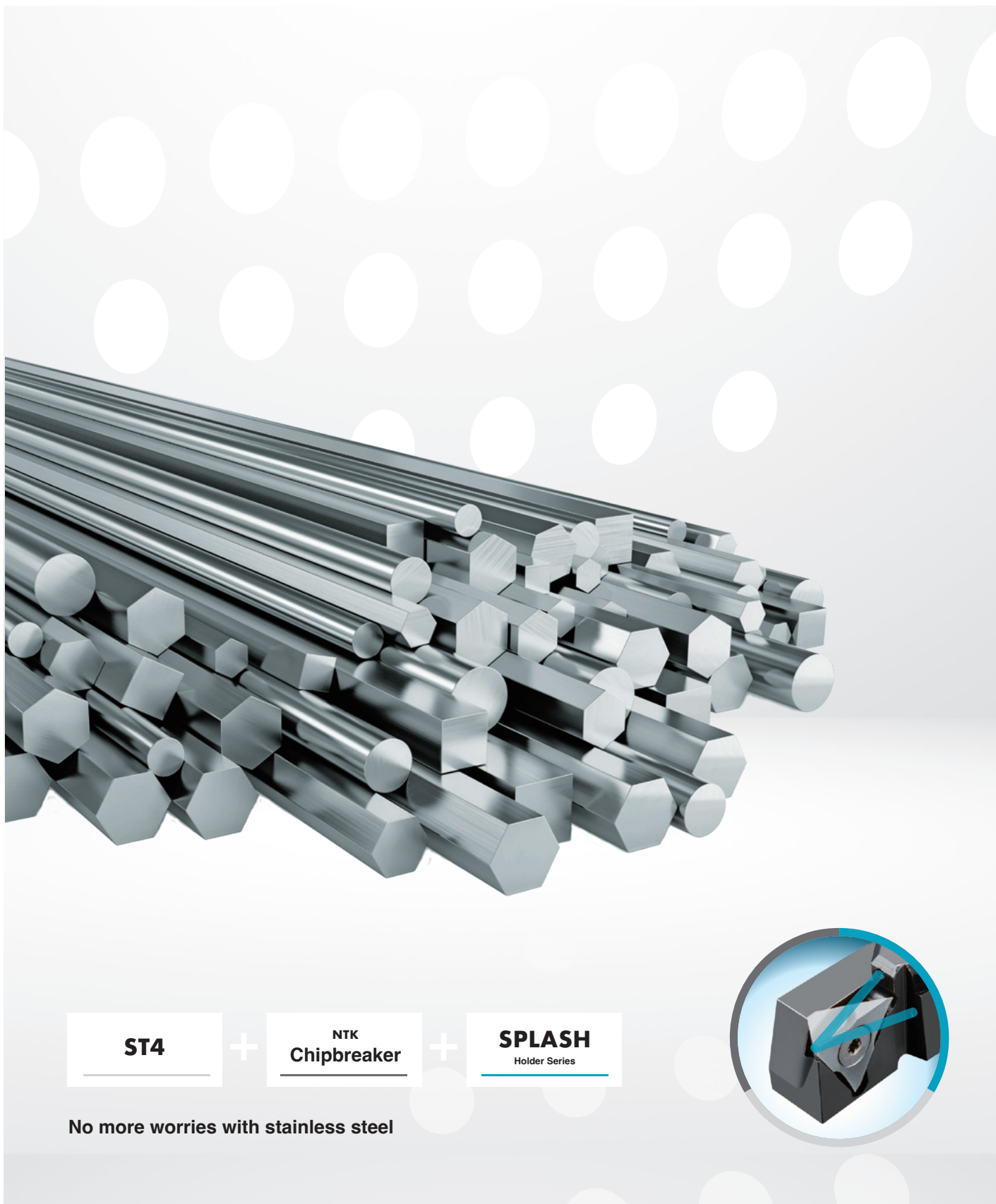


Stainless steel processing solutions

For small diameter parts | CNC automatic lathe tool



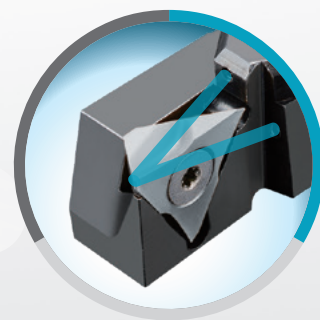
ST4

+

**NTK
Chipbreaker**

+

**SPLASH
Holder Series**



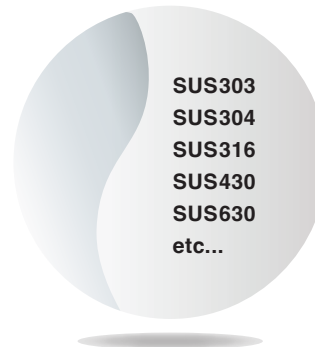
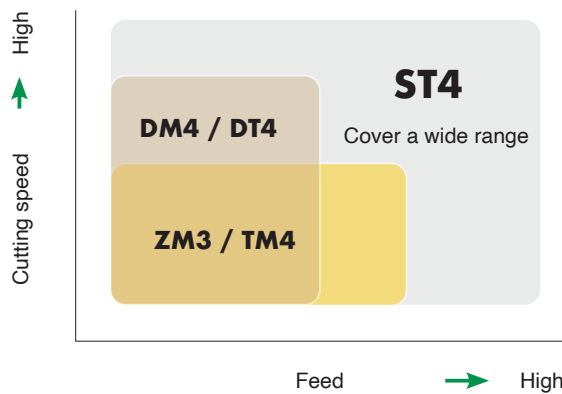
No more worries with stainless steel

CERtainly | but not only | **CERamics**
Outstanding solutions for demanding applications

ST4

Dedicated to stainless steel machining | CNC auto lathe tool material

APPLICATION AREA M



ST4 has long life with high-hardness and excellent oxidation resistance

Through our proprietary coating technology, we generate a high aluminum coating film, effectively reducing adhesion and weld-related issues.

