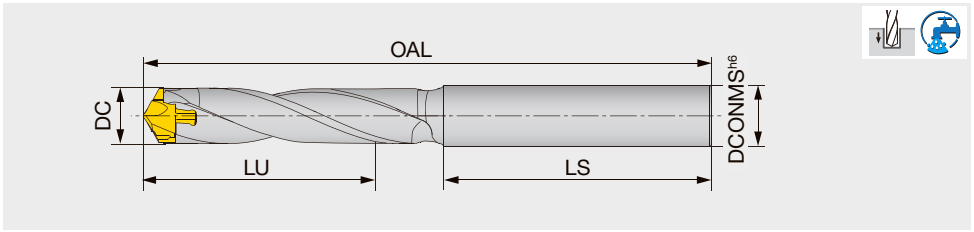
SPARE PARTS

Designation	Clamping key
TIDC075... - TIDC099...	K-TID6-9.99
TIDC100... - TIDC160...	K-TID10-19.99

Reference pages: Head → 9-16 - 9-21
Standard cutting conditions → 9-22

TID-R L/D=3.5

Exchangeable head drill, L/D = 3.5, Cylindrical shank



Metric	DC	DCONMS	LU	LS	OAL			Pocket size	Head
					DMP/H/N	DMC	DMF		
TID060R8-3.5	6 - 6.4	8	21	45	75.6	75.8	74.8	6	DM*060 - DM*064
TID065R8-3.5	6.5 - 6.9	8	23	45	77.5	77.6	76.6	6.5	DM*065 - DM*069
TID070R8-3.5	7 - 7.4	8	25	45	79.1	79.5	78.2	7	DM*070 - DM*074
TID075R8-3.5	7.5 - 7.9	8	26	45	80.8	81.3	80	7	DM*075 - DM*079
TID080R10-3.5	8 - 8.4	10	28	50	87.8	87.9	86.9	8	DM*080 - DM*084
TID085R10-3.5	8.5 - 8.9	10	30	50	89.5	89.7	88.6	8	DM*085 - DM*089
TID090R10-3.5	9 - 9.4	10	32	50	91.4	91.6	90.4	9	DM*090 - DM*094
TID095R10-3.5	9.5 - 9.9	10	33	50	93.2	93.3	92.1	9	DM*095 - DM*099
TID100R12-3.5	10 - 10.4	12	42	60	114	114.7	112.7	10	DM*100 - DM*104
TID105R12-3.5	10.5 - 10.9	12	44	60	115.7	116.3	114.4	10	DM*105 - DM*109
TID110R12-3.5	11 - 11.4	12	46	65	123.1	123.8	121.6	11	DM*110 - DM*114
TID115R12-3.5	11.5 - 11.9	12	48	65	124.8	125.4	123.2	11	DM*115 - DM*119
TID120R14-3.5	12 - 12.4	14	50	65	127.2	127.8	125.6	12	DM*120 - DM*124
TID125R14-3.5	12.5 - 12.9	14	52	65	128.8	129.5	127.3	12	DM*125 - DM*129
TID130R14-3.5	13 - 13.4	14	54	65	132.7	133.5	130.9	13	DM*130 - DM*134
TID135R14-3.5	13.5 - 13.9	14	56	65	134.4	135.2	132.5	13	DM*135 - DM*139
TID140R16-3.5	14 - 14.4	16	58	70	142.2	143	140.2	14	DM*140 - DM*144
TID145R16-3.5	14.5 - 14.9	16	60	70	143.8	144.7	141.9	14	DM*145 - DM*149
TID150R16-3.5	15 - 15.9	16	64	70	148.4	149.4	146.3	15	DM*150 - DM*159
TID160R18-3.5	16 - 16.9	18	68	70	153.9	154.9	151.7	16	DM*160 - DM*169

Tool diameter (mm)	Hole diameter tolerance*
ø6 - ø16.9	+0.04 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

SPARE PARTS

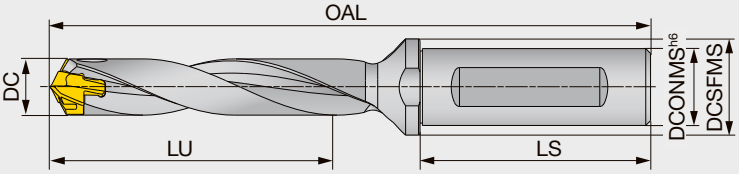
Designation	Clamping key
TID060... - TID095...	K-TID6-9.99
TID100... - TID160...	K-TID10-19.99

Reference pages: Head → 9-16 - 9-21
Standard cutting conditions → 9-22

DRILLMEISTER

TIDU-F L/D=5

Exchangeable head drill, L/D = 5, flange type



Inch	DC	DCONMS	DCSFMS	LU	LS	OAL DMP/H/N	OAL DMC	OAL DMF	Pocket size	Head
TIDU0394F0625-5	0.394 - 0.409	0.625	0.787	1.969	1.890	4.496	4.514	3.465	10	DM*100 - DM*104
TIDU0413F0625-5	0.413 - 0.429	0.625	0.787	2.087	1.890	4.594	4.618	3.574	10	DM*105 - DM*109
TIDU0433F0625-5	0.433 - 0.449	0.625	0.787	2.165	1.890	4.709	4.733	3.684	11	DM*110 - DM*114
TIDU0453F0625-5	0.453 - 0.469	0.625	0.787	2.283	1.890	4.807	4.831	3.783	11	DM*115 - DM*119
TIDU0472F0625-5	0.472 - 0.488	0.625	0.787	2.362	1.890	4.921	4.945	3.913	12	DM*120 - DM*124
TIDU0492F0625-5	0.492 - 0.508	0.625	0.787	2.441	1.890	5.020	5.044	4.011	12	DM*125 - DM*129
TIDU0512F0625-5	0.512 - 0.528	0.625	0.787	2.559	1.890	5.142	5.173	4.119	13	DM*130 - DM*134
TIDU0532F0625-5	0.532 - 0.547	0.625	0.787	2.677	1.890	5.240	5.271	4.217	13	DM*135 - DM*139
TIDU0551F0625-5	0.551 - 0.567	0.625	0.787	2.756	1.890	5.440	5.471	4.438	14	DM*140 - DM*144
TIDU0571F0625-5	0.571 - 0.587	0.625	0.787	2.874	1.890	5.539	5.570	4.536	14	DM*145 - DM*149
TIDU0591F0750-5	0.591 - 0.626	0.750	0.984	2.953	1.969	5.854	5.889	4.642	15	DM*150 - DM*159
TIDU0630F0750-5	0.630 - 0.665	0.750	0.984	3.150	1.969	6.114	6.153	4.740	16	DM*160 - DM*169
TIDU0669F0750-5	0.669 - 0.705	0.750	0.984	3.346	1.969	6.374	6.413	4.851	17	DM*170 - DM*179
TIDU0709F1000-5	0.709 - 0.744	1.000	1.260	3.543	2.205	6.870	6.913	4.949	18	DM*180 - DM*189
TIDU0748F1000-5	0.748 - 0.783	1.000	1.260	3.740	2.205	7.126	7.169	5.060	19	DM*190 - DM*199
TIDU0787F1000-5	0.787 - 0.823	1.000	1.260	3.937	2.205	7.386	7.432	5.159	20	DMP200 - DMP209
TIDU0827F1000-5	0.827 - 0.862	1.000	1.260	4.134	2.205	7.646	7.694	5.353	21	DMP210 - DMP219
TIDU0866F1000-5	0.866 - 0.902	1.000	1.260	4.331	2.205	7.906	7.956	5.451	22	DMP220 - DMP229
TIDU0906F1250-5	0.906 - 0.941	1.250	1.654	4.528	2.362	8.319	8.373	5.765	23	DMP230 - DMP239
TIDU0945F1250-5	0.945 - 0.980	1.250	1.654	4.724	2.362	8.579	8.634	6.017	24	DMP240 - DMP249
TIDU0984F1250-5	0.984 - 1.020	1.250	1.654	4.921	2.362	8.839	8.898	6.266	25	DMP250 - DMP259

Tool diameter (in)	Hole diameter tolerance (in)*
ø0.394" - ø1.020"	+0.0020" / 0

*Just for reference

- An overall length (OAL) differs for when the DMP insert is mounted and when the DMC is mounted. (No difference for the drill shoulder)
- For drill diameters from ø0.315"- ø0.390", the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.012" shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

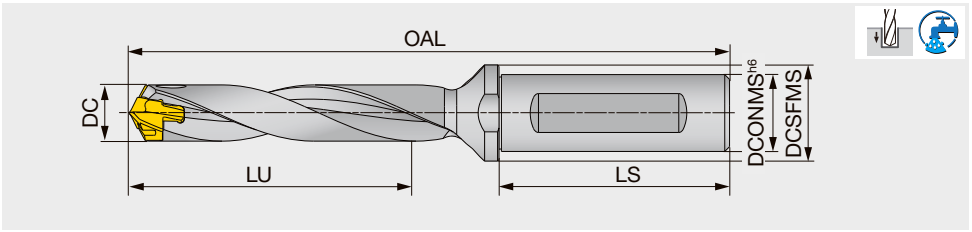
SPARE PARTS

Designation	Clamping key
TIDU0394 - TIDU0748	K-TID10-19.99
TIDU0787 - TIDU0984	K-TID20-26.99

Reference pages: Head → 9-16 - 9-21, Sleeve → 9-23
Standard cutting conditions → 9-22

TID L/D=5

Exchangeable head drill, L/D = 5, flange type



Metric	DC	DCONMS	DCSFMS	LU	LS	OAL			Pocket size	Head
						DMP/H/N	DMC	DMF		
TID060F12-5	6 - 6.4	12	16	31	45	88.9	89	88	6	DM*060 - DM*064
TID065F12-5	6.5 - 6.9	12	16	34	45	91.7	91.8	90.8	6.5	DM*065 - DM*069
TID070F12-5	7 - 7.4	12	16	36	45	94.5	94.9	93.6	7	DM*070 - DM*074
TID075F12-5	7.5 - 7.9	12	16	39	45	97	97.4	96.1	7	DM*075 - DM*079
TID080F12-5	8 - 8.4	12	16	42	45	100.3	100.4	99.4	8	DM*080 - DM*084
TID085F12-5	8.5 - 8.9	12	16	45	45	102.8	102.9	101.9	8	DM*085 - DM*089
TID090F12-5	9 - 9.4	12	16	47	45	105.7	105.8	104.6	9	DM*090 - DM*094
TID095F12-5	9.5 - 9.9	12	16	50	45	108.2	108.3	107.1	9	DM*095 - DM*099
TID100F16-5	10 - 10.4	16	20	52	48	114.1	114.7	112.7	10	DM*100 - DM*104
TID105F16-5	10.5 - 10.9	16	20	55	48	116.6	117.2	115.2	10	DM*105 - DM*109
TID110F16-5	11 - 11.4	16	20	57	48	119.5	120.1	117.9	11	DM*110 - DM*114
TID115F16-5	11.5 - 11.9	16	20	60	48	122	122.6	120.4	11	DM*115 - DM*119
TID120F16-5	12 - 12.4	16	20	62	48	124.8	125.4	123.2	12	DM*120 - DM*124
TID125F16-5	12.5 - 12.9	16	20	64	48	127.3	127.9	125.7	12	DM*125 - DM*129
TID130F16-5	13 - 13.4	16	20	67	48	130.4	131.2	128.5	13	DM*130 - DM*134
TID135F16-5	13.5 - 13.9	16	20	71	48	132.9	133.7	131	13	DM*135 - DM*139
TID140F16-5	14 - 14.4	16	20	73	48	138	138.8	136	14	DM*140 - DM*144
TID145F16-5	14.5 - 14.9	16	20	76	48	140.5	141.3	138.5	14	DM*145 - DM*149
TID150F20-5	15 - 15.9	20	25	78	50	148.5	149.4	146.4	15	DM*150 - DM*159
TID160F20-5	16 - 16.9	20	25	83	50	155.1	156.1	152.8	16	DM*160 - DM*169

Tool diameter (mm)	Hole diameter tolerance*
ø6 - ø16.9	+0.05 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

SPARE PARTS

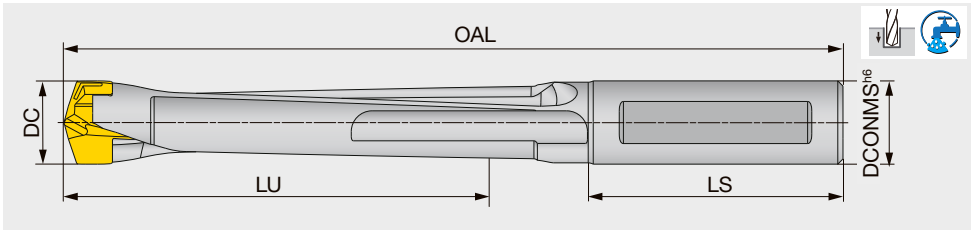
Designation	Clamping key
TID060... - TID095...	K-TID6-9.99
TID100... - TID160...	K-TID10-19.99

Reference pages: Head → 9-16 - 9-21, Sleeve → 9-23
Standard cutting conditions → 9-22

DRILLMEISTER

TIDC L/D=5

Exchangeable head drill, L/D = 5, Cylindrical shank, for chamfering adapter



Metric	DC	DCONMS	LU	LS	OAL			Pocket size	Head
					DMP/H/N	DMC	DMF		
TIDC075C8-5	7.5 - 7.9	8	38	36	85.1	85.6	84.2	7	DM*075 - DM*079
TIDC080C8-5	8 - 8.4	8	40	36	92.3	92.5	91.4	8	DM*080 - DM*084
TIDC085C9-5	8.5 - 8.9	9	43	36	89.8	90	88.9	8	DM*085 - DM*089
TIDC090C9-5	9 - 9.4	9	45	36	92.7	92.9	91.7	9	DM*090 - DM*094
TIDC095C10-5	9.5 - 9.9	10	48	36	95.2	95.4	94.2	9	DM*095 - DM*099
TIDC100C10-5	10 - 10.4	10	52	41	106.1	106.7	104.8	10	DM*100 - DM*104
TIDC105C11-5	10.5 - 10.9	11	54	41	108.6	109.2	107.3	10	DM*105 - DM*109
TIDC110C11-5	11 - 11.4	11	57	41	111.5	112.2	110	11	DM*110 - DM*114
TIDC115C12-5	11.5 - 11.9	12	60	41	114	114.7	112.5	11	DM*115 - DM*119
TIDC120C12-5	12 - 12.4	12	62	41	116.8	117.4	115.2	12	DM*120 - DM*124
TIDC125C13-5	12.5 - 12.9	13	65	46	124.3	124.9	122.7	12	DM*125 - DM*129
TIDC130C13-5	13 - 13.4	13	67	47	128.4	129.2	126.5	13	DM*130 - DM*134
TIDC135C14-5	13.5 - 13.9	14	70	43	126.9	127.7	125	13	DM*135 - DM*139
TIDC140C14-5	14 - 14.4	14	73	44	131	131.8	129	14	DM*140 - DM*144
TIDC145C15-5	14.5 - 14.9	15	75	45	134.5	135.3	132.5	14	DM*145 - DM*149
TIDC150C15-5	15 - 15.9	15	78	45	137.5	138.4	135.4	15	DM*150 - DM*159
TIDC160C16-5	16 - 16.9	16	83	48	149.5	150.5	147.2	16	DM*160 - DM*169

Tool diameter (mm)	Hole diameter tolerance*
ø7.5 - ø16.9	+0.05 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.

