

NTK650

For small components | New HiPIMS Coating



NTK650 now delivers expanded tooling for S, M, and P applications providing more tooling options than ever before.

NTK650

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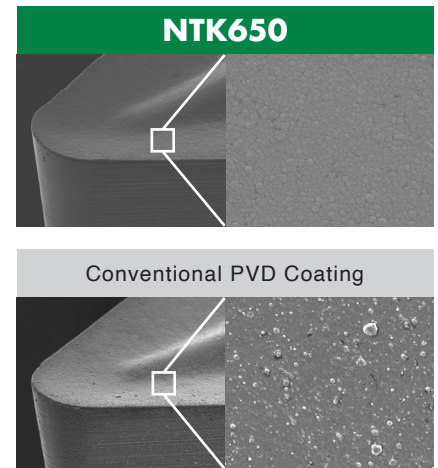
Dim-Stability × Superior Finish = Extend tool life

Features

- New HiPIMS coating improves surface smoothness and suppresses in-film defects. It significantly enhances anti-welding performance and provides stable processing.
- Excellent wear resistance even when machining difficult-to-cut machine materials where the cutting edge is subject to high temperatures.

Performance

- Excellent surface finish and long tool life for Ni-base alloys as well as M- and P-class alloys.
- Best performance for small-diameter components [up to $\phi .790"$ ($\phi 20$)]

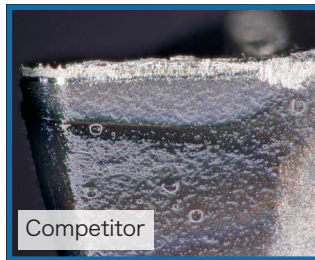
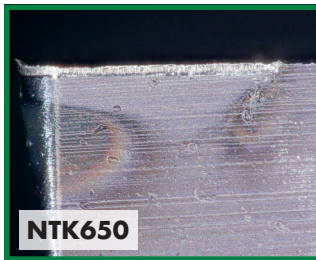


Excellent wear resistance

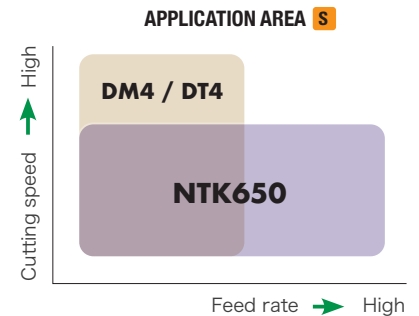
Shape:DCGT32.508(DCGT11T302), $v_c=160$ SFM(50m/min), $f=.002$ IPR(0.05mm/rev), $a_p=.039$ inch(1.0mm), WET



Inconel718



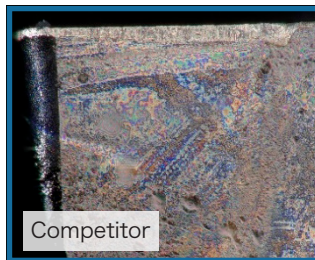
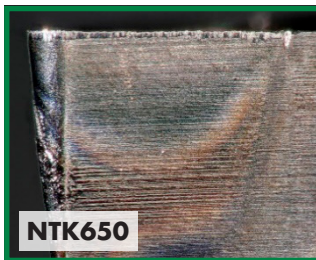
NTK650 doubled the wear resistance compared to the competitor



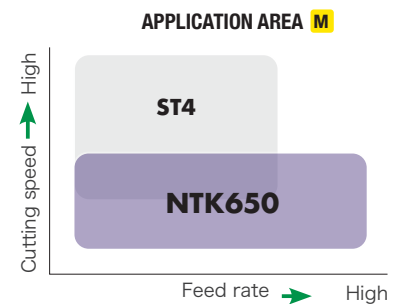
Shape:DCGT32.508(DCGT11T302), $v_c=520$ SFM(160m/min), $f=.002$ IPR(0.05mm/rev), $a_p=.039$ inch(1.0mm), WET



Stainless steel



NTK650 doubled the wear resistance compared to the competitor

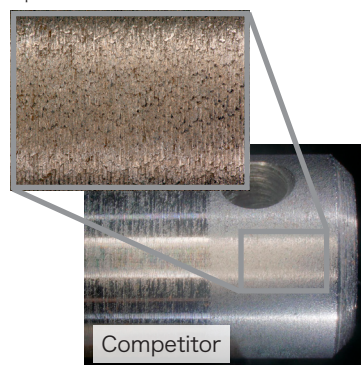
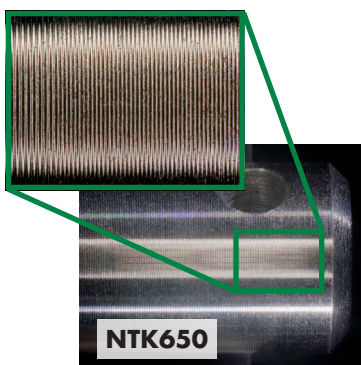


Excellent surface smoothness

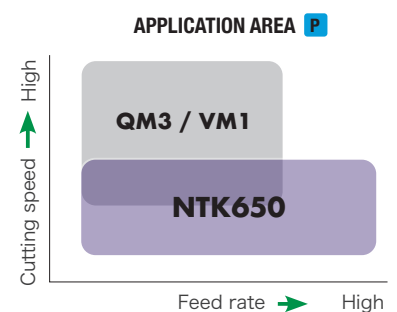
Shape:DCGT32.504(DCGT11T301), $v_c=260$ SFM(78m/min), $f=.003$ IPR(0.085mm/rev), $a_p=.059$ inch(1.5mm), WET



S45C



Improved surface roughness near the hole and doubled tool life



NTK Chipbreaker

Expanded lineup for all applications

The optimal chip breaker can be selected according to the material and processing conditions.

