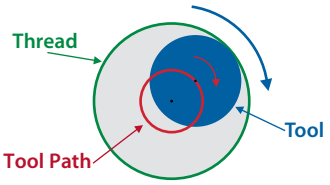
List 16642 - A Brand AT-2 R-SPEC
List 16647 - A Brand AT-2 R-SPEC

	N														
Work Material	**Copper**			**Brass** B21, B36			**Brass Casting** B62			**Aluminum Alloy Casting**			**Aluminum** 6061, 7075		
Coolant	**Water Soluble**			**Water Soluble**			**Water Soluble**			**Water Soluble**			**Water Soluble**		
Cutting Speed (SFM)	**330-985**			**330-985**			**330-985**			**330-985**			**330-985**		
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)
No. 4-40	15188	9.28	0.00118	15188	9.28	0.00118	15188	9.28	0.00118	15188	92.81	0.0118	15188	9.28	0.00118
M3x0.5	13263	6.26	0.00118	13263	6.26	0.00118	13263	6.26	0.00118	13263	62.68	0.0118	13263	6.26	0.00118
No. 6-32	15280	9.93	0.00118	15280	9.93	0.00118	15280	9.93	0.00118	15280	99.30	0.0118	15280	9.93	0.00118
M4x0.7	14375	7.64	0.00118	14375	7.64	0.00118	14375	7.64	0.00118	14375	76.42	0.0118	14375	7.64	0.00118
No. 8-32	14090	8.52	0.00118	14090	8.52	0.00118	14090	8.52	0.00118	14090	85.16	0.0118	14090	8.52	0.00118
No. 10-24, No. 10-32	17164	9.38	0.00118	17164	9.38	0.00118	17164	9.38	0.00118	17164	93.80	0.0118	17164	9.38	0.00118
M5x0.8	15915	10.04	0.00157	15915	10.04	0.00157	15915	10.04	0.00157	15915	75.20	0.0118	15915	10.04	0.00157
M6x1.0	15224	11.18	0.00157	15224	11.18	0.00157	15224	11.18	0.00157	15224	111.89	0.0157	15224	11.18	0.00157
1/4-20, 1/4-28	15408	13.74	0.00157	15408	13.74	0.00157	15408	13.74	0.00157	15408	137.40	0.0157	15408	13.74	0.00157
5/16-18, 5/16-24	12313	10.95	0.00157	12313	10.95	0.00157	12313	10.95	0.00157	12313	109.49	0.0157	12313	10.95	0.00157
M8x1.25	12322	10.91	0.00197	12322	10.91	0.00197	12322	10.91	0.00197	12322	87.32	0.0157	12322	10.91	0.00197
3/8-16, 3/8-24	11402	13.30	0.00197	11402	13.30	0.00197	11402	13.30	0.00197	11402	132.98	0.0197	11402	13.30	0.00197
M10x1.5	10186	10.04	0.00197	10186	10.04	0.00197	10186	10.04	0.00197	10186	80.20	0.0157	10186	10.04	0.00197
M12x1.75	8488	8.35	0.00197	8488	8.35	0.00197	8488	8.35	0.00197	8488	66.85	0.0157	8488	8.35	0.00197
1/2-13, 1/2-20	8315	9.04	0.00197	8315	9.04	0.00197	8315	9.04	0.00197	8315	90.42	0.0197	8315	9.04	0.00197

	N					
Work Material	**Magnesium Alloy**			**Zinc Alloy**		
Coolant	**Water Soluble**			**Water Soluble**		
Cutting Speed (SFM)	**330-985**			**330-985**		
Thread Size	**Speed** (RPM)	**Feed** (IPM)	**Feed** (IPT)	**Speed** (RPM)	**Feed** (IPM)	**Feed** (IPT)
No. 4-40	15188	9.28	0.00118	15188	9.28	0.00118
M3x0.5	13263	6.26	0.00118	13263	6.26	0.00118
No. 6-32	15280	9.93	0.00118	15280	9.93	0.00118
M4x0.7	14375	7.64	0.00118	14375	7.64	0.00118
No. 8-32	14090	8.52	0.00118	14090	8.52	0.00118
No. 10-24, No. 10-32	17164	9.38	0.00118	17164	9.38	0.00118
M5x0.8	15915	10.04	0.00157	15915	10.04	0.00157
M6x1.0	15224	11.18	0.00157	15224	11.18	0.00157
1/4-20, 1/4-28	15408	13.74	0.00157	15408	13.74	0.00157
5/16-18, 5/16-24	12313	10.95	0.00157	12313	10.95	0.00157
M8x1.25	12322	10.91	0.00197	12322	10.91	0.00197
3/8-16, 3/8-24	11402	13.30	0.00197	11402	13.30	0.00197
M10x1.5	10186	10.04	0.00197	10186	10.04	0.00197
M12x1.75	8488	8.35	0.00197	8488	8.35	0.00197
1/2-13, 1/2-20	8315	9.04	0.00197	8315	9.04	0.00197

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. When machining magnesium, please refer to the coolant oil manufacturer's specification for recommended oil. Please also properly dispose of the cutting chips to prevent fire hazards.
6. Please use water soluble coolant unless there is pre hole made by casting or drilling.



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.