

# NEW PRODUCT NEWS

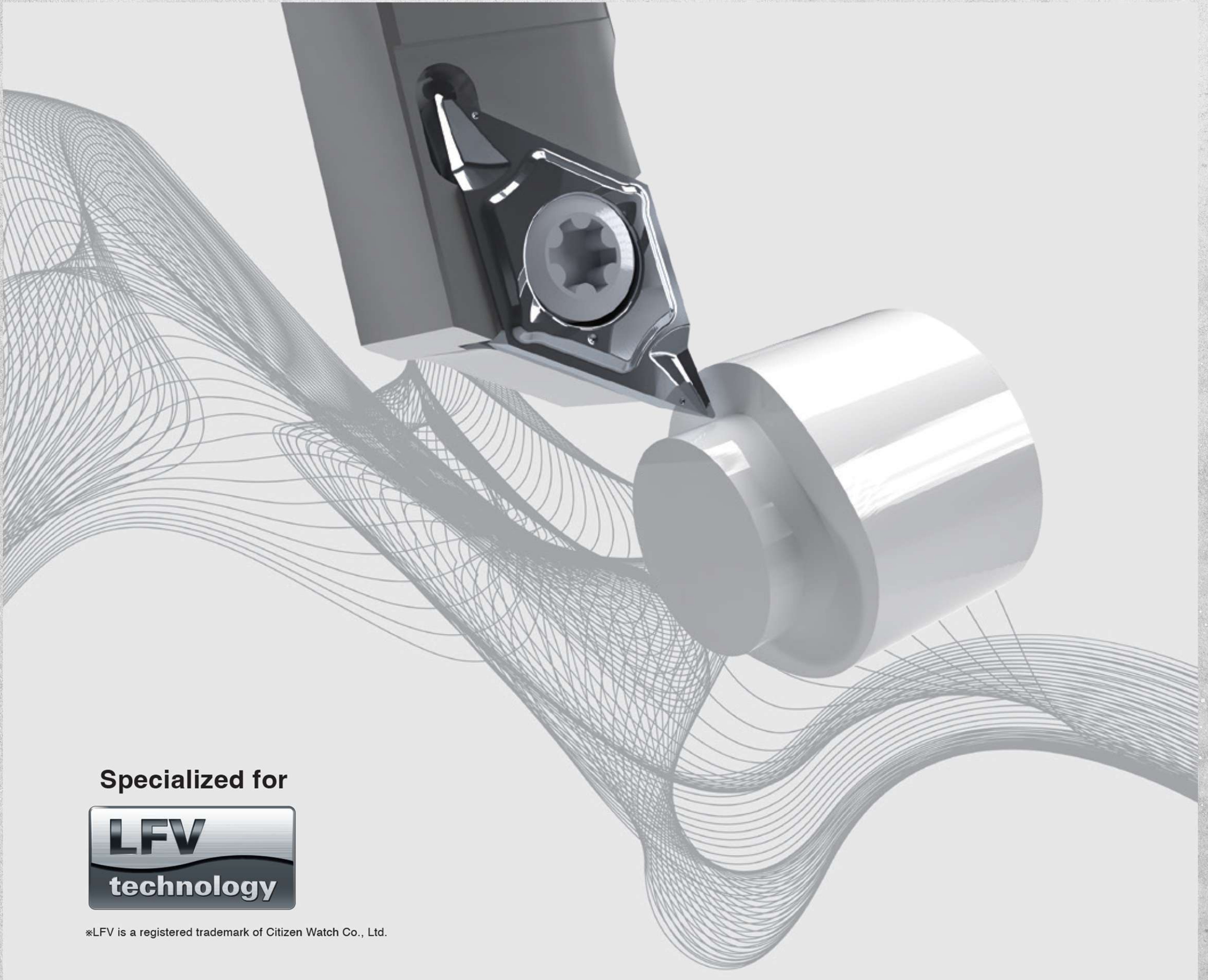


TMV Chipbreaker

## CITIZEN

For OD Turning | Specially designed for vibration cutting on automatic lathes

### THE BIRTH OF DEDICATED VIBRATION CUTTING TOOLS



Specialized for



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

*CERtainly* [but not only] *CERamics*  
Outstanding solutions for demanding applications

## TMV Chipbreaker

# The birth of dedicated vibration cutting tools

Cutting tools developed to maximize performance for vibration cutting and achieve efficient machining.  
The best selection of tooling to cover a large range of machining applications.

