

Roughers Regular Length — Typhoon

This fine pitch rougher is designed for milling harder metals and has updated geometry in the design of this tool for higher feed rates with no vibration or chatter and chipbreakers to eliminate birdnesting.



Speeds & Feeds > P. A40

Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	No. of Flutes	Code No.	Price \$
Inch						
1/4	1/4	3/4	2-1/2	3	104800	53.55
5/16	5/16	3/4	2-1/2	3	104802	61.48
3/8	3/8	7/8	2-1/2	3	104804	74.48
1/2	1/2	1	3	4	104806	100.69
5/8	5/8	1-1/4	3-1/2	4	104810	160.43
3/4	3/4	1-5/8	4	4	104812	230.36
1	1	1-3/4	4	5	104814	386.91

5pc 4-Flute Variable Helix Carbide End Mill Set

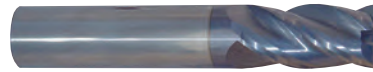
- Helix changes along flutes
- Increased stability during cutting action
- Substantial increase in speed
- Small corner radius for added strength and smoother cutting action
- AlTiN coated for improved tool life and increased production output
- Made from premium sub-micron grain carbide



Description	Code No.	Price \$
Set Includes: 153002, 153006, 153012, 153018, 153027	153005	233.82

4-Flute Variable Helix Carbide End Mill — Typhoon

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Speeds & Feeds > P. A16

Cutting Dia. (in.)	Shank Dia. (in.)	Flute Length (in.)	Overall Length (in.)	Corner Radius	With Radius Code No.	Price \$	Without Radius Code No.	Price \$	Weld on Flat Without Radius Code No.	Price \$
1/8	1/8	1/2	1-1/2	0.010-0.015	153000	18.66	153250	16.59	-	-
3/16	3/16	3/8	1-1/2	0.010-0.015	153001	23.44	-	-	-	-
3/16	3/16	5/8	2	0.015-0.020	153002	23.44	153252	20.92	-	-
1/4	1/4	1/2	2	0.015-0.020	153004	28.86	153254	28.86	-	-
1/4	1/4	3/4	2-1/2	0.015-0.020	153006	31.97	153256	28.23	-	-
1/4	1/4	1-1/8	3	0.015-0.020	153008	47.37	153258	47.37	-	-
5/16	5/16	1/2	2	0.015-0.020	153010	39.42	153260	34.39	-	-
5/16	5/16	13/16	2-1/2	0.015-0.020	153012	43.33	153262	40.24	-	-
5/16	5/16	1-1/8	3	0.015-0.020	153014	60.41	153264	60.41	-	-
3/8	3/8	5/8	2	0.015-0.020	153016	46.54	153266	40.63	153500	40.63
3/8	3/8	1	2-1/2	0.015-0.020	153018	50.60	153268	47.49	153502	47.49
3/8	3/8	1-1/8	3	0.015-0.020	153020	66.59	153270	66.59	153504	66.59
7/16	7/16	1	2-3/4	0.015-0.020	153022	61.18	153272	57.10	153506	57.10
1/2	1/2	5/8	2-1/2	0.025-0.030	153024	77.33	153274	66.49	153508	66.49
1/2	1/2	1	3	0.025-0.030	153026	86.31	153276	71.03	153510	71.03
1/2	1/2	1-1/4	3	0.025-0.030	153027	86.31	153277	71.03	153512	71.03
1/2	1/2	2	4	0.025-0.030	153028	102.00	153278	96.12	153514	96.12
5/8	5/8	3/4	3	0.030-0.035	153030	133.70	153280	127.34	153516	127.34
5/8	5/8	1-1/4	3-1/2	0.030-0.035	153032	137.41	153282	131.07	-	-
5/8	5/8	2-1/4	5	0.030-0.035	153034	205.62	153284	205.62	153518	205.62
3/4	3/4	1	3	0.030-0.035	153036	192.87	153286	183.07	153520	183.07
3/4	3/4	1-1/2	4	0.030-0.035	153038	197.06	153288	187.09	-	-
3/4	3/4	2-1/4	5	0.030-0.035	153040	273.33	153290	251.10	153522	251.10
1	1	1-1/2	4	0.030-0.035	153042	336.43	153292	279.49	153524	279.49
1	1	2-1/4	5	0.030-0.035	153041	413.93	153293	374.13	153524	374.13
1-1/4	1-1/4	2-1/4	5	0.030-0.035	153043	970.57	153294	776.39	-	-

Speeds & Feeds — 4 & 5-Flute Variable Helix End Mills

Material	SFM	1/8"	1/4"	1/2"	1"
Aluminum Alloys	1120	0.0010	0.0020	0.0040	0.0080
Carbon Steel	300-600	0.0010	0.0015	0.0030	0.0060
Cast Iron	350-550	0.0010	0.0015	0.0030	0.0060
Copper Alloys	500-900	0.0010	0.0020	0.0030	0.0060
Steel - Annealed	350-500	0.0010	0.0020	0.0030	0.0050
Steel - 18-24 HRC	150-500	0.0004	0.0008	0.0015	0.0045
Steel - 25-37 HRC	125-200	0.0003	0.0005	0.0010	0.0030
Stainless Steel - Free Machining	250-400	0.0005	0.0010	0.0020	0.0030
Stainless Steel - Other	150-300	0.0005	0.0010	0.0020	0.0030
Inconel/Monel	60-100	0.0005	0.0010	0.0015	0.0030
Titanium	175-300	0.0005	0.0008	0.0015	0.0030

* All speeds and feeds are suggested starting points. They may be increased or decreased depending on machine condition, depth of cut, finish required, coolant, etc.