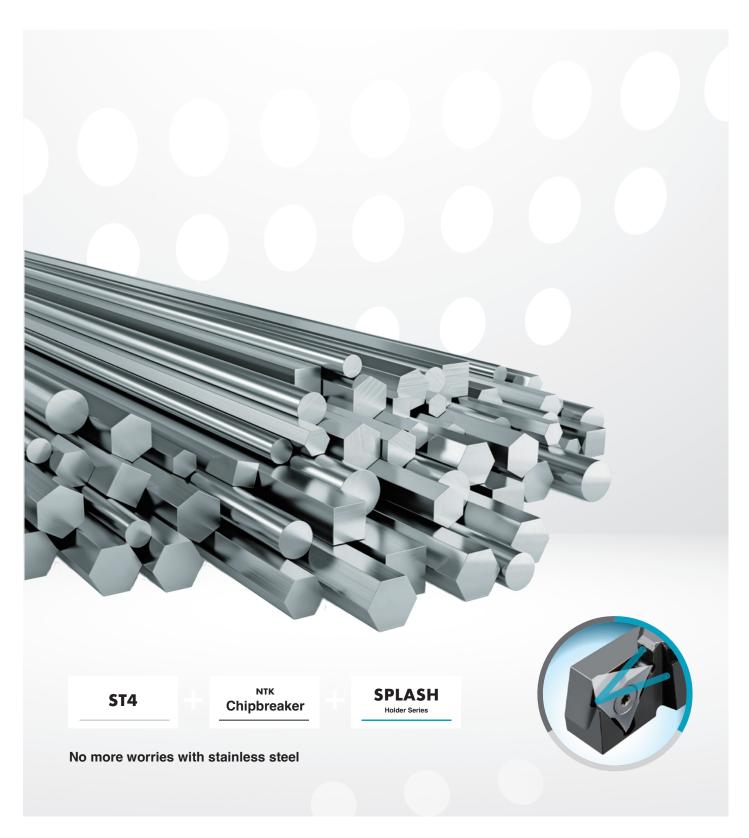
# Stainless steel processing solutions

For small diameter parts I CNC automatic lathe tool



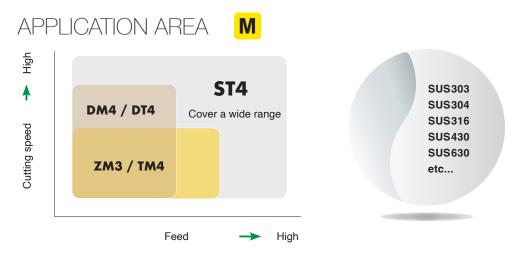




## **NTK Stainless-Steel Machining Solutions**

# ST4

Dedicated to stainless steel machining | CNC auto lathe tool material



# 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 I Cut-off



SUS304  $\Phi$ 11  $V_c$ =267 SFM f=.0012" IPR WET, CTPA15FLN

ST4 is not welded and tool wear is low.

Electromagnetic stainless steel I Front turning

After 2,100m processing	PVD coating <b>ST4</b>	Competitor's
Picture of cutting edge		Welding
Machined surface		
Surface roughness Ra(μin)	1.57	43.3
Tool wear (inch)	.0055"	.0063"

Electromagnetic stainless steel  $V_c$ =533 SFM f=.002" IPR ap=.0394" WET, DCGT11T302MYL

ST4 can also be machined with electro magnetic stainless-steel

# In all applications, "ST4",



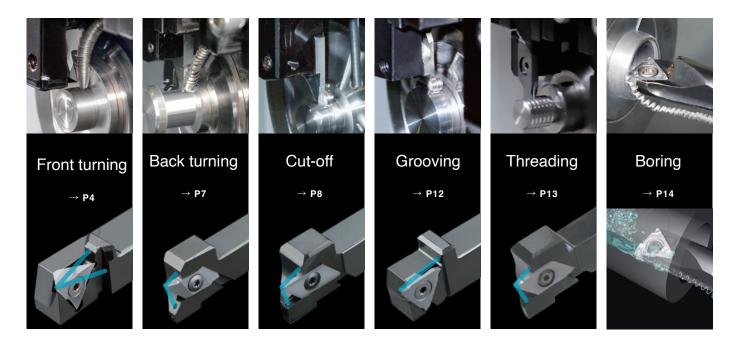


# NTK Chipbreaker

# New Addition of lineup

## **Expansion of lineup for all applications**

Select optimum chipbreaker according to machining conditions



# **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

See SPLASH brochure for details.

