

REV.  
A  
AS14102

FEDERAL SUPPLY CLASS  
3120

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS AEROSPACE STANDARD SHEET AND THE ISSUE OF THE FOLLOWING STANDARD LISTED IN THE DODISS SPECIFIED IN THE SOLICITATION: SAE AS81820.

NOTICE

THIS DOCUMENT INCLUDES CADMIUM AS A PLATING MATERIAL. THE USE OF CADMIUM HAS BEEN RESTRICTED AND/OR BANNED FOR USE IN MANY COUNTRIES DUE TO ENVIRONMENTAL AND HEALTH CONCERNS. THE USER SHOULD CONSULT WITH LOCAL OFFICIALS ON APPLICABLE HEALTH AND ENVIRONMENTAL REGULATIONS REGARDING ITS USE.

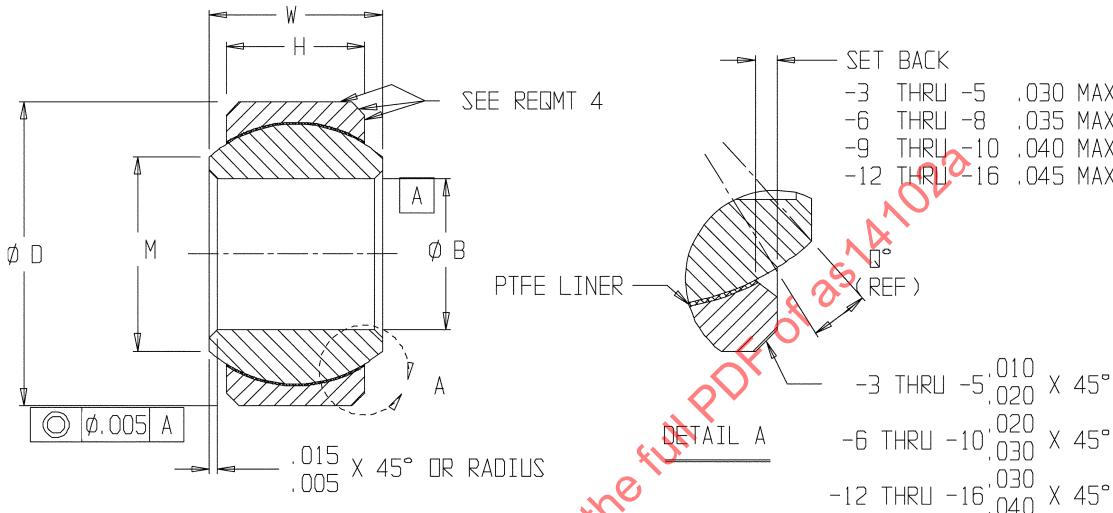


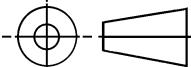
TABLE 1 - DIMENSIONS AND STRENGTHS

PART NO.	#B +.0000 -.0005	#D** +.0000 -.0005	H** ±.005	#M MIN	Q' (REF)	W +.000 -.002	STATIC LIMIT LOAD		OSCIL-LATING LOAD LB	NO-LOAD ROTATIONAL BREAKAWAY TORQUE IN-LB	WT LB MAX (REF)	
							RADIAL LB	AXIAL LB		STANDARD	*K* TYPE	
MS14102-3	.1900	.6250	.327	.300	15	.437	2500	1770	4900	0.25-5.0	0-0.5	.031
MS14102-4	.2500	.6875	.317	.360	14		5500					
MS14102-5	.3125	.8125	.406	.466	8	.500	13700	2630	8310			.035
MS14102-6	.3750	.8125	.406	.466	8	.500	9400	1640	6050			.060
MS14102-7	.4375	.9375	.442	.537	10	.562	20700	3650	11750			.080
MS14102-8	.5000	1.0000	.505	.607	9	.625	21400	4970	14950	0.25-8.0	0-1.0	.100
MS14102-9	.5625	1.1250	.536	.721	10	.687	26600	5370	18100			.135
MS14102-10	.6250	1.1875	.567	.747	12	.750	29000	6130	20250			.160
MS14102-12	.7500	1.3750	.630	.845	13	.875	37000	7730	26200			.240
MS14102-14	.8750	1.6250	.755	.995	6	.875	65200	10800	33600	0.25-12.0	0-2.0	.350
MS14102-16	1.0000	2.1250	1.005	1.269	12	1.375	104000	19300	56250			.970

\* SEE REQUIREMENT 5 "NO-LOAD TORQUE" AND NOTE 8.

\*\* SEE NOTE 7.

