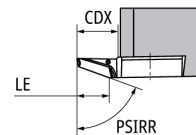
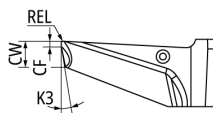
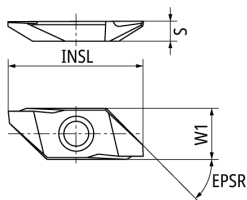


TBPA.. series/Inserts Carbide

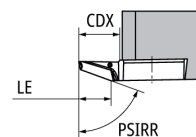
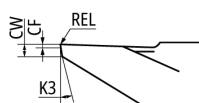
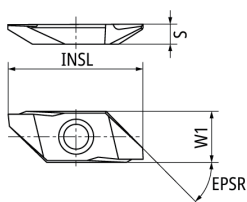
TBPA-BM with BM-Chipbreaker



● 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	DM4	ST4	TM4
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	●	●	●

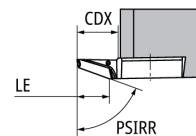
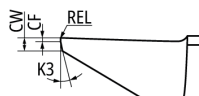
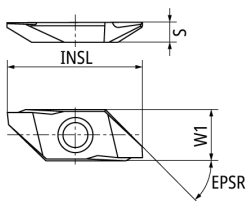
TBPA with Chipbreaker



● 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	DT4	QM3	VM1	ZM3
TBPA60FR10M	R	Yes	4.5	5.3	0.3	0.7	45	25	15	60	0.08	3.5	9.4		●		
TBPA60FRPB10	R	Yes	4.5	5.3	0.3	0.7	45	25	15	60	0.1	3.5	9.4			●	●
TBPA60FRPB10M	R	Yes	4.5	5.3	0.3	0.7	45	25	15	60	0.08	3.5	9.4	●		●	
TBPA60FRPB20M	R	Yes	4.5	5.3	0.3	0.7	45	25	15	60	0.18	3.5	9.4	●			
TBPA60FRVB	R	Yes	4.5	5.3	0.2	0.7	45	25	15	60	0	3.5	9.4	●		●	●
TBPA60FLPB10	L	Yes	4.5	5.3	0.3	0.7	45	25	15	60	0.1	3.5	9.4				●
TBPA60FLVB	L	Yes	4.5	5.3	0.2	0.7	45	25	15	60	0	3.5	9.4				●

TBPA-V without Chipbreaker



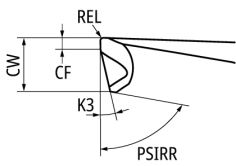
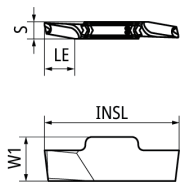
● Diagram shows right-hand tool

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	VM1	ZM3
TBPA60FRV	R	No	6.3	6.8	0.2	0.7	45	25	15	60	0	3.5	9.4	●	●
TBPA60FLV	L	No	6.3	6.8	0.2	0.7	45	25	15	60	0	3.5	9.4		●

BACK DUO

TBDP.. series/Inserts Carbide

TBDP

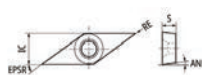


● Diagram shows right-hand tool

Item Number	Hand	Chip-breaker	LE	CF	CW	INSL	K3	PSIRR	REL	S	W1	Carbide		
			mm	mm	mm	mm	°	°	mm	mm	mm	DM4	QM3	TM4
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	●	●	●

VC.. series/Inserts Carbide

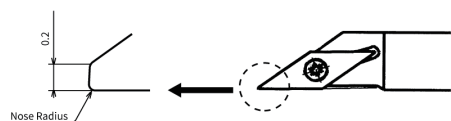
VC..