Our tool effectively minimizes tool wear due to increased cutting edge temperatures during high-speed machining and difficult-to-cut stainless steel machining

Example of machining

Stainless steel | Cut-off



SUS304 Φ11 $V_c=80\text{m/min}$ $f=0.03\text{mm/rev}$ WET, CTPA15FLN

ST4 is not welded and tool wear is low.

Electromagnetic stainless steel | Front turning

After 2,100m processing	PVD coating ST4	Competitor's
Picture of cutting edge		
Machined surface		
Surface roughness Ra(μm)	0.40	1.10
Tool wear (mm)	0.14	0.16

Electromagnetic stainless steel $V_c=160\text{m/min}$ $f=0.05\text{mm/rev}$ $a_p=1.0\text{mm}$ WET, DCGT11T302MYL

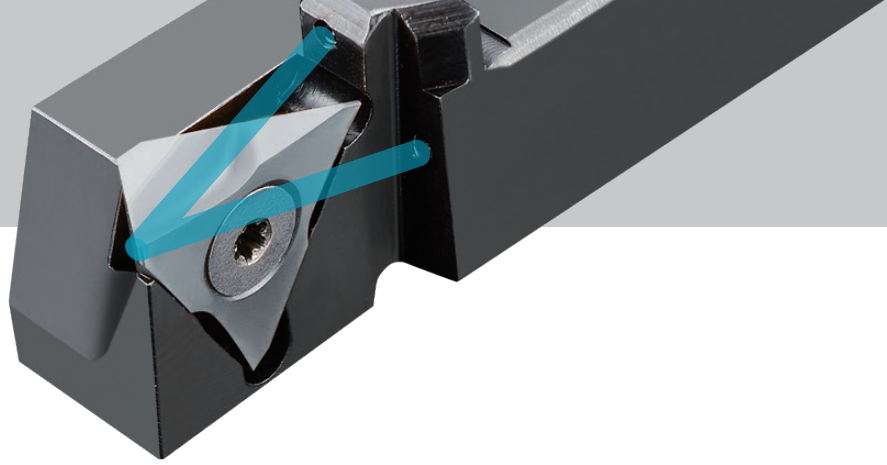
ST4 can also be machined with electro magnetic stainless-steel

In all applications, "ST4",

NTK
Chipbreaker



SPLASH
Holder Series



NTK Chipbreaker

New Addition of lineup

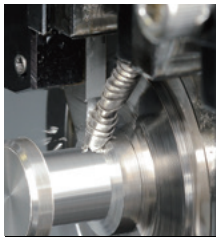
Expansion of lineup for all applications

Select optimum chipbreaker according to machining conditions



Front turning

→ P4



Back turning

→ P7



Cut-off

→ P8



Grooving

→ P12



Threading

→ P13



Boring

→ P14

SPLASH

Coolant Through Holders | For Swiss CNC Lathes

Set up SPLASH series for each application

Reducing the heat at the cutting edge reducing tool wear and forcibly controls chips

New Addition of lineup

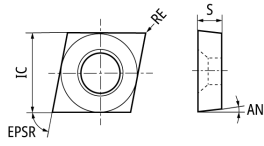
See **SPLASH** brochure for details.

"Chipbreaker" and "SPLASH" are selectable

Front Turning

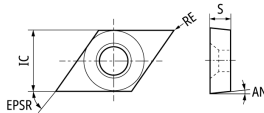
Inserts - Carbide

CCGT

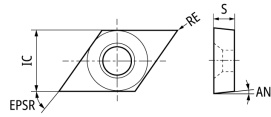


Shape	Item Number (ISO)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	BS mm	Carbide
									ST4 PVD
	CCGT09T301MRTMV	Up-sharp edge	80	9.525	3.97	7	0.08	-	●
	CCGT09T302MRTMV	Up-sharp edge	80	9.525	3.97	7	0.18	-	●
	CCGT09T304MRTMV	Up-sharp edge	80	9.525	3.97	7	0.38	-	●
	CCGT09T301MYL	Up-sharp edge	80	9.525	3.97	7	0.08	-	●
	CCGT09T302MYL	Up-sharp edge	80	9.525	3.97	7	0.18	-	●
	CCGT09T304MYL	Up-sharp edge	80	9.525	3.97	7	0.38	-	●
	CCGT09T308MYL	Up-sharp edge	80	9.525	3.97	7	0.78	-	●
	CCGT060201MCL	Up-sharp edge	80	6.35	2.38	7	0.08	-	●
	CCGT060202MCL	Up-sharp edge	80	6.35	2.38	7	0.18	-	●
	CCGT09T301MCL	Up-sharp edge	80	9.525	3.97	7	0.08	-	●
	CCGT09T302MCL	Up-sharp edge	80	9.525	3.97	7	0.18	-	●
	CCGT09T304MCL	Up-sharp edge	80	9.525	3.97	7	0.38	-	●
	CCGT060201MFNAM3	Up-sharp edge	80	6.35	2.38	7	0.08	-	●
	CCGT060202MFNAM3	Up-sharp edge	80	6.35	2.38	7	0.18	-	●
	CCGT060204MFNAM3	Up-sharp edge	80	6.35	2.38	7	0.38	-	●
	CCGT09T301MFNAM3	Up-sharp edge	80	9.525	3.97	7	0.08	-	●
	CCGT09T302MFNAM3	Up-sharp edge	80	9.525	3.97	7	0.18	-	●
	CCGT09T304MFNAM3	Up-sharp edge	80	9.525	3.97	7	0.38	-	●

