

Boring Tools Speeds & Feeds

Workpiece Material	Speed (SFM)	Feed (Inches per Revolution)	Depth of Cut	
			Boring	Extreme Boring
Aluminum (2021-6061)	700-1400	.005-.012	.014	.018
Brass	350-400	.001-.003	.011	.012
Bronze	300-400	.001-.002	.011	.012
Copper (101-707, 834-978)	600-800	.003-.005	.014	.016
Cast Iron (Ductile, Gray & Malleable)	250-350	.004-.010	.007	.009
Hastelloy	80-120	.001-.003	.007	.009
Inconel	80-120	.001-.003	.007	.009
Magnesium (AZ, AM, EZ, ZE, HK)	750-1500	.005-.012	.012	.016
Monel	80-120	.001-.003	.007	.009
Nickel (200-230)	100-250	.002-.005	.007	.009
Nylon	700-800	.001-.003	.012	.016
Phenolic	700-800	.001-.003	.012	.016
Plastic - Glass Filled	700-800	.001-.003	.012	.016
Stainless Steel (201-385, 405-446)	100-250	.001-.004	.008	.012
Stainless Steel (15-5PH, 16-6PH, 14-4PH)	300-400	.002-.004	.008	.012
Steel (1005-1029, 1030-1055)	100-300	.003-.007	.014	.016
Steel (1060-1095, 4140-4150, 12L13-12L15)	150-400	.003-.005	.014	.016
Steel (10L45-10L50)	300-500	.004-.006	.014	.016
Steel (41L30-41L50)	200-400	.003-.005	.014	.016
Steel (4140 (35 HRC)	90-125	.001-.004	.007	.008
Steel (8617-8622)	100-300	.002-.004	.006	.007
Steel (D2-D7)	150-250	.001-.010	.005	.006
Steel (H10-H19)	150-250	.003-.007	.005	.006
Steel (M1-M6, A2-A9, 01-07)	150-250	.003-.008	.005	.006
Steel (M-50, 52100)	300-400	.004-.010	.006	.007
Steel (W1, W2)	150-250	.003-.008	.006	.007
Titanium (TI-9Al-6V)	90-250	.001-.003	.008	.011
Teflon	500-600	.003-.006	.012	.016
Waspalloy	80-120	.001-.003	.007	.009

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



Grooving Tools Speeds & Feeds		
Workpiece Material	Speed (SFM)	Feed (Inches per Revolution)
Aluminum (2021-6061)	900-1000	.008
Brass	200-250	.006
Bronze	200-250	.006
Copper (101-707)	150-170	.008
Copper (834-978)	500-600	.008
Cast Iron - Ductile	120-350	.007
Cast Iron - Gray	70-350	.007
Cast Iron - Malleable	75-550	.007
Hastelloy	70-90	.004
Inconel	40-50	.004
Magnesium (AZ, AM, EZ, ZE, HK)	850-1000	.008
Monel	100-150	.004
Nickel (200-230)	200-250	.004
Nylon	350-600	.007
Phenolic	500-600	.007
Plastic - Glass Filled	250-300	.005
Stainless Steel (201-385)	200-280	.005
Stainless Steel (405-446)	250-300	.005
Stainless Steel (15-5PH, 16-6PH, 14-4PH)	100-200	.005
Steel (1005-1029)	250-450	.007
Steel (1030-1055)	110-370	.007
Steel (1060-1095)	90-250	.007
Steel (10L45-10L50)	130-450	.007
Steel (12L13-12L15)	550-600	.007
Steel (4140-4150)	65-400	.007
Steel (4140 (35 HRC))	190-200	.004
Steel (41L30-41L50)	65-350	.007
Steel (8617-8622)	100-400	.007
Steel (A2-A9 , 01-07, W1, W2)	150-250	.006
Steel (D2-D7)	150-200	.006
Steel (H10-H19)	65-250	.006
Steel (M1-M6)	150-200	.006
Steel (M-50, 52100)	60-300	.007
Titanium (TI-9Al-6V)	90-100	.005
Teflon	350-400	.007
Waspalloy	70-100	.004

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



Threading Tools Speeds & Feeds			
Workpiece Material	Speed (SFM)	Feed Infeed per pass 1st Pass	Feed Infeed per pass Last Pass
Aluminum (2021-6061)	100-200	.020	.001
Brass	200-300	.010	.001
Bronze	200-300	.010	.001
Copper	100-200	.010	.001
Cast Iron	85-140	.015	.0005
Magnesium (AZ, AM, EZ, ZE, HK)	100-200	.020	.001
Nickel (200-230)	40-100	.015	.001
Nylon	250-400	.015	.001
Phenolic	250-400	.015	.001
Plastic - Glass Filled	250-400	.015	.001
Stainless Steel (405-446)	65-100	.015t	.001
Stainless Steel (15-5PH, 16-6PH, 14-4PH)	65-100	.015	.001
Steel (1005-1029)	50-150	.015	.001
Steel (1030-1055)	50-150	.015	.001
Steel (1060-1095)	50-150	.015	.001
Steel (10L45-10L50)	50-150	.015	.001
Steel (12L13-12L15)	50-150	.015	.001
Steel (4140-4150)	50-150	.015	.001
Steel (4140 (35 HRC))	50-150	.015	.001
Steel (41L30-41L50)	50-150	.015	.001
Steel (8617-8622)	50-150	.015	.001
Steel (A2-A9 , 01-07, W1, W2)	50-150	.015	.001
Steel (D2-D7)	50-150	.015	.001
Steel (H10-H19)	50-150	.015	.001
Steel (M1-M6)	50-150	.015	.001
Steel (M-50, 52100)	50-150	.015	.001
Titanium (TI-9AI-6V)	40-65	.020	.0005
Teflon	250-400	.015	.001

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

Single Point Threading Roughing Infeed Depth per Pass														
Pass	Threads Per Inch													
	8	10	11	12	13	14	16	18	20	24	28	32	36	40
Pass 1	.0171	.0148	.0148	.0134	.0124	.0114	.0110	.0110	.0099	.0094	.0079	.0083	.0072	.0083
Pass 2	.0283	.0243	.0243	.0219	.0202	.0189	.0179	.0178	.0159	.0150	.0126	.0130	.0113	.0128
Pass 3	.0372	.0318	.0318	.0287	.0264	.0244	.0233	.0231	.0206	.0194	.0163	.0167	.0145	
Pass 4	.0449	.0383	.0383	.0345	.0317	.0293	.0279	.0276	.0246	.0231	.0194			
Pass 5	.0517	.0441	.0441	.0396	.0364	.0337	.0321	.0316	.0282					
Pass 6	.0580	.0494	.0494	.0443	.0407	.0376	.0358							
Pass 7	.0637	.0543	.0543	.0486	.0447	.0413								
Pass 8	.0691	.0588	.0588											
Pass 9	.0742													

