

## STANDARD CUTTING CONDITIONS

### FOR INTERNAL TURNING

ISO	Workpiece material	Grade			Cutting speed Vc (m/min)	Depth of cut ap (mm)	Feed f (mm/rev)
		First choice	For surface finish	For wear resistance (High speed)			
<b>P</b>	Low carbon steel SS400, S25C, etc. E275A, C25, etc.	AH725	-	-	50 - 180	0.3 - 2	0.08 - 0.3
		-	-	AH8015	50 - 200	0.3 - 2	0.08 - 0.3
		-	NS9530	-	80 - 250	0.3 - 2	0.08 - 0.3
		-	GT9530	-	80 - 300	0.3 - 2	0.08 - 0.3
	Carbon steel S45C, S55C, etc. C45, C55, etc.	AH725	-	-	50 - 180	0.3 - 2	0.08 - 0.3
		-	-	AH8015	50 - 200	0.3 - 2	0.08 - 0.3
		-	NS9530	-	80 - 250	0.3 - 2	0.08 - 0.3
	Low alloy steel SCM415, etc. 18CrMo4, etc.	-	GT9530	-	80 - 300	0.3 - 2	0.08 - 0.3
		AH725	-	-	50 - 180	0.3 - 2	0.08 - 0.3
		-	-	AH8015	50 - 200	0.3 - 2	0.08 - 0.3
	Alloy steel SCM440, SCr420, etc. 42CrMo4, 20Cr4, etc.	-	NS9530	-	80 - 250	0.3 - 2	0.08 - 0.3
		-	GT9530	-	80 - 300	0.3 - 2	0.08 - 0.3
AH725		-	-	50 - 180	0.3 - 2	0.08 - 0.3	
<b>M</b>	Stainless steel (Austenitic) SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-3, etc.	AH8015	-	-	50 - 150	0.3 - 2	0.08 - 0.3
		AH8015	-	-	50 - 150	0.3 - 2	0.08 - 0.3
		AH8015	-	-	50 - 150	0.3 - 2	0.08 - 0.3
<b>K</b>	Grey cast iron FC250, etc. 250, etc.	AH725	-	-	50 - 180	0.3 - 2	0.08 - 0.3
		-	-	AH8015	50 - 200	0.3 - 2	0.08 - 0.3
		-	NS9530	-	80 - 250	0.3 - 2	0.08 - 0.3
	Ductile cast iron FCD700, etc. 600-3, etc.	-	GT9530	-	80 - 300	0.3 - 2	0.08 - 0.3
		AH725	-	-	50 - 180	0.3 - 2	0.08 - 0.3
		-	-	AH8015	50 - 200	0.3 - 2	0.08 - 0.3
<b>N</b>	Non ferrous Metal Aluminum alloy, etc.	-	NS9530	-	80 - 250	0.3 - 2	0.08 - 0.3
		-	GT9530	-	80 - 300	0.3 - 2	0.08 - 0.3
<b>S</b>	Heat-resistant alloys Titanium alloys, etc.	AH8015	-	-	20 - 80	0.3 - 2	0.08 - 0.3
		AH8015	-	-	20 - 80	0.3 - 2	0.08 - 0.3