

PVD coated Cermet grade for steel

MP3025

New positive
breaker for
steel

Produces excellent surface finishes.

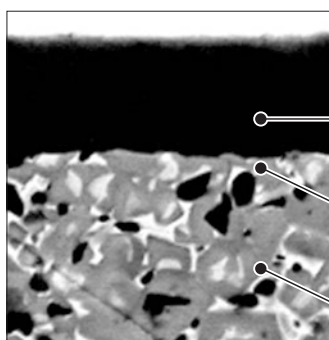


PVD coated Cermet grade for steel

MP3025

MP3025 has excellent flank wear and fracture resistance.

Due to the improved adhesion strength of the smooth substrate surface, MP3025 gives excellent surface finishes, ideal for mass production of small parts.



Ti-compound PVD coating provides excellent wear and welding resistance.

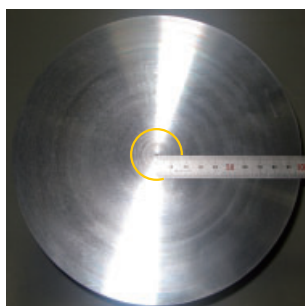
Substrate surface provides excellent adhesion strength for the coating layer.

Substrate with superior fracture and thermal shock resistance.

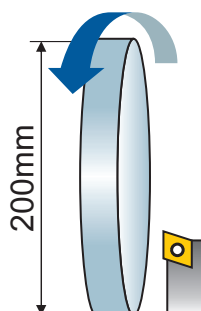
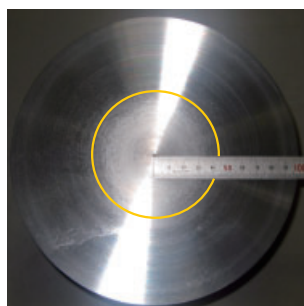
High quality finishes at low speeds.

MP3025 produces better surface finishes at low cutting speeds than competitors PVD cermet grades.

MP3025
LP Breaker

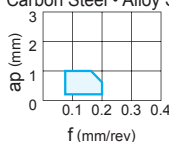
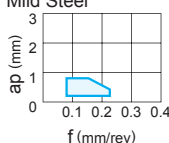
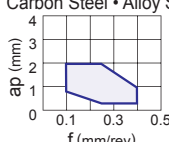
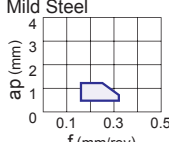
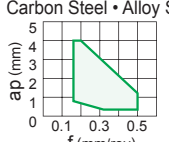


Conventional

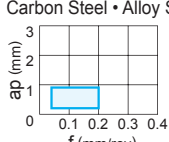
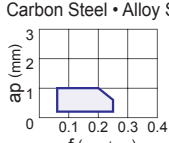
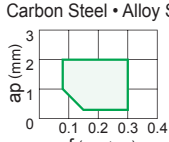


<Cutting condition>
Work piece : S25C
Insert : CNMG120408
Revolution : $n=398 \text{ min.}^{-1}$
(Outer: $vc=250 \text{ m/min.}$)
Depth of cut : $ap=1.5 \text{ mm}$
Feed : $f=0.15 \text{ mm/rev.}$
Wet cutting

Breaker system for steel cutting (Negative inserts)

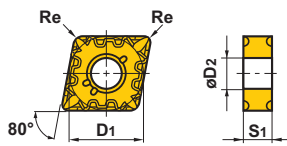
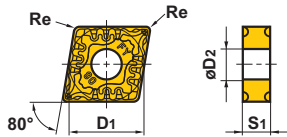
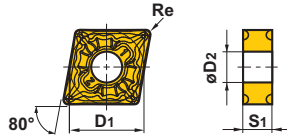
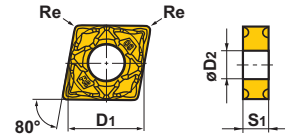
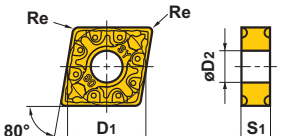
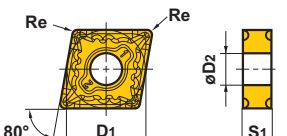
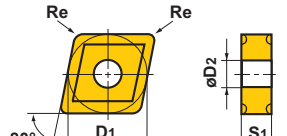
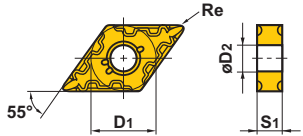
Application	Tolerance	Breaker Name and Picture	Features	Cross Section Geometry
Finish Cutting	M	FH 	First recommendation for finishing carbon steel, alloy steel and stainless steel Double sided chipbreaker. Stable chip control even at small depths of cut.	Carbon Steel • Alloy Steel  Nose 12° Flank 12°
	M	FY 	First recommendation for finishing mild steel Double sided chipbreaker. Effectively controls adhesive chips. Suitable for mild steel finishing.	Mild Steel  Nose 15° Flank 15°
Light Cutting	M	LP 	First recommendation for light cutting of carbon and alloy steel Stable chip control in the light cutting range. The curved edge allows smooth chip discharge.	Carbon Steel • Alloy Steel  Nose 15° Flank 11°
	M	SY 	First recommendation for light cutting of mild Double sided chipbreaker. Effectively controls adhesive chips. Suitable for light cutting.	Mild Steel  Nose 10° Flank 10°
Medium Cutting	M	MP 	First recommendation for medium cutting of carbon and alloy steel Suitable for medium to light cutting. Breaker geometry suitable for copying and back turning. Cutting edge geometry for an optimum balance of sharpness and fracture resistance.	Carbon Steel • Alloy Steel  Nose 15° Flank 11°

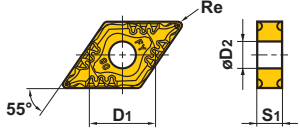
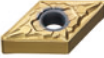
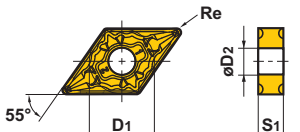
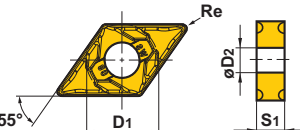
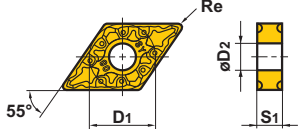
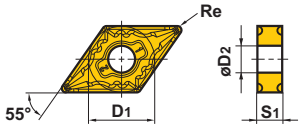
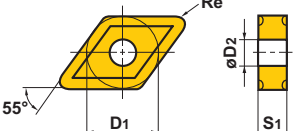
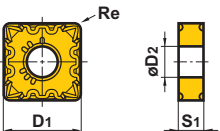
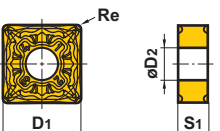
Breaker system for steel cutting (Positive inserts)

Application	Tolerance	Breaker Name and Picture	Features	Cross Section Geometry
Finish Cutting	M	NEW FP 	First recommendation for finish cutting of carbon and alloy steel The protuberance at the tip of the breaker controls chips even at small depths of cut. Corner strength is maintained to prevent abnormal fracturing. 5° 7° Positive Insert	Carbon Steel • Alloy Steel  Nose 6° Flank 6°
Light Cutting	M	NEW LP 	First recommendation for light cutting of carbon and alloy steel Excellent cutting edge sharpness due to the large rake angle. Prevents chip welding of the insert to ensure good surface finishes. Optimised breaker realises a wide range of chip control. 5° 7° Positive Insert	Carbon Steel • Alloy Steel  Nose 18° Flank 8°
Medium Cutting	M	NEW MP 	First recommendation for medium cutting of carbon and alloy steel The flat land produces excellent wear resistance and superior fracture resistance. The wide pocket reduces vibration and chip jamming and also prevents increases in cutting resistance even at high depths of cut. 5° 7° Positive Insert	Carbon Steel • Alloy Steel  Nose 18° Flank 18°

