

STANDARD CUTTING CONDITIONS: Size 07 inserts

New

ISO	Workpiece materials	Hardness	Priority	Grades	Cutting speed Vc (m/min)	Feed per tooth fz (mm/t)
P	Low carbon steel (S15C / C15E4, SS400 / E275A, etc.)	- 200 HB	First choice	AH3135	100 - 250	0.07 - 0.2
	Carbon steel and alloy steel (S55C / C55, SCM440 / 42CrMo4, etc.)	- 300 HB	First choice	AH3135	100 - 230	0.07 - 0.15
	Prehardened steel (NAK80, PX5, etc.)	30 - 40 HRC	First choice	AH3135	100 - 180	0.07 - 0.15
M	Stainless steel (SUS304 / X5CrNi18-9, SUS316 / X5CrNiMo17-12-3, etc.)	-	First choice	AH3135	90 - 200	0.07 - 0.15
K	Grey cast iron (FC250 / GG25 / 250, FC300 / GG30 / 300, etc.)	150 - 250 HB	First choice	AH120	140 - 250	0.07 - 0.2
	Ductile cast iron (FCD400, FCD600 / GGG60 / 600-3, etc.)	150 - 250 HB	First choice	AH120	110 - 200	0.07 - 0.15
S	Titanium alloys (Ti-6Al-4V, etc.)	-	First choice	AH3135	20 - 60	0.07 - 0.15
	Heat-resistant alloys (Inconel718, etc.)	-	First choice	AH120	20 - 40	0.07 - 0.1

STANDARD CUTTING CONDITIONS: Size 12 inserts

ISO	Workpiece materials	Hardness	Priority	Grades	Chip-breaker	Cutting speed Vc (m/min)	Feed per tooth fz (mm/t)
P	Low carbon steel (S15C / C15E4, SS400 / E275A, etc.)	- 200 HB	First choice	AH3135	MJ	100 - 250	0.08 - 0.3
		- 200 HB	Priority on wear resistance	T3225	MJ	100 - 300	0.08 - 0.3
		- 200 HB	For low cutting force	AH3135	NMJ	100 - 250	0.08 - 0.14
	Carbon steel and alloy steel (S55C / C55, SCM440 / 42CrMo4, etc.)	- 300 HB	First choice	AH3135	MJ	100 - 230	0.08 - 0.3
		- 300 HB	Priority on wear resistance	T3225	MJ	100 - 280	0.08 - 0.3
		- 300 HB	For low cutting force	AH3135	NMJ	100 - 230	0.08 - 0.14
	Prehardened steel (NAK80, PX5, etc.)	30 - 40 HRC	First choice	AH3135	MJ	100 - 180	0.08 - 0.25
		30 - 40 HRC	Priority on wear resistance	T3225	MJ	100 - 200	0.08 - 0.25
		30 - 40 HRC	For low cutting force	AH3135	NMJ	100 - 180	0.08 - 0.14
M	Stainless steel (SUS304 / X5CrNi18-9, SUS316 / X5CrNiMo17-12-3, etc.)	-	First choice	AH3135	MJ	90 - 200	0.08 - 0.25
		-	Priority on wear resistance	T3225	MJ	90 - 250	0.08 - 0.25
		-	For low cutting force	AH3135	NMJ	90 - 200	0.08 - 0.14
K	Grey cast iron (FC250 / GG25 / 250, FC300 / GG30 / 300, etc.)	150 - 250 HB	First choice	AH120	MJ	140 - 250	0.08 - 0.3
		150 - 250 HB	Priority on wear resistance	T1215	MJ	140 - 300	0.08 - 0.3
		150 - 250 HB	For low cutting force	AH120	NMJ	140 - 250	0.08 - 0.14
	Ductile cast iron (FCD400, FCD600 / GGG60 / 600-3, etc.)	150 - 250 HB	First choice	AH120	MJ	110 - 200	0.08 - 0.25
		150 - 250 HB	Priority on wear resistance	T1215	MJ	110 - 250	0.08 - 0.25
		150 - 250 HB	For low cutting force	AH120	NMJ	110 - 200	0.08 - 0.14
S	Titanium alloys (Ti-6Al-4V, etc.)	-	First choice	AH3135	MJ	20 - 60	0.08 - 0.2
		-	For low cutting force	AH3135	NMJ	20 - 60	0.08 - 0.14
	Heat-resistant alloys (Inconel718, etc.)	-	First choice	AH120	MJ	20 - 40	0.07 - 0.18
		-	For low cutting force	AH120	NMJ	20 - 40	0.07 - 0.14

Note: For NMJ chipbreaker, use a feed rate that satisfies the following theoretical chip thickness:

Designation	Chip thickness (mm)
TNMU120708PER-NMJ	< 0.2