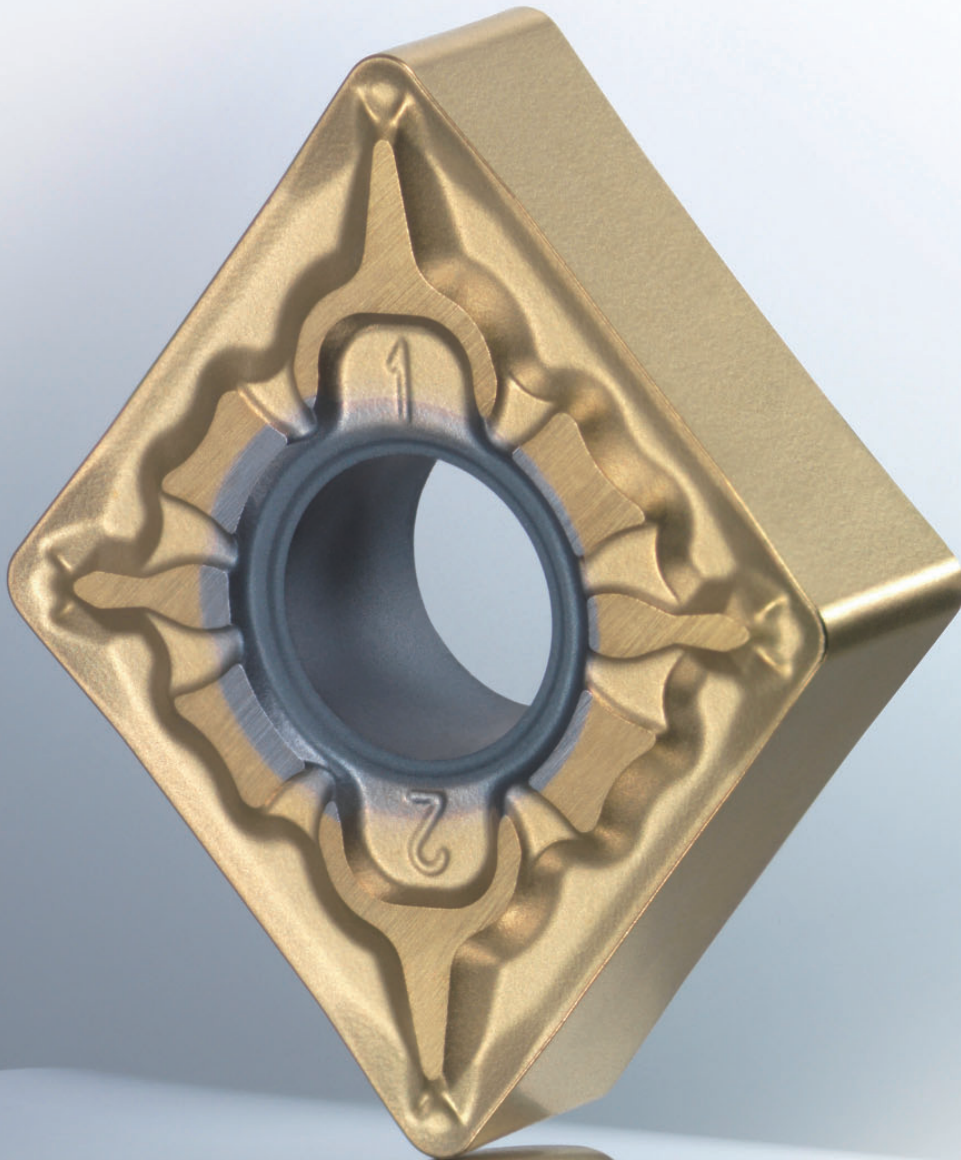


PVD coated Cermet grade for steel

MP3025

Series
Expansion

**For excellent surface finishes
and extended tool life.**

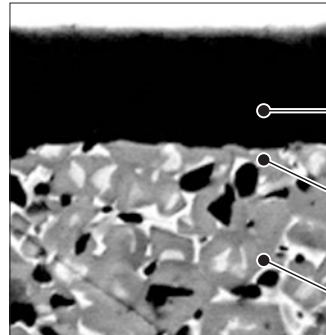


PVD coated Cermet grade for steel

MP3025

Excellent tool life when machining small diameter work pieces.

Due to the improved adhesion strength of the smooth substrate surface, MP3025 gives better tool life than conventional cermet.



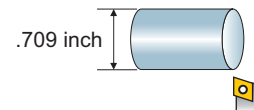
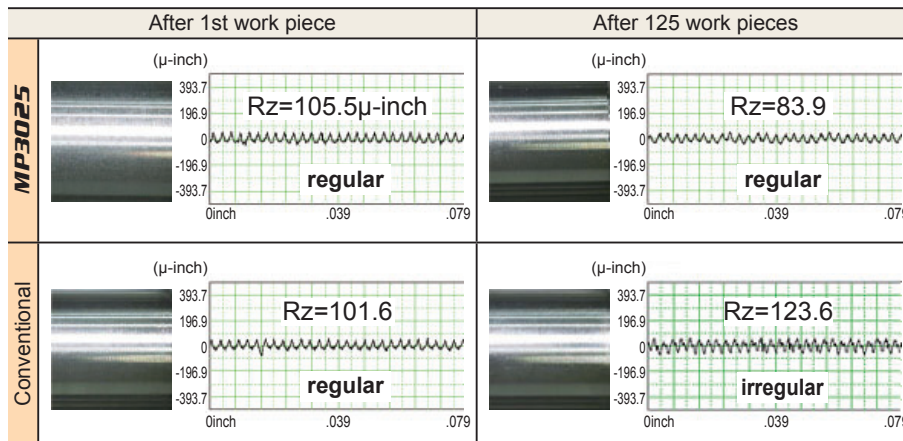
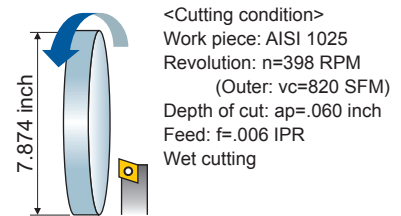
Ti-compound PVD coating provides excellent wear and welding resistance.

Substrate surface provides excellent adhesion strength for coating layer.

Substrate with superior fracture resistance and thermal shock resistance.

High quality finishes at low speeds.

