

TMV Chipbreaker

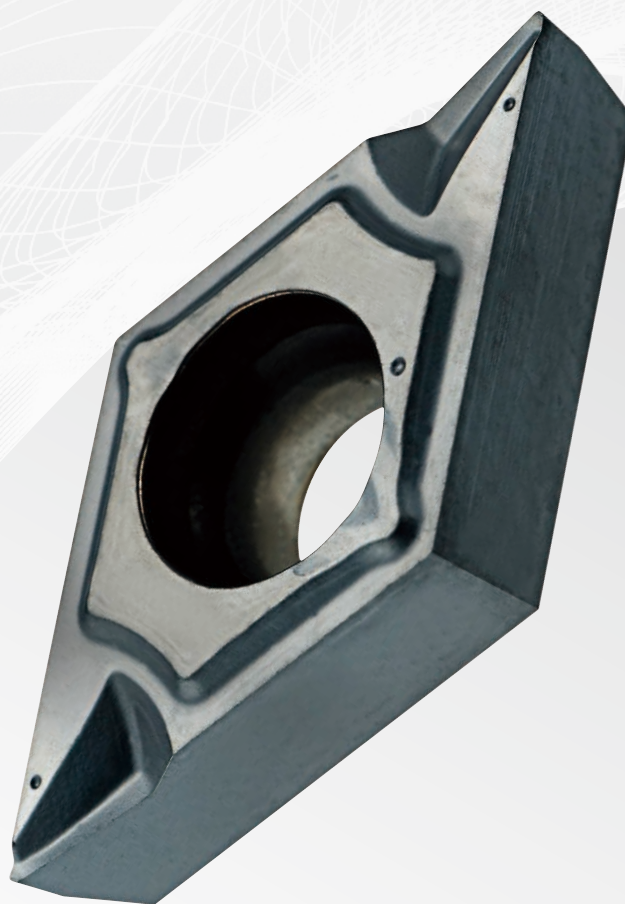
For Front Turning | Designed for Vibration Cutting on Swiss CNC Machines



Specialized for



* LFV is a registered trademark of Citizen Watch Co., Ltd.



Dedicated Tools for Vibration Cutting

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Dedicated Tools for Vibration Cutting

The development of a cutting tool that delivers maximum performance during vibration cutting utilization. NTK provides the best choice and eliminates the guess work of selecting a tool.

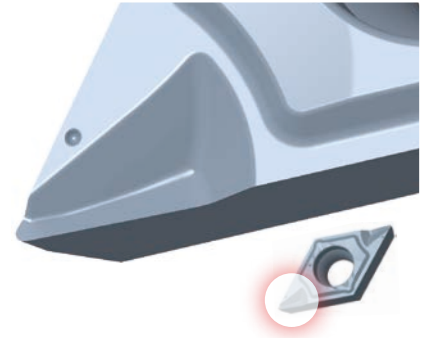
TMV Chipbreaker

For Front Turning | Designed for Vibration Cutting on Swiss CNC Machines

Reliably long tool life and stable chip evacuation during vibration cutting

Performance

- **Dramatic reduction in cutting edge wear**
Extended tool life even machining difficult-to-cut materials
- **Stable chip removal with dramatic reduction in cutting edge wear**
Stable chip formation during vibration cutting



Applications

Front turning operations on swiss cnc using vibration cutting function

Machining conditions

Grade	Work materials	Operation	Cutting conditions			Vibration condition (LFV)		
			Cutting speed (m/min)	Feed (mm/rev)	D.O.C. (ap) (mm)	P	Q	D
ST4	Austenitic stainless steel (SUS304 / SUS316 etc)	Front turning	40 - 100	0.02 - 0.06	0.5 - 2.0	Mode 1	0.5	0.5
DM4 NEW	Carbon steel / Alloy steel (S45C / SCM435)	Front turning	50 - 120	0.02 - 0.06				
TM4 NEW	Non-ferrous (Aluminum / Titanium etc)	Front turning	60 - 150	0.02 - 0.06				

⚠ The cutting edges are designed with lower height than our standard ISO inserts. Please correct the center height before using it.

⚠ * When using an **R0.08** insert, set the feed 0.02mm/rev or less. [Mode 2 / E4.0 / R0.5] is recommended when feed rate is higher than 0.02mm/rev.