DCGT

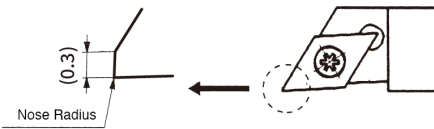


Shape	Item Number (ISO)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	BS mm	Carbide
									ST4 PVD
	DCGT11T301MRTMV	Up-sharp edge	55	9.525	3.97	7	0.08	-	●
	DCGT11T302MRTMV	Up-sharp edge	55	9.525	3.97	7	0.18	-	●
	DCGT11T304MRTMV	Up-sharp edge	55	9.525	3.97	7	0.38	-	●
	DCGT11T301MYL	Up-sharp edge	55	9.525	3.97	7	0.08	-	●
	DCGT11T302MYL	Up-sharp edge	55	9.525	3.97	7	0.18	-	●
	DCGT11T304MYL	Up-sharp edge	55	9.525	3.97	7	0.38	-	●
	DCGT11T308MYL	Up-sharp edge	55	9.525	3.97	7	0.78	-	●
	DCGT070201MCL	Up-sharp edge	55	6.35	2.38	7	0.08	-	●
	DCGT070202MCL	Up-sharp edge	55	6.35	2.38	7	0.18	-	●
	DCGT070204MCL	Up-sharp edge	55	6.35	2.38	7	0.38	-	●
	DCGT11T301MCL	Up-sharp edge	55	9.525	3.97	7	0.08	-	●
	DCGT11T302MCL	Up-sharp edge	55	9.525	3.97	7	0.18	-	●
	DCGT11T304MCL	Up-sharp edge	55	9.525	3.97	7	0.38	-	●
	DCGT070201MFNAM3	Up-sharp edge	55	6.35	2.38	7	0.08	-	●
	DCGT070202MFNAM3	Up-sharp edge	55	6.35	2.38	7	0.18	-	●
	DCGT070204MFNAM3	Up-sharp edge	55	6.35	2.38	7	0.38	-	●
	DCGT11T301MFNAM3	Up-sharp edge	55	9.525	3.97	7	0.08	-	●
	DCGT11T302MFNAM3	Up-sharp edge	55	9.525	3.97	7	0.18	-	●
	DCGT11T304MFNAM3	Up-sharp edge	55	9.525	3.97	7	0.38	-	●



Shape	Item Number (ISO)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	BS mm	Carbide	
									ST4	PVD
	DCGT070201MAMX	Up-sharp edge	55	6.35	2.38	7	0.08	-	●	●
	DCGT070202MAMX	Up-sharp edge	55	6.35	2.38	7	0.18	-	●	●
	DCGT11T301MAMX	Up-sharp edge	55	9.525	3.97	7	0.08	-	●	●
	DCGT11T302MAMX	Up-sharp edge	55	9.525	3.97	7	0.18	-	●	●
	DCGT11T304MAMX	Up-sharp edge	55	9.525	3.97	7	0.38	-	●	●
	DCGT11T3005AM3-WP	Up-sharp edge	55	9.525	3.97	7	0.05	(0.3)	●	●
	DCGT11T3015AM3-WP	Up-sharp edge	55	9.525	3.97	7	0.15	(0.3)	●	●

Features of DC.T-WP insert



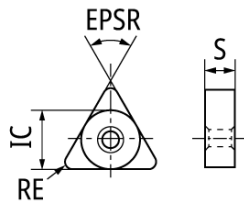
NTK WP style inserts have a wiper facet design.

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.

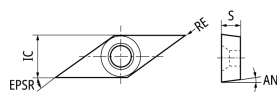
WP style inserts can be used in toolholders: SDJC, CH-SDUL and DS-SDUL.

TNGG



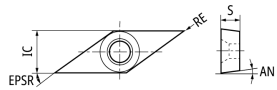
Shape	Item Number (ISO)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	BS mm	Carbide	
									ST4	PVD
	TNGG160402MRTMV	Up-sharp edge	60	9.525	4.76	-	0.18	-	●	●
	TNGG160404MRTMV	Up-sharp edge	60	9.525	4.76	-	0.38	-	●	●
	TNGG160401MFNUL	Up-sharp edge	60	9.525	4.76	-	0.08	-	●	●
	TNGG160402MFNUL	Up-sharp edge	60	9.525	4.76	-	0.18	-	●	●
	TNGG160404MFNUL	Up-sharp edge	60	9.525	4.76	-	0.38	-	●	●
	TNGG160408MFNUL	Up-sharp edge	60	9.525	4.76	-	0.78	-	●	●

VBGT



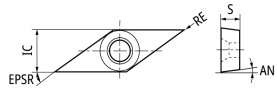
Shape	Item Number (ISO)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	BS mm	Carbide	
									ST4	PVD
	VBGT160402FNYL	Up-sharp edge	35	9.525	4.76	5	0.2	-	●	●
	VBGT160404FNYL	Up-sharp edge	35	9.525	4.76	5	0.4	-	●	●
	VBGT160408FNYL	Up-sharp edge	35	9.525	4.76	5	0.8	-	●	●

VCGT



Shape	Item Number (ISO)	CECC	EPSR	IC	S	AN	RE	BS	Carbide
			°	mm	mm	°	mm	mm	ST4 PVD
	VCGT110302MRTMV	Up-sharp edge	35	6.35	3.18	7	0.18	-	●
	VCGT110304MRTMV	Up-sharp edge	35	6.35	3.18	7	0.38	-	●
	VCGT110301MYL	Up-sharp edge	35	6.35	3.18	7	0.08	-	●
	VCGT110302MYL	Up-sharp edge	35	6.35	3.18	7	0.18	-	●
	VCGT110304MYL	Up-sharp edge	35	6.35	3.18	7	0.38	-	●
	VCGT110301MCL	Up-sharp edge	35	6.35	3.18	7	0.08	-	●
	VCGT110302MCL	Up-sharp edge	35	6.35	3.18	7	0.18	-	●
	VCGT110301MFNAM3	Up-sharp edge	35	6.35	3.18	7	0.08	-	●
	VCGT110302MFNAM3	Up-sharp edge	35	6.35	3.18	7	0.18	-	●
	VCGT110304MFNAM3	Up-sharp edge	35	6.35	3.18	7	0.38	-	●

