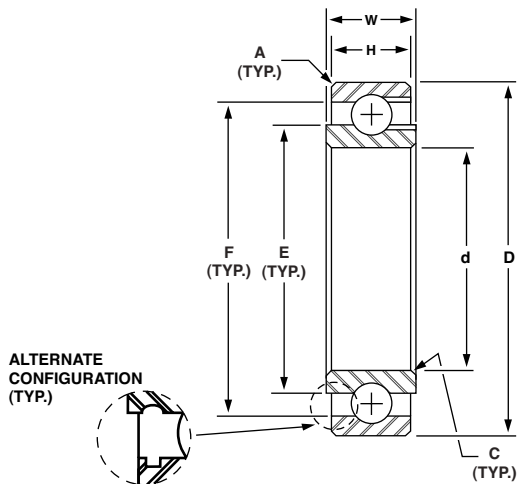


**B500 / MB500 Series**



Full ball complement (no retainer)

**Notes:**

1. Rings and balls are manufactured from premium quality AISI 52100 chrome steel.
2. Operating temperature range: -65 to +250 °F.
3. Open type—bearings do not have shields or seals.
4. Bearings are lubricated with a thin film of preservative oil, unless otherwise specified.
5. External surfaces are NOT cadmium plated.
6. Custom sizes, materials, tolerances, radial internal clearances, lubrication, plating, etc., are available upon request.
7. See "Airframe Part Numbering System" on page 5 for correct NHBB nomenclature.
8. All dimensions are in inches, unless otherwise specified.
9. B500/MB500 series are dimensionally interchangeable with B500DD/MB500DD series (applies to bore, O.D., and width).

Refer to the Qualifications and Manufacturing Schedule for a current list of the Precision Division's AS7949 qualifications and manufacturing capabilities.

**B500**

NHBB BASIC P/N	BORE d	O.D. D	RING WIDTH		BALL COMPLEMENT		RING SHOULDER DIAMETER		RING CHAMFER X 45°		LOAD RATINGS (LBS.)				APPROX. WEIGHT LBS.
			OUTER H	INNER W	NO.	DIA.	OUTER F	INNER E	OUTER A	INNER C	STATIC		DYNAMIC RADIAL+ RING ROTATION		
											RADIAL LIMIT	THRUST	INNER	OUTER	
	+0.007 -0.007	+0.000 -0.010	+0.000 -0.005	+0.000 -0.005			REF.	REF.	+0.020 -0.000	+0.020 -0.000	RADIAL LIMIT	AXIAL LIMIT			
B538	.6250	1.0625	.250	.281	21	1/8	.902	.785	.015	.015	3280	1500	1990	1820	.02
B539	.7500	1.1875	.250	.281	24	1/8	1.018	.905	.015	.015	3750	1700	2050	1900	.03
B540	.8750	1.3125	.250	.281	27	1/8	1.139	1.025	.015	.015	4220	1900	2110	1970	.04
B541	1.0625	1.5000	.250	.281	32	1/8	1.338	1.223	.015	.015	5000	2200	2170	2020	.05
B542	1.3125	1.7500	.250	.281	38	1/8	1.590	1.462	.015	.015	5950	2700	2220	2130	.07
B543	1.5625	2.0000	.250	.281	44	1/8	1.831	1.706	.015	.015	6880	3200	2260	2180	.08
B544	1.8125 <sup>(1)</sup>	2.2500 <sup>(2)</sup>	.250	.281	51	1/8	2.109	1.980	.015	.015	7980	3600	2300	2220	.09
B545	2.0625 <sup>(1)</sup>	2.6250 <sup>(2)</sup>	.250	.281	59	1/8	2.424	2.299	.015	.015	9220	4000	2340	2260	.13
B546	2.3125 <sup>(1)</sup>	2.8750 <sup>(2)</sup>	.250	.281	65	1/8	2.668	2.541	.015	.015	10150	4400	2360	2280	.15

Radial internal clearance: .0008 to .0018

<sup>(1)</sup> Bore (d) tolerance: +.0010 / -.0010

<sup>(2)</sup> O.D. (D) tolerance: +.0000 / -.0015

**MB500 Precision Series**

NHBB BASIC P/N	BORE d	O.D. D	RING WIDTH		BALL COMPLEMENT		RING SHOULDER DIAMETER		RING CHAMFER X 45°		LOAD RATINGS (LBS.)				APPROX. WEIGHT LBS.
			OUTER H	INNER W	NO.	DIA.	OUTER F	INNER E	OUTER A	INNER C	STATIC		DYNAMIC RADIAL+ RING ROTATION		
											RADIAL LIMIT	THRUST	INNER	OUTER	
	+0.000 -0.005	+0.000 -0.005	+0.000 -0.005	+0.000 -0.0025			REF.	REF.	+0.020 -0.000	+0.020 -0.000	RADIAL LIMIT	AXIAL LIMIT			
MB538	.6250	1.0625	.250	.2810	21	1/8	.902	.785	.015	.015	3280	1500	1990	1820	.02
MB539	.7500	1.1875	.250	.2810	24	1/8	1.022	.905	.015	.015	3750	1700	2050	1900	.03
MB540	.8750	1.3125	.250	.2810	27	1/8	1.140	1.025	.015	.015	4220	1900	2110	1970	.04
MB541	1.0625	1.5000	.250	.2810	32	1/8	1.338	1.223	.015	.015	5000	2200	2170	2020	.05
MB542	1.3125	1.7500	.250	.2810	38	1/8	1.590	1.462	.015	.015	5950	2700	2220	2130	.07
MB543	1.5625	2.0000	.250	.2810	44	1/8	1.831	1.706	.015	.015	6880	3200	2260	2180	.08
MB544	1.8125 <sup>(1)</sup>	2.2500 <sup>(2)</sup>	.250	.2810	51	1/8	2.109	1.980	.015	.015	7980	3600	2300	2220	.09
MB545	2.0625 <sup>(1)</sup>	2.6250 <sup>(2)</sup>	.250	.2810	59	1/8	2.424	2.299	.015	.015	9220	4000	2340	2260	.13
MB546	2.3125 <sup>(1)</sup>	2.8750 <sup>(2)</sup>	.250	.2810	65	1/8	2.668	2.541	.015	.015	10150	4400	2360	2280	.15

Radial internal clearance: .0001 to .0005

<sup>(1)</sup> Bore (d) tolerance: +.0000 / -.0008

<sup>(2)</sup> O.D. (D) tolerance: +.0000 / -.0007

+Dynamic radial load ratings are for operation up to 250 °F. Reduce load ratings by 20% for 250 to 350 °F operation. Dynamic radial load ratings are based on an average life of 10,000 complete 90° cycles.