

RECOMMENDED FEEDS AND SPEEDS

Internal Roller Burnishing Tools

Hole Size	Inch Per Revolution		Speed Rev/Min
	Min.	Max.	
.125	.004	.006	1500
.187	.004	.006	
.250	.006	.008	
.375	.009	.013	1000
.500	.011	.016	
.625	.015	.022	600
.750	.018	.027	
.875	.020	.030	
1.000	.026	.039	300
1.250	.038	.057	
1.500	.045	.067	200
1.750	.046	.069	
2.000	.056	.084	

Hole Size	Inch Per Revolution		Speed Rev/Min
	Min.	Max.	
2.250	.060	.090	170
2.500	.066	.099	
2.750	.043	.064	
3.000	.045	.067	120
3.250	.049	.073	
3.500	.059	.083	100
3.750	.062	.093	
4.000	.065	.097	
4.250	.071	.106	85
4.500	.072	.108	
4.750	.078	.117	70
5.000	.081	.121	
5.500	.093	.140	

STOCK ALLOWANCE/SURFACE FINISH CHART

Tools with non-feed cages (full bottom tools) must always be machine fed. Machine settings are approximate.

Always set the machine faster than the feed rate of the burnishing tool. Feeds can be adjusted upward 25% to 50%.

	Work-piece Size Range	Internal Surfaces			External Surfaces		
		Stock Allowance	Surface Finish		Stock Allowance	Surface Finish	
			Machined	Roller Burnished		Machined	Roller Burnished
High Ductility	0.125 to 0.484	0.0004	80	8	0.0004	80	8
	0.500 to 1.000	0.0007	125	8	0.0005	100	8
	1.031 to 2.000	0.0007	60	8	0.0005	60	8
	2.031 to 6.500	0.0015	125	8	0.0010	180	8
		0.0010	60	8	0.0007	100	8
		0.0020	125	8	0.0010	180	8
Low Ductility	0.125 to 0.484	0.0015	60	8	0.0010	125	8
	0.500 to 1.000	0.0020	125	8	0.0015	300	8
	1.031 to 2.000	0.0030	200	8	0.0020	500	8
	2.031 to 6.500	0.0004	80	18	0.0003	60	18
		0.0007	100	18	0.0005	90	18
		0.0007	90	18	0.0005	100	18
	0.0010	125	18	0.0007	140	20	
	0.0010	125	18	0.0005	100	18	
	0.0015	180	20	0.0010	180	20	
	0.0015	120	18	0.0010	125	18	
	0.0015	160	18	0.0015	140	18	
	0.0020	200	24	0.0015	200	20	

High Ductility Materials have more than 18% elongation and less than R_c32. They include: annealed steel, stainless steel, aluminum, brass, bronze and malleable iron.

Low Ductility Materials have less than 18% elongation and a maximum hardness of R_c40. They include: gray iron, nodular iron, heat-treated steel, magnesium alloys and hard copper alloys.

Stock Allowances are based on an 80 to 180 microinch surface finish consisting of uniform peaks and valleys. The amount of stock allowance varies with job conditions, material properties, wall thickness, nature of the machined surface and quality of surface finish desired. Figures shown are a starting point for part preparation.