

Face milling cutter

DOT^{TRIPLE}**MILL**

Tungaloy Report No. 503S1-G

Face milling cutter that uses three unique inserts in one cutter body — now offers AH3225 grade inserts





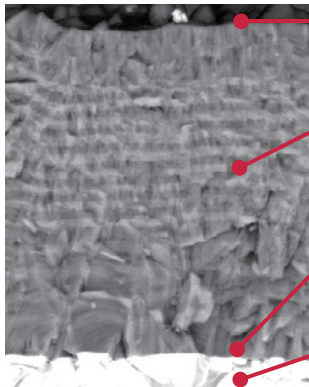
First choice grade in steel for long tool life and process reliability

New

AH3225

P

- Nano multi-layer coating technology with three major properties for optimal cutting edge integrity
- Increased resistance to wear, fracture, oxidation, built-up edge, and delamination



Resistance to built-up edge

The coating surface prevents built-up edge

Resistance to wear, oxidation, and fracture

Multi-layered coating is designed to resist wear and oxidation, while preventing micro-cracks from propagating in the coating layer for improved resistance to edge chipping

Strong coating / substrate adhesion

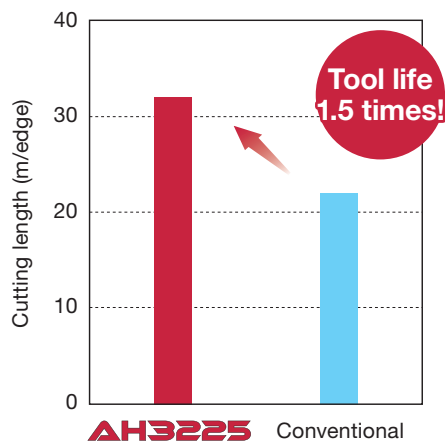
Coating is optimized for strong adhesion property with substrate to maintain strong cutting edge integrity

Carbide substrate

High resistance to fracture

Long tool life

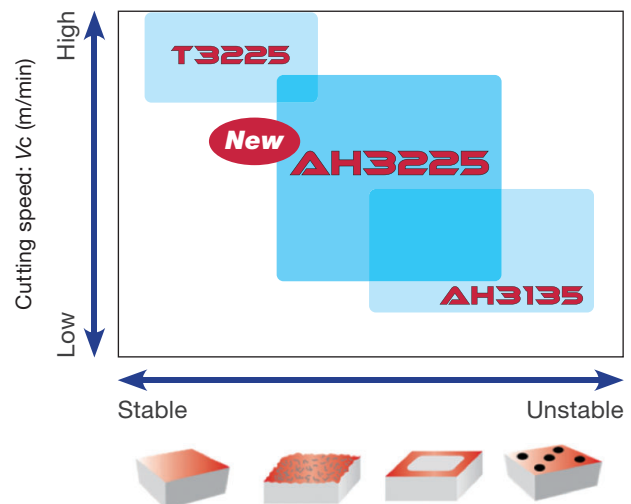
P S55C / C55



Cutter : TASN13J080B25.4R05
($\phi 80$ mm, $z = 5$)
Insert : SNMU1307ANEN-MJ AH3225
Cutting speed : $V_c = 150$ m/min
Feed per tooth : $f_z = 0.2$ mm/t
Depth of cut : $a_p = 2$ mm
Width of cut : $a_e = 50$ mm
Coolant : Dry
Machine : Vertical M/C, BT40