Front turning S M P

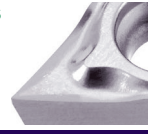
Compatible for Vibration / Non-Vibration cutting

TMV



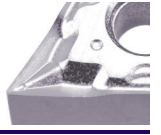
Exceptional sharpness

CL



Up-sharp-edge like positive insert

UL



High-efficiency machining

TMV-WP



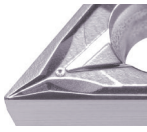
Exceptional toughness

AM3



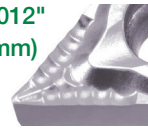
Versatile type

YL



Super finish, $a_p = .002-.012"$
(0.05-0.3mm)

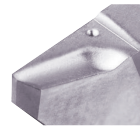
AMX



Back turning S M P

Good surface finish

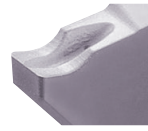
BM



Parting

Good chip control

CX M P



Grooving

Good chip control

GX M P



First recommendation for S-class components

Ground chipbreaker S



First recommendation for S-class components

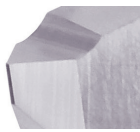
Ground chipbreaker S



Threading S M P

Broad applicability

Ground chipbreaker



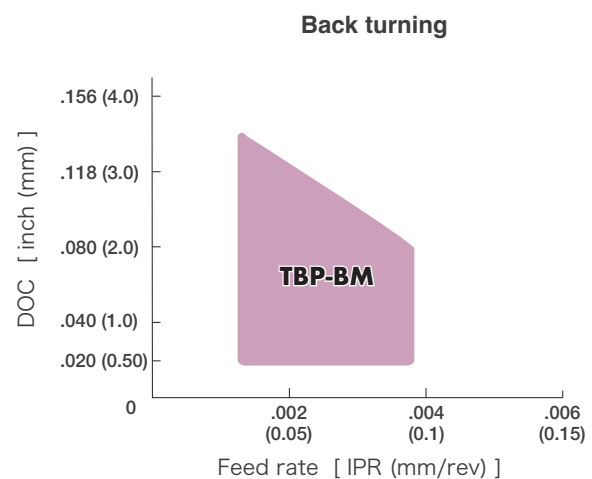
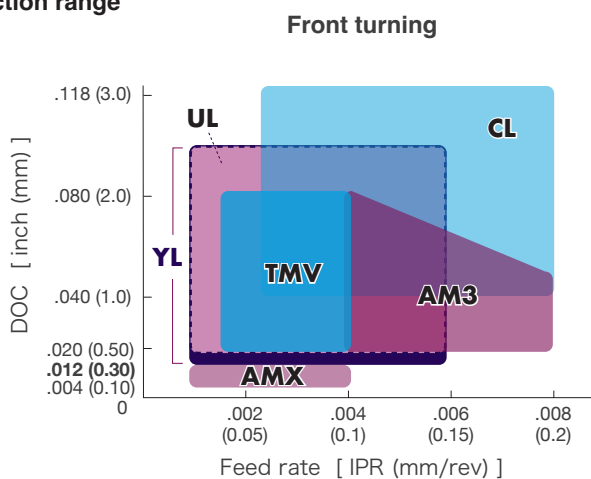
Boring S M P

Smooth chip control

FG



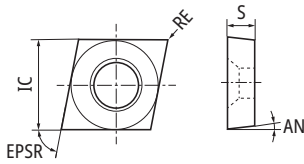
Function range



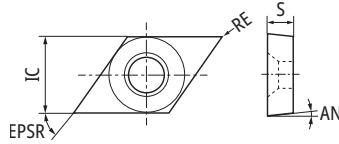
Inch

Front turning

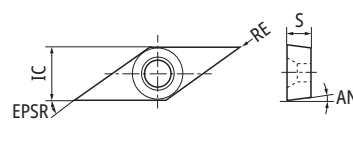
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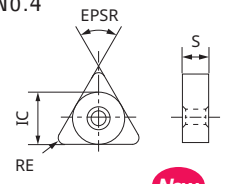
No.2