## **Front Turning**

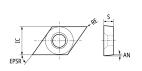
## Inserts - Carbide

## CCGT

					Sto	eel		0
					Stainle	ss Steel		•
	, S				Cast	Iron		
					Non-Ferro	us Materia	ıl	
					Heat Resis	stant Alloy	,	
	EPSR ,	AN			Hardened	l Material		
					Others (no	n-metallic	)	
								Carbide
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	Earbid.
	inch		0	inch	inch	0	inch	ST4
	CCGT 32.504M R TMV	Up-sharp edge	80	3/8	5/32	7	.003	•
	CCGT 32.508M R TMV	Up-sharp edge	80	3/8	5/32	7	.007	•
	CCGT 32.51M R TMV	Up-sharp edge	80	3/8	5/32	7	.015	•
	CCGT 32.504M YL	Up-sharp edge	80	3/8	5/32	7	.003	•
	CCGT 32.508M YL	Up-sharp edge	80	3/8	5/32	7	.007	•
	CCGT 32.51M YL	Up-sharp edge	80	3/8	5/32	7	.015	•
	CCGT 32.52M YL	Up-sharp edge	80	3/8	5/32	7	.031	•
	CCGT 21.504M CL	Up-sharp edge	80	1/4	3/32	7	.003	•
No.	CCGT 21.508M CL	Up-sharp edge	80	1/4	3/32	7	.007	•
	CCGT 32.504M CL	Up-sharp edge	80	3/8	5/32	7	.003	•
	CCGT 32.508M CL	Up-sharp edge	80	3/8	5/32	7	.007	•
	CCGT 32.51M CL	Up-sharp edge	80	3/8	5/32	7	.015	•
	CCGT 21.504M FN AM3	Up-sharp edge	80	1/4	3/32	7	.003	•
	CCGT 21.508M FN AM3	Up-sharp edge	80	1/4	3/32	7	.007	•
	CCGT 21.51M FN AM3	Up-sharp edge	80	1/4	3/32	7	.015	•
	CCGT 32.504M FN AM3	Up-sharp edge	80	3/8	5/32	7	.003	•
	CCGT 32.508M FN AM3	Up-sharp edge	80	3/8	5/32	7	.007	•
	CCGT 32.51M FN AM3	Up-sharp edge	80	3/8	5/32	7	.015	•

## DCGT

							●: 1st (	Choice O	: 2nd choice
						St	eel		0
						Stainle	ss Steel		•
		<u>\$</u>				Cast	Iron		
		<u>}</u>			N	al			
		AN			ŀ	leat Resi	stant Allo	y	
	EPSR \	100				Hardened	d Material		
					O	thers (no	n-metalli	<b>:</b> )	
								Carbide	
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	BS	Q A
	inch	_	o	inch	inch	o	inch	inch	ST4
	DCGT 32.504M R TMV	Up-sharp edge	55	1/4	3/32	7	.003	-	•
	DCGT 32.508M R TMV	Up-sharp edge	55	1/4	3/32	7	.007	-	•
	DCGT 32.51M R TMV	Up-sharp edge	55	1/4	3/32	7	.015	-	•
	DCGT 32.504M YL	Up-sharp edge	55	3/8	5/32	7	.003	-	•
	DCGT 32.508M YL	Up-sharp edge	55	3/8	5/32	7	.007	-	•
	DCGT 32.51M YL	Up-sharp edge	55	3/8	5/32	7	.015	-	•
	DCGT 32.52M YL	Up-sharp edge	55	3/8	5/32	7	.031	-	•
	DCGT 21.504M CL	Up-sharp edge	55	1/4	3/32	7	.003	-	•
	DCGT 21.508M CL	Up-sharp edge	55	1/4	3/32	7	.007	-	•
	DCGT 21.51M CL	Up-sharp edge	55	1/4	3/32	7	.015	-	•
	DCGT 32.504M CL	Up-sharp edge	55	3/8	5/32	7	.003	-	•

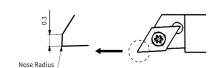


Steel	0
Stainless Steel	•
Cast Iron	
Non-Ferrous Material	
Heat Resistant Alloy	
Hardened Material	
Others (non-metallic)	

									Carbide
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	BS	PVD
	inch		o	inch	inch	0	inch	inch	ST4
	DCGT 32.508M CL	Up-sharp edge	55	3/8	5/32	7	.007	_	•
	DCGT 32.51M CL	Up-sharp edge	55	3/8	5/32	7	.015	_	•
	DCGT 21.504M FN AM3	Up-sharp edge	55	1/4	3/32	7	.003	-	•
	DCGT 21.508M FN AM3	Up-sharp edge	55	1/4	3/32	7	.007	-	•
	DCGT 21.51M FN AM3	Up-sharp edge	55	1/4	3/32	7	.015	-	•
	DCGT 32.504M FN AM3	Up-sharp edge	55	3/8	5/32	7	.003	-	•
	DCGT 32.508M FN AM3	Up-sharp edge	55	3/8	5/32	7	.007	-	•
	DCGT 32.51M FN AM3	Up-sharp edge	55	3/8	5/32	7	.015	-	•
	DCGT 21.504M AMX	Up-sharp edge	55	1/4	3/32	7	.003	-	•
E TOWN	DCGT 21.508M AMX	Up-sharp edge	55	1/4	3/32	7	.007	-	•
	DCGT 32.504M AMX	Up-sharp edge	55	3/8	5/32	7	.003	-	•
	DCGT 32.508M AMX	Up-sharp edge	55	3/8	5/32	7	.007	-	•
	DCGT 32.51M AMX	Up-sharp edge	55	3/8	5/32	7	.015	-	•
	DCGT 32.502 AM3 -WP	Up-sharp edge	55	3/8	5/32	7	.002	(.012)	•
	DCGT 32.506 AM3 -WP	Up-sharp edge	55	3/8	5/32	7	.006	(.012)	•