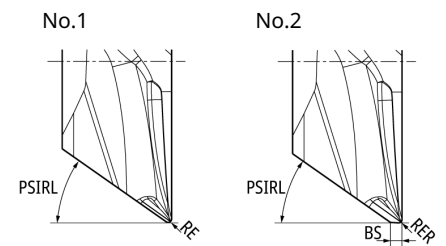
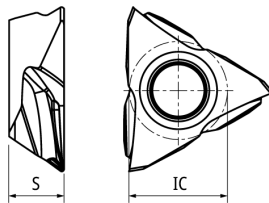
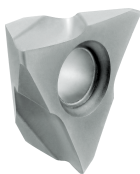
VPGT



Shape	Item Number (ISO)	CECC	EPSR	IC	S	AN	RE	BS	Carbide
			°	mm	mm	°	mm	mm	ST4 PVD
	VPGT110301MFNAM3	Up-sharp edge	35	6.35	3.18	11	0.08	-	●
	VPGT110302MFNAM3	Up-sharp edge	35	6.35	3.18	11	0.18	-	●

TF.. series/Toolholder

TFX The Front Max



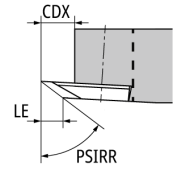
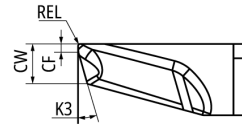
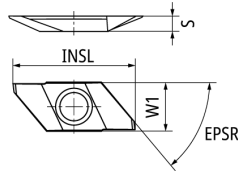
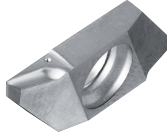
● Diagram shows right-hand tool
All angles shown are obtained when insert is set in the holder.

Figure	Item Number	Hand	Wiper	APMX	IC	S	BS	PSIRL	RE	RER	Carbide
				mm	mm	mm	mm	°	mm	mm	ST4 PVD
1	TFX3301MR	R	No	5	9.525	4.76	-	32	0.08	-	●
1	TFX3302MR	R	No	5	9.525	4.76	-	32	0.18	-	●
1	TFX3304MR	R	No	5	9.525	4.76	-	32	0.38	-	●
2	TFX3301MRW	R	Straight	5	9.525	4.76	0.5	32	-	0.08	●
2	TFX3302MRW	R	Straight	5	9.525	4.76	0.5	32	-	0.18	●
2	TFX3304MRW	R	Straight	5	9.525	4.76	0.5	32	-	0.38	●

Back Turning

TBP.. series/Inserts Carbide

TBP-BM

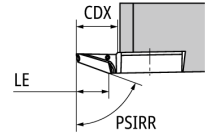
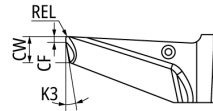
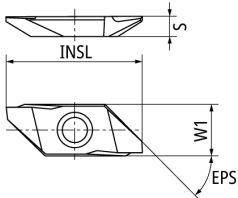
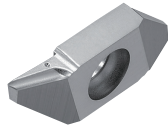


● Diagram shows right-hand tool

Item Number	Hand	Chip-breaker	LE	CDX	CF	CW	EPSR	INSL	K3	PSIRR	REL	S	W1	Carbide PVD
			mm	mm	mm	mm	°	mm	°	mm	°	mm	mm	ST4
TBP72FR05-BM	R	Yes	3.5	5.3	0.3	1.4	50	20	16	72	0.05	2.5	8	●
TBP72FR10M-BM	R	Yes	3.5	5.3	0.3	1.4	50	20	16	72	0.08	2.5	8	●
TBP72FR20M-BM	R	Yes	3.5	5.3	0.3	1.4	50	20	16	72	0.18	2.5	8	●

TBPA.. series/Inserts Carbide

TBPA-BM



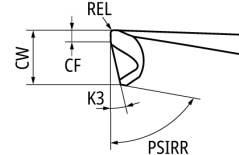
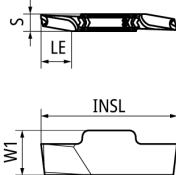
● Diagram shows right-hand tool

Item Number	Hand	Chip-breaker	LE	CDX	CF	CW	EPSR	INSL	K3	PSIRR	REL	S	W1	Carbide PVD
			mm	mm	mm	mm	°	mm	°	°	mm	mm	mm	ST4
TBPA70FR05-BM	R	Yes	5.5	6.5	0.3	1.35	45	25	12	70	0.05	3.5	9.4	●
TBPA70FR10M-BM	R	Yes	5.5	6.5	0.3	1.35	45	25	12	70	0.08	3.5	9.4	●
TBPA70FR20M-BM	R	Yes	5.5	6.5	0.3	1.35	45	25	12	70	0.18	3.5	9.4	●

BACK DUO

TBDP.. series/Inserts Carbide

TBDP



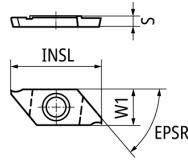
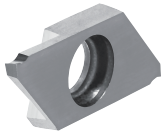
● Diagram shows right-hand tool

Item Number	Hand	Chip-breaker	LE	CF	CW	INSL	K3	PSIRR	REL	S	W1	Carbide PVD
			mm	mm	mm	mm	°	°	mm	mm	mm	ST4
TBDP22005R	R	Yes	3.5	0.3	1.4	17.48	13	80	0.05	2.2	6	●
TBDP2201MR	R	Yes	3.5	0.3	1.4	17.48	13	80	0.08	2.2	6	●
TBDP2202MR	R	Yes	3.5	0.3	1.4	17.48	13	80	0.18	2.2	6	●

Cut-off

CTP.. series/Inserts Carbide Right-Hand

CTP-FR



●All angles shown are obtained when insert is set in the holder.