No.3



No.4



New

Shape	Figure	Designation (Inch)	HAND	EPSR °	IC inch	S inch	AN °	RE inch	BS inch	PVD 650
	1	CCGT32.504MRTMV	R	80	.375	.156	7	.003	-	●
		CCGT32.508MRTMV	R	80	.375	.156	7	.007	-	●
		CCGT32.51MRTMV	R	80	.375	.156	7	.015	-	●
	1	CCGT32.504MYL	-	80	.375	.156	7	.003	-	●
		CCGT32.508MYL	-	80	.375	.156	7	.007	-	●
		CCGT32.51MYL	-	80	.375	.156	7	.015	-	●
	1	CCGT32.504MCL	-	80	.375	.156	7	.003	-	●
		CCGT32.508MCL	-	80	.375	.156	7	.007	-	●
		CCGT32.51MCL	-	80	.375	.156	7	.015	-	●
	1	CCGT32.504MFNAM3	-	80	.375	.156	7	.003	-	●
		CCGT32.508MFNAM3	-	80	.375	.156	7	.007	-	●
		CCGT32.51MFNAM3	-	80	.375	.156	7	.015	-	●
	2	DCGT32.504MRTMV	R	55	.375	.156	7	.003	-	●
		DCGT32.508MRTMV	R	55	.375	.156	7	.007	-	●
		DCGT32.51MRTMV	R	55	.375	.156	7	.015	-	●
		DCGT32.504MRTMV-WP	R	55	.375	.156	7	.003	(.012)	●
		DCGT32.508MRTMV-WP	R	55	.375	.156	7	.007	(.012)	●
	2	DCGT32.504MYL	-	55	.375	.156	7	.003	-	●
		DCGT32.508MYL	-	55	.375	.156	7	.007	-	●
		DCGT32.51MYL	-	55	.375	.156	7	.015	-	●
	2	DCGT32.504MCL	-	55	.375	.156	7	.003	-	●
		DCGT32.508MCL	-	55	.375	.156	7	.007	-	●
		DCGT32.51MCL	-	55	.375	.156	7	.015	-	●
	2	DCGT32.504MFNAM3	-	55	.375	.156	7	.003	-	●
		DCGT32.508MFNAM3	-	55	.375	.156	7	.007	-	●
		DCGT32.51MFNAM3	-	55	.375	.156	7	.015	-	●
	2	DCGT32.504MAMX	-	55	.375	.156	7	.003	-	●
		DCGT32.508MAMX	-	55	.375	.156	7	.007	-	●
		DCGT32.51MAMX	-	55	.375	.156	7	.015	-	●
	2	DCGT32.502AM3-WP	R	55	.375	.156	7	0.05	(.012)	●
		DCGT32.506AM3-WP	R	55	.375	.156	7	0.15	(.012)	●
	3	VCGT2208MRTMV	R	35	.250	.125	7	.007	-	●
		VCGT221MRTMV	R	35	.250	.125	7	.015	-	●
	3	VCGT2204MYL	-	35	.250	.125	7	.003	-	●
		VCGT2208MYL	-	35	.250	.125	7	.007	-	●
		VCGT221MYL	-	35	.250	.125	7	.015	-	●
	3	VCGT2204MCL	-	35	.250	.125	7	.003	-	●
		VCGT2208MCL	-	35	.250	.125	7	.007	-	●
		VCGT221MCL	-	35	.250	.125	7	.015	-	●
	3	VCGT2204MFNAM3	-	35	.250	.125	7	.003	-	●
		VCGT2208MFNAM3	-	35	.250	.125	7	.007	-	●
		VCGT221MFNAM3	-	35	.250	.125	7	.015	-	●
	4	TNGG3308MRTMV	R	60	.375	.190	-	.007	-	●
		TNGG331MRTMV	R	60	.375	.190	-	.015	-	●
	4	TNGG3304MFNUL	-	60	.375	.190	-	.003	-	●
		TNGG3308MFNUL	-	60	.375	.190	-	.007	-	●
	4	TNGG331MFNUL	-	60	.375	.190	-	.015	-	●

Front turning

Back turning

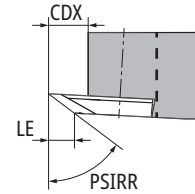
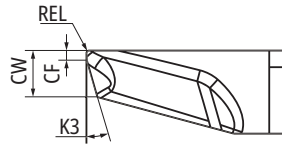
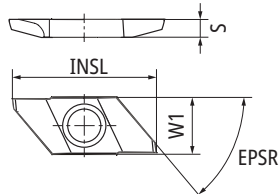
Parting

Grooving

Threading

Boring

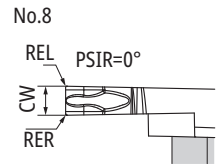
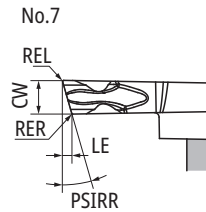
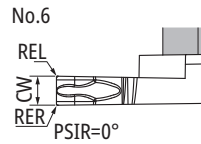
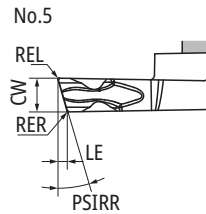
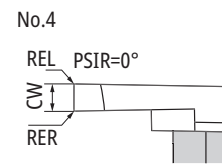
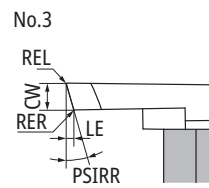
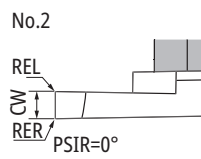
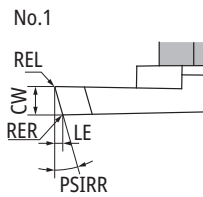
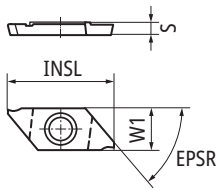
Back turning



New

Shape	Designation	Hand	Chip-breaker	LE inch	CDX inch	CF inch	CW inch	EPSR °	INSL inch	K3 °	PSIRR °	REL inch	S inch	W1 inch	PVD 650
	TBP72FR05-BM	R	Yes	.137	.209	.012	.059	50	.787	16	72	.002	.098	.315	●
	TBP72FR10M-BM	R	Yes	.137	.209	.012	.059	50	.787	16	72	.003	.098	.315	●
	TBP72FR20M-BM	R	Yes	.137	.209	.012	.059	50	.787	16	72	.007	.098	.315	●

