

Rich Mill RM6

Application guideline for grade

Workpiece		P		M	K	N
		Carbon steel	Alloy steel	Stainless steel	Cast iron	Non-ferrous metal
Shape	1st recommended	MM	MM	ML	ML	MA
	2nd recommended	ML	ML	-	MM	MA
Grades	High speed milling	PC3700	PC3700	PC5300	PC6510	H01
	General milling	PC5400	PC5300	PC5400	PC5300	H01
	Interrupted milling	PC5400	PC5400	PC5400	PC5400	H01

Recommended cutting condition

• WNGX04

Workpiece		Grades	WNGX040304PNSR-MM			WNGX040304PNER-ML			WNGX040304PNFR-MA		
			vc (m/min)	fz (mm/t)	max. ap(mm)	vc (m/min)	fz (mm/t)	max. ap(mm)	vc (m/min)	fz (mm/t)	max. ap(mm)
P	Steel	PC3700	160~270	0.25~0.05	4.3	160~270	0.20~0.05	4.3	-	-	4.3
		PC5300	150~240	0.25~0.05		150~240	0.25~0.05		-	-	
		PC5400	130~210	0.25~0.05		130~210	0.25~0.05		-	-	
M	Stainless steel	PC5300	90~150	0.20~0.05		90~150	0.10~0.05		-	-	
		PC5400	70~120	0.20~0.05		70~120	0.10~0.05		-	-	
K	Cast iron	PC6510	140~230	0.30~0.08		140~230	0.25~0.08		-	-	
		PC5300	120~200	0.30~0.08		120~200	0.25~0.08		-	-	
N	Non-ferrous metal	H01	-	-	-	-	-	-	500~1000	0.2~0.05	4.3

※ The above data refer to general cutting conditions and can be adjustable up to 300 m/min and 0.4 mm/t depending on user environment.

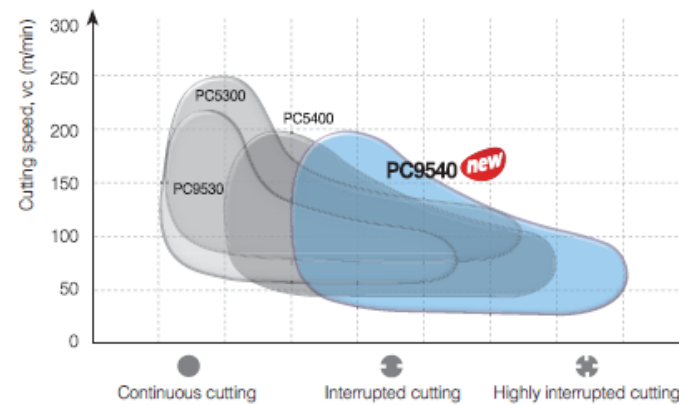
• WNGX08

Workpiece		Grades	WNGX080608PNSR-MM			WNGX080608PNER-ML			WNGX080608PNFR-MA		
			vc (m/min)	fz (mm/t)	max. ap(mm)	vc (m/min)	fz (mm/t)	max. ap(mm)	vc (m/min)	fz (mm/t)	max. ap(mm)
P	Steel	PC3700	160~270	0.25~0.05	8.2	160~270	0.20~0.05	8.2	-	-	8.2
		PC5300	150~240	0.25~0.05		150~240	0.25~0.05		-	-	
		PC5400	130~210	0.25~0.05		130~210	0.25~0.05		-	-	
M	Stainless steel	PC5300	90~150	0.20~0.05		90~150	0.10~0.05		-	-	
		PC5400	70~120	0.20~0.05		70~120	0.10~0.05		-	-	
K	Cast iron	PC6510	140~230	0.30~0.08		140~230	0.25~0.08		-	-	
		PC5300	120~200	0.30~0.08		120~200	0.25~0.08		-	-	
N	Non-ferrous metal	H01	-	-	-	-	-	-	500~1000	0.2~0.05	8.2

※ The above data refer to general cutting conditions and can be adjustable up to 300 m/min and 0.4 mm/t depending on user environment.