●: Stock(Newly added) ●: Stock

## Features of DC.T-WP insert



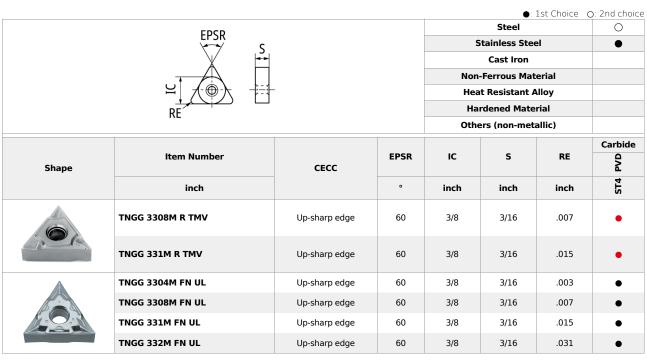
NTK WP style inserts have a wiper facet design.

The insert has a 0.3mm(.012") 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



## **VBGT**

• 1st Choice O: 2nd choice Steel 0 Stainless Steel **Cast Iron Non-Ferrous Material Heat Resistant Alloy Hardened Material** Others (non-metallic) Carbide **EPSR** IC s **Item Number** AN RE <u>M</u> CECC Shape inch inch inch inch VBGT 3308 FN YL 3/16 5 Up-sharp edge 35 3/8 .008 VBGT 331 FN YL Up-sharp edge 35 3/8 3/16 5 .016 VBGT 332 FN YL 3/8 3/16 Up-sharp edge 35 .031 ●: Stock(Newly added) ●: Stock

## **VCGT**

						<b>●</b> : 1s	Choice C	: 2nd choice
					St	eel		0
					Stainle	ss Steel		•
	<u> </u>				Cast	t Iron		
					Non-Ferro	us Materia	ıl	
	EPSR	AN			Heat Resi	stant Alloy	,	
					Hardene	d Material		
					Others (no	n-metallic	)	
					Carbide			
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	PVD
	inch		o	inch	inch	o	inch	ST4
161	VCGT 2208M R TMV	Up-sharp edge	35	1/4	1/8	7	.007	•
	VCGT 221M R TMV	Up-sharp edge	35	1/4	1/8	7	.015	•
	VCGT 2204M YL	Up-sharp edge	35	1/4	1/8	7	.003	•
	VCGT 2208M YL	-	-	-	-	-	-	•
	VCGT 221M YL	Up-sharp edge	35	1/4	1/8	7	.015	•
	VCGT 2204M CL	Up-sharp edge	35	1/4	1/8	7	.003	•
	VCGT 2208M CL	Up-sharp edge	35	1/4	1/8	7	.007	•
	VCGT 2204M FN AM3	Up-sharp edge	35	1/4	1/8	7	.003	•
	VCGT 2208M FN AM3	Up-sharp edge	35	1/4	1/8	7	.007	•
	VCGT 221M FN AM3	Up-sharp edge	35	1/4	1/8	7	.015	•

## **VPGT**

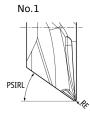
						●: 1st	Choice C	: 2nd choice
					Sto	eel		0
					Stainle	ss Steel		•
	,							
			I					
	EPSR	N .			Heat Resis	stant Alloy	•	
					Hardened	d Material		
					Others (no	n-metallic	)	
								Carbide
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	P. D.
	inch		۰	inch	inch	0	inch	ST4
	VPGT 2204M FN AM3	Up-sharp edge	35	1/4	1/8	11	.003	•
	VPGT 2208M FN AM3	Up-sharp edge	35	1/4	1/8	11	.007	•

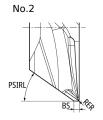
## TF.. series/Insert

## **■ TFX** The Front Max











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

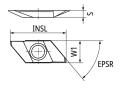
Figure	Item Number	Hand	Wiper	АРМХ	IC	S	BS	PSIRL	RE	RER	Carbide PVD
				inch	inch	inch	inch	0	inch	inch	ST4
1	TFX3301MR	R	No	.197	3/8	3/16	-	32	.003	-	•
1	TFX3302MR	R	No	.197	3/8	3/16	-	32	.007	-	•
1	TFX3304MR	R	No	.197	3/8	3/16	-	32	.015	-	•
2	TFX3301MRW	R	Straight	.197	3/8	3/16	.020	32	-	.003	•
2	TFX3302MRW	R	Straight	.197	3/8	3/16	.020	32	-	.007	•
2	TFX3304MRW	R	Straight	.197	3/8	3/16	.020	32	-	.015	•

