

Material Group	Group No.	Material Examples*	Brinell hardness HB	d.o.c [mm]		feed [mm/rev]		A max [mm ²]	V _c [m/min]		Optimal cutting conditions	
				min	max	min	max		min	max	d.o.c	feed
Low Carbon Steel	1	Ck15 9SMnPb28	150	0.20	3.00	0.11	0.30	0.50	180	400	0.5 to 1.5	0.18
			180		3.00		0.30	0.50		350		
			210		3.00		0.28	0.50		200		
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.20	3.00	0.11	0.28	0.50	120	300	0.5 to 1.5	0.15
			230		3.00		0.28	0.40		250		
			280		3.00	0.09	0.25	0.400		210		
			320		3.00	0.09	0.25	0.30		180		
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.20	3.00	0.09	0.28	0.40	70	190	0.5 to 1.5	0.12
			280		3.00		0.28	0.40		150		
			320		2.50		0.25	0.20		130		
			350		2.50		0.25	0.20		100		
Austenitic Stainless Steel	4	303 / 304 304 L	210 to 250	0.20	3.00	0.10	0.25	0.30	170	270	0.5 to 1.5	0.15 0.28
			230 to 270		2.50		0.09	0.25		0.20	170	210
	6	316 Ti 630 (F16PH)	-----		2.50	0.09	0.25	0.20	80	130	0.5 to 1.5	0.12
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.50	3.00	0.11	0.25	0.30	170	250	0.5 to 1.5	0.15
Martensitic Stainless Steel	8	410 / 420	Annealed Treated	0.50	3.00	0.11	0.25	0.30	170 120	250 210	0.5 to 1.5	0.15
Grey Cast Iron	9	EN - GJL 200 EN - GJL 250 EN - GJL 300	140 to 230	0.20	3.00	0.08	0.35	0.60	170	280	0.5 to 1.5	0.18
			0.50					250				
			0.50					230				
Nodular Cast Iron	10	EN - GJS 400 EN - GJS 600 EN - GJS 800	210	0.20	3.00	0.08	0.35	0.50	120	230	0.5 to 1.5	0.15
			260					0.40		190		
			310					0.40		150		
Nickel Based Alloys	11	Inconel 625 Inconel 718 Hastelloy C	-----	0.25	2.00	0.10	0.25	0.20	25	35	0.5 to 1.5	0.12
			0.20					40				
			0.20					65				
Titanium Based Alloys	12	TiAl 6 V4 T40	-----	0.25	2.00	0.09	0.25	35	60	0.5 to 1.5	0.15	
			0.21				0.20		28			40

*For all material types and standards, see pages 155 to 158.