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

Shape	Item Number	CECC	EPSR	IC	S	AN	RE	BS	Carbide											Uncoated
									PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	
									ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1		
(ISO)	°	mm	mm	°	mm	mm	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1				
	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	-	●	●	●	●	●							
	VCGT110202MCL	Up-sharp edge	35	6.35	2.38	7	0.18	-		●	●	●	●	●						
	VCGT110301MCL	Up-sharp edge	35	6.35	3.18	7	0.08	-	●	●	●	●	●							
	VCGT110302MCL	Up-sharp edge	35	6.35	3.18	7	0.18	-	●	●	●	●	●							
	VCGT110300FNAM3	Up-sharp edge	35	6.35	3.18	7	0.03	-			●		●	●						
	VCGT110301MFNAM3	Up-sharp edge	35	6.35	3.18	7	0.08	-	●		●	●	●	●						
	VCGT110301FNAM3	Up-sharp edge	35	6.35	3.18	7	0.1	-						●	●					
	VCGT110302MFNAM3	Up-sharp edge	35	6.35	3.18	7	0.18	-	●		●	●	●	●						
	VCGT110302FNAM3	Up-sharp edge	35	6.35	3.18	7	0.2	-						●	●					
	VCGT110304MFNAM3	Up-sharp edge	35	6.35	3.18	7	0.38	-	●		●	●	●	●						
	VCMT110302FNAM3	Up-sharp edge	35	6.35	3.18	7	0.2	-		●										
	VCMT110304FNAM3	Up-sharp edge	35	6.35	3.18	7	0.4	-		●										
	VCGT110300AZ7	Up-sharp edge	35	6.35	3.18	7	0.03	-				●				●				
	VCGT110301MAZ7	Up-sharp edge	35	6.35	3.18	7	0.08	-				●				●				
	VCGT110302MAZ7	Up-sharp edge	35	6.35	3.18	7	0.18	-				●				●				
	VCGT110304MAZ7	Up-sharp edge	35	6.35	3.18	7	0.38	-				●				●				
	VCGT110300RU	Up-sharp edge	35	6.35	3.18	7	0.03	-						●	●					
	VCGT110301MRU	Up-sharp edge	35	6.35	3.18	7	0.08	-			●									
	VCGT110301RU	Up-sharp edge	35	6.35	3.18	7	0.1	-						●	●					
	VCGT110302MRU	Up-sharp edge	35	6.35	3.18	7	0.18	-			●									
	VCGT110302RU	Up-sharp edge	35	6.35	3.18	7	0.2	-						●	●					
	VCET1103008RUHG	Up-sharp edge	35	6.35	3.18	7	0.08	-						●						
	VCGT1103005RU-WP	Up-sharp edge	35	6.35	3.18	7	0.05	(0.2)						●	●					
	VCGT110301RU-WP	Up-sharp edge	35	6.35	3.18	7	0.1	(0.2)						●	●					
	VCGT1103005RSX-WP	Ⓜ Up-sharp edge	35	6.35	3.18	7	0.05	(0.2)						●	●					
	VCGT110301RSX-WP	Ⓜ Up-sharp edge	35	6.35	3.18	7	0.1	(0.2)						●	●					
	VCGW110300H	Ⓜ Up-sharp edge	35	6.35	3.18	7	0.03	-									●			
	VCGW110301H	Ⓜ Up-sharp edge	35	6.35	3.18	7	0.1	-									●			
	VCGW110302H	Ⓜ Up-sharp edge	35	6.35	3.18	7	0.2	-									●			

Features of VCGT-WP insert



NTK WP style inserts have a wiper facet design.

The insert has a 0.2mm flat on the cutting edge when the insert is set into the toolholder.

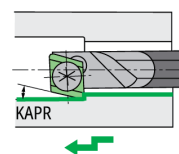
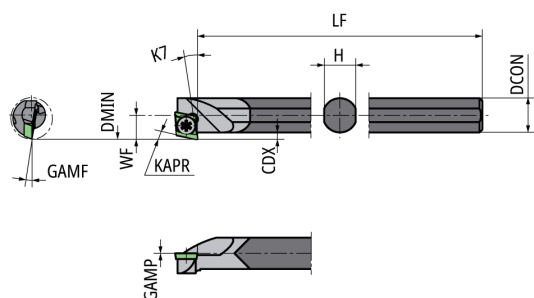
The flat on the cutting edge ensures a superior surface when feed rates are increased.

WP style inserts can be used in toolholders: SVAC

ID Back Turning

MBL.. series/Toolholder

C-MSBR Carbide shank



- Diagram shows right-hand tool
- For F1 chipbreaker, right-hand inserts fit to right-hand toolholder
- F1 chipbreaker evacuates chips BACKWARD

EDP	Item Number	Stock	Hand	DMIN mm	CDX mm	DCON mm	GAMF °	GMAP °	H mm	KAPR °	LF mm	RE mm	WF mm	Insert Gage
5161054	C04J-MSBR	●	R	5.7	1	4	10	0	3.5	13	110	0.15	3.2	MBL..
5161047	C06J-MSBR	●	R	7.7	1	6	4	0	5.5	13	110	0.15	4.2	MBL..