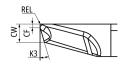
## **Back Turning**

## TBP.. series/Inserts Carbide

## TBP-BM









 $\bullet$  Diagram shows right-hand tool

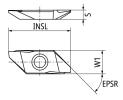
Item Number		Chipbreaker	LE	CDX	CF	cw	EPSR	INSL	кз	PSIRR	REL	_	W1	Carbide
	Hand		LE	CDX	C.	CVV	EPSK	INSL	K3	PSIKK	KEL	3	AAT	PVD
			inch	inch	inch	inch	0	inch	0	0	inch	inch	inch	ST4
TBP72FR05-BM	R	Yes	.138	.209	.012	.055	50	.787	16	72	.002	.098	.315	•
TBP72FR10M-BM	R	Yes	.138	.209	.012	.055	50	.787	16	72	.003	.098	.315	•
TBP72FR20M-BM	R	Yes	.138	.209	.012	.055	50	.787	16	72	.007	.098	.315	•

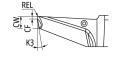
●: Stock(Newly added) ●: Stock

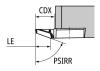
## TBPA.. series/Inserts Carbide

## TBPA-BM









• Diagram shows right-hand tool

Item Number		Chipbreaker	LE	CDX	CF	cw	EPSR	INSL	К3	PSIRR	REL	s	W1	Carbide
	Hand			CDX	CF	CVV	EFSK	INSL	Κ3	FJIKK	NEL	3	VV I	PVD
			inch	inch	inch	inch	0	inch	0	۰	inch	inch	inch	ST4
TBPA70FR05-BM	R	Yes	.217	.256	.012	.053	45	.984	12	70	.002	.138	.370	•
TBPA70FR10M-BM	R	Yes	.217	.256	.012	.053	45	.984	12	70	.003	.138	.370	•
TBPA70FR20M-BM	R	Yes	.217	.256	.012	.053	45	.984	12	70	.007	.138	.370	•

●: Stock(Newly added) ●: Stock

## **BACK DUO**

## TBDP.. series/Inserts Carbide

## **TBDP**





• Diagram shows right-hand tool

			LE	CF	cw	INSL	КЗ	PSIRR	REL	S	W1	Carbide
Item Number	Hand	Chipbreaker		EE CI	CVV	INSL	K3	FJIKK	KLL	3	***	PVD
			inch	inch	inch	inch	۰	٥	inch	inch	inch	ST4
TBDP22005R	R	Yes	.138	.012	.055	.688	13	80	.002	.087	.236	•
TBDP2201MR	R	Yes	.138	.012	.055	.688	13	80	.003	.087	.236	•
TBDP2202MR	R	Yes	.138	.012	.055	.688	13	80	.007	.087	.236	•

## **Cut-off**

## CTP.. series/Inserts Carbide Right-Hand

## CTP-FR





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



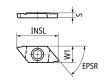


				CUTDIA	cw	EPSR	INSL	LE	PSIRR	REL	RER	S	W1	Carbide
Figure	Item Number	Hand	Chipbreaker	CUIDIA	CVV	EPSK	INSL	LE	PSIKK	KEL	KEK		AAT	PVD
				inch	inch	•	inch	inch	0	inch	inch	inch	inch	ST4
2	CTP10FR-CX	R	Yes	.472	.039	50	.787	.013	16	.002	.002	.098	.315	•
1	CTP10FR-TH	R	Yes	.472	.039	50	.787	.013	16	.002	.002	.098	.315	•
2	CTP13FR-CX	R	Yes	.472	.051	50	.787	.016	16	.002	.002	.098	.315	•
2	CTP15FR-CX	R	Yes	.472	.059	50	.787	.018	16	.002	.002	.098	.315	•
1	CTP15FR-TH	R	Yes	.472	.059	50	.787	.018	16	.002	.002	.098	.315	•
1	CTP20FR-TH	R	Yes	.472	.079	50	.787	.024	16	.002	.002	.098	.315	•

●: Stock(Newly added) ●: Stock

## CTP-FRN





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



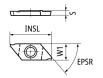


				CUTDIA	cw	EPSR	INSL	PSIR	REL	RER	S	W1	Carbide
Figure	Item Number	Hand	Chipbreaker	COIDIA	CVV	LFJK	INSL	FJIK	KLL	KLK	3	***	PVD
				inch	inch	۰	inch	0	inch	inch	inch	inch	ST4
2	CTP10FRN-CX	R	Yes	.472	.039	50	.787	0	.002	.002	.098	.315	•
1	CTP10FRN-TH	R	Yes	.472	.039	50	.787	0	.002	.002	.098	.315	•
2	CTP13FRN02-CX	R	Yes	.472	.051	50	.787	0	.008	.008	.098	.315	•
2	CTP13FRN-CX	R	Yes	.472	.051	50	.787	0	.002	.002	.098	.315	•
2	CTP15FRN02-CX	R	Yes	.472	.059	50	.787	0	.008	.008	.098	.315	•
2	CTP15FRN-CX	R	Yes	.472	.059	50	.787	0	.002	.002	.098	.315	•
1	CTP15FRN-TH	R	Yes	.472	.059	50	.787	0	.002	.002	.098	.315	•
1	CTP20FRN-TH	R	Yes	.472	.079	50	.787	0	.002	.002	.098	.315	•

