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New CVD turning grade

DTC5025M

ISO
M

Specially engineered for High toughness and High wear resistance.

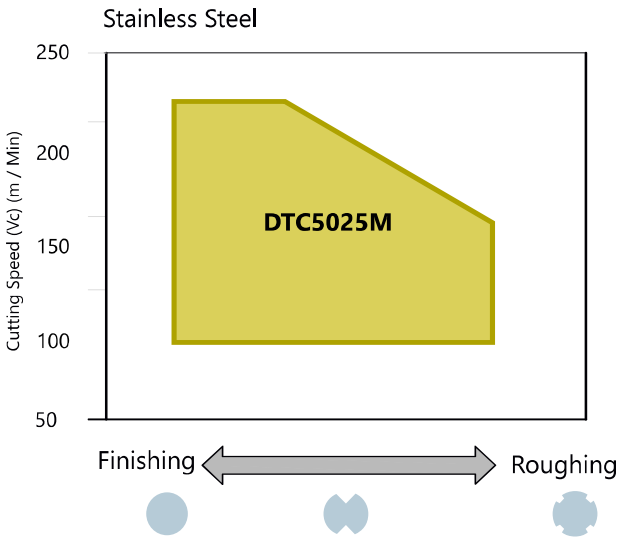


Brochure/MDC/2026/009/26

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Application area



Turning operations on stainless steel at higher speeds, especially the operations involving interrupted cuts, using **CVD coated carbide grade** pose big challenges. The cutting tool needs to possess both : **high toughness as well as high wear resistance**, simultaneously. This challenge is effectively met by the **specially engineered grade DTC5025M.**

DTC5025M is the **first choice** grade for Machining of **Stainless Steels**, especially the austenitic types for **General Purpose Turning.**

Application area: M20-M30

Grade description

Delivering Maximum Stability and Superior Performance.

High Core Toughness: Specially engineered gradient sintered substrate prevents tool breakage even under heavy cutting loads.

Superior Wear Resistance: The thick CVD and golden TiN layers maximize tool life and reduce replacement costs.

Optimized Performance: A specialized post-coating surface treatment directly eliminates premature tool failure in tough materials.

Excellent Surface Finish: The ultra-smooth outer layer reduces friction to deliver clean, precise stainless steel turning.

RECOMMENDED **Cutting parameters**

Work material	Application	Grade	Chipbreaker	Cutting parameters								
				Ap (mm)			Feed (mm/tooth)			Speed (m/min)		
				Min.	Ideal	Max.	Min.	Ideal	Max.	Min.	Ideal	Max.
Stainless Steel	Finishing	DTC5025M	FM2	0.5	1.0	2.0	0.1	0.15	0.25	180	200	250
	General		MM2	1.0	2.0	3.0	0.15	0.25	0.30	160	180	200
	Roughing		MR2	3.0	4.0	5.0	0.25	0.35	0.45	120	140	160

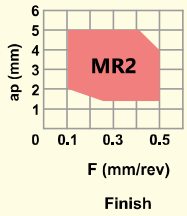
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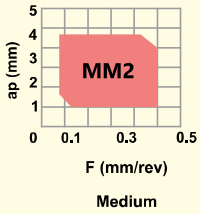
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Chipbreaker application range

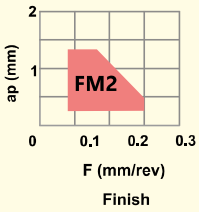
FM2 is a general purpose chip breaker geometry for positive inserts. The medium machining operations carried out using negative inserts are supported by **MM2**, while the operations involving a heavier depth of cut are supported by **MR2** chip breaker geometry.