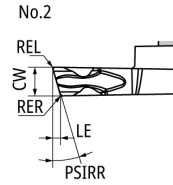
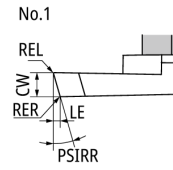
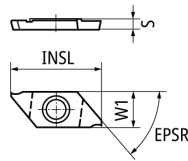
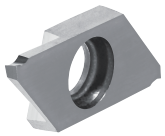


Figure	Item Number	Hand	Chip-breaker	CUTDIA	CW	EPSR	INSL	LE	PSIRR	REL	RER	S	W1	Carbide PVD
				mm	mm	°	mm	mm	°	mm	mm	mm	mm	ST4
2	CTP10FR-CX	R	Yes	12	1	50	20	0.32	16	0.05	0.05	2.5	8	●
1	CTP10FR-TH	R	Yes	12	1	50	20	0.32	16	0.05	0.05	2.5	8	●
2	CTP13FR-CX	R	Yes	12	1.3	50	20	0.4	16	0.05	0.05	2.5	8	●
2	CTP15FR-CX	R	Yes	12	1.5	50	20	0.46	16	0.05	0.05	2.5	8	●
1	CTP15FR-TH	R	Yes	12	1.5	50	20	0.46	16	0.05	0.05	2.5	8	●
1	CTP20FR-TH	R	Yes	12	2	50	20	0.61	16	0.05	0.05	2.5	8	●

CTP-FRN



●All angles shown are obtained when insert is set in the holder.

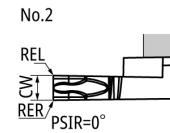
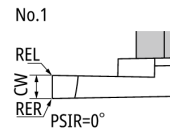
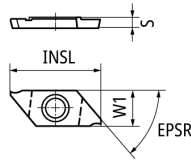
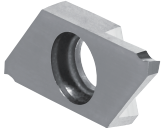


Figure	Item Number	Hand	Chip-breaker	CUTDIA	CW	EPSR	INSL	PSIR	REL	RER	S	W1	Carbide PVD
				mm	mm	°	mm	°	mm	mm	mm	mm	ST4
2	CTP10FRN-CX	R	Yes	12	1	50	20	0	0.05	0.05	2.5	8	●
1	CTP10FRN-TH	R	Yes	12	1	50	20	0	0.05	0.05	2.5	8	●
2	CTP13FRN02-CX	R	Yes	12	1.3	50	20	0	0.2	0.2	2.5	8	●
2	CTP13FRN-CX	R	Yes	12	1.3	50	20	0	0.05	0.05	2.5	8	●
2	CTP15FRN02-CX	R	Yes	12	1.5	50	20	0	0.2	0.2	2.5	8	●
2	CTP15FRN-CX	R	Yes	12	1.5	50	20	0	0.05	0.05	2.5	8	●
1	CTP15FRN-TH	R	Yes	12	1.5	50	20	0	0.05	0.05	2.5	8	●
1	CTP20FRN-TH	R	Yes	12	2	50	20	0	0.05	0.05	2.5	8	●

CTP.. series/Inserts Carbide Left-Hand

CTP-FLK



●All angles shown are obtained when insert is set in the holder.

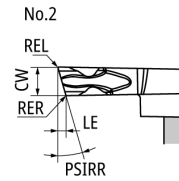
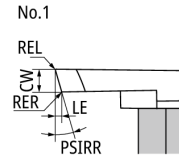
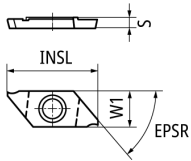
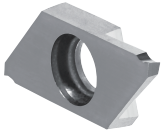


Figure	Item Number	Hand	Chip-breaker	CUTDIA	CW	EPSR	INSL	LE	PSIRR	REL	RER	S	W1	Carbide
				mm	mm	°	mm	mm	°	mm	mm	mm	mm	PVD ST4
2	CTP10FLK-CX	L	Yes	11	1	50	20	0.32	16	0.05	0.05	2.5	8	●
1	CTP10FLK-TH	L	Yes	11	1	50	20	0.32	16	0.05	0.05	2.5	8	●
2	CTP13FLK-CX	L	Yes	11	1.3	50	20	0.4	16	0.05	0.05	2.5	8	●
2	CTP15FLK-CX	L	Yes	11	1.5	50	20	0.46	16	0.05	0.05	2.5	8	●
1	CTP15FLK-TH	L	Yes	11	1.5	50	20	0.46	16	0.05	0.05	2.5	8	●
1	CTP20FLK-TH	L	Yes	11	2	50	20	0.61	16	0.05	0.05	2.5	8	●

CTP-FLN



●All angles shown are obtained when insert is set in the holder.

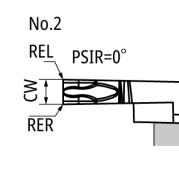
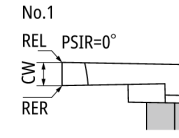
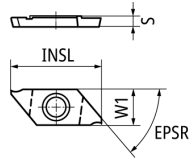
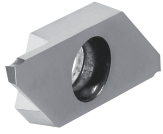


Figure	Item Number	Hand	Chip-breaker	CUTDIA	CW	EPSR	INSL	REL	RER	S	W1	Carbide
				mm	mm	°	mm	°	mm	mm	mm	mm
2	CTP10FLN-CX	L	Yes	12	1	50	20	0.05	0.05	2.5	8	●
1	CTP10FLN-TH	L	Yes	12	1	50	20	0.05	0.05	2.5	8	●
2	CTP13FLN02-CX	L	Yes	12	1.3	50	20	0.2	0.2	2.5	8	●
2	CTP13FLN-CX	L	Yes	12	1.3	50	20	0.05	0.05	2.5	8	●
2	CTP15FLN02-CX	L	Yes	12	1.5	50	20	0.2	0.2	2.5	8	●
2	CTP15FLN-CX	L	Yes	12	1.5	50	20	0.05	0.05	2.5	8	●
1	CTP15FLN-TH	L	Yes	12	1.5	50	20	0.05	0.05	2.5	8	●
1	CTP20FLN-TH	L	Yes	12	2	50	20	0.05	0.05	2.5	8	●

CTPA.. series/Inserts Carbide Right-Hand

CTPA-FR



●All angles shown are obtained when insert is set in the holder.

