

## UN Thread



AlTiN Coated

### UN Thread Internal & External

Size & Pitch	Cutting $\phi$	Length of Cut	OAL	# of Flutes	Shank $\phi$	AlTiN Coated Part #
2-56	.065	.125	2	3	1/8	RM20099
4-40	.085	.180	2	3	1/8	RM20100
6-32	.100	.218	2	3	1/8	RM20101
8-32	.115	.250	2	3	1/8	RM20103
8-36	.115	.250	2	3	1/8	RM20105
10-24	.120	.312	2	3	3/16	RM20107
10-32	.120	.312	2	3	3/16	RM20109
1/4-20	.180	.500	2-1/2	3	3/16	RM20111
1/4-28	.180	.500	2-1/2	3	3/16	RM20113
5/16-18	.240	.625	2-1/2	3	1/4	RM20115
5/16-24	.240	.625	2-1/2	3	1/4	RM20117
3/8-16	.290	.750	3	4	5/16	RM20119
3/8-24	.290	.750	3	4	5/16	RM20121
7/16-14	.340	.875	3	4	3/8	RM20123
7/16-20	.340	.875	3	4	3/8	RM20125
1/2-13	.350	.875	3-1/2	4	3/8	RM20127
1/2-20	.350	.875	3-1/2	4	3/8	RM20129
9/16-12	.370	.875	3-1/2	4	1/2	RM20131
9/16-18	.370	.875	3-1/2	4	1/2	RM20133
5/8-11	.470	1.250	3-1/2	5	1/2	RM20135
5/8-18	.470	1.250	3-1/2	5	1/2	RM20137
3/4-10	.495	1.250	3-1/2	5	1/2	RM20139
3/4-16	.495	1.250	3-1/2	5	1/2	RM20141
7/8-9	.620	1.250	3-1/2	5	5/8	RM20143
7/8-14	.620	1.250	3-1/2	5	5/8	RM20145
1-8	.620	1.375	4	5	3/4	RM20147
1-12	.620	1.375	4	5	3/4	RM20149

Carbide Threadmills



Speeds & Feeds page 353.

Tolerances	Diameter	Shank
All Sizes	+0.000, -0.002	h6



AITiN Coated

### UN Thread Internal & External End or Side Coolant

Tool Size	Cutting ø	Length of Cut	OAL	# of Flutes	Shank ø	AITiN Coated	
						End Coolant Part #	Side Coolant Part #
1/4-20	.180	.500	2-1/2	3	3/16	RM20111EC	-
1/4-20	.180	.500	2-1/2	4	3/16	-	RM20111SC
1/4-28	.180	.500	2-1/2	3	3/16	RM20113EC	-
1/4-28	.180	.500	2-1/2	4	3/16	-	RM20113SC
5/16-18	.240	.625	2-1/2	3	1/4	RM20115EC	-
5/16-18	.240	.625	2-1/2	4	1/4	-	RM20115SC
5/16-24	.240	.625	2-1/2	3	1/4	RM20117EC	-
5/16-24	.240	.625	2-1/2	4	1/4	-	RM20117SC
3/8-16	.290	.750	3	4	5/16	RM20119EC	RM20119SC
3/8-24	.290	.750	3	4	5/16	RM20121EC	RM20121SC
7/16-14	.340	.875	3	4	3/8	RM20123EC	RM20123SC
7/16-20	.340	.875	3	4	3/8	RM20125EC	RM20125SC
1/2-13	.350	.875	3-1/2	4	3/8	RM20127EC	RM20127SC
9/16-12	.370	.875	3-1/2	4	1/2	RM20131EC	RM20131SC
9/16-18	.370	.875	3-1/2	4	1/2	RM20133EC	RM20133SC
5/8-11	.470	1.250	3-1/2	5	1/2	RM20135EC	-
5/8-11	.470	1.250	3-1/2	4	1/2	-	RM20135SC
5/8-18	.470	1.250	3-1/2	5	1/2	RM20137EC	-
5/8-18	.470	1.250	3-1/2	4	1/2	-	RM20137SC
3/4-10	.495	1.250	3-1/2	5	1/2	RM20139EC	-
3/4-10	.495	1.250	3-1/2	4	1/2	-	RM20139SC
3/4-12	.495	1.250	3-1/2	5	1/2	RM20140EC	-
3/4-12	.495	1.250	3-1/2	4	1/2	-	RM20140SC
3/4-16	.495	1.250	3-1/2	5	1/2	RM20141EC	-
3/4-16	.495	1.250	3-1/2	4	1/2	-	RM20141SC
7/8-9	.495	1.250	3-1/2	5	1/2	RM20143EC	-
7/8-9	.495	1.250	3-1/2	4	1/2	-	RM20143SC
7/8-14	.495	1.250	3-1/2	5	1/2	RM20145EC	-
7/8-14	.495	1.250	3-1/2	4	1/2	-	RM20145SC
1-8	.620	1.375	4	5	3/4	RM20147EC	-
1-8	.620	1.375	4	4	3/4	-	RM20147SC
1-12	.620	1.375	4	5	3/4	RM20149EC	-
1-12	.620	1.375	4	4	3/4	-	RM20149SC

Note: Threadmills with End Coolant have one hole, threadmills with Side Coolant have a hole for each Flute.