Specialized for



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# TMV Chipbreaker

For OD Turning | Specially designed for vibration cutting on automatic lathes

### Compatible models ( Cincom )



L12



L20



L20XIIB5



L32



A20



D25



M16



M32

## TMV Chipbreaker

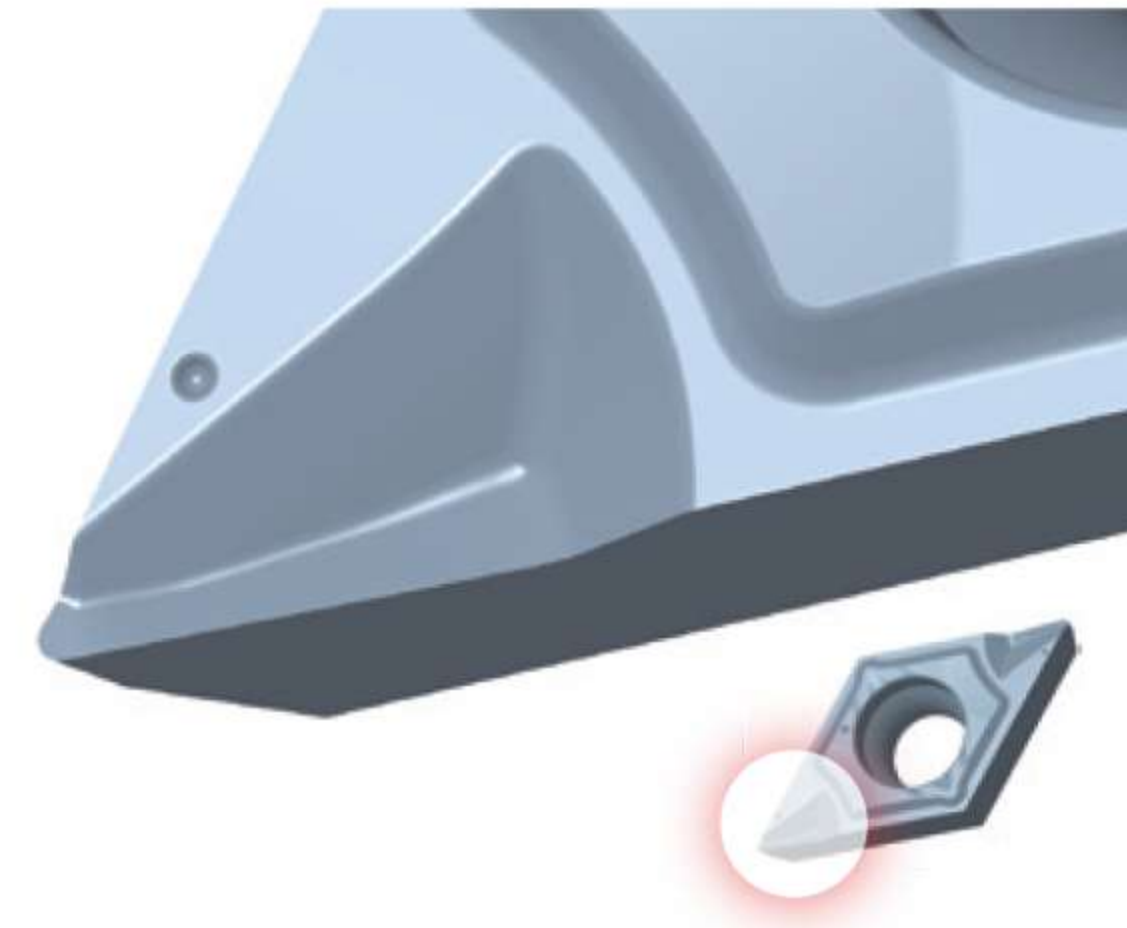
### Achieving extended tool life and stable cutting performance in vibration cutting

