

VISION Series

General Inserts for turning

VM Breaker

New

www.itachile.com

Fono: 055 787169

Features

- VM chip breaker ensures stable cutting performance even in high feed and deep depth of cut.
- Specially designed 3-dimensional chip breaker having low cutting resistance and improved rigidity of cutting.
- The best cutting performance is accomplished due to improved chip control on various workplace under the continuous machining of high speed.



Features of VM C/B

- The 'convex part' for smooth chip breaking
- Excellent chip control in medium to roughing operations

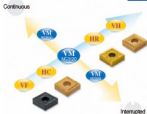


- Chip breaker with 2-step geometry
- Feature chip-control resistance at high speed & feed cutting due to smooth-chip cutting

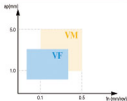
- Rigid cutting edge
- Improved the rigidity of cutting edge and increased toughness guarantees long tool life under the heavy intermittent cutting

www.itachile.com

Application of chip breaker

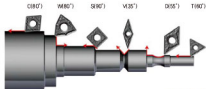


Chip Control Range



Recommended Cutting Conditions

Workpiece	Hardness	Grade	vc (mm/s)
Soft Steels (SM40C-SM25C, SS430, SCR415, SCM415, etc)	≤180HB	NC3010	310(270-350)
		NC3120	260(190-300)
		NC3030	270(230-300)
General Steels (SM45C, SM55C, SCM430, SCM440, etc)	180-260HB	NC3010	220(180-250)
		NC3120	200(170-230)
		NC3030	190(160-210)
Hardened Steels (SNC415, SNC815, SNCM240, SNCM430, STB12, STB61, etc)	260-350HB	NC3010	130(100-150)
		NC3120	120(90-140)
		NC3030	110(80-130)



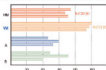
VM chip breaker tooling system

Wear resistance



Cutting Conditions
 Designation: CM6020408-VM
 Grade: NC2100
 Workpiece: SCM440
 vc: 250 m/min
 ap: 2.0 mm
 fr: 0.25 - 0.35 mm/rev

Shock resistance



Cutting Conditions
 Designation: CM6020408-VM
 Grade: NC2120
 Workpiece: SCM440 (interrupted)
 vc: 200 m/min
 ap: 2.0 mm
 fr: 0.45 mm/rev

www.itachile.com

Application examples

Workpiece	Korloy	Competitor	
 HB Gear (SCM40)	Designation	CM6020408-VM (NC2010)	CM6020408-O
	vc (m/min)	250	---
	fr (mm/rev)	0.35 - 0.4	---
	ap (mm)	1.5	---
	Machined part	Outer & Face	---
Result	120sa	100sa	

Workpiece	Korloy	Competitor	
 HB Wheel (SCM40)	Designation	CM6020410-VM (NC2120)	CM6020410-O
	vc (m/min)	300	---
	fr (mm/rev)	0.25	---
	ap (mm)	2.5	---
	Machined part	Outer & Face	---
Result	25sa	25sa	

Workpiece	Korloy	Competitor	
 Ring (SCM40)	Designation	CM60120408-VM (NC2120)	CM60120408-O
	vc (m/min)	240	---
	fr (mm/rev)	0.2	---
	ap (mm)	2.0	---
	Machined part	Outer & Face	---
Result	200sa	180sa	

Workpiece	Korloy	Competitor	
 Cam Shaft (SCM40)	Designation	CM6015008-VM (NC2120)	CM6015008-O
	vc (m/min)	157	---
	fr (mm/rev)	0.15 - 0.4	---
	ap (mm)	1.0 - 1.5	---
	Machined part	Outer & Face	---
Result	150sa	120sa	

Workpiece	Korloy	Competitor	
 Pin Gear (SCM40)	Designation	TM60100408-VM (NC2120)	TM60100408-O
	vc (m/min)	336	---
	fr (mm/rev)	0.25	---
	ap (mm)	2.0	---
	Machined part	Outer & Face	---
Result	180sa	150sa	



VM-Insert

www.itachile.com

Geometry	Designation	CVD					PVD		CERMET
		NC0010	NC0020	MC0030	NC0010	MC0030	PC0010	PC0030	CP0030
	CHRG09004-VM	●	○	○					●
	CHRG09008-VM	●	○	○					●
	CHRG120404-VM	●	●	●	●			●	●
	CHRG120408-VM	●	●	●	●	●	●	●	●
	CHRG120412-VM	●	●	●	●		●		
	CHRG180608-VM	●	○	○					
	CHRG180612-VM	●	○	○					
	CHRG180616-VM	●	○	○					
	CHRG180612-VM	●	○	○					
	DHRG110404-VM								●
	DHRG110408-VM	○	○						
	DHRG110412-VM								
	DHRG150404-VM	○	●	●	●	●	○		●
	DHRG150408-VM	○	●	●	●	●	○		●
	DHRG150412-VM								●
	DHRG150604-VM	○	●	●	●	○		●	●
	DHRG150608-VM	●	●	●	●	●	●	●	●
	DHRG150612-VM					○			●
	SBRG09004-VM	○	○						●
	SBRG09008-VM	○	○	●					●
	SBRG120404-VM	○	○	●	○				●
	SBRG120408-VM	●	●	●	●	●	●	●	●
	SBRG120412-VM	○	○	○	○				●
	SBRG180612-VM	○	○	○					●
	TMRG110308-VM				○	○			
	TMRG160404-VM	●	●	●	●	○			●
	TMRG160408-VM	●	●	●	●			●	●
	TMRG160412-VM				●	●	○		●
	TMRG220404-VM					○			
	TMRG220408-VM			○					
	TMRG220412-VM			○					
	TMRG220413-VM			○					
	VHRG160404-VM	●	○	○					●
	VHRG160408-VM	●	○	○	●	●		●	
	VHRG160412-VM								
	VHRG220404-VM								
	VHRG220408-VM								
	VHRG220412-VM								
	WHRG060404-VM		○						●
	WHRG060408-VM	○	○	○					●
	WHRG060412-VM		○						
	WHRG060404-VM	○	○	○					●
	WHRG060408-VM	●	●	●	●	●	●	●	●
	WHRG060412-VM	●	●	●	●				●

● Stock Item, ○ Under preparation for stock