Tolerances	Diameter	Shank
All Sizes	+0.000, -0.0001	+0.000, -0.0005



Speeds & Feeds page 354.

## UN Thread



AlTiN Coated

### UN Thread Internal & External Extended Length

Size & Pitch	Cutting $\phi$	Length of Cut	Length Below Shank	OAL	# of Flutes	Shank $\phi$	AlTiN Coated Part #
4-40	.085	.175	.224	2	3	1/8	RM40000
4-40	.085	.175	.336	2	3	1/8	RM41000
6-32	.095	.218	.250	2	3	1/8	RM40001
6-32	.095	.218	.375	2	3	1/8	RM41001
8-32	.115	.250	.328	2	3	1/8	RM40002
8-32	.115	.250	.500	2	3	1/8	RM41002
8-36	.115	.250	.328	2	3	1/8	RM40003
8-36	.115	.250	.500	2	3	1/8	RM41003
10-24	.120	.312	.500	2	3	3/16	RM40004
10-24	.120	.312	.625	2	3	3/16	RM41004
10-32	.120	.312	.500	2	3	3/16	RM40005
10-32	.120	.312	.625	2	3	3/16	RM41005
1/4-20	.180	.500	.650	2-1/2	3	3/16	RM40006
1/4-20	.180	.500	.750	2-1/2	3	3/16	RM41006
1/4-28	.180	.500	.650	2-1/2	3	3/16	RM40007
1/4-28	.180	.500	.750	2-1/2	3	3/16	RM41007
5/16-18	.240	.625	.833	2-1/2	3	1/4	RM40008
5/16-18	.240	.625	1.000	2-1/2	3	1/4	RM41008
5/16-24	.240	.625	.833	2-1/2	3	1/4	RM40009
5/16-24	.240	.625	1.000	2-1/2	3	1/4	RM41009
3/8-16	.290	.750	.875	3	4	5/16	RM40010
3/8-16	.290	.750	1.000	3	4	5/16	RM41010
3/8-24	.290	.750	.875	3	4	5/16	RM40011
3/8-24	.290	.750	1.000	3	4	5/16	RM41011
7/16-14	.340	.875	1.000	3	4	3/8	RM40012
7/16-14	.340	.875	1.300	3	4	3/8	RM41012
7/16-20	.340	.875	1.000	3	4	3/8	RM40013
7/16-20	.340	.875	1.300	3	4	3/8	RM41013
1/2-13	.350	.875	1.000	3-1/2	4	3/8	RM40014
1/2-13	.350	.875	1.300	3-1/2	4	3/8	RM41014
1/2-20	.350	.875	1.000	3-1/2	4	3/8	RM40015
1/2-20	.350	.875	1.300	3-1/2	4	3/8	RM41015
9/16-12	.370	.875	1.125	3-1/2	4	1/2	RM40016
9/16-12	.370	.875	1.500	3-1/2	4	1/2	RM41016
9/16-18	.370	.875	1.125	3-1/2	4	1/2	RM40017
9/16-18	.370	.875	1.500	3-1/2	4	1/2	RM41017
5/8-11	.470	1.250	1.500	3-1/2	5	1/2	RM40018
5/8-11	.470	1.250	1.900	3-1/2	5	1/2	RM41018
5/8-18	.470	1.250	1.500	3-1/2	5	1/2	RM40019



Speeds & Feeds page 353.