Parting



New

Shape	Figure	Designation	Hand	Chip-breaker	CUTDIA inch	CW inch	EPSR °	INSL inch	LE inch	PSIRR °	REL inch	RER inch	S inch	W1 inch	PVD 650
	1	CTP10FR	R	Yes	.472	.039	50	.787	.013	16	.002	.002	.098	.315	●
	1	CTP15FR	R	Yes	.472	.059	50	.787	.020	16	.002	.002	.098	.315	●
	1	CTP20FR	R	Yes	.472	.079	50	.787	.024	16	.002	.002	.098	.315	●
	2	CTP10FRN	R	Yes	.472	.039	50	.787	-	0	.002	.002	.098	.315	●
	2	CTP15FRN	R	Yes	.472	.059	50	.787	-	0	.002	.002	.098	.315	●
	2	CTP15FRN02	R	Yes	.472	.059	50	.787	-	0	.008	.008	.098	.315	●
	2	CTP20FRN	R	Yes	.472	.079	50	.787	-	0	.002	.002	.098	.315	●
	2	CTP20FRN02	R	Yes	.472	.079	50	.787	-	0	.008	.008	.098	.315	●
	3	CTP10FLK	L	Yes	.430	.039	50	.787	.013	16	.002	.002	.098	.315	●
	3	CTP15FLK	L	Yes	.430	.059	50	.787	.020	16	.002	.002	.098	.315	●
	4	CTP10FLN	L	Yes	.472	.039	50	.787	-	0	.002	.002	.098	.315	●
	4	CTP15FLN	L	Yes	.472	.059	50	.787	-	0	.002	.002	.098	.315	●
	4	CTP15FLN02	L	Yes	.472	.059	50	.787	-	0	.008	.008	.098	.315	●
	4	CTP20FLN	L	Yes	.472	.079	50	.787	-	0	.002	.002	.098	.315	●
	4	CTP20FLN02	L	Yes	.472	.079	50	.787	-	0	.008	.008	.098	.315	●
		5	CTP13FR-CX	R	Yes	.472	.047	50	.787	.016	16	.002	.002	.098	.315
5		CTP15FR-CX	R	Yes	.472	.059	50	.787	.020	16	.002	.002	.098	.315	●
6		CTP10FRN-CX	R	Yes	.472	.039	50	.787	-	0	.002	.002	.098	.315	●
6		CTP15FRN-CX	R	Yes	.472	.059	50	.787	-	0	.002	.002	.098	.315	●
7		CTP15FLK-CX	L	Yes	.430	.059	50	.787	.020	16	.002	.002	.098	.315	●
8		CTP10FLN-CX	L	Yes	.472	.039	50	.787	-	0	.002	.002	.098	.315	●
8		CTP15FLN-CX	L	Yes	.472	.059	50	.787	-	0	.002	.002	.098	.315	●
8		CTP15FLN02-CX	L	Yes	.472	.059	50	.787	-	0	.008	.008	.098	.315	●

Front turning

Back turning



Parting

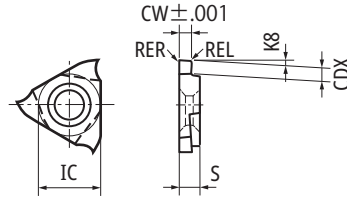


Grooving

Threading

Boring

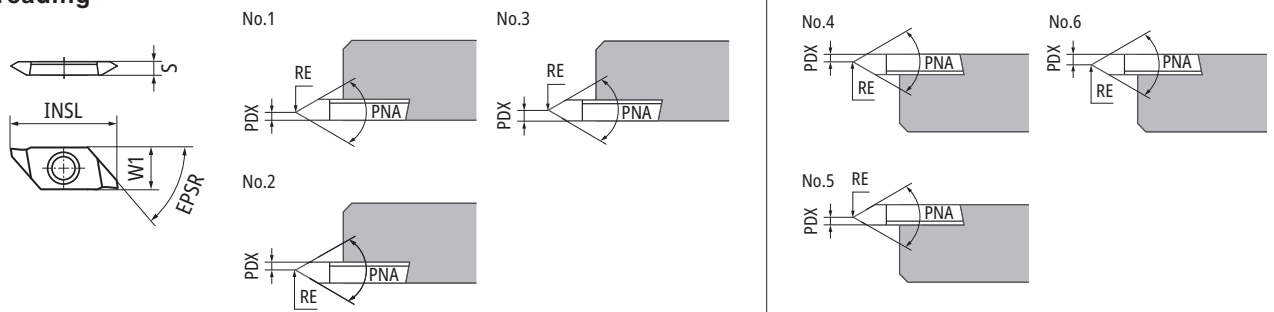
Grooving



New

Shape	Designation	Hand	Chip-breaker	APMX inch	CDX inch	CW inch	EPSR °	GAN °	IC inch	K8 °	REL inch	RER inch	S inch	PVD 650
	GTMH32050RGX	R	Yes	.035	.047	.020	60	17	.375	2	.002	.002	.125	●
	GTMH32075RGX	R	Yes	.063	.079	.030	60	17	.375	2	.002	.002	.125	●
	GTMH32100RGX	R	Yes	.063	.079	.039	60	17	.375	2	.002	.002	.125	●
	GTMH32100RGX01	R	Yes	.063	.079	.039	60	17	.375	2	.004	.004	.125	●
	GTMH32150RGX	R	Yes	.106	.118	.059	60	17	.375	2	.002	.002	.125	●
	GTMH32150RGX01	R	Yes	.106	.118	.059	60	17	.375	2	.004	.004	.125	●
	GTMH32150RGX02	R	Yes	.106	.118	.059	60	17	.375	2	.008	.008	.125	●
	GTMH32200RGX	R	Yes	.106	.118	.079	60	17	.375	2	.002	.002	.125	●
	GTMH32200RGX01	R	Yes	.106	.118	.079	60	17	.375	2	.004	.004	.125	●
	GTMH32200RGX02	R	Yes	.106	.118	.079	60	17	.375	2	.008	.008	.125	●
	GTMH32300RGX	R	Yes	.106	.118	.118	60	17	.375	2	.002	.002	.125	●
	GTMH32300RGX02	R	Yes	.106	.118	.118	60	17	.375	2	.008	.008	.125	●
	GTMX32050RT	R	Yes	.035	.047	.020	60	14	.375	2	.002	.002	.125	●
	GTMX32075RT	R	Yes	.063	.079	.030	60	14	.375	2	.002	.002	.125	●
	GTMX32100RT	R	Yes	.063	.079	.039	60	14	.375	2	.002	.002	.125	●
	GTMX32100RT01	R	Yes	.063	.079	.039	60	14	.375	2	.004	.004	.125	●
	GTMX32150RT	R	Yes	.106	.118	.059	60	14	.375	2	.002	.002	.125	●
	GTMX32150RT02	R	Yes	.106	.118	.059	60	14	.375	2	.008	.008	.125	●
	GTMX32200RT	R	Yes	.106	.118	.079	60	14	.375	2	.002	.002	.125	●
	GTMX32200RT02	R	Yes	.106	.118	.079	60	14	.375	2	.008	.008	.125	●
	GTMX32300RT	R	Yes	.106	.118	.118	60	14	.375	2	.002	.002	.125	●
	GTMX32300RT02	R	Yes	.106	.118	.118	60	14	.375	2	.008	.008	.125	●