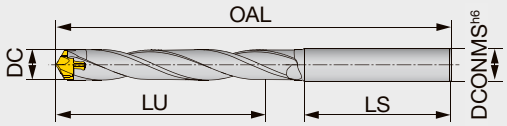
SPARE PARTS

Designation	Clamping key
TIDC075... - TIDC099...	K-TID6-9.99
TIDC100... - TIDC160...	K-TID10-19.99

Reference pages: Head → 9-16 - 9-21
Standard cutting conditions → 9-22

TID-R L/D=6

Exchangeable head drill, L/D = 6, Cylindrical shank



Metric	DC	DCONMS	LU	LS	OAL			Pocket size	Head
					DMP/H/N	DMC	DMF		
TID060R8-6	6 - 6.4	8	36	45	91.6	91.8	90.8	6	DM*060 - DM*064
TID065R8-6	6.5 - 6.9	8	39	45	94.7	94.9	93.9	6.5	DM*065 - DM*069
TID070R8-6	7 - 7.4	8	42	45	97.6	98	96.7	7	DM*070 - DM*074
TID075R8-6	7.5 - 7.9	8	45	45	100.6	101	99.7	7	DM*075 - DM*079
TID080R10-6	8 - 8.4	10	48	50	108.8	108.9	107.9	8	DM*080 - DM*084
TID085R10-6	8.5 - 8.9	10	51	50	111.8	111.9	110.9	8	DM*085 - DM*089
TID090R10-6	9 - 9.4	10	54	50	114.9	115.1	113.9	9	DM*090 - DM*094
TID095R10-6	9.5 - 9.9	10	57	50	117.9	118.1	116.9	9	DM*095 - DM*099
TID100R12-6	10 - 10.4	12	68	60	140	140.7	138.7	10	DM*100 - DM*104
TID105R12-6	10.5 - 10.9	12	71	60	142.9	143.6	141.6	10	DM*105 - DM*109
TID110R12-6	11 - 11.4	12	75	65	151.6	152.3	150.1	11	DM*110 - DM*114
TID115R12-6	11.5 - 11.9	12	78	65	154.5	155.2	153	11	DM*115 - DM*119
TID120R14-6	12 - 12.4	14	81	65	158.2	158.8	156.6	12	DM*120 - DM*124
TID125R14-6	12.5 - 12.9	14	84	65	161.1	161.7	159.5	12	DM*125 - DM*129
TID130R14-6	13 - 13.4	14	88	65	166.2	167	164.4	13	DM*130 - DM*134
TID135R14-6	13.5 - 13.9	14	91	65	169.2	169.9	167.3	13	DM*135 - DM*139
TID140R16-6	14 - 14.4	16	94	70	178.2	179	176.2	14	DM*140 - DM*144
TID145R16-6	14.5 - 14.9	16	97	70	181.1	181.9	179.1	14	DM*145 - DM*149
TID150R16-6	15 - 15.9	16	104	70	188.2	189.1	186.1	15	DM*150 - DM*159
TID160R18-6	16 - 16.9	18	110	70	196.2	197.2	193.9	16	DM*160 - DM*169

Tool diameter (mm)	Hole diameter tolerance*
ø6 - ø16.9	+0.05 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

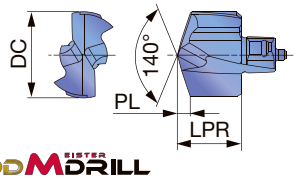
SPARE PARTS

Designation	Clamping key
TID060... - TID095...	K-TID6-9.99
TID100... - TID160...	K-TID10-19.99

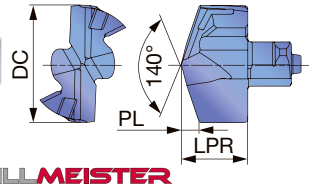
Reference pages: Head → 9-16 - 9-21
Standard cutting conditions → 9-22

DRILL HEAD

DMP (General purpose)



ADDMEISTER DRILL
DMP040 - DMP059



DRILLMEISTER
DMP060 - DMP259

Tool diameter (in)	Head diameter tolerance (in)
ø0.157" - ø0.665"	+0.0007" / 0
Tool diameter (mm)	**Head diameter tolerance (mm)**
ø4 - ø16.9	+0.018 / 0

P	Steel	☆	★
M	Stainless	☆	★
K	Cast iron	☆	★
N	Non-ferrous		☆
S	Superalloys	☆	★
H	Hard materials	☆	★

★ : First choice
☆ : Second choice

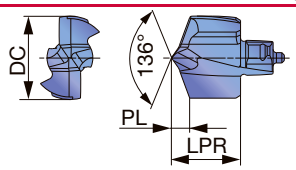
Designation	DC (in)	DC (mm)	LPR (mm)	Coated AH725	Coated AH9130	PL (mm)	Body
DMP040	0.157	4	3.1	●		0.62	TID*040...
DMP041	0.161	4.1	3.1	●		0.64	TID*040...
DMP042	0.165	4.2	3.1	●		0.66	TID*040...
DMP043	0.169	4.3	3.1	●		0.67	TID*040...
DMP044	0.173	4.4	3.1	●		0.69	TID*040...
DMP045	0.177	4.5	3.55	●		0.66	TID*045...
DMP046	0.181	4.6	3.55	●		0.68	TID*045...
DMP047	0.185	4.7	3.55	●		0.70	TID*045...
DMP048	0.189	4.8	3.55	●		0.71	TID*045...
DMP049	0.193	4.9	3.55	●		0.73	TID*045...
DMP050	0.197	5	3.7	●		0.73	TID*050...
DMP051	0.201	5.1	3.7	●		0.75	TID*050...
DMP052	0.205	5.2	3.7	●		0.77	TID*050...
DMP053	0.209	5.3	3.7	●		0.78	TID*050...
DMP054	0.213	5.4	3.7	●		0.8	TID*050...
DMP055	0.217	5.5	3.85	●		0.81	TID*055...
DMP056	0.220	5.6	3.85	●		0.83	TID*055...
DMP057	0.224	5.7	3.85	●		0.85	TID*055...
DMP058	0.228	5.8	3.85	●		0.86	TID*055...
DMP059	0.232	5.9	3.85	●		0.88	TID*055...
DMP060	0.236	6	3.85	●	●	1.09	TID*060...
DMP061	0.240	6.1	3.85	●	●	1.11	TID*060...
DMP062	0.244	6.2	3.85	●	●	1.13	TID*060...
DMP063	0.248	6.3	3.85	●	●	1.14	TID*060...
DMP064	0.252	6.4	3.85	●	●	1.16	TID*060...
DMP065	0.256	6.5	4.15	●	●	1.27	TID*065...
DMP066	0.260	6.6	4.15	●	●	1.29	TID*065...
DMP067	0.264	6.7	4.15	●	●	1.31	TID*065...
DMP068	0.268	6.8	4.15	●	●	1.33	TID*065...
DMP069	0.272	6.9	4.15	●	●	1.34	TID*065...
DMP070	0.276	7	4.45	●	●	1.03	TID*070...
DMP071	0.280	7.1	4.45	●	●	1.05	TID*070...
DMP072	0.283	7.2	4.45	●	●	1.07	TID*070...
DMP073	0.287	7.3	4.45	●	●	1.08	TID*070...
DMP074	0.291	7.4	4.45	●	●	1.1	TID*070...
DMP075	0.295	7.5	4.45	●	●	1.12	TID*075...
DMP076	0.299	7.6	4.45	●	●	1.14	TID*075...
DMP077	0.303	7.7	4.45	●	●	1.16	TID*075...
DMP078	0.307	7.8	4.45	●	●	1.18	TID*075...
DMP079	0.311	7.9	4.45	●	●	1.19	TID*075...
DMP080	0.315	8	5.25	●	●	1.2	TID*080...
DMP081	0.319	8.1	5.25	●	●	1.22	TID*080...
DMP082	0.323	8.2	5.25	●	●	1.24	TID*080...

Designation	DC (in)	DC (mm)	LPR (mm)	Coated AH725	Coated AH9130	PL (mm)	Body
DMP083	0.327	8.3	5.25	●	●	1.25	TID*080...
DMP084	0.331	8.4	5.25	●	●	1.27	TID*080...
DMP085	0.335	8.5	5.25	●	●	1.29	TID*085...
DMP086	0.339	8.6	5.25	●	●	1.31	TID*085...
DMP087	0.343	8.7	5.25	●	●	1.33	TID*085...
DMP088	0.346	8.8	5.25	●	●	1.35	TID*085...
DMP089	0.350	8.9	5.25	●	●	1.36	TID*085...
DMP090	0.354	9	5.65	●	●	1.37	TID*090...
DMP091	0.358	9.1	5.65	●	●	1.39	TID*090...
DMP092	0.362	9.2	5.65	●	●	1.41	TID*090...
DMP093	0.366	9.3	5.65	●	●	1.42	TID*090...
DMP094	0.370	9.4	5.65	●	●	1.44	TID*090...
DMP095	0.374	9.5	5.65	●	●	1.46	TID*095...
DMP096	0.378	9.6	5.65	●	●	1.48	TID*095...
DMP097	0.382	9.7	5.65	●	●	1.5	TID*095...
DMP098	0.386	9.8	5.65	●	●	1.52	TID*095...
DMP099	0.390	9.9	5.65	●	●	1.53	TID*095...
DMP100	0.394	10	6.05	●	●	1.47	TID*100...
DMP101	0.398	10.1	6.05	●	●	1.49	TID*100...
DMP102	0.402	10.2	6.05	●	●	1.51	TID*100...
DMP103	0.406	10.3	6.05	●	●	1.52	TID*100...
DMP104	0.409	10.4	6.05	●	●	1.54	TID*100...
DMP105	0.413	10.5	6.05	●	●	1.56	TID*105...
DMP106	0.417	10.6	6.05	●	●	1.58	TID*105...
DMP107	0.421	10.7	6.05	●	●	1.6	TID*105...
DMP108	0.425	10.8	6.05	●	●	1.62	TID*105...
DMP109	0.429	10.9	6.05	●	●	1.63	TID*105...
DMP110	0.433	11	6.45	●	●	1.67	TID*110...
DMP111	0.437	11.1	6.45	●	●	1.69	TID*110...
DMP112	0.441	11.2	6.45	●	●	1.71	TID*110...
DMP113	0.445	11.3	6.45	●	●	1.72	TID*110...
DMP114	0.449	11.4	6.45	●	●	1.74	TID*110...
DMP115	0.453	11.5	6.45	●	●	1.76	TID*115...
DMP116	0.457	11.6	6.45	●	●	1.78	TID*115...
DMP117	0.461	11.7	6.45	●	●	1.8	TID*115...
DMP118	0.465	11.8	6.45	●	●	1.82	TID*115...
DMP119	0.469	11.9	6.45	●	●	1.83	TID*115...
DMP120	0.472	12	6.8	●	●	1.82	TID*120...
DMP121	0.476	12.1	6.8	●	●	1.84	TID*120...
DMP122	0.480	12.2	6.8	●	●	1.86	TID*120...
DMP123	0.484	12.3	6.8	●	●	1.87	TID*120...
DMP124	0.488	12.4	6.8	●	●	1.89	TID*120...
DMP125	0.492	12.5	6.8	●	●	1.91	TID*125...

ø0.157" - ø0.665" (ø4 mm - ø16.9 mm) = 2 pieces per package

● : Line up

DMC (High precision hole making)



ADDMDRILL SINTEC
DMC040 - DMC059

Tool diameter (in)	Head diameter tolerance (in)
ø0.157" - ø0.665"	+0.0007" / 0
Tool diameter (mm)	**Head diameter tolerance (mm)**
ø4 - ø16.9	+0.018 / 0

P	Steel	☆	★
M	Stainless	☆	★
K	Cast iron	☆	★
N	Non-ferrous		☆
S	Superalloys	☆	★
H	Hard materials	☆	★

Designation	DC (in)	DC (mm)	LPR (mm)	Coated AH725	Coated AH9130	PL (mm)	Body
DMP126	0.496	12.6	6.8	●	●	1.93	TID*125...
DMP127	0.500	12.7	6.8	●	●	1.95	TID*125...
DMP128	0.504	12.8	6.8	●	●	1.97	TID*125...
DMP129	0.508	12.9	6.8	●	●	1.98	TID*125...
DMP130	0.512	13	7.4	●	●	1.96	TID*130...
DMP131	0.516	13.1	7.4	●	●	1.98	TID*130...
DMP132	0.520	13.2	7.4	●	●	2	TID*130...
DMP133	0.524	13.3	7.4	●	●	2.01	TID*130...
DMP134	0.528	13.4	7.4	●	●	2.03	TID*130...
DMP135	0.531	13.5	7.4	●	●	2.05	TID*135...
DMP136	0.535	13.6	7.4	●	●	2.07	TID*135...
DMP137	0.539	13.7	7.4	●	●	2.09	TID*135...
DMP138	0.543	13.8	7.4	●	●	2.11	TID*135...
DMP139	0.547	13.9	7.4	●	●	2.12	TID*135...
DMP140	0.551	14	7.95	●	●	2.12	TID*140...
DMP141	0.555	14.1	7.95	●	●	2.14	TID*140...
DMP142	0.559	14.2	7.95	●	●	2.16	TID*140...
DMP143	0.563	14.3	7.95	●	●	2.17	TID*140...
DMP144	0.567	14.4	7.95	●	●	2.19	TID*140...
DMP145	0.571	14.5	7.95	●	●	2.21	TID*145...
DMP146	0.575	14.6	7.95	●	●	2.23	TID*145...
DMP147	0.579	14.7	7.95	●	●	2.25	TID*145...
DMP148	0.583	14.8	7.95	●	●	2.27	TID*145...
DMP149	0.587	14.9	7.95	●	●	2.28	TID*145...
DMP150	0.591	15	8.53	●	●	2.27	TID*150...
DMP151	0.594	15.1	8.53	●	●	2.29	TID*150...
DMP152	0.598	15.2	8.53	●	●	2.31	TID*150...
DMP153	0.602	15.3	8.53	●	●	2.32	TID*150...
DMP154	0.606	15.4	8.53	●	●	2.34	TID*150...
DMP155	0.610	15.5	8.53	●	●	2.36	TID*150...
DMP156	0.614	15.6	8.53	●	●	2.38	TID*150...
DMP157	0.618	15.7	8.53	●	●	2.4	TID*150...
DMP158	0.622	15.8	8.53	●	●	2.42	TID*150...
DMP159	0.626	15.9	8.53	●	●	2.43	TID*150...
DMP160	0.630	16	9.1	●	●	2.42	TID*160...
DMP161	0.634	16.1	9.1	●	●	2.44	TID*160...
DMP162	0.638	16.2	9.1	●	●	2.46	TID*160...
DMP163	0.642	16.3	9.1	●	●	2.47	TID*160...
DMP164	0.646	16.4	9.1	●	●	2.49	TID*160...
DMP165	0.650	16.5	9.1	●	●	2.51	TID*160...
DMP166	0.654	16.6	9.1	●	●	2.53	TID*160...
DMP167	0.657	16.7	9.1	●	●	2.55	TID*160...
DMP168	0.661	16.8	9.1	●	●	2.57	TID*160...
DMP169	0.665	16.9	9.1	●	●	2.58	TID*160...