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



<Cutting condition>
Work piece: AISI 1045
Inserts: DCMT11T304
Cutting Speed: vc=490 SFM
Depth of cut: ap=.039 inch
Feed: f=.003 IPR
Wet cutting

★MP3025 maintained a high quality surface finish through 125 components.

LP breaker
for light cutting of steels.

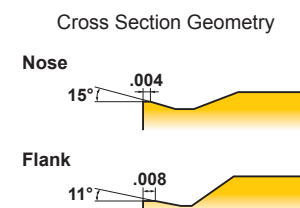
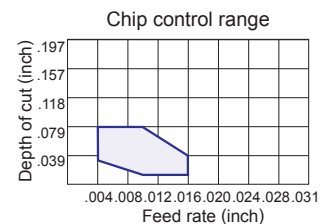


Optimized for profiling

Cutting edge is optimized for profiling.

Wide chip control range

Chip deflectors control chips in low DOC applications.



RECOMMENDED CUTTING CONDITIONS

Negative Inserts (External turning tools)

Work Material	Hardness	Cutting Mode		Breaker	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)
P	Mild Steel (1010, 1018, 1020 etc.)	General Cutting	Finish Cutting	FY	900—1375	.003—.009	.008—.031
		General Cutting	Light Cutting	SY	820—1260	.006—.013	.020—.047
	Carbon Steel, Alloy Steel (1045, 4140 etc.)	Stable Cutting	Finish Cutting	R/L-F	690—1065	.002—.006	.004—.020
		Stable Cutting	Light Cutting	LP	640—965	.004—.016	.012—.079
		Stable Cutting	Light Cutting	SW	640—965	.004—.020	.012—.098
		Stable Cutting	Light Cutting	R/L-K	640—965	.003—.008	.012—.047
		Stable Cutting	Medium Cutting	R/L	575—885	.006—.013	.016—.079
		Stable Cutting	Medium Cutting	MP	575—885	.006—.020	.012—.157
		Stable Cutting	Medium Cutting	Standard	575—885	.010—.024	.059—.197
		General Cutting	Finish Cutting	FH	690—1065	.003—.008	.008—.039
		General Cutting	Light Cutting	LP	640—965	.004—.016	.012—.079

7° Positive Inserts (External turning tools)

Work Material	Hardness	Cutting Mode		Breaker	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)
P	Mild Steel (1010, 1018, 1020 etc.)	Stable Cutting	Finish Cutting	R/L-F	755—1150	.002—.005	.004—.059
		Stable Cutting	Light Cutting	MV	620—965	.003—.012	.012—.079
		Stable Cutting	Light Cutting	Standard	620—965	.003—.012	.012—.079
		General Cutting	Finish Cutting	FV	755—1150	.008—.016	.008—.035
P	Carbon Steel, Alloy Steel (1045, 4140 etc.)	Stable Cutting	Finish Cutting	R/L-F	555—850	.002—.005	.004—.020
		Stable Cutting	Light Cutting	MV	460—705	.003—.012	.012—.079
		Stable Cutting	Light Cutting	Standard	460—705	.003—.012	.012—.079
		Stable Cutting	Light Cutting	SV	555—850	.002—.010	.008—.039
		Stable Cutting	Light Cutting	MW	460—705	.004—.014	.031—.098
		General Cutting	Finish Cutting	FV	555—850	.002—.008	.008—.035
		General Cutting	Finish Cutting	SW	555—850	.002—.009	.008—.059

11° Positive Inserts (External turning tools)

Work Material	Hardness	Cutting Mode		Breaker	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)
P	Mild Steel (1010, 1018, 1020 etc.)	General Cutting	Medium Cutting	Standard	620—965	.003—.012	.012—.079
	Carbon Steel, Alloy Steel (1045, 4140 etc.)	General Cutting	Medium Cutting	Standard	460—705	.003—.012	.012—.079

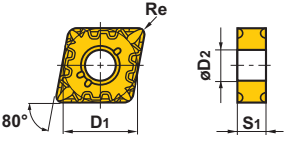
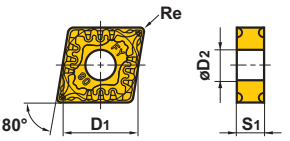
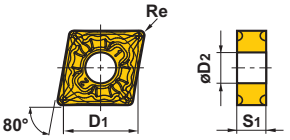
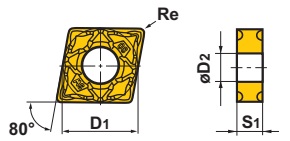
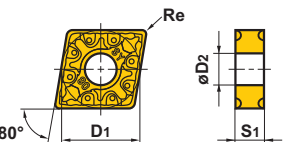
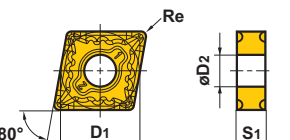
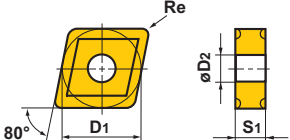
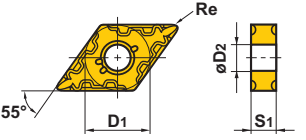
5°/11° Positive Inserts (Boring bars)

Work Material	Hardness	Cutting Mode		Breaker	Cutting Speed (SFM)	Feed (IPR)	Depth of Cut (inch)
P	Mild Steel (1010, 1018, 1020 etc.)	General Cutting	Finish Cutting	FV	755—1150	.002—.008	.008—.035
		General Cutting	Medium Cutting	MV	620—965	.003—.012	.012—.079
	Carbon Steel, Alloy Steel (1045, 4140 etc.)	Stable Cutting	Finish Cutting	FV	555—850	.002—.008	.008—.035
		Stable Cutting	Light Cutting	SV	555—850	.002—.010	.008—.039
		Stable Cutting	Medium Cutting	MV	460—705	.003—.012	.012—.079

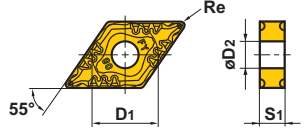
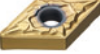
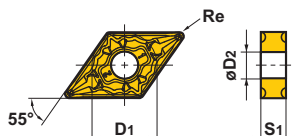
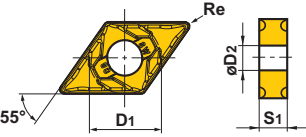
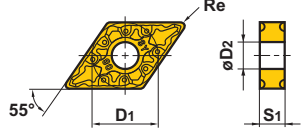
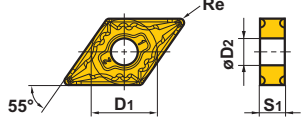
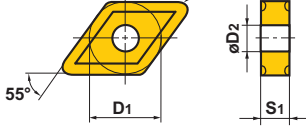
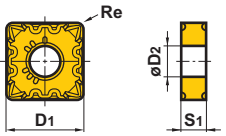
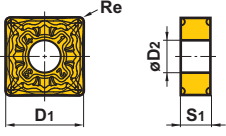
*The conditions of 5deg. / 11 deg. positive inserts for boring should only be used as a guide.
Adjust cutting conditions appropriately according to the overhang length.

