DIA EDGE TOOL NEWS B277B

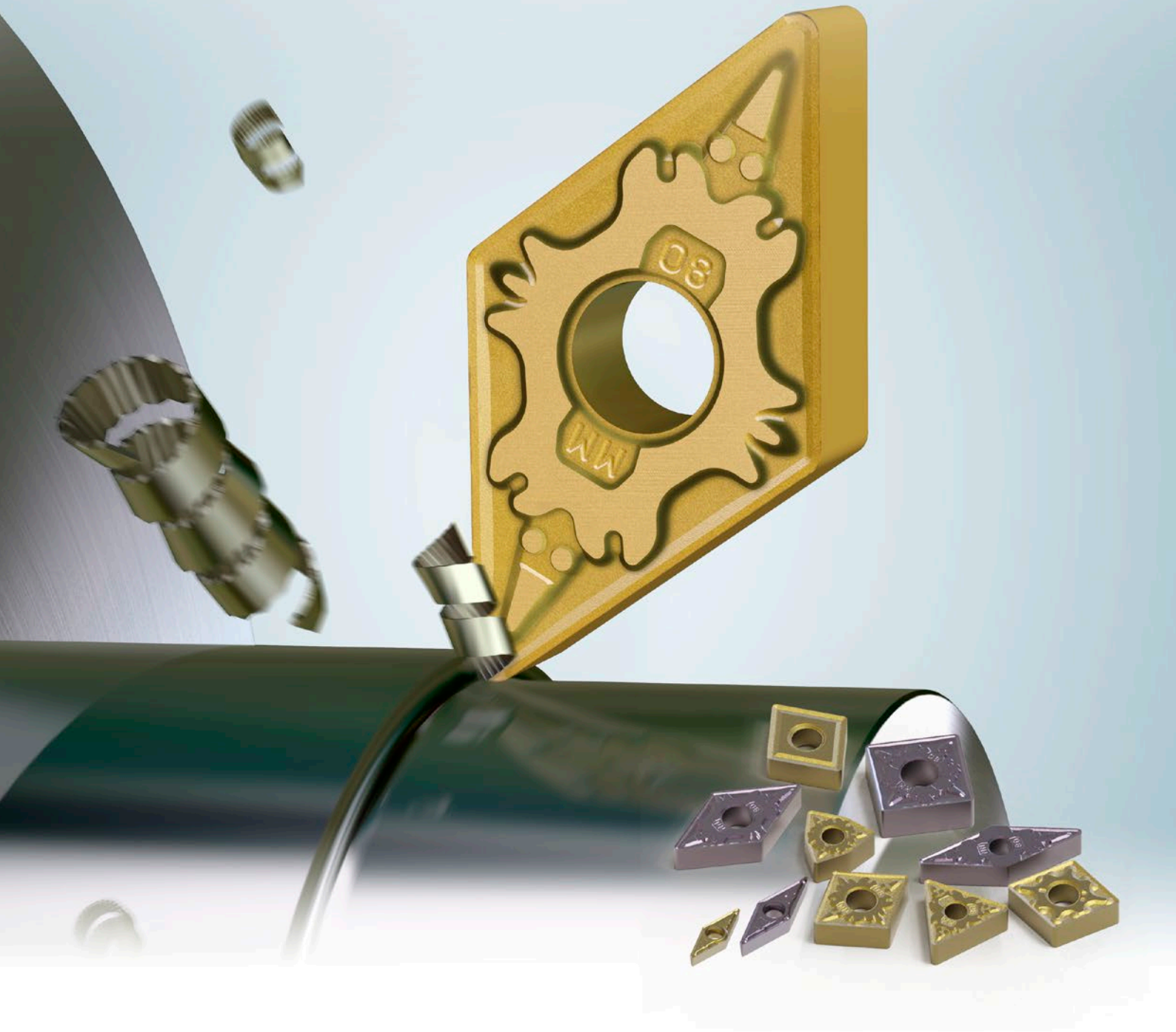
Coated Grade for Stainless Steel Turning

MC/MP7100 Series

New Products

Dedicated Carbide Substrate + New Coating Technology

Creation of a new series for a variety of stainless steel applications.



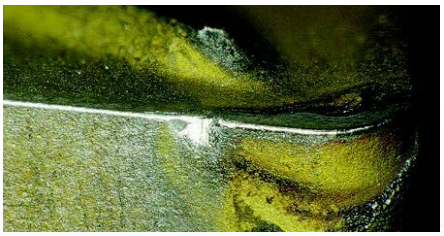
MITSUBISHI MATERIALS CORPORATION

Coated Grade for Stainless Steel Turning

MC/MP7100 Series

Improved coating adhesion strength and dedicated carbide substrate suppresses notching during stainless steel turning.

Stainless steels are widely used for components that require resistance to corrosion. When comparing stainless steels to other steels and cast irons, it has low hardness but is tough to machine and susceptible to work hardening. Due to these characteristics, turning inserts are prone to edge damage and weld chipping. Additionally, plastic deformation of the insert due to the heat generated makes more difficult to cut, resulting in unstable tool life.
The properties of stainless steels, such as corrosion and heat resistance, vary greatly depending on the metallurgical structure and composition, and these small differences can make it appear is as if a completely a different workpiece material is being machined.
Mitsubishi Materials has the ability to combine coating and substrate technology to produce a series of grades to successfully machine stainless steels.



Notching



Fracture from welding chipping



Plastic deformation

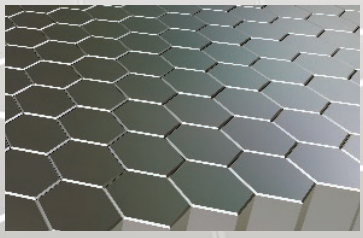
Features of The MC7100 Series Coating

"Super" Nano Texture Technology

The standard Nano Texture Technology has been improved and developed to be an industry leading standard for crystal growth of Al_2O_3 coatings. This Super Nano Texture Technology increases tool life and wear resistance due to the fine, dense crystal growth process.



The ratio of Al_2O_3 crystal grains with the same orientation



*By Image



Conventional CVD inserts

Grain size and growth direction are uneven.

Nano Texture

Uniformity of the grain size and growth direction has improved.

"Super" Nano Texture

Uniformity of the growth direction has drastically improved.

Tough and Sub Grip Layers

The extra strength of the adhesion between the coating layers suppresses peeling during machining of stainless steels.



Super-TOUGH-Grip

The adhesion strength of the Al_2O_3 layer, which was prone to peeling due to the work-hardened layer when machining stainless steel, has been significantly improved.

SUB-Grip

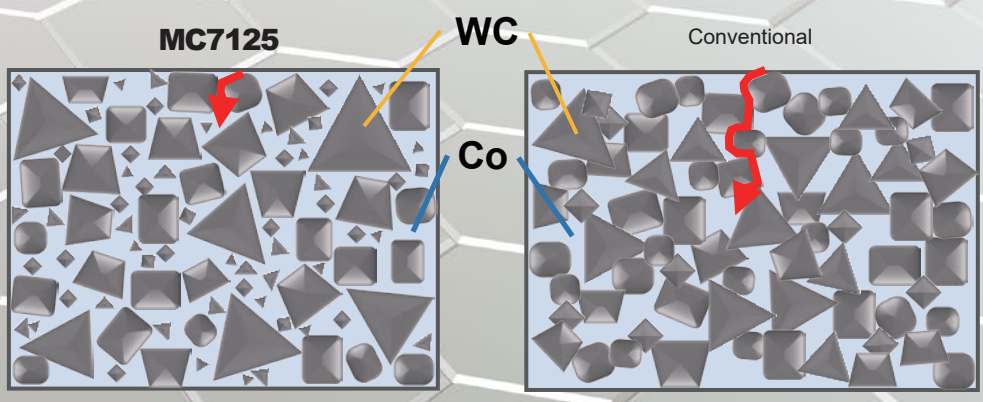
It increases the adhesion strength between the carbide substrate and the coating layer, and prevents the coating from peeling off due to welding.

Features of Carbide Substrate

MC7115 Has crater wear and plastic deformation resistance that are ideal for high-speed cutting of stainless steel.

MC7125 By optimising the particle size distribution, the boundary contact between the low toughness WC particles has been reduced and promotes hardness, thereby dramatically improving plastic deformation and fracture resistance.

MP7135 The dedicated carbide substrate has excellent wear resistance and greatly improved chipping resistance.

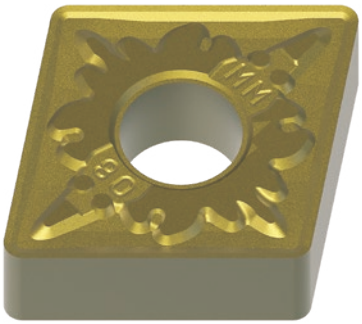


Reduces **WC** boundaries and suppresses crack growth

Cracks grow along the WC boundaries that are lower in toughness

The All Round Choice for Stainless Steel Turning

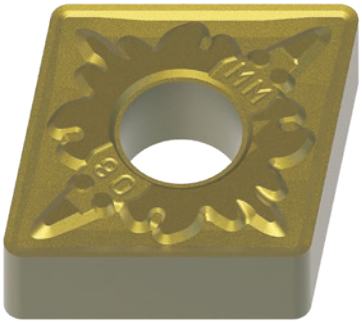
MC7125



First recommended grade
Compatible with a wide range of applications,
from continuous cutting through to interrupted cutting.
Suitable for a wide variety of stainless steels.

For High Speed Turning

MC7115

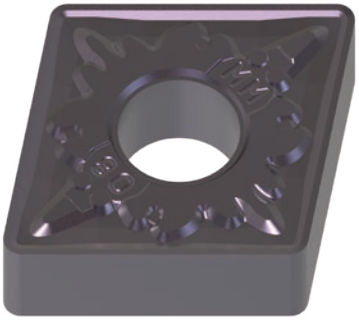


CVD coated carbide grade specialised for high speed cutting
For medium to large austenitic stainless steel parts, cutting speeds of 250 m/min or more reduce machining time.

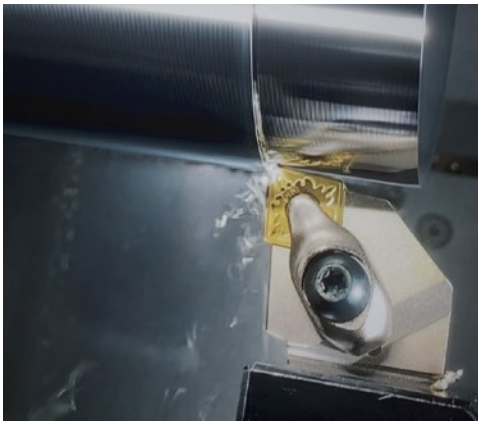
Note) The appearance colour of MC7115 and MC7125 may vary depending on the product, but this does not affect the quality or performance.

Tougher for Interrupted Cutting

MP7135



PVD coated carbide grade that is resistant to the impacts of interrupted cutting
It is ideal for intermittent cutting of workpieces, as well as for rough machining of forged and cast products.