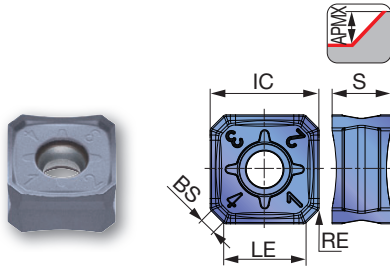
Application area

P Steel

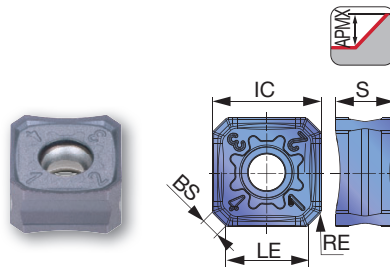


INSERTS

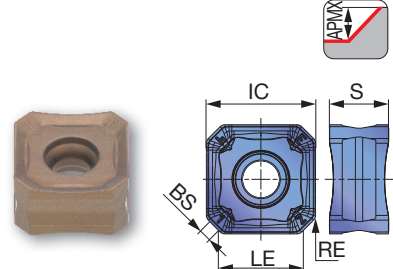
SNMU-MJ



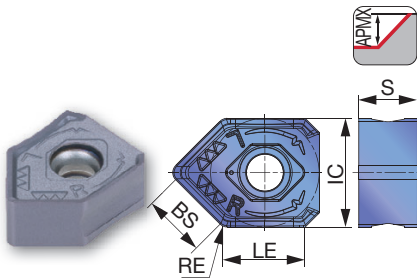
SNGU-MJ



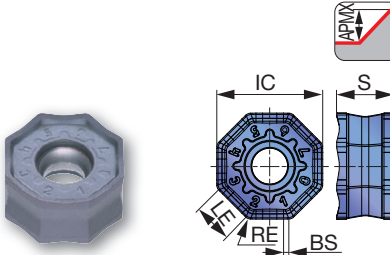
SNGU-MH



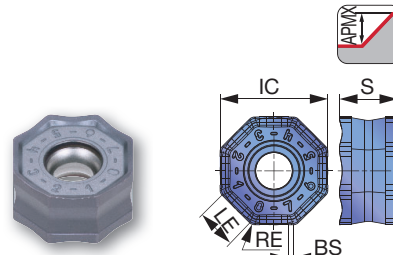
SNGU-W



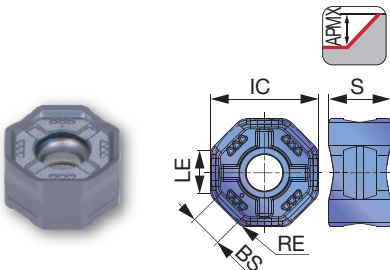
ONMU-MJ



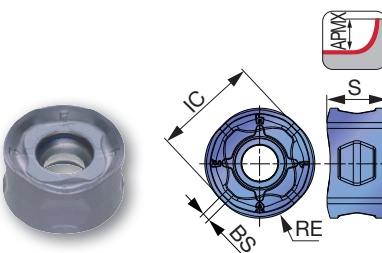
ONGU-MJ



ONGU-W



RNMU-MJ



P	Steel	☆	★	☆	★
M	Stainless		☆	★	★
K	Cast iron	★	☆		★
N	Non-ferrous				
S	Superalloys	★		☆	
H	Hard materials				

★ : First choice
☆ : Second choice

Designation	RE	APMX	Coated					LE	IC	S	BS
			AH120	AH3225	AH3135	T3225	T1215				
SNMU1307ANEN-MJ	0.5	6	●	●	●	●	●	9.4	13	7	2
SNGU1307ANEN-MJ	0.5	6	●	●	●	●	●	9.4	13	7	2
SNGU1307ANEN-MH	0.8	6					●	9	13	7	2
SNGU1307ANEN-W	1.2	6	●	●	●			9.6	13	7	7.5
ONMU0507ANEN-MJ	0.8	3.4	●	●	●	●	●	4.9	13	7	0.7
ONGU0507ANEN-MJ	0.8	3.4	●	●	●	●	●	4.9	13	7	0.7
ONGU0507ANEN-W	1.6	3.4	●	●	●			5	13	7.44	3.9
RNMU1307ZNER-MJ	6	6	●	●	●	●	●	-	13	7.26	1