INSERTS

● Negative Inserts (With hole)

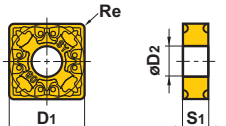
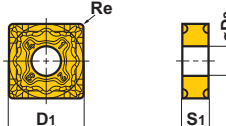
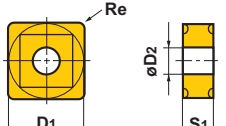
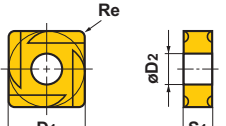
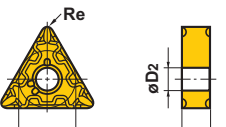
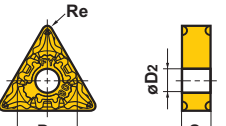
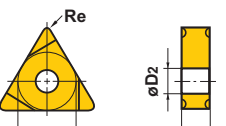
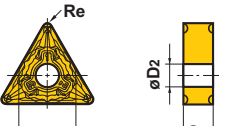
Shape	Order Number	(ISO) Number	Class	Stock	Dimensions (inch)				Geometry
				MP3025	D1	S1	Re	D2	
FH  Finish Cutting	CNMG430.5FH	CNMG120402-FH	M	●	.500	.187	.008	.203	
	431FH	120404-FH	M	●	.500	.187	.016	.203	
	432FH	120408-FH	M	●	.500	.187	.031	.203	
FY  Finish Cutting	CNMG431FY	CNMG120404-FY	M	●	.500	.187	.016	.203	
	432FY	120408-FY	M	●	.500	.187	.031	.203	
LP  Light Cutting	CNMG431LP	CNMG120404-LP	M	●	.500	.187	.016	.203	
	432LP	120408-LP	M	●	.500	.187	.031	.203	
SW  Light Cutting (Wiper)	CNMG431SW	CNMG120404-SW	M	●	.500	.187	.016	.203	
	432SW	120408-SW	M	●	.500	.187	.031	.203	
	433SW	120412-SW	M	●	.500	.187	.047	.203	
SY  Light Cutting	CNMG431SY	CNMG120404-SY	M	●	.500	.187	.016	.203	
	432SY	120408-SY	M	●	.500	.187	.031	.203	
MP  Medium Cutting	CNMG431MP	CNMG120404-MP	M	●	.500	.187	.016	.203	
	432MP	120408-MP	M	●	.500	.187	.031	.203	
	433MP	120412-MP	M	●	.500	.187	.047	.203	
Standard  Medium Cutting	CNMG431	CNMG120404	M	●	.500	.187	.016	.203	
	432	120408	M	●	.500	.187	.031	.203	
FH  Finish Cutting	DNMG430.5FH	DNMG150402-FH	M	●	.500	.187	.008	.203	
	431FH	150404-FH	M	●	.500	.187	.016	.203	
	432FH	150408-FH	M	●	.500	.187	.031	.203	
	440.5FH	150602-FH	M	●	.500	.250	.008	.203	
	441FH	150604-FH	M	★	.500	.250	.016	.203	
	442FH	150608-FH	M	★	.500	.250	.031	.203	

● : Inventory maintained. ★ : Inventory maintained in Japan.

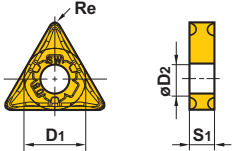
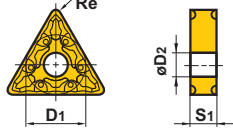
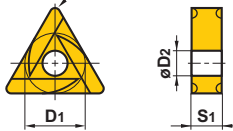
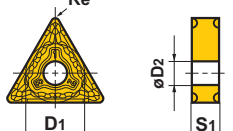
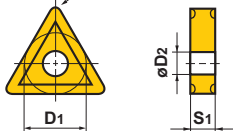
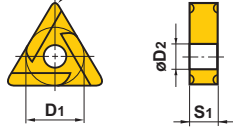
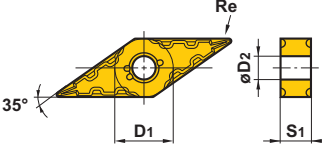
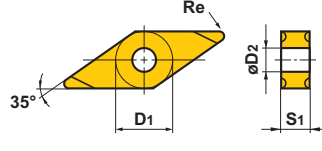
Shape	Order Number	(ISO) Number	Class	Stock	Dimensions (inch)				Geometry
				MP3025	D1	S1	Re	D2	
FY  Finish Cutting	DNMG431FY	DNMG150404-FY	M	●	.500	.187	.016	.203	
	432FY	150408-FY	M	●	.500	.187	.031	.203	
	441FY	150604-FY	M	★	.500	.250	.016	.203	
	442FY	150608-FY	M	★	.500	.250	.031	.203	
LP  Light Cutting	NEW DNMG331LP	DNMG110404-LP	M	●	.375	.187	.016	.150	
	NEW 332LP	110408-LP	M	●	.375	.187	.031	.150	
	431LP	150404-LP	M	●	.500	.187	.016	.203	
	432LP	150408-LP	M	●	.500	.187	.031	.203	
	NEW 433LP	150412-LP	M	●	.500	.187	.047	.203	
	441LP	150604-LP	M	●	.500	.250	.016	.203	
SW  Light Cutting (Wiper)	DNMX431SW	DNMX150404-SW	M	●	.500	.187	.016	.203	
	432SW	150408-SW	M	●	.500	.187	.031	.203	
	441SW	150604-SW	M	★	.500	.250	.016	.203	
	442SW	150608-SW	M	★	.500	.250	.031	.203	
SY  Light Cutting	DNMG431SY	DNMG150404-SY	M	●	.500	.187	.016	.203	
	432SY	150408-SY	M	●	.500	.187	.031	.203	
	441SY	150604-SY	M	★	.500	.250	.016	.203	
	442SY	150608-SY	M	★	.500	.250	.031	.203	
MP  Medium Cutting	DNMG431MP	DNMG150404-MP	M	●	.500	.187	.016	.203	
	432MP	150408-MP	M	●	.500	.187	.031	.203	
	433MP	150412-MP	M	●	.500	.187	.047	.203	
	441MP	150604-MP	M	★	.500	.250	.016	.203	
	442MP	150608-MP	M	★	.500	.250	.031	.203	
	443MP	150612-MP	M	★	.500	.250	.047	.203	
Standard  Medium Cutting	DNMG431	DNMG150404	M	●	.500	.187	.016	.203	
	432	150408	M	●	.500	.187	.031	.203	
	441	150604	M	●	.500	.250	.016	.203	
	442	150608	M	●	.500	.250	.031	.203	
FH  Finish Cutting	SNMG431FH	SNMG120404-FH	M	●	.500	.187	.016	.203	
	432FH	120408-FH	M	●	.500	.187	.031	.203	
LP  Light Cutting	SNMG431LP	SNMG120404-LP	M	●	.500	.187	.016	.203	
	432LP	120408-LP	M	●	.500	.187	.031	.203	