Threading



New

Shape	Figure	Designation	Hand	Chip-breaker	Pitch mm	TPI	EPSR °	INSL inch	PDX inch	PNA °	RE inch	S inch	W1 inch	PVD 650
	1	TTP60FR4A	R	Yes	0.2 - 0.75	127 - 34	50	.783	.016	60	(.002) or less flat	.098	.315	●
	2	TTP60FR4B	R	Yes	0.2 - 0.75	127 - 34	50	.783	.016	60	(.002) or less flat	.098	.315	●
	1	TTP60FR8A	R	Yes	0.4 - 1.25	63 - 21	50	.783	.031	60	(.002)	.098	.315	●
	2	TTP60FR8B	R	Yes	0.4 - 1.25	63 - 21	50	.783	.031	60	(.002)	.098	.315	●
	3	TTP60FR-N	R	Yes	1 - 1.5	25 - 17	50	.783	.049	60	(.004)	.098	.315	●
	4	TTP60FL4A	L	Yes	0.2 - 0.75	127 - 34	50	.783	.016	60	(.002) or less flat	.098	.315	●
	5	TTP60FL4B	L	Yes	0.2 - 0.75	127 - 34	50	.783	.016	60	(.002) or less flat	.098	.315	●
	4	TTP60FL8A	L	Yes	0.4 - 1.25	63 - 21	50	.783	.031	60	(.002)	.098	.315	●
	5	TTP60FL8B	L	Yes	0.4 - 1.25	63 - 21	50	.783	.031	60	(.002)	.098	.315	●
	6	TTP60FL-N	L	Yes	1 - 1.5	25 - 17	50	.783	.049	60	(.004)	.098	.315	●

Front turning

Back turning

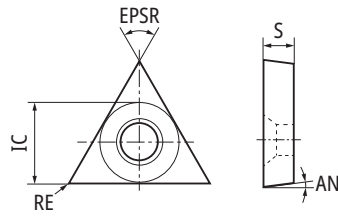
Parting

Grooving

Threading

Boring

Boring



New

Shape	Designation (Inch)	CECC	EPSR °	IC inch	S inch	AN °	RE inch	BS inch	PVD 650
	TPGH2208RFG	Sharp Edge	60	.250	.125	11	.008	-	●
	TPGH221RFG	Sharp Edge	60	.250	.125	11	.016	-	●

Front turning

Back turning

Parting

Grooving

Threading

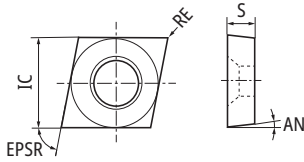
Boring



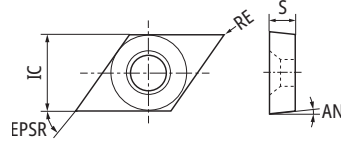
Metric

Front turning

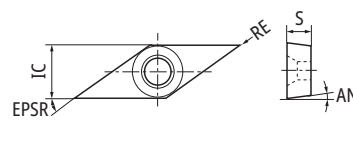
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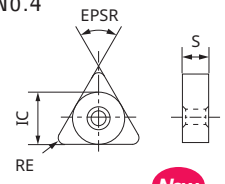
No.2



No.3



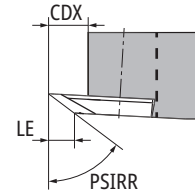
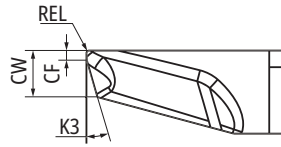
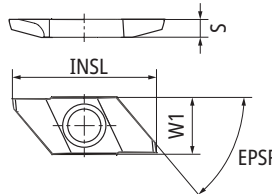
No.4