ø0.157" - ø0.665" (ø4 mm - ø16.9 mm) = 2 pieces per package

● : Line up

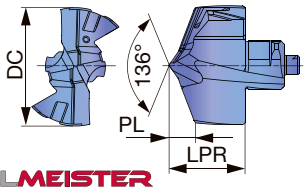
P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous	☆	
S	Superalloys	★	
H	Hard materials	★	

Designation	DC (in)	DC (mm)	LPR (mm)	Coated AH9130	PL (mm)	Body
DMC040	0.157	4	3.51	●	0.86	TID*040...
DMC041	0.161	4.1	3.51	●	0.88	TID*040...
DMC042	0.165	4.2	3.51	●	0.9	TID*040...
DMC043	0.169	4.3	3.51	●	0.92	TID*040...
DMC044	0.173	4.4	3.51	●	0.94	TID*040...
DMC045	0.177	4.5	3.81	●	0.97	TID*045...
DMC046	0.181	4.6	3.81	●	0.99	TID*045...
DMC047	0.185	4.7	3.81	●	1.01	TID*045...
DMC048	0.189	4.8	3.81	●	1.03	TID*045...
DMC049	0.193	4.9	3.81	●	1.05	TID*045...
DMC050	0.197	5	4.14	●	1.09	TID*050...
DMC051	0.201	5.1	4.14	●	1.11	TID*050...
DMC052	0.205	5.2	4.14	●	1.13	TID*050...
DMC053	0.209	5.3	4.14	●	1.15	TID*050...
DMC054	0.213	5.4	4.14	●	1.17	TID*050...
DMC055	0.217	5.5	4.17	●	1.22	TID*055...
DMC056	0.220	5.6	4.17	●	1.24	TID*055...
DMC057	0.224	5.7	4.17	●	1.26	TID*055...
DMC058	0.228	5.8	4.17	●	1.28	TID*055...
DMC059	0.232	5.9	4.17	●	1.3	TID*055...
DMC060	0.236	6	4	●	1.24	TID*060...
DMC061	0.240	6.1	4	●	1.26	TID*060...
DMC062	0.244	6.2	4	●	1.28	TID*060...
DMC063	0.248	6.3	4	●	1.3	TID*060...
DMC064	0.252	6.4	4	●	1.32	TID*060...
DMC065	0.256	6.5	4.3	●	1.33	TID*065...
DMC066	0.260	6.6	4.3	●	1.35	TID*065...
DMC067	0.264	6.7	4.3	●	1.37	TID*065...
DMC068	0.268	6.8	4.3	●	1.39	TID*065...
DMC069	0.272	6.9	4.3	●	1.41	TID*065...
DMC070	0.276	7	4.9	●	1.48	TID*070...
DMC071	0.280	7.1	4.9	●	1.5	TID*070...
DMC072	0.283	7.2	4.9	●	1.52	TID*070...
DMC073	0.287	7.3	4.9	●	1.54	TID*070...
DMC074	0.291	7.4	4.9	●	1.56	TID*070...
DMC075	0.295	7.5	4.9	●	1.58	TID*075...
DMC076	0.299	7.6	4.9	●	1.6	TID*075...
DMC077	0.303	7.7	4.9	●	1.62	TID*075...
DMC078	0.307	7.8	4.9	●	1.64	TID*075...
DMC079	0.311	7.9	4.9	●	1.66	TID*075...
DMC080	0.315	8	5.4	●	1.62	TID*080...
DMC081	0.319	8.1	5.4	●	1.64	TID*080...
DMC082	0.323	8.2	5.4	●	1.66	TID*080...
DMC083	0.327	8.3	5.4	●	1.68	TID*080...
DMC084	0.331	8.4	5.4	●	1.7	TID*080...
DMC085	0.335	8.5	5.4	●	1.72	TID*085...
DMC086	0.339	8.6	5.4	●	1.74	TID*085...
DMC087	0.343	8.7	5.4	●	1.76	TID*085...
DMC088	0.346	8.8	5.4	●	1.78	TID*085...
DMC089	0.350	8.9	5.4	●	1.8	TID*085...

● : Line up

DRILL HEAD

DMC (High precision hole making)



DRILLMEISTER

DMC060 - DMC169

Tool diameter (in)	Head diameter tolerance (in)
ø0.157" - ø0.665"	+0.0007" / 0
Tool diameter (mm)	**Head diameter tolerance (mm)**
ø4 - ø16.9	+0.018 / 0

P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous	☆	
S	Superalloys	★	
H	Hard materials	★	

Designation	DC (in)	DC (mm)	LPR (mm)	Coated AH9130	PL (mm)	Body
DMC090	0.354	9	5.8	●	1.91	TID*090...
DMC091	0.358	9.1	5.8	●	1.93	TID*090...
DMC092	0.362	9.2	5.8	●	1.95	TID*090...
DMC093	0.366	9.3	5.8	●	1.97	TID*090...
DMC094	0.370	9.4	5.8	●	1.99	TID*090...
DMC095	0.374	9.5	5.8	●	2.01	TID*095...
DMC096	0.378	9.6	5.8	●	2.03	TID*095...
DMC097	0.382	9.7	5.8	●	2.05	TID*095...
DMC098	0.386	9.8	5.8	●	2.07	TID*095...
DMC099	0.390	9.9	5.8	●	2.09	TID*095...
DMC100	0.394	10	6.67	●	2.09	TID*100...
DMC101	0.398	10.1	6.67	●	2.11	TID*100...
DMC102	0.402	10.2	6.67	●	2.13	TID*100...
DMC103	0.406	10.3	6.67	●	2.15	TID*100...
DMC104	0.409	10.4	6.67	●	2.17	TID*100...
DMC105	0.413	10.5	6.67	●	2.19	TID*105...
DMC106	0.417	10.6	6.67	●	2.21	TID*105...
DMC107	0.421	10.7	6.67	●	2.23	TID*105...
DMC108	0.425	10.8	6.67	●	2.25	TID*105...
DMC109	0.429	10.9	6.67	●	2.27	TID*105...
DMC110	0.433	11	7.1	●	2.32	TID*110...
DMC111	0.437	11.1	7.1	●	2.34	TID*110...
DMC112	0.441	11.2	7.1	●	2.36	TID*110...
DMC113	0.445	11.3	7.1	●	2.38	TID*110...
DMC114	0.449	11.4	7.1	●	2.4	TID*110...
DMC115	0.453	11.5	7.1	●	2.42	TID*115...
DMC116	0.457	11.6	7.1	●	2.44	TID*115...
DMC117	0.461	11.7	7.1	●	2.46	TID*115...
DMC118	0.465	11.8	7.1	●	2.48	TID*115...
DMC119	0.469	11.9	7.1	●	2.5	TID*115...
DMC120	0.472	12	7.43	●	2.45	TID*120...
DMC121	0.476	12.1	7.43	●	2.47	TID*120...
DMC122	0.480	12.2	7.43	●	2.49	TID*120...
DMC123	0.484	12.3	7.43	●	2.51	TID*120...
DMC124	0.488	12.4	7.43	●	2.53	TID*120...
DMC125	0.492	12.5	7.43	●	2.55	TID*125...
DMC126	0.496	12.6	7.43	●	2.57	TID*125...
DMC127	0.500	12.7	7.43	●	2.59	TID*125...
DMC128	0.504	12.8	7.43	●	2.61	TID*125...
DMC129	0.508	12.9	7.43	●	2.63	TID*125...
DMC130	0.512	13	8.15	●	2.71	TID*130...
DMC131	0.516	13.1	8.15	●	2.73	TID*130...
DMC132	0.520	13.2	8.15	●	2.75	TID*130...
DMC133	0.524	13.3	8.15	●	2.77	TID*130...
DMC134	0.528	13.4	8.15	●	2.79	TID*130...
DMC135	0.531	13.5	8.15	●	2.81	TID*135...
DMC136	0.535	13.6	8.15	●	2.83	TID*135...
DMC137	0.539	13.7	8.15	●	2.85	TID*135...
DMC138	0.543	13.8	8.15	●	2.87	TID*135...

P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous	☆	
S	Superalloys	★	
H	Hard materials	★	

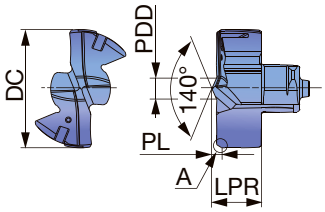
★ : First choice
☆ : Second choice

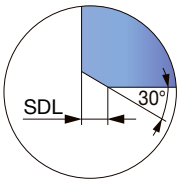
Designation	DC (in)	DC (mm)	LPR (mm)	Coated AH9130	PL (mm)	Body
DMC139	0.547	13.9	8.15	●	2.89	TID*135...
DMC140	0.551	14	8.76	●	2.93	TID*140...
DMC141	0.555	14.1	8.76	●	2.95	TID*140...
DMC142	0.559	14.2	8.76	●	2.97	TID*140...
DMC143	0.563	14.3	8.76	●	2.99	TID*140...
DMC144	0.567	14.4	8.76	●	3.01	TID*140...
DMC145	0.571	14.5	8.76	●	3.03	TID*145...
DMC146	0.575	14.6	8.76	●	3.05	TID*145...
DMC147	0.579	14.7	8.76	●	3.07	TID*145...
DMC148	0.583	14.8	8.76	●	3.09	TID*145...
DMC149	0.587	14.9	8.76	●	3.11	TID*145...
DMC150	0.591	15	9.44	●	3.18	TID*150...
DMC151	0.594	15.1	9.44	●	3.2	TID*150...
DMC152	0.598	15.2	9.44	●	3.22	TID*150...
DMC153	0.602	15.3	9.44	●	3.24	TID*150...
DMC154	0.606	15.4	9.44	●	3.26	TID*150...
DMC155	0.610	15.5	9.44	●	3.28	TID*150...
DMC156	0.614	15.6	9.44	●	3.3	TID*150...
DMC157	0.618	15.7	9.44	●	3.32	TID*150...
DMC158	0.622	15.8	9.44	●	3.34	TID*150...
DMC159	0.626	15.9	9.44	●	3.36	TID*150...
DMC160	0.630	16	10.07	●	3.39	TID*160...
DMC161	0.634	16.1	10.07	●	3.41	TID*160...
DMC162	0.638	16.2	10.07	●	3.43	TID*160...
DMC163	0.642	16.3	10.07	●	3.45	TID*160...
DMC164	0.646	16.4	10.07	●	3.47	TID*160...
DMC165	0.650	16.5	10.07	●	3.49	TID*160...
DMC166	0.654	16.6	10.07	●	3.51	TID*160...
DMC167	0.657	16.7	10.07	●	3.53	TID*160...
DMC168	0.661	16.8	10.07	●	3.55	TID*160...
DMC169	0.665	16.9	10.07	●	3.57	TID*160...

ø0.157" - ø0.665" (ø4 mm - ø16.9 mm) = 2 pieces per package

● : Line up

DMF (Flat geometry head)





Detail in A

Tool diameter (in)	Head diameter tolerance (in)
ø0.236" - ø0.665"	+0.0007" / 0

Tool diameter (mm)	Head diameter tolerance (mm)
ø6 - ø16.9	+0.018 / 0

		AH9130
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	☆
S	Superalloys	★
H	Hard materials	★

		AH9130
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	☆
S	Superalloys	★
H	Hard materials	★

★ : First choice
☆ : Second choice

Designation	DC (in)	DC (mm)	LPR (mm)	Coated AH9130	SDL (mm)	PL (mm)	PDD (mm)	Body
DMF060	0.236	6	3.01	●	0.4	0.61	1.15	TID*060...
DMF061	0.240	6.1	3.01	●	0.4	0.61	1.15	TID*060...
DMF062	0.244	6.2	3.01	●	0.4	0.61	1.15	TID*060...
DMF063	0.248	6.3	3.01	●	0.4	0.61	1.15	TID*060...
DMF064	0.252	6.4	3.01	●	0.4	0.61	1.15	TID*060...
DMF065	0.256	6.5	3.28	●	0.4	0.68	1.54	TID*065...
DMF066	0.260	6.6	3.28	●	0.4	0.68	1.54	TID*065...
DMF067	0.264	6.7	3.28	●	0.4	0.68	1.54	TID*065...
DMF068	0.268	6.8	3.28	●	0.4	0.68	1.54	TID*065...
DMF069	0.272	6.9	3.28	●	0.4	0.68	1.54	TID*065...
DMF070	0.276	7	3.58	●	0.4	0.68	1.54	TID*070...
DMF071	0.280	7.1	3.58	●	0.4	0.68	1.54	TID*070...
DMF072	0.283	7.2	3.58	●	0.4	0.68	1.54	TID*070...
DMF073	0.287	7.3	3.58	●	0.4	0.68	1.54	TID*070...
DMF074	0.291	7.4	3.58	●	0.4	0.68	1.54	TID*070...
DMF075	0.295	7.5	3.58	●	0.4	0.68	1.54	TID*075...
DMF076	0.299	7.6	3.58	●	0.4	0.68	1.54	TID*075...
DMF078	0.307	7.8	3.58	●	0.4	0.68	1.54	TID*075...
DMF079	0.311	7.9	3.58	●	0.4	0.68	1.54	TID*075...
DMF080	0.315	8	4.39	●	0.7	1.09	2.44	TID*080...
DMF081	0.319	8.1	4.39	●	0.7	1.09	2.44	TID*080...
DMF082	0.323	8.2	4.39	●	0.7	1.09	2.44	TID*080...
DMF083	0.327	8.3	4.39	●	0.7	1.09	2.44	TID*080...
DMF084	0.331	8.4	4.39	●	0.7	1.09	2.44	TID*080...
DMF085	0.335	8.5	4.39	●	0.7	1.09	2.44	TID*085...
DMF086	0.339	8.6	4.39	●	0.7	1.09	2.44	TID*085...
DMF087	0.343	8.7	4.39	●	0.7	1.09	2.44	TID*085...
DMF088	0.346	8.8	4.39	●	0.7	1.09	2.44	TID*085...
DMF089	0.350	8.9	4.39	●	0.7	1.09	2.44	TID*085...
DMF090	0.354	9	4.61	●	0.7	1.11	2.55	TID*090...
DMF091	0.358	9.1	4.61	●	0.7	1.11	2.55	TID*090...
DMF092	0.362	9.2	4.61	●	0.7	1.11	2.55	TID*090...
DMF093	0.366	9.3	4.61	●	0.7	1.11	2.55	TID*090...
DMF094	0.370	9.4	4.61	●	0.7	1.11	2.55	TID*090...
DMF095	0.374	9.5	4.61	●	0.7	1.11	2.55	TID*095...
DMF096	0.378	9.6	4.61	●	0.7	1.11	2.55	TID*095...
DMF097	0.382	9.7	4.61	●	0.7	1.11	2.55	TID*095...
DMF098	0.386	9.8	4.61	●	0.7	1.11	2.55	TID*095...
DMF099	0.390	9.9	4.61	●	0.7	1.11	2.55	TID*095...
DMF100	0.394	10	4.72	●	0.7	1.17	2.89	TID*100...
DMF101	0.398	10.1	4.72	●	0.7	1.17	2.89	TID*100...
DMF103	0.406	10.3	4.72	●	0.7	1.17	2.89	TID*100...
DMF104	0.409	10.4	4.72	●	0.7	1.17	2.89	TID*100...
DMF105	0.413	10.5	4.72	●	0.7	1.17	2.89	TID*105...
DMF106	0.417	10.6	4.72	●	0.7	1.17	2.89	TID*105...
DMF107	0.421	10.7	4.72	●	0.7	1.17	2.89	TID*105...
DMF108	0.425	10.8	4.72	●	0.7	1.17	2.89	TID*105...
DMF110	0.433	11	4.9	●	0.7	1.25	2.98	TID*110...
DMF115	0.453	11.5	4.9	●	0.7	1.25	2.98	TID*115...
DMF117	0.461	11.7	4.9	●	0.7	1.25	2.98	TID*115...
DMF120	0.472	12	5.21	●	0.7	1.26	3.13	TID*120...
DMF121	0.476	12.1	5.21	●	0.7	1.26	3.13	TID*120...

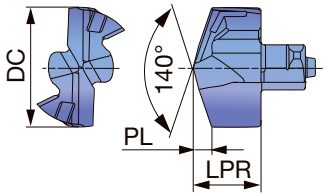
Designation	DC (in)	DC (mm)	LPR (mm)	Coated AH9130	SDL (mm)	PL (mm)	PDD (mm)	Body
DMF122	0.480	12.2	5.21	●	0.7	1.26	3.13	TID*120...
DMF123	0.484	12.3	5.21	●	0.7	1.26	3.13	TID*120...
DMF124	0.488	12.4	5.21	●	0.7	1.26	3.13	TID*120...
DMF125	0.492	12.5	5.21	●	0.7	1.26	3.13	TID*125...
DMF126	0.496	12.6	5.21	●	0.7	1.26	3.13	TID*125...
DMF127	0.500	12.7	5.21	●	0.7	1.26	3.13	TID*125...
DMF130	0.512	13	5.53	●	0.7	1.28	3.52	TID*130...
DMF131	0.516	13.1	5.53	●	0.7	1.28	3.52	TID*130...
DMF133	0.524	13.3	5.53	●	0.7	1.28	3.52	TID*130...
DMF135	0.531	13.5	5.53	●	0.7	1.28	3.52	TID*135...
DMF137	0.539	13.7	5.53	●	0.7	1.28	3.52	TID*135...
DMF138	0.543	13.8	5.53	●	0.7	1.28	3.52	TID*135...
DMF139	0.547	13.9	5.53	●	0.7	1.28	3.52	TID*135...
DMF140	0.551	14	5.96	●	0.7	1.31	3.81	TID*140...
DMF141	0.555	14.1	5.96	●	0.7	1.31	3.81	TID*140...
DMF142	0.559	14.2	5.96	●	0.7	1.31	3.81	TID*140...
DMF143	0.563	14.3	5.96	●	0.7	1.31	3.81	TID*140...
DMF144	0.567	14.4	5.96	●	0.7	1.31	3.81	TID*140...
DMF145	0.571	14.5	5.96	●	0.7	1.31	3.81	TID*145...
DMF150	0.591	15	6.43	●	0.7	1.35	4.24	TID*150...
DMF152	0.598	15.2	6.43	●	0.7	1.35	4.24	TID*150...
DMF155	0.610	15.5	6.43	●	0.7	1.35	4.24	TID*150...
DMF157	0.618	15.7	6.43	●	0.7	1.35	4.24	TID*150...
DMF158	0.622	15.8	6.43	●	0.7	1.35	4.24	TID*150...
DMF160	0.630	16	6.84	●	0.7	1.39	4.06	TID*160...
DMF161	0.634	16.1	6.84	●	0.7	1.39	4.06	TID*160...
DMF165	0.650	16.5	6.84	●	0.7	1.39	4.06	TID*160...
DMF167	0.657	16.7	6.84	●	0.7	1.39	4.06	TID*160...