INSERTS

● Negative Inserts (With hole)

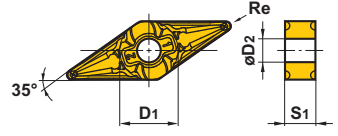
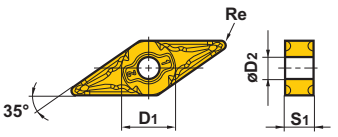
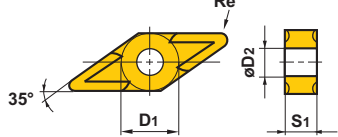
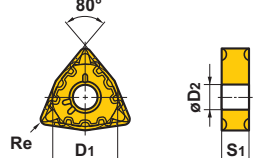
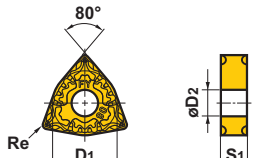
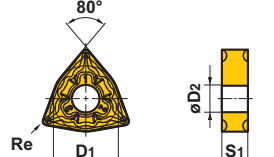
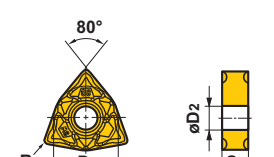
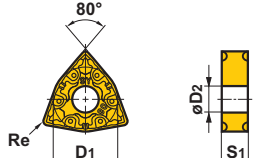
Shape	Order Number	(ISO) Number	Class	Stock	Dimensions (inch)				Geometry
				MP3025	D1	S1	Re	D2	
SY  Light Cutting	SNMG432SY	SNMG120408-SY	M	●	.500	.187	.031	.203	
MP  Medium Cutting	SNMG431MP	SNMG120404-MP	M	●	.500	.187	.016	.203	
	432MP	120408-MP	M	●	.500	.187	.031	.203	
	433MP	120412-MP	M	●	.500	.187	.047	.203	
Standard  Medium Cutting	SNMG321	SNMG090304	M	●	.375	.125	.016	.150	
	322	090308	M	●	.375	.125	.031	.150	
	431	120404	M	●	.500	.187	.016	.203	
	432	120408	M	●	.500	.187	.031	.203	
R/L  Medium Cutting	SNGG431R	SNGG120404R	G	●	.500	.187	.016	.203	
	432R	120408R	G	●	.500	.187	.031	.203	
	431L	120404L	G	●	.500	.187	.016	.203	
	432L	120408L	G	●	.500	.187	.031	.203	
FH  Finish Cutting	TNMG330.5FH	TNMG160402-FH	M	●	.375	.187	.008	.150	
	331FH	160404-FH	M	●	.375	.187	.016	.150	
	332FH	160408-FH	M	●	.375	.187	.031	.150	
FY  Finish Cutting	TNMG331FY	TNMG160404-FY	M	●	.375	.187	.016	.150	
	332FY	160408-FY	M	●	.375	.187	.031	.150	
R/L-F  Finish Cutting	TNGG330.5RF	TNGG160402R-F	G	●	.375	.187	.008	.150	
	331RF	160404R-F	G	●	.375	.187	.016	.150	
	332RF	160408R-F	G	●	.375	.187	.031	.150	
	330.5LF	160402L-F	G	●	.375	.187	.008	.150	
	331LF	160404L-F	G	●	.375	.187	.016	.150	
	332LF	160408L-F	G	●	.375	.187	.031	.150	
LP  Light Cutting	TNMG331LP	TNMG160404-LP	M	●	.375	.187	.016	.150	
	332LP	160408-LP	M	●	.375	.187	.031	.150	
	NEW 333LP	160412-LP	M	●	.375	.187	.047	.150	
	NEW 432LP	220408-LP	M	●	.500	.187	.031	.203	

● : Inventory maintained.

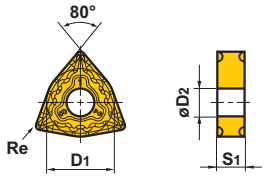
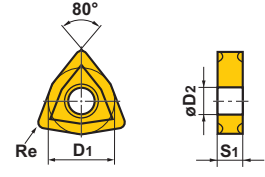
Shape	Order Number	(ISO) Number	Class	Stock	Dimensions (inch)				Geometry
				MP3025	D1	S1	Re	D2	
SW  Light Cutting (Wiper)	TNMX331SW	TNMX160404-SW	M	●	.375	.187	.016	.150	
	332SW	160408-SW	M	●	.375	.187	.031	.150	
SY  Light Cutting	TNMG331SY	TNMG160404-SY	M	●	.375	.187	.016	.150	
	332SY	160408-SY	M	●	.375	.187	.031	.150	
R/L-K  Light Cutting	TNGG330.5RK	TNGG160402R-K	G	●	.375	.187	.008	.150	
	331RK	160404R-K	G	●	.375	.187	.016	.150	
	332RK	160408R-K	G	●	.375	.187	.031	.150	
	330.5LK	160402L-K	G	●	.375	.187	.008	.150	
	331LK	160404L-K	G	●	.375	.187	.016	.150	
	332LK	160408L-K	G	●	.375	.187	.031	.150	
MP  Medium Cutting	TNMG331MP	TNMG160404-MP	M	●	.375	.187	.016	.150	
	332MP	160408-MP	M	●	.375	.187	.031	.150	
	333MP	160412-MP	M	●	.375	.187	.047	.150	
Standard  Medium Cutting	TNMG331	TNMG160404	M	●	.375	.187	.016	.150	
	332	160408	M	●	.375	.187	.031	.150	
R/L  Medium Cutting	TNGG330.5R	TNGG160402R	G	●	.375	.187	.008	.150	
	331R	160404R	G	●	.375	.187	.016	.150	
	332R	160408R	G	●	.375	.187	.031	.150	
	330.5L	160402L	G	●	.375	.187	.008	.150	
	331L	160404L	G	●	.375	.187	.016	.150	
	332L	160408L	G	●	.375	.187	.031	.150	
FH  Finish Cutting	VNMG330.5FH	VNMG160402-FH	M	●	.375	.187	.008	.150	
	331FH	160404-FH	M	●	.375	.187	.016	.150	
	332FH	160408-FH	M	●	.375	.187	.031	.150	
R/L-F  Finish Cutting	VNMG330.5RF	VNMG160402R-F	G	●	.375	.187	.008	.150	
	331RF	160404R-F	G	●	.375	.187	.016	.150	
	330.5LF	160402L-F	G	●	.375	.187	.008	.150	
	331LF	160404L-F	G	●	.375	.187	.016	.150	