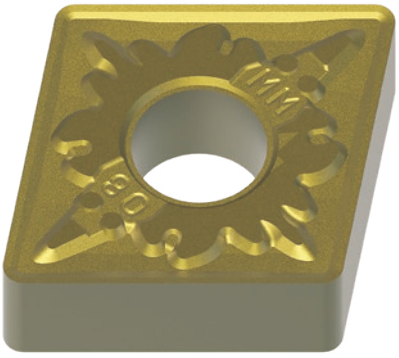
MC/MP7100 series machining video

YouTube

The All-Rounder for Stainless Steel Turning

MC7125

Incredibly stable with both plastic deformation and chipping resistance

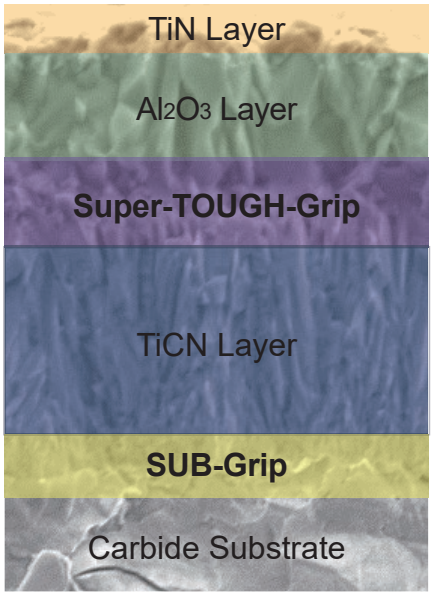


Coating layer with high adhesive strength

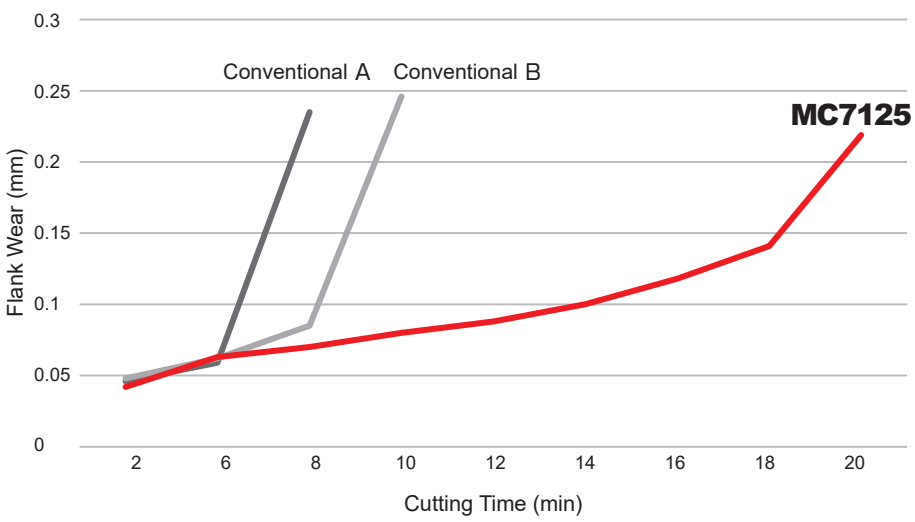
Tough and Super TOUGH-Grip dramatically improve adhesion strength and maximise the effectiveness of the coating.

Substrate resistant to plastic deformation and chipping

By optimising the particle size distribution of the main component WC and improving its dispersibility, reduced contact between the WC particles, dramatically improves resistance to plastic deformation and fracture.



Machining SUS316L : Comparison of wear resistance during wet cutting



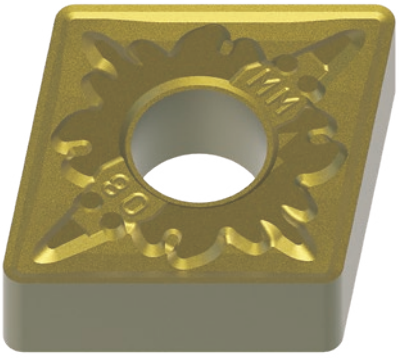
Tool life doubled

<Cutting Conditions>

Material	: SUS316L
Inserts	: CNMG120408-◌◌
Cutting Speed	: vc = 150 m/min
Feed per Rev.	: f =0.30 mm/rev
Depth of Cut	: ap = 1.5 mm
Cutting Mode	: Wet Cutting

For High Speed Turning

MC7115



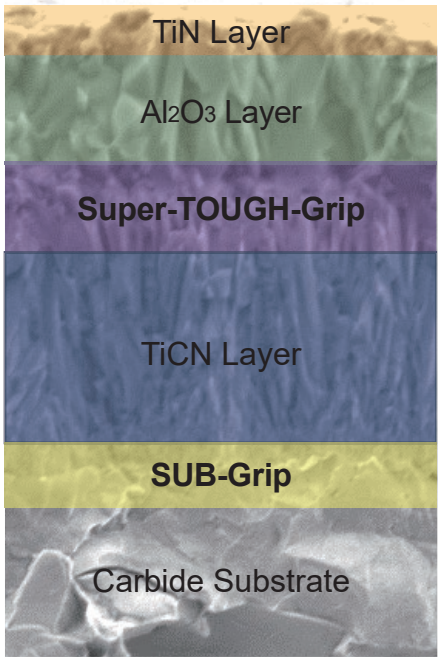
Increases the hardness of the base material, providing excellent resistance to plastic deformation and crater wear

Coating layer with high adhesive strength

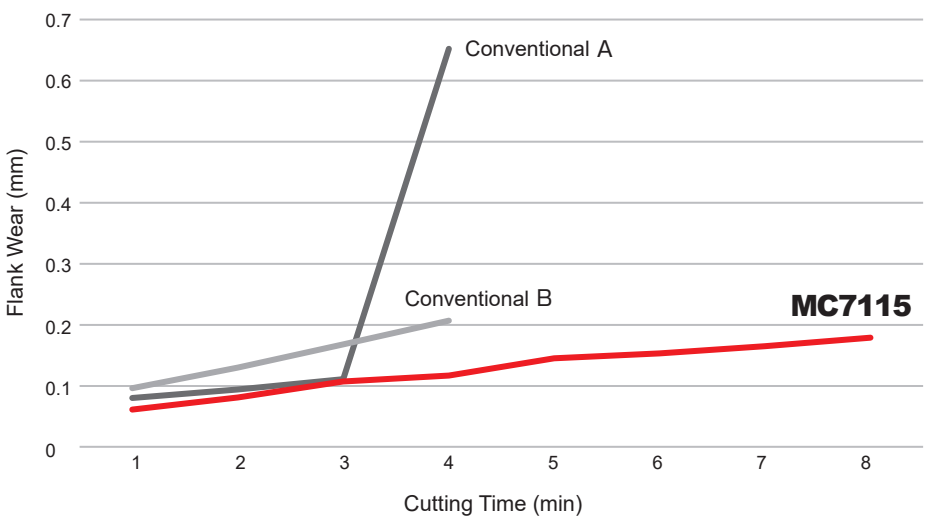
Tough and Super Tough Grip improve adhesion strength and maximise the effectiveness of the coating. "Super" Nano Texture Technology suppresses crater wear during high speed cutting.

Carbide Substrate That is Strong for High Speed Cutting

The hard carbide substrate is resistant to the high temperatures generated during high speed cutting and has excellent resistance to plastic deformation and crater wear.



Machining SUS304 : Comparison of wear resistance during wet cutting



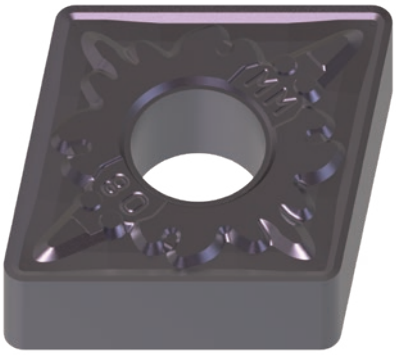
Tool life doubled

<Cutting Conditions>

Material	: SUS304
Inserts	: CNMG120408-◌◌
Cutting Speed	: vc = 250 m/min
Feed per Rev.	: f =0.30 mm/rev
Depth of Cut	: ap = 1.5 mm
Cutting Mode	: Wet Cutting

Tougher for Interrupted Cutting

MP7135



The highly heat resistant coating and dedicated carbide substrate provide both wear resistance and chipping resistance.

AlTiN-based nano-layer coating

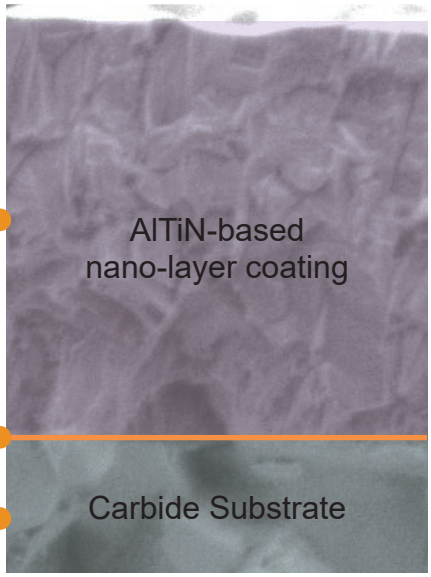
By layering the highly heat resistant AlTiN coating at the Nano level, excellent wear and chipping resistance has been achieve.

Technology to improve adhesion strength

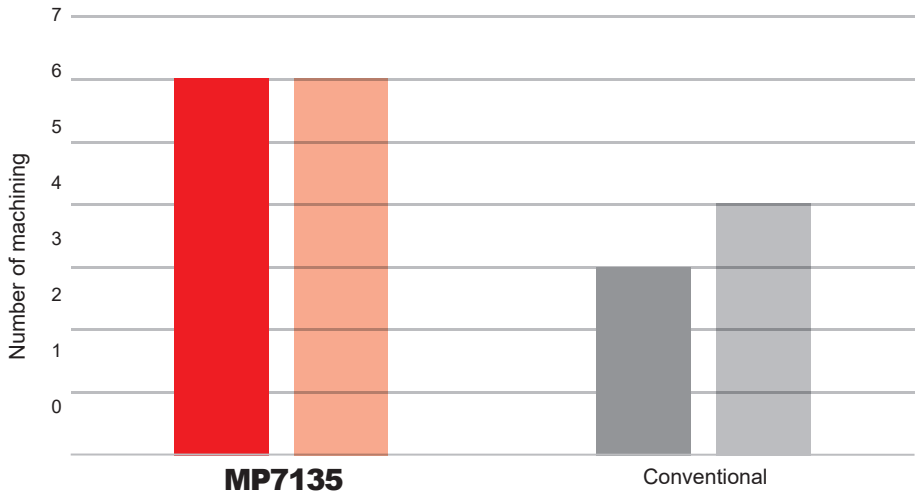
Suppresses peeling when machining stainless steel and exhibits excellent chipping resistance.

Dedicated carbide base material

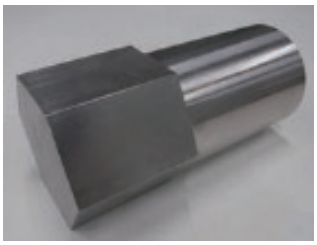
A carbide substrate exclusively for stainless steel that combines both wear and fracture resistance.



Machining SUS304 : Intermittent Cutting Comparison



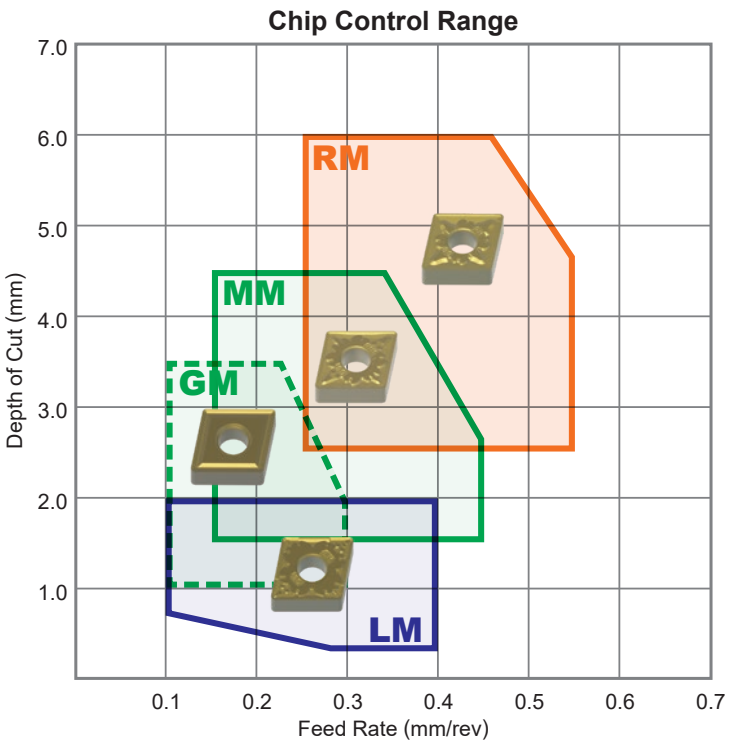
Almost double tool life



<Cutting Conditions>

Material	: SUS304
Inserts	: CNMG120408-◌◌
Cutting Speed	: vc = 120 m/min
Feed per Rev.	: f =0.25 mm/rev
Depth of Cut	: 2.0 mm x 2 pass
Cutting Mode	: Wet Cutting

Chipbreaker System (Negative Inserts)



M Stainless Steel

Negative insert for external turning

	Light Cutting	Medium Cutting	Rough Cutting
●	LM MC7115	MM MC7115	RM MC7115
◔	LM MC7125	MM MC7125	RM MC7125
✣	LM MP7135	MM MP7135	RM MP7135

CUTTING CONDITIONS

Stable Cutting

Continuous Cutting
Constant Depth of Cut
Pre-machined Surfaces
Securely Clamped Component Cutting

General Cutting

Unstable Cutting

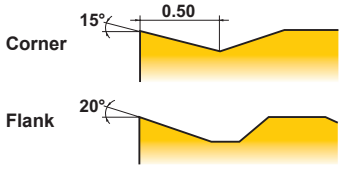
Heavy Interrupted Cutting
Irregular Depth of Cut
Low Clamping Rigidity Cutting

Main Chipbreaker

LM chipbreaker for light cutting

Excellent burr control
Reduces the incidence of burrs drastically because the sharpness properties and cutting edge strength are optimised with different rake angles.