ø0.157" - ø0.665" (ø4 mm - ø16.9 mm) = 2 pieces per package

● : Line up

DRILL HEAD

DMH (High strength cutting edge)



Tool diameter (in)	Head diameter tolerance (in)
ø0.236" - ø0.657"	+0.0007" / -0.0002"
Tool diameter (mm)	**Head diameter tolerance (mm)**
ø6 - ø16.7	+0.018 / -0.005

P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials	★		

Designation	DC (in)	DC (mm)	LPR (mm)	Coated AH9130	PL (mm)	Body
DMH060	0.236	6	3.85	●	1.09	TID*060...
DMH068	0.268	6.8	4.15	●	1.33	TID*065...
DMH070	0.276	7	4.45	●	1.03	TID*070...
DMH075	0.295	7.5	4.45	●	1.12	TID*075...
DMH080	0.315	8	5.25	●	1.2	TID*080...
DMH085	0.335	8.5	5.25	●	1.29	TID*085...
DMH086	0.339	8.6	5.25	●	1.31	TID*085...
DMH087	0.343	8.7	5.25	●	1.33	TID*085...
DMH088	0.346	8.8	5.25	●	1.35	TID*085...
DMH090	0.354	9	5.65	●	1.37	TID*090...
DMH095	0.374	9.5	5.65	●	1.46	TID*095...
DMH097	0.382	9.7	5.65	●	1.5	TID*095...
DMH100	0.394	10	6.05	●	1.47	TID*100...
DMH101	0.398	10.1	6.05	●	1.49	TID*100...
DMH103	0.406	10.3	6.05	●	1.52	TID*100...
DMH104	0.409	10.4	6.05	●	1.54	TID*100...
DMH105	0.413	10.5	6.05	●	1.56	TID*105...
DMH106	0.417	10.6	6.05	●	1.58	TID*105...
DMH107	0.421	10.7	6.05	●	1.6	TID*105...
DMH108	0.425	10.8	6.05	●	1.62	TID*105...
DMH110	0.433	11	6.45	●	1.67	TID*110...
DMH111	0.437	11.1	6.45	●	1.69	TID*110...
DMH112	0.441	11.2	6.45	●	1.71	TID*110...
DMH113	0.445	11.3	6.45	●	1.72	TID*110...
DMH114	0.449	11.4	6.45	●	1.74	TID*110...
DMH115	0.453	11.5	6.45	●	1.76	TID*115...
DMH117	0.461	11.7	6.45	●	1.8	TID*115...
DMH118	0.465	11.8	6.45	●	1.82	TID*115...
DMH119	0.469	11.9	6.45	●	1.83	TID*115...
DMH120	0.472	12	6.8	●	1.82	TID*120...
DMH121	0.476	12.1	6.8	●	1.84	TID*120...
DMH122	0.480	12.2	6.8	●	1.86	TID*120...
DMH123	0.484	12.3	6.8	●	1.87	TID*120...
DMH124	0.488	12.4	6.8	●	1.89	TID*120...
DMH125	0.492	12.5	6.8	●	1.91	TID*125...
DMH126	0.496	12.6	6.8	●	1.93	TID*125...
DMH127	0.500	12.7	6.8	●	1.95	TID*125...
DMH128	0.504	12.8	6.8	●	1.97	TID*125...
DMH129	0.508	12.9	6.8	●	1.98	TID*125...
DMH130	0.512	13	7.4	●	1.96	TID*130...
DMH131	0.516	13.1	7.4	●	1.98	TID*130...
DMH132	0.520	13.2	7.4	●	2	TID*130...
DMH133	0.524	13.3	7.4	●	2.01	TID*130...
DMH134	0.528	13.4	7.4	●	2.03	TID*130...
DMH135	0.531	13.5	7.4	●	2.05	TID*135...
DMH136	0.535	13.6	7.4	●	2.07	TID*135...
DMH137	0.539	13.7	7.4	●	2.09	TID*135...
DMH138	0.543	13.8	7.4	●	2.11	TID*135...
DMH139	0.547	13.9	7.4	●	2.12	TID*135...
DMH140	0.551	14	7.95	●	2.12	TID*140...
DMH141	0.555	14.1	7.95	●	2.14	TID*140...
DMH142	0.559	14.2	7.95	●	2.16	TID*140...
DMH143	0.563	14.3	7.95	●	2.17	TID*140...

P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials	★		

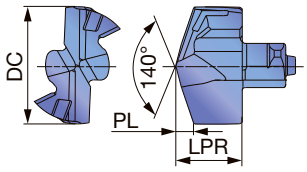
★ : First choice

Designation	DC (in)	DC (mm)	LPR (mm)	Coated AH9130	PL (mm)	Body
DMH144	0.567	14.4	7.95	●	2.19	TID*140...
DMH145	0.571	14.5	7.95	●	2.21	TID*145...
DMH146	0.575	14.6	7.95	●	2.23	TID*145...
DMH147	0.579	14.7	7.95	●	2.25	TID*145...
DMH150	0.591	15	8.53	●	2.27	TID*150...
DMH151	0.594	15.1	8.53	●	2.29	TID*150...
DMH152	0.598	15.2	8.53	●	2.31	TID*150...
DMH153	0.602	15.3	8.53	●	2.32	TID*150...
DMH154	0.606	15.4	8.53	●	2.34	TID*150...
DMH155	0.610	15.5	8.53	●	2.36	TID*150...
DMH156	0.614	15.6	8.53	●	2.38	TID*150...
DMH157	0.618	15.7	8.53	●	2.40	TID*150...
DMH158	0.622	15.8	8.53	●	2.42	TID*150...
DMH160	0.630	16	9.1	●	2.42	TID*160...
DMH162	0.638	16.2	9.1	●	2.46	TID*160...
DMH163	0.642	16.3	9.1	●	2.47	TID*160...
DMH165	0.650	16.5	9.1	●	2.51	TID*160...
DMH166	0.654	16.6	9.1	●	2.53	TID*160...
DMH167	0.657	16.7	9.1	●	2.55	TID*160...

0.236" - 0.657"(ø6 mm - ø16.7 mm) = 2 pieces per package

● : Line up

DMN Non-ferrous metals drilling



Tool diameter (in)	Head diameter tolerance (in)
ø0.394" - ø0.650"	+0.0004" / 0
Tool diameter (mm)	**Head diameter tolerance (mm)**
ø6.8 - ø16.5	+0.01 / 0

P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	DC (in)	DC (mm)	LPR (mm)	Coated KS15F			PL (mm)	Body
DMN068	0.268	6.8	4.15	●			1.33	TID*065...
DMN078	0.307	7.8	4.45	●			1.18	TID*075...
DMN080	0.315	8	5.25	●			1.2	TID*080...
DMN085	0.335	8.5	5.25	●			1.29	TID*085...
DMN088	0.346	8.8	5.25	●			1.35	TID*085...
DMN095	0.374	9.5	5.65	●			1.46	TID*095...
DMN100	0.394	10	6.05	●			1.47	TID*100...
DMN102	0.402	10.2	6.05	●			1.51	TID*100...
DMN105	0.413	10.5	6.05	●			1.56	TID*105...
DMN108	0.425	10.8	6.05	●			1.62	TID*105...
DMN110	0.433	11	6.45	●			1.67	TID*110...
DMN115	0.453	11.5	6.45	●			1.76	TID*115...
DMN120	0.472	12	6.8	●			1.82	TID*120...
DMN123	0.484	12.3	6.8	●			1.87	TID*120...
DMN125	0.492	12.5	6.8	●			1.91	TID*125...
DMN126	0.496	12.6	6.8	●			1.93	TID*125...
DMN127	0.500	12.7	6.8	●			1.95	TID*125...
DMN130	0.512	13	7.4	●			1.96	TID*130...
DMN135	0.531	13.5	7.4	●			2.05	TID*135...
DMN138	0.543	13.8	7.4	●			2.11	TID*135...
DMN140	0.551	14	7.95	●			2.12	TID*140...
DMN142	0.559	14.2	7.95	●			2.16	TID*140...
DMN145	0.571	14.5	7.95	●			2.21	TID*145...
DMN150	0.591	15	8.53	●			2.27	TID*150...
DMN152	0.598	15.2	8.53	●			2.31	TID*150...
DMN155	0.610	15.5	8.53	●			2.36	TID*150...
DMN158	0.622	15.8	8.53	●			2.42	TID*150...
DMN159	0.626	15.9	8.53	●			2.43	TID*150...
DMN160	0.630	16	9.1	●			2.42	TID*160...
DMN163	0.642	16.3	9.1	●			2.47	TID*160...
DMN165	0.650	16.5	9.1	●			2.51	TID*160...

ø0.268" - ø0.650" (ø6.8 mm - ø16.5 mm) = 2 pieces per package

● : Line up

STANDARD CUTTING CONDITIONS

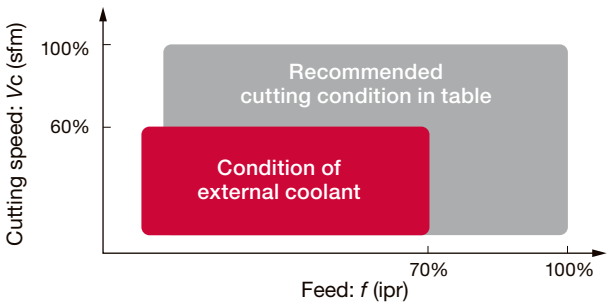
ISO	Workpiece material	Hardness	Cutting speed *Vc* (sfm)	Feed: *f* (ipr) Tool diameter: DC (in) ø0.157" - ø0.173"	ø0.177" - ø0.193"	ø0.197" - ø0.232"	ø0.236" - ø0.311"	ø0.315" - ø0.390"	ø0.394" - ø0.469"	ø0.472" - ø0.547"	ø0.551" - ø0.626"	ø0.630" - ø0.783"	ø0.787" - ø1.020"
P	Low carbon steels (C < 0.3) 1018, 1020, 1026, etc.	- 200 HB	262 - 459	0.002 - 0.003	0.002 - 0.003	0.003 - 0.005	0.004 - 0.005	0.005 - 0.010	0.006 - 0.011	0.007 - 0.012	0.008 - 0.014	0.010 - 0.018	0.010 - 0.018
P	High carbon steels (C > 0.3) 1045, 1055, etc.	- 300 HB	230 - 394	0.002 - 0.003	0.002 - 0.003	0.003 - 0.005	0.004 - 0.005	0.005 - 0.010	0.006 - 0.011	0.007 - 0.012	0.008 - 0.014	0.01 0- 0.018	0.010 - 0.018
P	Low alloy steels 4140, etc.	- 200 HB	230 - 394	0.002 - 0.002	0.002 - 0.003	0.003 - 0.005	0.003 - 0.005	0.004 - 0.010	0.006 - 0.011	0.006 - 0.013	0.007 - 0.014	0.009 - 0.016	0.010 - 0.018
P	Alloy steels 8620, etc.	- 300 HB	131 - 295	0.002 - 0.003	0.002 - 0.003	0.003 - 0.005	0.003 - 0.005	0.004 - 0.010	0.006 - 0.011	0.006 - 0.013	0.007 - 0.014	0.009 - 0.016	0.010 - 0.018
M	Stainless steels 304SS, 316SS, etc.	- 250 HB	98 - 230	-	-	0.002 - 0.003	0.003 - 0.004	0.004 - 0.006	0.005 - 0.007	0.006 - 0.008	0.006 - 0.009	0.006 - 0.010	0.007 - 0.012
K	Gray cast irons Class 25, etc.	150 - 250 HB	262 - 591	0.002 - 0.003	0.002 - 0.003	0.004 - 0.006	0.005 - 0.007	0.006 - 0.012	0.008 - 0.014	0.010 - 0.016	0.012 - 0.018	0.014 - 0.022	0.014 - 0.024
K	Ductile cast irons 100-70-03, etc.	150 - 250 HB	262 - 459	0.002 - 0.003	0.002 - 0.003	0.004 - 0.006	0.005 - 0.007	0.006 - 0.012	0.008 - 0.014	0.010 - 0.016	0.012 - 0.018	0.014 - 0.022	0.014 - 0.024
N	Aluminum alloys	-	262 - 722	-	-	-	0.004 - 0.008	0.008 - 0.014	0.010 - 0.016	0.012 - 0.018	0.014 - 0.02	0.016 - 0.024	0.020 - 0.030
S	Titanium alloys Ti-6Al-4V, etc.	- 40 HRC	66 - 164	-	-	-	0.002 - 0.003	0.002 - 0.005	0.003 - 0.006	0.004 - 0.011	0.005 - 0.008	0.006 - 0.009	0.007 - 0.011
S	Nickel-based alloys	- 40 HRC	66 - 164	-	-	-	0.002 - 0.003	0.002 - 0.004	0.003 - 0.005	0.004 - 0.006	0.005 - 0.007	0.005 - 0.009	0.006 - 0.009
H	Hardened steel	- 50 HRC	66 - 164	-	-	-	0.002 - 0.003	0.002 - 0.005	0.003 - 0.006	0.004 - 0.007	0.005 - 0.008	0.006 - 0.009	0.006 - 0.010

- Cutting conditions in the above table show standard cutting conditions
- Cutting conditions may change due to the rigidity and power of the machine and the workpiece material
- Machined hole diameter may change depending upon the rigidity of the machine tool or cutting conditions

Over 2xD drilling without internal coolant

In an environment without internal coolant, an external coolant supply is required. It is recommended to reduce the cutting conditions based on the material, diameter, and hole depth. Over 2xD drill, a step or pecking cycle operation is recommended in order to cool the cutting edge and improve chip evacuation.

2xD drilling in P material



CRITERIA FOR THE END OF DRILL-BODY LIFE

For your safety, it is recommended to replace drill bodies that reached the fatigue life with new drill bodies. For measuring un-clamping torque, the exclusive Clamping key (sold separately) should be used. To determine the fatigue life, Measure the torque value required to unlock the drill head with a torque driver. When the torque value required is equal to or smaller than the values listed below for respective head sizes, replace the drill body with a new one.

Clamping key for measuring un-clamping torque:

KHS-TID10-19.99

* The clamping key can be connect with general torque drivers.