INSERTS

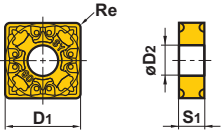
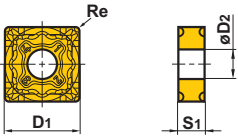
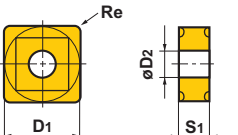
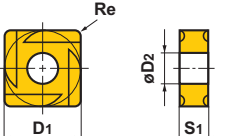
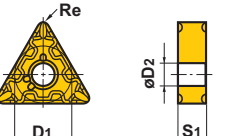
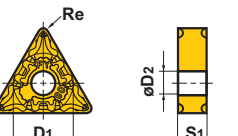
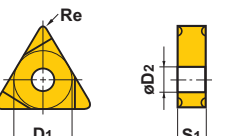
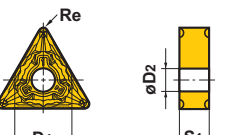
● Negative Inserts (With hole)

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
FH  Finish Cutting	CNMG120402-FH	M	●	12.7	4.76	0.2	5.16	
	120404-FH	M	●	12.7	4.76	0.4	5.16	
	120408-FH	M	●	12.7	4.76	0.8	5.16	
FY  Finish Cutting	CNMG120404-FY	M	●	12.7	4.76	0.4	5.16	
	120408-FY	M	●	12.7	4.76	0.8	5.16	
LP  Light Cutting	CNMG120404-LP	M	●	12.7	4.76	0.4	5.16	
	120408-LP	M	●	12.7	4.76	0.8	5.16	
SW  Light Cutting (Wiper)	CNMG120404-SW	M	●	12.7	4.76	0.4	5.16	
	120408-SW	M	●	12.7	4.76	0.8	5.16	
	120412-SW	M	●	12.7	4.76	1.2	5.16	
SY  Light Cutting	CNMG120404-SY	M	●	12.7	4.76	0.4	5.16	
	120408-SY	M	●	12.7	4.76	0.8	5.16	
MP  Medium Cutting	CNMG120404-MP	M	●	12.7	4.76	0.4	5.16	
	120408-MP	M	●	12.7	4.76	0.8	5.16	
	120412-MP	M	●	12.7	4.76	1.2	5.16	
Standard  Medium Cutting	CNMG120404	M	●	12.7	4.76	0.4	5.16	
	120408	M	●	12.7	4.76	0.8	5.16	
FH  Finish Cutting	DNMG150402-FH	M	●	12.7	4.76	0.2	5.16	
	150404-FH	M	●	12.7	4.76	0.4	5.16	
	150408-FH	M	●	12.7	4.76	0.8	5.16	
	150602-FH	M	●	12.7	6.35	0.2	5.16	
	150604-FH	M	●	12.7	6.35	0.4	5.16	
	150608-FH	M	●	12.7	6.35	0.8	5.16	

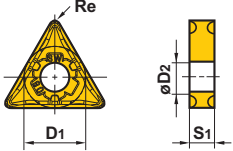
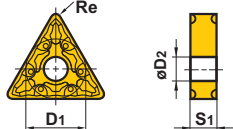
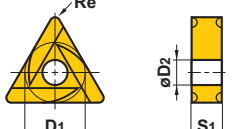
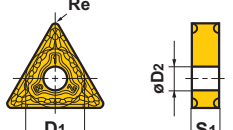
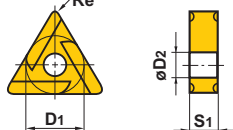
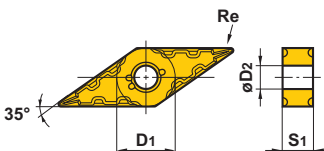
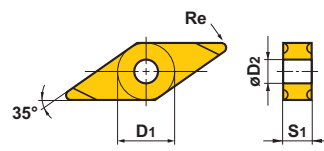
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
FY  Finish Cutting	DNMG150404-FY	M	●	12.7	4.76	0.4	5.16	
	150408-FY	M	●	12.7	4.76	0.8	5.16	
	150604-FY	M	●	12.7	6.35	0.4	5.16	
	150608-FY	M	●	12.7	6.35	0.8	5.16	
LP  Light Cutting	NEW DNMG110404-LP	M	●	9.525	4.76	0.4	3.81	
	NEW 110408-LP	M	●	9.525	4.76	0.8	3.81	
	150404-LP	M	●	12.7	4.76	0.4	5.16	
	150408-LP	M	●	12.7	4.76	0.8	5.16	
	NEW 150412-LP	M	●	12.7	4.76	1.2	5.16	
	150604-LP	M	●	12.7	6.35	0.4	5.16	
SW  Light Cutting (Wiper)	DNMX150404-SW	M	●	12.7	4.76	0.4	5.16	
	150408-SW	M	●	12.7	4.76	0.8	5.16	
	150604-SW	M	●	12.7	6.35	0.4	5.16	
	150608-SW	M	●	12.7	6.35	0.8	5.16	
SY  Light Cutting	DNMG150404-SY	M	●	12.7	4.76	0.4	5.16	
	150408-SY	M	●	12.7	4.76	0.8	5.16	
	150604-SY	M	●	12.7	6.35	0.4	5.16	
	150608-SY	M	●	12.7	6.35	0.8	5.16	
MP  Medium Cutting	DNMG150404-MP	M	●	12.7	4.76	0.4	5.16	
	150408-MP	M	●	12.7	4.76	0.8	5.16	
	150412-MP	M	●	12.7	4.76	1.2	5.16	
	150604-MP	M	●	12.7	6.35	0.4	5.16	
	150608-MP	M	●	12.7	6.35	0.8	5.16	
	150612-MP	M	●	12.7	6.35	1.2	5.16	
Standard  Medium Cutting	DNMG150404	M	●	12.7	4.76	0.4	5.16	
	150408	M	●	12.7	4.76	0.8	5.16	
	150604	M	●	12.7	6.35	0.4	5.16	
	150608	M	●	12.7	6.35	0.8	5.16	
FH  Finish Cutting	SNMG120404-FH	M	●	12.7	4.76	0.4	5.16	
	120408-FH	M	●	12.7	4.76	0.8	5.16	
LP  Light Cutting	SNMG120404-LP	M	●	12.7	4.76	0.4	5.16	
	120408-LP	M	●	12.7	4.76	0.8	5.16	

INSERTS

● Negative Inserts (With hole)

