

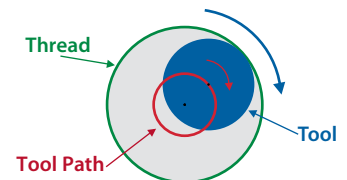
List 16640 - A Brand AT-2

List 16645 - A Brand AT-2

Work Material	P															M		
	Carbon Steels									Alloy Steel			Die Steel			Stainless Steel		
	Low			Medium			High											
	1010, 1018			1035, 1045			1065			4140, 4340, 8620			D2, H13, A6			300, 400, 17-4 PH		
Coolant	Water Soluble			Water Soluble			Water Soluble			Water Soluble			Water Soluble			Water Soluble		
Cutting Speed (SFM)	115-180			260-525			260-525			200-400			115-330			115-330		
Thread Size	Speed (RPM)	Feed (IPM)	Feed (IPT)	Speed (RPM)	Feed (IPM)	Feed (IPT)	Speed (RPM)	Feed (IPM)	Feed (IPT)	Speed (RPM)	Feed (IPM)	Feed (IPT)	Speed (RPM)	Feed (IPM)	Feed (IPT)	Speed (RPM)	Feed (IPM)	Feed (IPT)
M3x0.5	5968	1.89	0.0004	10610	3.35	0.0004	10610	3.35	0.0004	7958	2.52	0.0004	5968	1.89	0.0004	5968	1.89	0.0004
M4x0.7	4621	2.44	0.0006	8214	4.37	0.0006	8214	4.37	0.0006	6161	3.27	0.0006	4621	2.44	0.0006	4621	2.44	0.0006
No. 8-32	4621	1.85	0.0004	8214	3.35	0.0004	8214	3.35	0.0004	6161	2.52	0.0004	4621	1.85	0.0004	4621	1.85	0.0004
No. 10-32	4621	2.65	0.0004	8214	4.70	0.0004	8214	4.70	0.0004	6161	3.53	0.0004	4621	2.65	0.0004	4621	2.65	0.0004
No. 10-24	3871	2.13	0.0006	6882	3.78	0.0006	6882	3.78	0.0006	5162	2.83	0.0006	3871	2.13	0.0006	3871	2.13	0.0006
M5x0.8	3581	1.93	0.0007	6366	3.43	0.0007	6366	3.43	0.0007	4775	2.56	0.0007	3581	1.93	0.0007	3581	1.93	0.0007
M6x1.0	3114	2.28	0.0008	5536	4.06	0.0008	5536	4.06	0.0008	4152	3.07	0.0008	3114	2.28	0.0008	3114	2.28	0.0008
1/4-20, 1/4-28	3148	3.50	0.001	5597	6.26	0.001	5597	6.26	0.001	4197	4.69	0.001	3148	3.50	0.001	3148	3.50	0.001
5/16-18, 5/16-24	2513	3.35	0.0012	4468	5.94	0.0012	4468	5.94	0.0012	3351	4.45	0.0012	2513	3.35	0.0012	2513	3.35	0.0012
M8x1.25	2310	2.44	0.0012	4107	4.37	0.0012	4107	4.37	0.0012	3080	3.27	0.0012	2310	2.44	0.0012	2310	2.44	0.0012
3/8-16, 3/8-24	2138	3.50	0.0014	3801	6.22	0.0014	3801	6.22	0.0014	2851	4.65	0.0014	2138	3.50	0.0014	2138	3.50	0.0014
M10x1.5	1910	2.64	0.0014	3395	4.69	0.0014	3395	4.69	0.0014	2546	3.50	0.0014	1910	2.64	0.0014	1910	2.64	0.0014
M12x1.75	1592	2.83	0.0018	2839	5.00	0.0018	2839	5.00	0.0018	2122	3.74	0.0018	1592	2.83	0.0018	1592	2.83	0.0018
1/2-13, 1/2-20	1557	3.03	0.0018	2768	5.39	0.0018	2768	5.39	0.0018	2076	4.06	0.0018	1557	3.03	0.0018	1557	3.03	0.0018