Head Designation	Recommended value of un-clamping torque that means usable limit of a drill body (lbf·ft)
DM*100-109	0.15
DM*110-119	0.15
DM*120-129	0.18
DM*130-139	0.18
DM*140-149	0.22
DM*150-159	0.22
DM*160-169	0.26
DM*170-179	0.26
DM*180-189	0.3
DM*190-199	0.3

BLM

Sleeve for exchangeable head drill

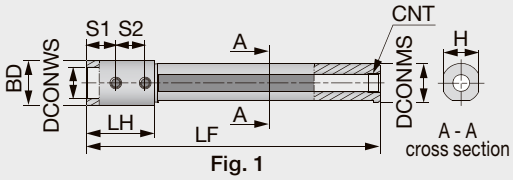


Fig. 1

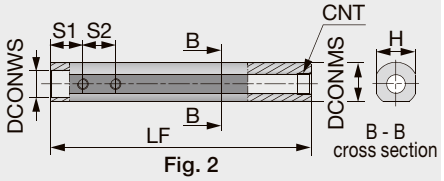


Fig. 2

Metric	DCONMS	DCONWS	LF	LH	BD	H	S1	S2	CNT	Body	Fig.
BLM16-12LF	16	12	85	35	20	15.5	15	15	Rc1/8	TID***F12...	1
BLM19-12LF	19.05	12	140	35	23	18.5	15	15	Rc1/8	TID***F12...	1
BLM19-12SF	19.05	12	90	35	23	18.5	15	15	Rc1/8	TID***F12...	1
BLM19-16LF	19.05	16	140	35	23	18.5	15	15	Rc1/8	TID***F16...	1
BLM19-16SF	19.05	16	90	35	23	18.5	15	15	Rc1/8	TID***F16...	1
BLM20-12LR	20	12	120	-	-	19	15	15	Rc1/8	TID***F12...	2
BLM20-16LF	20	16	150	35	23	19	15	15	Rc1/8	TID***F16...	1
BLM22-12LR	22	12	120	-	-	21.5	15	15	Rc1/8	TID***F12...	2
BLM22-16LF	22	16	140	35	25	21.5	15	15	Rc1/8	TID***F16...	1
BLM25-12LR	25	12	115	-	-	24	15	15	Rc1/8	TID***F12...	2
BLM25-16LR	25	16	115	-	-	24	15	15	Rc1/8	TID***F16...	2
BLM25-20LF	25	20	150	35	28	24	15	15	Rc1/8	TID***F20...	1
BLM254-12LR	25.4	12	115	-	-	24.7	15	15	Rc1/8	TID***F12...	2
BLM254-12SR	25.4	12	75	-	-	24.7	15	15	Rc1/8	TID***F12...	2
BLM254-16LR	25.4	16	115	-	-	24.7	15	15	Rc1/8	TID***F16...	2
BLM254-16SR	25.4	16	75	-	-	24.7	15	15	Rc1/8	TID***F16...	2
BLM254-20LF	25.4	20	140	35	28	24.7	15	15	Rc1/8	TID***F20...	1
BLM32-12LR	32	12	120	-	-	31.5	15	15	Rc1/8	TID***F12...	2
BLM32-16LR	32	16	120	-	-	31.5	15	15	Rc1/8	TID***F16...	2
BLM32-20LR	32	20	120	-	-	31.5	15	15	Rc1/8	TID***F20...	2

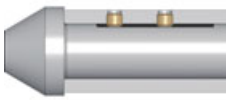
SPARE PARTS

Designation	Clamping screw	Wrench
BLM16/19/20/22...	SR M5x4 FLAT	P-2.5
BLM25-12LR	SR M5x6 FLAT	P-2.5
BLM25-16LR, BLM25-20LF	SR M5x4 FLAT	P-2.5
BLM254-12LR, BLM254-12SR	SR M5x6 FLAT	P-2.5
BLM254-16LR, BLM254-16SR, BLM254-20LF	SR M5x4 FLAT	P-2.5
BLM32-12LR, BLM32-16LR	SR M5x6 FLAT	P-2.5
BLM32-20LR	SR M5x4 FLAT	P-2.5

Note for sleeve usage

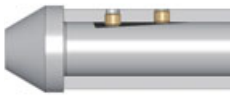
- Please refer to the separate Tungaloy report and product catalog for cutting conditions
- Please refrain from using whistle notch and weldon type shanks from the viewpoint of clamping stability

Good



Flat

No good

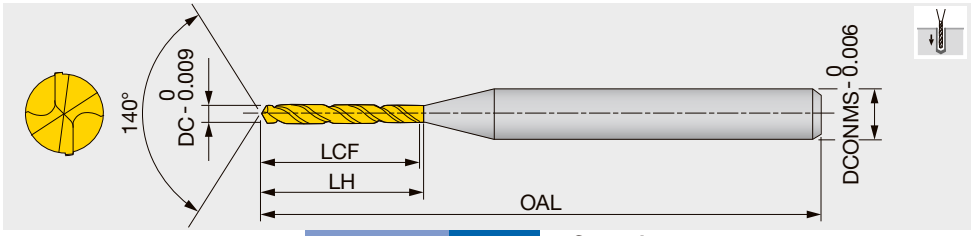


Whistle notch shank

SOLIDDRILL

DSM

Micro solid drill, L/D = 5 - 15, without coolant hole



Metric	DC	Coated YH170	Coated YH180	DCONMS	LCF	LH	OAL
DSM0010G10	0.1	●		3	1.15	1.4	38
DSM0011G10	0.11	●		3	1.25	1.5	38
DSM0012G10	0.12	●		3	1.35	1.6	38
DSM0013G10	0.13	●		3	1.55	1.8	38
DSM0014G10	0.14	●		3	1.65	1.9	38
DSM0015G10	0.15	●		3	1.75	2	38
DSM0016G10	0.16	●		3	1.85	2.1	38
DSM0017G10	0.17	●		3	1.95	2.2	38
DSM0018G10	0.18	●		3	2.15	2.4	38
DSM0019G10	0.19	●		3	2.25	2.5	38
DSM0020G10	0.2	●		3	2.35	2.6	38
DSM0021G10	0.21	●		3	2.45	2.7	38
DSM0022G10	0.22	●		3	2.55	2.8	38
DSM0023G10	0.23	●		3	2.75	3	38
DSM0024G10	0.24	●		3	2.85	3.1	38
DSM0025G10	0.25	●		3	3	3.3	38
DSM0026G10	0.26	●		3	3.1	3.4	38
DSM0027G10	0.27	●		3	3.2	3.5	38
DSM0028G10	0.28	●		3	3.4	3.7	38
DSM0029G10	0.29	●		3	3.5	3.8	38
DSM0030G10	0.3	●		3	3.9	4.2	38
DSM0031G15	0.31	●		3	5.6	5.9	38
DSM0032G15	0.32	●		3	5.6	5.9	38
DSM0033G15	0.33	●		3	5.6	5.9	38
DSM0034G15	0.34	●		3	5.6	5.9	38
DSM0035G15	0.35	●		3	5.6	5.9	38
DSM0036G15	0.36	●		3	6.5	6.8	38
DSM0037G15	0.37	●		3	6.5	6.8	38
DSM0038G15	0.38	●		3	6.5	6.8	38
DSM0039G15	0.39	●		3	6.5	6.8	38
DSM0040G15	0.4	●		3	6.5	6.8	38
DSM0041G15	0.41	●		3	7.4	7.7	38
DSM0042G15	0.42	●		3	7.4	7.7	38
DSM0043G15	0.43	●		3	7.4	7.7	38
DSM0044G15	0.44	●		3	7.4	7.7	38
DSM0045G15	0.45	●		3	7.4	7.7	38
DSM0046G15	0.46	●		3	8.1	8.7	38
DSM0047G15	0.47	●		3	8.1	8.7	38
DSM0048G15	0.48	●		3	8.1	8.7	38
DSM0049G15	0.49	●		3	8.1	8.7	38
DSM0050G15	0.5	●		3	8.1	8.7	38
DSM0053G10	0.53	●		3	6.6	7.2	38
DSM0055G10	0.55	●		3	6.6	7.2	38
DSM0060G10	0.6	●		3	7.3	7.9	38
DSM0061G10	0.61	●		3	7.9	8.5	38
DSM0065G10	0.65	●		3	7.9	8.5	38
DSM0070G10	0.7	●		3	8.6	9.2	38
DSM0075G10	0.75	●		3	9.2	9.8	38
DSM0080G10	0.8	●		3	9.9	10.5	38
DSM0088G10	0.88	●		3	9.9	10.5	38
DSM0090G10	0.9	●		3	9.9	10.5	38
DSM0097G10	0.97	●		3	11	11.6	38

Metric	DC	Coated YH170	Coated YH180	DCONMS	LCF	LH	OAL
DSM0100G10	1	●		3	11.5	12.1	38
DSM0108G05	1.08	●		3	8	8.6	38
DSM0110G05	1.1	●		3	8	8.6	38
DSM0120G05	1.2	●		3	8.9	9.5	38
DSM0130G05	1.3	●		3	9.7	10.3	38
DSM0140G05	1.4	●		3	10.5	11.1	38
DSM0145G05	1.45	●		3	11.3	11.9	38
DSM0149G05	1.49	●		3	11.3	11.9	38
DSM0150G05	1.5	●		3	11.3	11.9	38
DSM0153G05	1.53	●		3	12.1	12.7	45
DSM0155G05	1.55	●		3	12.1	12.7	45
DSM0160G05	1.6	●		3	12.1	12.7	45
DSM0165G05	1.65	●		3	12.9	13.6	45
DSM0170G05	1.7	●		3	12.9	13.6	45
DSM0180G05	1.8	●		3	13.7	14.3	45
DSM0182G05	1.82	●		3	14.5	15.1	45
DSM0185G05	1.85	●		3	14.5	15.1	45
DSM0190G05	1.9	●		3	14.5	15.1	45
DSM0195G05	1.95	●		3	15.3	15.9	45
DSM0200G05	2		●	3	15.3	15.9	45
DSM0203G05	2.03		●	3	16.1	16.7	45
DSM0205G05	2.05		●	3	16.1	16.7	45
DSM0210G05	2.1		●	3	16.1	16.7	45
DSM0220G05	2.2		●	3	16.9	17.5	45
DSM0230G05	2.3		●	3	17.7	18.3	45
DSM0240G05	2.4		●	3	18.5	19.1	55
DSM0250G05	2.5		●	3	19.3	19.9	55
DSM0254G05	2.54		●	3	20.1	20.7	55
DSM0255G05	2.55		●	3	20.1	20.7	55
DSM0256G05	2.56		●	3	20.1	20.7	55
DSM0257G05	2.57		●	3	20.1	20.7	55
DSM0260G05	2.6		●	3	20.1	20.7	55
DSM0265G05	2.65		●	3	20.9	21.5	55
DSM0270G05	2.7		●	3	20.9	21.5	55
DSM0280G05	2.8		●	3	21.7	22.3	55
DSM0290G05	2.9		●	3	22.5	23.1	55
DSM0295G05	2.95		●	3	23.3	23.9	55
DSM0296G05	2.96		●	3	23.3	23.9	55
DSM0300G05	3		●	3	23.3	23.9	55

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Cutting speed: *Vc* (sfm) ø0.004" ~ ø0.012"	ø0.012" ~ ø0.020"	ø0.020" ~ ø0.118"	Feed: *f* (ipr) ø0.004" ~ ø0.012"	ø0.012" ~ ø0.020"	ø0.020" ~ ø0.039"	ø0.039" ~ ø0.079"	ø0.079" ~ ø0.118"
P	Carbon steels, Alloy steels	- 300 HB	16 - 66	49 - 98	82 - 197	0.00004 - 0.00016	0.00008 - 0.0004	0.00020 - 0.0020	0.0012 - 0.0035	0.0020 - 0.004
M	Stainless steels	- 200 HB	7 - 39	20 - 59	33 - 66	0.00002 - 0.00016	0.00008 - 0.00031	0.00020 - 0.0012	0.0004 - 0.0016	0.0008 - 0.0020
K	Gray cast irons	150 - 250 HB	16 - 49	33 - 82	66 - 164	0.00002 - 0.00016	0.00008- 0.0005	0.00020 - 0.0012	0.0004 - 0.0024	0.0012 - 0.005
	Ductile cast irons	150 - 250 HB	16 - 49	33 - 82	66 - 164	0.00004 - 0.00012	0.00008 - 0.0004	0.00020 - 0.0008	0.0004 - 0.0020	0.0012 - 0.004
N	Aluminum alloys	-	33 - 66	33 - 98	66 - 164	0.00004 - 0.0004	0.00020 - 0.0012	0.0004 - 0.0020	0.0016 - 0.006	0.0024 - 0.008
	Copper / Brass	-	33 - 66	33 - 98	66 - 164	0.00004 - 0.0004	0.00020 - 0.0012	0.0004 - 0.0020	0.0016 - 0.006	0.0024 - 0.008
S	Heat-resistant alloys	- 40 HRC	7 - 20	16 - 33	26 - 66	0.00002 - 0.00012	0.00008 - 0.00016	0.00008 - 0.00016	0.00008 - 0.00016	※
H	High hardened steels	- 50 HRC	13 - 26	20 - 33	20 - 52	0.00002 - 0.00008	0.00004 - 0.00020	0.00020 - 0.0008	0.0004 - 0.0012	0.0008 - 0.0024

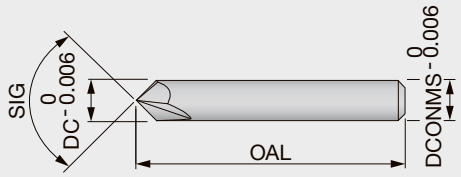
※ Not recommended

Notes: • When the drilling depth is deeper than L/D = 5, use drill pecking every 10 to 50% of the drill diameter.
• The above cutting conditions are applied to when a water soluble cutting fluid is used. For drilling a hole smaller than ø0.3 mm, use of a starting drill is recommended.
• When setting the drill, the drill run out should be within 0.002 mm on the taper. (Especially for the drill diameter smaller than ø0.5 mm)

SOLIDDRILL

DSM-CP

Centering drill for DSM drill



DC = DCONMS

Metric	DC	YH170	DCONMS	OAL	SIG
DSM-CP90	3	●	3	38.1	90°
DSM-CP140	3	●	3	38.1	140°

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Cutting speed: *Vc* (sfm)	Feed: *f* (ipr) DSM-CP90	DSM-CP140
P	Carbon, Mild and Alloy steels	- 300 HB	98 - 262	0.0004 - 0.0024	0.0012 - 0.0031
M	Stainless steels	- 200 HB	49 - 131	0.0004 - 0.0012	0.0008 - 0.0024
K	Grey and ductile cast irons	150 - 250 HB	98 - 262	0.0008 - 0.0024	0.0020 - 0.0039
N	Aluminium alloys	-	197 - 394	0.0008 - 0.0039	0.0020 - 0.0059
H	High hardened steels	- 45 HRC	33 - 131	※	0.0004 - 0.002

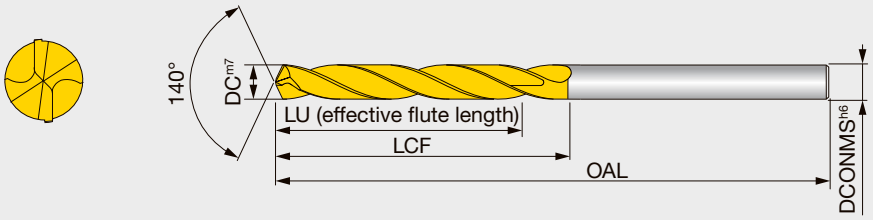
※ Not recommended

Notes: • For hard materials and stainless steels which have work-hardening nature, DSM-CP140 is recommended.
• Above cutting conditions are of using a water-soluble cutting fluid. When using a water-insoluble type, set the lower side of cutting conditions.