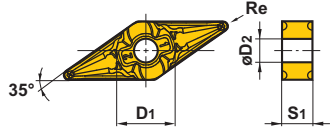
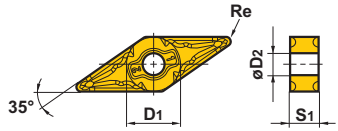
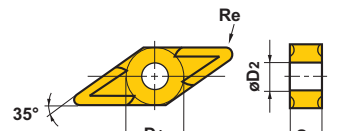
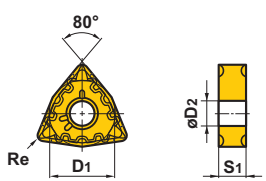
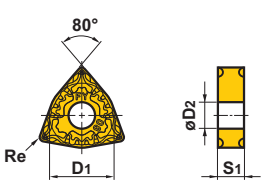
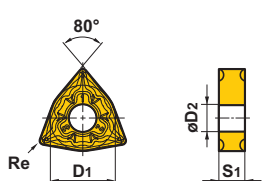
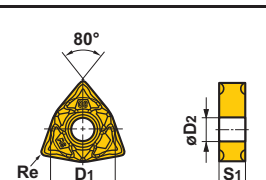
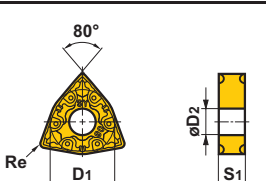
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
SY  Light Cutting	SNMG120408-SY	M	●	12.7	4.76	0.8	5.16	
MP  Medium Cutting	SNMG120404-MP	M	●	12.7	4.76	0.4	5.16	
	120408-MP	M	●	12.7	4.76	0.8	5.16	
	120412-MP	M	●	12.7	4.76	1.2	5.16	
Standard  Medium Cutting	SNMG090304	M	●	9.525	3.18	0.4	3.81	
	090308	M	●	9.525	3.18	0.8	3.81	
	120404	M	●	12.7	4.76	0.4	5.16	
	120408	M	●	12.7	4.76	0.8	5.16	
R/L  Medium Cutting	SNGG120404R	G	●	12.7	4.76	0.4	5.16	
	120408R	G	●	12.7	4.76	0.8	5.16	
	120404L	G	●	12.7	4.76	0.4	5.16	
	120408L	G	●	12.7	4.76	0.8	5.16	
FH  Finish Cutting	TNMG160402-FH	M	●	9.525	4.76	0.2	3.81	
	160404-FH	M	●	9.525	4.76	0.4	3.81	
	160408-FH	M	●	9.525	4.76	0.8	3.81	
FY  Finish Cutting	TNMG160404-FY	M	●	9.525	4.76	0.4	3.81	
	160408-FY	M	●	9.525	4.76	0.8	3.81	
R/L-F  Finish Cutting	TNGG160402R-F	G	●	9.525	4.76	0.2	3.81	
	160404R-F	G	●	9.525	4.76	0.4	3.81	
	160408R-F	G	●	9.525	4.76	0.8	3.81	
	160402L-F	G	●	9.525	4.76	0.2	3.81	
	160404L-F	G	●	9.525	4.76	0.4	3.81	
	160408L-F	G	●	9.525	4.76	0.8	3.81	
LP  Light Cutting	TNMG160404-LP	M	●	9.525	4.76	0.4	3.81	
	160408-LP	M	●	9.525	4.76	0.8	3.81	
	160412-LP	M	●	9.525	4.76	1.2	3.81	
	220408-LP	M	●	12.7	4.76	0.8	5.16	

● : Inventory maintained.

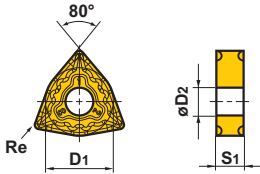
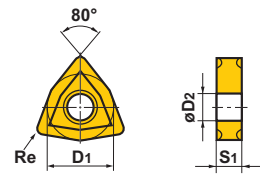
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
SW  Light Cutting (Wiper)	TNMX160404-SW	M	●	9.525	4.76	0.4	3.81	
	160408-SW	M	●	9.525	4.76	0.8	3.81	
SY  Light Cutting	TNMG160404-SY	M	●	9.525	4.76	0.4	3.81	
	160408-SY	M	●	9.525	4.76	0.8	3.81	
R/L-K  Light Cutting	TNGG160402R-K	G	●	9.525	4.76	0.2	3.81	
	160404R-K	G	●	9.525	4.76	0.4	3.81	
	160408R-K	G	●	9.525	4.76	0.8	3.81	
	160402L-K	G	●	9.525	4.76	0.2	3.81	
	160404L-K	G	●	9.525	4.76	0.4	3.81	
	160408L-K	G	●	9.525	4.76	0.8	3.81	
MP  Medium Cutting	TNMG160404-MP	M	●	9.525	4.76	0.4	3.81	
	160408-MP	M	●	9.525	4.76	0.8	3.81	
	160412-MP	M	●	9.525	4.76	1.2	3.81	
Standard  Medium Cutting	TNMG160404	M	●	9.525	4.76	0.4	3.81	
	160408	M	●	9.525	4.76	0.8	3.81	
R/L  Medium Cutting	TNGG160402R	G	●	9.525	4.76	0.2	3.81	
	160404R	G	●	9.525	4.76	0.4	3.81	
	160408R	G	●	9.525	4.76	0.8	3.81	
	160402L	G	●	9.525	4.76	0.2	3.81	
	160404L	G	●	9.525	4.76	0.4	3.81	
	160408L	G	●	9.525	4.76	0.8	3.81	
FH  Finish Cutting	VNMG160402-FH	M	●	9.525	4.76	0.2	3.81	
	160404-FH	M	●	9.525	4.76	0.4	3.81	
	160408-FH	M	●	9.525	4.76	0.8	3.81	
R/L-F  Finish Cutting	VNGG160402R-F	G	●	9.525	4.76	0.2	3.81	
	160404R-F	G	●	9.525	4.76	0.4	3.81	
	160402L-F	G	●	9.525	4.76	0.2	3.81	
	160404L-F	G	●	9.525	4.76	0.4	3.81	

INSERTS

● Negative Inserts (With hole)

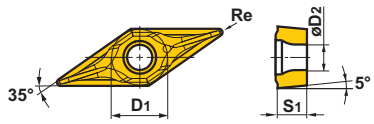
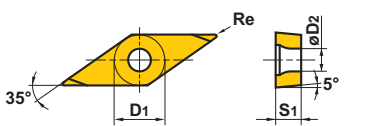
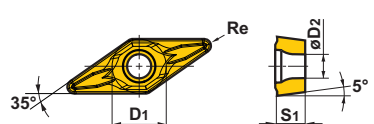
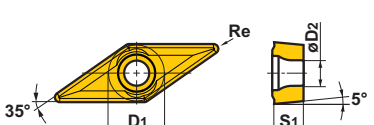
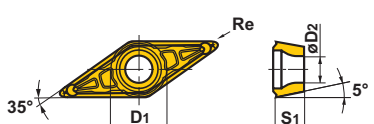
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
LP  Light Cutting	VNMG160404-LP	M	●	9.525	4.76	0.4	3.81	
	160408-LP	M	●	9.525	4.76	0.8	3.81	
MP  Medium Cutting	VNMG160404-MP	M	●	9.525	4.76	0.4	3.81	
	160408-MP	M	●	9.525	4.76	0.8	3.81	
Standard  Medium Cutting	VNMG160404	M	●	9.525	4.76	0.4	3.81	
	160408	M	●	9.525	4.76	0.8	3.81	
FH  Finish Cutting	WNMG080404-FH	M	●	12.7	4.76	0.4	5.16	
	080408-FH	M	●	12.7	4.76	0.8	5.16	
FY  Finish Cutting	WNMG080404-FY	M	●	12.7	4.76	0.4	5.16	
	080408-FY	M	●	12.7	4.76	0.8	5.16	
LP  Light Cutting	NEW WNMG06T304-LP	M	●	9.525	3.97	0.4	3.81	
	NEW 06T308-LP	M	●	9.525	3.97	0.8	3.81	
	NEW 060404-LP	M	●	9.525	4.76	0.4	3.81	
	NEW 060408-LP	M	●	9.525	4.76	0.8	3.81	
	080404-LP	M	●	12.7	4.76	0.4	5.16	
	080408-LP	M	●	12.7	4.76	0.8	5.16	
SW  Light Cutting (Wiper)	WNMG060404-SW	M	●	9.525	4.76	0.4	3.81	
	060408-SW	M	●	9.525	4.76	0.8	3.81	
	080404-SW	M	●	12.7	4.76	0.4	5.16	
	080408-SW	M	●	12.7	4.76	0.8	5.16	
	080412-SW	M	●	12.7	4.76	1.2	5.16	
SY  Light Cutting	WNMG080404-SY	M	●	12.7	4.76	0.4	5.16	
	080408-SY	M	●	12.7	4.76	0.8	5.16	

● : Inventory maintained.