Tolerances	Diameter	Shank
All Sizes	+0.000, -0.0001	+0.000, -0.0005



AITiN Coated

**UN Thread Internal & External  
Extended Length**

Size & Pitch	Cutting ø	Length of Cut	Length Below Shank	OAL	# of Flutes	Shank ø	AITiN Coated Part #
5/8-18	.470	1.250	1.900	3-1/2	5	1/2	RM41019
3/4-10	.495	1.250	1.500	3-1/2	5	1/2	RM40020
3/4-10	.495	1.250	1.900	3-1/2	5	1/2	RM41020
3/4-12	.495	1.250	1.500	3-1/2	5	1/2	RM40021
3/4-12	.495	1.250	1.900	3-1/2	5	1/2	RM41021
3/4-16	.495	1.250	1.500	3-1/2	5	1/2	RM40022
3/4-16	.495	1.250	1.900	3-1/2	5	1/2	RM41022
7/8-9	.495	1.250	1.750	4	5	1/2	RM40023
7/8-9	.495	1.250	2.500	4	5	1/2	RM41023
7/8-14	.495	1.250	1.750	4	5	1/2	RM40024
7/8-14	.495	1.250	2.500	4	5	1/2	RM41024
1-8	.620	1.375	2.000	4-1/2	5	3/4	RM40025
1-8	.620	1.375	2.500	4-1/2	5	3/4	RM41025
1-12	.620	1.375	2.000	4-1/2	5	3/4	RM40026
1-12	.620	1.375	2.500	4-1/2	5	3/4	RM41026

Carbide Threadmills

Tolerances	Diameter	Shank
All Sizes	+0.000, -0.0001	+0.000, -0.0005



Speeds & Feeds page 353.

## NPT & NPTF Thread



AITiN Coated

### NPT Pipe Thread Internal & External

Size & Pitch	Cutting $\phi$	Length of Cut	OAL	# of Flutes	Shank $\phi$	AITiN Coated Part #
<b>1/16-27</b>	.245	.437	2-1/2	3	1/4	<a href="#">RM20200</a>
<b>1/8-27</b>	.310	.437	2-1/2	4	5/16	<a href="#">RM20202</a>
<b>1/4-18</b>	.370	.625	3	4	3/8	<a href="#">RM20205</a>
<b>3/8-18</b>	.370	.625	3	4	3/8	<a href="#">RM20207</a>
<b>1/2-14</b>	.495	.875	3-1/2	4	1/2	<a href="#">RM20208</a>
<b>3/4-14</b>	.495	.875	3-1/2	4	1/2	<a href="#">RM20210</a>
<b>1-11-1/2</b>	.620	1.125	4	5	3/4	<a href="#">RM20212</a>



AITiN Coated

### NPTF Pipe Thread Internal & External

Size & Pitch	Cutting $\phi$	Length of Cut	OAL	# of Flutes	Shank $\phi$	AITiN Coated Part #
<b>1/16-27</b>	.245	.437	2-1/2	3	1/4	<a href="#">RM20301</a>
<b>1/8-27</b>	.310	.437	2-1/2	4	5/16	<a href="#">RM20303</a>
<b>1/4-18</b>	.370	.625	3	4	3/8	<a href="#">RM20306</a>
<b>3/8-18</b>	.370	.625	3	4	3/8	<a href="#">RM20308</a>
<b>1/2-14</b>	.495	.875	3-1/2	4	1/2	<a href="#">RM20309</a>
<b>3/4-14</b>	.495	.875	3-1/2	4	1/2	<a href="#">RM20311</a>
<b>1-11-1/2</b>	.620	1.125	4	5	3/4	<a href="#">RM20313</a>

Carbide Threadmills



Speeds & Feeds page 353.

Tolerances	Diameter	Shank
All Sizes	+0.000, -0.0001	+0.000, -0.0005



AITiN Coated

**NPT, NPTF Pipe Thread Internal & External  
End or Side Coolant**

Size & Pitch	Cutting ø	Length of Cut	OAL	# of Flutes	Shank ø	AITiN Coated	
						End Coolant Part #	Side Coolant Part #
1/16-27	.245	.437	2-1/2	3	1/4	RM20200EC	
1/16-27	.245	.437	2-1/2	4	1/4	-	RM20200SC
1/8-27	.310	.437	2-1/2	4	5/16	RM20202EC	-
1/8-27	.310	.437	2-1/2	4	3/8	-	RM20202SC
1/4 & 3/8-18	.305	.625	3	4	3/8	RM20207EC	RM20207SC
1/2 & 3/4-14	.495	.875	3-1/2	4	1/2	RM20210EC	RM20210SC
1-11.5	.620	1.125	4	5	3/4	RM20212EC	-
1-11.5	.620	1.125	4	4	3/4	-	RM20212SC

Tolerances	Diameter	Shank
All Sizes	+0.000, -0.0001	+0.000, -0.0005



Speeds & Feeds page 354.