THIRD ANGLE PROJECTION



PREPARED BY AIRFRAME CONTROL BEARINGS GROUP

**SAE Aerospace**  
An SAE International Group

AEROSPACE STANDARD

(R) BEARING, PLAIN, SELF-LUBRICATING, SELF-ALIGNING,  
LOW SPEED, WIDE, CHAMFERED RACE,  
-65 TO 325 °F

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TABLE 2 - OVERSIZE BEARING DIMENSIONS 1/2/  
RESTRICTED USAGE FOR REPAIR WORK ONLY  
.010 AND .020 OVERSIZE OUTSIDE DIAMETER FOR  
REPLACEMENT OF BEARINGS SHOWN ON SHEET 1

PART NO.	NOMINAL SIZE	1 <sup>st</sup> OVERSIZE (.010) #D
MS14102 -3T	.1875	.6350
MS14102 -4T	.2500	.6350
MS14102 -5T	.3125	.6975
MS14102 -6T	.3750	.8225
MS14102 -7T	.4375	.9475
MS14102 -8T	.5000	1.0100
MS14102 -9T	.5625	1.1350
MS14102 -10T	.6250	1.1975
MS14102 -12T	.7500	1.3850
MS14102 -14T	.8750	1.6350
MS14102 -16T	1.0000	2.1350

PART NO.	NOMINAL SIZE	2 <sup>nd</sup> OVERSIZE (.020) #D
MS14102 -3U	.1875	.6450
MS14102 -4U	.2500	.6450
MS14102 -5U	.3125	.7075
MS14102 -6U	.3750	.8325
MS14102 -7U	.4375	.9575
MS14102 -8U	.5000	1.0200
MS14102 -9U	.5625	1.1450
MS14102 -10U	.6250	1.2075
MS14102 -12U	.7500	1.3950
MS14102 -14U	.8750	1.6450
MS14102 -16U	1.0000	2.1450

1/ BEFORE INITIATING A REPAIR PROCEDURE TO USE AN OVERSIZE BEARING, APPROVAL FOR MODIFYING AND REIDENTIFYING THE BEARING HOUSING MUST BE OBTAINED FROM THE COGNIZANT ENGINEERING AUTHORITY.

2/ REFER TO NAS0331 FOR INSTALLATION PROCEDURE AND STAKING FORCES.

REQUIREMENTS:

1. MATERIAL: BALL, 440C (AMS 5630, AMS 5880, OR AMS 5618) OR PH13-8Mo AMS 5629 H1000 (SEE NOTE 8a)  
RACE, AMS 5643 (17-4PH)  
LINER, PTFE SHALL BE INCLUDED IN THE LINER
2. SURFACE TEXTURE: BALL DIA Ra 8 MAX; BALL FACES Ra 16 MAX; BALL BORE AND RACE DIA Ra 32 MAX;  
ALL OTHER METALLIC SURFACES Ra 125 MAX. LINER SURFACES ARE EXEMPT  
FROM SURFACE TEXTURE MEASUREMENTS.
3. HARDNESS: BALL, 440C 55-62 Rc OR PH13-8Mo Rc 43 MIN; RACE Rc 28 MIN/Rc 37 MAX BEFORE SWAGING.
4. SURFACE FINISH:  
  
RACE: PLATING, WHEN SPECIFIED, SHALL BE ZINC-NICKEL PLATING PER AMS 2417, TYPE 2, OR  
CADMIUM PLATING PER AMS-QQ-P-416, TYPE II, CLASS 2, WITH A THICKNESS RANGE OF 0.0003 TO  
0.0006 INCHES. PLATE ON THE OUTSIDE DIAMETER SURFACE AND ON THE CHAMFER  
PLATING RUNOUT SHALL OCCUR IN THE SIDE FACE AREA BETWEEN THE CHAMFER  
AND THE BALL.
5. SURFACE FINISH:  
  
BALL: PH13-8Mo, PASSIVATE PER AMS-QQ-P-35 OR ASTM A 967; 440C, PASSIVATE PER AMS-QQ-P-35 OR  
ASTM A 967, OPTIONAL.
5. NO-LOAD TORQUE: WHEN THE LETTER "K" IS PRESENT IN THE PART NUMBER, LOWER VALUES OF NO-LOAD TORQUE ARE  
SPECIFIED PER TABLE 1. IF THE MEASURED TORQUE OF A "K" TYPE BEARING IS LESS THAN 0.1 INCH-POUND, THE  
INTERNAL RADIAL PLAY SHALL BE MEASURED AND SHALL NOT EXCEED THE FOLLOWING:

DASH NO.	MAXIMUM RADIAL PLAY	MAXIMUM AXIAL PLAY
-3K THRU -12K	0.0007 INCH	0.0021 INCH
-14K THRU -16K	0.0010 INCH	0.0030 INCH

THE INTERNAL AXIAL PLAY SHALL BE MEASURED FOR ALL "K" TYPE BEARINGS.

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