Negative





Positive



Success Case

20% tool life

Continuous Cutting of Valve body

Application : Turning - Internal

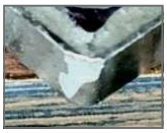
SS316L (ISO M)

Insert: CNMG120412-MR2-DTC5025M



Vc=180m/min, f=0.28mm/rev, ap=2.50mm, Wet

Existing

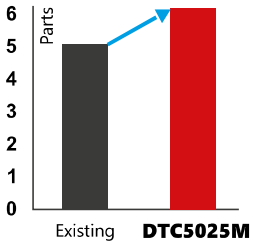


After 5 parts

DTC5025M



After 6 parts

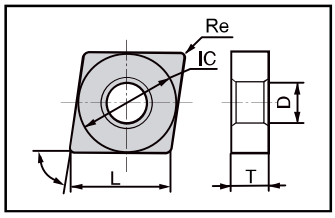


Annual savings : Rs. 2.5Lakh



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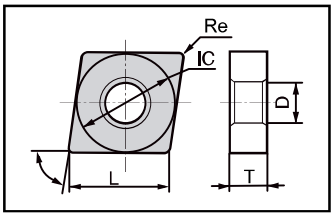
In Stock - ● Make to Order - ○ **(All dimensions are in mm)**

Shape	Catalogue No.	Re Nose Radius	Grade DTC5025K	IC Inscribed circle	T Thickness	D Hole Dia.
Negative with Chip Breaker Geometry						
C 80°	CNMG120404-MM2	0.4	●	12.7	4.76	5.16
	CNMG120408-MM2	0.8	●	12.7	4.76	5.16
	CNMG120412-MR2	1.2	●	12.7	4.76	5.16
	CNMG160612-MR2	1.2	●	15.875	6.35	6.35
	CNMG190612-MR2	1.2	●	19.05	6.35	7.94
	CNMG190616-MR2	1.6	●	19.05	6.35	7.94
D 55°	DNMG110408-MM2	0.8	●	9.525	4.76	3.81
	DNMG150604-MM2	0.4	●	12.7	4.76	5.16
	DNMG150608-MM2	0.8	●	12.7	6.35	5.16
	DNMG150612-MR2	1.2	●	12.7	6.35	5.16
S 90°	SNMG120408-MM2	0.8	●	12.7	4.76	5.16
	SNMG120412-MR2	1.2	●	12.7	4.76	5.16
	SNMG190612-MR2	1.2	●	19.05	6.35	7.94
	SNMG190616-MR2	1.6	●	19.05	6.35	7.94
T 60°	TNMG160404-MM2	0.4	●	9.525	4.76	3.81
	TNMG160408-MM2	0.8	●	9.525	4.76	3.81
	TNMG160412-MR2	1.2	●	9.525	4.76	3.81
V 35°	VNMG160404-MM2	0.4	●	9.525	4.76	3.81
	VNMG160408-MM2	0.8	●	9.525	4.76	3.81
W 80°	WNMG060408-MM2	0.8	●	9.525	4.76	3.81
	WNMG080408-MM2	0.8	●	12.7	4.76	5.16
	WNMG080412-MR2	1.2	●	12.7	4.76	5.16



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In Stock - ● Make to Order - ○ **(All dimensions are in mm)**

Shape	Catalogue No.	Re Nose Radius	Grade DTC5025K	IC Inscribed circle	T Thickness	D Hole Dia.
Positive with Chip Breaker Geometry						
C 80°	CCMT060204-FM2	0.4	●	6.35	2.38	2.8
	CCMT060208-FM2	0.8	●	6.35	2.38	2.8
	CCMT09T304-FM2	0.4	●	9.525	3.97	4.4
	CCMT09T308-FM2	0.8	●	9.525	3.97	4.4
D 55°	DCMT070204-FM2	0.4	●	6.35	2.38	2.8
	DCMT11T304-FM2	0.4	●	9.525	3.97	4.4
	DCMT11T308-FM2	0.8	●	9.525	3.97	4.4
S 90°	SCMT120408-FM2	0.8	●	12.7	4.76	5.5
T 60°	TCMT110204-FM2	0.4	●	6.35	2.38	2.8
	TCMT16T308-FM2	0.8	●	9.525	3.97	4.3
V 35°	VBMT160404-FM2	0.4	●	9.525	4.76	4.4
	VCMT110304-FM2	0.4	●	6.35	3.18	2.8
	VCMT160404-FM2	0.4	●	9.525	4.76	4.4
	VCMT160408-FM2	0.8	●	9.525	4.76	4.4



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