

## Speeds & Feeds

Material Group		Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [inch]		Feed [inch/tooth]		V <sub>c</sub> [sfm]		Suggested Starting Parameters			
						min	max	min	max	min	max	D.O.C.	Feed	V <sub>c</sub>	
Steel	Non-alloyed	1	1	C35, Ck45, 1020,	125 HB	0.020	0.157	0.009	0.021	620	1080	0.099	0.015	820	
			2	1045, 1060, 28Mn6	190 HB									720	
			3	250 HB	650										
	Low alloyed	2	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.020	0.157	0.007	0.017	490	780	0.099	0.013	650	
					230 HB					490	680				
					280 HB					420	620				
					350 HB					420	550				
	High alloyed	3	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.020	0.112	0.006	0.015	290	490	0.074	0.012	420	
					280 HB					290	420				
					320 HB					190	360				
					350 HB					190	290				
	Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.020	0.157	0.007	0.015	620	820	0.099	0.012	720	
240 HB					520					680	620				
Duplex		5	14	X2CrNiN23-4, S31500	290 HB	0.020	0.112	0.006	0.012	220	420	0.074	0.011	320	
					310 HB					390	290				
Ferritic & Martensitic		6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.020	0.157	0.007	0.015	490	680	0.099	0.012	620	
					42 HRc					290	490			0.074	0.011
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.020	0.157	0.009	0.021	490	780	0.099	0.015	650		
				200 HB									720	590	
				250 HB									620	520	
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.020	0.157	0.007	0.019	320	650	0.099	0.013	590	
					200 HB									490	420
					250 HB									490	420
High Temp. Alloys	Fe, Ni & Co based	9	31,32	Incoloy 800	0.020	0.112	0.006	0.012	80	140	0.074	0.011	100		
			33	Inconel 700									140	90	
			34	Stellite 21									140	90	
	Ti based	10	36	TiAl6V4	0.020	0.112	0.006	0.013	130	210	0.074	0.012	180		
				37					T40	90			180	0.011	130
	Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.016	0.056	0.005	0.012	130	260	0.050	0.009	190	
50 HRc					220						180				
55 HRc					190						160				
Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.016	0.045	0.005	0.012	130	260	0.037	0.009	160		
White Cast Iron		41	G-X300CrMo15	55 HRc	0.016	0.017	0.005	0.009	90	190	0.025	0.008	130		
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.020	0.157	0.009	0.021	650	1310	0.099	0.017	910	



(800) 597-3921 or (317) 803-8000 for Application Support.  
 For additional suggested Speeds & Feeds: <http://delivr.com/1kppm>

