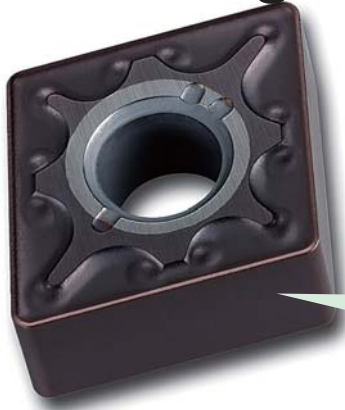


MIRACLE Coating

VP15TF Insert

Excellent performance grade for interrupted machining in low-medium cutting speed.



● Integrating the carbide technology and coating technology!!



Miracle coating

- High adhesion strength to the substrate improves stable tool life.
- Due to the excellent heat resistance and oxidation resistance, the VP15TF prevents a failure of tool life even when machining hardened workpiece.

TF15 micrograin cemented carbide

- Due to the cemented carbide with high wear resistance and fracture resistance, the VP15TF realized stable machining operation.

Turning Inserts

● Negative Inserts (With hole)

Breaker	Order Number	Stock
MA Breaker	CNMG120404-MA	●
	120408-MA	●
	120412-MA	●
	DNMG150404-MA	●
	150408-MA	●
	150604-MA	●
	150608-MA	●
	SNMG120408-MA	●
	TNMG160404-MA	●
	160408-MA	●
	WNMG080404-MA	●
	080408-MA	●
080412-MA	●	
Standard Breaker	CNMG120408	●
	120412	●
	DNMG150408	●
	150412	●
	150608	●
	150612	●
	SNMG120408	●
	TNMG160404	●
	160408	●
	VNMG160404	●
	160408	●
	WNMG080408	●
080412	●	

● 7° Positive Inserts (With hole)

Breaker	Order Number	Stock
Standard Breaker	CCMT060204	●
	060208	●
	09T304	●
	09T308	●
	120404	●
	120408	●
	DCMT070204	●
	11T304	●
	11T308	●
	TCMT110202	●
	110204	●
	110208	●
	16T304	●
	16T308	●
	VCMT110304	●
	160404	●
160408	●	

● 11° Positive Inserts (With hole)

Breaker	Order Number	Stock
Without Breaker	TPGX080204	○
	110304	○

● : Inventory maintained. ○ : Inventory maintained. (Available Autumn 2009)

Recommended cutting conditions

	Work Material	Hardness	Cutting Speed (m/min)
P	Mild Steel	≤180HB	130 (90-160)
	Carbon Steel	180-280HB	100 (70-120)
	Alloy Steel		

	Work Material	Hardness	Cutting Speed (m/min)
M	Stainless Steel	≤200HB	100 (70-120)

Rotating Tool Inserts

Cutter Type	Order Number	Stock
SE445	SEEN1203AFEN1	●
LSE445	SEER1203AFEN-JS	●
SE545	SEEN1504AFEN1	●
SE415	SEEN1203EFER1	●
SE515	SEEN1504EFER1	●
NSE300	TEEN1603PEER1	●
NSE400	TEEN2204PEER1	●
DCCC	CCMX09T308EN-A	○
	ZCMX09T308ER-A	○
OCTACUT	* OEMX1705EOR1	○
	* OEMX1705EOR1-JS	○
SG20	* RGEN2004M0N	○
CESP CFSP CGSP	SPMW090304	○
	090308	○
	120304	○
	120308	○

Cutter Type	Order Number	Stock
CBJP	JPMT060204-E	○
CBMP	MPMT090308	○
(ISO)	TPMN160304	○
	160308	○
	220408	○
	220412	○
(ISO/Corner Angle 15°)	TPKN1603PPR	○
	2204PDR	○
(ISO)	SDKN1203AEN	○
(ISO)	SPMN120304	○
	120308	○
	120312	○
(ISO/Corner Angle 15°)	SPKN1203EDR	○
	1504EDR	○

* the reference order number shown. For the details, please contact us.

●: Inventory maintained. ○: Inventory maintained. (Available Autumn 2009)

Recommended cutting conditions

Work Material	Hardness	Cutting Speed (m/min)	
P	Mild Steel	≤180HB	180 (100–250)
	Carbon Steel Alloy Steel	180–280HB	180 (100–250)
M	Stainless Steel	≤200HB	150 (100–200)
K	Cast Iron	Tensile Strength ≤450MPa	160 (100–220)

Work Material	Hardness	Cutting Speed (m/min)	
S	Heat Resistant Alloy	–45HRC	30 (20–40)
	Titanium Alloy	–40HRC	40 (30–60)
H	Hardened steel	40–55HRC	80 (50–100)

Note) These cutting conditions are a guide to
Please make adjustments according to the machining conditions.

In case of face cutter processing, end mill side processing, it is possible to raise by about 30 % from the median, too.
In case of end mill ditch processing and seat processing, use first after lowering by about 20 % from the median.

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 spanner. ● When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

MITSUBISHI MATERIALS CORPORATION

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(Tools specifications subject to change without notice.)