INSERTS

● Negative Inserts (With hole)

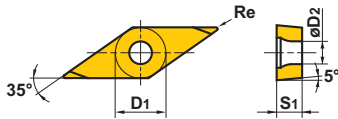
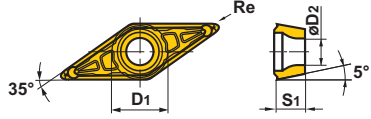
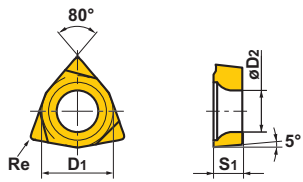
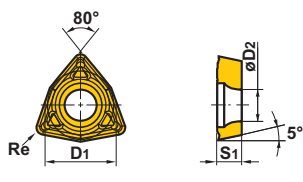
Shape	Order Number	(ISO) Number	Class	Stock	Dimensions (inch)				Geometry
				MP3025	D1	S1	Re	D2	
LP  Light Cutting	VNMG331LP	VNMG160404-LP	M	●	.375	.187	.016	.150	
	332LP	160408-LP	M	●	.375	.187	.031	.150	
MP  Medium Cutting	VNMG331MP	VNMG160404-MP	M	●	.375	.187	.016	.150	
	332MP	160408-MP	M	●	.375	.187	.031	.150	
Standard  Medium Cutting	VNMG331	VNMG160404	M	●	.375	.187	.016	.150	
	332	160408	M	●	.375	.187	.031	.150	
FH  Finish Cutting	WNMG431FH	WNMG080404-FH	M	●	.500	.187	.016	.203	
	432FH	080408-FH	M	●	.500	.187	.031	.203	
FY  Finish Cutting	WNMG431FY	WNMG080404-FY	M	●	.500	.187	.016	.203	
	432FY	080408-FY	M	●	.500	.187	.031	.203	
LP  Light Cutting	NEW WNMG32.51LP	WNMG06T304-LP	M	●	.375	.156	.016	.150	
	NEW 32.52LP	06T308-LP	M	●	.375	.156	.031	.150	
	NEW 331LP	060404-LP	M	●	.375	.187	.016	.150	
	NEW 332LP	060408-LP	M	●	.375	.187	.031	.150	
	431LP	080404-LP	M	●	.500	.187	.016	.203	
	432LP	080408-LP	M	●	.500	.187	.031	.203	
SW  Light Cutting (Wiper)	WNMG331SW	WNMG060404-SW	M	●	.375	.187	.016	.150	
	332SW	060408-SW	M	●	.375	.187	.031	.150	
	431SW	080404-SW	M	●	.500	.187	.016	.203	
	432SW	080408-SW	M	●	.500	.187	.031	.203	
	433SW	080412-SW	M	●	.500	.187	.047	.203	
SY  Light Cutting	WNMG431SY	WNMG080404-SY	M	●	.500	.187	.016	.203	
	432SY	080408-SY	M	●	.500	.187	.031	.203	

● : Inventory maintained.

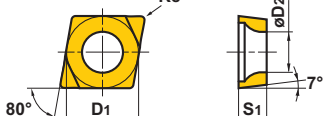
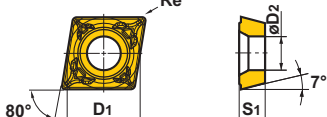
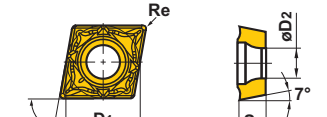
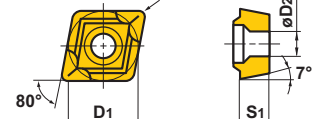
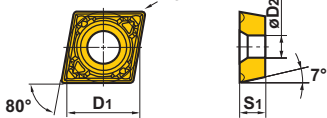
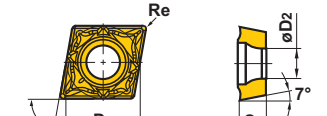
Shape	Order Number	(ISO) Number	Class	Stock	Dimensions (inch)				Geometry
				MP3025	D1	S1	Re	D2	
MP  Medium Cutting	WNMG431MP	WNMG080404-MP	M	●	.500	.187	.016	.203	
	432MP	080408-MP	M	●	.500	.187	.031	.203	
	433MP	080412-MP	M	●	.500	.187	.047	.203	
Standard  Medium Cutting	WNMG431	WNMG080404	M	●	.500	.187	.016	.203	
	432	080408	M	●	.500	.187	.031	.203	

INSERTS

● 5° Positive Inserts (With hole)

