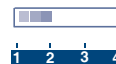
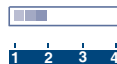


Material Group	Group No	Material Examples*	Brinell hardness	d.o.c [mm]		feed [mm/rev]		A max [mm <sup>2</sup> ]	V <sub>c</sub> [m/min]		Optimal cutting conditions								
				min	max	min	max		min	max	d.o.c	feed							
Low Carbon Steel	1	Ck15, Ck45 1020, 1045	150	0.50	6.0	0.27	0.68	3.1	180	330	4.0	0.50							
			180		5.0		0.68			3.1			280						
			210		5.0		0.60			2.6			250						
Alloy Steel	2	42 CrMo 4 St 50-2 Ck60 1060 4140	180	0.50	6.0	0.27	0.60	2.6	120	280	4.0	0.45							
			230		6.0		0.60			2.0			250						
			280		5.0	0.53	2.0	210											
			320		5.0	0.53	1.7	180											
High Alloy Steel	3	X40 CrMoV 5 1 H 13 40 NiCrMo 6 4340 S 2-10-1-8 HSS M42	220	0.50	6.0	0.23	0.60	2.0	70	190	4.0	0.40							
			280		5.0		0.60			2.0			150						
			320		5.0		0.53			1.6			130						
			350		4.0	0.53	1.6	100											
			400	0.50	3.5	0.14	0.45	1.2		50			90	3.4	0.36				
			480		3.0		0.35			0.9			40	80	2.9	0.30			
			550		2.5		0.28			0.6			30	70	2.5	0.25			
Austenitic Stainless Steel	4	X5 CrNi 18 9 304	210 to 250	0.50	5.0	0.26	0.52	1.7	170	270	4.0	0.40							
			230 to 270		5.0								0.23	0.46	1.4	160	210	4.0	0.36
			-----		5.0								0.23	0.46	1.0	70	150	4.0	0.32
Ferritic Stainless Steel	7	X8 Cr 7 430	Annealed	0.50	5.0	0.29	0.46	1.5	170	250	4.0	0.35							
Martensitic Stainless Steel	8	X15 Cr 13 410	Annealed Treated	0.50	5.0	0.29	0.46	1.5	170 120	250 190	4.0	0.35							
Grey Cast Iron	9	GG 20 GG 25 GG 30	140 to 230	0.50	6.0	0.20	0.90	3.0 2.7 2.7	170	250 230 210	4.0	0.60							
			GGG 40 GGG 50 GGG 70 G-X260NiCr42							210			0.50	6.0	0.20	0.70	2.3 2.0 1.8	120	230 190 150
										260									4.0
310	4.0	0.50																	
Nickel Based Alloys	11	Inconel 625 Inconel 718 Hastelloy C	-----	0.50	5.0	0.26	0.46	1.4	25	35	3.0	0.38							
			-----					1.4		28			40						
			-----					1.6		40			65						
			-----					1.6		35			60						
Titanium Based Alloys	12	TiAl 6 V4 T40	-----	0.50	5.0	0.23	0.46	1.6	35	60	3.0	0.38							
			-----				0.39		1.2	28			40	3.0	0.32				

Insert designation    Super Finishing    Finishing    Semi Finishing    Roughing    Interrupted Cut

TNMG 220412 NN



LAMINA  
TECHNOLOGIES