Series SM6F & SM6F-NB

Cutting Parameters

Suggested Starting Speeds & Feed Rates

Material Group	ISO Code	Material Examples	Finishing Cuts .1D Radial x 2D Axial		Medium Cuts .25D Radial x 1.5D Axial		Heavy Cuts .5D Radial x 1.5D Axial		High Feed .05D Radial x 2D Axial	
			SFM	IPM	SFM	IPM	SFM	IPM	SFM	IPM
Steel	P	1018 thru 1095, 12L14, A-36, Hot Rolled	600	90.00	n/a	n/a	n/a	n/a	n/a	n/a
Steel Alloys	P	4140 thru 8820	500	70.00	n/a	n/a	n/a	n/a	n/a	n/a
		Steel Alloys <45 HRC, Cobalt Chrome	300	35.00	n/a	n/a	n/a	n/a	n/a	n/a
Tool & Mold Steels	P	H-13, O-1, A-2, D-2, S7, P20	250	45.00	n/a	n/a	n/a	n/a	n/a	n/a
	H*	AR-450, Steels >45 HRC	100	12.00	n/a	n/a	n/a	n/a	n/a	n/a
High Temp - Titanium	S	6Al4V, 5553, 99	200	20.00	200	16.00	200	12.00	n/a	n/a
High Temp - Nickel Based Alloys	S	Inconel 100, 718, Hastelloy-B, Rene 77, Jethete M252, Haynes 75	80	8.00	80	7.00	80	6.00	250	25
	S	Inconel 625, Waspalloy	120	12.00	120	10.00	120	8.00	350	35
	S	Monel 400	250	20.00	250	16.00	250	12.00	500	50
High Temp - Iron Based Alloys	S	Aeromet 100, A286, Jethete M152	100	9.00	100	7.00	100	6.00	300	30
High Temp - Cobalt Based Alloys	S	Kovar, L-405, L-605, Stellite SF12	70	7.00	70	6.00	70	5.00	200	20
Cast Iron	K	Gray Cast, Malleable and Ductile Iron	600	90.00	600	80.00	600	70.00	n/a	n/a

**When machining Hardened Materials > 45 HRC, use the Series with "NB." Having an AlTiN coating will result in much longer tool life*

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Series SM6F & SM6F-NB

Cutting Parameters

Recommended Chip Loads

Material Group	ISO Code	Material Examples	Cutting Diameter							
			1/8	3/16	1/4	3/8	1/2	5/8	3/4	1
Steel	P	1018 thru 1095, 12L14, A-36, Hot Rolled	0.0007	0.0010	0.0020	0.0030	0.0040	0.0050	0.0060	0.0070
Steel Alloys	P	4140 thru 8820	0.0005	0.0007	0.0015	0.0020	0.0030	0.0040	0.0050	0.0060
		Cobalt Chromes	0.0008	0.0010	0.0020	0.0030	0.0050	0.0070	0.0080	0.0100
		Steel Alloys <45 HRC	0.0003	0.0003	0.0005	0.0008	0.0010	0.0015	0.0020	0.0030
Tool & Mold Steels	P	H-13, O-1, A-2, D-2, S7, P20	0.0005	0.0010	0.0015	0.0020	0.0030	0.0040	0.0050	0.0050
	H*	AR-450, Steels >45 HRC	0.0002	0.0003	0.0005	0.0008	0.0010	0.0015	0.0020	0.0030
High Temp - Titanium	S	6Al4V, 5553, 99	0.0005	0.0008	0.0010	0.0012	0.0015	0.0020	0.0030	0.0040
High Temp - Nickel Based Alloys	S	Inconel 100, 718, Hastelloy-B, Rene 77, Jethete M252, Haynes 75	0.0005	0.0007	0.0010	0.0015	0.0020	0.0025	0.0030	0.0030
		Inconel 625, Waspalloy	0.0005	0.0007	0.0010	0.0015	0.0020	0.0025	0.0030	0.0030
		Monel 400	0.0005	0.0010	0.0015	0.0020	0.0025	0.0030	0.0040	0.0050
High Temp - Iron Based Alloys	S	Aeromet 100, A286, Jethete M152	0.0005	0.0007	0.0010	0.0015	0.0020	0.0025	0.0030	0.0030
High Temp - Cobalt Based Alloys	S	Kovar, L-405, L-605, Stellite SF12	0.0005	0.0007	0.0010	0.0015	0.0020	0.0025	0.0030	0.0030
Iron	K	Gray Cast, Malleable and Ductile Iron	0.0050	0.0007	0.0010	0.0015	0.0020	0.0030	0.0040	0.0050

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