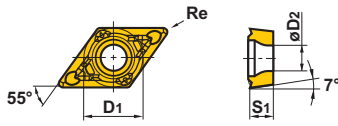
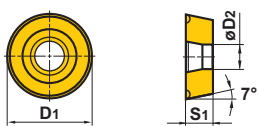
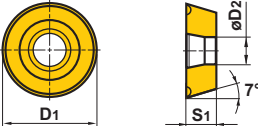
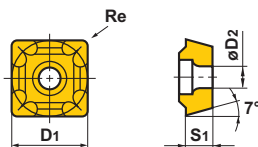
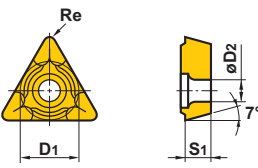
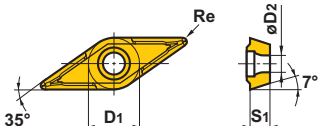
Shape	Order Number	(ISO) Number	Class	Stock	Dimensions (inch)				Geometry
				MP3025	D1	S1	Re	D2	
R/L-F	VBGT220.5RF	VBGT110302R-F	G	●	.250	.125	.008	.115	
	220.5LF	110302L-F	G	●	.250	.125	.008	.115	
 Finish Cutting									
MV	VBMT221MV	VBMT110304-MV	M	●	.250	.125	.016	.115	
	222MV	110308-MV	M	●	.250	.125	.031	.115	
	331MV	160404-MV	M	●	.375	.187	.016	.178	
	332MV	160408-MV	M	●	.375	.187	.031	.178	
 Medium Cutting									
R/L-F	WBG1.210.5LF	WBG1020102L-F	G	●	.156	.063	.008	.091	
	1.211LF	020104L-F	G	●	.156	.063	.016	.091	
	1.51.50.5LF	L30202L-F	G	●	.187	.094	.008	.091	
	1.51.51LF	L30204L-F	G	●	.187	.094	.016	.091	
 Finish Cutting									
R/L-MV	WBMT1.51.50.5RMV	WBMTL30202R-MV	M	●	.187	.094	.008	.091	
	1.51.50.5LMV	L30202L-MV	M	●	.187	.094	.008	.091	
	1.51.51RMV	L30204R-MV	M	●	.187	.094	.016	.091	
	1.51.51LMV	L30204L-MV	M	●	.187	.094	.016	.091	
 Medium Cutting									

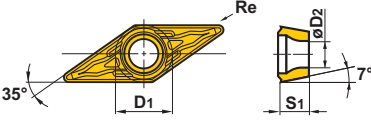
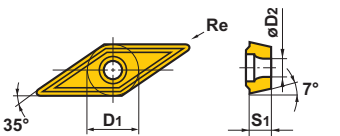
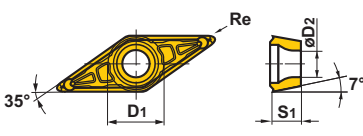
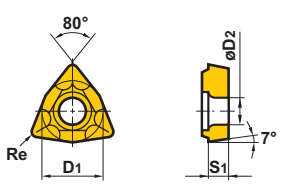
● 7° Positive Inserts (With hole)

Shape	Order Number	(ISO) Number	Class	Stock	Dimensions (inch)				Geometry
				MP3025	D1	S1	Re	D2	
L-F  Finish Cutting	CCGT1.20.90.5LF	CCGT03S102L-F	G	●	.156	.055	.008	.079	
	1.20.91LF	03S104L-F	G	●	.156	.055	.016	.079	
	1.51.10.5LF	04T002L-F	G	●	.187	.070	.008	.094	
	1.51.11LF	04T004L-F	G	●	.187	.070	.016	.094	
SV  Light Cutting	CCMH21.50.5SV	CCMH060202-SV	M	●	.250	.094	.008	.110	
	21.51SV	060204-SV	M	●	.250	.094	.016	.110	
SW  Light Cutting (Wiper)	CCMT21.50.5SW	CCMT060202-SW	M	●	.250	.094	.008	.110	
	21.51SW	060204-SW	M	●	.250	.094	.016	.110	
	32.50.5SW	09T302-SW	M	●	.375	.156	.008	.173	
	32.51SW	09T304-SW	M	●	.375	.156	.016	.173	
Standard  Medium Cutting	CCMT21.50.5	CCMT060202	M	●	.250	.094	.008	.110	
	21.51	060204	M	●	.250	.094	.016	.110	
	2.521	080304	M	●	.313	.125	.016	.110	
	32.50.5	09T302	M	●	.375	.156	.008	.173	
	32.51	09T304	M	●	.375	.156	.016	.173	
	32.52	09T308	M	●	.375	.156	.031	.173	
	431	120404	M	●	.500	.187	.016	.217	
	432	120408	M	●	.500	.187	.031	.217	
MV  Medium Cutting	CCMH21.50.5MV	CCMH060202-MV	M	●	.250	.094	.008	.110	
	21.51MV	060204-MV	M	●	.250	.094	.016	.110	
MW  Medium Cutting (Wiper)	CCMT21.51MW	CCMT060204-MW	M	●	.250	.094	.008	.110	
	21.52MW	060208-MW	M	●	.250	.094	.016	.110	
	32.51MW	09T304-MW	M	●	.375	.156	.008	.173	
	32.52MW	09T308-MW	M	●	.375	.156	.016	.173	
Standard  Medium Cutting	DCMT21.50.5	DCMT070202	M	●	.250	.094	.008	.110	
	21.51	070204	M	●	.250	.094	.016	.110	
	21.52	070208	M	●	.250	.094	.031	.110	
	32.50.5	11T302	M	●	.375	.156	.008	.173	
	32.51	11T304	M	●	.375	.156	.016	.173	
	32.52	11T308	M	●	.375	.156	.031	.173	
	431	150404	M	●	.500	.187	.016	.217	
	432	150408	M	●	.500	.187	.031	.217	

INSERTS

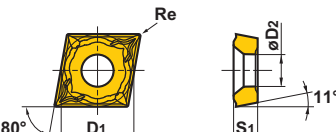
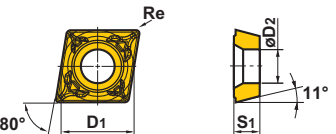
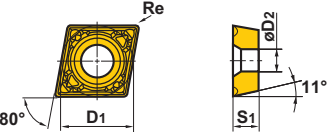
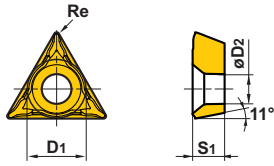
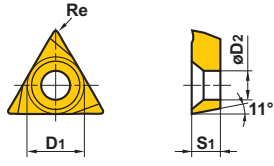
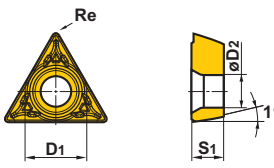
● 7° Positive Inserts (With hole)