## Metric Thread



AlTiN Coated

### Metric Thread Internal & External

Size & Pitch	Cutting $\phi$	Length of Cut	OAL	# of Flutes	Shank $\phi$	AlTiN Coated Part #
<b>M4 X .70</b>	.115	.250	2	3	1/8	<a href="#">RM20420</a>
<b>M4.5 X .75</b>	.120	.250	2	3	1/8	<a href="#">RM20422</a>
<b>M5 X .80</b>	.120	.312	2	3	3/16	<a href="#">RM20424</a>
<b>M6 X 1.00</b>	.170	.500	2-1/2	3	3/16	<a href="#">RM20426</a>
<b>M8 X .75</b>	.235	.625	2-1/2	3	1/4	<a href="#">RM20428</a>
<b>M8 X 1.00</b>	.235	.625	2-1/2	3	1/4	<a href="#">RM20430</a>
<b>M8 X 1.25</b>	.235	.625	2-1/2	3	1/4	<a href="#">RM20432</a>
<b>M10 X 1.25</b>	.300	.750	3	4	5/16	<a href="#">RM20434</a>
<b>M10 X 1.50</b>	.300	.750	3	4	5/16	<a href="#">RM20436</a>
<b>M12 X 1.00</b>	.360	.875	3-1/2	4	3/8	<a href="#">RM20438</a>
<b>M12 X 1.25</b>	.360	.875	3-1/2	4	3/8	<a href="#">RM20440</a>
<b>M12 X 1.75</b>	.360	.875	3-1/2	4	3/8	<a href="#">RM20442</a>
<b>M14 X 1.50</b>	.360	.875	3-1/2	4	3/8	<a href="#">RM20444</a>
<b>M16 X 2.00</b>	.470	1.250	3-1/2	5	1/2	<a href="#">RM20446</a>
<b>M18 X 2.50</b>	.470	1.250	3-1/2	5	1/2	<a href="#">RM20448</a>
<b>M20 X 3.00</b>	.470	1.250	3-1/2	5	5/8	<a href="#">RM20450</a>



Speeds & Feeds page 353.

Tolerances	Diameter	Shank
.0000-.1181	+0.000, -0.002	h6



AITiN Coated

**Metric Thread Internal & External  
End or Side Coolant**

Tool Size	Cutting ø	Length of Cut	OAL	# of Flutes	Shank ø	AITiN Coated	
						End Coolant Part #	Side Coolant Part #
M5 X .80	.120	.312	2	3	3/16	RM20424EC	-
M5 X .80	.120	.312	2	4	3/16	-	RM20424SC
M6 X 1.00	.170	.500	2-1/2	3	3/16	RM20426EC	-
M6 X 1.00	.170	.500	2-1/2	4	3/16	-	RM20426SC
M8 X .75	.235	.625	2-1/2	3	1/4	RM20428EC	-
M8 X .75	.235	.625	2-1/2	4	1/4	-	RM20428SC
M8 X 1.00	.235	.625	2-1/2	3	1/4	RM20430EC	-
M8 X 1.00	.235	.625	2-1/2	4	1/4	-	RM20430SC
M8 X 1.25	.235	.625	2-1/2	3	1/4	RM20432EC	-
M8 X 1.25	.235	.625	2-1/2	4	1/4	-	RM20432SC
M10 X 1.25	.300	.750	3	4	5/16	RM20434EC	RM20434SC
M10 X 1.50	.300	.750	3	4	5/16	RM20436EC	RM20436SC
M12 X 1.00	.360	.875	3-1/2	4	3/8	RM20438EC	RM20438SC
M12 X 1.25	.360	.875	3-1/2	4	3/8	RM20440EC	RM20440SC
M12 X 1.75	.360	.875	3-1/2	4	3/8	RM20442EC	RM20442SC
M14 X 1.50	.360	.875	3-1/2	4	3/8	RM20444EC	RM20444SC
M16 X 2.00	.470	1.250	3-1/2	5	1/2	RM20446EC	-
M16 X 2.00	.470	1.250	3-1/2	4	1/2	-	RM20446SC
M18 X 2.50	.470	1.250	3-1/2	5	1/2	RM20448EC	-
M18 X 2.50	.470	1.250	3-1/2	4	1/2	-	RM20448SC
M20 X 3.00	.470	1.250	3-1/2	5	1/2	RM20450EC	-
M20 X 3.00	.470	1.250	3-1/2	4	1/2	-	RM20450SC

Note: Threadmills with End Coolant have one hole, threadmills with Side Coolant have a hole for each Flute.

Tolerances	Diameter	Shank
All Sizes	+0.000, -0.0001	+0.000, -0.0005



Speeds & Feeds page 354.