New

Shape	Figure	Designation (Metric)	HAND	EPSR °	IC mm	S mm	AN °	RE mm	BS mm	PVD 650	
	1	CCGT09T301MRTMV	R	80	9.525	3.97	7	0.08	-	●	
		CCGT09T302MRTMV	R	80	9.525	3.97	7	0.18	-	●	
		CCGT09T304MRTMV	R	80	9.525	3.97	7	0.38	-	●	
CCGT09T301MYL		-	80	9.525	3.97	7	0.08	-	●		
CCGT09T302MYL		-	80	9.525	3.97	7	0.18	-	●		
CCGT09T304MYL		-	80	9.525	3.97	7	0.38	-	●		
CCGT09T301MCL		-	80	9.525	3.97	7	0.08	-	●		
CCGT09T302MCL		-	80	9.525	3.97	7	0.18	-	●		
CCGT09T304MCL		-	80	9.525	3.97	7	0.38	-	●		
CCGT09T301MFNAM3		-	80	9.525	3.97	7	0.08	-	-	●	
CCGT09T302MFNAM3	-	80	9.525	3.97	7	0.18	-	-	●		
CCGT09T304MFNAM3	-	80	9.525	3.97	7	0.38	-	-	●		
	2	DCGT11T301MRTMV	R	55	9.525	3.97	7	0.08	-	●	
		DCGT11T302MRTMV	R	55	9.525	3.97	7	0.18	-	●	
		DCGT11T304MRTMV	R	55	9.525	3.97	7	0.38	-	●	
		DCGT11T301MRTMV-WP	R	55	9.525	3.97	7	0.08	(0.3)	-	●
		DCGT11T302MRTMV-WP	R	55	9.525	3.97	7	0.18	(0.3)	-	●
DCGT11T301MYL		-	55	9.525	3.97	7	0.08	-	-	●	
DCGT11T302MYL		-	55	9.525	3.97	7	0.18	-	-	●	
DCGT11T304MYL		-	55	9.525	3.97	7	0.38	-	-	●	
DCGT11T301MCL		-	55	9.525	3.97	7	0.08	-	-	●	
DCGT11T302MCL		-	55	9.525	3.97	7	0.18	-	-	●	
DCGT11T304MCL	-	55	9.525	3.97	7	0.38	-	-	●		
DCGT11T301MFNAM3	-	55	9.525	3.97	7	0.08	-	-	●		
DCGT11T302MFNAM3	-	55	9.525	3.97	7	0.18	-	-	●		
DCGT11T304MFNAM3	-	55	9.525	3.97	7	0.38	-	-	●		
DCGT11T301MAMX	-	55	9.525	3.97	7	0.08	-	-	●		
DCGT11T302MAMX	-	55	9.525	3.97	7	0.18	-	-	●		
DCGT11T304MAMX	-	55	9.525	3.97	7	0.38	-	-	●		
DCGT11T3005AM3-WP	R	55	9.525	3.97	7	0.05	(0.3)	-	●		
DCGT11T3015AM3-WP	R	55	9.525	3.97	7	0.15	(0.3)	-	●		
	3	VCGT110302MRTMV	R	35	6.35	3.18	7	0.18	-	●	
		VCGT110304MRTMV	R	35	6.35	3.18	7	0.38	-	●	
		VCGT110301MYL	-	35	6.35	3.18	7	0.08	-	●	
		VCGT110302MYL	-	35	6.35	3.18	7	0.18	-	●	
		VCGT110304MYL	-	35	6.35	3.18	7	0.38	-	●	
		VCGT110301MCL	-	35	6.35	3.18	7	0.08	-	●	
		VCGT110302MCL	-	35	6.35	3.18	7	0.18	-	●	
		VCGT110301MFNAM3	-	35	6.35	3.18	7	0.08	-	-	●
		VCGT110302MFNAM3	-	35	6.35	3.18	7	0.18	-	-	●
VCGT110304MFNAM3		-	35	6.35	3.18	7	0.38	-	-	●	
	4	TNGG160402MRTMV	R	60	9.525	4.76	-	0.18	-	●	
		TNGG160404MRTMV	R	60	9.525	4.76	-	0.38	-	●	
		TNGG160401MFNUL	-	60	9.525	4.76	-	0.08	-	●	
		TNGG160402MFNUL	-	60	9.525	4.76	-	0.18	-	●	
		TNGG160404MFNUL	-	60	9.525	4.76	-	0.38	-	●	

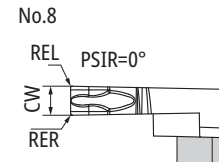
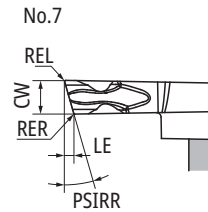
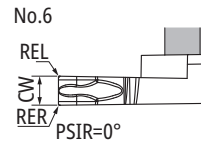
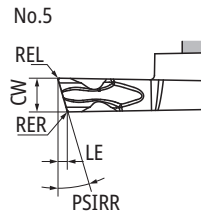
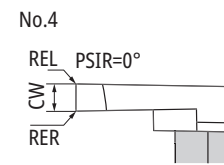
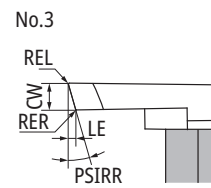
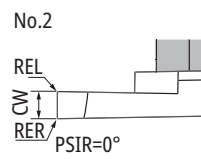
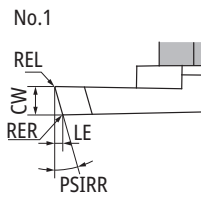
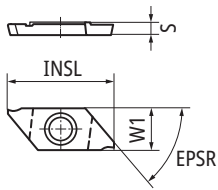
Back turning



New

Shape	Designation	Hand	Chip-breaker	LE mm	CDX mm	CF mm	CW mm	EPSR °	INSL mm	K3 °	PSIRR mm	REL mm	S mm	W1 mm	PVD 650
	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	●

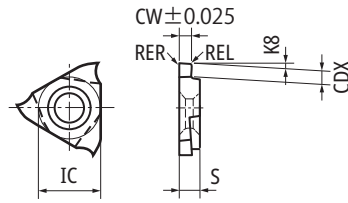
Parting




New

Shape	Figure	Designation	Hand	Chip-breaker	CUTDIA mm	CW mm	EPSR °	INSL mm	LE mm	PSIRR °	REL mm	RER mm	S mm	W1 mm	PVD 650
	1	CTP10FR	R	Yes	12	1	50	20	0.32	16	0.05	0.05	2.5	8	●
	1	CTP15FR	R	Yes	12	1.5	50	20	0.46	16	0.05	0.05	2.5	8	●
	1	CTP20FR	R	Yes	12	2	50	20	0.61	16	0.05	0.05	2.5	8	●
	2	CTP10FRN	R	Yes	12	1	50	20	-	0	0.05	0.05	2.5	8	●
	2	CTP15FRN	R	Yes	12	1.5	50	20	-	0	0.05	0.05	2.5	8	●
	2	CTP15FRN02	R	Yes	12	1.5	50	20	-	0	0.2	0.2	2.5	8	●
	2	CTP20FRN	R	Yes	12	2	50	20	-	0	0.05	0.05	2.5	8	●
	2	CTP20FRN02	R	Yes	12	2	50	20	-	0	0.2	0.2	2.5	8	●
	3	CTP10FLK	L	Yes	11	1	50	20	0.32	16	0.05	0.05	2.5	8	●
	3	CTP15FLK	L	Yes	11	1.5	50	20	0.46	16	0.05	0.05	2.5	8	●
	4	CTP10FLN	L	Yes	12	1	50	20	-	0	0.05	0.05	2.5	8	●
	4	CTP15FLN	L	Yes	12	1.5	50	20	-	0	0.05	0.05	2.5	8	●
	4	CTP15FLN02	L	Yes	12	1.5	50	20	-	0	0.2	0.2	2.5	8	●
	4	CTP20FLN	L	Yes	12	2	50	20	-	0	0.05	0.05	2.5	8	●
	4	CTP20FLN02	L	Yes	12	2	50	20	-	0	0.2	0.2	2.5	8	●
		5	CTP13FR-CX	R	Yes	12	1.3	50	20	0.4	16	0.05	0.05	2.5	8
5		CTP15FR-CX	R	Yes	12	1.5	50	20	0.46	16	0.05	0.05	2.5	8	●
6		CTP10FRN-CX	R	Yes	12	1	50	20	-	0	0.05	0.05	2.5	8	●
6		CTP15FRN-CX	R	Yes	12	1.5	50	20	-	0	0.05	0.05	2.5	8	●
7		CTP15FLK-CX	L	Yes	11	1.5	50	20	0.46	16	0.05	0.05	2.5	8	●
8		CTP10FLN-CX	L	Yes	12	1	50	20	-	0	0.05	0.05	2.5	8	●
8		CTP15FLN-CX	L	Yes	12	1.5	50	20	-	0	0.05	0.05	2.5	8	●
8		CTP15FLN02-CX	L	Yes	12	1.5	50	20	-	0	0.2	0.2	2.5	8	●