Shape	Order Number	(ISO) Number	Class	Stock	Dimensions (inch)				Geometry
					MP3025	D1	S1	Re	D2
MV  Medium Cutting	DCMT21.50.5MV	DCMT070202-MV	M	●	.250	.094	.008	.110	
	21.51MV	070204-MV	M	●	.250	.094	.016	.110	
	21.52MV	070208-MV	M	●	.250	.094	.031	.110	
	32.50.5MV	11T302-MV	M	●	.375	.156	.008	.173	
	32.51MV	11T304-MV	M	●	.375	.156	.016	.173	
	32.52MV	11T308-MV	M	●	.375	.156	.031	.173	
Standard  Medium Cutting	RCMT0602M0	RCMT0602M0	M	●	.236	.094	-	.110	
	0803M0	0803M0	M	●	.315	.125	-	.134	
Standard  Medium Cutting	RCMX1003M0	RCMX1003M0	M	●	.394	.125	-	.142	
	1204M0	1204M0	M	●	.472	.187	-	.165	
Standard  Medium Cutting	SCMT32.51	SCMT09T304	M	●	.375	.156	.016	.173	
	32.52	09T308	M	●	.375	.156	.031	.173	
	431	120404	M	●	.500	.187	.016	.217	
	432	120408	M	●	.500	.187	.031	.217	
Standard  Medium Cutting	TCMT1.51.51	TCMT080204	M	●	.187	.094	.016	.091	
	1.81.51	090204	M	●	.219	.094	.016	.098	
	21.50.5	110202	M	●	.250	.094	.008	.110	
	21.51	110204	M	●	.250	.094	.016	.110	
	21.52	110208	M	●	.250	.094	.031	.110	
	2.520.5	130302	M	●	.313	.125	.008	.134	
	2.521	130304	M	●	.313	.125	.016	.134	
	32.51	16T304	M	●	.375	.156	.016	.173	
	32.52	16T308	M	●	.375	.156	.031	.173	
FV  Finish Cutting	VCMT1.51.50.5FV	VCMT080202-FV	M	●	.187	.094	.008	.097	
	1.51.51FV	080204-FV	M	●	.187	.094	.016	.097	

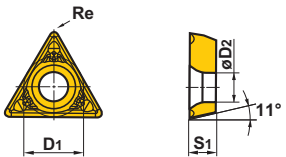
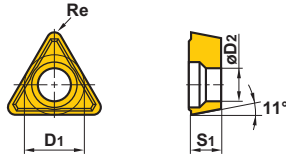
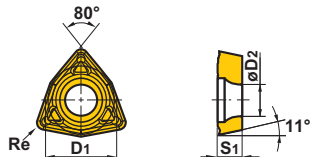
Shape	Order Number	(ISO) Number	Class	Stock	Dimensions (inch)				Geometry
				MP3025	D1	S1	Re	D2	
SV 	VCMT1.51.50.5SV	VCMT080202-SV	M	●	.187	.094	.008	.097	
	1.51.51SV	080204-SV	M	●	.187	.094	.016	.097	
Light Cutting									
Standard 	VCMT221	VCMT110304	M	●	.250	.125	.016	.110	
	331	160404	M	●	.375	.187	.016	.173	
	332	160408	M	●	.375	.187	.031	.173	
Medium Cutting									
MV 	VCMT1.51.50.5MV	VCMT080202-MV	M	●	.187	.094	.008	.097	
	1.51.51MV	080204-MV	M	●	.187	.094	.016	.097	
Medium Cutting									
Standard 	WCMT1.210.5	WCMT020102	M	●	.156	.063	.008	.091	
	1.211	020104	M	●	.156	.063	.016	.091	
	1.51.50.5	L30202	M	●	.187	.094	.008	.091	
	1.51.51	L30204	M	●	.187	.094	.016	.091	
	21.50.5	040202	M	●	.250	.094	.008	.110	
	21.51	040204	M	●	.250	.094	.016	.110	
	32.51	06T304	M	●	.375	.156	.016	.173	
	32.52	06T308	M	●	.375	.156	.031	.173	
Medium Cutting									

INSERTS

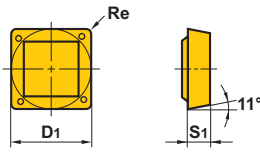
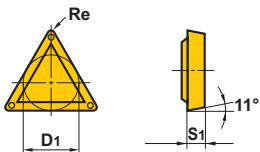
● 11° Positive Inserts (With hole)

Shape	Order Number	(ISO) Number	Class	Stock	Dimensions (inch)				Geometry	
				MP3025	D1	S1	Re	D2		
	FV	CPMH2.51.50.5FV	CPMH080202-FV	M	●	.313	.094	.008	.138	
		2.51.51FV	080204-FV	M	●	.313	.094	.016	.138	
		320.5FV	090302-FV	M	●	.375	.125	.008	.177	
		321FV	090304-FV	M	●	.375	.125	.016	.177	
		322FV	090308-FV	M	●	.375	.125	.031	.177	
Finish Cutting										
	SV	CPMH2.51.50.5SV	CPMH080202-SV	M	●	.313	.094	.008	.138	
		2.51.51SV	080204-SV	M	●	.313	.094	.016	.138	
		320.5SV	090302-SV	M	●	.375	.125	.008	.177	
		321SV	090304-SV	M	●	.375	.125	.016	.177	
		322SV	090308-SV	M	●	.375	.125	.031	.177	
Light Cutting										
	MV	CPMH2.51.51MV	CPMH080204-MV	M	●	.313	.094	.016	.138	
		2.51.52MV	080208-MV	M	●	.313	.094	.031	.138	
		321MV	090304-MV	M	●	.375	.125	.016	.177	
		322MV	090308-MV	M	●	.375	.125	.031	.177	
Medium Cutting										
	FV	TPMH1.51.50.5FV	TPMH080202-FV	M	●	.187	.094	.008	.098	
		1.51.51FV	080204-FV	M	●	.187	.094	.016	.098	
		1.81.50.5FV	090202-FV	M	●	.219	.094	.008	.114	
		1.81.51FV	090204-FV	M	●	.219	.094	.016	.114	
		220.5FV	110302-FV	M	●	.250	.125	.008	.134	
		221FV	110304-FV	M	●	.250	.125	.016	.134	
		222FV	110308-FV	M	●	.250	.125	.031	.134	
		320.5FV	160302-FV	M	●	.375	.125	.008	.173	
		321FV	160304-FV	M	●	.375	.125	.016	.173	
		322FV	160308-FV	M	●	.375	.125	.031	.173	
Finish Cutting										
	L-FS	TPGH1.51.50.5LFS	TPGH080202L-FS	G	●	.187	.094	.008	.098	
		1.51.51LFS	080204L-FS	G	●	.187	.094	.016	.098	
		1.81.50.5LFS	090202L-FS	G	●	.219	.094	.008	.114	
		1.81.51LFS	090204L-FS	G	●	.219	.094	.016	.114	
		220.5LFS	110302L-FS	G	●	.250	.125	.008	.134	
		221LFS	110304L-FS	G	●	.250	.125	.016	.134	
		321LFS	160304L-FS	G	●	.375	.125	.016	.173	
		322LFS	160308L-FS	G	●	.375	.125	.031	.173	
Finish Cutting										
	SV	TPMH1.51.50.5SV	TPMH080202-SV	M	●	.187	.094	.008	.098	
		1.51.51SV	080204-SV	M	●	.187	.094	.016	.098	
		1.81.50.5SV	090202-SV	M	●	.219	.094	.008	.114	
		1.81.51SV	090204-SV	M	●	.219	.094	.016	.114	
		220.5SV	110302-SV	M	●	.250	.125	.008	.134	
		221SV	110304-SV	M	●	.250	.125	.016	.134	
		222SV	110308-SV	M	●	.250	.125	.031	.134	
		320.5SV	160302-SV	M	●	.375	.125	.008	.173	
		321SV	160304-SV	M	●	.375	.125	.016	.173	
		322SV	160308-SV	M	●	.375	.125	.031	.173	
Light Cutting										

