



Thread Injector High Performance Threadmills Technical Information

- RedLine Thread Injector High Performance Threadmills are geared for top performance in a variety of different materials
- Designed to cut internal and external threads for greater versatility.
- With our free cutting geometry and AlTiN coating, you can count on RedLine threadmills to give you high performance, and long tool life at an extremely attractive price.
- Thread Injector High Performance Threadmills found on pages 342, 344-346 & 348.

Threadmills Speeds & Feeds

Material	Grades	SFM	Threadmill Diameter (IPT)								
			1/16 (.0625)	1/8 (.1250)	3/16 (.1875)	1/4 (.2500)	5/16 (.3125)	3/8 (.3750)	1/2 (.5000)	5/8 (.6250)	3/4 (.7500)
P - Steels											
High Strength Tool Steel	A2, D2, P20, H11, H13, S2, O1	250-400	.00015-.00030	.00030-.00060	.00050-.00100	.00080-.00150	.00100-.00200	.00150-.00250	.00200-.00300	.00300-.00400	.00350-.00500
Low Carbon	A36, 12L14, 12L15, 1005, 1018, 1020, 1108-1119, 1213-1215, 1513-1518, 4012, 5015, 9310	350-500	.00020-.00040	.00050-.00100	.00100-.00150	.00150-.00250	.00200-.00300	.00300-.00450	.00350-.00550	.00500-.00700	.00600-.00800
Medium Carbon	1040-1095, 1140-1151, 1330-1345, 1520-1572, 4023-4063, 4120-4161, 4330-4340, 4620-4640, 8620-8660, 8740-8750, 6150, 51000, 52100	300-450	.00020-.00040	.00050-.00100	.00100-.00150	.00150-.00250	.00200-.00300	.00300-.00450	.00350-.00550	.00500-.00700	.00600-.00800
M - Stainless Steels											
Austenitic	301-304L, 310, 316L, 321, 347	100-250	.00015-.00025	.00025-.00055	.00050-.00100	.00080-.00150	.00100-.00200	.00150-.00250	.00200-.00300	.00300-.00400	.00350-.00500
Martensitic	403, 410, 416, 420, 430, 431, 440	150-250	.00020-.00030	.00040-.00080	.00060-.00100	.00100-.00150	.00150-.00200	.00150-.00300	.00200-.00350	.00300-.00400	.00300-.00400
Precipitation Hardening	12/8, 15/5, 17/4, AM-350/355/363, PH13-8MO, PH14-8/MO	100-250	.00015-.00025	.00025-.00055	.00050-.00100	.00080-.00150	.00100-.00200	.00150-.00250	.00200-.00300	.00300-.00400	.00350-.00500
K - Cast Irons											
Ductile	A536, J434, 60-40-18	200-300	.00025-.00035	.00030-.00060	.00050-.00100	.00080-.00150	.00100-.00200	.00150-.00250	.00200-.00300	.00300-.00400	.00300-.00500
Gray	A48, A436, A319, Class 20, G4000	250-350	.00025-.00035	.00040-.00080	.00070-.00130	.00070-.00130	.00150-.00200	.00200-.00300	.00200-.00400	.00300-.00500	.00400-.00600
Malleable	A220, A602, J158	200-300	.00025-.00035	.00030-.00060	.00050-.00100	.00080-.00150	.00100-.00200	.00150-.00250	.00200-.00300	.00300-.00400	.00300-.00500
N - Non-Ferrous											
Aluminum Alloys	2014, 2024, 6061, 7075	800-1400	.00020-.00040	.00050-.00100	.00100-.00150	.00150-.00250	.00200-.00300	.00300-.00450	.00350-.00550	.00500-.00700	.00600-.01000
Aluminum High Silicon	A380, A390	475-750	.00015-.00022	.00035-.00040	.00075-.00080	.00100-.00200	.00150-.00250	.00180-.00280	.00200-.00300	.00280-.00310	.00350-.00500
Brass/Bronze	Aluminum Bronze, Low Silicon Bronze	550-800	.00020-.00050	.00050-.00100	.00100-.00150	.00150-.00250	.00200-.00300	.00300-.00450	.00350-.00550	.00500-.00700	.00600-.01000
Composites	G-10, Fiberglass, Graphite, Graphite Epoxy, Plastics	800-1400	.00030-.00050	.00050-.00100	.00100-.00150	.00150-.00250	.00200-.00300	.00300-.00450	.00350-.00550	.00500-.00700	.00600-.01000
Copper		450-1000	.00025-.00035	.00030-.00060	.00050-.00100	.00080-.00150	.00100-.00200	.00150-.00250	.00200-.00300	.00300-.00400	.00350-.00500
Magnesium		800-1400	.00030-.00050	.00050-.00100	.00100-.00150	.00150-.00250	.00200-.00300	.00300-.00450	.00350-.00550	.00500-.00700	.00600-.01000
S - High Temp Alloys											
Cobalt Base	Stellite, HS-21, Haynes 25/188, X40, L605	50-90	.00015-.00025	.00020-.00050	.00030-.00050	.00040-.00060	.00060-.00090	.00080-.00150	.00100-.00200	.00140-.00280	.00180-.00300
Iron Base	Incoloy 800-802, Multimet N-155, Timkin 16-25-6, Carpenter 22-b3	50-90	.00015-.00025	.00020-.00050	.00030-.00050	.00040-.00060	.00060-.00090	.00080-.00150	.00100-.00200	.00140-.00280	.00180-.00300
Nickel Base	Inconel 625/718, Inco 700, 713C, 718, Monel 400-401, 404, K401, Rene, Rene 41 & 95 Hastelloy, Waspoloy, Udimet 500 & 700	60-100	.00020-.00030	.00030-.00060	.00050-.00100	.00080-.00150	.00100-.00200	.00150-.00250	.00150-.00250	.00200-.00300	.00250-.00400
Titanium	Commercially Pure, 6Al-4V, ASTM 1/2/3, 6Al-25N-4Zr-2Mo-Si, Ti-8Al-1Mo, Ti-8Al-4Mo	80-150	.00020-.00050	.00030-.00060	.00050-.00100	.00080-.00150	.00100-.00200	.00150-.00250	.00150-.00250	.00250-.00350	.00300-.00450

NOTE: Speeds and Feeds listed are estimated and will vary by application.

Threadmill Calculation Formulas

Feedrate Adjustment	$\frac{(\text{Thread Major Diameter}) - (\text{Threadmill Diameter})}{(\text{Thread Major Diameter})} \times \text{Linear Feedrate}$
RPM	$\frac{3.8}{(\text{Threadmill Diameter})} \times \text{SFM}$
Linear IPM	$(\text{Inches per Tooth}) \times (\text{Number of Flutes}) \times \text{RPM}$