#### Performance

- **Significantly reducing damage of cutting edge**  
Extended lifespan can be expected even in the machining of difficult-to-cut materials
- **More stable of chip control**  
Stable chip formation during vibration cutting

#### Applications

Front turning process using an automatic lathe with vibration cutting function



#### Cutting conditions

Grade	Material	Machinig method	Cutting conditions			Vibration condition ( LFV )		
			Cutting speed (m/min)	Feed (mm/rev)	D.O.C. (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	Carbon steel / Alloy steel ( SCM435 / S45C etc )	Front Turning	50 - 120	0.02 - 0.06				
TM4	Non-ferrous ( Aluminum / Titanium etc )	Front Turning	60 - 150	0.02 - 0.06				

⚠ Our products are designed with a low cutting edge, please use them after aligning with the center.

⚠ When using insert radius R0.08, please set the feed rate to 0.02mm/rev or less. If you want to increase the feed rate beyond 0.02mm/rev. we recommend using the [ Mode 2 / E4.0 / R0.5 ]

#### Case study

Machine: Cincom L20-LFV  
Material: SUS316L  
Speed: 80 m/min  
Feed: 0.05 mm/rev  
D.O.C.: 1.0 mm  
Coolant: WET  
Vib condition: Mode Q0.5 D0.5

	TMV Chipbreaker	Competitor
Cutting edge photo Machining distance 8km		
Chip condition		

#### Construction equipment parts

Material	SGD material ( SS polish ) Machining Dia : φ8 / 10.8 / 12	
Rotation speed (rpm)	2,500	
Feed (mm/rev)	0.03	
D.O.C.(mm)	2.0/2.6/4.0	
Vib condition (LFV)	Mode 1 / Q1.0 / D0.5	
<b>DM4 DCGT11T302MRTMV</b>	<b>600pcs / Corner</b>	
Competitor PVD coated insert	300pcs / Corner	





#### Valve component

Material	SUS304 Machining Dia : φ3.8	
Rotation speed (rpm)	2,263	
Feed (mm/rev)	0.02	
D.O.C. (mm)	3.1	
Vib condition (LFV)	Mode 2 / E3.0 / R0.5 / I0.02	
<b>ST4 DCGT11T302MRTMV</b>	<b>3,000pcs / Corner</b>	
Competitor PVD coated insert	2,200pcs / Corner	

## TMV Chipbreaker

| Lineup

NEW

Shape	Insert number		Qty /Case	PVD coated grade			Dimensions		
	ISO	ANSI		ST4	DM4	TM4	I.C.	Thickness	Radius
	DCGT11T301MRTMV	DCGT32.504MRTMV	10	●	●	●	9.525	3.97	0.08 <sup>*</sup>
	DCGT11T302MRTMV	DCGT32.508MRTMV	10	●	●	●	9.525	3.97	0.18
	DCGT11T304MRTMV	DCGT32.51MRTMV	10	●	●	●	9.525	3.97	0.38
	CCGT09T301MRTMV	CCGT32.504MRTMV	10	●	●	●	9.525	3.97	0.08 <sup>*</sup>
	CCGT09T302MRTMV	CCGT32.508MTMV	10	●	●	●	9.525	3.97	0.18
	CCGT09T304MRTMV	CCGT32.51MRTMV	10	●	●	●	9.525	3.97	0.38
	VCGT110302MRTMV	VCGT2208MRTMV	10	●	●	●	6.35	3.18	0.18
	VCGT110304MRTMV	VCGT221MRTMV	10	●	●	●	6.35	3.18	0.38
	TNGG160402MRTMV	TNGG3308MRTMV	10	●	●	●	9.525	4.76	0.18
	TNGG160404MRTMV	TNGG331MRTMV	10	●	●	●	9.525	4.76	0.38

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