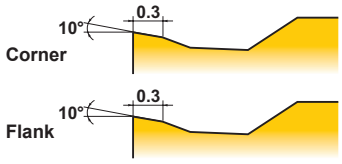


MM chipbreaker for medium cutting

New Design

Excellent welding resistance
The sharp design of the corner radius and main cutting edge improves welding resistance and prevents problems.

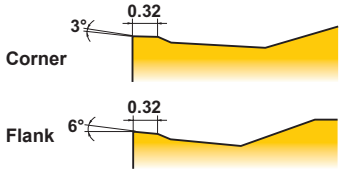




RM chipbreaker for rough cutting

Excellent fracture resistance
By optimizing the land angle and honing geometry, high cutting edge stability is achieved during interrupted machining.

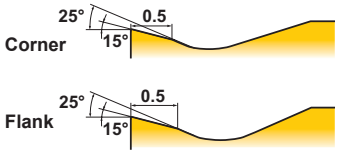




Interpolated Chipbreaker

GM chipbreaker

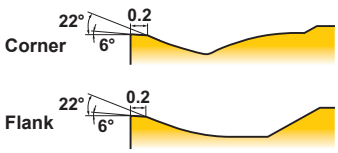
Sub chipbreaker of the main LM and MM chipbreaker.
Excellent in notching resistance for light cutting to medium cutting.



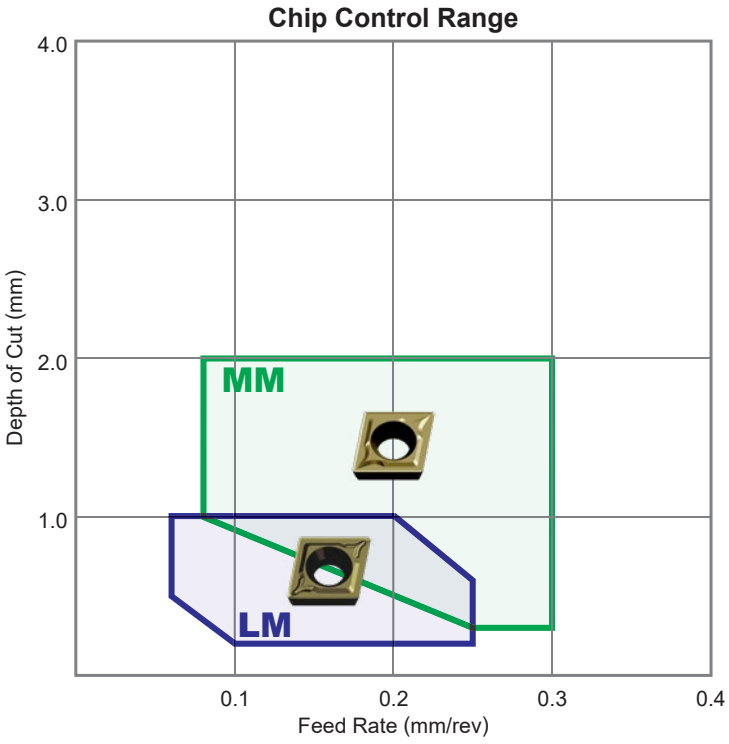
Multi-Assist Chipbreaker

MA chipbreaker

Suitable for medium cutting range.



Chipbreaker System (Positive Inserts)



M Stainless Steel

7° Positive Insert

	Light Cutting	Medium Cutting
●	LM MC7125	MM MC7125
◔	LM MC7125	MM MC7125
✚	LM MP7135	MM MP7135

CUTTING CONDITIONS

● Stable Cutting

Continuous Cutting
Constant Depth of Cut
Pre-machined Surfaces
Securely Clamped Component Cutting

◔ General Cutting

✚ Unstable Cutting

Heavy Interrupted Cutting
Irregular Depth of Cut
Low Clamping Rigidity Cutting

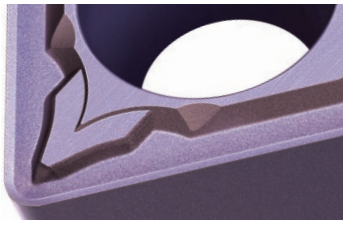
Main Chipbreaker

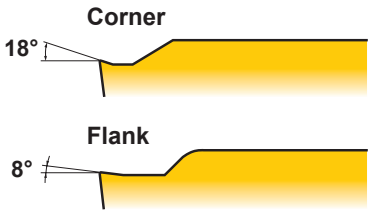
LM chipbreaker for light cutting

First recommendation for light cutting of stainless steel

The large rake angle gives a sharp cutting edge that prevents chip welding, which in turn helps to control the surface finish. The protruding chipbreaker provides an ideal range of chip control.

5° 7° 11° Positive Insert



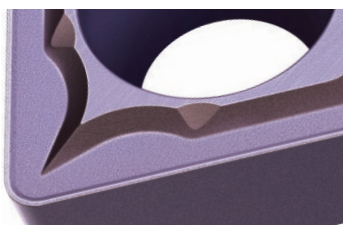


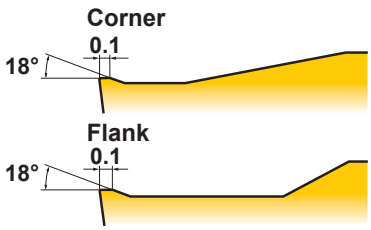
MM chipbreaker for medium cutting

First recommendation for medium cutting of stainless steel

The flat land enables a good balance of wear and fracture resistance. The wide pocket reduces vibration and chip jamming and also prevents increases in cutting resistance even at large depths of cut.

5° 7° Positive Insert

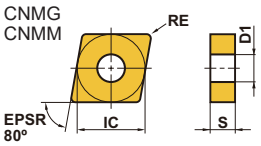




MC/MP7100 Series NEW

Negative Inserts (With Hole)

M Class



Light	Light	Medium	Medium	Medium	Medium
LM	SH	MM	MA	GM	GH
		 (Wiper)			
Rough	**Heavy**	**Heavy**			
RM	HL	HM			
					

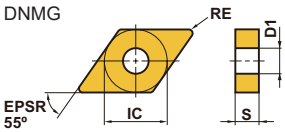
(mm)

Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
CNMG120404-LM	L	●	●	●	12.7	4.76	0.4	5.16
CNMG120408-LM	L	●	●	●	12.7	4.76	0.8	5.16
CNMG120412-LM	L	●	●	●	12.7	4.76	1.2	5.16
CNMG120404-SH	L			●	12.7	4.76	0.4	5.16
CNMG120408-SH	L			●	12.7	4.76	0.8	5.16
CNMG120408-MM	M	●	●	●	12.7	4.76	0.8	5.16
CNMG120412-MM	M	●	●	●	12.7	4.76	1.2	5.16
CNMG120416-MM	M	●	●	●	12.7	4.76	1.6	5.16
CNMG160608-MM	M	●	●	●	15.875	6.35	0.8	6.35
CNMG160612-MM	M	●	●	●	15.875	6.35	1.2	6.35
CNMG160616-MM	M	●	●	●	15.875	6.35	1.6	6.35
CNMG190608-MM	M	●	●	●	19.05	6.35	0.8	7.93
CNMG190612-MM	M	●	●	●	19.05	6.35	1.2	7.93
CNMG190616-MM	M	●	●	●	19.05	6.35	1.6	7.93
CNMG120404-MA	M		●	●	12.7	4.76	0.4	5.16
CNMG120408-MA	M		●	●	12.7	4.76	0.8	5.16
CNMG120412-MA	M		●	●	12.7	4.76	1.2	5.16
CNMG120416-MA	M		●	●	12.7	4.76	1.6	5.16
CNMG160608-MA	M			●	15.875	6.35	0.8	6.35
CNMG160612-MA	M			●	15.875	6.35	1.2	6.35
CNMG160616-MA	M			●	15.875	6.35	1.6	6.35
CNMG190612-MA	M			●	19.05	6.35	1.2	7.93
CNMG190616-MA	M		●	●	19.05	6.35	1.6	7.93
CNMG120404-GM	M		●	●	12.7	4.76	0.4	5.16
CNMG120408-GM	M		●	●	12.7	4.76	0.8	5.16
CNMG120412-GM	M		●	●	12.7	4.76	1.2	5.16

Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
CNMG120408-GH	M			●	12.7	4.76	0.8	5.16
CNMG120412-GH	M			●	12.7	4.76	1.2	5.16
CNMG160612-GH	M			●	15.875	6.35	1.2	6.35
CNMG190612-GH	M			●	19.05	6.35	1.2	7.93
CNMG190616-GH	M			●	19.05	6.35	1.6	7.93
CNMG120408-RM	R	●	●	●	12.7	4.76	0.8	5.16
CNMG120412-RM	R	●	●	●	12.7	4.76	1.2	5.16
CNMG120416-RM	R	●	●	●	12.7	4.76	1.6	5.16
CNMG160612-RM	R	●	●	●	15.875	6.35	1.2	6.35
CNMG160616-RM	R	●	●	●	15.875	6.35	1.6	6.35
CNMG190612-RM	R	●	●	●	19.05	6.35	1.2	7.93
CNMG190616-RM	R	●	●	●	19.05	6.35	1.6	7.93
CNMM190612-HL	H		●		19.05	6.35	1.2	7.93
CNMM190616-HL	H		●		19.05	6.35	1.6	7.93
CNMM190612-HM	H		●		19.05	6.35	1.2	7.93
CNMM190616-HM	H		●		19.05	6.35	1.6	7.93

Negative Inserts (With Hole)

M Class



Light	Light	Medium	Medium	Medium	Medium
LM	SH	MM	MA	GM	GH
					
Rough					
RM					
					

(mm)

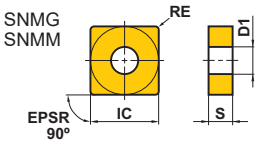
Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
DNMG110404-LM	L	●	●	●	9.525	4.76	0.4	3.81
DNMG110408-LM	L	●	●	●	9.525	4.76	0.8	3.81
DNMG150404-LM	L	●	●	●	12.7	4.76	0.4	5.16
DNMG150408-LM	L	●	●	●	12.7	4.76	0.8	5.16
DNMG150412-LM	L	●	●	●	12.7	4.76	1.2	5.16
DNMG150604-LM	L	●	●	●	12.7	6.35	0.4	5.16
DNMG150608-LM	L	●	●	●	12.7	6.35	0.8	5.16
DNMG110404-SH	L			●	9.525	4.76	0.4	3.81
DNMG110408-SH	L			●	9.525	4.76	0.8	3.81
DNMG150404-SH	L			●	12.7	4.76	0.4	5.16
DNMG150408-SH	L			●	12.7	4.76	0.8	5.16
DNMG150408-MM	M	●	●	●	12.7	4.76	0.8	5.16
DNMG150412-MM	M		●	●	12.7	4.76	1.2	5.16
DNMG150608-MM	M	●	●	●	12.7	6.35	0.8	5.16
DNMG150612-MM	M	●	●	●	12.7	6.35	1.2	5.16
DNMG150404-MA	M		●	●	12.7	4.76	0.4	5.16
DNMG150408-MA	M		●	●	12.7	4.76	0.8	5.16
DNMG150412-MA	M		●	●	12.7	4.76	1.2	5.16
DNMG150604-MA	M		●	●	12.7	6.35	0.4	5.16
DNMG150608-MA	M		●	●	12.7	6.35	0.8	5.16
DNMG150612-MA	M		●	●	12.7	6.35	1.2	5.16
DNMG150404-GM	M		●	●	12.7	4.76	0.4	5.16
DNMG150408-GM	M		●	●	12.7	4.76	0.8	5.16
DNMG150604-GM	M		●	●	12.7	6.35	0.4	5.16
DNMG150608-GM	M		●	●	12.7	6.35	0.8	5.16
DNMG150408-GH	M			●	12.7	4.76	0.8	5.16
DNMG150412-GH	M			●	12.7	4.76	1.2	5.16
DNMG150608-GH	M			●	12.7	6.35	0.8	5.16
DNMG150612-GH	M			●	12.7	6.35	1.2	5.16

Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
DNMG150408-RM	R	●	●	●	12.7	4.76	0.8	5.16
DNMG150412-RM	R		●	●	12.7	4.76	1.2	5.16
DNMG150416-RM	R		●	●	12.7	4.76	1.6	5.16
DNMG150608-RM	R		●	●	12.7	6.35	0.8	5.16
DNMG150612-RM	R		●	●	12.7	6.35	1.2	5.16

MC/MP7100 Series NEW

Negative Inserts (With Hole)

M Class



Light	Medium	Medium	Medium	Medium
LM	MM	MA	GM	GH
				
Rough	**Heavy**	**Heavy**	**Heavy**	
RM	HL	HM		
				

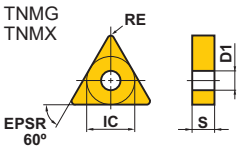
(mm)

Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
SNMG120404-LM	L	●	●	●	12.7	4.76	0.4	5.16
SNMG120408-LM	L	●	●	●	12.7	4.76	0.8	5.16
SNMG120408-MM	M	●	●	●	12.7	4.76	0.8	5.16
SNMG120412-MM	M	●	●	●	12.7	4.76	1.2	5.16
SNMG120416-MM	M	●	●	●	12.7	4.76	1.6	5.16
SNMG150608-MM	M		●	●	15.875	6.35	0.8	6.35
SNMG150612-MM	M	●	●	●	15.875	6.35	1.2	6.35
SNMG150616-MM	M		●		15.875	6.35	1.6	6.35
SNMG190612-MM	M		●	●	19.05	6.35	1.2	7.93
SNMG190616-MM	M		●	●	19.05	6.35	1.6	7.93
SNMG120404-MA	M		●	●	12.7	4.76	0.4	5.16
SNMG120408-MA	M		●	●	12.7	4.76	0.8	5.16
SNMG120412-MA	M		●	●	12.7	4.76	1.2	5.16
SNMG150608-MA	M		●	●	15.875	6.35	0.8	6.35
SNMG150612-MA	M		●	●	15.875	6.35	1.2	6.35
SNMG190616-MA	M		●	●	19.05	6.35	1.6	7.93
SNMG120404-GM	M		●	●	12.7	4.76	0.4	5.16
SNMG120408-GM	M		●	●	12.7	4.76	0.8	5.16
SNMG120412-GM	M		●	●	12.7	4.76	1.2	5.16
SNMG120408-GH	M			●	12.7	4.76	0.8	5.16
SNMG120412-GH	M			●	12.7	4.76	1.2	5.16
SNMG120416-GH	M			●	12.7	4.76	1.6	5.16
SNMG190612-GH	M			●	19.05	6.35	1.2	7.93
SNMG190616-GH	M			●	19.05	6.35	1.6	7.93

Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
SNMG120408-RM	R	●	●	●	12.7	4.76	0.8	5.16
SNMG120412-RM	R	●	●	●	12.7	4.76	1.2	5.16
SNMG120416-RM	R	●	●	●	12.7	4.76	1.6	5.16
SNMG150612-RM	R	●	●	●	15.875	6.35	1.2	6.35
SNMG150616-RM	R	●			15.875	6.35	1.6	6.35
SNMG190612-RM	R	●	●	●	19.05	6.35	1.2	7.93
SNMG190616-RM	R	●	●	●	19.05	6.35	1.6	7.93
SNMM190612-HL	H		●		19.05	6.35	1.2	7.93
SNMM190616-HL	H		●		19.05	6.35	1.6	7.93
SNMM190612-HM	H		●		19.05	6.35	1.2	7.93
SNMM190616-HM	H		●		19.05	6.35	1.6	7.93
SNMM250732-HM	H		●		25.4	7.94	3.2	9.12

Negative Inserts (With Hole)

M Class



Light	Light	Light	Medium	Medium	Medium
LM	SH	SW	MM	MA	GM
					
Medium	**Medium**	**Rough**			
GH	R/L-ES	RM			
					

(mm)

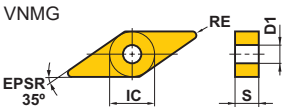
Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
TNMG160404-LM	L	●	●	●	9.525	4.76	0.4	3.81
TNMG160408-LM	L	●	●	●	9.525	4.76	0.8	3.81
TNMG160412-LM	L	●	●	●	9.525	4.76	1.2	3.81
TNMG160404-SH	L			●	9.525	4.76	0.4	3.81
TNMG160408-SH	L			●	9.525	4.76	0.8	3.81
TNMX160408-SW	L		●		9.525	4.76	0.8	3.81
TNMG160408-MM	M	●	●	●	9.525	4.76	0.8	3.81
TNMG160412-MM	M	●	●	●	9.525	4.76	1.2	3.81
TNMG220408-MM	M	●	●	●	12.7	4.76	0.8	5.16
TNMG220412-MM	M		●	●	12.7	4.76	1.2	5.16
TNMG220416-MM	M		●		12.7	4.76	1.6	5.16
TNMG160404-MA	M		●	●	9.525	4.76	0.4	3.81
TNMG160408-MA	M		●	●	9.525	4.76	0.8	3.81
TNMG160412-MA	M		●	●	9.525	4.76	1.2	3.81
TNMG220408-MA	M		●	●	12.7	4.76	0.8	5.16
TNMG220412-MA	M		●	●	12.7	4.76	1.2	5.16
TNMG160404-GM	M		●	●	9.525	4.76	0.4	3.81
TNMG160408-GM	M		●	●	9.525	4.76	0.8	3.81
TNMG160412-GM	M		●	●	9.525	4.76	1.2	3.81
TNMG220408-GM	M		●	●	12.7	4.76	0.8	5.16
TNMG160408-GH	M			●	9.525	4.76	0.8	3.81
TNMG220408-GH	M			●	12.7	4.76	0.8	5.16
TNMG220412-GH	M			●	12.7	4.76	1.2	5.16

Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
TNMG160404R-ES	M		●	●	9.525	4.76	0.4	3.81
TNMG160404L-ES	M		●	●	9.525	4.76	0.8	3.81
TNMG160408R-ES	M		●	●	9.525	4.76	0.8	3.81
TNMG160408L-ES	M		●	●	9.525	4.76	0.8	3.81
TNMG220408R-ES	M			●	12.7	4.76	0.8	5.16
TNMG220408L-ES	M			●	12.7	4.76	0.8	5.16
TNMG160408-RM	R	●	●	●	9.525	4.76	0.8	3.81
TNMG160412-RM	R	●	●	●	9.525	4.76	1.2	3.81
TNMG220408-RM	R		●	●	12.7	4.76	0.8	5.16
TNMG220412-RM	R		●	●	12.7	4.76	1.2	5.16
TNMG220416-RM	R		●	●	12.7	4.76	1.6	5.16

MC/MP7100 Series NEW

Negative Inserts (With Hole)

M Class



Light	Medium	Medium	Medium
LM	MM	MA	GM
			

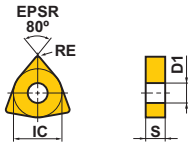
(mm)

Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
VNMG160404-LM	L	●	●	●	9.525	4.76	0.4	3.81
VNMG160408-LM	L	●	●	●	9.525	4.76	0.8	3.81
VNMG160408-MM	M	●	●	●	9.525	4.76	0.8	3.81
VNMG160404-MA	M		●	●	9.525	4.76	0.4	3.81
VNMG160408-MA	M		●	●	9.525	4.76	0.8	3.81
VNMG160404-GM	M		●	●	9.525	4.76	0.4	3.81
VNMG160408-GM	M		●	●	9.525	4.76	0.8	3.81

Negative Inserts (With Hole)

M Class

WNMG



Light	Light	Medium	Medium	Medium	Medium
LM	SH	MM	MA	GM	GH
					
Rough					
RM					
					

(mm)

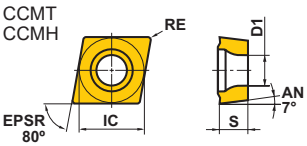
Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
WNMG060404-LM	L	●	●	●	9.525	4.76	0.4	3.81
WNMG060408-LM	L	●	●	●	9.525	4.76	0.8	3.81
WNMG080404-LM	L	●	●	●	12.7	4.76	0.4	5.16
WNMG080408-LM	L	●	●	●	12.7	4.76	0.8	5.16
WNMG06T304-SH	L			●	9.525	3.97	0.4	3.81
WNMG06T308-SH	L			●	9.525	3.97	0.8	3.81
WNMG060404-SH	L			●	9.525	4.76	0.4	3.81
WNMG060408-SH	L			●	9.525	4.76	0.8	3.81
WNMG080404-SH	L			●	12.7	4.76	0.4	5.16
WNMG080408-SH	L			●	12.7	4.76	0.8	5.16
WNMG060408-MM	M	●	●	●	9.525	4.76	0.8	3.81
WNMG060412-MM	M		●	●	9.525	4.76	1.2	3.81
WNMG080408-MM	M	●	●	●	12.7	4.76	0.8	5.16
WNMG080412-MM	M	●	●	●	12.7	4.76	1.2	5.16
WNMG06T304-MA	M		●	●	9.525	3.97	0.4	3.81
WNMG06T308-MA	M		●	●	9.525	3.97	0.8	3.81
WNMG06T312-MA	M		●	●	9.525	3.97	1.2	3.81
WNMG060408-MA	M		●	●	9.525	4.76	0.8	3.81
WNMG060412-MA	M		●	●	9.525	4.76	1.2	3.81
WNMG080404-MA	M		●	●	12.7	4.76	0.4	5.16
WNMG080408-MA	M		●	●	12.7	4.76	0.8	5.16
WNMG080412-MA	M		●	●	12.7	4.76	1.2	5.16
WNMG060404-GM	M		●	●	9.525	4.76	0.4	3.81
WNMG060408-GM	M		●	●	9.525	4.76	0.8	3.81
WNMG080404-GM	M		●	●	12.7	4.76	0.4	5.16
WNMG080408-GM	M		●	●	12.7	4.76	0.8	5.16
WNMG080412-GM	M		●	●	12.7	4.76	1.2	5.16
WNMG080408-GH	M			●	12.7	4.76	0.8	5.16
WNMG080412-GH	M			●	12.7	4.76	1.2	5.16

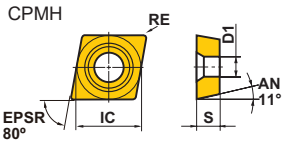
Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
WNMG060408-RM	R	●	●	●	9.525	4.76	0.8	3.81
WNMG060412-RM	R		●	●	9.525	4.76	1.2	3.81
WNMG080408-RM	R	●	●	●	12.7	4.76	0.8	5.16
WNMG080412-RM	R	●	●	●	12.7	4.76	1.2	5.16

MC/MP7100 Series NEW

7°, 11° Positive Inserts (With Hole)

M Class





Finish	Light	Medium	Medium
FM	LM	MM	MV
			
Light	Medium		
LM	MV		
			

(mm)

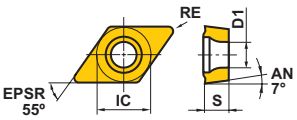
Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
CCMT060202-FM	F		●		6.35	2.38	0.2	2.8
CCMT060204-FM	F	●	●	●	6.35	2.38	0.4	2.8
CCMT09T302-FM	F		●		9.525	3.97	0.2	4.4
CCMT09T304-FM	F	●	●	●	9.525	3.97	0.4	4.4
CCMT09T308-FM	F	●	●	●	9.525	3.97	0.8	4.4
CCMT060204-LM	L	●	●	●	6.35	2.38	0.4	2.8
CCMT060208-LM	L	●	●	●	6.35	2.38	0.8	2.8
CCMT09T304-LM	L	●	●	●	9.525	3.97	0.4	4.4
CCMT09T308-LM	L	●	●	●	9.525	3.97	0.8	4.4
CCMT060202-MM	M		●	●	6.35	2.38	0.2	2.8
CCMT060204-MM	M	●	●	●	6.35	2.38	0.4	2.8
CCMT060208-MM	M	●	●	●	6.35	2.38	0.8	2.8
CCMT09T302-MM	M		●	●	9.525	3.97	0.2	4.4
CCMT09T304-MM	M	●	●	●	9.525	3.97	0.4	4.4
CCMT09T308-MM	M	●	●	●	9.525	3.97	0.8	4.4
CCMT120404-MM	M	●	●	●	12.7	4.76	0.4	5.5
CCMT120408-MM	M	●	●	●	12.7	4.76	0.8	5.5
CCMT120412-MM	M	●	●	●	12.7	4.76	1.2	5.5
CCMH060202-MV	M		●	●	6.35	2.38	0.2	2.8
CCMH060204-MV	M		●	●	6.35	2.38	0.4	2.8

Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
CPMH080204-LM	L	●	●	●	7.94	2.38	0.4	3.5
CPMH080208-LM	L	●	●	●	7.94	2.38	0.8	3.5
CPMH090304-LM	L	●	●	●	9.525	3.18	0.4	4.4
CPMH090308-LM	L	●	●	●	9.525	3.18	0.8	4.4
CPMH080204-MV	M		●	●	7.94	2.38	0.4	3.5
CPMH080208-MV	M		●	●	7.94	2.38	0.8	3.5
CPMH090304-MV	M		●	●	9.525	3.18	0.4	4.4
CPMH090308-MV	M		●	●	9.525	3.18	0.8	4.4

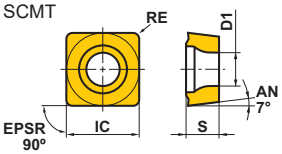
7° Positive Inserts (With Hole)

M Class

DCMT



SCMT



Finish	Light	Medium	Medium
FM	LM	MM	MV
			
Light	**Medium**		
LM	MM		
			

(mm)

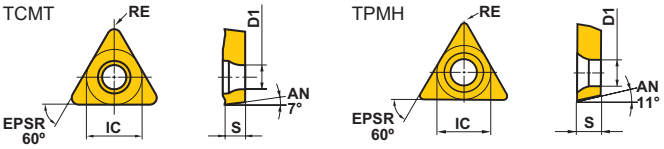
Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
DCMT070202-FM	F		●		6.35	2.38	0.2	2.8
DCMT070204-FM	F	●	●		6.35	2.38	0.4	2.8
DCMT11T302-FM	F		●		9.525	3.97	0.2	4.4
DCMT11T304-FM	F	●	●	●	9.525	3.97	0.4	4.4
DCMT11T308-FM	F	●	●	●	9.525	3.97	0.8	4.4
DCMT070202-LM	L		●		6.35	2.38	0.2	2.8
DCMT070204-LM	L	●	●	●	6.35	2.38	0.4	2.8
DCMT070208-LM	L	●	●	●	6.35	2.38	0.8	2.8
DCMT11T302-LM	L		●		9.525	3.97	0.2	4.4
DCMT11T304-LM	L	●	●	●	9.525	3.97	0.4	4.4
DCMT11T308-LM	L	●	●	●	9.525	3.97	0.8	4.4
DCMT070202-MM	M		●	●	6.35	2.38	0.2	2.8
DCMT070204-MM	M	●	●	●	6.35	2.38	0.4	2.8
DCMT070208-MM	M	●	●	●	6.35	2.38	0.8	2.8
DCMT11T302-MM	M		●		9.525	3.97	0.2	4.4
DCMT11T304-MM	M	●	●	●	9.525	3.97	0.4	4.4
DCMT11T308-MM	M	●	●	●	9.525	3.97	0.8	4.4
DCMT150404-MM	M	●	●	●	12.7	4.76	0.4	5.5
DCMT150408-MM	M	●	●	●	12.7	4.76	0.8	5.5
DCMT070202-MV	M		●	●	6.35	2.38	0.2	2.8
DCMT070204-MV	M		●	●	6.35	2.38	0.4	2.8
DCMT070208-MV	M		●	●	6.35	2.38	0.8	2.8
DCMT11T302-MV	M		●		9.525	3.97	0.2	4.4
DCMT11T304-MV	M		●	●	9.525	3.97	0.4	4.4
DCMT11T308-MV	M		●	●	9.525	3.97	0.8	4.4

Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
SCMT09T304-LM	L	●	●	●	9.525	3.97	0.4	4.4
SCMT09T308-LM	L	●	●	●	9.525	3.97	0.8	4.4
SCMT09T304-MM	M	●	●	●	9.525	3.97	0.4	4.4
SCMT09T308-MM	M	●	●	●	9.525	3.97	0.8	4.4
SCMT120404-MM	M	●	●	●	12.7	4.76	0.4	5.5
SCMT120408-MM	M	●	●	●	12.7	4.76	0.8	5.5

MC/MP7100 Series NEW

7°, 11° Positive Inserts (With Hole)

M Class



Finish	Light	Medium
FM	LM	MM
		
Light	Medium	
LM	MV	
		

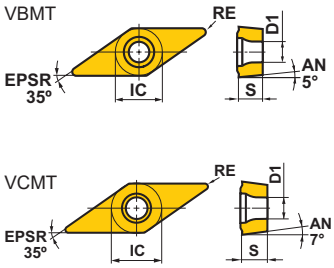
(mm)

Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
TCMT090204-FM	F	●	●	●	5.56	2.38	0.4	2.5
TCMT090204-LM	L		●	●	5.56	2.38	0.4	2.5
TCMT110204-LM	L		●	●	6.35	2.38	0.4	2.8
TCMT110208-LM	L		●	●	6.35	2.38	0.8	2.8
TCMT16T304-LM	L	●	●	●	9.525	3.97	0.4	4.4
TCMT16T308-LM	L	●	●	●	9.525	3.97	0.8	4.4
TCMT090204-MM	M		●	●	5.56	2.38	0.4	2.5
TCMT090208-MM	M			●	5.56	2.38	0.8	2.5
TCMT110204-MM	M		●	●	6.35	2.38	0.4	2.8
TCMT110208-MM	M	●	●	●	6.35	2.38	0.8	2.8
TCMT130304-MM	M			●	7.94	3.18	0.4	3.4
TCMT16T304-MM	M	●	●	●	9.525	3.97	0.4	4.4
TCMT16T308-MM	M	●	●	●	9.525	3.97	0.8	4.4
TCMT16T312-MM	M		●	●	9.525	3.97	1.2	4.4

Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
TPMH090204-LM	L		●	●	5.56	2.38	0.4	2.9
TPMH110304-LM	L		●	●	6.35	3.18	0.4	3.4
TPMH110308-LM	L		●	●	6.35	3.18	0.8	3.4
TPMH160304-LM	L		●	●	9.525	3.18	0.4	4.4
TPMH160308-LM	L		●	●	9.525	3.18	0.8	4.4
TPMH080202-MV	M		●	●	4.76	2.38	0.2	2.4
TPMH080204-MV	M		●	●	4.76	2.38	0.4	2.4
TPMH090204-MV	M		●	●	5.56	2.38	0.4	2.9
TPMH090208-MV	M		●	●	5.56	2.38	0.8	2.9
TPMH110302-MV	M		●	●	6.35	3.18	0.2	3.4
TPMH110304-MV	M		●	●	6.35	3.18	0.4	3.4
TPMH110308-MV	M		●	●	6.35	3.18	0.8	3.4
TPMH160304-MV	M		●	●	9.525	3.18	0.4	4.4
TPMH160308-MV	M		●	●	9.525	3.18	0.8	4.4

5°, 7° Positive Inserts (With Hole)

M Class



Finish	Light	Medium	Medium
FM	LM	MM	MV
			
Finish	Light	Medium	Medium
FM	LM	MM	MV
			

(mm)

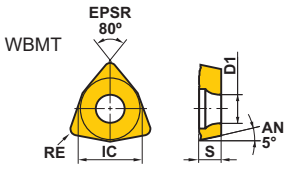
Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
VBMT110302-FM	F		●	●	6.35	3.18	0.2	2.9
VBMT110304-FM	F	●	●	●	6.35	3.18	0.4	2.9
VBMT110308-FM	F	●	●		6.35	3.18	0.8	2.9
VBMT160404-FM	F	●	●	●	9.525	4.76	0.4	4.4
VBMT160408-FM	F	●	●		9.525	4.76	0.8	4.4
VBMT110304-LM	L	●	●	●	6.35	3.18	0.4	2.9
VBMT110308-LM	L	●	●	●	6.35	3.18	0.8	2.9
VBMT160404-LM	L	●	●	●	9.525	4.76	0.4	4.4
VBMT160408-LM	L	●	●	●	9.525	4.76	0.8	4.4
VBMT160404-MM	M	●	●	●	9.525	4.76	0.4	4.4
VBMT160408-MM	M	●	●	●	9.525	4.76	0.8	4.4
VBMT110304-MV	M		●	●	6.35	3.18	0.4	2.9
VBMT110308-MV	M		●	●	6.35	3.18	0.8	2.9
VBMT160404-MV	M		●	●	9.525	4.76	0.4	4.4
VBMT160408-MV	M		●	●	9.525	4.76	0.8	4.4

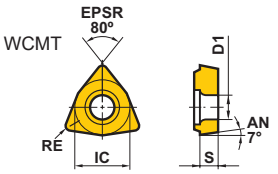
Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
VCMT110302-FM	F		●	●	6.35	3.18	0.2	2.8
VCMT110304-FM	F	●	●	●	6.35	3.18	0.4	2.8
VCMT160404-FM	F	●	●	●	9.525	4.76	0.4	4.4
VCMT110304-LM	L	●	●	●	6.35	3.18	0.4	2.8
VCMT110308-LM	L	●	●	●	6.35	3.18	0.8	2.8
VCMT160404-LM	L	●	●	●	9.525	4.76	0.4	4.4
VCMT160408-LM	L	●	●	●	9.525	4.76	0.8	4.4
VCMT160404-MM	M	●	●	●	9.525	4.76	0.4	4.4
VCMT160408-MM	M	●	●	●	9.525	4.76	0.8	4.4
VCMT160412-MM	M		●	●	9.525	4.76	1.2	4.4
VCMT080202-MV	M		●	●	4.76	2.38	0.2	2.4
VCMT080204-MV	M		●	●	4.76	2.38	0.4	2.4

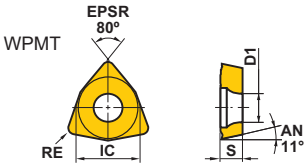
MC/MP7100 Series NEW

5°, 7°, 11° Positive Inserts (With Hole)

M Class







Medium		Medium
L-MV		MM
		
Medium		
MV		
		

(mm)

Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
WBMTL30202L-MV	M		●		4.76	2.38	0.2	2.3
WBMTL30204L-MV	M		●		4.76	2.38	0.4	2.3
WCMT020102-MM	M		●	●	3.97	1.59	0.2	2.3
WCMT020104-MM	M		●	●	3.97	1.59	0.4	2.3
WCMTL30202-MM	M		●	●	4.76	2.38	0.2	2.3
WCMTL30204-MM	M		●	●	4.76	2.38	0.4	2.3
WCMT040202-MM	M		●	●	6.35	2.38	0.2	2.8
WCMT040204-MM	M		●	●	6.35	2.38	0.4	2.8
WCMT06T304-MM	M		●	●	9.525	3.97	0.4	4.4
WCMT06T308-MM	M		●	●	9.525	3.97	0.8	4.4

Order Number	Cutting Area	MC7115	MC7125	MP7135	IC	S	RE	D1
WPMT040204-MV	M		●	●	6.35	2.38	0.4	2.8
WPMT060304-MV	M		●	●	9.525	3.18	0.4	4.4
WPMT060308-MV	M		●	●	9.525	3.18	0.8	4.4

Recommended Cutting Conditions

Negative Inserts (For External Turning)

(mm)