Back Turning

R

Spare Parts

Item Number	Clamp screw	Wrench (for Clamp screw)
C04J-MSBR	LR-S-2*3.5	CLR-13S
C06J-MSBR	LR-S-2*3.5	CLR-13S

MBL.. series/Inserts Carbide

MBL

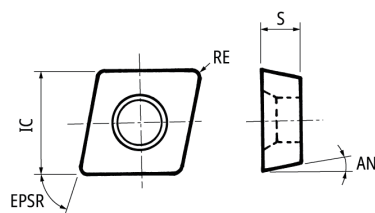
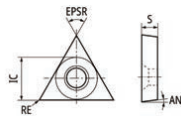


Figure	Item Number	Hand	Chip-breaker	AN °	EPSR °	IC mm	RE mm	S mm	Carbide PVD	QM3	ST4	TM4	ZM3
1	MBL005FL	L	Yes	9	75	3.6	0.05	1	●	●	●	●	●
1	MBL015FL	L	Yes	9	75	3.6	0.15	1	●	●	●	●	●
2	MBL005FRF1	R	Yes	9	75	3.6	0.05	1	●	●	●	●	●
2	MBL015FRF1	R	Yes	9	75	3.6	0.15	1	●	●	●	●	●

TP.. series/Inserts Carbide

TPGH



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

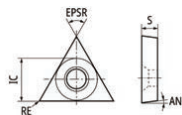
Shape	Item Number	CECC	Carbide																	Uncoated
			EPSR	IC	S	AN	RE	BS	PVD	PVD	PVD	PVD	PVD	PVD	PVD	CVD	CVD			
	(ISO)	°	mm	mm	°	mm	mm	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1			
	TPGH090202RFG	Up-sharp edge	60	5.56	2.38	11	0.2	-	●			●	●							
	TPGH090204RFG	Up-sharp edge	60	5.56	2.38	11	0.4	-	●			●	●							
	TPGH110302RFG	Up-sharp edge	60	6.35	3.18	11	0.2	-	●			●	●							
	TPGH110304RFG	Up-sharp edge	60	6.35	3.18	11	0.4	-	●			●	●							
	TPGH080202FRF1	Up-sharp edge	60	4.76	2.38	11	0.2	-				●	●	●						
	TPGH080204FRF1	Up-sharp edge	60	4.76	2.38	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	-	●			●	●		●					
	TPGH090202FLK	Up-sharp edge	60	5.56	2.38	11	0.2	-				●								
	TPGH090204FLK	Up-sharp edge	60	5.56	2.38	11	0.4	-				●								
	TPGH090208FLK	Up-sharp edge	60	5.56	2.38	11	0.8	-				●								
	TPGH090202FLB2	Up-sharp edge	60	5.56	2.38	11	0.2	-				●		●						
	TPGH090204FLB2	Up-sharp edge	60	5.56	2.38	11	0.4	-				●		●						
	TPGH090208FLB2	Up-sharp edge	60	5.56	2.38	11	0.8	-				●		●						
	TPGH080202FLB3	Up-sharp edge	60	4.76	2.38	11	0.2	-				●		●						
	TPGH080204FLB3	Up-sharp edge	60	4.76	2.38	11	0.4	-				●		●						

Back Turning

R

TC.. series/Inserts Carbide

TCG.



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

Shape	Item Number	CECC	EPSR	IC	S	AN	RE	BS	Carbide										Uncoated
									PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	CVD	CVD	
									°	mm	mm	°	mm	mm	ST4	DM4	DT4	QM3	
	TCGH060101FRF05	Up-sharp edge	60	3.97	1.59	7	0.1	-	●			●	●						
	TCGH060102FLF05	Up-sharp edge	60	3.97	1.59	7	0.2	-					●			●			
	TCGH060102FRF05	Up-sharp edge	60	3.97	1.59	7	0.2	-	●			●	●			●			
	TCGH060104FRF05	Up-sharp edge	60	3.97	1.59	7	0.4	-	●			●	●			●			
	TCGH060102FLK	Up-sharp edge	60	3.97	1.59	7	0.2	-					●						
	TCGH060104FLK	Up-sharp edge	60	3.97	1.59	7	0.4	-					●						
	TCGH060102FLB1	Up-sharp edge	60	3.97	1.59	7	0.2	-					●			●			
	TCGH060104FLB1	Up-sharp edge	60	3.97	1.59	7	0.4	-					●			●			

Back Turning
R