Speed & Feed Guide

GWS TOOL GROUP

Series 2134, 2135

Aggressor M & F | 3 - 5 FL | Rougher | Corner Chamfer

Profiling				SFM based on RDOC					IPT *(BASELINE)				
				Cutting Diameter Engaged					Cutting Diameter				
Material			Hardness	5%	10%	20%	30%	50%	5/16	3/8	1/2	5/8	3/4
P	Steel	Free Machining & Low Carbon: 10XX, 11XX, 12XX, A36	≤ 28 Rc	1485	1485	1155	1000	825	0.0033	0.0047	0.0066	0.0078	0.0090
	Steel	Medium/High Carbon Steels, Alloy Steels: 13XX, 41XX, 43XX, 86XX	28-38 Rc	890	890	825	750	660	0.0033	0.0047	0.0066	0.0078	0.0090
	Die Steels	A2, H13, L6, P20, S7	28-44 Rc	750	750	660	560	430	0.0033	0.0047	0.0066	0.0078	0.0090
M	Stainless Steels	Easy to Machine, 430F, 301, 303, 410, 416 Annealed, 420F, 430, 430F	≤ 28 Rc	500	500	430	400	350	0.0033	0.0047	0.0066	0.0078	0.0090
	Stainless Steels	Moderately Difficult to Machine, Nitronic 50, 301, 303, 304, 304L, 316, 316L, 321, 347	≤ 28 Rc	430	430	400	370	330	0.0025	0.0033	0.0049	0.0059	0.0066
	Stainless Steels	Difficult to Machine, 302B, 304B, 309, 310, 316, 316B, 316L, 316Ti, 317, 317L, 321, PH13-8Mo, Nitronics	> 28 Rc	430	430	400	360	330	0.0025	0.0033	0.0049	0.0059	0.0066
S	Super Alloys	High Temp, Nimonics, Inconel, Monel, Hastelloy	≤ 42 Rc	165	165	130	115	100	0.0008	0.0011	0.0017	0.0019	0.0023
	Super Alloys	Titanium: Ti 3Al-2.5V, Ti 6Al-4V Ti 10V-2Fe-3Al	≤ 42 Rc	400	400	370	300	250	0.0008	0.0011	0.0017	0.0019	0.0023
H	Hardened Steels	Tool Steel, Die Steel: S7, H13, A2	45-55 Rc	450	450	410	300	165	0.0029	0.0039	0.0059	0.0070	0.0078
	Hardened Steels	Tool Steel, Die Steel: D2, CPM-10V	55-65 Rc	380	380	350	250	150	0.0020	0.0029	0.0039	0.0051	0.0061
K	Cast Iron	Gray: SAE J431, ASTM A48	≤ 240 HB	1180	1180	1120	800	630	0.0033	0.0047	0.0066	0.0078	0.0090
	Cast Iron	Ductile & Malleable, ASTM A536, ASTM 897, ASTM A47, ASTM A220	> 240 HB	530	530	500	460	430	0.0033	0.0047	0.0066	0.0078	0.0090

Slotting				SFM					IPT *(BASELINE)				
				Cutting Diameter Engaged					Cutting Diameter				
Material			Hardness	25%	50%	100%	5/16	3/8	1/2	5/8	3/4		
P	Steel	Free Machining & Low Carbon: 10XX, 11XX, 12XX, A36	≤ 28 Rc	800	700	500	0.0010	0.0020	0.0025	0.0030	0.0035		
	Steel	Medium/High Carbon Steels, Alloy Steels: 13XX, 41XX, 43XX, 86XX	28-38 Rc	650	550	450	0.0010	0.0020	0.0025	0.0030	0.0035		
	Die Steels	A2, H13, L6, P20, S7	28-44 Rc	500	450	400	0.0010	0.0020	0.0025	0.0030	0.0035		
M	Stainless Steels	Easy to Machine, 430F, 301, 303, 410, 416 Annealed, 420F, 430, 430F	≤ 28 Rc	400	350	325	0.0010	0.0020	0.0025	0.0030	0.0035		
	Stainless Steels	Moderately Difficult to Machine, Nitronic 50, 301, 303, 304, 304L, 316, 316L, 321, 347	≤ 28 Rc	320	275	250	0.0010	0.0020	0.0025	0.0030	0.0035		
	Stainless Steels	Difficult to Machine, 302B, 304B, 309, 310, 316, 316B, 316L, 316Ti, 317, 317L, 321, PH13-8Mo, Nitronics	> 28 Rc	330	275	250	0.0010	0.0020	0.0025	0.0030	0.0035		
S	Super Alloys	High Temp, Nimonics, Inconel, Monel, Hastelloy	≤ 42 Rc	110	100	95	0.0005	0.0010	0.0010	0.0015	0.0020		
	Super Alloys	Titanium: Ti 3Al-2.5V, Ti 6Al-4V Ti 10V-2Fe-3Al	≤ 42 Rc	230	210	195	0.0008	0.0009	0.0011	0.0017	0.0019		
H	Hardened Steels	Tool Steel, Die Steel: S7, H13, A2	35-45 Rc	200	180	150	0.0010	0.0020	0.0025	0.0030	0.0035		
	Hardened Steels	Tool Steel, Die Steel: D2, CPM-10V	45-55 Rc	180	150	125	0.0005	0.0010	0.0010	0.0015	0.0020		
K	Cast Iron	Gray: SAE J431, ASTM A48	≤ 240 HB	600	550	500	0.0010	0.0020	0.0025	0.0030	0.0035		
	Cast Iron	Ductile & Malleable, ASTM A536, ASTM 897, ASTM A47, ASTM A220	> 240 HB	320	275	250	0.0010	0.0020	0.0025	0.0030	0.0035		