



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	Ck 15 9SMnPb28	150	0.50	5.00	0.21	0.45	1.80	180	400	1.5 to 3	0.35	
			180		5.00		0.45			1.80			350
			210		4.00		0.40			1.50			200
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.50	5.00	0.21	0.40	1.20	120	300	1.5 to 3	0.30	
			230		4.00		0.40			1.20			250
			280		4.00	0.18	0.35	1.20		210			
			320		3.50		0.35	1.00		180			
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.50	4.00	0.18	0.40	1.20	70	190	1.5 to 3	0.28	
			280		4.00		0.40			1.20			150
			320		3.00		0.35	0.80		130			
			350		3.00		0.35	0.80		100			
Austenitic Stainless Steel	4	303 / 304 304 L	210 to 250	0.50	5.00	0.20	0.40	1.00	170	270	1.5 to 3	0.35	
	5	316 / 316 L	230 to 270		4.00	0.18	0.35	0.80	170	210	1.5 to 3	0.32	
	6	316 Ti 630 (F16PH)	-----		4.00	0.18	0.35	0.60	80	130	1.5 to 3	0.28	
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.50	4.00	0.22	0.35	0.90	170	250	1.5 to 3	0.32	
Martensitic Stainless Steel	8	410 / 420	Annealed Treated	0.50	4.00	0.22	0.35	0.90	170 120	250 210	1.5 to 3	0.32	
Grey Cast Iron	9	EN - G.JL 200	140 to 230	0.50	5.00	0.15	0.60	2.00	170	280	1.5 to 3	0.35	
		EN - G.JL 250						1.80		250			
		EN - G.JL 300						1.80		230			
Nodular Cast Iron	10	EN - GJS 400	210	0.50	5.00	0.15	0.50	1.50	120	230	1.5 to 3	0.30	
		EN - GJS 600						1.30		190			
		EN - GJS 800						1.20		150			
Nickel Based Alloys	11	Inconel 625	-----	0.50	3.00	0.20	0.35	0.70	25	35	1.5 to 3	0.28	
		Inconel 718						0.70		40			
		Hastelloy C						0.80		65			
Titanium Based Alloys	12	TiAl 6 V4	-----	0.50	3.00	0.18	0.35	35	60	1.5 to 3	0.30		
		T40					0.30		0.60			28	40

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