AITiN Coated

### Single Profile Threadmills

Size & Pitch	Cutting $\phi$	Length Below Shank	Undercut $\phi$	OAL	# of Flutes	Shank $\phi$	STI Sizes	AITiN Coated Part #
0-80	.045	.250	.030	1-1/2	1	1/8	—	RM1000
2-56, 2-64, M2.5 x .45	.064	.250	.030	1-1/2	3	1/8	—	RM1001
4-40, 4-48	.081	.250	.035	1-1/2	3	1/8	STI 2-56	RM1002
5-40, 5-44, M3 X .5	.095	.250	.050	1-1/2	3	1/8	—	RM1003
6-32, 6-40	.095	.375	.050	1-1/2	3	1/8	STI 4-40	RM1004
8-32, 8-36, M4 X .7	.115	.375	.070	1-1/2	3	1/8	STI 4-40, STI 4-48, STI 6-32	RM1005
M5 X .8	.140	.375	.100	2	3	3/16	STI 6-32, STI 6-40	RM1006
—	.165	.500	.100	2	3	3/16	STI 8-32, STI 8-36	RM1007
10-24, 10-32	.130	.500	.100	2	3	3/16	STI 10-24, STI 10-32	RM1008
1/4-20, 1/4-28, M6 X 1.0	.180	.600	.100	2	3	3/16	STI 1/4-20, STI 1/4-28	RM1009
18-56	.240	1.000	.115	2-1/2	4	1/4	—	RM1010
12-32	.300	1.000	.230	3-1/2	4	3/8	—	RM1011
11-32	.490	1.250	.300	3-1/2	5	1/2	—	RM1012
4-12	.720	2.000	.420	4	6	3/4	—	RM1013

Carbide Threadmills



Speeds & Feeds page 355.

Tolerances	Diameter	Shank
All Sizes	+0.000, -0.0001	+0.000, -0.0005



AICrN Coated

### 3 Form Threadmills

Size & Pitch	Cutting $\phi$	Length of Cut	Length Below Shank	Undercut $\phi$	OAL	# of Flutes	Shank $\phi$	AICrN Coated Part #
1-72	.057	.042	.154	.037	2-1/2	3	1/4	RM3000
1-72	.057	.042	.240	.047	2-1/2	3	1/4	RM3001
1-64, 2-64	.057	.047	.165	.035	2-1/2	3	1/4	RM3002
2-56, 3-56	.065	.054	.197	.040	2-1/2	3	1/4	RM3003
2-56, 3-56	.065	.054	.260	.039	2-1/2	3	1/4	RM3004
3-48, 4-48	.075	.063	.236	.045	2-1/2	3	1/4	RM3005
4-40, 6-40	.085	.075	.236	.050	2-1/2	3	1/4	RM3006
4-40, 6-40	.085	.075	.310	.049	2-1/2	3	1/4	RM3007
8-36	.115	.083	.343	.075	2-1/2	3	1/4	RM3008
6-32, 8-32, 10-32	.100	.094	.292	.056	2-1/2	3	1/4	RM3009
8-32, 10-32	.120	.094	.394	.098	2-1/2	3	1/4	RM3010
6-32, 8-32, 10-32	.100	.094	.400	.056	2-1/2	3	1/4	RM3011
8-32, 10-32	.120	.094	.500	.098	2-1/2	3	1/4	RM3012
1/4-28	.180	.107	.520	.130	2-1/2	3	1/4	RM3013
1/4-28	.180	.107	.750	.130	2-1/2	3	1/4	RM3014
10-24, 5/16-24	.130	.125	.400	.100	2-1/2	3	1/4	RM3015
5/16-24	.240	.125	.650	.210	2-1/2	3	1/4	RM3016
5/16-24	.240	.125	.940	.180	2-1/2	3	1/4	RM3017
1/4-20	.185	.150	.530	.115	2-1/2	3	1/4	RM3018
1/4-20	.185	.150	.750	.115	2-1/2	3	1/4	RM3019
7/16-20	.340	.150	.900	.270	3	4	3/8	RM3020
5/16-18	.240	.167	.900	.200	2-1/2	3	1/4	RM3021
3/8-16	.290	.188	.750	.202	3	4	3/8	RM3022
7/16-14	.340	.214	.900	.240	3	4	3/8	RM3023
1/2-13	.350	.231	1.100	.240	3	4	3/8	RM3024
9/16-12	.370	.250	1.250	.250	3-1/2	4	1/2	RM3025
5/8-11	.470	.273	1.350	.340	3-1/2	4	1/2	RM3026
3/4-10	.495	.300	1.600	.360	3-1/2	4	1/2	RM3027

Tolerances	Diameter	Shank
All Sizes	+0.000, -0.0001	+0.000, -0.0005



Speeds & Feeds page 356.