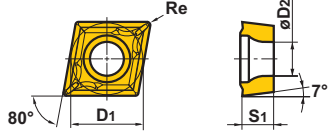
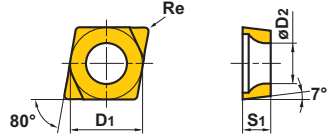
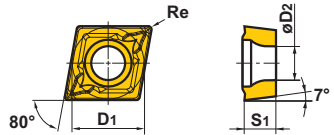
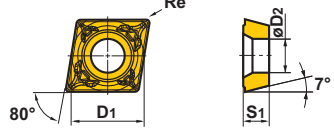
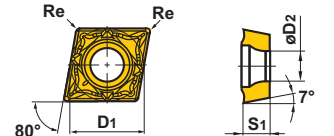
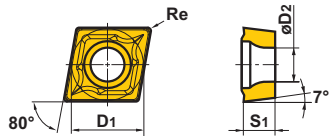
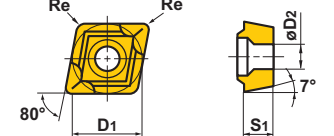
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
MP  Medium Cutting	WNMG080404-MP	M	●	12.7	4.76	0.4	5.16	
	080408-MP	M	●	12.7	4.76	0.8	5.16	
	080412-MP	M	●	12.7	4.76	1.2	5.16	
Standard  Medium Cutting	WNMG080404	M	●	12.7	4.76	0.4	5.16	
	080408	M	●	12.7	4.76	0.8	5.16	

INSERTS

● 5° Positive Inserts (With hole)

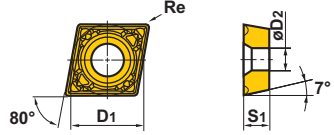
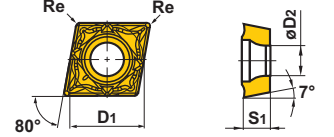
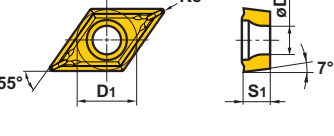
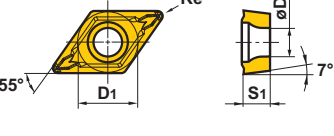
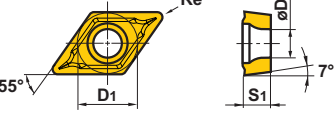
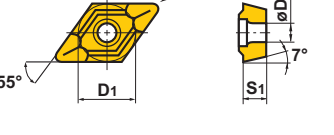
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
NEW FP 	VBMT110302-FP	M	●	6.35	3.18	0.2	2.9	
	110304-FP	M	●	6.35	3.18	0.4	2.9	
	110308-FP	M	●	6.35	3.18	0.8	2.9	
	160404-FP	M	●	9.525	4.76	0.4	4.4	
	160408-FP	M	●	9.525	4.76	0.8	4.4	
Finish Cutting								
R/L-F 	VBGT110302R-F	G	●	6.35	3.18	0.2	2.85	
	110302L-F	G	●	6.35	3.18	0.2	2.85	
Finish Cutting								
NEW LP 	VBMT110304-LP	M	●	6.35	3.18	0.4	2.9	
	110308-LP	M	●	6.35	3.18	0.8	2.9	
	160404-LP	M	●	9.525	4.76	0.4	4.4	
	160408-LP	M	●	9.525	4.76	0.8	4.4	
Light Cutting								
NEW MP 	VBMT160404-MP	M	●	9.525	4.76	0.4	4.4	
	160408-MP	M	●	9.525	4.76	0.8	4.4	
Medium Cutting								
MV 	VBMT110304-MV	M	●	6.35	3.18	0.4	2.85	
	110308-MV	M	●	6.35	3.18	0.8	2.85	
	160404-MV	M	●	9.525	4.76	0.4	4.43	
	160408-MV	M	●	9.525	4.76	0.8	4.43	
Medium Cutting								
R/L-F 	WBGT020102L-F	G	●	3.97	1.59	0.2	2.3	
	020104L-F	G	●	3.97	1.59	0.4	2.3	
	L30202L-F	G	●	4.76	2.38	0.2	2.3	
	L30204L-F	G	●	4.76	2.38	0.4	2.3	
Finish Cutting								
R/L-MV 	WBMTL30202L-MV	M	●	4.76	2.38	0.2	2.3	
	L30202R-MV	M	●	4.76	2.38	0.2	2.3	
	L30204L-MV	M	●	4.76	2.38	0.4	2.3	
	L30204R-MV	M	●	4.76	2.38	0.4	2.3	
Medium Cutting								

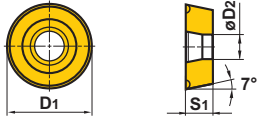
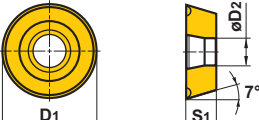
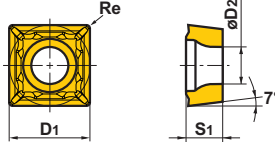
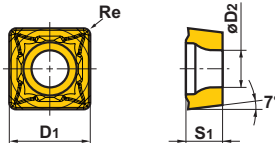
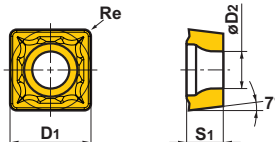
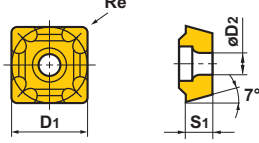
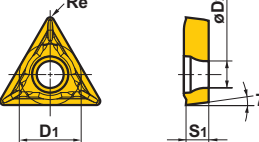
● 7° Positive Inserts (With hole)

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
NEW FP 	CCMT060202-FP	M	●	6.35	2.38	0.2	2.8	
	060204-FP	M	●	6.35	2.38	0.4	2.8	
	09T302-FP	M	●	9.525	3.97	0.2	4.4	
	09T304-FP	M	●	9.525	3.97	0.4	4.4	
	09T308-FP	M	●	9.525	3.97	0.8	4.4	
Finish Cutting								
L-F 	CCGT03S102L-F	G	●	3.97	1.39	0.2	2.0	
	03S104L-F	G	●	3.97	1.39	0.4	2.0	
	04T002L-F	G	●	4.76	1.79	0.2	2.4	
	04T004L-F	G	●	4.76	1.79	0.4	2.4	
Finish Cutting								
NEW LP 	CCMT060204-LP	M	●	6.35	2.38	0.4	2.8	
	060208-LP	M	●	6.35	2.38	0.8	2.8	
	09T304-LP	M	●	9.525	3.97	0.4	4.4	
	09T308-LP	M	●	9.525	3.97	0.8	4.4	
Light Cutting								
SV 	CCMH060202-SV	M	●	6.35	2.38	0.2	2.8	
	060204-SV	M	●	6.35	2.38	0.4	2.8	
Light Cutting								
SW 	CCMT060202-SW	M	●	6.35	2.38	0.2	2.8	
	060204-SW	M	●	6.35	2.38	0.4	2.8	
	09T302-SW	M	●	9.525	3.97	0.2	4.4	
	09T304-SW	M	●	9.525	3.97	0.4	4.4	
Light Cutting (Wiper)								
NEW MP 	CCMT060204-MP	M	●	6.35	2.38	0.4	2.8	
	060208-MP	M	●	6.35	2.38	0.8	2.8	
	09T304-MP	M	●	9.525	3.97	0.4	4.4	
	09T308-MP	M	●	9.525	3.97	0.8	4.4	
	120404-MP	M	●	12.7	4.76	0.4	5.5	
	120408-MP	M	●	12.7	4.76	0.8	5.5	
	120412-MP		●	12.7	4.76	1.2	5.5	
Medium Cutting								
Standard 	CCMT060202	M	●	6.35	2.38	0.2	2.8	
	060204	M	●	6.35	2.38	0.4	2.8	
	080304	M	●	7.94	3.18	0.4	3.4	
	09T302	M	●	9.525	3.97	0.2	4.4	
	09T304	M	●	9.525	3.97	0.4	4.4	
	09T308	M	●	9.525	3.97	0.8	4.4	
	120404	M	●	12.7	4.76	0.4	5.5	
	120408	M	●	12.7	4.76	0.8	5.5	
Medium Cutting								

