

**TABLE II-2  
TOLERANCES, CAST ALNICO MAGNETS**

	Dimensions		Tolerances	
	(Inches)	(Millimeters)	(Inches)	(Millimeters)
<b>Size:</b>				
Unfinished surfaces: (including draft)	0-1	0-25	±0.016	±0.4
	1-2	25-50	±0.031	±0.8
	2-3	50-75	±0.031	±0.8
	3-4	75-100	±0.047	±1.2
	4-5	100-125	±0.047	±1.2
	5-6	125-150	±0.062	±1.6
	6-7	150-175	±0.062	±1.6
	7-8	175-200	±0.078	±2.0
	8-9	200-225	±0.078	±2.0
	9-10	225-250	±0.094	±2.4
	10-12	250-275	±0.094	±2.4
Finished surfaces: any plane ground dimension			±0.005	±0.1
Center or centerless ground: 0 to 1.5 Inches OD (0 to 38 mm)			±0.004	±0.1
Over 1.5 Inches OD (over 38 mm)			±0.008	±0.2
<b>Parallelism:</b>				
Finished surfaces			½ total tolerance between surfaces	
<b>Angles, including squareness:</b>				
Between two unfinished surfaces			± 1½°	
Between one finished & one unfinished surface			± 1½°	
Between two finished surfaces			±0.005 (± 0.1 mm) from true angle as measured on the shorter of the two surfaces in question or ± ½°, whichever is greater	
<b>Concentricity between inside and outside surfaces:</b>				
Unfinished surfaces				
Hole diameter > its length			0.032 TIR	0.8 TIR
Hole diameter < its length			1.5 x Total OD TOL. TIR	
Finished surfaces			0.007 TIR	0.2 TIR
<b>Surface roughness:</b>				
Unfinished surfaces			No surface roughness specification	
Finished surfaces			63 microinches (1.6 µm) over at least 95% of the surface	