Speed & Feed Guide

Series 2140, 2141, 2142, 2143

Attacker | 3 & 4 FL | Chip Breaker

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	1
P	Steel	Free Machining & Low Carbon: 10XX, 11XX, 12XX, A36	≤ 28 Rc	1050	700	385	375	350	0.0027	0.0032	0.0045	0.0054	0.0063	0.0090
	Steel	Medium/High Carbon Steels, Alloy Steels: 13XX, 41XX, 43XX, 86XX	28-38 Rc	630	420	320	250	210	0.0027	0.0032	0.0045	0.0054	0.0063	0.0090
	Die Steels	A2, H13, L6, P20, S7	28-44 Rc	525	350	300	275	250	0.0027	0.0032	0.0045	0.0054	0.0063	0.0090
M	Stainless Steels	Easy to Machine, 430F, 301, 303, 410, 416 Annealed, 420F, 430, 430F	≤ 28 Rc	650	600	550	500	450	0.0027	0.0032	0.0045	0.0054	0.0063	0.0090
	Stainless Steels	Moderately Difficult to Machine, Nitronic 50, 301, 303, 304, 304L, 316, 316L, 321, 347	≤ 28 Rc	525	400	350	300	250	0.0027	0.0032	0.0045	0.0054	0.0063	0.0090
	Stainless Steels	Difficult to Machine, 302B, 304B, 309, 310, 316, 316Ti, PH13-8Mo	> 28 Rc	525	400	350	300	250	0.0027	0.0032	0.0045	0.0054	0.0063	0.0090
S	Super Alloys	High Temp, Nimonics, Inconel, Monel, Hastelloy	≤ 42 Rc	265	200	175	150	100	0.0014	0.0016	0.0023	0.0027	0.0032	0.0045
	Super Alloys	Titanium: Ti 3Al-2.5V, Ti 6Al-4V Ti 10V-2Fe-3Al	≤ 42 Rc	230	200	175	150	125	0.0014	0.0016	0.0023	0.0027	0.0032	0.0045
H	Hardened Steels	Tool Steel, Die Steel: S7, H13, A2	45-55 Rc	250	240	230	210	200	0.0018	0.0021	0.0030	0.0036	0.0042	0.0060
	Hardened Steels	Tool Steel, Die Steel: D2, CPM-10V	55-65 Rc	200	180	160	150	100	0.0013	0.0014	0.0021	0.0024	0.0029	0.0041
K	Cast Iron	Gray: SAE J431, ASTM A48	≤ 240 HB	425	400	375	350	300	0.0027	0.0032	0.0045	0.0054	0.0063	0.0090
	Cast Iron	Ductile & Malleable, ASTM A536, ASTM 897, ASTM A47, ASTM A220	> 240 HB	320	300	250	225	200	0.0027	0.0032	0.0045	0.0054	0.0063	0.0090
N	Non-Ferrous	Aluminum, Brass, Bronze, Copper, Plastics, Graphite	-	1000	960	920	880	840	0.0027	0.0032	0.0045	0.0054	0.0063	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	1
P	Steel	Free Machining & Low Carbon: 10XX, 11XX, 12XX, A36	≤ 28 Rc	385	370	350	0.0016	0.0019	0.0025	0.0031	0.0038	0.0050
	Steel	Medium/High Carbon Steels, Alloy Steels: 13XX, 41XX, 43XX, 86XX	28-38 Rc	245	230	2210	0.0016	0.0019	0.0025	0.0031	0.0038	0.0050
	Die Steels	A2, H13, L6, P20, S7	28-44 Rc	210	195	175	0.0016	0.0019	0.0025	0.0031	0.0038	0.0050
M	Stainless Steels	Easy to Machine, 430F, 301, 303, 410, 416 Annealed, 420F, 430, 430F	≤ 28 Rc	385	370	350	0.0016	0.0019	0.0025	0.0031	0.0038	0.0050
	Stainless Steels	Moderately Difficult to Machine, Nitronic 50, 301, 303, 304, 304L, 316, 316L, 321, 347	≤ 28 Rc	245	210	175	0.0016	0.0019	0.0025	0.0031	0.0038	0.0050
	Stainless Steels	Difficult to Machine, 302B, 304B, 309, 310, 316, 316Ti, PH13-8Mo	> 28 Rc	210	195	175	0.0016	0.0019	0.0025	0.0031	0.0038	0.0050
S	Super Alloys	High Temp, Nimonics, Inconel, Monel, Hastelloy	≤ 42 Rc	125	105	90	0.0008	0.0010	0.0013	0.0016	0.0017	0.0026
	Super Alloys	Titanium: Ti 3Al-2.5V, Ti 6Al-4V Ti 10V-2Fe-3Al	≤ 42 Rc	100	90	80	0.0008	0.0010	0.0013	0.0016	0.0017	0.0026
H	Hardened Steels	Tool Steel, Alloyed Steel: P20, 4140H	35-45 Rc	245	230	210	0.0016	0.0019	0.0025	0.0031	0.0038	0.0050
	Hardened Steels	Tool Steel, Die Steel: S7, H13, A2	45-55 Rc	175	160	140	0.0008	0.0010	0.0013	0.0016	0.0020	0.0025
	Hardened Steels	Tool Steel, Die Steel: D2, CPM-10V	55-65 Rc	150	125	100	0.0004	0.0005	0.0008	0.0008	0.0010	0.0012
K	Cast Iron	Gray: SAE J431, ASTM A48	≤ 240 HB	450	400	350	0.0016	0.0019	0.0025	0.0031	0.0038	0.0050
	Cast Iron	Ductile & Malleable, ASTM A536, ASTM 897, ASTM A47, ASTM A220	> 240 HB	300	250	225	0.0016	0.0019	0.0025	0.0031	0.0038	0.0050
N	Non-Ferrous	Aluminum, Brass, Bronze, Copper, Plastics, Graphite	-	750	600	450	0.0016	0.0019	0.0025	0.0031	0.0038	0.0050