## CTP.. series/Inserts Carbide Left-Hand

## CTP-FLK





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



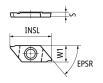


Figure	Item Number	Hand	Chipbreaker	CUTDIA	cw	EPSR	INSL	LE	PSIRR	REL	RER	s	W1	Carbide PVD
				inch	inch	۰	inch	inch	0	inch	inch	inch	inch	ST4
2	CTP10FLK-CX	L	Yes	.433	.039	50	.787	.013	16	.002	.002	.098	.315	•
1	CTP10FLK-TH	L	Yes	.433	.039	50	.787	.013	16	.002	.002	.098	.315	•
2	CTP13FLK-CX	L	Yes	.433	.051	50	.787	.016	16	.002	.002	.098	.315	•
2	CTP15FLK-CX	L	Yes	.433	.059	50	.787	.018	16	.002	.002	.098	.315	•
1	CTP15FLK-TH	L	Yes	.433	.059	50	.787	.018	16	.002	.002	.098	.315	•
1	CTP20FLK-TH	L	Yes	.433	.079	50	.787	.024	16	.002	.002	.098	.315	•

●: Stock(Newly added) ●: Stock

## CTP-FLN





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





				CUTDIA	cw	EPSR	INSL	PSIR	REL	RER	s	W1	Carbide
Figure	Item Number	Hand	Chipbreaker										PVD
				inch	inch	•	inch	0	inch	inch	inch	inch	ST4
2	CTP10FLN-CX	L	Yes	.472	.039	50	.787	0	.002	.002	.098	.315	•
1	CTP10FLN-TH	L	Yes	.472	.039	50	.787	0	.002	.002	.098	.315	•
2	CTP13FLN02-CX	L	Yes	.472	.051	50	.787	0	.008	.008	.098	.315	•
2	CTP13FLN-CX	L	Yes	.472	.051	50	.787	0	.002	.002	.098	.315	•
2	CTP15FLN02-CX	L	Yes	.472	.059	50	.787	0	.008	.008	.098	.315	•
2	CTP15FLN-CX	L	Yes	.472	.059	50	.787	0	.002	.002	.098	.315	•
1	CTP15FLN-TH	L	Yes	.472	.059	50	.787	0	.002	.002	.098	.315	•
1	CTP20FLN-TH	L	Yes	.472	.079	50	.787	0	.002	.002	.098	.315	•

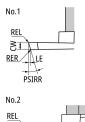
## CTPA.. series/Inserts Carbide Right-Hand

## CTPA-FR





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



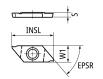
PSIRR	REL	RER	s	W1	C
RER			_		

				CUTDIA	cw	EPSR	INSL	LE	PSIRR	REL	RER	s	W1	Carbide
Figure	Item Number	Hand	Chipbreaker											PVD
				inch	inch	•	inch	inch	۰	inch	inch	inch	inch	ST4
2	CTPA15FR-CX	R	Yes	.630	.059	45	.984	.018	16	.002	.002	.138	.370	•
1	CTPA15FR-TH	R	Yes	.630	.059	45	.984	.018	16	.002	.002	.138	.370	•
1	CTPA20FR-TH	R	Yes	.630	.079	45	.984	.024	16	.002	.002	.138	.370	•

●: Stock(Newly added) ●: Stock

## CTPA-FRN





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



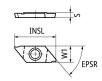


				CUTDIA	cw	EPSR	INSL	PSIR	REL	RER	_	W1	Carbide
Figure	Item Number	Hand	Chipbreaker	CUIDIA	CW	EPSK	INSL	PSIK	KEL	KEK	3	WI	PVD
				inch	inch	۰	inch	۰	inch	inch	inch	inch	ST4
2	CTPA15FRN-CX	R	Yes	.630	.059	45	.984	0	.002	.002	.138	.370	•
1	CTPA15FRN-TH	R	Yes	.630	.059	45	.984	0	.002	.002	.138	.370	•
1	CTPA20FRN-TH	R	Yes	.630	.079	45	.984	0	.002	.002	.138	.370	•