## Metric 3 Form



AlTiN Coated

### Metric 3 Form Threadmills

Size & Pitch	Cutting $\phi$	Length of Cut	Length Below Shank	Undercut $\phi$	OAL	# of Flutes	Shank $\phi$	AlCrN Coated Part #
M1.6 X .35	.047	.041	.140	.027	2-1/2	3	1/8	RM3050
M1.6 X .35	.047	.041	.197	.027	2-1/2	3	1/8	RM3051
M2 X .40	.060	.047	.165	.038	2-1/2	3	1/4	RM3052
M2 X .40	.060	.047	.245	.038	2-1/2	3	1/4	RM3053
M2.2 X .45	.065	.053	.180	.040	2-1/2	3	1/4	RM3054
M2.2 X .45	.075	.053	.275	.050	2-1/2	3	1/4	RM3055
M2.5 X .45	.075	.053	.200	.050	2-1/2	3	1/4	RM3056
M3 X .50	.090	.059	.245	.062	2-1/2	3	1/4	RM3057
M3 X .50	.090	.059	.360	.062	2-1/2	3	1/4	RM3058
M3.5 X .60	.105	.059	.285	.075	2-1/2	3	1/4	RM3059
M4 X .70	.120	.083	.325	.100	2-1/2	3	1/4	RM3060
M4 X .70	.120	.083	.490	.080	2-1/2	3	1/4	RM3061
M5 X .80	.155	.094	.400	.110	2-1/2	3	1/4	RM3062
M5 X .80	.155	.094	.610	.110	2-1/2	3	1/4	RM3063
M6 X 1.00	.185	.118	.500	.130	2-1/2	3	1/4	RM3064
M6 X 1.00	.185	.118	.725	.132	2-1/2	3	1/4	RM3065
M8 X 1.25	.245	.148	.650	.210	2-1/2	3	1/4	RM3066
M8 X 1.25	.245	.148	.970	.175	2-1/2	3	1/4	RM3067
M10 X 1.50	.330	.177	.800	.250	3	4	3/8	RM3068
M12 X 1.75	.360	.207	1.000	.300	3	4	3/8	RM3069
M16 X 2.00	.470	.236	1.400	.360	3-1/2	4	1/2	RM3070
M20 X 2.50	.495	.295	1.700	.350	3-1/2	4	1/2	RM3071

Carbide Threadmills



Speeds & Feeds page 356.

Tolerances	Diameter	Shank
All Sizes	+0.000, -0.0001	+0.000, -0.0005



## 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)	
<b>P - Steels</b>												
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	
<b>M - Stainless Steels</b>												
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	
<b>K - Cast Irons</b>												
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	
<b>N - Non-Ferrous</b>												
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	
<b>S - High Temp Alloys</b>												
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, Waspology, 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

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



## Thread Injector High Performance End or Side Coolant Threadmills Technical Information

- RedLine Thread Injector High Performance Coolant Fed Threadmills are geared for top performance in a variety of different materials
- Coolant Fed Threadmills found on pages 343, 347 & 349.

### End or Side Coolant 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)	
<b>P - Steels</b>												
High Strength Tool Steel	A2, D2, P20, H11, H13, S2, 01	400	.0001	.0001	.0001	.0002	.0004	.0010	.0012	.0015	.0020	
Low Carbon	A36, 12L14, 12L15, 1005, 1018, 1020, 1108-1119, 1213-1215, 1513-1518, 4012, 5015, 9310	600	.0025	.0030	.0030	.0040	.0050	.0050	.0060	.0060	.0060	
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	525-575	.0010	.0003-.0010	.0003-.0030	.0005-.0020	.0006-.0030	.0007-.0030	.0010-.0040	.0015-.0040	.0015-.0040	
<b>M - Stainless Steels</b>												
Austenitic	301-304L, 310, 316L, 321, 347	525	.0008	.0010	.0010	.0015	.0015	.0020	.0030	.0030	.0040	
Martensitic	403, 410, 416, 420, 430, 431, 440	550	.0008	.0010	.0010	.0015	.0015	.0020	.0030	.0030	.0040	
Precipitation Hardening	12/8, 15/5, 17/4, AM-350/355/363, PH13-8MO, PH14-8/MO	300	.0008	.0010	.0010	.0010	.0015	.0015	.0020	.0020	.0020	
<b>K - Cast Irons</b>												
Ductile	A536, J434, 60-40-18	600	.0010	.0010	.0015	.0015	.0020	.0030	.0040	.0040	.0040	
Gray	A48, A436, A319, Class 20, G4000	600	.0010	.0010	.0015	.0015	.0020	.0030	.0040	.0040	.0040	
Malleable	A220, A602, J158	600	.0010	.0010	.0015	.0015	.0020	.0030	.0040	.0040	.0040	
<b>N - Non-Ferrous</b>												
Aluminum Alloys	2014, 2024, 6061, 7075	1700	.0015	.0020	.0020	.0030	.0030	.0040	.0050	.0050	.0050	
Aluminum High Silicon	A380, A390	450	.0004	.0005	.0010	.0015	.0020	.0020	.0025	.0030	.0050	
Brass/Bronze	Aluminum Bronze, Low Silicon Bronze	1700	.0010	.0020	.0020	.0030	.0030	.0040	.0050	.0050	.0050	
Composites	G-10, Fiberglass, Graphite, Graphite Epoxy, Plastics	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Copper		1000	.0004	.0004	.0005	.0006	.0006	.0008	.0010	.0012	.0012	
Magnesium		1000	.0004	.0010	.0010	.0020	.0020	.0020	.0030	.0050	.0050	
<b>S - High Temp Alloys</b>												
Cobalt Base	Stellite, HS-21, Haynes 25/188, X40, L605	150	.0001	.0002	.0004	.0005	.0005	.0007	.0008	.0010	.0012	
Iron Base	Incoloy 800-802, Multmet N-155, Timkin 16-25-6, Carpenter 22-b3	150	.0001	.0002	.0004	.0005	.0005	.0007	.0008	.0010	.0012	
Nickel Base	Inconel 625/718, Inco 700, 713C, 718, Monel 400-401, 404, K401, Rene, Rene 41 & 95 Hastelloy, Waspoloy, Udimet 500 & 700	120	.0005	.0005	.0005	.0010	.0010	.0015	.0020	.0020	.0020	
Titanium	Commercially Pure, 6Al-4V, ASTM 1/2/3, 6Al-25N-4Zr-2Mo-Si, Ti-8Al-1Mo, Ti-8Al-4Mo	100	.0005	.0005	.0005	.0010	.0010	.0015	.0020	.0020	.0020	