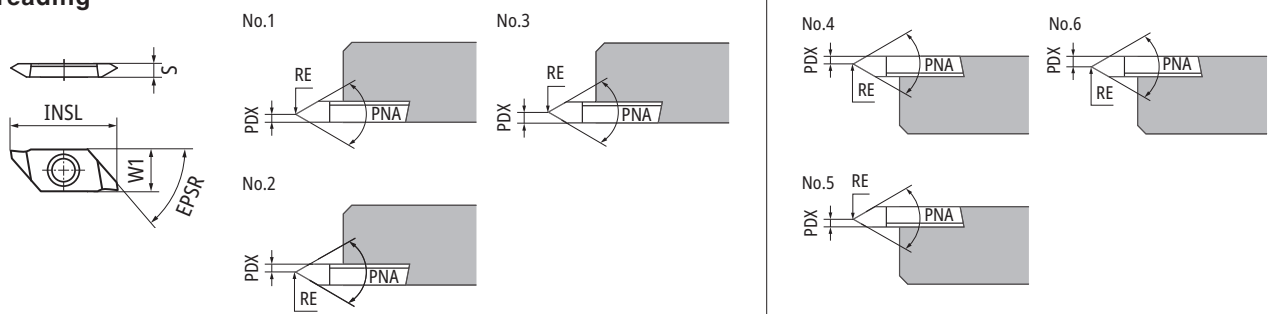
Grooving



New

Shape	Designation	Hand	Chip-breaker	APMX mm	CDX mm	CW mm	EPSR	GAN	IC mm	K8	REL mm	RER mm	S mm	PVD 650
	GTMH32050RGX	R	Yes	0.9	1.2	0.5	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	●
	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	●
	GTMX32050RT	R	Yes	0.9	1.2	0.5	60	14	9.525	2	0.05	0.05	3.18	●
	GTMX32075RT	R	Yes	1.6	2	0.75	60	14	9.525	2	0.05	0.05	3.18	●
	GTMX32100RT	R	Yes	1.6	2	1	60	14	9.525	2	0.05	0.05	3.18	●
	GTMX32100RT01	R	Yes	1.6	2	1	60	14	9.525	2	0.1	0.1	3.18	●
	GTMX32150RT	R	Yes	2.7	3	1.5	60	14	9.525	2	0.05	0.05	3.18	●
	GTMX32150RT02	R	Yes	2.7	3	1.5	60	14	9.525	2	0.2	0.2	3.18	●
	GTMX32200RT	R	Yes	2.7	3	2	60	14	9.525	2	0.05	0.05	3.18	●
	GTMX32200RT02	R	Yes	2.7	3	2	60	14	9.525	2	0.2	0.2	3.18	●
	GTMX32300RT	R	Yes	2.7	3	3	60	14	9.525	2	0.05	0.05	3.18	●
	GTMX32300RT02	R	Yes	2.7	3	3	60	14	9.525	2	0.2	0.2	3.18	●

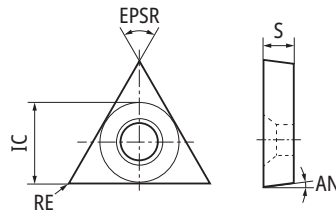
Threading



New

Shape	Figure	Designation	Hand	Chip-breaker	Pitch mm	TPI	EPSR	INSL mm	PDX mm	PNA	RE mm	S mm	W1 mm	PVD 650
	1	TTP60FR4A	R	Yes	0.2 - 0.75	127 - 34	50	19.9	0.4	60	(0.05) or less flat	2.5	8	●
	2	TTP60FR4B	R	Yes	0.2 - 0.75	127 - 34	50	19.9	0.4	60	(0.05) or less flat	2.5	8	●
	1	TTP60FR8A	R	Yes	0.4 - 1.25	63 - 21	50	19.9	0.8	60	(0.05)	2.5	8	●
	2	TTP60FR8B	R	Yes	0.4 - 1.25	63 - 21	50	19.9	0.8	60	(0.05)	2.5	8	●
	3	TTP60FR-N	R	Yes	1 - 1.5	25 - 17	50	19.9	1.25	60	(0.1)	2.5	8	●
	4	TTP60FL4A	L	Yes	0.2 - 0.75	127 - 34	50	19.9	0.4	60	(0.05) or less flat	2.5	8	●
	5	TTP60FL4B	L	Yes	0.2 - 0.75	127 - 34	50	19.9	0.4	60	(0.05) or less flat	2.5	8	●
	4	TTP60FL8A	L	Yes	0.4 - 1.25	63 - 21	50	19.9	0.8	60	(0.05)	2.5	8	●
	5	TTP60FL8B	L	Yes	0.4 - 1.25	63 - 21	50	19.9	0.8	60	(0.05)	2.5	8	●
	6	TTP60FL-N	L	Yes	1 - 1.5	25 - 17	50	19.9	1.25	60	(0.1)	2.5	8	●

