Cutting Conditions for GD-DH (10.00-11.50) (METRIC)

ISO	Material		Condition	Material Group No.	Cutting Speed V_c [m/min]	ZSGT 06 Feed [mm/rev]
P	non-alloy steel and cast steel, free cutting steel	<0.25% C	annealed	1	80-140	0.05-0.08
		≥0.25% C	annealed	2		
		<0.55% C	quenched and tempered	3		0.05-0.14
		≥0.55% C	annealed	4		
			quenched and tempered	5		
	low alloy and cast steel (less than 5% of alloying elements)		annealed	6		0.05-0.08
			quenched and tempered	7		
				8		
				9		
	high alloyed steel, cast steel and tool steel		annealed	10	80-120	0.05-0.14
			quenched and tempered	11		
	stainless steel and cast steel		ferritic / martensitic	12	60-100	0.05-0.08
			martensitic	13		
M	stainless steel and cast steel		austenitic, duplex	14	60-100	0.05-0.08
K	gray cast iron (GG)		ferritic / pearlitic	15	80-140	0.05-0.20
			pearlitic / martensitic	16		
	nodular cast iron (GGG)		ferritic	17		
			pearlitic	18		
	malleable cast iron		ferritic	19		
			pearlitic	20		
N	aluminum-wrought alloys		not hardenable	21	100-200	0.05-0.18
			hardenable	22		
	aluminum-cast alloys	≤12% Si	not hardenable	23		
			hardenable	24		
		>12% Si	high temperature	25		
	copper alloys	>1% Pb	free cutting	26		
			brass	27		
			electrolytic copper	28		
	non metallic		duroplastics, fiber plastics	29		
			hard rubber	30		
S	high temperature alloys	Fe based	annealed	31	20-50	0.04-0.06
			hardened	32		
		Ni or Co based	annealed	33		
			hardened	34		
			cast	35		
	titanium alloys		pure	36	30-60	0.04-0.10
			alpha+beta alloys, hardened	37		
H	hardened steel		hardened	38	50-100	0.04-0.06
			hardened	39		
	chilled cast iron		cast	40		
	cast iron		hardened	41		

- steel
- stainless steel
- cast iron
- non-ferrous metals
- superalloys and titanium
- hard materials