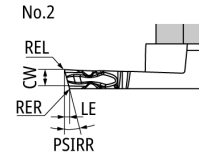
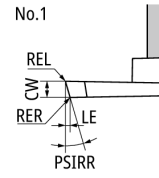
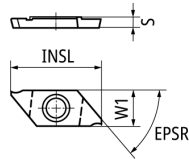
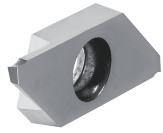


Figure	Item Number	Hand	Chip-breaker	CUTDIA	CW	EPSR	INSL	LE	PSIRR	REL	RER	S	W1	Carbide PVD
				mm	mm	°	mm	mm	°	mm	mm	mm	mm	ST4
2	CTPA15FR-CX	R	Yes	16	1.5	45	25	0.46	16	0.05	0.05	3.5	9.4	●
1	CTPA15FR-TH	R	Yes	16	1.5	45	25	0.46	16	0.05	0.05	3.5	9.4	●
1	CTPA20FR-TH	R	Yes	16	2	45	25	0.61	16	0.05	0.05	3.5	9.4	●

CTPA-FRN



●All angles shown are obtained when insert is set in the holder.

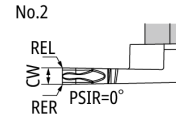
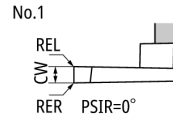
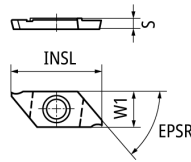
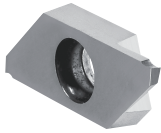


Figure	Item Number	Hand	Chip-breaker	CUTDIA	CW	EPSR	INSL	PSIR	REL	RER	S	W1	Carbide PVD
				mm	mm	°	mm	°	mm	mm	mm	mm	ST4
2	CTPA15FRN-CX	R	Yes	16	1.5	45	25	0	0.05	0.05	3.5	9.4	●
1	CTPA15FRN-TH	R	Yes	16	1.5	45	25	0	0.05	0.05	3.5	9.4	●
1	CTPA20FRN-TH	R	Yes	16	2	45	25	0	0.05	0.05	3.5	9.4	●

CTPA.. series/Inserts Carbide Left-Hand

CTPA-FLK



●All angles shown are obtained when insert is set in the holder.

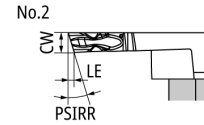
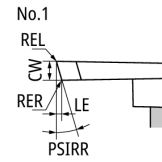
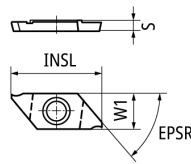
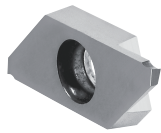


Figure	Item Number	Hand	Chip-breaker	CUTDIA	CW	EPSR	INSL	LE	PSIRR	REL	RER	S	W1	Carbide
														PVD
														ST4
2	CTPA15FLK-CX	L	Yes	14.5	1.5	45	25	0.46	16	0.05	0.05	3.5	9.4	●
1	CTPA15FLK-TH	L	Yes	14.5	1.5	45	25	0.46	16	0.05	0.05	3.5	9.4	●
1	CTPA20FLK-TH	L	Yes	14.5	2	45	25	0.61	16	0.05	0.05	3.5	9.4	●

CTPA-FLN



●All angles shown are obtained when insert is set in the holder.

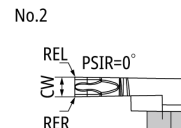
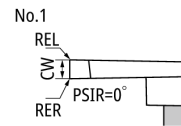
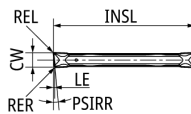
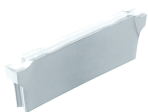


Figure	Item Number	Hand	Chip-breaker	CUTDIA	CW	EPSR	INSL	PSIR	REL	RER	S	W1	Carbide	
													PVD	
														ST4
2	CTPA15FLN-CX	L	Yes	16	1.5	45	25	0	0.05	0.05	3.5	9.4	●	
1	CTPA15FLN-TH	L	Yes	16	1.5	45	25	0	0.05	0.05	3.5	9.4	●	
1	CTPA20FLN-TH	L	Yes	16	2	45	25	0	0.05	0.05	3.5	9.4	●	

CTDP.. series/Inserts Carbide

CTDP20/25 CUT DUO

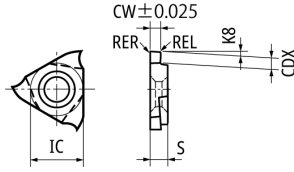
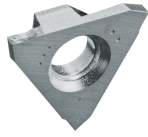


Item Number	Hand	Chip-breaker	CW	INSL	PSIRR	REL	RER	Carbide
								PVD
								ST4
CTDP20N	N	Yes	2	19.1	-	0.05	0.05	●
CTDP20N02	N	Yes	2	19.1	-	0.2	0.2	●
CTDP25N02	N	Yes	2.5	21.2	-	0.2	0.2	●
CTDP20R6	R	Yes	2	19.1	6	0.05	0.05	●
CTDP25R6	R	Yes	2.5	21.2	6	0.05	0.05	●
CTDP20R15	R	Yes	2	19.1	15	0.05	0.05	●

OD Grooving

GTMH(X)32.. series/Inserts Carbide

■ GTMH32-GX Side Turning / 3D mold chipbreaker



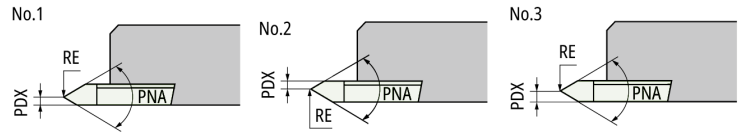
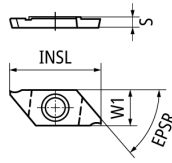
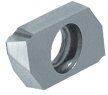
● Diagram shows right-hand tool