## CTPA.. series/Inserts Carbide Left-Hand

## CTPA-FLK





No.1

REL

RER

PSIRR

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

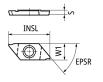
No.2		
8	LE	$\overline{\Box}$
-	PSIRR	

				CUTDIA	cw	EPSR	INSL	LE	PSIRR	REL	RER	-	W1	Carbide
Figure	Item Number	Hand	Chipbreaker	COIDIA	CVV	EFSK	INSL	LE	FJINN	NEL	NEN	3	AAT	PVD
				inch	inch	0	inch	inch	۰	inch	inch	inch	inch	ST4
2	CTPA15FLK-CX	L	Yes	.571	.059	45	.984	.018	16	.002	.002	.138	.370	•
1	CTPA15FLK-TH	L	Yes	.571	.059	45	.984	.018	16	.002	.002	.138	.370	•
1	CTPA20FLK-TH	L	Yes	.571	.079	45	.984	.024	16	.002	.002	.138	.370	•

●: Stock(Newly added) ●: Stock

## CTPA-FLN







 $\bullet$  All angles shown are obtained when insert is set in the holder.



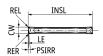
Figure	Item Number	Hand	Chipbreaker	CUTDIA	cw	EPSR	INSL	PSIR	REL	RER	S	W1	Carbide PVD
				inch	inch	۰	inch	0	inch	inch	inch	inch	ST4
2	CTPA15FLN-CX	L	Yes	.630	.059	45	.984	0	.002	.002	.138	.370	•
1	CTPA15FLN-TH	L	Yes	.630	.059	45	.984	0	.002	.002	.138	.370	•
1	CTPA20FLN-TH	L	Yes	.630	.079	45	.984	0	.002	.002	.138	.370	•

●: Stock(Newly added) ●: Stock

## CTDP.. series/Inserts Carbide

## CTDP20/25 CUT DUO





			614	15161	ncinn			Carbide
Item Number	Hand	Chipbreaker	cw	INSL	PSIRR	REL	RER	PVD
			inch	inch	۰	inch	inch	ST4
CTDP20N	N	Yes	.079	.752	-	.002	.002	•
CTDP20N02	N	Yes	.079	.752	-	.008	.008	•
CTDP25N02	N	Yes	.098	.835	-	.008	.008	•
CTDP20R6	R	Yes	.079	.752	6	.002	.002	•
CTDP25R6	R	Yes	.098	.835	6	.002	.002	•
CTDP20R15	R	Yes	.079	.752	15	.002	.002	•

lacksquare: Stock(Newly added) lacksquare: Stock

## **OD** Grooving

## GTMH(X)32.. series/Inserts Carbide

## GTMH32-GX Side Turning / 3D mold chipbreaker



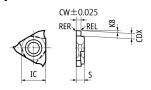




Diagram shows right-hand tool

			АРМХ	CDX	cw	EPSR	GAN	IC	К8	REL	RER	s	Carbide
Item Number	Hand	Chipbreaker	APMA	CDX	CVV	EPSK	GAN	IC.	No.	KEL	KEK	3	PVD
			inch	inch	inch	0	0	inch	0	inch	inch	inch	ST4
GTMH32033RGX	R	Yes	.010	.024	.013	60	17	3/8	2	.002	.002	1/8	•
GTMH32043RGX	R	Yes	.035	.047	.017	60	17	3/8	2	.002	.002	1/8	•
GTMH32050RGX	R	Yes	.035	.047	.020	60	17	3/8	2	.002	.002	1/8	•
GTMH32053RGX	R	Yes	.035	.047	.021	60	17	3/8	2	.002	.002	1/8	•
GTMH32075RGX	R	Yes	.063	.079	.030	60	17	3/8	2	.002	.002	1/8	•
GTMH32095RGX	R	Yes	.063	.079	.037	60	17	3/8	2	.002	.002	1/8	•
GTMH32100RGX	R	Yes	.063	.079	.039	60	17	3/8	2	.002	.002	1/8	•
GTMH32100RGX01	R	Yes	.063	.079	.039	60	17	3/8	2	.004	.004	1/8	•
GTMH32150RGX	R	Yes	.106	.118	.059	60	17	3/8	2	.002	.002	1/8	•
GTMH32150RGX01	R	Yes	.106	.118	.059	60	17	3/8	2	.004	.004	1/8	•
GTMH32150RGX02	R	Yes	.106	.118	.059	60	17	3/8	2	.008	.008	1/8	•
GTMH32200RGX	R	Yes	.106	.118	.079	60	17	3/8	2	.002	.002	1/8	•
GTMH32200RGX01	R	Yes	.106	.118	.079	60	17	3/8	2	.004	.004	1/8	•
GTMH32200RGX02	R	Yes	.106	.118	.079	60	17	3/8	2	.008	.008	1/8	•
GTMH32300RGX	R	Yes	.106	.118	.118	60	17	3/8	2	.002	.002	1/8	•
GTMH32300RGX02	R	Yes	.106	.118	.118	60	17	3/8	2	.008	.008	1/8	•

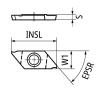
<sup>●:</sup> Stock(Newly added) ●: Stock

