



Material Group	Group No.	Materials Examples	Brinell hardness HB	d.o.c [mm]		feed [mm/rev]		A max [mm2]	Vc [m/min]		Optimal cutting conditions					
				min	max	min	max		min	max	d.o.c	feed				
Low Carbon steel	1	XC 12 S 250 Pb	150	0.5	5	0.15	0.35	1	180	400	1 to 2.5	0.32				
			180		4		0.32			0.8			350			
			210		4		0.3			0.8			200			
Alloy steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.5	4	0.18	0.4	0.8	120	300	1 to 2.5	0.3				
			230		4		0.4			0.7			250			
			280		3	0.2	0.35	0.7		210						
			320		3		0.32	0.6		180						
High alloy steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.5	3	0.2	0.3	0.7	70	190	1 to 2.5	0.28				
			280		3		0.28			0.5			150			
			320		3		0.25			130						
			350		3		0.22			100						
Austenitic Stainless Steel	4	303 / 304 304 L	Annealed	0.5	4	0.2	0.3	1	170	270	1 to 2.5	0.3				
	5	316 / 316 L	Annealed		3		0.18		0.26	0.7			120	210	1 to 2.5	0.25
	6	316 Ti 630 (F16PH)	Annealed		3		0.18		0.22	0.5			70	120	1 to 2.5	0.22
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.5	3	0.22	0.28	0.7	170	250	1 to 2.5	0.28				
Martensitic Stainless Steel	8	410 / 420	Annealed	0.5	3	0.22	0.28	0.7	170	250	1 to 2.5	0.28				
			Treated						120	210						
Grey Cast iron	9	EN - GJL 200	140 à 230	0.5	5	0.15	0.35	1.2	170	280	1 to 3	0.32				
		EN - GJL 250						1		250						
		EN - GJL 300						0.8		230						
Nodular Cast iron	10	EN - GJS 400	210	0.5	4	0.15	0.3	1	120	230	1 to 2.5	0.28				
		EN - GJS 600	260					0.8		190						
		EN - GJS 800	310					0.7		150						
Nickel based alloys	11	Inconel 625	-----	0.5	3	0.2	0.26	0.6	25	35	1 to 2.5	0.25				
		Inconel 718	-----					0.6	28	40						
		Hastelloy C	-----					0.7	40	65						
Titanium based alloys	12	TiAl 6 V4	-----	0.5	3	0.18	0.28	0.7	35	60	1 to 2.5	0.25				
		T40	-----				0.22	0.6	28	40	1 to 2.5	0.22				