Item Number	Hand	Chip-breaker	APMX	CDX	CW	EPSR	GAN	IC	K8	REL	RER	S	Carbide
			mm	mm	mm	°	°	mm	°	mm	mm	mm	PVD ST4
GTMH32033RGX	R	Yes	0.25	0.6	0.33	60	17	9.525	2	0.05	0.05	3.18	●
GTMH32043RGX	R	Yes	0.9	1.2	0.43	60	17	9.525	2	0.05	0.05	3.18	●
GTMH32050RGX	R	Yes	0.9	1.2	0.5	60	17	9.525	2	0.05	0.05	3.18	●
GTMH32053RGX	R	Yes	0.9	1.2	0.53	60	17	9.525	2	0.05	0.05	3.18	●
GTMH32075RGX	R	Yes	1.6	2	0.75	60	17	9.525	2	0.05	0.05	3.18	●
GTMH32095RGX	R	Yes	1.6	2	0.95	60	17	9.525	2	0.05	0.05	3.18	●
GTMH32100RGX	R	Yes	1.6	2	1	60	17	9.525	2	0.05	0.05	3.18	●
GTMH32100RGX01	R	Yes	1.6	2	1	60	17	9.525	2	0.1	0.1	3.18	●
GTMH32150RGX	R	Yes	2.7	3	1.5	60	17	9.525	2	0.05	0.05	3.18	●
GTMH32150RGX01	R	Yes	2.7	3	1.5	60	17	9.525	2	0.1	0.1	3.18	●
GTMH32150RGX02	R	Yes	2.7	3	1.5	60	17	9.525	2	0.2	0.2	3.18	●
GTMH32200RGX	R	Yes	2.7	3	2	60	17	9.525	2	0.05	0.05	3.18	●
GTMH32200RGX01	R	Yes	2.7	3	2	60	17	9.525	2	0.1	0.1	3.18	●
GTMH32200RGX02	R	Yes	2.7	3	2	60	17	9.525	2	0.2	0.2	3.18	●
GTMH32300RGX	R	Yes	2.7	3	3	60	17	9.525	2	0.05	0.05	3.18	●
GTMH32300RGX02	R	Yes	2.7	3	3	60	17	9.525	2	0.2	0.2	3.18	●

External Thread

TTP.. series/Inserts Carbide

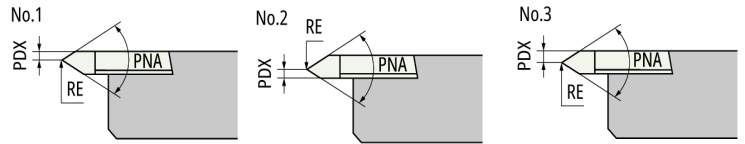
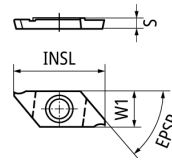
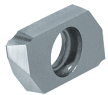
TTP-R



● Diagram shows right-hand tool

Figure	Item Number	Hand	Chip-breaker	Pitch	TPI	PDX	PNA	RE	Carbide PVD ST4
				mm	inch	mm	°	mm	
1	TTP60FR4A	R	Yes	0.2-0.75	-	0.4	60	0.05MAX Flat	●
1	TTP60FR8A	R	Yes	0.4-1.25	-	0.8	60	(R.002)	●
2	TTP60FR4B	R	Yes	0.2-0.75	-	0.4	60	0.05MAX Flat	●
2	TTP60FR8B	R	Yes	0.4-1.25	-	0.8	60	(R.002)	●
3	TTP60FR-N	R	Yes	1-1.5	-	1.25	60	(R.004)	●
3	TTP60FR-N02	R	Yes	1.5-2	-	1.25	60	(R.008)	●

TTP-L



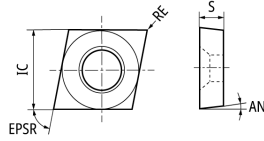
● Diagram shows left-hand tool

Figure	Item Number	Hand	Chip-breaker	Pitch	TPI	PDX	PNA	RE	Carbide PVD ST4
				mm	inch	mm	°	mm	
1	TTP60FL4A	L	Yes	0.2-0.75	-	0.4	60	0.05MAX Flat	●
1	TTP60FL8A	L	Yes	0.4-1.25	-	0.8	60	(R.002)	●
2	TTP60FL4B	L	Yes	0.2-0.75	-	0.4	60	0.05MAX Flat	●
2	TTP60FL8B	L	Yes	0.4-1.25	-	0.8	60	(R.002)	●
3	TTP60FL-N	L	Yes	1-1.5	-	1.25	60	(R.004)	●
3	TTP60FL-N02	L	Yes	1.5-2	-	1.25	60	(R.008)	●

ID Tooling

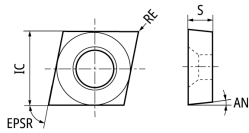
Inserts Carbide

CC..



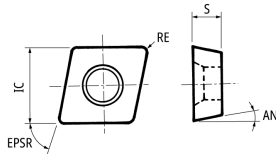
Shape	Item Number (ISO)	CECC	EPSR	IC	S	AN	RE	BS	Carbide	
									°	mm
	CCGT060201FRF1	Up-sharp edge	80	6.35	2.38	7	0.1	-	●	●
	CCGT060202FRF1	Up-sharp edge	80	6.35	2.38	7	0.2	-	●	●
	CCGT060204FRF1	Up-sharp edge	80	6.35	2.38	7	0.4	-	●	●
	CCGT09T302FRF1	Up-sharp edge	80	9.525	3.97	7	0.2	-	●	●
	CCGT09T304FRF1	Up-sharp edge	80	9.525	3.97	7	0.4	-	●	●

CP..