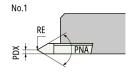
## **External Thread**

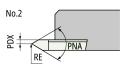
## TTP.. series/Inserts Carbide

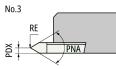
## TTP-R











• Diagram shows right-hand tool

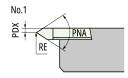
				Pitch	EPSR	INSL	PDX	PNA	RE	S	W1	Carbide
Figure	Item Number	Hand	Chipbreaker	FICE	LFSK	INSL	FDA	FIVA	NL.	3	***	PVD
				TPI	۰	inch	inch	0	inch	inch	inch	ST4
1	TTP60FR4A	R	Yes	127-34	50	.783	.016	60	.002MAX Flat	.098	.315	•
1	TTP60FR8A	R	Yes	63-21	50	.783	.031	60	(R.002)	.098	.315	•
2	TTP60FR4B	R	Yes	127-34	50	.783	.016	60	.002MAX Flat	.098	.315	•
2	TTP60FR8B	R	Yes	63-21	50	.783	.031	60	(R.002)	.098	.315	•
3	TTP60FR-N	R	Yes	25-17	50	.783	.049	60	(R.004)	.098	.315	•
3	TTP60FR-N02	R	Yes	16-13	50	.783	.049	60	(R.008)	.098	.315	•

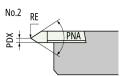
●: Stock(Newly added) ●: Stock

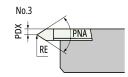
## TTP-L











• Diagram shows left-hand tool

Figure	Item Number	Hand	Chipbreaker	Pitch	EPSR	INSL	PDX	PNA	RE	s	W1	Carbide PVD
				TPI	0	inch	inch	•	inch	inch	inch	ST4
1	TTP60FL4A	L	Yes	127-34	50	.783	.016	60	.002MAX Flat	.098	.315	•
1	TTP60FL8A	L	Yes	63-21	50	.783	.031	60	(R.002)	.098	.315	•
2	TTP60FL4B	L	Yes	127-34	50	.783	.016	60	.002MAX Flat	.098	.315	•
2	TTP60FL8B	L	Yes	63-21	50	.783	.031	60	(R.002)	.098	.315	•
3	TTP60FL-N	L	Yes	25-17	50	.783	.049	60	(R.004)	.098	.315	•
3	TTP60FL-N02	L	Yes	16-13	50	.783	.049	60	(R.008)	.098	.315	•

## **ID Tooling**

## **Inserts Carbide**

## CC..

						●: 19	st Choice	: 2nd choice
					S	teel		0
	, ,				Stainle	ess Steel		•
	* * *				Cas	t Iron		
				1	lon-Ferro	us Mate	rial	
				1	Heat Res	istant Al	loy	
	EPSR	≤AN .			Hardened Material			
				(	Others (n	on-meta	llic)	
								Carbide
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	PVD
	inch		0	inch	inch	0	inch	ST4
	CCGT 21.504 FR F1	Up-sharp edge	80	1/4	3/32	7	.004	•
	CCGT 21.508 FR F1	Up-sharp edge	80	1/4	3/32	7	.008	•
	CCGT 21.51 FR F1	Up-sharp edge	80	1/4	3/32	7	.016	•
	CCGT 32.508 FR F1	Up-sharp edge	80	3/8	3/32	7	.008	•
	CCGT 32.51 FR F1	Up-sharp edge	80	3/8	3/32	7	.016	•

## CP..

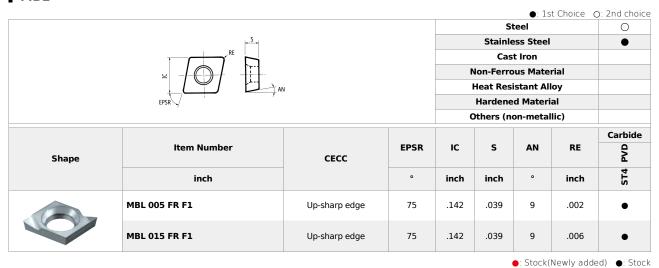
					S	teel		0
					Stainle	ess Steel		•
	, pt 15				Cas	t Iron		
				P	lon-Ferro	us Mate	rial	
		N		1	Heat Res	istant Al	loy	
	EPSR	IN			Hardene	d Materi	al	
				(	Others (n	on-meta	llic)	
								Carbide
Shape	Item Number	CECC	EPSR	IC	s	AN	RE	PVD
	inch		۰	inch	inch	0	inch	ST4
	CPGP 6204 FR F1	Up-sharp edge	80	3/16	1/16	11	.004	•
	CPGP 6208 FR F1	Up-sharp edge	80	3/16	1/16	11	.008	•
100	CPGP 621 FR F1	Up-sharp edge	80	3/16	1/16	11	.016	•
	CPGP 21.508 FR F1	Up-sharp edge	80	1/4	3/32	11	.008	•
<b>~</b>	CPGP 21.51 FR F1	Up-sharp edge	80	1/4	3/32	11	.016	•