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



## Thread Injector High Performance Single Profile Threadmills Technical Information

- RedLine Thread Injector High Performance Single Profile Threadmills are geared for top performance in a variety of different materials
- Single Profile Threadmills found on page 350.



### Single Profile 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)
<b>P - Steels</b>											
High Strength Tool Steel	A2, D2, P20, H11, H13, S2, 01	300	.0001	.0001	.0001	.0002	.0004	.0010	.0012	.0015	.0020
Low Carbon	A36, 12L14, 12L15, 1005, 1018, 1020, 1108-1119, 1213-1215, 1513-1518, 4012, 5015, 9310	450	.0025	.0030	.0030	.0040	.0050	.0050	.0060	.0060	.0060
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	395-430	.0010	.0003-.0010	.0003-.0030	.0005-.0020	.0006-.0030	.0007-.0030	.0010-.0040	.0015-.0040	.0015-.0040
<b>M - Stainless Steels</b>											
Austenitic	301-304L, 310, 316L, 321, 347	395	.0008	.0010	.0010	.0015	.0015	.0020	.0030	.0030	.0040
Martensitic	403, 410, 416, 420, 430, 431, 440	415	.0008	.0010	.0010	.0015	.0015	.0020	.0030	.0030	.0040
Precipitation Hardening	12/8, 15/5, 17/4, AM-350/355/363, PH13-8MO, PH14-8/MO	225	.0008	.0010	.0010	.0010	.0015	.0015	.0020	.0020	.0020
<b>K - Cast Irons</b>											
Ductile	A536, J434, 60-40-18	450	.0010	.0010	.0015	.0015	.0020	.0030	.0040	.0040	.0040
Gray	A48, A436, A319, Class 20, G4000	450	.0010	.0010	.0015	.0015	.0020	.0030	.0040	.0040	.0040
Malleable	A220, A602, J158	450	.0010	.0010	.0015	.0015	.0020	.0030	.0040	.0040	.0040
<b>N - Non-Ferrous</b>											
Aluminum Alloys	2014, 2024, 6061, 7075	1275	.0015	.0020	.0020	.0030	.0030	.0040	.0050	.0050	.0050
Aluminum High Silicon	A380, A390	335	.0004	.0005	.0010	.0015	.0020	.0020	.0025	.0030	.0050
Brass/Bronze	Aluminum Bronze, Low Silicon Bronze	1275	.0010	.0020	.0020	.0030	.0030	.0040	.0050	.0050	.0050
Composites	G-10, Fiberglass, Graphite, Graphite Epoxy, Plastics	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Copper		750	.0004	.0004	.0005	.0006	.0006	.0008	.0010	.0012	.0012
Magnesium		750	.0004	.0010	.0010	.0020	.0020	.0020	.0030	.0050	.0050
<b>S - High Temp Alloys</b>											
Cobalt Base	Stellite, HS-21, Haynes 25/188, X40, L605	115	.0001	.0002	.0004	.0005	.0005	.0007	.0008	.0010	.0012
Iron Base	Incoloy 800-802, Multmet N-155, Timkin 16-25-6, Carpenter 22-b3	115	.0001	.0002	.0004	.0005	.0005	.0007	.0008	.0010	.0012
Nickel Base	Inconel 625/718, Inco 700, 713C, 718, Monel 400-401, 404, K401, Rene, Rene 41 & 95 Hastelloy, Waspoly, Udimet 500 & 700	90	.0005	.0005	.0005	.0010	.0010	.0015	.0020	.0020	.0020
Titanium	Commercially Pure, 6Al-4V, ASTM 1/2/3, 6Al-25N-4Zr-2Mo-Si, Ti-8Al-1Mo, Ti-8Al-4Mo	75	.0005	.0005	.0005	.0010	.0010	.0015	.0020	.0020	.0020