INSERTS

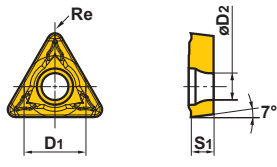
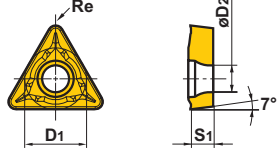
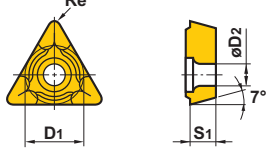
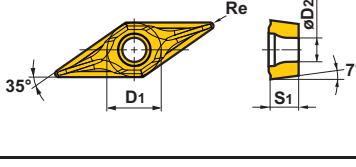
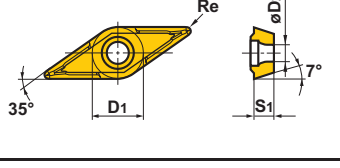
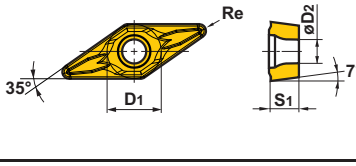
● 7° Positive Inserts (With hole)

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
MV  Medium Cutting	CCMH060202-MV	M	●	6.35	2.38	0.2	2.8	
	060204-MV	M	●	6.35	2.38	0.4	2.8	
MW  Medium Cutting (Wiper)	CCMT060204-MW	M	●	6.35	2.38	0.4	2.8	
	060208-MW	M	●	6.35	2.38	0.8	2.8	
	09T304-MW	M	●	9.525	3.97	0.4	4.4	
	09T308-MW	M	●	9.525	3.97	0.8	4.4	
NEW FP  Finish Cutting	DCMT070202-FP	M	●	6.35	2.38	0.2	2.8	
	070204-FP	M	●	6.35	2.38	0.4	2.8	
	11T302-FP	M	●	9.525	3.97	0.2	4.4	
	11T304-FP	M	●	9.525	3.97	0.4	4.4	
	11T308-FP	M	●	9.525	3.97	0.8	4.4	
NEW LP  Light Cutting	DCMT070204-LP	M	●	6.35	2.38	0.4	2.8	
	070208-LP	M	●	6.35	2.38	0.8	2.8	
	11T304-LP	M	●	9.525	3.97	0.4	4.4	
	11T308-LP	M	●	9.525	3.97	0.8	4.4	
NEW MP  Medium Cutting	DCMT070204-MP	M	●	6.35	2.38	0.4	2.8	
	070208-MP	M	●	6.35	2.38	0.8	2.8	
	11T304-MP	M	●	9.525	3.97	0.4	4.4	
	11T308-MP	M	●	9.525	3.97	0.8	4.4	
	150404-MP	M	●	12.7	4.76	0.4	5.5	
	150408-MP	M	●	12.7	4.76	0.8	5.5	
Standard  Medium Cutting	DCMT070202	M	●	6.35	2.38	0.2	2.8	
	070204	M	●	6.35	2.38	0.4	2.8	
	070208	M	●	6.35	2.38	0.8	2.8	
	11T302	M	●	9.525	3.97	0.2	4.4	
	11T304	M	●	9.525	3.97	0.4	4.4	
	11T308	M	●	9.525	3.97	0.8	4.4	
	150404	M	●	12.7	4.76	0.4	5.5	
	150408	M	●	12.7	4.76	0.8	5.5	
MV  Medium Cutting	DCMT070202-MV	M	●	6.35	2.38	0.2	2.8	
	070204-MV	M	●	6.35	2.38	0.4	2.8	
	070208-MV	M	●	6.35	2.38	0.8	2.8	
	11T302-MV	M	●	9.525	3.97	0.2	4.4	
	11T304-MV	M	●	9.525	3.97	0.4	4.4	
	11T308-MV	M	●	9.525	3.97	0.8	4.4	

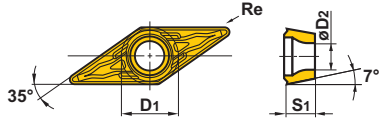
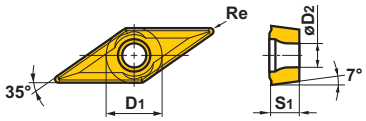
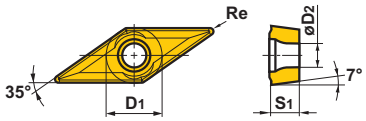
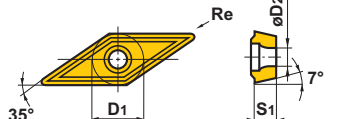
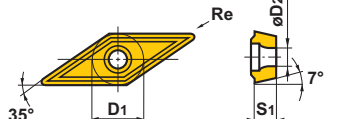
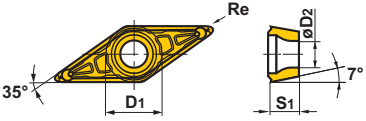
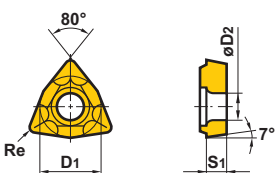
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
Standard 	RCMT0602M0	M	●	6	2.38	-	2.8	
	0803M0	M	●	8	3.18	-	3.4	
Medium Cutting								
Standard 	RCMX1003M0	M	●	10	3.18	-	3.6	
	1204M0	M	●	12	4.76	-	4.2	
Medium Cutting								
NEW FP 	SCMT09T304-FP	M	●	9.525	3.97	0.4	4.4	
Finish Cutting	09T308-FP	M	●	9.525	3.97	0.8	4.4	
NEW LP 	SCMT09T304-LP	M	●	9.525	3.97	0.4	4.4	
Light Cutting	09T308-LP	M	●	9.525	3.97	0.8	4.4	
NEW MP 	SCMT09T304-MP	M	●	9.525	3.97	0.4	4.4	
	09T308-MP	M	●	9.525	3.97	0.8	4.4	
	120404-MP	M	●	12.7	4.76	0.4	5.5	
	120408-MP	M	●	12.7	4.76	0.8	5.5	
Medium Cutting								
Standard 	SCMT09T304	M	●	9.525	3.97	0.4	4.4	
	09T308	M	●	9.525	3.97	0.8	4.4	
	120404	M	●	12.7	4.76	0.4	5.5	
	120408	M	●	12.7	4.76	0.8	5.5	
Medium Cutting								
NEW FP 	TCMT090202-FP	M	●	5.56	2.38	0.2	2.5	
	090204-FP	M	●	5.56	2.38	0.4	2.5	
	110202-FP	M	●	6.35	2.38	0.2	2.8	
	110204-FP	M	●	6.35	2.38	0.4	2.8	
	16T304-FP	M	●	9.525	3.97	0.4	4.4	
Finish Cutting								