SOLIDDRILL

DSW-DE3

Solid drillL/D = 3, DIN shank, without coolant hole



Metric	DC	AH725	DCONMS	LU	LCF	OAL
DSW030-014-06DE3	3	●	6	14	20	62
DSW031-014-06DE3	3.1	●	6	14	20	62
DSW032-014-06DE3	3.2	●	6	14	20	62
DSW033-014-06DE3	3.3	●	6	14	20	62
DSW034-014-06DE3	3.4	●	6	14	20	62
DSW035-014-06DE3	3.5	●	6	14	20	62
DSW036-014-06DE3	3.6	●	6	14	20	62
DSW037-014-06DE3	3.7	●	6	14	20	62
DSW038-017-06DE3	3.8	●	6	17	24	66
DSW039-017-06DE3	3.9	●	6	17	24	66
DSW040-017-06DE3	4	●	6	17	24	66
DSW041-017-06DE3	4.1	●	6	17	24	66
DSW042-017-06DE3	4.2	●	6	17	24	66
DSW043-017-06DE3	4.3	●	6	17	24	66
DSW044-017-06DE3	4.4	●	6	17	24	66
DSW045-017-06DE3	4.5	●	6	17	24	66
DSW046-017-06DE3	4.6	●	6	17	24	66
DSW047-017-06DE3	4.7	●	6	17	24	66
DSW048-020-06DE3	4.8	●	6	20	28	66
DSW049-020-06DE3	4.9	●	6	20	28	66
DSW050-020-06DE3	5	●	6	20	28	66
DSW051-020-06DE3	5.1	●	6	20	28	66
DSW052-020-06DE3	5.2	●	6	20	28	66
DSW053-020-06DE3	5.3	●	6	20	28	66
DSW054-020-06DE3	5.4	●	6	20	28	66
DSW055-020-06DE3	5.5	●	6	20	28	66
DSW056-020-06DE3	5.6	●	6	20	28	66
DSW057-020-06DE3	5.7	●	6	20	28	66
DSW058-020-06DE3	5.8	●	6	20	28	66
DSW059-020-06DE3	5.9	●	6	20	28	66
DSW060-020-06DE3	6	●	6	20	28	66
DSW061-024-08DE3	6.1	●	8	24	34	79
DSW062-024-08DE3	6.2	●	8	24	34	79
DSW063-024-08DE3	6.3	●	8	24	34	79
DSW064-024-08DE3	6.4	●	8	24	34	79
DSW065-024-08DE3	6.5	●	8	24	34	79
DSW066-024-08DE3	6.6	●	8	24	34	79
DSW067-024-08DE3	6.7	●	8	24	34	79
DSW068-024-08DE3	6.8	●	8	24	34	79
DSW069-024-08DE3	6.9	●	8	24	34	79
DSW070-024-08DE3	7	●	8	24	34	79
DSW071-029-08DE3	7.1	●	8	29	41	79
DSW072-029-08DE3	7.2	●	8	29	41	79
DSW073-029-08DE3	7.3	●	8	29	41	79
DSW074-029-08DE3	7.4	●	8	29	41	79
DSW075-029-08DE3	7.5	●	8	29	41	79
DSW076-029-08DE3	7.6	●	8	29	41	79
DSW077-029-08DE3	7.7	●	8	29	41	79
DSW078-029-08DE3	7.8	●	8	29	41	79
DSW079-029-08DE3	7.9	●	8	29	41	79
DSW080-029-08DE3	8	●	8	29	41	79
DSW081-035-10DE3	8.1	●	10	35	47	89
DSW082-035-10DE3	8.2	●	10	35	47	89
DSW083-035-10DE3	8.3	●	10	35	47	89
DSW084-035-10DE3	8.4	●	10	35	47	89
DSW085-035-10DE3	8.5	●	10	35	47	89
DSW086-035-10DE3	8.6	●	10	35	47	89
DSW087-035-10DE3	8.7	●	10	35	47	89
DSW088-035-10DE3	8.8	●	10	35	47	89
DSW089-035-10DE3	8.9	●	10	35	47	89
DSW090-035-10DE3	9	●	10	35	47	89
DSW091-035-10DE3	9.1	●	10	35	47	89
DSW092-035-10DE3	9.2	●	10	35	47	89
DSW093-035-10DE3	9.3	●	10	35	47	89
DSW094-035-10DE3	9.4	●	10	35	47	89
DSW095-035-10DE3	9.5	●	10	35	47	89
DSW096-035-10DE3	9.6	●	10	35	47	89
DSW097-035-10DE3	9.7	●	10	35	47	89
DSW098-035-10DE3	9.8	●	10	35	47	89
DSW099-035-10DE3	9.9	●	10	35	47	89
DSW100-035-10DE3	10	●	10	35	47	89
DSW101-040-12DE3	10.1	●	12	40	55	102
DSW102-040-12DE3	10.2	●	12	40	55	102
DSW103-040-12DE3	10.3	●	12	40	55	102
DSW104-040-12DE3	10.4	●	12	40	55	102
DSW105-040-12DE3	10.5	●	12	40	55	102
DSW106-040-12DE3	10.6	●	12	40	55	102
DSW107-040-12DE3	10.7	●	12	40	55	102
DSW108-040-12DE3	10.8	●	12	40	55	102
DSW109-040-12DE3	10.9	●	12	40	55	102
DSW110-040-12DE3	11	●	12	40	55	102
DSW111-040-12DE3	11.1	●	12	40	55	102
DSW112-040-12DE3	11.2	●	12	40	55	102
DSW113-040-12DE3	11.3	●	12	40	55	102
DSW114-040-12DE3	11.4	●	12	40	55	102
DSW115-040-12DE3	11.5	●	12	40	55	102
DSW116-040-12DE3	11.6	●	12	40	55	102
DSW117-040-12DE3	11.7	●	12	40	55	102
DSW118-040-12DE3	11.8	●	12	40	55	102
DSW119-040-12DE3	11.9	●	12	40	55	102
DSW120-040-12DE3	12	●	12	40	55	102

● : Line up

STANDARD CUTTING CONDITIONS

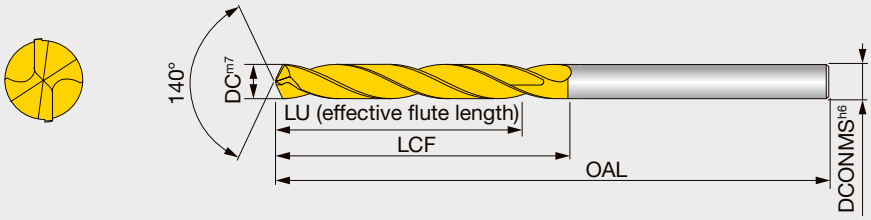
See more information

e-catalog

SOLIDDRILL

DSW-DE5

Solid drill, L/D = 5, DIN shank, without coolant hole



Metric	DC	AH725	DCONMS	LU	LCF	OAL
DSW030-023-06DE5	3	●	6	23	28	66
DSW031-023-06DE5	3.1	●	6	23	28	66
DSW032-023-06DE5	3.2	●	6	23	28	66
DSW033-023-06DE5	3.3	●	6	23	28	66
DSW034-023-06DE5	3.4	●	6	23	28	66
DSW035-023-06DE5	3.5	●	6	23	28	66
DSW036-023-06DE5	3.6	●	6	23	28	66
DSW037-023-06DE5	3.7	●	6	23	28	66
DSW038-029-06DE5	3.8	●	6	29	36	74
DSW039-029-06DE5	3.9	●	6	29	36	74
DSW040-029-06DE5	4	●	6	29	36	74
DSW041-029-06DE5	4.1	●	6	29	36	74
DSW042-029-06DE5	4.2	●	6	29	36	74
DSW043-029-06DE5	4.3	●	6	29	36	74
DSW044-029-06DE5	4.4	●	6	29	36	74
DSW045-029-06DE5	4.5	●	6	29	36	74
DSW046-029-06DE5	4.6	●	6	29	36	74
DSW047-029-06DE5	4.7	●	6	29	36	74
DSW048-035-06DE5	4.8	●	6	35	44	82
DSW049-035-06DE5	4.9	●	6	35	44	82
DSW050-035-06DE5	5	●	6	35	44	82
DSW051-035-06DE5	5.1	●	6	35	44	82
DSW052-035-06DE5	5.2	●	6	35	44	82
DSW053-035-06DE5	5.3	●	6	35	44	82
DSW054-035-06DE5	5.4	●	6	35	44	82
DSW055-035-06DE5	5.5	●	6	35	44	82
DSW056-035-06DE5	5.6	●	6	35	44	82
DSW057-035-06DE5	5.7	●	6	35	44	82
DSW058-035-06DE5	5.8	●	6	35	44	82
DSW059-035-06DE5	5.9	●	6	35	44	82
DSW060-035-06DE5	6	●	6	35	44	82
DSW061-043-08DE5	6.1	●	8	43	53	91
DSW062-043-08DE5	6.2	●	8	43	53	91
DSW063-043-08DE5	6.3	●	8	43	53	91
DSW064-043-08DE5	6.4	●	8	43	53	91
DSW065-043-08DE5	6.5	●	8	43	53	91
DSW066-043-08DE5	6.6	●	8	43	53	91
DSW067-043-08DE5	6.7	●	8	43	53	91
DSW068-043-08DE5	6.8	●	8	43	53	91
DSW069-043-08DE5	6.9	●	8	43	53	91
DSW070-043-08DE5	7	●	8	43	53	91
DSW071-043-08DE5	7.1	●	8	43	53	91
DSW072-043-08DE5	7.2	●	8	43	53	91
DSW073-043-08DE5	7.3	●	8	43	53	91
DSW074-043-08DE5	7.4	●	8	43	53	91
DSW075-043-08DE5	7.5	●	8	43	53	91

Metric	DC	AH725	DCONMS	LU	LCF	OAL
DSW076-043-08DE5	7.6	●	8	43	53	91
DSW077-043-08DE5	7.7	●	8	43	53	91
DSW078-043-08DE5	7.8	●	8	43	53	91
DSW079-043-08DE5	7.9	●	8	43	53	91
DSW080-043-08DE5	8	●	8	43	53	91
DSW081-049-10DE5	8.1	●	10	49	61	103
DSW082-049-10DE5	8.2	●	10	49	61	103
DSW083-049-10DE5	8.3	●	10	49	61	103
DSW084-049-10DE5	8.4	●	10	49	61	103
DSW085-049-10DE5	8.5	●	10	49	61	103
DSW086-049-10DE5	8.6	●	10	49	61	103
DSW087-049-10DE5	8.7	●	10	49	61	103
DSW088-049-10DE5	8.8	●	10	49	61	103
DSW089-049-10DE5	8.9	●	10	49	61	103
DSW090-049-10DE5	9	●	10	49	61	103
DSW091-049-10DE5	9.1	●	10	49	61	103
DSW092-049-10DE5	9.2	●	10	49	61	103
DSW093-049-10DE5	9.3	●	10	49	61	103
DSW094-049-10DE5	9.4	●	10	49	61	103
DSW095-049-10DE5	9.5	●	10	49	61	103
DSW096-049-10DE5	9.6	●	10	49	61	103
DSW097-049-10DE5	9.7	●	10	49	61	103
DSW098-049-10DE5	9.8	●	10	49	61	103
DSW099-049-10DE5	9.9	●	10	49	61	103
DSW100-049-10DE5	10	●	10	49	61	103
DSW101-056-12DE5	10.1	●	12	56	71	118
DSW102-056-12DE5	10.2	●	12	56	71	118
DSW103-056-12DE5	10.3	●	12	56	71	118
DSW104-056-12DE5	10.4	●	12	56	71	118
DSW105-056-12DE5	10.5	●	12	56	71	118
DSW106-056-12DE5	10.6	●	12	56	71	118
DSW107-056-12DE5	10.7	●	12	56	71	118
DSW108-056-12DE5	10.8	●	12	56	71	118
DSW109-056-12DE5	10.9	●	12	56	71	118
DSW110-056-12DE5	11	●	12	56	71	118
DSW111-056-12DE5	11.1	●	12	56	71	118
DSW112-056-12DE5	11.2	●	12	56	71	118
DSW113-056-12DE5	11.3	●	12	56	71	118
DSW114-056-12DE5	11.4	●	12	56	71	118
DSW115-056-12DE5	11.5	●	12	56	71	118
DSW116-056-12DE5	11.6	●	12	56	71	118
DSW117-056-12DE5	11.7	●	12	56	71	118
DSW118-056-12DE5	11.8	●	12	56	71	118
DSW119-056-12DE5	11.9	●	12	56	71	118
DSW120-056-12DE5	12	●	12	56	71	118

● : Line up

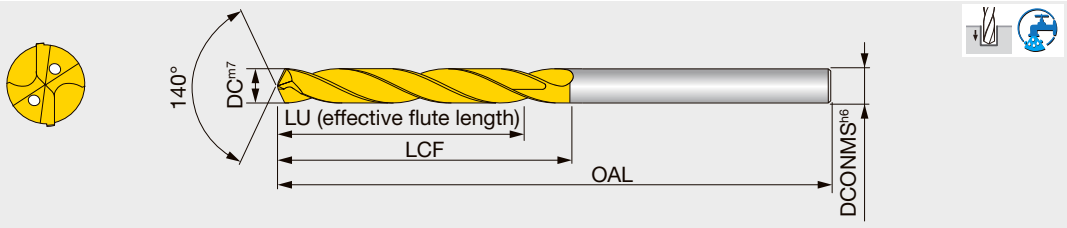
STANDARD CUTTING CONDITIONS

See more information

e-catalog

DSW-DI5

Solid drill, L/D = 5, DIN shank, with coolant hole



Metric	DC	AH725	DCONMS	LU	LCF	OAL
DSW030-023-06DI5	3	●	6	23	28	66
DSW031-023-06DI5	3.1	●	6	23	28	66
DSW032-023-06DI5	3.2	●	6	23	28	66
DSW033-023-06DI5	3.3	●	6	23	28	66
DSW034-023-06DI5	3.4	●	6	23	28	66
DSW035-023-06DI5	3.5	●	6	23	28	66
DSW036-023-06DI5	3.6	●	6	23	28	66
DSW037-023-06DI5	3.7	●	6	23	28	66
DSW038-029-06DI5	3.8	●	6	29	36	74
DSW039-029-06DI5	3.9	●	6	29	36	74
DSW040-029-06DI5	4	●	6	29	36	74
DSW041-029-06DI5	4.1	●	6	29	36	74
DSW042-029-06DI5	4.2	●	6	29	36	74
DSW043-029-06DI5	4.3	●	6	29	36	74
DSW044-029-06DI5	4.4	●	6	29	36	74
DSW045-029-06DI5	4.5	●	6	29	36	74
DSW046-029-06DI5	4.6	●	6	29	36	74
DSW047-029-06DI5	4.7	●	6	29	36	74
DSW048-035-06DI5	4.8	●	6	35	44	82
DSW049-035-06DI5	4.9	●	6	35	44	82
DSW050-035-06DI5	5	●	6	35	44	82
DSW051-035-06DI5	5.1	●	6	35	44	82
DSW052-035-06DI5	5.2	●	6	35	44	82
DSW053-035-06DI5	5.3	●	6	35	44	82
DSW054-035-06DI5	5.4	●	6	35	44	82
DSW055-035-06DI5	5.5	●	6	35	44	82
DSW056-035-06DI5	5.6	●	6	35	44	82
DSW057-035-06DI5	5.7	●	6	35	44	82
DSW058-035-06DI5	5.8	●	6	35	44	82
DSW059-035-06DI5	5.9	●	6	35	44	82
DSW060-035-06DI5	6	●	6	35	44	82
DSW061-043-08DI5	6.1	●	8	43	53	91
DSW062-043-08DI5	6.2	●	8	43	53	91
DSW063-043-08DI5	6.3	●	8	43	53	91
DSW064-043-08DI5	6.4	●	8	43	53	91
DSW065-043-08DI5	6.5	●	8	43	53	91
DSW066-043-08DI5	6.6	●	8	43	53	91
DSW067-043-08DI5	6.7	●	8	43	53	91
DSW068-043-08DI5	6.8	●	8	43	53	91
DSW069-043-08DI5	6.9	●	8	43	53	91
DSW070-043-08DI5	7	●	8	43	53	91
DSW071-043-08DI5	7.1	●	8	43	53	91
DSW072-043-08DI5	7.2	●	8	43	53	91
DSW073-043-08DI5	7.3	●	8	43	53	91
DSW074-043-08DI5	7.4	●	8	43	53	91
DSW075-043-08DI5	7.5	●	8	43	53	91

Metric	DC	AH725	DCONMS	LU	LCF	OAL
DSW076-043-08DI5	7.6	●	8	43	53	91
DSW077-043-08DI5	7.7	●	8	43	53	91
DSW078-043-08DI5	7.8	●	8	43	53	91
DSW079-043-08DI5	7.9	●	8	43	53	91
DSW080-043-08DI5	8	●	8	43	53	91
DSW081-049-10DI5	8.1	●	10	49	61	103
DSW082-049-10DI5	8.2	●	10	49	61	103
DSW083-049-10DI5	8.3	●	10	49	61	103
DSW084-049-10DI5	8.4	●	10	49	61	103
DSW085-049-10DI5	8.5	●	10	49	61	103
DSW086-049-10DI5	8.6	●	10	49	61	103
DSW087-049-10DI5	8.7	●	10	49	61	103
DSW088-049-10DI5	8.8	●	10	49	61	103
DSW089-049-10DI5	8.9	●	10	49	61	103
DSW090-049-10DI5	9	●	10	49	61	103
DSW091-049-10DI5	9.1	●	10	49	61	103
DSW092-049-10DI5	9.2	●	10	49	61	103
DSW093-049-10DI5	9.3	●	10	49	61	103
DSW094-049-10DI5	9.4	●	10	49	61	103
DSW095-049-10DI5	9.5	●	10	49	61	103
DSW096-049-10DI5	9.6	●	10	49	61	103
DSW097-049-10DI5	9.7	●	10	49	61	103
DSW098-049-10DI5	9.8	●	10	49	61	103
DSW099-049-10DI5	9.9	●	10	49	61	103
DSW100-049-10DI5	10	●	10	49	61	103
DSW101-056-12DI5	10.1	●	12	56	71	118
DSW102-056-12DI5	10.2	●	12	56	71	118
DSW103-056-12DI5	10.3	●	12	56	71	118
DSW104-056-12DI5	10.4	●	12	56	71	118
DSW105-056-12DI5	10.5	●	12	56	71	118
DSW106-056-12DI5	10.6	●	12	56	71	118
DSW107-056-12DI5	10.7	●	12	56	71	118
DSW108-056-12DI5	10.8	●	12	56	71	118
DSW109-056-12DI5	10.9	●	12	56	71	118
DSW110-056-12DI5	11	●	12	56	71	118
DSW111-056-12DI5	11.1	●	12	56	71	118
DSW112-056-12DI5	11.2	●	12	56	71	118
DSW113-056-12DI5	11.3	●	12	56	71	118
DSW114-056-12DI5	11.4	●	12	56	71	118
DSW115-056-12DI5	11.5	●	12	56	71	118
DSW116-056-12DI5	11.6	●	12	56	71	118
DSW117-056-12DI5	11.7	●	12	56	71	118
DSW118-056-12DI5	11.8	●	12	56	71	118
DSW119-056-12DI5	11.9	●	12	56	71	118
DSW120-056-12DI5	12	●	12	56	71	118