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



## Thread Injector High Performance 3 Form Threadmills Technical Information

- RedLine Thread Injector High Performance 3 Form Threadmills are geared for top performance in a variety of different materials
- 3 Form Threadmills are found on pages 351-352.

### 3 Form Threadmills Speeds & Feeds

Material	Grades	SFM	Threadmill Diameter (IPT)									
			1/16	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	
			(.0625)	(.1250)	(.1875)	(.2500)	(.3125)	(.3750)	(.5000)	(.0625)	(.7500)	
<b>P - Steels</b>												
High Strength Tool Steel	A2, D2, P20, H11, H13, S2, 01	300	.0001	.0001	.0001	.0002	.0004	.0010	.0012	.0015	.0020	
Low Carbon	A36, 12L14, 12L15, 1005, 1018, 1020, 1108-1119, 1213-1215, 1513-1518, 4012, 5015, 9310	450	.0025	.0030	.0030	.0040	.0050	.0050	.0060	.0060	.0060	
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	395-430	.0010	.0003-.0010	.0003-.0030	.0005-.0020	.0006-.0030	.0007-.0030	.0010-.0040	.0015-.0040	.0015-.0040	
<b>M - Stainless Steels</b>												
Austenitic	301-304L, 310, 316L, 321, 347	395	.0008	.0010	.0010	.0015	.0015	.0020	.0030	.0030	.0040	
Martensitic	403, 410, 416, 420, 430, 431, 440	415	.0008	.0010	.0010	.0015	.0015	.0020	.0030	.0030	.0040	
Precipitation Hardening	12/8, 15/5, 17/4, AM-350/355/363, PH13-8MO, PH14-8/MO	225	.0008	.0010	.0010	.0010	.0015	.0015	.0020	.0020	.0020	
<b>K - Cast Irons</b>												
Ductile	A536, J434, 60-40-18	450	.0010	.0010	.0015	.0015	.0020	.0030	.0040	.0040	.0040	
Gray	A48, A436, A319, Class 20, G4000	450	.0010	.0010	.0015	.0015	.0020	.0030	.0040	.0040	.0040	
Malleable	A220, A602, J158	450	.0010	.0010	.0015	.0015	.0020	.0030	.0040	.0040	.0040	
<b>N - Non-Ferrous</b>												
Aluminum Alloys	2014, 2024, 6061, 7075	1275	.0015	.0020	.0020	.0030	.0030	.0040	.0050	.0050	.0050	
Aluminum High Silicon	A380, A390	335	.0004	.0005	.0010	.0015	.0020	.0020	.0025	.0030	.0050	
Brass/Bronze	Aluminum Bronze, Low Silicon Bronze	1275	.0010	.0020	.0020	.0030	.0030	.0040	.0050	.0050	.0050	
Composites	G-10, Fiberglass, Graphite, Graphite Epoxy, Plastics	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Copper		750	.0004	.0004	.0005	.0006	.0006	.0008	.0010	.0012	.0012	
Magnesium		750	.0004	.0010	.0010	.0020	.0020	.0020	.0030	.0050	.0050	
<b>S - High Temp Alloys</b>												
Cobalt Base	Stellite, HS-21, Haynes 25/188, X40, L605	115	.0001	.0002	.0004	.0005	.0005	.0007	.0008	.0010	.0012	
Iron Base	Incoloy 800-802, Multmet N-155, Timkin 16-25-6, Carpenter 22-b3	115	.0001	.0002	.0004	.0005	.0005	.0007	.0008	.0010	.0012	
Nickel Base	Inconel 625/718, Inco 700, 713C, 718, Monel 400-401, 404, K401, Rene, Rene 41 & 95 Hastelloy, Waspoly, Udimet 500 & 700	90	.0005	.0005	.0005	.0010	.0010	.0015	.0020	.0020	.0020	
Titanium	Commercially Pure, 6Al-4V, ASTM 1/2/3, 6Al-25N-4Zr-2Mo-Si, Ti-8Al-1Mo, Ti-8Al-4Mo	75	.0005	.0005	.0005	.0010	.0010	.0015	.0020	.0020	.0020	

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