● : New product
● : Line up

STANDARD CUTTING CONDITIONS

SNMU / SNGU / ONMU / ONGU

ISO	Workpiece materials	Hardness	Priority	Grades	Chip-breaker	Cutting speed Vc (m/min)	Feed per tooth fz (mm/t)
P	Low carbon steel S15C, etc. C15, etc.	200 - 300HB	First choice	AH3225	MJ	100 - 250	0.1 - 0.5
			For wear resistance	T3225	MJ	200 - 350	0.1 - 0.4
	High carbon and alloy steel S55C, SCM440, etc. C55, 42CrMo4, etc.	150 - 300HB	First choice	AH3225	MJ	100 - 250	0.1 - 0.4
			For wear resistance	T3225	MJ	180 - 300	0.1 - 0.4
M	Prehardened steel NAK80, PX5, etc.	30 - 40HRC	First choice	AH3225	MJ	100 - 200	0.1 - 0.4
			For wear resistance	T3225	MJ	150 - 250	0.1 - 0.4
	Stainless steel SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-3, etc.	- 200HB	First choice	AH3135	MJ	100 - 200	0.1 - 0.35
			For wear resistance	T3225	MJ	100 - 250	0.1 - 0.3
K	Stainless cast steel SCH20XNb, 1.4849, etc.	-	First choice	T3225	MH	60 - 120	0.1 - 0.3
			For low cutting force	AH3135	MJ	60 - 120	0.1 - 0.3
	Grey cast iron FC250, etc. 250, etc., GGG25, etc.	150 - 250HB	First choice	T1215	MJ	100 - 300	0.1 - 0.4
				AH120	MJ	100 - 250	0.1 - 0.5
S	Ductile cast iron FCD600, etc. 600-3, etc., GGG60, etc.	150 - 250HB	First choice	T1215	MJ	100 - 300	0.1 - 0.4
				AH120	MJ	80 - 200	0.1 - 0.5
	Titanium alloys Ti-6Al-4V, etc.	- 40HRC	First choice	AH3135	MJ	30 - 60	0.1 - 0.3
H	Heat-resistant alloys Inconel718, etc.	- 40HRC	First choice	AH120	MJ	10 - 40	0.05 - 0.15
	Hardened steel	SKD61, etc. X40CrMoV5-1, etc.	40 - 50HRC	First choice	AH3225	MJ	80 - 130
		SKD11, etc. X153CrMoV12, etc.	50 - 60HRC	First choice	AH120	MJ	50 - 70

RNMU

ISO	Workpiece materials	Hardness	Priority	Grades	Chip-breaker	Cutting speed Vc (m/min)	Feed per tooth fz (mm/t)
P	Low carbon steel S15C, etc. C15, etc.	200 - 300HB	First choice	AH3225	MJ	100 - 250	
			For wear resistance	T3225	MJ	200 - 350	
	High carbon and alloy steel S55C, SCM440, etc. C55, 42CrMo4, etc.	150 - 300HB	First choice	AH3225	MJ	100 - 250	※ap = 6 mm : 0.1 - 0.3
			For wear resistance	T3225	MJ	180 - 300	※ap = 2 mm : 0.4 - 0.8 ※ap = 1 mm : 0.8 - 1.5
M	Prehardened steel NAK80, PX5, etc.	30 - 40HRC	First choice	AH3225	MJ	100 - 200	
			For wear resistance	T3225	MJ	150 - 250	
	Stainless steel SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-3, etc.	- 200HB	First choice	AH3135	MJ	100 - 200	※ap = 6 mm : 0.1 - 0.25
			For wear resistance	T3225	MJ	100 - 250	※ap = 2 mm : 0.3 - 0.7 ※ap = 1 mm : 0.6 - 1.3
K	Stainless cast steel SCH20XNb, 1.4849, etc.	-	First choice	T3225	MJ	60 - 120	※ap = 2 mm : 0.2 - 0.4
			For fracture resistance	AH3135	MJ	60 - 120	※ap = 1 mm : 0.3 - 0.8
	Grey cast iron FC250, etc. 250, etc., GGG25, etc.	150 - 250HB	First choice	AH120	MJ	100 - 300	
				T1215	MJ	100 - 250	※ap = 6 mm : 0.1 - 0.3 ※ap = 2 mm : 0.4 - 0.8 ※ap = 1 mm : 0.8 - 1.5
S	Ductile cast iron FCD600, etc. 600-3, etc., GGG60, etc.	150 - 250HB	First choice	AH120	MJ	100 - 300	
				T1215	MJ	80 - 200	
	Titanium alloys Ti-6Al-4V, etc.	- 40HRC	First choice	AH3135	MJ	30 - 60	ap = 1 mm : 0.15 - 0.8
H	Heat-resistant alloys Inconel718, etc.	- 40HRC	First choice	AH120	MJ	10 - 40	ap = 1 mm : 0.05 - 0.3
	Hardened steel	SKD61, etc. X40CrMoV5-1, etc.	40 - 50HRC	First choice	AH3225	MJ	80 - 130
		SKD11, etc. X153CrMoV12, etc.	50 - 60HRC	First choice	AH120	MJ	50 - 70

※ When using T3225 or T1215, decrease the feed per tooth (fz) to 80% of the abovementioned value.



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