Cutting Range		Priority	Grade	Chipbreaker	Cutting Speed **vc** (m/min)	Feed **f** (mm/rev)	Depth of Cut **ap**
M Austenitic Stainless Steel Hardness ≤ 200 HB							
●	L	1	**MC7115**	**LM**	185–295	0.10–0.35	0.3–2.0
●	L	2	**MC7125**	**LM**	175–240	0.10–0.35	0.3–2.0
●	M	1	**MC7115**	**MM**	170–270	0.15–0.45	0.7–5.0
●	R	1	**MC7115**	**RM**	160–255	0.25–0.55	1.5–6.0
●	H	1	**MC7125**	**HL**	135–185	0.30–0.70	3.0–7.5
◐	L	1	**MC7125**	**LM**	175–240	0.10–0.35	0.3–2.0
◐	M	1	**MC7125**	**MM**	160–220	0.15–0.45	0.7–5.0
◐	M	2	**MC7125**	**GM**	160–220	0.16–0.50	0.5–4.0
◐	M	3	**MC7125**	**MA**	160–220	0.20–0.50	0.3–4.0
◐	M	4	**MP7135**	**GM**	120–155	0.16–0.50	0.5–4.0
◐	M	5	**MP7135**	**MM**	120–155	0.15–0.45	0.7–5.0
◐	M	6	**MP7135**	**MA**	120–155	0.20–0.50	0.3–4.0
◐	R	1	**MC7125**	**RM**	150–205	0.25–0.55	1.5–6.0
◐	R	2	**MP7135**	**RM**	110–145	0.25–0.55	1.5–6.0
◐	R	3	**MP7135**	**GH**	110–145	0.25–0.60	1.5–6.0
◐	H	1	**MC7125**	**HL**	135–185	0.30–0.70	3.0–7.5
◐	H	2	**MC7125**	**HM**	135–185	0.50–1.10	2.0–10.0
✣	L	1	**MP7135**	**LM**	130–170	0.10–0.35	0.3–2.0
✣	L	2	**MP7135**	**SH**	130–170	0.10–0.40	0.3–2.0
✣	M	1	**MP7135**	**GM**	120–155	0.16–0.50	0.5–4.0
✣	M	2	**MP7135**	**MM**	120–155	0.15–0.45	0.7–5.0
✣	M	3	**MP7135**	**MA**	120–155	0.20–0.50	0.3–4.0
✣	R	1	**MP7135**	**RM**	110–145	0.25–0.55	1.5–6.0
✣	R	2	**MP7135**	**GH**	110–145	0.25–0.60	1.5–6.0
✣	H	1	**MC7125**	**HL**	135–185	0.30–0.70	3.0–7.5
✣	H	2	**MC7125**	**HM**	135–185	0.50–1.10	2.0–10.0
M Austenitic Stainless Steel Hardness > 200 HB							
●	L	1	**MC7115**	**LM**	155–245	0.10–0.35	0.3–2.0
●	L	2	**MC7125**	**LM**	145–200	0.10–0.35	0.3–2.0
●	M	1	**MC7115**	**MM**	140–225	0.15–0.45	0.7–0.5
●	R	1	**MC7115**	**RM**	135–215	0.25–0.55	1.5–6.0
●	H	1	**MC7125**	**HL**	110–155	0.30–0.70	3.0–7.5
●	H	2	**MC7125**	**HM**	110–155	0.50–1.10	2.0–10.0
◐	L	1	**MC7125**	**LM**	145–200	0.10–0.35	0.3–2.0
◐	M	1	**MC7125**	**MM**	130–180	0.15–0.45	0.7–5.0
◐	M	2	**MC7125**	**GM**	130–180	0.16–0.50	0.5–4.0
◐	M	3	**MC7125**	**MA**	130–180	0.20–0.50	0.3–4.0
◐	M	4	**MP7135**	**GM**	100–130	0.16–0.50	0.5–4.0
◐	M	5	**MP7135**	**MM**	100–130	0.15–0.45	0.7–5.0
◐	M	6	**MP7135**	**MA**	100–130	0.20–0.50	0.3–4.0
◐	R	1	**MC7125**	**RM**	125–175	0.25–0.55	1.5–6.0
◐	R	2	**MP7135**	**RM**	95–120	0.25–0.55	1.5–6.0
◐	R	3	**MP7135**	**GH**	95–120	0.25–0.60	1.5–6.0
◐	H	1	**MC7125**	**HL**	110–155	0.30–0.70	3.0–7.5
◐	H	2	**MC7125**	**HM**	110–155	0.50–1.10	2.0–10.0
✣	L	1	**MP7135**	**LM**	110–140	0.10–0.35	0.3–2.0
✣	L	2	**MP7135**	**SH**	110–140	0.10–0.40	0.3–2.0
✣	M	1	**MP7135**	**GM**	100–130	0.16–0.50	0.5–4.0
✣	M	2	**MP7135**	**MM**	100–130	0.15–0.45	0.7–5.0
✣	M	3	**MP7135**	**MA**	100–130	0.20–0.50	0.3–4.0
✣	R	1	**MP7135**	**RM**	95–120	0.25–0.55	1.5–6.0
✣	R	2	**MP7135**	**GH**	95–120	0.25–0.60	1.5–6.0
✣	H	1	**MC7125**	**HL**	110–155	0.30–0.70	3.0–7.5
✣	H	2	**MC7125**	**HM**	110–155	0.50–1.10	2.0–10.0
M Ferritic and Martensitic Stainless Steel Hardness ≤ 200 HB							
●	L	1	**MC7115**	**LM**	185–295	0.10–0.35	0.3–2.0
●	L	2	**MC7125**	**LM**	175–240	0.10–0.35	0.3–2.0
●	M	1	**MC7115**	**MM**	170–270	0.15–0.45	0.7–5.0
●	R	1	**MC7115**	**RM**	160–255	0.25–0.55	1.5–6.0
●	H	1	**MC7125**	**HL**	135–185	0.30–0.70	3.0–7.5
●	H	2	**MC7125**	**HM**	135–185	0.50–1.10	2.0–10.0

Cutting Range		Priority	Grade	Chipbreaker	Cutting Speed **vc** (m/min)	Feed **f** (mm/rev)	Depth of Cut **ap**
M Ferritic and Martensitic Stainless Steel Hardness ≤ 200 HB							
◐	L	1	**MC7125**	**LM**	175–240	0.10–0.35	0.3–2.0
◐	M	1	**MC7125**	**MM**	160–220	0.15–0.45	0.7–5.0
◐	M	2	**MC7125**	**GM**	160–220	0.16–0.50	0.5–4.0
◐	M	3	**MC7125**	**MA**	160–220	0.20–0.50	0.3–4.0
◐	M	4	**MP7135**	**GM**	120–155	0.16–0.50	0.5–4.0
◐	M	5	**MP7135**	**MM**	120–155	0.15–0.45	0.7–5.0
◐	M	6	**MP7135**	**MA**	120–155	0.20–0.50	0.3–4.0
◐	R	1	**MC7125**	**RM**	150–205	0.25–0.55	1.5–6.0
◐	R	2	**MP7135**	**RM**	110–145	0.25–0.55	1.5–6.0
◐	R	3	**MP7135**	**GH**	110–145	0.25–0.60	1.5–6.0
◐	H	1	**MC7125**	**HL**	135–185	0.30–0.70	3.0–7.5
◐	H	2	**MC7125**	**HM**	135–185	0.50–1.10	2.0–10.0
✣	L	1	**MP7135**	**LM**	130–170	0.10–0.35	0.3–2.0
✣	L	2	**MP7135**	**SH**	130–170	0.10–0.40	0.3–2.0
✣	M	1	**MP7135**	**GM**	120–155	0.16–0.50	0.5–4.0
✣	M	2	**MP7135**	**MM**	120–155	0.15–0.45	0.7–5.0
✣	M	3	**MP7135**	**MA**	120–155	0.20–0.50	0.3–4.0
✣	R	1	**MP7135**	**RM**	110–145	0.25–0.55	1.5–6.0
✣	R	2	**MP7135**	**GH**	110–145	0.25–0.60	1.5–6.0
✣	H	1	**MC7125**	**HL**	135–185	0.30–0.70	3.0–7.5
✣	H	2	**MC7125**	**HM**	135–185	0.50–1.10	2.0–10.0
M Ferritic and Martensitic Stainless Steel Hardness > 200 HB							
●	L	1	**MC7115**	**LM**	155–245	0.10–0.35	0.3–2.0
●	L	2	**MC7125**	**LM**	145–200	0.10–0.35	0.3–2.0
●	M	1	**MC7115**	**MM**	140–225	0.15–0.45	0.7–5.0
●	R	1	**MC7115**	**RM**	135–215	0.25–0.55	1.5–6.0
●	H	1	**MC7125**	**HL**	110–155	0.30–0.70	3.0–7.5
●	H	2	**MC7125**	**HM**	110–155	0.50–1.10	2.0–10.0
◐	L	1	**MC7125**	**LM**	145–200	0.10–0.35	0.3–2.0
◐	M	1	**MC7125**	**MM**	130–180	0.15–0.45	0.7–5.0
◐	M	2	**MC7125**	**GM**	130–180	0.16–0.50	0.5–4.0
◐	M	3	**MC7125**	**MA**	130–180	0.20–0.50	0.3–4.0
◐	M	4	**MP7135**	**GM**	100–130	0.16–0.50	0.5–4.0
◐	M	5	**MP7135**	**MM**	100–130	0.15–0.45	0.7–5.0
◐	M	6	**MP7135**	**MA**	100–130	0.20–0.50	0.3–4.0
◐	R	1	**MC7125**	**RM**	125–175	0.25–0.55	1.5–6.0
◐	H	1	**MC7125**	**HL**	110–155	0.30–0.70	3.0–7.5
◐	H	2	**MC7125**	**HM**	110–155	0.50–1.10	2.0–10.0
✣	L	1	**MP7135**	**LM**	110–140	0.10–0.35	0.3–2.0
✣	L	2	**MP7135**	**SH**	110–140	0.10–0.40	0.3–2.0
✣	M	1	**MP7135**	**GM**	100–130	0.16–0.50	0.5–4.0
✣	M	2	**MP7135**	**MM**	100–130	0.15–0.45	0.7–5.0
✣	M	3	**MP7135**	**MA**	100–130	0.20–0.50	0.3–4.0
✣	R	1	**MP7135**	**RM**	95–120	0.25–0.55	1.5–6.0
✣	R	2	**MP7135**	**GH**	95–120	0.25–0.60	1.5–6.0
✣	H	1	**MC7125**	**HL**	110–155	0.30–0.70	3.0–7.5
✣	H	2	**MC7125**	**HM**	110–155	0.50–1.10	2.0–10.0
M Two-phase Stainless Steel Hardness ≤ 280 HB							
●	L	1	**MP7135**	**LM**	85–115	0.10–0.35	0.3–2.0
●	L	2	**MP7135**	**SH**	85–115	0.10–0.40	0.3–2.0
●	L	3	**MC7125**	**LM**	115–160	0.10–0.35	0.3–2.0
●	L	4	**MC7115**	**LM**	125–200	0.10–0.35	0.3–2.0
●	M	1	**MP7135**	**GM**	80–105	0.16–0.50	0.5–4.0
●	M	2	**MP7135**	**MM**	80–105	0.15–0.45	0.7–5.0
●	M	3	**MP7135**	**MA**	80–105	0.20–0.50	0.3–4.0
●	M	4	**MC7125**	**MM**	105–145	0.15–0.45	0.7–5.0
●	M	5	**MC7125**	**GM**	105–145	0.16–0.50	0.5–4.0
●	M	6	**MC7125**	**MA**	105–145	0.20–0.50	0.3–4.0
●	M	7	**MC7115**	**MM**	115–180	0.15–0.45	0.7–5.0
●	R	1	**MP7135**	**RM**	75–100	0.25–0.55	1.5–6.0
●	R	2	**MP7135**	**GH**	75–100	0.25–0.60	1.5–6.0

Note 1) Recommended cutting conditions for 5º/7º/11º positive inserts are provided as a guideline only.
Verify the recommended conditions for each boring bar as cutting conditions for internal machining will vary depending on the length of overhang.