## ER..

						●: 19	t Choice (	o: 2nd choice
					S	teel		0
	<del>- S -</del>				Stainle	ess Steel		•
	RE RE				Cas	t Iron		
				ı	lon-Ferro	us Mate	rial	
		N		ı	Heat Res	istant Al	loy	
	EPSR				Hardened Material			
				C	Others (n	on-meta	llic)	
								Carbide
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	P. O.
	inch	_	0	inch	inch	0	inch	ST4
	ERGP 5204 FR F1	Up-sharp edge	75	5/32	1/16	9	.004	•
	ERGP 5208 FR F1	Up-sharp edge	75	5/32	1/16	9	.008	•
	ERGP 521 FR F1	Up-sharp edge	75	5/32	1/16	9	.016	•

●: Stock(Newly added) ●: Stock

## MBL



## TC..

						<b>●</b> : 19	t Choice	: 2nd choice
					St	teel		0
	EPSR S				Stainle	ss Steel		•
	X				Cas	t Iron		
				r	lon-Ferro	us Mate	rial	
				ı	Heat Resi	istant Al	loy	
	RE AN			Hardened Material				
				(	Others (n	on-meta	llic)	
								Carbide
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	P O
	inch		o	inch	inch	۰	inch	ST4
	TCGP 5204 FR F05	Up-sharp edge	60	-	-	7	-	•
8	TCGP 5208 FR F05	Up-sharp edge	60	5/32	1/16	7	.008	•
	TCGP 521 FR F05	Up-sharp edge	60	5/32	1/16	7	.016	•

●: Stock(Newly added) ●: Stock

## TP...

						●: 19	t Choice (	o: 2nd choice
					S	teel		0
	EPSR S				Stainle	ess Steel		•
	X Fi				Cas	t Iron		
				1	Non-Ferro	us Mate	rial	
					Heat Res	istant Al	loy	
	RE	N			Hardene	d Materi	ial	
				C	Others (n	on-meta	llic)	
								Carbide
Shape	Item Number	CECC	EPSR	IC	s	AN	RE	P. D.
	inch		0	inch	inch	0	inch	ST4
<u> </u>	TPGP 7308 R FG	Up-sharp edge	60	7/32	3/32	11	.008	•
	TPGP 731 R FG	Up-sharp edge	60	7/32	3/32	11	.016	•
	TPGH 2208 R FG	Up-sharp edge	60	1/4	1/8	11	.008	•
	TPGH 221 R FG	Up-sharp edge	60	1/4	1/8	11	.016	•
	TPGP 7304 FR F1	Up-sharp edge	60	7/32	3/32	11	.004	•
	TPGP 7308 FR F1	Up-sharp edge	60	7/32	3/32	11	.008	•
	TPGP 731 FR F1	Up-sharp edge	60	7/32	3/32	11	.016	•
	TPGP 732 FR F1	Up-sharp edge	60	7/32	3/32	11	.031	•
	TPGH 2208 FR F1	Up-sharp edge	60	1/4	1/8	11	.008	•
	TPGH 221 FR F1	Up-sharp edge	60	1/4	1/8	11	.016	•
	TPGH 222 FR F1	Up-sharp edge	60	1/4	1/8	11	.031	•

#### Front turning

#### Mechanical equipment

Work material	SUS316L	44.07#
Cutting Speed (SFM)	200	Ф1.97″
Feed (IPR)	.0012″	
D.O.C.(inch)	.0197″	
Coolant	WET	
YL chipbreaker ST4 CCGT09T304	MYL	4,000 pcs/ Corner
Mold chipbreaker from (PVD coated carbide)	Competitor	2,000 pcs/ Corner

ST4 achieved double the tool life compared to competitor.

## **Back turning**

#### Stud parts

Work material	SUS430F		flange back surface
Cutting Speed (SFM)	167		7
Feed (IPR)	.0020″	Ф.394″	.1457"
D.O.C.(inch)	.0787″		Ф.236″
Coolant	WET		
TBP-BM chipbrea ST4 TBP72FR10M		①1PASS machining	*No grooving and roughing / finishing required!
Grinded chipbreaker from (PVD coated carbide)	n competitor	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.





#### Tungaloy-NTK America Inc.

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Official Website	www.ntkcuttingtools.com	
	www.youtube.com/NTKCUTTINGTOOLS	
LinkedIn	www.linkedin.com/company/tungaloy-ntk-america/	
Facebook	www.facebook.com/NTKUS/	

#### Cut-off

#### Sleeve

Work material  Cutting Speed (SFM)	SUS304 330	Ф.472″
Feed (IPR)	.0008″	
Coolant	WET	
CX chipbreaker ST4 CTP15FLN-0	cx	3,500 pcs/ Corner
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.

## Grooving

#### Automotive parts

Work material	SUS430	Width .0788",
Cutting Speed (SFM)	267	
Feed (IPR)	.0012″	Ф.472″
D.O.C.(inch)	.0394″	
Coolant	WET	
GX chipbreaker ST4 GTMH32200F	RGX	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.