Insert for hard-to-cut stainless steel milling **PC9540**

Application range



Guideline for grades application

Section	High speed and continuous cutting	Medium speed and interrupted cutting	Medium to low speed and highly interrupted cutting
ISO	M25 - M30	M35 - M40	M40
Recommended grade	PC5300, PC9530	PC5400, PC9540	PC9540
Parts	General stainless steel blocks, molds and large workpieces	Automobiles and machinery parts, turbo charger turbine housings	Oil pumps, aero parts, turbo charger turbine housings
Workpiece shape			

PC9540

Main machining examples guideline (turbo charger turbine housings)

(*: DIN)

Section	Finishing	Medium cutting to roughing	Highly interrupted cutting
ISO	M25 - M30	M40	M40
Recommended grade	PC5300, PC9530	PC9540	PC9540
Workpiece	Heat resistance stainless steel (1.48□□)*	Heat resistance stainless steel (1.48□□)*	Heat resistance stainless steel (1.48□□)*
Machining	Wet machining with low depth of cut on rough machining	Dry machining with high depth of cut on wider machining	Unstable and highly interrupted machining
Machining part			

Recommended cutting conditions

Workpiece					Hardness (HB)	Recommended cutting conditions	
ISO	Workpiece	ISO (DIN)*	AISI	KS		vc (m/min)	fz (mm/t)
M	Austenitic stainless steel	X5CrNi18-9 X5CrNiMo17-12-2	304 316	STS304 STS316	160 - 180	90 - 150	0.05 - 0.3
	Ferritic and martensitic stainless steel	X6Cr17 X12Cr13	430 410	STS430 STS410	180 - 200	120 - 200	0.05 - 0.35
	Precipitation hardening stainless steel	X5CrNiCuNb16-4 (1.4462)*	630 F60	ST9630 -	280 - 300	70 - 120	0.05 - 0.25
	Heat resistance stainless steel	(1.4837)* (1.4848)*	- -	- -	160 - 200	60 - 100	0.05 - 0.2

Ultra Coating Series **UPC810 / UPC845**

Recommended cutting conditions (Milling)

Application		Grade	Chip breaker		Recommended cutting conditions							
					Inconel				Titanium alloy			
					vc (m/min)	fz (mm/t)	ap (mm)	ae (mm)	vc (m/min)	fz (mm/t)	ap (mm)	ae (mm)
FMR P-positive	High speed machining	UNC840	For general cutting (KA*)	ML	30 - 50	0.4 - 0.5	≤2.0	0.7D - 0.1D	30 - 80	0.4 - 0.8	≤2.0	0.7D - 0.1D
			For general cutting (MU*)	ML2								
			Rough	ML3								
			Finishing	ML4								
			Heavy interrupted cutting, Low depths of cut	MF								
			Heavy interrupted cutting, High depths of cut	MM								
FMR P-positive	High feed machining	UPC845	For general cutting (KA*)	ML	20 - 40	0.4 - 0.6	≤3.0	0.7D - 0.1D	20 - 60	0.4 - 1.0	≤3.0	0.7D - 0.1D
			For general cutting (MU*)	ML2								
			Rough	ML3								
			Finishing	ML4								
			Heavy interrupted cutting, Low depths of cut	MF								
			Heavy interrupted cutting, High depths of cut	MM								
HFM / HFMD	High speed machining	UNC840	Finishing - Medium	ML	30 - 50	0.6 - 1.0	≤1.0	0.7D - 0.1D	30 - 80	0.6 - 1.0	≤1.0	0.7D - 0.1D
			Medium - Rough	MF								
	High feed machining	UPC845	Finishing - Medium	ML	20 - 40	0.6 - 1.2	≤1.0	0.7D - 0.1D	20 - 60	0.6 - 1.2	≤1.0	0.7D - 0.1D
			Medium - Rough	MF								
APMT / ADKT	High speed machining	UNC840	Finishin - Medium	ML	30 - 50	0.05 - 0.2	≤9.0	≤0.3D	30 - 80	0.05 - 0.2	≤9.0	≤0.3D
			Medium - Rough	MF								
	High feed machining	UPC845	Finishin - Medium	ML	20 - 40	0.07 - 0.3	≤9.0	≤0.3D	20 - 60	0.07 - 0.3	≤9.0	≤0.3D
			Medium - Rough	MF								

※ KA Grade : Grinding / MU Grade : Non-Grinding