Boring



New

Shape	Designation (Metric)	CECC	EPSR	IC mm	S mm	AN °	RE mm	BS mm	PVD 650
	TPGH1 10302RFG	Sharp Edge	60	6.35	3.18	11	0.2	-	●
	TPGH1 10304RFG	Sharp Edge	60	6.35	3.18	11	0.4	-	●

Practical examples


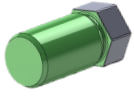

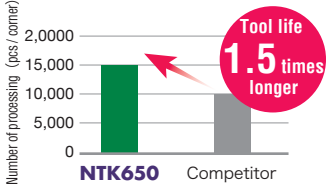
Component name		Precision equipment	
Insert		DCGT32.504MYL (DCGT11T301MYL)	
Grade		NTK650	
Material		Hastelloy C22	
Cutting speed		430SFM (132m/min)	
Cutting condition	Rotation speed	-	
	Feed	~.0008IPR (~0.02mm/rev)	
	DOC	~.017" (~0.425mm)	
	Machining area	Facing + OD turning	
	Coolant	WET	
Results		<p>Number of processing (pcs / corner)</p> <p>NTK650 Competitor</p> <p>Tool life 4 times longer</p> <p>Current tool had poor outer dia. Processing surface, requiring separate processes. NTK650 consolidates processes and achieves four times tool life with a good surface condition.</p>	




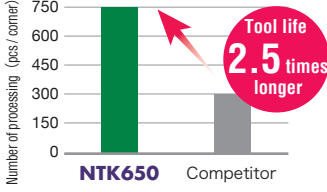
Component name		Connector	
Insert		VCGT221MYL (VCGT110304MYL)	
Grade		NTK650	
Material		Incoloy A286	
Cutting speed		120SFM (36m/min)	
Cutting condition	Rotation speed	1,600rpm	
	Feed	.002IPR (0.04mm/rev)	
	DOC	.039" (1.0mm)	
	Machining area	Facing + OD turning	
	Coolant	WET	
Results		<p>Number of processing (pcs / corner)</p> <p>NTK650 Competitor</p> <p>Tool life 2 times longer</p> <p>Current tool had poor dimensional stability, while NTK650 delivers stable dimensions and surface roughness, doubling tool life.</p>	

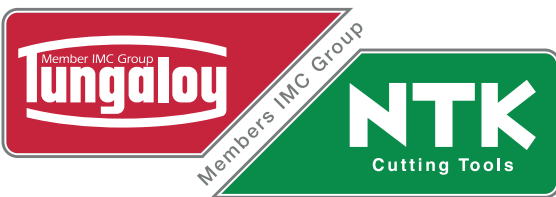
Component name		Pin	
Insert		DCGT32.508MYL (DCGT11T302MYL)	
Grade		NTK650	
Material		SUS440C / 440C	
Cutting speed		150SFM (47m/min)	
Cutting condition	Rotation speed	1,500rpm	
	Feed	.0012IPR (0.03mm/rev)	
	DOC	.079" (2.0mm)	
	Machining area	Facing + OD turning	
	Coolant	WET	
Results		<p>Number of processing (pcs / corner)</p> <p>NTK650 Competitor</p> <p>Tool life 4 times longer</p> <p>Current tool had unstable outer dia. dimensions. NTK650 delivers improved machining accuracy and surface quality, extending tool life by 4x.</p>	

Component name		Connector	
Insert		CCGT32.508MYL (CCGT09T302MYL)	
Grade		NTK650	
Material		SUS440C / 440C	
Cutting speed		220SFM (69m/min)	
Cutting condition	Rotation speed	1,100rpm	
	Feed	.002IPR (0.04mm/rev)	
	DOC	.008" (0.2mm)	
	Machining area	Facing + OD turning	
	Coolant	WET	
Results		<p>Number of processing (pcs / corner)</p> <p>NTK650 Competitor</p> <p>Tool life 2 times longer</p> <p>Current tool had unstable surface roughness, requiring inspection for all. NTK650 achieves stable machining accuracy, doubling the tool life.</p>	


Practical examples

Component name		Nut	
Insert		DCGT32.508MYL (DCGT11T302MYL)	
Grade		NTK650	
		SUM23 Leadless / 1215 Leadless	
Material			
Cutting condition	Cutting speed	310SFM (94m/min)	
	Rotation speed	5,000rpm	
	Feed	.002IPR (0.05mm/rev)	
	DOC	.039" (1.0mm)	
	Machining area	Facing + OD turning	
	Coolant	WET	
	Results	 <p>Number of processing (pcs / corner)</p> <p>NTK650 Competitor</p> <p>Tool life 1.5 times longer</p> <p>Current tool had rough surfaces. NTK650 achieves glossy and smooth surfaces, extending the tool life 1.5 times.</p>	

Component name		Pin	
Insert		CCGT32.504MYL (CCGT09T301MYL)	
Grade		NTK650	
		S45C / 1045	
Material			
Cutting condition	Cutting speed	260SFM (78m/min)	
	Rotation speed	-	
	Feed	.003IPR (0.085mm/rev)	
	DOC	.059" (1.5mm)	
	Machining area	Facing + OD turning	
	Coolant	WET	
	Results	 <p>Number of processing (pcs / corner)</p> <p>NTK650 Competitor</p> <p>Tool life 2.5 times longer</p> <p>Current tool experienced white cloudiness near the outer hole. NTK650 achieves a glossy surface, improving appearance. Additionally, its stable dimensional accuracy extends the tool life to 2.5 times longer.</p>	



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