Cutting Conditions : ● : Stable Cutting ◐ : General Cutting ✣ : Unstable Cutting
Cutting Area : **F** : Finish Cutting **L** : Light Cutting **M** : Medium Cutting **R** : Rough Cutting **H** : Heavy Cutting

Recommended Cutting Conditions

Negative Inserts (For External Turning)

Cutting Range		Priority	Grade	Chipbreaker	Cutting Speed **vc** (m/min)	Feed **f** (mm/rev)	Depth of Cut **ap**
M Two-phase Stainless Steel Hardness ≤ 280 HB							
●	R	3	**MC7125**	**RM**	100—140	0.25—0.55	1.5—6.0
●	H	1	**MC7125**	**HL**	90—125	0.30—0.70	3.0—7.5
●	H	2	**MC7125**	**HM**	90—125	0.50—1.10	2.0—10.0
◐	L	1	**MP7135**	**LM**	85—115	0.10—0.35	0.3—2.0
◐	L	2	**MP7135**	**SH**	85—115	0.10—0.40	0.3—2.0
◐	L	3	**MC7125**	**LM**	115—160	0.10—0.35	0.3—2.0
◐	M	1	**MP7135**	**GM**	80—105	0.16—0.50	0.5—4.0
◐	M	2	**MP7135**	**MM**	80—105	0.15—0.45	0.7—5.0
◐	M	3	**MP7135**	**MA**	80—105	0.20—0.50	0.3—4.0
◐	M	4	**MC7125**	**MM**	105—145	0.15—0.45	0.7—5.0
◐	M	5	**MC7125**	**GM**	105—145	0.16—0.50	0.5—4.0
◐	M	6	**MC7125**	**MA**	105—145	0.20—0.50	0.3—4.0
◐	R	1	**MP7135**	**RM**	75—100	0.25—0.55	1.5—6.0
◐	R	2	**MP7135**	**GH**	75—100	0.25—0.60	1.5—6.0
◐	R	3	**MC7125**	**RM**	100—140	0.25—0.55	1.5—6.0
◐	H	1	**MC7125**	**HL**	90—125	0.30—0.70	3.0—7.5
◐	H	2	**MC7125**	**HM**	90—125	0.50—1.10	2.0—10.0
✣	L	1	**MP7135**	**LM**	85—115	0.10—0.35	0.3—2.0
✣	L	2	**MP7135**	**SH**	85—115	0.10—0.40	0.3—2.0
✣	M	1	**MP7135**	**GM**	80—105	0.16—0.50	0.5—4.0
✣	M	2	**MP7135**	**MM**	80—105	0.15—0.45	0.7—5.0
✣	M	3	**MP7135**	**MA**	80—105	0.20—0.50	0.3—4.0
✣	R	1	**MP7135**	**RM**	75—100	0.25—0.55	1.5—6.0
✣	R	2	**MP7135**	**GH**	75—100	0.25—0.60	1.5—6.0
✣	H	1	**MC7125**	**HL**	90—125	0.30—0.70	3.0—7.5
✣	H	2	**MC7125**	**HM**	90—125	0.50—1.10	2.0—10.0
M Precipitation-Hardening Stainless Steel Hardness < 450 HB							
●	L	1	**MC7115**	**LM**	110—165	0.10—0.35	0.3—2.0
●	L	2	**MC7125**	**LM**	95—120	0.10—0.35	0.3—2.0
●	M	1	**MC7115**	**MM**	100—150	0.15—0.45	0.7—5.0
●	R	1	**MC7115**	**RM**	95—140	0.25—0.55	1.5—6.0
●	H	1	**MC7125**	**HL**	75—90	0.40—1.00	1.5—8.0
●	H	2	**MC7125**	**HM**	75—90	0.50—1.10	2.0—10.0
◐	L	1	**MC7125**	**LM**	95—120	0.10—0.35	0.3—2.0
◐	L	2	**MP7135**	**LM**	70—95	0.10—0.35	0.3—2.0
◐	L	3	**MP7135**	**SH**	70—95	0.10—0.40	0.3—2.0
◐	M	1	**MC7125**	**MM**	90—110	0.15—0.45	0.7—5.0
◐	M	2	**MC7125**	**GM**	90—110	0.16—0.50	0.5—4.0
◐	M	3	**MC7125**	**MA**	90—110	0.10—0.30	0.5—3.0
◐	M	4	**MP7135**	**GM**	65—90	0.16—0.50	0.5—4.0
◐	M	5	**MP7135**	**MM**	65—90	0.15—0.45	0.7—5.0
◐	M	6	**MP7135**	**MA**	65—90	0.10—0.30	0.5—3.0
◐	R	1	**MC7125**	**RM**	85—100	0.25—0.55	1.5—6.0
◐	R	2	**MP7135**	**RM**	60—85	0.25—0.55	1.5—6.0
◐	R	3	**MP7135**	**GH**	60—85	0.25—0.60	1.5—6.0
◐	H	1	**MC7125**	**HL**	75—90	0.40—1.00	1.5—8.0
◐	H	2	**MC7125**	**HM**	75—90	0.50—1.00	2.0—10.0
✣	L	1	**MP7135**	**LM**	70—95	0.10—0.35	0.3—2.0
✣	L	2	**MP7135**	**SH**	70—95	0.10—0.40	0.3—2.0
✣	M	1	**MP7135**	**MM**	65—90	0.15—0.45	0.7—5.0
✣	R	1	**MP7135**	**RM**	60—85	0.25—0.55	1.5—6.0
✣	R	2	**MP7135**	**GH**	60—85	0.25—0.60	1.5—6.0
✣	H	1	**MC7125**	**HL**	75—90	0.40—1.00	1.5—8.0
✣	H	2	**MC7125**	**HM**	75—90	0.50—1.10	2.0—10.0

Note 1) Recommended cutting conditions for 5º/7º/11º positive inserts are provided as a guideline only.
Verify the recommended conditions for each boring bar as cutting conditions for internal machining will vary depending on the length of overhang.

Cutting Conditions : ● : Stable Cutting ◐ : General Cutting ✣ : Unstable Cutting
Cutting Area : **F** : Finish Cutting **L** : Light Cutting **M** : Medium Cutting **R** : Rough Cutting **H** : Heavy Cutting

Recommended Cutting Conditions

7° Positive Inserts (For External Turning)

Cutting Range		Priority	Grade	Chipbreaker	Cutting Speed **vc** (m/min)	Feed **f** (mm/rev)	Depth of Cut **ap**
M Austenitic Stainless Steel Hardness ≤ 200 HB							
●	F	1	**MC7115**	**FM**	160–255	0.04–0.20	0.2–0.9
●	F	2	**MC7125**	**FM**	150–210	0.04–0.20	0.2–0.9
●	L	1	**MC7125**	**LM**	150–210	0.06–0.25	0.2–1.0
●	L	2	**MC7115**	**LM**	160–255	0.06–0.25	0.2–1.0
●	M	1	**MC7125**	**MM**	125–175	0.08–0.30	0.3–2.0
●	M	2	**MC7125**	**MV**	125–175	0.08–0.30	0.3–2.0
●	M	3	**MC7115**	**MM**	135–215	0.08–0.30	0.3–2.0
◐	F	1	**MC7125**	**FM**	150–210	0.04–0.20	0.2–0.9
◐	L	1	**MC7125**	**LM**	150–210	0.06–0.25	0.2–1.0
◐	L	2	**MP7135**	**LM**	115–145	0.06–0.25	0.2–1.0
◐	M	1	**MC7125**	**MM**	125–175	0.08–0.30	0.3–2.0
◐	M	2	**MC7125**	**MV**	125–175	0.08–0.30	0.3–2.0
✣	F	1	**MP7135**	**FM**	115–145	0.04–0.20	0.2–0.9
✣	L	1	**MP7135**	**LM**	115–145	0.06–0.25	0.2–1.0
✣	M	1	**MP7135**	**MM**	95–120	0.08–0.30	0.3–2.0
✣	M	2	**MP7135**	**MV**	95–120	0.08–0.30	0.3–2.0
M Austenitic Stainless Steel Hardness > 200 HB							
●	F	1	**MC7115**	**FM**	135–215	0.04–0.20	0.2–0.9
●	F	2	**MC7125**	**FM**	125–175	0.04–0.20	0.2–0.9
●	L	1	**MC7125**	**LM**	125–175	0.06–0.25	0.2–1.0
●	L	2	**MC7115**	**LM**	135–215	0.06–0.25	0.2–1.0
●	M	1	**MC7125**	**MM**	105–145	0.08–0.30	0.3–2.0
●	M	2	**MC7125**	**MV**	105–145	0.08–0.30	0.3–2.0
●	M	3	**MC7115**	**MM**	110–180	0.08–0.30	0.3–2.0
◐	F	1	**MC7125**	**FM**	125–175	0.04–0.20	0.2–0.9
◐	L	1	**MC7125**	**LM**	125–175	0.06–0.25	0.2–1.0
◐	L	2	**MP7135**	**LM**	95–120	0.06–0.25	0.2–1.0
◐	M	1	**MC7125**	**MM**	105–145	0.08–0.30	0.3–2.0
◐	M	2	**MC7125**	**MV**	105–145	0.08–0.30	0.3–2.0
✣	F	1	**MP7135**	**FM**	95–120	0.04–0.20	0.2–0.9
✣	L	1	**MP7135**	**LM**	95–120	0.06–0.25	0.2–1.0
✣	M	1	**MP7135**	**MM**	80–100	0.08–0.30	0.3–2.0
✣	M	2	**MP7135**	**MV**	80–100	0.08–0.30	0.3–2.0
M Ferritic and Martensitic Stainless Steel Hardness ≤ 200 HB							
●	F	1	**MC7125**	**FM**	150–210	0.04–0.20	0.2–0.9
●	L	1	**MC7125**	**LM**	150–210	0.06–0.25	0.2–1.0
●	L	2	**MC7115**	**LM**	160–255	0.06–0.25	0.2–1.0
●	M	1	**MC7125**	**MM**	125–175	0.08–0.30	0.3–2.0
●	M	2	**MC7125**	**MV**	125–175	0.08–0.30	0.3–2.0
●	M	3	**MC7115**	**MM**	135–215	0.08–0.30	0.3–2.0
◐	F	1	**MC7125**	**FM**	150–210	0.04–0.20	0.2–0.9
◐	L	1	**MC7125**	**LM**	150–210	0.06–0.25	0.2–1.0
◐	L	2	**MP7135**	**LM**	115–145	0.06–0.25	0.2–1.0
◐	M	1	**MC7125**	**MM**	125–175	0.08–0.30	0.3–2.0
◐	M	2	**MC7125**	**MV**	125–175	0.08–0.30	0.3–2.0
✣	F	1	**MP7135**	**FM**	115–145	0.04–0.20	0.2–0.9
✣	L	1	**MP7135**	**LM**	115–145	0.06–0.25	0.2–1.0
✣	M	1	**MP7135**	**MM**	95–120	0.08–0.30	0.3–2.0
✣	M	2	**MP7135**	**MV**	95–120	0.08–0.30	0.3–2.0
M Ferritic and Martensitic stainless steels Hardness > 200 HB							
●	F	1	**MC7125**	**FM**	125–175	0.04–0.20	0.2–0.9
●	F	2	**MC7115**	**FM**	135–215	0.04–0.20	0.2–0.9
●	L	1	**MC7125**	**LM**	125–175	0.06–0.25	0.2–1.0
●	L	2	**MC7115**	**LM**	135–215	0.06–0.25	0.2–1.0
●	M	1	**MC7125**	**MM**	105–145	0.08–0.30	0.3–2.0
●	M	2	**MC7125**	**MV**	105–145	0.08–0.30	0.3–2.0
●	M	3	**MC7115**	**MM**	110–180	0.08–0.30	0.3–2.0
◐	F	1	**MC7125**	**FM**	125–175	0.04–0.20	0.2–0.9
◐	L	1	**MC7125**	**LM**	125–175	0.06–0.25	0.2–1.0
◐	L	2	**MP7135**	**LM**	95–120	0.06–0.25	0.2–1.0
◐	M	1	**MC7125**	**MM**	105–145	0.08–0.30	0.3–2.0
◐	M	2	**MC7125**	**MV**	105–145	0.08–0.30	0.3–2.0
✣	F	1	**MP7135**	**FM**	95–120	0.04–0.20	0.2–0.9
✣	L	1	**MP7135**	**LM**	95–120	0.06–0.25	0.2–1.0
✣	M	1	**MP7135**	**MM**	80–100	0.08–0.30	0.3–2.0
✣	M	2	**MP7135**	**MV**	80–100	0.08–0.30	0.3–2.0