Work Material	K			N									S					
	Cast Iron Ductile Cast Iron			Aluminum			Cu, Brass, Brass Casting Mg, Zn Alloys			Bronze			Nickel Alloy			Titanium		
	G2			6061, 7075			B21, B37, B63			B124, B103, B160			Inconel			Ti-6Al-4V		
	Air Blow			Water Soluble			Water Soluble			Water Soluble			Water Soluble			Water Soluble		
Coolant	Air Blow			Water Soluble			Water Soluble			Water Soluble			Water Soluble			Water Soluble		
Cutting Speed (SFM)	115-330			115-330			115-330			115-250			115-180			115-180		
Thread Size	Speed (RPM)	Feed (IPM)	Feed (IPT)	Speed (RPM)	Feed (IPM)	Feed (IPT)	Speed (RPM)	Feed (IPM)	Feed (IPT)	Speed (RPM)	Feed (IPM)	Feed (IPT)	Speed (RPM)	Feed (IPM)	Feed (IPT)	Speed (RPM)	Feed (IPM)	Feed (IPT)
M3x0.5	7958	2.52	0.0004	10610	3.35	0.0004	7958	2.52	0.0004	5968	2.47	0.0004	4642	1.46	0.0004	5968	1.89	0.0004
M4x0.7	6161	3.27	0.0006	8214	4.37	0.0006	6161	3.27	0.0006	4621	3.05	0.0006	3594	1.93	0.0006	4621	2.44	0.0006
No. 8-32	6161	2.52	0.0004	8214	3.37	0.0004	6161	2.52	0.0004	4621	1.89	0.0004	3594	1.46	0.0004	4621	1.85	0.0004
No. 10-32	6161	3.53	0.0004	8214	4.70	0.0004	6161	3.53	0.0004	4621	2.65	0.0004	3594	2.06	0.0004	4621	2.65	0.0004
No. 10-24	5162	2.83	0.0006	6882	3.82	0.0006	5162	2.87	0.0006	3871	2.15	0.0006	3011	1.65	0.0006	3871	2.13	0.0006
M5x0.8	4775	2.56	0.0007	6366	3.43	0.0007	4775	2.56	0.0007	3581	2.57	0.0007	2785	1.50	0.0007	3581	1.93	0.0007
M6x1.0	4152	3.07	0.0008	5536	4.06	0.0008	4152	3.07	0.0008	3114	2.31	0.0008	2422	1.77	0.0008	3114	2.28	0.0008
1/4-20, 1/4-28	4197	4.69	0.001	5597	6.36	0.001	4197	4.77	0.001	3148	3.58	0.001	2449	2.72	0.001	3148	3.50	0.001
5/16-18, 5/16-24	3351	4.45	0.0012	4468	6.07	0.0012	3351	4.56	0.0012	2513	3.42	0.0012	1955	2.60	0.0012	2513	3.35	0.0012
M8x1.25	3080	3.27	0.0012	4107	4.37	0.0012	3080	3.27	0.0012	2310	2.57	0.0012	1797	1.93	0.0012	2310	2.44	0.0012
3/8-16, 3/8-24	2851	4.65	0.0014	3801	6.30	0.0014	2851	4.73	0.0014	2138	3.54	0.0014	1663	2.72	0.0014	2138	3.50	0.0014
M10x1.5	2546	3.50	0.0014	3395	4.69	0.0014	2546	3.50	0.0014	1910	3.04	0.0014	1485	2.05	0.0014	1910	2.64	0.0014
M12x1.75	2122	3.74	0.0018	2829	5.00	0.0018	2122	3.74	0.0018	1592	3.26	0.0018	1238	2.20	0.0018	1592	2.83	0.0018
1/2-13, 1/2-20	2076	4.06	0.0018	2768	5.50	0.0018	2076	4.13	0.0018	1557	3.09	0.0018	1211	2.36	0.0018	1557	3.03	0.0018

Work Material	H						Other		
	Hardened Steel						Thermosetting Plastic Thermo Plastic		
	40-50 HRC			50-65 HRC					
	Air Blow			Air Blow			Water Soluble		
Coolant	Air Blow			Air Blow			Water Soluble		
Cutting Speed (SFM)	115-215			115-180			115-330		
Thread Size	Speed (RPM)	Feed (IPM)	Feed (IPT)	Speed (RPM)	Feed (IPM)	Feed (IPT)	Speed (RPM)	Feed (IPM)	Feed (IPT)
M3x0.5	5968	1.89	0.0004	5968	1.89	0.0004	7958	2.52	0.0004
M4x0.7	4621	2.44	0.0006	4621	2.44	0.0006	6161	3.27	0.0006
No. 8-32	4621	1.85	0.0004	4621	1.85	0.0004	6161	2.52	0.0004
No. 10-32	4621	2.65	0.0004	4621	2.65	0.0004	6161	3.53	0.0004
No. 10-24	3871	2.13	0.0006	3871	2.13	0.0006	5162	2.83	0.0006
M5x0.8	3581	1.93	0.0007	3581	1.93	0.0007	4775	2.56	0.0007
M6x1.0	3114	2.28	0.0008	3114	2.28	0.0008	4152	3.07	0.0008
1/4-20, 1/4-28	3148	3.50	0.001	3148	3.50	0.001	4197	4.69	0.001
5/16-18, 5/16-24	2513	3.35	0.0012	2513	3.35	0.0012	3351	4.45	0.0012
M8x1.25	2310	2.44	0.0012	2310	2.44	0.0012	3080	3.27	0.0012
3/8-16, 3/8-24	2138	3.50	0.0014	2138	3.50	0.0014	2851	4.65	0.0014
M10x1.5	1910	2.64	0.0014	1910	2.64	0.0014	2546	3.50	0.0014
M12x1.75	1592	2.83	0.0018	1592	2.83	0.0018	2122	3.74	0.0018
1/2-13, 1/2-20	1557	3.03	0.0018	1557	3.03	0.0018	2076	4.06	0.0018



Formula

$$V_f = \frac{f_z \times z \times n \times (D_m - D_c)}{D_m}$$

V_f : IPM (Table Feed)

f_z : IPT

z : # of Flutes

n : Speed (RPM)

Thread Size

D_m = Actual path for cutting edge

D_c = Tool Dia.

1. Tool is left hand cutting - program spindle for counter clockwise rotation.
2. Please use the recommended coolant type for each material.
3. Table feed in IPM is tool path feed, this is the feed that should be used in your program.
4. Feed per Tooth will be the actual cutting edge feed, use these values when programming in ThreadPro.
5. Table values are nominal cutting parameters, please adjust based on results from cutting, setup, workholding, etc.