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# FP

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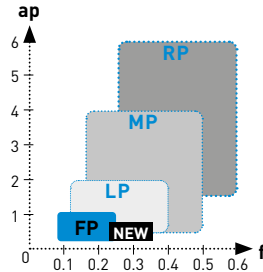
CHIP BREAKER FOR FINISHING STEELS  
WIDE RANGE OF EFFECTIVE CHIP CONTROL

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# FP

## CHIP BREAKER FOR FINISHING STEELS WIDE RANGE OF EFFECTIVE CHIP CONTROL

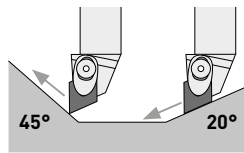


### 1ST CHOICE FOR FINISHING OF STEELS

The FP chip breaker offers stable chip control and provides fine surface finishes over an expanded application area including varied depths of cut and feed rates.

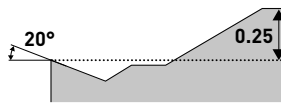
### P ISO APPLICATION AREA

Ideal for finishing of general, malleable and low carbon steels. Helps to eliminate chip jamming when copy turning.



### CROSS SECTION OF FP CORNER

20° rake angle and the protrusion designed with low resistance geometry realize excellent sharpness.



### 20° POSITIVE RAKE ANGLE

Provides high sharpness and increased reliability for soft materials machining. The convex breaker improves the shape of the chips over an expanded range of cutting conditions.

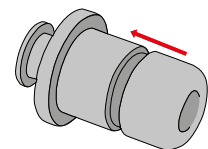


## APPLICATION EXAMPLE

### Finishing of workpiece (with coolant)

Insert	DNMG150408-FP MP3025
Workpiece Material	18CrMo4 / 1.7243
Cutting mode	External, Continuous
Cutting Speed Vc (m/min)	220
Feed f (mm/rev)	0.25
Depth of Cut ap (mm)	0.5
Coolant	Emulsion

**Result** The new FP breaker shows improved, stable chip control when finish machining.



Competitor FP Chip Breaker

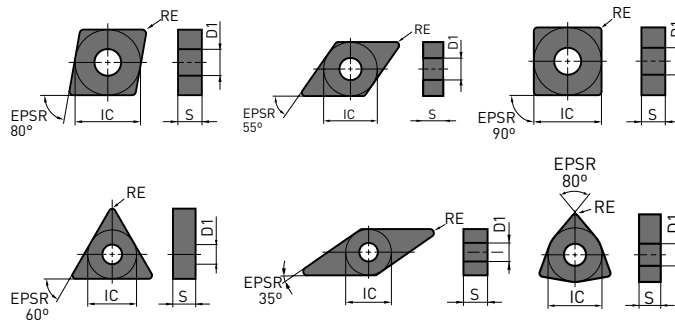
# NEGATIVE INSERTS

(WITH HOLE)

**P** **K**

**M Class**

**CNMG, DNMG, SNMG, TNMG, VNMG, WNMG**



Finishing

FP



Order Number	Cutting Range					IC	S	RE	DC
		MC6015	MC6025	NX2525	MP3025				
CNMG120402-FP	F	●	●	●	●	12.7	4.76	0.2	5.16
CNMG120404-FP	F	●	●	●	●	12.7	4.76	0.4	5.16
CNMG120408-FP	F	●	●	●	●	12.7	4.76	0.8	5.16
CNMG120412-FP	F	●	●	●	●	12.7	4.76	1.2	5.16
DNMG150402-FP	F	★	★	★	●	12.7	4.76	0.2	5.16
DNMG150404-FP	F	★	★	●	★	12.7	4.76	0.4	5.16
DNMG150408-FP	F	★	★	●	★	12.7	4.76	0.8	5.16
DNMG150412-FP	F	★	★	●	★	12.7	4.76	1.2	5.16
DNMG150602-FP	F	★	★	★	★	12.7	6.35	0.2	5.16
DNMG150604-FP	F	●	●	●	●	12.7	6.35	0.4	5.16
DNMG150608-FP	F	●	●	●	●	12.7	6.35	0.8	5.16
DNMG150612-FP	F	●	●	●	●	12.7	6.35	1.2	5.16
SNMG120404-FP	F	★	★	★	★	12.7	4.76	0.4	5.16
SNMG120408-FP	F	●	●	●	●	12.7	4.76	0.8	5.16
SNMG120412-FP	F	●	●	●	●	12.7	4.76	1.2	5.16
TNMG160402-FP	F	★	★	★	★	9.525	4.76	0.2	3.81
TNMG160404-FP	F	●	●	●	●	9.525	4.76	0.4	3.81
TNMG160408-FP	F	●	●	●	●	9.525	4.76	0.8	3.81
TNMG160412-FP	F	●	●	●	●	9.525	4.76	1.2	3.81
VNMG160402-FP	F	★	★	★	★	9.525	4.76	0.2	3.81
VNMG160404-FP	F	●	●	●	●	9.525	4.76	0.4	3.81
VNMG160408-FP	F	●	●	●	●	9.525	4.76	0.8	3.81
VNMG160412-FP	F	●	●	●	●	9.525	4.76	1.2	3.81
WNMG080402-FP	F	★	★	★	★	12.7	4.76	0.2	5.16
WNMG080404-FP	F	●	●	●	●	12.7	4.76	0.4	5.16
WNMG080408-FP	F	●	●	●	●	12.7	4.76	0.8	5.16
WNMG080412-FP	F	●	●	●	●	12.7	4.76	1.2	5.16

**GRADE SELECTION**

ISO	Application range	ISO
P		K
P10	MC6015	K10
P20	MC6025	K20
P30	NX2525	K30
P40	MP3025	K40
	CVD	Cermet
	CVD	Coated Cermet

Material	Cutting Range	Vc (m/min <sup>-1</sup> )	f (mm/rev)	ap (mm)
P Carbon Steel, Alloy Steel	General Cutting	230 - 395	0.08 - 0.25	0.10 - 1.00
	Unstable Cutting	230 - 375	0.08 - 0.25	0.10 - 1.00

● : Inventory maintained. ★ : Inventory maintained in Japan.

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