Cutting Range		Priority	Grade	Chipbreaker	Cutting Speed **vc** (m/min)	Feed **f** (mm/rev)	Depth of Cut **ap**
M Two-phase Stainless Steel Hardness ≤ 280 HB							
●	F	1	**MP7135**	**FM**	75–100	0.04–0.20	0.2–0.9
●	L	1	**MP7135**	**LM**	75–100	0.06–0.25	0.2–1.0
●	L	2	**MC7125**	**LM**	100–140	0.06–0.25	0.2–1.0
●	L	3	**MC7115**	**LM**	110–175	0.06–0.25	0.2–1.0
●	M	1	**MP7135**	**MM**	65–80	0.08–0.30	0.3–2.0
●	M	2	**MC7125**	**MM**	85–115	0.08–0.30	0.3–2.0
●	M	3	**MC7125**	**MV**	85–115	0.08–0.30	0.3–2.0
●	M	4	**MC7115**	**MM**	90–145	0.08–0.30	0.3–2.0
◐	F	1	**MC7125**	**FM**	100–140	0.04–0.20	0.2–0.9
◐	L	1	**MC7125**	**LM**	100–140	0.06–0.25	0.2–1.0
◐	M	1	**MC7125**	**MM**	85–115	0.08–0.30	0.3–2.0
◐	M	2	**MC7125**	**MV**	85–115	0.08–0.30	0.3–2.0
✣	F	1	**MP7135**	**FM**	75–100	0.04–0.20	0.2–0.9
✣	L	1	**MP7135**	**LM**	75–100	0.06–0.25	0.2–1.0
✣	M	1	**MP7135**	**MM**	65–80	0.08–0.30	0.3–2.0
✣	M	2	**MP7135**	**MV**	65–80	0.08–0.30	0.3–2.0
M Precipitation-Hardening Stainless Steel Hardness < 450 HB							
●	F	1	**MC7115**	**FM**	95–140	0.04–0.20	0.2–0.9
●	L	1	**MC7115**	**LM**	95–140	0.06–0.20	0.2–1.0
●	L	2	**MC7125**	**LM**	85–105	0.06–0.20	0.2–1.0
●	M	1	**MC7115**	**MM**	80–120	0.08–0.25	0.3–2.0
●	M	2	**MC7125**	**MM**	70–85	0.08–0.25	0.3–2.0
◐	F	1	**MC7125**	**FM**	85–105	0.04–0.20	0.2–0.9
◐	F	2	**MP7135**	**FM**	60–85	0.04–0.20	0.2–0.9
◐	L	1	**MC7125**	**LM**	85–105	0.06–0.20	0.2–1.0
◐	L	2	**MP7135**	**LM**	60–85	0.06–0.20	0.2–1.0
◐	M	1	**MC7125**	**MM**	70–85	0.08–0.25	0.3–2.0
◐	M	2	**MC7125**	**MV**	70–85	0.08–0.30	0.3–2.0
◐	M	3	**MP7135**	**MM**	50–70	0.08–0.25	0.3–2.0
✣	F	1	**MP7135**	**FM**	60–85	0.04–0.20	0.2–0.9
✣	L	1	**MP7135**	**LM**	60–85	0.06–0.20	0.2–1.0
✣	M	1	**MP7135**	**MM**	50–70	0.08–0.25	0.3–2.0
✣	M	2	**MP7135**	**MV**	50–70	0.08–0.30	0.3–2.0

11° Positive Inserts (For External Turning)

Cutting Range		Priority	Grade	Chipbreaker	Cutting Speed **vc** (m/min)	Feed **f** (mm/rev)	Depth of Cut **ap**
M Austenitic Stainless Steel Hardness ≤ 200 HB							
●	L	1	**MC7125**	**LM**	150–210	0.06–0.25	0.2–1.0
●	L	2	**MC7115**	**LM**	160–255	0.06–0.25	0.2–1.0
●	M	1	**MC7125**	**MM**	125–175	0.08–0.30	0.3–2.0
●	M	2	**MC7115**	**MM**	135–215	0.08–0.30	0.3–2.0
◐	L	1	**MC7125**	**LM**	150–210	0.06–0.25	0.2–1.0
◐	M	1	**MC7125**	**MM**	125–175	0.08–0.30	0.3–2.0
◐	M	2	**MC7125**	**MV**	125–175	0.08–0.30	0.3–2.0
✣	L	1	**MP7135**	**LM**	115–145	0.06–0.25	0.2–1.0
✣	M	1	**MP7135**	**MM**	95–120	0.08–0.30	0.3–2.0
✣	M	2	**MP7135**	**MV**	95–120	0.08–0.30	0.3–2.0
M Austenitic Stainless Steel Hardness > 200 HB							
●	L	1	**MC7125**	**LM**	125–175	0.06–0.25	0.2–1.0
●	L	2	**MC7115**	**LM**	135–215	0.06–0.25	0.2–1.0
●	M	1	**MC7125**	**MM**	105–145	0.08–0.30	0.3–2.0
●	M	2	**MC7125**	**MV**	105–145	0.08–0.30	0.3–2.0
●	M	3	**MC7115**	**MM**	110–180	0.08–0.30	0.3–2.0
◐	L	1	**MC7125**	**LM**	125–175	0.06–0.25	0.2–1.0
◐	M	1	**MC7125**	**MM**	105–145	0.08–0.30	0.3–2.0
◐	M	2	**MC7125**	**MV**	105–145	0.08–0.30	0.3–2.0
✣	L	1	**MP7135**	**LM**	95–120	0.06–0.25	0.2–1.0
✣	M	1	**MP7135**	**MM**	80–100	0.08–0.30	0.3–2.0
✣	M	2	**MP7135**	**MV**	80–100	0.08–0.30	0.3–2.0

Note 1) Recommended cutting conditions for 5°/7°/11° positive inserts are provided as a guideline only.
Verify the recommended conditions for each boring bar as cutting conditions for internal machining will vary depending on the length of overhang.

Cutting Conditions : ● : Stable Cutting ◐ : General Cutting ✣ : Unstable Cutting
Cutting Area : **F** : Finish Cutting **L** : Light Cutting **M** : Medium Cutting **R** : Rough Cutting **H** : Heavy Cutting

Recommended Cutting Conditions

11° Positive Inserts (For External Turning)

Cutting Range		Priority	Grade	Chipbreaker	Cutting Speed **vc** (m/min)	Feed **f** (mm/rev)	Depth of Cut **ap**
M Ferritic and Martensitic Stainless Steel Hardness ≤ 200 HB							
●	L	1	**MC7125**	**LM**	150—210	0.06—0.25	0.2—1.0
●	L	2	**MC7115**	**LM**	160—255	0.06—0.25	0.2—1.0
●	M	1	**MC7125**	**MM**	125—175	0.08—0.30	0.3—2.0
●	M	2	**MC7125**	**MV**	125—175	0.08—0.30	0.3—2.0
●	M	3	**MC7115**	**MM**	135—215	0.08—0.30	0.3—2.0
◐	L	1	**MC7125**	**LM**	150—210	0.06—0.25	0.2—1.0
◐	M	1	**MC7125**	**MM**	125—175	0.08—0.30	0.3—2.0
◐	M	2	**MC7125**	**MV**	125—175	0.08—0.30	0.3—2.0
✣	L	1	**MP7135**	**LM**	115—145	0.06—0.25	0.2—1.0
✣	M	1	**MP7135**	**MM**	95—120	0.08—0.30	0.3—2.0
✣	M	2	**MP7135**	**MV**	95—120	0.08—0.30	0.3—2.0
M Ferritic and Martensitic Stainless Steel Hardness > 200 HB							
●	L	1	**MC7125**	**LM**	125—175	0.06—0.25	0.2—1.0
●	L	2	**MC7115**	**LM**	135—215	0.06—0.25	0.2—1.0
●	M	1	**MC7125**	**MM**	105—145	0.08—0.30	0.3—2.0
●	M	2	**MC7125**	**MV**	105—145	0.08—0.30	0.3—2.0
●	M	3	**MC7115**	**MM**	110—180	0.08—0.30	0.3—2.0
◐	L	1	**MC7125**	**LM**	125—175	0.06—0.25	0.2—1.0
◐	M	1	**MC7125**	**MM**	105—145	0.08—0.30	0.3—2.0
✣	L	1	**MP7135**	**LM**	95—120	0.06—0.25	0.2—1.0
✣	M	1	**MP7135**	**MM**	80—100	0.08—0.30	0.3—2.0
✣	M	2	**MP7135**	**MV**	80—100	0.08—0.30	0.3—2.0

Cutting Range		Priority	Grade	Chipbreaker	Cutting Speed **vc** (m/min)	Feed **f** (mm/rev)	Depth of Cut **ap**
M Two-phase Stainless Steel Hardness ≤ 280 HB							
●	L	1	**MC7125**	**LM**	100—140	0.06—0.25	0.2—1.0
●	L	2	**MC7115**	**LM**	110—175	0.06—0.25	0.2—1.0
●	M	1	**MC7125**	**MM**	85—115	0.08—0.30	0.3—2.0
●	M	2	**MC7125**	**MV**	85—115	0.08—0.30	0.3—2.0
●	M	3	**MC7115**	**MM**	90—145	0.08—0.30	0.3—2.0
◐	L	1	**MP7135**	**LM**	75—100	0.06—0.25	0.2—1.0
◐	L	2	**MC7125**	**LM**	100—140	0.06—0.25	0.2—1.0
◐	M	1	**MC7125**	**MM**	85—115	0.08—0.30	0.3—2.0
◐	M	2	**MC7125**	**MV**	85—115	0.08—0.30	0.3—2.0
✣	L	1	**MP7135**	**LM**	75—100	0.06—0.25	0.2—1.0
✣	M	1	**MP7135**	**MM**	65—80	0.08—0.30	0.3—2.0
✣	M	2	**MP7135**	**MV**	65—80	0.08—0.30	0.3—2.0
M Precipitation-Hardening Stainless Steel Hardness < 450 HB							
●	L	1	**MC7125**	**LM**	85—105	0.06—0.20	0.2—1.0
●	L	2	**MC7115**	**LM**	95—140	0.06—0.20	0.2—1.0
●	M	1	**MC7125**	**MM**	70—85	0.08—0.25	0.3—2.0
●	M	2	**MC7125**	**MV**	70—85	0.08—0.30	0.3—2.0
◐	L	1	**MC7125**	**LM**	85—105	0.06—0.20	0.2—1.0
◐	M	1	**MC7125**	**MM**	70—85	0.08—0.25	0.3—2.0
◐	M	2	**MC7125**	**MV**	70—85	0.08—0.30	0.3—2.0
✣	L	1	**MP7135**	**LM**	60—85	0.06—0.20	0.2—1.0
✣	M	1	**MC7125**	**MM**	70—85	0.08—0.25	0.3—2.0
✣	M	2	**MC7125**	**MV**	70—85	0.08—0.30	0.3—2.0

Note 1) Recommended cutting conditions for 5°/7°/11° positive inserts are provided as a guideline only.
Verify the recommended conditions for each boring bar as cutting conditions for internal machining will vary depending on the length of overhang.

Cutting Conditions : ● : Stable Cutting ◐ : General Cutting ✣ : Unstable Cutting
Cutting Area : **F** : Finish Cutting **L** : Light Cutting **M** : Medium Cutting **R** : Rough Cutting **H** : Heavy Cutting

For Your Safety
●Don't handle inserts and chips without gloves. ●Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage. ●Please use safety covers and wear safety glasses. ●When using compounded cutting oils, please take fire precautions. ●When attaching inserts or spare parts, please use only the correct wrench or driver. ●When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds, etc.

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A Sales Company of MITSUBISHI MATERIALS
MMC Hardmetal (Thailand) Co., Ltd.

MMC Hardmetal (Thailand) Co., Ltd.
622 Emporium Tower, Floor 22/1-4, Sukhumvit Road, Klongton, Klongtoey, Bangkok 10110 Thailand Tel. +66-2661-8170 Fax. +66-2258-1790

Thailand Amata City Branch
Amtata City Industrial Estate Phase 9 700/843 Moo 5, Tambon Nongkakha, Amphur Phanthong, Chonburi 20160 Thailand
Tel : +66-3 21-0728 Fax : +66-3 21-0732

Singapore Branch
33 Ubi Avenue3, #05-14 Vertex, Singapore 408868
Tel : +65-6634-8250 Fax : +65-6634.8257

Ho Chi Minh Representative Office
1205 12th Floor SROC, 2A-4A Ton Duc Thang, Ben Nghe, Dist. 1, Ho Chi Minh City, Vietnam
Tel : +84-28-3829-7700 Fax : +84-28-3824-3344

Indonesia Representative Office
MM2100 Industrial Town
Jl. Jawa Blok GG-6 No.2 Jatiwangi, Cikarang, Bekasi Indonesia 17520
Tel : +62-21-2214-3639 Fax : +62-21-2214-3745

Hanoi Representative Office
403A, 4th Fl. of The 6-Storey Block,Thang Long Ford Building, 105 Lang Ha St., Dong Da District, Hanoi, Vietnam
Tel : +84-24-3772-8362 Fax : +84-24-3772-8299

https://www.mmc-carbide.com/sea
(Tool specifications are subject to change without notice.)

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