● : Line up

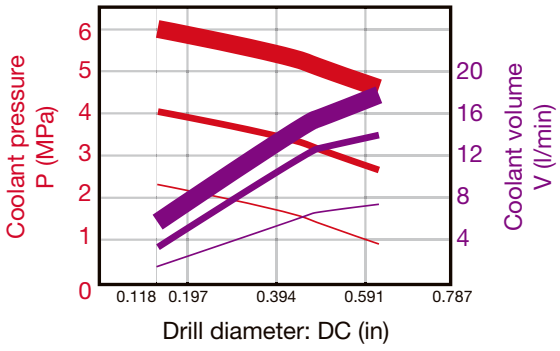
STANDARD CUTTING CONDITIONS

See more information

e-catalog

Recommended coolant pressure and volume for internal coolant supply:

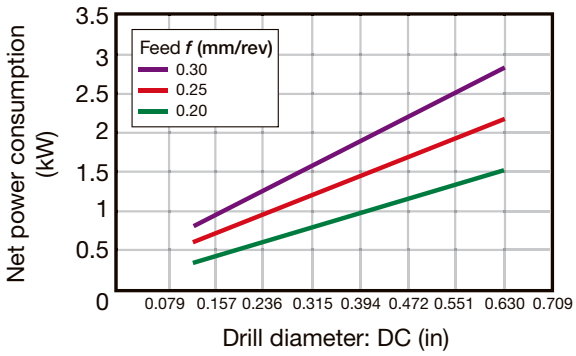
The following graph is a reference guide for pressure and volume. Values should be adjusted according to work material and actual chip evacuation.



: Ideal pressure
: Enough pressure
: Minimum pressure
: Ideal volume
: Enough volume
: Minimum volume

Reference for required spindle power:

The required spindle power may vary depending on the type of work material or hardness. A spindle with sufficient power should be used when referring to the below graph.

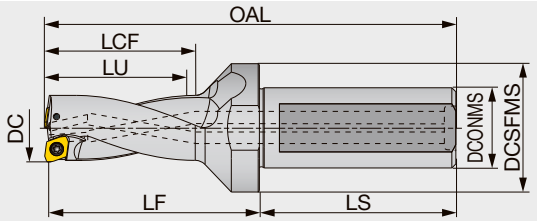


Work material : Alloy steel (4340)
Cutting speed : *Vc* = 328 sfm

TUNGDRILLTWISTED

TDX-F L/D=2

Indexable drill, L/D = 2, flat cotter



Metric	DC	DCONMS	DCSFMS	LU	LS	LCF	LF	OAL	Max. offset (radial)	WT(kg)	Insert
TDX125F20-2	12.5	20	25	25.4	49	28.4	41	90.4	0.8	0.2	XPMT040104R-D*
TDX130F20-2	13	20	25	26.4	49	29.4	42	91.4	0.7	0.2	XPMT040104R-D*
TDX135F20-2	13.5	20	25	27.4	49	30.4	43	92.4	0.6	0.2	XPMT040104R-D*
TDX140F20-2	14	20	25	28.4	49	31.4	44	93.4	0.5	0.2	XPMT040104R-D*
TDX145F20-2	14.5	20	25	29.4	49	32.4	46	95.4	0.4	0.2	XPMT040104R-D*
TDX150F20-2	15	20	25	30.5	49	33.5	47	96.5	0.9	0.2	XPMT050204R-D*
TDX155F20-2	15.5	20	32	31.5	49	34.5	49	98.5	0.8	0.2	XPMT050204R-D*
TDX160F20-2	16	20	32	32.5	49	35.5	51	100.5	0.6	0.2	XPMT050204R-D*
TDX165F20-2	16.5	20	32	33.5	49	36.5	52	101.5	0.5	0.2	XPMT050204R-D*
TDX170F20-2	17	20	32	34.5	49	37.5	53	102.5	0.4	0.2	XPMT050204R-D*
TDX175F25-2	17.5	25	32	35.5	54	38.5	55	109.5	1.2	0.3	XPMT06X308R-D*
TDX180F25-2	18	25	32	36.5	54	39.5	56	110.5	1.1	0.3	XPMT06X308R-D*
TDX185F25-2	18.5	25	32	37.5	54	40.5	57	111.5	0.9	0.3	XPMT06X308R-D*
TDX190F25-2	19	25	32	38.5	54	41.5	58	112.5	0.8	0.3	XPMT06X308R-D*
TDX195F25-2	19.5	25	32	39.5	54	42.5	60	114.5	0.7	0.3	XPMT06X308R-D*
TDX200F25-2	20	25	32	40.5	54	45.5	61	115.5	0.5	0.3	XPMT06X308R-D*

Tool diameter	Tool diameter tolerance	Hole diameter tolerance*
ø12.5 - ø17	+ 0.1 / 0	+ 0.25 / 0
ø17.5 - ø20	+ 0.2 / 0	+ 0.3 / 0

*Just for reference

SPARE PARTS

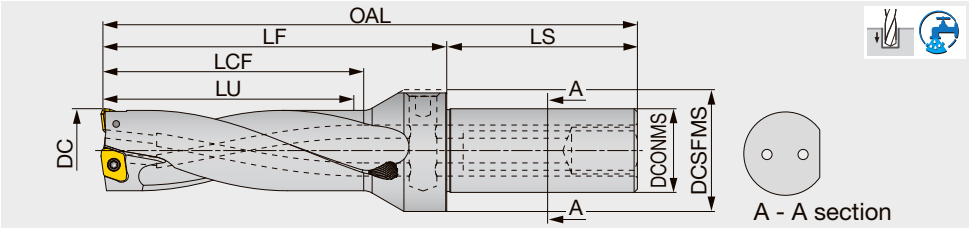
Designation	Clamping screw	Wrench
TDX125 - 145	CSPB-2H	IP-6DB
TDX150 - 170	CSPB-2L043	IP-6DB
TDX175 -200	CSPB-2.2	IP-7D

Recommended clamping torque (N·m): CSPB-2H/CSPB-2L043=0.7, CSPB-2.2=1

Reference pages: Inserts → 9-33
Standard cutting conditions → 9-34

TDXU-F L/D=3

Indexable drill, L/D = 3, flat shank with side port



Inch	DC	DCONMS	DCSFMS	LU	LS	LCF	LF	OAL	Max. offset** (radial)	WT(lb)	Insert
TDXU-0500FS-03	0.500	0.750	1.250	1.515	2.000	1.630	2.519	4.534	0.030	0.450	XPMT040104R-D*
TDXU-0531FS-03	0.531	0.750	1.250	1.608	2.000	1.730	2.620	4.635	0.024	0.460	XPMT040104R-D*
TDXU-0562FS-03	0.562	0.750	1.250	1.701	2.000	1.820	2.715	4.730	0.018	0.470	XPMT040104R-D*
TDXU-0625FS-03	0.625	0.750	1.250	1.896	2.000	2.020	2.909	4.930	0.026	0.490	XPMT050204R-D*
TDXU-0687FS-03	0.687	1.000	1.457	2.080	2.280	2.200	3.159	5.458	0.048	0.830	XPMT06X308R-D*
TDXU-0750FS-03	0.750	1.000	1.457	2.269	2.280	2.390	3.341	5.640	0.027	0.870	XPMT06X308R-D*
TDXU-0812FS-03	0.812	1.000	1.457	2.455	2.280	2.580	3.542	5.841	0.015	0.910	XPMT06X308R-D*
TDXU-0875FS-03	0.875	1.000	1.457	2.648	2.280	2.770	3.724	6.027	0.045	0.950	XPMT07H308R-D*
TDXU-0937FS-03	0.937	1.000	1.457	2.834	2.280	2.960	3.929	6.232	0.029	1.030	XPMT07H308R-D*
TDXU-1000FS-03	1.000	1.000	1.457	3.023	2.280	3.210	4.111	6.314	0.013	1.050	XPMT07H308R-D*

** For offsetting on lathe

Tool diameter (in)	Tool diameter tolerance (in)	Hole diameter tolerance (in)*
ø0.500" - ø0.625"	+ 0.004" / 0	+ 0.010" / 0
ø0.687" - ø1.000"	+ 0.008" / 0	+ 0.012" / 0

*Just for reference

SPARE PARTS

Designation	Clamping screw	Torx driver	Plug *	
			Side port	Rear port (Optional parts)
TDXU500 - TDXU0562	CSPB-2H	IP-6DB	NPTF1/8	(NPTF1/4)
TDXU-0625FS-03	CSPB-2L043	IP-6DB	NPTF1/8	(NPTF1/4)
TDXU0687-TDXU0812	CSPB-2.2	IP-7D	NPTF1/8	(SL25IN)
TDXU0875 - TDXU1000	CSPB-2.5	IP-8D	NPTF1/8	(SL25IN)

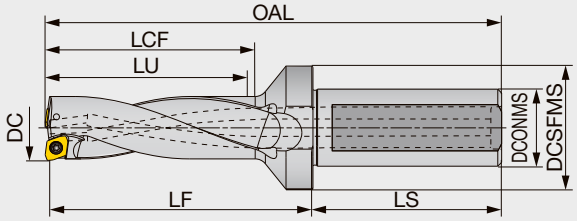
Recommended clamping torque:
CSPB-2H/CSPB-2L043 = 0.52 lb·ft, CSPB-2.2 = 0.74 lb·ft, CSPB-2.5 = 0.96 lb·ft

Reference pages: Inserts → 9-33
Standard cutting conditions → 9-34

TUNGDRILLTWISTED

TDX-F L/D=3

Indexable drill, L/D = 3, flat cotter



Metric	DC	DCONMS	DCSFMS	LU	LS	LCF	LF	OAL	Max. offset (radial)	WT(kg)	Insert
TDX125F20-3	12.5	20	25	37.9	49	40.9	53	102.4	0.8	0.2	XPMT040104R-D*
TDX130F20-3	13	20	25	39.4	49	42.4	55	104.4	0.7	0.2	XPMT040104R-D*
TDX135F20-3	13.5	20	25	40.9	49	43.9	56	105.4	0.6	0.2	XPMT040104R-D*
TDX140F20-3	14	20	25	42.4	49	45.4	58	107.4	0.5	0.2	XPMT040104R-D*
TDX145F20-3	14.5	20	25	43.9	49	46.9	60	109.4	0.4	0.2	XPMT040104R-D*
TDX150F20-3	15	20	25	45.4	49	48.4	62	111.4	0.9	0.2	XPMT050204R-D*
TDX155F20-3	15.5	20	32	46.9	49	49.9	64	113.4	0.8	0.2	XPMT050204R-D*
TDX160F20-3	16	20	32	48.4	49	51.4	66	115.4	0.6	0.2	XPMT050204R-D*
TDX165F20-3	16.5	20	32	49.9	49	52.9	68	117.4	0.5	0.2	XPMT050204R-D*
TDX170F20-3	17	20	32	51.4	49	54.4	69	118.4	0.4	0.2	XPMT050204R-D*
TDX175F25-3	17.5	25	32	53	54	56	72	126.5	1.2	0.3	XPMT06X308R-D*
TDX180F25-3	18	25	32	54.5	54	57.5	73	127.5	1.1	0.3	XPMT06X308R-D*
TDX185F25-3	18.5	25	32	56	54	59	75	129.5	0.9	0.3	XPMT06X308R-D*
TDX190F25-3	19	25	32	57.5	54	60.5	76	130.5	0.8	0.3	XPMT06X308R-D*
TDX195F25-3	19.5	25	32	59	54	62	79	133.5	0.7	0.3	XPMT06X308R-D*
TDX200F25-3	20	25	32	60.5	54	65.5	81	135.5	0.5	0.3	XPMT06X308R-D*

Tool diameter	Tool diameter tolerance	Hole diameter tolerance*
ø12.5 - ø17	+ 0.1 / 0	+ 0.25 / 0
ø17.5 - ø20	+ 0.2 / 0	+ 0.3 / 0

*Just for reference

SPARE PARTS

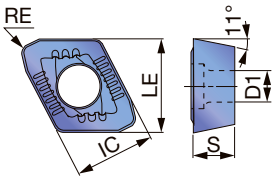
Designation	Clamping screw	Wrench
TDX125 - 145	CSPB-2H	IP-6DB
TDX150 - 170	CSPB-2L043	IP-6DB
TDX175 - 200	CSPB-2.2	IP-7D

Recommended clamping torque (N·m): CSPB-2H/CSPB-2L043=0.7, CSPB-2.2=1

Reference pages: Standard cutting conditions → 9-34

INSERT

DJ



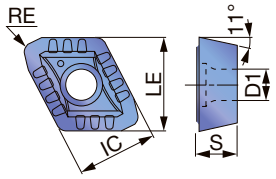
P	Steel			★	☆			
M	Stainless	☆		★				
K	Cast iron		☆	☆	★			
N	Non-ferrous	★		☆				
S	Superalloys	☆		★	☆			
H	Hard materials	☆		★	☆			

★ : First choice
☆ : Second choice

Designation	IC (in)	LE (in)	Coated				S (in)	D1 (in)	RE (in)	DCN (in)	DCX (in)
			AH725	T1115	AH6030	AH9030					
XPMT040104R-DJ	0.169	0.177	●	●	●	●	0.063	0.091	0.016	0.492	0.571
XPMT050204R-DJ	0.205	0.213	●	●	●	●	0.094	0.091	0.016	0.591	0.669
XPMT06X308R-DJ	0.236	0.276	●	●	●	●	0.118	0.098	0.031	0.689	0.846

●: Line up

DS



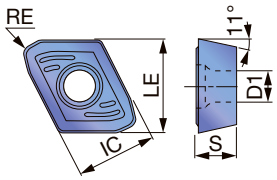
P	Steel	☆	★					
M	Stainless	☆	★					
K	Cast iron							
N	Non-ferrous	☆						
S	Superalloys	☆	★					
H	Hard materials							

★ : First choice
☆ : Second choice

Designation	IC (in)	LE (in)	Coated		S (in)	D1 (in)	RE (in)	DCN (in)	DCX (in)
			AH725	AH6030					
XPMT040104R-DS	0.169	0.177	●	●	0.063	0.091	0.016	0.492	0.571
XPMT050204R-DS	0.205	0.213	●	●	0.094	0.091	0.016	0.591	0.669
XPMT06X308R-DS	0.236	0.276	●	●	0.118	0.098	0.031	0.689	0.846

●: Line up

DW



P	Steel	☆	★	☆				
M	Stainless	☆	★	☆				
K	Cast iron		☆	★				
N	Non-ferrous	☆	★					
S	Superalloys	☆	★	☆				
H	Hard materials	☆	★	☆				

★ : First choice
☆ : Second choice

Designation	IC (in)	LE (in)	Coated			S (in)	D1 (in)	RE (in)	DCN (in)	DCX (in)
			AH725	AH6030	AH9030					
XPMT040104R-DW	0.169	0.177	●	●	●	0.063	0.091	0.016	0.492	0.571
XPMT050204R-DW	0.205	0.213	●	●	●	0.094	0.091	0.016	0.591	0.669
XPMT06X308R-DW	0.236	0.276	●	●	●	0.118	0.098	0.031	0.689	0.846

