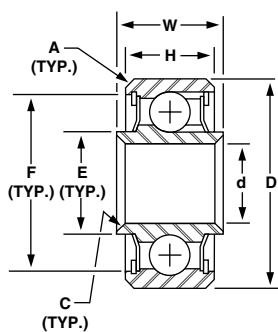




KP-A (AS27641) / MKP-A Series



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. All bearings include removable PTFE seals.
4. Bearings are lubricated with MIL-PRF-81322 grease, 80% minimum fill, unless otherwise specified.
5. External surfaces (except bore) are cadmium plated per AMS-QQ-P-416. All dimensions apply after plating.
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.

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

KP-A (AS27641) — Qualified to SAE AS7949

NHBB BASIC P/N	MS27641 DASH NO.	BORE d	O.D. D	RING WIDTH		BALL COMPLEMENT		RING SHOULDER DIAMETER		RING CHAMFER X 45°		LOAD RATINGS (LBS.)				APPROX. WEIGHT	MAX. STARTING TORQUE <sup>^</sup>
				OUTER H	INNER W	NO.	DIA.	OUTER F	INNER E	OUTER A	INNER C	STATIC		DYNAMIC RADIAL+ RING ROTATION			
												RADIAL LIMIT	THRUST LIMIT	INNER	OUTER		
		+0.000 -0.005	+0.000 -0.005	+0.00 -0.05	+0.00 -0.05			REF.	REF.	+0.015 -0.000	+0.015 -0.000	RADIAL LIMIT	AXIAL LIMIT			LBS.	OZ.-IN.
KP3AL	(1)	.1900	.5000	.196	.237	11	3/32	.420	.258	.012	.005	970	430	962	813	.01	1.0
KP3A	-3	.1900	.6250	.234	.297	10	1/8	.531	.297	.016	.005	1560	700	1500	1250	.01	1.0
KP4A	-4	.2500	.7500	.219	.281	12	1/8	.618	.380	.016	.005	1880	900	1690	1450	.02	1.5
KP5A	-5	.3125	.8125	.234	.297	14	1/8	.697	.417	.016	.015	2190	1000	1820	1600	.02	1.5
KP6A	-6	.3750	.8750	.250	.313	16	1/8	.772	.493	.016	.015	2500	1100	1920	1710	.03	2.0
KP8A	-8	.5000	1.1250	.313	.375	16	5/32	.980	.616	.016	.015	3910	1700	2870	2550	.05	2.5
KP10A	-10	.6250	1.3750	.344	.406	14	7/32	1.242	.768	.032	.015	6700	3000	4980	4360	.08	3.0
KP12A	-12	.7500	1.6250	.375	.437	16	15/64	1.434	.919	.032	.015	8790	3900	5980	5320	.13	3.0
KP16A	-16	1.0000	2.0000	.438	.500	19	1/4	1.790	1.238	.032	.015	11900	5200	7070	6400	.22	4.0
KP20A	-20	1.2500	2.2500	.438	.500	22	1/4	1.975	1.540	.032	.015	13800	6100	7400	6810	.26	5.0

Radial internal clearance: .0004 to .0010

(1) KP3AL equivalent not defined.

MKP-A 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	MAX. STARTING TORQUE <sup>^</sup>
			OUTER H	INNER W	NO.	DIA.	OUTER F	INNER E	OUTER A	INNER C	STATIC		DYNAMIC RADIAL+ RING ROTATION			
											RADIAL LIMIT	THRUST LIMIT	INNER	OUTER		
	+0.000 -0.003	+0.000 -0.004	+0.00 -0.05	+0.000 -0.025			REF.	REF.	+0.015 -0.000	+0.015 -0.000	RADIAL LIMIT	AXIAL LIMIT			LBS.	OZ.-IN.
MKP3AL	.1900	.5000	.196	.2370	11	3/32	.420	.258	.012	.005	970	430	962	813	.01	1.0
MKP3A	.1900	.6250	.234	.2970	10	1/8	.531	.297	.016	.005	1560	700	1500	1250	.01	1.0
MKP4A	.2500	.7500	.219	.2810	12	1/8	.618	.380	.016	.005	1880	900	1690	1450	.02	1.5
MKP5A	.3125	.8125	.234	.2970	14	1/8	.697	.417	.016	.015	2190	1000	1820	1600	.02	1.5
MKP6A	.3750	.8750	.250	.3130	16	1/8	.772	.493	.016	.015	2500	1100	1920	1710	.03	2.0
MKP8A	.5000	1.1250	.313	.3750	16	5/32	.980	.616	.016	.015	3910	1700	2870	2550	.05	2.5
MKP10A	.6250	1.3750	.344	.4060	14	7/32	1.242	.768	.032	.015	6700	3000	4980	4360	.08	3.0
MKP12A	.7500	1.6250	.375	.4370	16	15/64	1.434	.919	.032	.015	8790	3900	5980	5320	.13	3.0
MKP16A	1.0000	2.0000	.438	.5000	19	1/4	1.790	1.238	.032	.015	11900	5200	7070	6400	.22	4.0
MKP20A	1.2500	2.2500	.438	.5000	22	1/4	1.975	1.540	.032	.015	13800	6100	7400	6810	.26	5.0

Radial internal clearance: .0002 to .0005

+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.

<sup>^</sup>Torque limits are for bearings lubricated with MIL-PRF-81322 grease. For bearings lubricated with MIL-PRF-23827, multiply torque limits by a factor of 1.2.