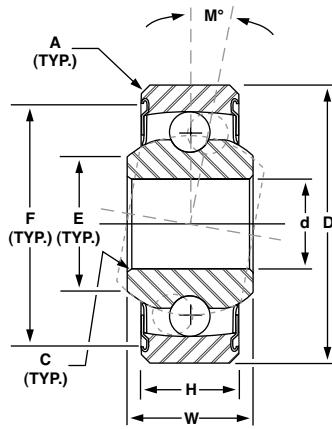




KSP-, KSP-A (AS27645) / MKSP-, MKSP-A Series



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 nonremovable 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.

KSP-, KSP-A (AS27645) — Qualified to SAE AS7949

NHBB BASIC P/N	MS27645 DASH NO.	BORE d	O.D. D	RING WIDTH		MIS-ALIGNMENT ANGLE† M°	BALL COMPLEMENT		RING SHOULDER DIAMETER		RING CHAMFER X 45°		LOAD RATINGS (LBS.)				APPROX. WEIGHT	MAX. STARTING TORQUE^	MAX. AXIAL INTERNAL CLEARANCE	MIN. SEAL BREAKOUT TORQUE^
				OUTER H	INNER W		NO.	DIA.	OUTER F	INNER E	OUTER A	INNER C	STATIC		DYNAMIC RADIAL+ RING ROTATION					
													RADIAL	THRUST	INNER	OUTER				
		+0.0000 -0.0005	+0.0000 -0.0005	+0.000 -0.005	+0.000 -0.005				REF.	REF.	+0.015 -0.000	+0.015 -0.000	RADIAL LIMIT	AXIAL LIMIT			LBS.	OZ.-IN.		LBS.-IN.
KSP3L	-3A	.1900	.6250	.203	.245	±10	13	3/32	.549	.278	.016	.005	550	100	550	480	.01	1.0	.023	4.0
KSP4A	-4A	.2500	.7500	.219	.281	±8	12	1/8	.636	.329	.016	.005	900	200	900	770	.01	1.0	.025	6.0
KSP5A	-5A	.3125	.8125	.234	.297	±8	14	.122	.712	.388	.016	.015	1000	200	950	815	.02	2.0	.028	10.0
KSP6A	-6A	.3750	.8750	.250	.313	±8	15	1/8	.763	.463	.016	.016	1120	200	1120	990	.02	3.0	.030	8.0
KSP3	-3	.1900	.7774	.270	.297	±10	12	1/8	.656	.314	.022	.005	900	200	900	770	.03	1.0	.023	6.0
KSP4	-4	.2500	.9014	.335	.484	±10	13	9/64	.756	.399	.032	.005	1410	300	1230	1230	.04	1.0	.025	5.0
KSP5	-5	.3125	1.2500	.375	.558	±10	13	3/16	1.089	.569	.032	.015	2190	300	2190	1890	.10	2.0	.028	16.0
KSP6	-6	.3750	1.4375	.469	.620	±10	13	7/32	1.185	.614	.032	.015	2980	400	2980	2580	.15	3.0	.030	18.0
KSP8	-8	.5000	1.6875	.500	.620	±10	16	7/32	1.418	.811	.044	.015	3670	500	3670	3290	.23	4.0	.032	20.0
KSP10	-10	.6250	1.9375	.625	.813	±10	14	9/32	1.647	.925	.044	.015	5320	600	4980	4360	.37	6.0	.034	25.0

Radial internal clearance: .0000 to .0010

MKSP-, MKSP-A Precision Series

NHBB BASIC P/N	BORE d	O.D. D	RING WIDTH		MIS-ALIGNMENT ANGLE† M°	BALL COMPLEMENT		RING SHOULDER DIAMETER		RING CHAMFER X 45°		LOAD RATINGS (LBS.)				APPROX. WEIGHT	MAX. STARTING TORQUE^	MAX. AXIAL INTERNAL CLEARANCE	MIN. SEAL BREAKOUT TORQUE^
			OUTER H	INNER W		NO.	DIA.	OUTER F	INNER E	OUTER A	INNER C	STATIC		DYNAMIC RADIAL+ RING ROTATION					
												RADIAL	THRUST	INNER	OUTER				
	+0.0000 -0.0003	+0.0000 -0.0004	+0.000 -0.005	+0.0000 -0.0025				REF.	REF.	+0.015 -0.000	+0.015 -0.000	RADIAL LIMIT	AXIAL LIMIT			LBS.	OZ.-IN.		LBS.-IN.
MKSP3L	.1900	.6250	.203	.2450	±10	13	3/32	.549	.278	.016	.005	550	100	550	480	.01	1.0	.023	4.0
MKSP4A	.2500	.7500	.219	.2810	±8	12	1/8	.636	.329	.016	.005	900	200	900	770	.01	1.0	.025	6.0
MKSP5A	.3125	.8125	.234	.2970	±8	14	.122	.712	.388	.016	.015	1000	200	950	815	.02	2.0	.028	10.0
MKSP6A	.3750	.8750	.250	.3130	±8	15	1/8	.763	.463	.016	.016	1120	200	1120	990	.02	3.0	.030	8.0
MKSP3	.1900	.7774	.270	.2970	±10	12	1/8	.656	.314	.022	.005	900	200	900	770	.03	1.0	.023	6.0
MKSP4	.2500	.9014	.335	.4840	±10	13	9/64	.756	.399	.032	.005	1410	300	1230	1230	.04	1.0	.025	5.0
MKSP5	.3125	1.2500	.375	.5580	±10	13	3/16	1.089	.569	.032	.015	2190	300	2190	1890	.10	2.0	.028	16.0
MKSP6	.3750	1.4375	.469	.6200	±10	13	7/32	1.185	.614	.032	.015	2980	400	2980	2580	.15	3.0	.030	18.0
MKSP8	.5000	1.6875	.500	.6200	±10	16	7/32	1.418	.811	.044	.015	3670	500	3670	3290	.23	4.0	.032	20.0
MKSP10	.6250	1.9375	.625	.8130	±10	14	9/32	1.647	.925	.044	.015	5320	600	4980	4360	.37	6.0	.034	25.0

Radial internal clearance: .0001 to .0005

†Maximum misalignment angle the bearing can accommodate in either direction.

+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.

^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.

*Minimum torque required to dislodge seals.