●: Line up

RECOMMENDED INSERT

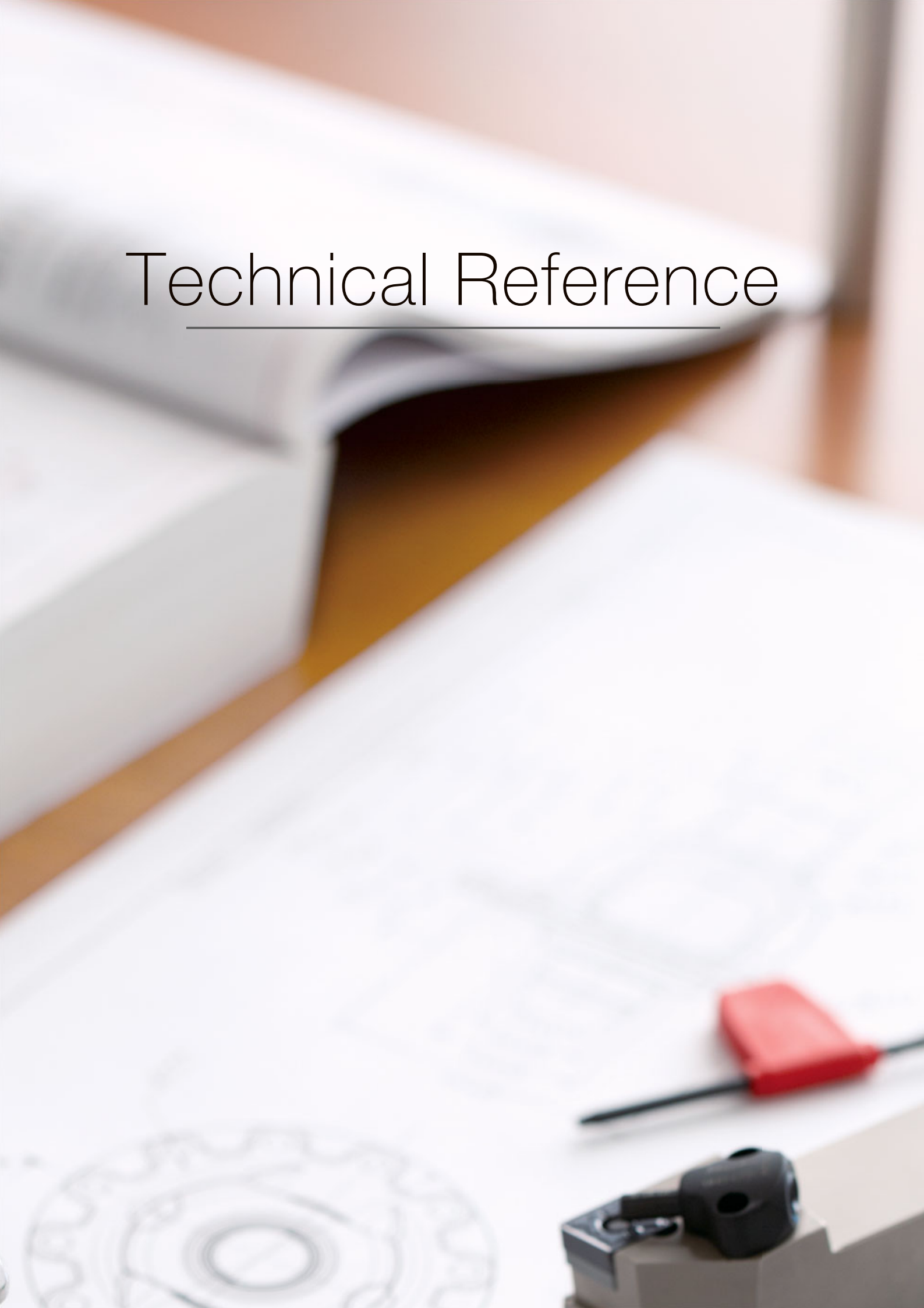
ISO	Workpiece material	Hardness	First choice	High feed	High speed	Troubleshooting		
						Chipping resistance	Wear resistance	Surface finish
P	Low carbon steels (C ≤ 0.3%)	- 200 HB	DS, AH6030	-	-	DS, AH725	-	DW, AH6030
	Carbon steels (C > 0.3%) Alloy steels	- 300 HB	DJ, AH6030	DW, AH6030	DJ, AH9030	DW, AH725	DJ, AH9030	DW, AH6030
	Low alloy steels	- 200 HB	DS, AH6030	-	-	DS, AH725	-	DW, AH6030
M	Stainless steel	- 200 HB	DS, AH6030	-	-	DS, AH725	-	DW, AH6030
K	Gray cast irons	150 - 250 HB	DJ, AH9030	DW, AH9030	DJ, T1115	DW, AH725	-	DW, AH9030
	Ductile cast irons	150 - 250 HB	DJ, AH9030	DW, AH9030	-	DW, AH725	-	DW, AH9030
N	Aluminum alloy	-	DJ, AH725	DW, AH725	DS, AH6030	-	-	DW, AH725
S	Titanium alloys Heat-resistant alloys	- 40 HRC	DS, AH6030	-	-	DW, AH725	-	DW, AH725
H	Hardened steel	- 50 HRC	DJ, AH9030	DW, AH9030	-	DW, AH725	-	DW, AH9030

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Cutting speed *Vc* (sfm)	Series L/D	Feed: *f* (ipr)		
					ø0.492" ~ ø0.571"	ø0.591" ~ ø0.669"	ø0.689" ~ ø1.024"
P	Low carbon steels (C < 0.3) 1018, 1026, etc.	- 200 HB	525 - 1050	2D, 3D	0.0008 - 0.0024	0.0008 - 0.0024	0.0016 - 0.0039
	Carbon steels (C > 0.3) 1045, 1055, etc.	- 300 HB	262 - 820	2D, 3D	0.0016 - 0.0039	0.0016 - 0.0047	0.0024 - 0.0051
	Low alloy steels 4130, etc.	- 200 HB	525 - 820	2D, 3D	0.0016 - 0.0031	0.0016 - 0.0031	0.0024 - 0.0047
	Alloy steels 4140, 5120, etc.	- 300 HB	262 - 656	2D, 3D	0.0016 - 0.0039	0.0016 - 0.0047	0.0024 - 0.0051
M	Stainless steels (Austenitic) 304, 316, etc.	- 200 HB	328 - 656	2D, 3D	0.0008 - 0.0031	0.0008 - 0.0031	0.0016 - 0.0039
	Stainless steels (Martensitic and ferritic) 430, 416, etc.	- 200 HB	328 - 722	2D, 3D	0.0008 - 0.0031	0.0008 - 0.0031	0.0016 - 0.0039
	Stainless steels (Precipitation hardening) 630, etc.	-	262 - 394	2D, 3D	0.0016 - 0.0031	0.0016 - 0.0031	0.0016 - 0.0031
K	Gray cast irons Class 25, Class 30, etc.	150 - 250 HB	262 - 820	2D, 3D	0.0024 - 0.0047	0.0024 - 0.0047	0.0024 - 0.0059
	Ductile cast irons 60-40-18, etc.	150 - 250 HB	262 - 656	2D, 3D	0.0016 - 0.0047	0.0016 - 0.0047	0.0024 - 0.0059
N	Aluminum alloy 333.0, 383.0, etc.	-	656 - 1312	2D, 3D	0.0039 - 0.0047	0.0039 - 0.0059	0.0059 - 0.0079
S	Heat-resistant alloys Inconel 718, etc.	- 40 HRC	66 - 197	2D, 3D	0.0016 - 0.0031	0.0016 - 0.0031	0.0016 - 0.0039
	Titanium alloys Ti-6Al-4V, etc.	- 40 HRC	131 - 394	2D, 3D	0.0024 - 0.0039	0.0024 - 0.0039	0.0024 - 0.0047
H	Hardened steel ≥ 40HRC	- 50 HRC	131 - 328	2D, 3D	0.0016 - 0.0031	0.0016 - 0.0031	0.0016 - 0.0039

MEMO

Technical Reference



Technical Reference

Tungaloy, NTK
For instructions, directions and parts,
please refer to the General catalog

Tungaloy

NTK

NTK
SPLASH holders

NTK
Y-axis turning holder, please refer to page : O24

Worldwide Network

Head Office & Production Facilities in Japan

Tungaloy Corporation Head Office
11-1 Yoshima Kogyodanchi
Iwaki 970-1144 Japan
Phone: +81-246-36-8501
Fax: +81-246-36-8542
www.tungaloy.com

Iwaki Plant
Products: Cutting Tools

Nagoya Plant
Products: Cutting Tools

Kyushu Plant
Products: PCBN
PCD Tools
Deep Hole Drills

Nirasaki Plant
Products: Cutting Tools
Friction Materials (TungFric)
Wear Resistant Tools
Civil Engineering Tools

NTK CUTTING TOOLS Co., Ltd. Head Office
2808 Iwasaki Komaki City, Aichi
Prefecture, 485-8510 Japan
Phone: +81-568-76-1270
www.ntkcuttingtools.com/jp-en

Komaki plant
Products: Cutting Tools

Kamioka plant
Products: Cutting Tools

Sales Channels

Tungaloy-NTK America Inc.
3726 N. Ventura Drive
Arlington Heights
IL 60004, U.S.A.
Phone: +1-888-554-8394
Fax: +1-888-554-8392
www.tungaloy.com/us
https://www.ntkcuttingtools.com/us/

Tungaloy Canada
432 Elgin St. Unit 3, Brantford
Ontario N3S 7P7, Canada
Phone: +1-519-758-5779
Fax: +1-519-758-5791
www.tungaloy.com/ca

Tungaloy-NTK De Mexico S.A.
C/ Los Arellano 113
Parque Industrial Siglo XXI
Aguascalientes, AGS
Mexico 20290
Phone: +52-449-929-5410
Fax: +52-449-929-5411
www.tungaloy.com/mx
https://www.ntkcuttingtools.com/mx/

Tungaloy-NTK do Brasil Ltda.
Avd. Independencia N4158
Residencial Flora
13280-000 Vinhedo
São Paulo, Brazil
Phone: +55-19-38262757
Fax: +55-19-38262757
www.tungaloy.com/br
https://www.ntkcuttingtools.com/br/

Tungaloy-NTK Germany GmbH
Katzbergstr. 3a
D-40764 Langenfeld, Germany
Phone: +49-2173-90420-0
Fax: +49-2173-90420-19
www.tungaloy.com/de
https://www.ntkcuttingtools.com/de/

Tungaloy France S.A.S.
Les Fjords
19 avenue de Norvège
91140 Villebon Sur Yvette, France
Phone: +33-1-6486-4300
Fax: +33-1-6907-7817
www.tungaloy.com/fr

Tungaloy Italia S.r.l.
Viale Sarca 336/Edificio 13
20126 Milano, Italy
Phone: +39-02-252012-1
Fax: +39-02-252012-65
www.tungaloy.com/it

Tungaloy Czech s.r.o
Turanka 115
CZ-627 00 Brno, Czech Republic
Phone: +420-532 123 391
Fax: +420-532 123 392
www.tungaloy.com/cz

Tungaloy Ibérica S.L.
C/Miquel Servet, 43B, Nau 7
Pol. Ind. Bufalvent
ES-08243 Manresa (BCN), Spain
Phone: +34 93 113 1360
www.tungaloy.com/es

Tungaloy Scandinavia AB
Bultgatan 38, 442 40
Kungälv, Sweden
Phone: +46-462119200
Fax: +46-462119207
www.tungaloy.com/se

Tungaloy Rus, LLC
Andropova avenue, h.18/7,
11 floor, office 3, 115432,
Moscow, Russia
Phone: +7-499-683-01-80
Fax: +7-499-683-01-81
www.tungaloy.com/ru

Tungaloy Polska Sp. z o.o.
ul. Irysowa 1, 55-040 Bielany
Wrocławskie, Poland
Phone: +48 607 907 237
www.tungaloy.com/pl

Tungaloy-NTK UK Ltd.
Suite 3, Pioneer House, Mill Street,
Cannock, WS11 0EF, UK
Phone: +44 121 4000 231
Fax: +44 121 270 9694
www.tungaloy.com/uk
https://www.ntkcuttingtools.com/uk/

Tungaloy Hungary Kft
Erzsébet királyné útja 125
H-1142 Budapest, Hungary
Phone: +36 1 781-6846
Fax: +36 1 781-6866
www.tungaloy.com/hu

Tungaloy Turkey
Serifali Mah.bayraktar
Bulvari Kule Sk. No:26
34775 Umraniye / Istanbul / Turkey
Phone: +90 216 540 04 67
Fax: +90 216 540 04 87
www.tungaloy.com/tr

Tungaloy Benelux b.v.
Tjalk 70
NL-2411 NZ Bodegraven Netherlands
Phone: +31 172 630 420
Fax: +31 172 630 429
www.tungaloy.com/nl

Tungaloy Croatia
Ulica bana Josipa Jelačića 87,
10430 Samobor, Croatia
Phone: +385 1 3326 604
Fax: +385 1 3327 683
www.tungaloy.com/hr

Tungaloy Cutting Tool (Shanghai) Co.,Ltd.
Rm No 401 No.88 Zhabei
Jiangchang No.3 Rd
Shanghai 200436, China
Phone: +86-21-3632-1880
Fax: +86-21-3621-1918
www.tungaloy.com/cn

Tungaloy-NTK Cutting Tools (Thailand) Co.,Ltd.
Interlink tower 4th Fl.
1858/5-7 Bangna-Trad Road
km.5 Bangna, Bangna, Bangkok
10260
Thailand
Phone: +66-2-751-5711
Fax: +66-2-751-5715
www.tungaloy.com/th
https://www.ntkcuttingtools.com/th/

Tungaloy Cutting Tools (Taiwan) Co.,Ltd.
9F. No.293, Zhongyang Rd,
Xinzhuang Dist, New Taipei City,
24251 Taiwan
Phone: +886-2-8521-9986
Fax: +886-2-8521-8935
www.tungaloy.com/tw

Tungaloy Singapore (Pte.), Ltd.
62 Ubi Road 1
#06-11 Oxley BizHub 2
Singapore 408734
Phone: +65-6391-1833
Fax: +65-6299-4557
www.tungaloy.com/sg

Tungaloy-NTK Vietnam LLC
3rd Floor, Licogi 13 Tower, 164 Khuat Duy Tien, Nhan Chinh, Thanh Xuan District, Hanoi, Vietnam
Phone: +84 24 63282086
www.tungaloy.com/vn

Tungaloy India Pvt. Ltd.
One International Center,
Unit # 902-A, 9th Floor,
Tower 1, Senapati Bapat Marg,
Elphinstone Road (West),
Mumbai -400013, India
Phone: +91-22-6124-8803
Fax: +91-22-6124-8899
www.tungaloy.com/in

Tungaloy Korea Co., Ltd
#1312, Byucksan Digital Valley 5-cha
Beotkkot-ro 244, Geumcheon-gu
153-788 Seoul, Korea
Phone: +82-2-2621-6161
Fax: +82-2-6393-8952
www.tungaloy.com/kr

Tungaloy Malaysia Sdn Bhd
50 K-2, Kelana Mall, Jalan
SS6/14, Kelana Jaya, 47301
Petaling Jaya, Selangor Darul Ehsan
Malaysia
Phone: +603-7805-3222
Fax: +603-7804-8563
www.tungaloy.com/my

Tungaloy Australia Pty Ltd
Unit 68 1470 Ferntree Gully Road
Knoxfield 3180 Victoria, Australia
Phone: +61-3-9755-8147
Fax: +61-3-9755-6070
www.tungaloy.com/au

PT. Tungaloy Indonesia
Ruko Blok AA.10 No3&5, Grand
Wisata, Lambangjaya,
Tambun Selatan, Bekasi, 17510
Indonesia
Phone: +62-21-8261-5808
Fax: +62-21-8261-5809
www.tungaloy.com/id

High-Precision Solutions for

MACHINING MINIATURE PARTS

1 + 1 > 2

Member IMC Group Tungaloy

Member IMC Group NTK CUTTING TOOLS

Distributed by:

Explore the Tungaloy world!

FIND US ON THE CLOUD!
machiningcloud.com

Jan. 2026