● : Inventory maintained.

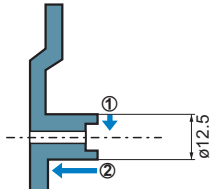
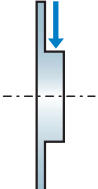
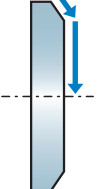
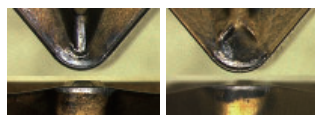
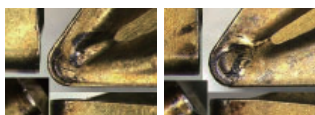
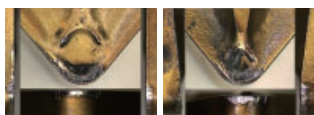
Shape	Order Number	(ISO) Number	Class	Stock	Dimensions (inch)				Geometry	
				MP3025	D1	S1	Re	D2		
	MV	TPMH1.51.50.5MV	TPMH080202-MV	M	●	.187	.094	.008	.098	
		1.51.51MV	080204-MV	M	●	.187	.094	.016	.098	
		1.81.50.5MV	090202-MV	M	●	.219	.094	.008	.114	
		1.81.51MV	090204-MV	M	●	.219	.094	.016	.114	
		1.81.52MV	090208-MV	M	●	.219	.094	.031	.114	
		220.5MV	110302-MV	M	●	.250	.125	.008	.134	
		221MV	110304-MV	M	●	.250	.125	.016	.134	
		222MV	110308-MV	M	●	.250	.125	.031	.134	
		321MV	160304-MV	M	●	.375	.125	.016	.173	
		322MV	160308-MV	M	●	.375	.125	.031	.173	
Medium Cutting										
Standard	TPMX221	TPMX110304	M	●	.250	.125	.016	.138		
	222	110308	M	●	.250	.125	.031	.138		
										
Medium Cutting										
MV	WPMT21.50.5MV	WPMT040202-MV	M	●	.250	.094	.008	.110		
	21.51MV	040204-MV	M	●	.250	.094	.016	.110		
	321MV	060304-MV	M	●	.375	.125	.016	.173		
	322MV	060308-MV	M	●	.375	.125	.031	.173		
										
Medium Cutting										

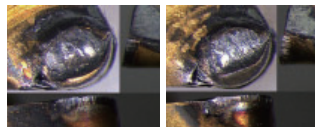
● 11° Positive Inserts (Without hole)

Shape	Order Number	(ISO) Number	Class	Stock	Dimensions (inch)				Geometry	
				MP3025	D1	S1	Re	D2		
 Light to Medium Cutting	Standard	SPMR321	SPMR090304	M	●	.375	.125	.016	-	
		322	090308	M	●	.375	.125	.031	-	
		421	120304	M	●	.500	.125	.016	-	
		422	120308	M	●	.500	.125	.031	-	
 Light to Medium Cutting	Standard	TPMR1.81.50.5	TPMR090202	M	●	.219	.094	.008	-	
		1.81.51	090204	M	●	.219	.094	.016	-	
		1.81.52	090208	M	●	.219	.094	.031	-	
		220.5	110302	M	●	.250	.125	.008	-	
		221	110304	M	●	.250	.125	.016	-	
		222	110308	M	●	.250	.125	.031	-	
		321	160304	M	●	.375	.125	.016	-	
		322	160308	M	●	.375	.125	.031	-	
		323	160312	M	●	.375	.125	.047	-	

PVD coated Cermet grade for steel

APPLICATION EXAMPLES

Insert		WNMG432LP (MP3025)	DNMG431LP (MP3025)	WNMG432LP (MP3025)
Work piece		Sprocket (ASTA A569) 	Mortor parts (AISI 4130) 	ASTM A283 
Cutting Conditions	Cutting Speed (SFM)	320	655	655
	Feed (IPM)	.008	.005	.008
	Depth of Cut (inch)	.014	.012	.020
Coolant		Wet cutting	Wet cutting	—
Results		Coventional MP3025  MP3025 wear resistance exceeds conventional PVD coated cermet, extending 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 when machining without coolant.

Insert		TNGG331LF (MP3025)
Work piece		AISI 1045 
Cutting Conditions	Cutting Speed (SFM)	820
	Feed (IPM)	.006
	Depth of Cut (inch)	.020
Coolant		Wet cutting
Results		Coventional MP3025  Compared to the conventional product, MP3025 has smaller wear after the same machining time and can achieve the longer tool life.

For your safety

●Don't touch breakers and chips without gloves. ●Please machine within recommended application range, and exchange expired tools with new parts in advance. ●Please use safety cover and wear safety glasses. ●When using compounded cutting oils, please take fire prevention. ●When attaching chips or spare parts, please use the attached wrench or driver. ●When using tools in revolution machining, please make a trial run to check run-out, vibration, abnormal sounds etc.

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MITSUBISHI MATERIALS U.S.A. CORPORATION

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(Tools specifications subject to change without notice.)

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