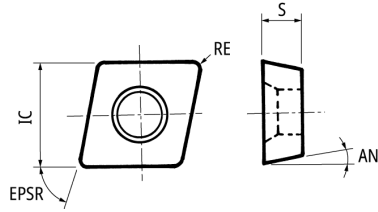
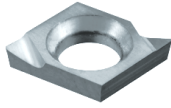
Shape	Item Number (ISO)	CECC	EPSR	IC	S	AN	RE	BS	Carbide	
									°	mm
	CPGH040101FRF1	Up-sharp edge	80	4.76	1.59	11	0.1	-	●	●
	CPGH040102FRF1	Up-sharp edge	80	4.76	1.59	11	0.2	-	●	●
	CPGH040104FRF1	Up-sharp edge	80	4.76	1.59	11	0.4	-	●	●
	CPGH060202FRF1	Up-sharp edge	80	6.35	2.38	11	0.2	-	●	●
	CPGH060204FRF1	Up-sharp edge	80	6.35	2.38	11	0.4	-	●	●

ERGH



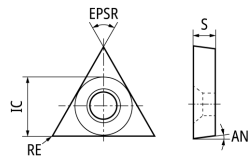
Shape	Item Number (ISO)	CECC	EPSR	IC	S	AN	RE	BS	Carbide	
									°	mm
	ERGH30101FRF1	Up-sharp edge	75	3.97	1.59	9	0.1	-	●	●
	ERGH30102FRF1	Up-sharp edge	75	3.97	1.59	9	0.2	-	●	●
	ERGH30104FRF1	Up-sharp edge	75	3.97	1.59	9	0.4	-	●	●

MBL



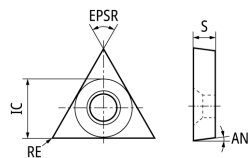
Item Number	Hand	Chip breaker	AN	EPSR	IC	RE	S	Carbide PVD
			°	°	mm	mm	mm	ST4
MBL005FRF1	R	□□	9	75	3.6	0.05	1	●
MBL015FRF1	R	□□	9	75	3.6	0.15	1	●

TCGH



Shape	Item Number (ISO)	CECC	EPSR	IC	S	AN	RE	BS	Carbide PVD
			°	mm	mm	°	mm	mm	ST4
	TCGH060101FRF05	Up-sharp edge	60	3.97	1.59	7	0.1	-	●
	TCGH060102FRF05	Up-sharp edge	60	3.97	1.59	7	0.2	-	●
	TCGH060104FRF05	Up-sharp edge	60	3.97	1.59	7	0.4	-	●

TPGH



Shape	Item Number (ISO)	CECC	EPSR	IC	S	AN	RE	BS	Carbide PVD
			°	mm	mm	°	mm	mm	ST4
	TPGH090202RFG	Up-sharp edge	60	5.56	2.38	11	0.2	-	●
	TPGH090204RFG	Up-sharp edge	60	5.56	2.38	11	0.4	-	●
	TPGH110302RFG	Up-sharp edge	60	6.35	3.18	11	0.2	-	●
	TPGH110304RFG	Up-sharp edge	60	6.35	3.18	11	0.4	-	●
	TPGH090201FRF1	Up-sharp edge	60	5.56	2.38	11	0.1	-	●
	TPGH090202FRF1	Up-sharp edge	60	5.56	2.38	11	0.2	-	●
	TPGH090204FRF1	Up-sharp edge	60	5.56	2.38	11	0.4	-	●
	TPGH090208FRF1	Up-sharp edge	60	5.56	2.38	11	0.8	-	●
	TPGH110302FRF1	Up-sharp edge	60	6.35	3.18	11	0.2	-	●
	TPGH110304FRF1	Up-sharp edge	60	6.35	3.18	11	0.4	-	●
	TPGH110308FRF1	Up-sharp edge	60	6.35	3.18	11	0.8	-	●

Front turning

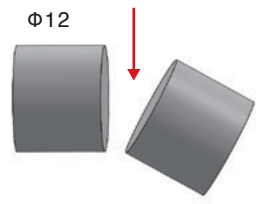
Mechanical equipment

Work material	SUS316L	
Cutting Speed (m/min)	60	
Feed (mm/rev)	0.03	
D.O.C.(mm)	0.5	
Coolant	WET	
YL chipbreaker ST4 CCGT09T304MYL		4,000 pcs/ Corner
Mold chipbreaker from Competitor (PVD coated carbide)		2,000 pcs/ Corner

ST4 achieved double the tool life compared to competitor.

Cut-off

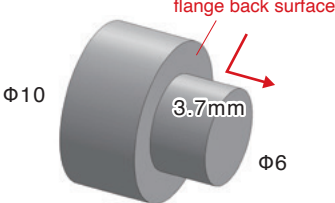
Sleeve

Work material	SUS304	
Cutting Speed (m/min)	100	
Feed (mm/rev)	0.02	
Coolant	WET	
CX chipbreaker ST4 CTP15FLN-CX		
Mold chipbreaker from Competitor (PVD coated carbide)		2,000 pcs/ Corner

CX chipbreaker was able to perform stable machining without chip control issues. By combining it with the specialized ST4 material for stainless steel processing, we achieved a tool life extension of over 1.5 times compared to competitor.

Back turning

Stud parts

Work material	SUS430F	
Cutting Speed (m/min)	50	
Feed (mm/rev)	0.05	
D.O.C.(mm)	2.0	
Coolant	WET	
TBP-BM chipbreaker ST4 TBP72FR10M-BM		①1PASS machining *No grooving and roughing / finishing required!
Grinded chipbreaker from competitor (PVD coated carbide)		①Rough : Grooving ②Back turning

Conventional tools machine in 2 passes to prevent roughness of the back surface of the flange caused by chips. By using the BM chipbreaker a superior surface finish was achieved on the back surface in 1PASS machining, and the cycle time was also drastically reduced.

Grooving

Automotive parts

Work material	SUS430	
Cutting Speed (m/min)	80	
Feed (mm/rev)	0.03	
D.O.C.(mm)	1.0	
Coolant	WET	
GX chipbreaker ST4 GTMH32200RGX		3,500 pcs/ Corner
Grinded chipbreaker from competitor (PVD coated carbide)		2,500 pcs/ Corner

Using the GX chipbreaker, we have eliminated chip packing at the bottom of the groove, leading to a reduction in the inspection process.



Tungaloy-NTK UK Limited

Gallan Park, Watling Street, Cannock, WS11 0XG, United Kingdom