INSERTS

● 7° Positive Inserts (With hole)

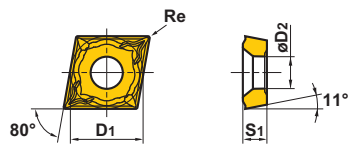
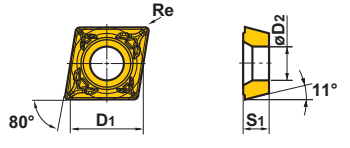
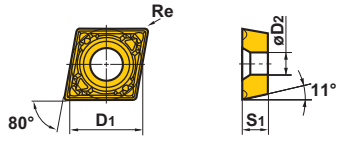
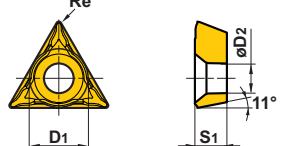
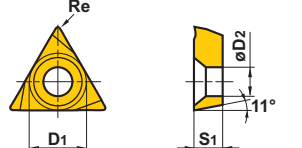
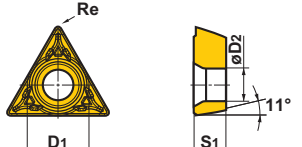
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
NEW LP  Light Cutting	TCMT090204-LP	M	●	5.56	2.38	0.4	2.5	
	090208-LP	M	●	5.56	2.38	0.8	2.5	
	110204-LP	M	●	6.35	2.38	0.4	2.8	
	110208-LP	M	●	6.35	2.38	0.8	2.8	
	16T304-LP	M	●	9.525	3.97	0.4	4.4	
	16T308-LP	M	●	9.525	3.97	0.8	4.4	
NEW MP  Medium Cutting	TCMT090204-MP	M	●	5.56	2.38	0.4	2.5	
	090208-MP	M	●	5.56	2.38	0.8	2.5	
	110204-MP	M	●	6.35	2.38	0.4	2.8	
	110208-MP	M	●	6.35	2.38	0.8	2.8	
	130304-MP	M	●	7.94	3.18	0.4	3.4	
	16T304-MP	M	●	9.525	3.97	0.4	4.4	
	16T308-MP	M	●	9.525	3.97	0.8	4.4	
	16T312-MP	M	●	9.525	3.97	1.2	4.4	
Standard  Medium Cutting	TCMT080204	M	●	4.76	2.38	0.4	2.3	
	090204	M	●	5.56	2.38	0.4	2.5	
	110202	M	●	6.35	2.38	0.2	2.8	
	110204	M	●	6.35	2.38	0.4	2.8	
	110208	M	●	6.35	2.38	0.8	2.8	
	130302	M	●	7.94	3.18	0.2	3.4	
	130304	M	●	7.94	3.18	0.4	3.4	
	16T304	M	●	9.525	3.97	0.4	4.4	
NEW FP  Finish Cutting	VCMT110302-FP	M	●	6.35	3.18	0.2	2.8	
	110304-FP	M	●	6.35	3.18	0.4	2.8	
	160404-FP	M	●	9.525	4.76	0.4	4.4	
	160408-FP	M	●	9.525	4.76	0.8	4.4	
FV  Finish Cutting	VCMT080202-FV	M	●	4.76	2.38	0.2	2.42	
	080204-FV	M	●	4.76	2.38	0.4	2.42	
NEW LP  Light Cutting	VCMT110304-LP	M	●	6.35	3.18	0.4	2.8	
	110308-LP	M	●	6.35	3.18	0.8	2.8	
	160404-LP	M	●	9.525	4.76	0.4	4.4	
	160408-LP	M	●	9.525	4.76	0.8	4.4	

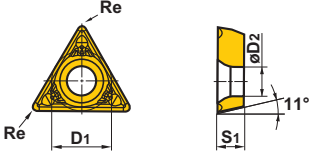
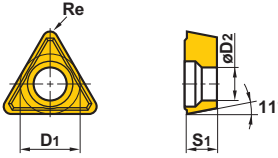
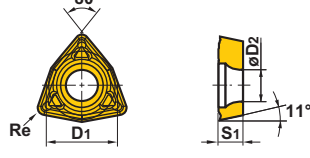
● : Inventory maintained.

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
SV  Light Cutting	VCMT080202-SV	M	●	4.76	2.38	0.2	2.42	
	080204-SV	M	●	4.76	2.38	0.4	2.42	
NEW MP  Medium Cutting	VCMT160404-MP	M	●	9.525	4.76	0.4	4.4	
	160408-MP	M	●	9.525	4.76	0.8	4.4	
	160412-MP	M	●	9.525	4.76	1.2	4.4	
Standard  Medium Cutting	VCMT110304	M	●	6.35	3.18	0.4	2.8	
	160404	M	●	9.525	4.76	0.4	4.4	
	160408	M	●	9.525	4.76	0.8	4.4	
MV  Medium Cutting	VCMT080202-MV	M	●	4.76	2.38	0.2	2.42	
	080204-MV	M	●	4.76	2.38	0.4	2.42	
Standard  Medium Cutting	WCMT020102	M	●	3.97	1.59	0.2	2.3	
	020104	M	●	3.97	1.59	0.4	2.3	
	L30202	M	●	4.76	2.38	0.2	2.3	
	L30204	M	●	4.76	2.38	0.4	2.3	
	040202	M	●	6.35	2.38	0.2	2.8	
	040204	M	●	6.35	2.38	0.4	2.8	
	06T304	M	●	9.525	3.97	0.4	4.4	
	06T308	M	●	9.525	3.97	0.8	4.4	

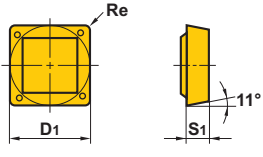
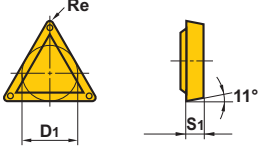
INSERTS

● 11° Positive Inserts (With hole)

