

The follow tables are starting parameters only. Every application is different and may require varying feeds and speeds from this chart.

As the degree of taper increases, you may have to use the large diameter provided to calculate the appropriate RPM, instead of tip size. This usually isn't necessary until seven degrees. At that time, the tip size would be used to calculate the needed feed per tooth. Tapered end mill usage can be tricky if the proper settings are not adhered to. Please follow these endmill usage charts as closely as possible.

Tapered End Mills – High Speed Steel – Feed per Tooth (Roughing and Finishing)									
Material	SFM	3/32 to 1/8	5/32 to 3/16	7/32 to 1/4	5/16 to 3/8	7/16 to 1/2	9/16 to 5/8	11/16 to 3/4	7/8 to 1"
Aluminum 6061	600	0.0005	0.001	0.0013	0.002	0.0035	0.004	0.0065	0.008
Stainless Steel 304, 302	90	0.0003	0.0004	0.0005	0.001	0.00013	0.003	0.0035	0.004
Cast Iron ó Ductile, Grey	100	0.0003	0.0004	0.0007	0.0013	0.0025	0.003	0.004	0.005
Bronze, Brass, Copper	125	0.0003	0.0005	0.0008	0.001	0.0025	0.003	0.0042	0.005
Tool Steel A2, D2, H13	80	0.0002	0.0003	0.0004	0.0006	0.0015	0.002	0.0025	0.003
Steel 4140, 1020, 4340	80	0.0004	0.0005	0.0006	0.001	0.002	0.003	0.004	0.005
Titanium 6A1-6V-25N. 6A1-4V	60	0.0002	0.0004	0.0005	0.0007	0.001	0.0023	0.0025	0.003
Nickel Base Alloys, Inconel 718, Hastalloy, Waspalloy	20	0.0002	0.0004	0.0005	0.0007	0.001	0.0015	0.002	0.003
Tapered End Mills – Micrograin Carbide – Feed per Tooth (Roughing and Finishing)									
Material	SFM	3/32 to 1/8	5/32 to 3/16	7/32 to 1/4	5/16 to 3/8	7/16 to 1/2	9/16 to 5/8	11/16 to 3/4	7/8 to 1"
Aluminum T6 2014 T6/T651	600	0.0005	0.001	0.0013	0.002	0.0035	0.004	0.0065	0.008
Copper, Brass	90	0.0003	0.0004	0.0005	0.001	0.00013	0.003	0.0035	0.004
Copper Alloy, Bronze	100	0.0003	0.0004	0.0007	0.0013	0.0025	0.003	0.004	0.005
Magnesium Diecast	125	0.0003	0.0005	0.0008	0.001	0.0025	0.003	0.0042	0.005
Graphite	80	0.0002	0.0003	0.0004	0.0006	0.0015	0.002	0.0025	0.003
High Strength 4140, 4340,52100,H11,H13	80	0.0004	0.0005	0.0006	0.001	0.002	0.003	0.004	0.005
Mold Steels P20, 01 ,06	60	0.0002	0.0004	0.0005	0.0007	0.001	0.0023	0.0025	0.003
Alloy Steel, 200,300,11xx,13xx	20	0.0002	0.0004	0.0005	0.0007	0.001	0.0015	0.002	0.003
Titanium Alloy	200	0.0002	0.0003	0.0004	0.0009	0.0012	0.002	0.003	0.0035

6AL-4V, 6AL-25N-ASTM																				
Stainless Steel 200 Series, 304-L, 316L, 303, 15115	225	0.0002	0.0003	0.0004	0.0008	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01	0.011	0.012	0.013	0.014	0.015
Ductile Grey Cast Iron	250	0.0005	0.0007	0.0015	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01	0.011	0.012	0.013	0.014	0.015	0.016	0.017
Plastics and Acrylics	400	0.001	0.0015	0.0025	0.004	0.005	0.008	0.01	0.011	0.012	0.013	0.014	0.015	0.016	0.017	0.018	0.019	0.02	0.021	0.022
Nickel Base Haspaloy, Waspaloy Inconnel, Monel, K-monel,	75	0.0004	0.0005	0.0007	0.0009	0.0015	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01	0.011	0.012	0.013	0.014	0.015

SFM & FPT
R.P.M.= 3.82 X SFM divided by Diameter
IPM = CL (chipload) X Number of Flutes X R.P.M.

Surface Feet Per Minute																			
Diameter	20	30	40	50	60	70	80	90	100	125	150	200	300	400	500	600	800	1000	
1/16	1122	1833	2445	3056	3667	4278	4889	5500	6112	7639	9167								
1/8	611	917	1222	1528	1833	2139	2445	2750	3056	3820	4584	6112	9167						
3/16	407	611	815	1019	1222	1426	1630	1833	2037	2546	3056	4074	6112	8149					
1/4	306	458	611	764	917	1070	1222	1375	1528	1910	2292	3056	4584	6112	7639	9167			
5/16	244	367	489	611	733	856	978	1100	1222	1528	1833	2445	3667	4889	6112	7334	9778		
3/8	204	306	407	509	611	713	815	917	1019	1273	1528	2037	3056	4074	5093	6112	8149		
7/16	175	260	347	435	520	615	700	780	875	1094	1315	1745	2620	3490	4368	5240	6990	8735	
1/2	155	230	308	384	460	537	614	691	766	958	1148	1530	2290	3054	3821	4585	6113	7640	
5/8	123	185	246	305	369	430	490	555	615	766	920	1228	1838	2450	3060	3669	4890	6120	
3/4	102	155	206	257	308	359	409	460	511	639	766	1021	1530	2040	2350	3060	4080	5098	
7/8	87	131	176	220	264	308	350	395	440	550	658	878	1312	1748	2185	2620	3494	4368	
1	77	116	154	194	230	269	308	346	384	479	576	766	1148	1530	1911	2295	3058	3820	
1-1/8	68	102	138	174	206	239	274	308	341	424	508	678	1020	1360	1699	2038	2718	3398	
1-1/4	61	93	123	156	185	216	245	280	307	383	460	612	917	1222	1530	1835	2450	3058	
1-3/8	56	83	113	141	169	198	224	254	280	349	420	559	835	1112	1390	1669	2223	2780	
1-1/2	52	77	104	129	154	180	206	230	256	319	383	510	765	1020	1273	1528	2038	2548	
1-5/8	49	72	96	120	143	167	190	213	236	298	354	475	706	942	1178	1412	1882	2352	
1-3/4	44	66	87	110	132	154	178	198	220	275	329	439	658	876	1092	1315	1749	2186	
1-7/8	41	61	83	103	121	144	161	189	204	256	307	408	612	818	1020	1223	1631	2038	
2	38	59	77	98	118	136	155	173	194	241	289	384	576	765	958	1148	1530	1911	
2-1/2	31	47	62	77	94	107	123	138	154	190	230	307	456	612	766	918	1224	1530	

Revolutions Per Minute

1:) SFM + FPT (For Material) 2.) Find RPM at intersection of SFM + Diameter 3.) Calculate Feed IPM = FPT x Number of Flutes X RPM

WARNING:
All cutting tools can shatter and break during use. Government regulations require that safety glasses be worn during use. We also recommend wearing a simple respiration mask.