

STANDARD CUTTING CONDITIONS

TCS18R (3D chipbreaker) , TCG18R/L (honed edge)

ISO	Workpiece materials	Grades	Cutting speed Vc (m/min)	Feed: f (mm/rev)		
				TCL18	TCS18	TCG18
P	Low carbon steel (S15C / C15, S20C / C20, etc.)	AH7025	80 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
	Carbon steels, Alloy steel (S55C / C55, SCM440 / 42CrMoS4, etc.)	AH7025	80 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
	Prehardened steel (NAK80, PX5, etc.)	AH7025	80 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
M	Stainless steel (SUS304 / X5CrNi18-9, X5CrNiMo17-12-2, etc.)	AH7025	50 - 120	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
K	Grey cast iron (FC250 / GG25 / 250, FC300 / GG30 / 300, etc.)	AH7025	50 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
	Ductile cast iron (FCD400 / 400-15, FCD600 / 600-3, etc.)	AH7025	50 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
S	Titanium alloys (Ti-6Al-4V, etc.)	AH7025	30 - 80	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
	Superalloys (Inconel718, etc.)	AH7025	20 - 60	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14

TCP18R/L (lightly honed edge) / TCP18R/L-F (sharp edge)

ISO	Workpiece materials	Priority	Grades	Cutting speed Vc (m/min)	Feed f (mm/rev)
P	Low carbon steel (S15C / C15, S20C / C20, etc.)	First choice	SH725	80 - 180	0.03 - 0.1
		Toughness	AH725	80 - 180	0.03 - 0.1
	Carbon steels, Alloy steel (S55C / C55, SCM440 / 42CrMoS4, etc.)	First choice	SH725	80 - 180	0.03 - 0.1
		Toughness	AH725	80 - 180	0.03 - 0.1
M	Prehardened steel (NAK80, PX5, etc.)	First choice	SH725	80 - 180	0.03 - 0.1
		Toughness	AH725	80 - 180	0.03 - 0.1
	Stainless steel (SUS304 / X5CrNi18-9, X5CrNiMo17-12-2, etc.)	First choice	SH725	50 - 120	0.03 - 0.1
		Toughness	AH725	50 - 120	0.03 - 0.1
K	Grey cast iron (FC250 / GG25 / 250, FC300 / GG30 / 300, etc.)	First choice	AH725	50 - 180	0.03 - 0.1
		Sharpness	SH725	50 - 180	0.03 - 0.1
	Ductile cast iron (FCD400 / 400-15, FCD600 / 600-3, etc.)	First choice	AH725	50 - 180	0.03 - 0.1
		Sharpness	SH725	50 - 180	0.03 - 0.1
S	Titanium alloys (Ti-6Al-4V, etc.)	First choice	SH725	30 - 80	0.03 - 0.1
		Toughness	AH725	30 - 80	0.03 - 0.1
	Superalloys (Inconel718, etc.)	First choice	SH725	20 - 60	0.03 - 0.1
		Toughness	AH725	20 - 60	0.03 - 0.1