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
FV 	CPMH080202-FV	M	●	7.94	2.38	0.2	3.5	
	080204-FV	M	●	7.94	2.38	0.4	3.5	
	090302-FV	M	●	9.525	3.18	0.2	4.5	
	090304-FV	M	●	9.525	3.18	0.4	4.5	
	090308-FV	M	●	9.525	3.18	0.8	4.5	
Finish Cutting								
SV 	CPMH080202-SV	M	●	7.94	2.38	0.2	3.5	
	080204-SV	M	●	7.94	2.38	0.4	3.5	
	090302-SV	M	●	9.525	3.18	0.2	4.5	
	090304-SV	M	●	9.525	3.18	0.4	4.5	
	090308-SV	M	●	9.525	3.18	0.8	4.5	
Light Cutting								
MV 	CPMH080204-MV	M	●	7.94	2.38	0.4	3.5	
	080208-MV	M	●	7.94	2.38	0.8	3.5	
	090304-MV	M	●	9.525	3.18	0.4	4.5	
	090308-MV	M	●	9.525	3.18	0.8	4.5	
Medium Cutting								
FV 	TPMH080202-FV	M	●	4.76	2.38	0.2	2.4	
	080204-FV	M	●	4.76	2.38	0.4	2.4	
	090202-FV	M	●	5.56	2.38	0.2	2.9	
	090204-FV	M	●	5.56	2.38	0.4	2.9	
	110302-FV	M	●	6.35	3.18	0.2	3.4	
	110304-FV	M	●	6.35	3.18	0.4	3.4	
	110308-FV	M	●	6.35	3.18	0.8	3.4	
	160302-FV	M	●	9.525	3.18	0.2	4.4	
	160304-FV	M	●	9.525	3.18	0.4	4.4	
Finish Cutting	160308-FV	M	●	9.525	3.18	0.8	4.4	
L-FS 	TPGH080202L-FS	G	●	4.76	2.38	0.2	2.4	
	080204L-FS	G	●	4.76	2.38	0.4	2.4	
	090202L-FS	G	●	5.56	2.38	0.2	2.9	
	090204L-FS	G	●	5.56	2.38	0.4	2.9	
	110302L-FS	G	●	6.35	3.18	0.2	3.4	
	110304L-FS	G	●	6.35	3.18	0.4	3.4	
	160304L-FS	G	●	9.525	3.18	0.4	4.4	
Finish Cutting	160308L-FS	G	●	9.525	3.18	0.8	4.4	
SV 	TPMH080202-SV	M	●	4.76	2.38	0.2	2.4	
	080204-SV	M	●	4.76	2.38	0.4	2.4	
	090202-SV	M	●	5.56	2.38	0.2	2.9	
	090204-SV	M	●	5.56	2.38	0.4	2.9	
	110302-SV	M	●	6.35	3.18	0.2	3.4	
	110304-SV	M	●	6.35	3.18	0.4	3.4	
	110308-SV	M	●	6.35	3.18	0.8	3.4	
	160302-SV	M	●	9.525	3.18	0.2	4.4	
	160304-SV	M	●	9.525	3.18	0.4	4.4	
Light Cutting	160308-SV	M	●	9.525	3.18	0.8	4.4	

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
MV 	TPMH080202-MV	M	●	4.76	2.38	0.2	2.4	
	080204-MV	M	●	4.76	2.38	0.4	2.4	
	090202-MV	M	●	5.56	2.38	0.2	2.9	
	090204-MV	M	●	5.56	2.38	0.4	2.9	
	090208-MV	M	●	5.56	2.38	0.8	2.9	
	110302-MV	M	●	6.35	3.18	0.2	3.4	
	110304-MV	M	●	6.35	3.18	0.4	3.4	
	110308-MV	M	●	6.35	3.18	0.8	3.4	
	160304-MV	M	●	9.525	3.18	0.4	4.4	
	160308-MV	M	●	9.525	3.18	0.8	4.4	
Medium Cutting								
Standard	TPMX110304	M	●	6.35	3.18	0.4	3.5	
	110308	M	●	6.35	3.18	0.8	3.5	
Medium Cutting								
MV 	WPMT040202-MV	M	●	6.35	2.38	0.2	2.8	
	040204-MV	M	●	6.35	2.38	0.4	2.8	
	060304-MV	M	●	9.525	3.18	0.4	4.4	
	060308-MV	M	●	9.525	3.18	0.8	4.4	
Medium Cutting								

● 11° Positive Inserts (Without hole)

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			MP3025	D1	S1	Re	D2	
Standard 	SPMR090304	M	●	9.525	3.18	0.4	-	
	090308	M	●	9.525	3.18	0.8	-	
	120304	M	●	12.7	3.18	0.4	-	
	120308	M	●	12.7	3.18	0.8	-	
Light to Medium Cutting								
Standard 	TPMR090202	M	●	5.56	2.38	0.2	-	
	090204	M	●	5.56	2.38	0.4	-	
	090208	M	●	5.56	2.38	0.8	-	
	110302	M	●	6.35	3.18	0.2	-	
	110304	M	●	6.35	3.18	0.4	-	
	110308	M	●	6.35	3.18	0.8	-	
	160304	M	●	9.525	3.18	0.4	-	
	160308	M	●	9.525	3.18	0.8	-	
	160312	M	●	9.525	3.18	1.2	-	
Light to Medium Cutting								

PVD coated Cermet grade for steel

RECOMMENDED CUTTING CONDITIONS

Negative Inserts (External turning tools)

Work Material	Hardness	Cutting Mode		Breaker	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Mild Steel (SS400, S10C etc.)	General Cutting	Finish Cutting	FY	275—420	0.09—0.23	0.20—0.80
			Light Cutting	SY	250—385	0.16—0.33	0.50—1.20
	Carbon Steel, Alloy Steel (S45C, SCM440 etc.)	Stable Cutting	Finish Cutting	R/L-F	210—325	0.05—0.15	0.10—0.50
			Light Cutting	LP	195—295	0.10—0.40	0.30—2.00
			Light Cutting	SW	195—295	0.10—0.50	0.30—2.50
			Light Cutting	R/L-K	195—295	0.08—0.20	0.30—1.20
			Medium Cutting	MP	175—270	0.16—0.50	0.30—4.00
			Medium Cutting	Standard	175—270	0.25—0.60	1.50—5.00
			Medium Cutting	R/L	175—270	0.15—0.32	0.40—2.00
		General Cutting	Finish Cutting	FH	210—325	0.08—0.20	0.20—1.00
			Medium Cutting	LP	195—295	0.10—0.40	0.30—2.00

7° Positive Inserts (SP Holder, External turning tools)

Work Material	Hardness	Cutting Mode		Breaker	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Mild Steel (SS400, S10C etc.)	Stable Cutting	Finish Cutting	R/L-F	230—350	0.05—0.12	0.10—1.50
			Light Cutting	MV, Standard	190—295	0.08—0.30	0.30—2.00
		General Cutting	Finish Cutting	FP, FV	230—350	0.04—0.20	0.20—0.90
			Light Cutting	LP	230—350	0.06—0.25	0.20—1.00
			Medium Cutting	MP	190—295	0.08—0.30	0.30—2.00
	Carbon Steel, Alloy Steel (S45C, SCM440 etc.)	Stable Cutting	Finish Cutting	R/L-F	170—260	0.05—0.12	0.10—0.50
			Light Cutting	SV	170—260	0.06—0.25	0.20—1.00
			Medium Cutting	MV, Standard	140—215	0.08—0.30	0.30—2.00
			Medium Cutting	MW	140—215	0.10—0.35	0.80—2.50
		General Cutting	Finish Cutting	FP, FV	170—260	0.04—0.20	0.20—0.90
			Light Cutting	LP	170—260	0.06—0.25	0.20—1.00
			Light Cutting	SW	170—260	0.06—0.24	0.20—1.50
			Medium Cutting	MP	140—215	0.08—0.30	0.30—2.00
	Carbon Steel, Alloy Steel (SNM439 etc.)	General Cutting	Medium Cutting	MP	100—155	0.08—0.30	0.30—2.00

11° Positive Inserts (MC Holder, External turning tools)

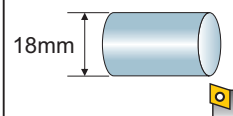
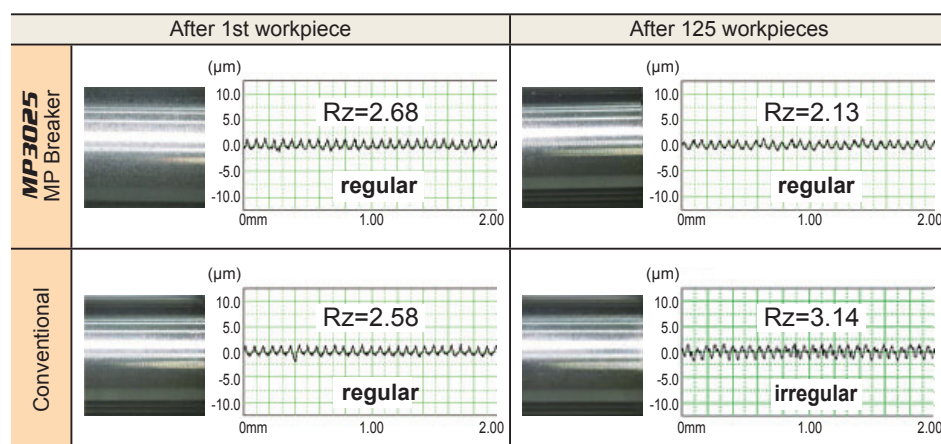
Work Material	Hardness	Cutting Mode		Breaker	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Mild Steel (SS400, S10C etc.)	General Cutting	Light/Medium Cutting	Standard	190—295	0.08—0.30	0.30—2.00
	Carbon Steel, Alloy Steel (S45C, SCM440 etc.)	General Cutting	Light/Medium Cutting	Standard	140—215	0.08—0.30	0.30—2.00