Case Study

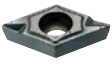
		Conventional tool	TMV chipbreaker
CNC Lathe	Cincom L20-LFV		
Work material	SUS316L		
Cutting speed	80 m/min		
Feed	0.05 mm/rev		
D.O.C. (ap)	1.0 mm		
Coolant	WET		
Vibration condition	Mode 1 Q0.5 D0.5		
	Edge image Machining range 8km		
	Chip images		

Construction machine parts

Work material	SGD material (SS polishing material) Machining dia. φ8 / 10.8 / 12	
RPM	2,500	
Feed (mm/rev)	0.03	
D.O.C (mm)	2.0/2.6/4.0	
Vibration condition (LFV)	Mode 1 / Q1.0 / D0.5	
DM4 DCGT11T302MRTMV		600pcs / corner
Competitor's PVD carbide		300pcs / corner

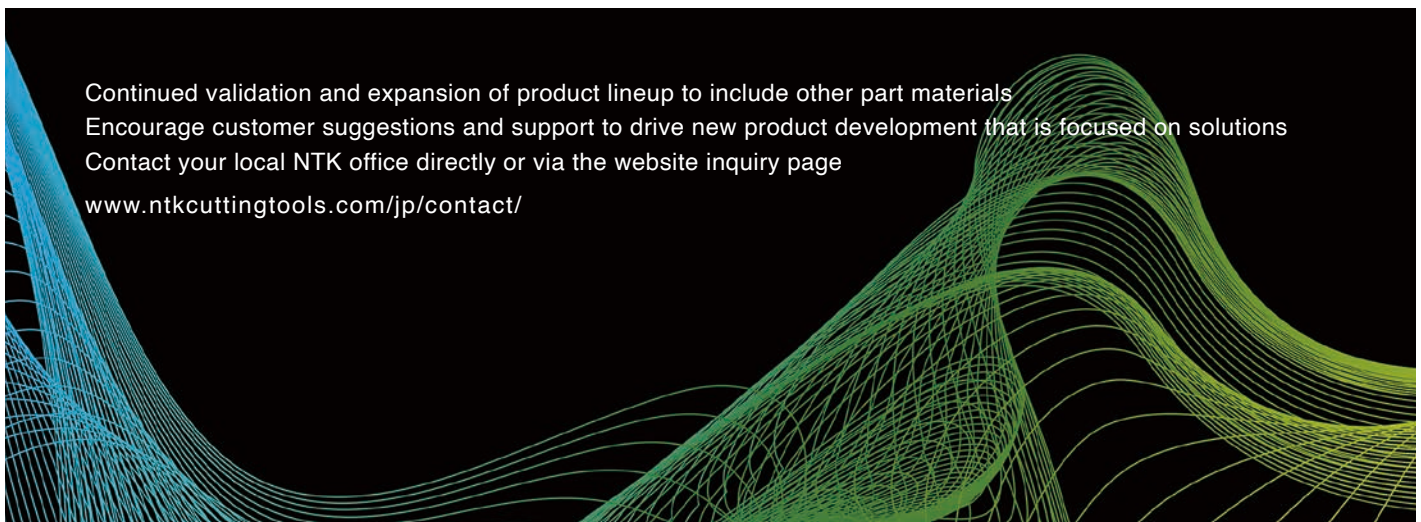
Valve parts

Work material	SUS304 Machining dia. φ3.8	
RPM	2,263	
Feed (mm/rev)	0.02	
D.O.C (mm)	3.1	
Vibration condition (LFV)	Mode 2 / E3.0 / R0.5 / I0.02	
ST4 DCGT11T302MRTMV		3,000pcs / corner
Competitor's PVD carbide		2,200pcs / corner

Shape	Item description		Quantity/Case	Grade (PVD)			Dimensions		
	ISO	ANSI		ST4	DM4	TM4	IC	Thickness	Radius
	DCGT11T301MRTMV	DCGT32.504MRTMV	10	●	●	●	9.525	3.97	0.08*
	DCGT11T301MRTMV2	DCGT32.504MRTMV2	2	●	●	●	9.525	3.97	0.08*
	DCGT11T302MRTMV	DCGT32.508MRTMV	10	●	●	●	9.525	3.97	0.18
	DCGT11T302MRTMV2	DCGT32.508MRTMV2	2	●	●	●	9.525	3.97	0.18
	DCGT11T304MRTMV	DCGT32.51MRTMV	10	●	●	●	9.525	3.97	0.38
	DCGT11T304MRTMV2	DCGT32.51MRTMV2	2	●	●	●	9.525	3.97	0.38

In addition to the standard 10-piece case, a 2-piece case is available

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Sample request



YouTube Channel

www.youtube.com/NTKCUTTINGTOOLS



LINE Technical consultation @ntktech