5°/7° Positive Inserts (Boring bars)

Work Material	Hardness	Cutting Mode		Breaker	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
P	Mild Steel (SS400, S10C etc.)	General Cutting	Finish Cutting	FP, FV	230—350	0.04—0.20	0.20—0.90
			Light Cutting	LP	230—350	0.06—0.25	0.20—1.00
			Medium Cutting	MP, MV, Standard	190—295	0.08—0.30	0.30—2.00
	Carbon Steel, Alloy Steel (S45C, SCM440 etc.)	General Cutting	Finish Cutting	FP	170—260	0.04—0.20	0.20—0.90
			Light Cutting	LP	170—260	0.06—0.25	0.20—1.00
			Medium Cutting	MP	140—215	0.08—0.30	0.30—2.00
	Carbon Steel, Alloy Steel (SNM439 etc.)	General Cutting	Finish Cutting	FP	120—185	0.04—0.20	0.20—0.90
			Light Cutting	LP	120—185	0.06—0.25	0.20—1.00
			Medium Cutting	MP	100—155	0.08—0.30	0.30—2.00

★Recommended cutting conditions for 5° and 7° positive insert may vary depending on overhang.
Please refer to the recommended cutting conditions for the boring bar when boring.

Comparison of surface finishes

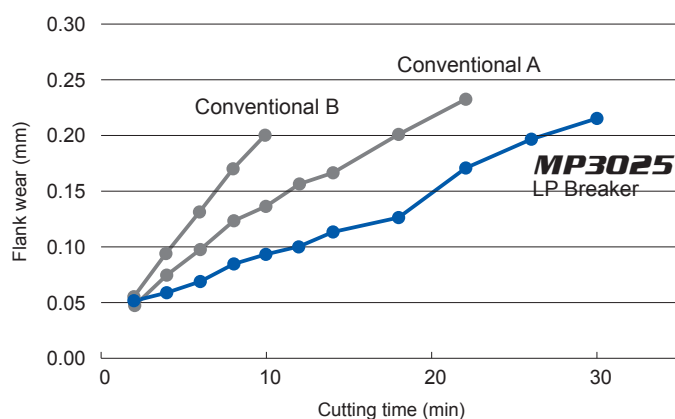


<Cutting condition>

Work piece : JIS-S45C
 Inserts : DCMT11T304
 Cutting speed : $vc=150$ m/min
 Depth of cut : $ap=1.0$ mm
 Feed : $f=0.07$ mm/rev
 Wet cutting

*MP3025 maintained a high quality surface finish after 125 components.

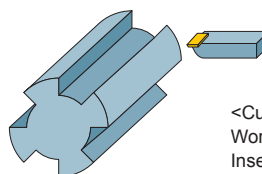
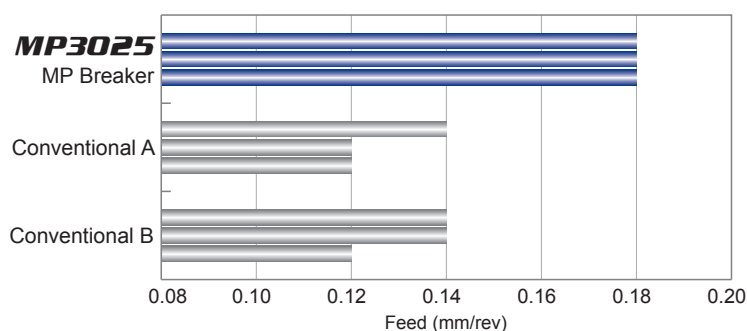
Wear resistance comparison



<Cutting condition>

Work piece : S45C
 Inserts : CNMG120408-
 Cutting speed : $vc=250$ m/min
 Depth of cut : $ap=1.0$ mm
 Feed : $f=0.15$ mm/rev
 Wet cutting

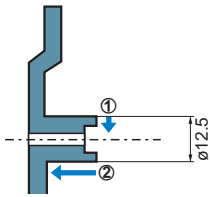
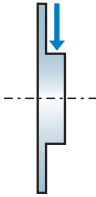
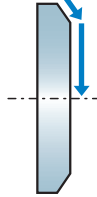
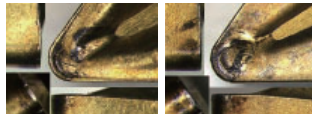
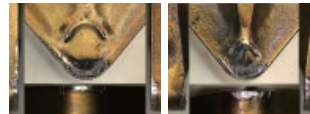
Fracture resistance comparison

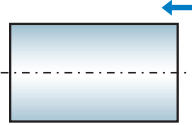
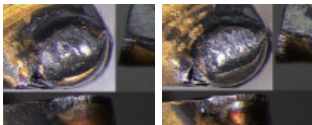


<Cutting condition>

Work piece : SCM440
 Inserts : CNMG120408-
 Cutting speed : $vc=200$ m/min
 Depth of cut : $ap=1.0$ mm
 Dry cutting

Application Examples

Insert		WNMG080408-LP (MP3025)	DNMG150404-LP (MP3025)	WNMG080408-LP (MP3025)
Work piece		Sprocket (JIS-SPHC)	Motor parts (JIS-SCM420H)	JIS-SS400
				
Cutting Conditions	Cutting Speed (m/min)	98	200	200
	Feed (mm/rev)	0.2	0.12	0.2
	Depth of Cut (mm)	0.35	0.3	0.5
Coolant		Wet cutting	Wet cutting	Dry cutting
Results		Coventional MP3025  MP3025 has better wear resistance than conventional cermet and enables extended time between tool changes.	Coventional MP3025  MP3025 doubled tool life and the LP chip breaker allowed vibration free machining.	Coventional MP3025  MP3025 doubled tool life compared to conventional inserts during dry cutting machining.

Insert		TNGG160404L-F (MP3025)
Work piece		JIS S45C
		
Cutting Conditions	Cutting Speed (m/min)	250
	Feed (mm/rev)	0.15
	Depth of Cut (mm)	0.5
Coolant		Wet cutting
Results		Coventional MP3025  Compared to conventional products, MP3025 displayed less wear, therefore extended tool life.

For Your Safety

●Don't handle inserts and chips without gloves. ●Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage. ●Please use safety covers and wear safety glasses. ●When using compounded cutting oils, please take fire precautions. ●When attaching inserts or spare parts, please use only the correct wrench or driver. ●When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

MITSUBISHI MATERIALS CORPORATION

MITSUBISHI MATERIALS CORPORATION

Area Marketing & Operations Dept.

KFC bldg., 8F, 1-6-1, Yokoami, Sumida-ku, Tokyo 130-0015, Japan

TEL +81-3-5819-8772 FAX +81-3-5819-8774

URL : <http://www.mitsubishicarbide.com>

(Tools specifications subject to change without notice.)

EXP-11-E024
2013.12.E(-)