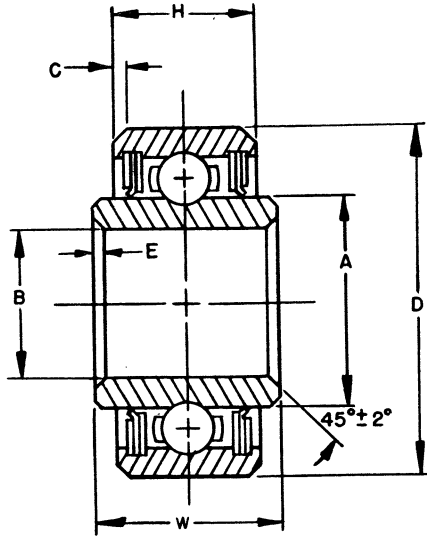


Users: Army-ME  
Navy  
Air Force  
Review: Army - AV  
Navy - AS  
Air Force - 99  
DLA - IS



DIMENSIONS IN INCHES

MS DASH NO.	REF. PART NO.	B BORE (a)	D OUTSIDE DIAMETER (a)	W WIDTH INNER RING	H WIDTH OUTER RING	A SHOULDER DIAMETER INNER RING (APPROX.)	E CORNER CHAMFER X 45°		C OUTER RING O.D.	RADIAL LIMIT LOAD (f) RATING LBS.	THRUST LIMIT LOAD (f) RATING LBS.	RADIAL LOAD RATING (LBS.) FOR AVERAGE LIFE OF 10,000 COMPLETE OF 90° CYCLES		WEIGHT POUNDS (APPROX)
							INNER BORE	BORE				(d) CASE I	(d) CASE II	
-3	AW3AK	.1900	.6250	.406	.312	.317	.005	.016	450	210	440	440	.018	
-4	AW4AK	.2500	.7500	.438	.312	.415	.005	.016	525	250	510	510	.028	
-5	AW5AK	.3125	.8125	.469	.344	.462	.015	.016	820	380	800	800	.033	
-6	AW6AK	.3750	.8750	.469	.344	.520	.015	.016	820	380	800	800	.034	
-8	AW8AK	.5000	1.1250	.562	.438	.681	.015	.016	1350	630	1310	1310	.075	
-10	AW10AK	.6250	1.3750	.594	.469	.848	.015	.032	1840	860	1790	1790	.119	
-12	AW12AK	.7500	1.6250	.656	.531	1.052	.015	.032	2400	1120	2340	2340	.189	
-16	AW16AK	1.0000	2.0000	.688	.562	1.334	.015	.032	3000	1400	2920	2920	.296	
-20	AW20AK	1.2500	2.2500	.688	.562	1.615	.015	.032	3600	1680	3500	3270	.355	

- (a) OUT OF ROUND TOLERANCES, BORE: +.0002, -.0007  
OUTER DIA.: +.0005, -.0010
- (b) A RADIUS GIVING APPROXIMATELY THE SAME GRIP FOR STAKING THE BEARING IN THE HOUSING WILL BE ACCEPTABLE.
- (c) A RADIUS GIVING APPROXIMATELY THE SAME FILLET CLEARANCE WILL BE ACCEPTABLE.
- (d) CASE I - LOAD FIXED WITH RESPECT TO OUTER RACE.  
CASE II - LOAD FIXED WITH RESPECT TO INNER RACE.
- (e) THESE RATINGS ARE FOR OPERATION UP TO 250°F MAX. WHEN SUBJECT TO OPERATION UP TO 350°F, THE RATINGS SHALL BE REDUCED BY 20%.

- 1. MATERIALS: RINGS: AISI 440C, CORROSION RESISTANT STEEL  
BALLS: AISI 440C, CORROSION RESISTANT STEEL
- 2. SEALS: POLYTETRAFLUOROETHYLENE PER AMS3652 OR POLYTETRAFLUOROETHYLENE SHEET, GLASS FABRIC REINFORCED AMS3666.
- 3. SEAL RETAINERS: STEEL, CORROSION RESISTANT
- 4. LUBRICANT: MIL-G-81322 OR MIL-G-23827. MIL-G-81322 SHALL BE USED FOR OPERATION ABOVE 250°F. ALL BEARINGS SHALL BE PREPACKED WITH GREASE CONFORMING TO MIL-G-81322 UNLESS OTHERWISE SPECIFIED. IF MIL-G-23827 IS REQUIRED, ADD THE LETTER G AFTER THE MS PART NUMBER. BEARINGS SHALL BE FILLED 80% MINIMUM.
- 5. HARDNESS: HEAT TREAT RINGS AND BALLS TO ROCKWELL "C" 57 TO 63 AND STABILIZED FOR OPERATION AT 250°F.
- 6. SURFACE ROUGHNESS: RACEWAYS AND BALLS - 8 MICROINCHES AA PER ANSI B46.1.
- 7. RADIAL PLAY: .0003 TO .0009.
- 8. RADIAL ECCENTRICITY: INNER RING: .0010 MAXIMUM, OUTER RING: .0016 MAXIMUM.
- 9. FACE RUNOUT: INNER RING: .0010 MAXIMUM, OUTER RING: .0016 MAXIMUM.
- 10. PART NUMBER = MS NUMBER AND DASH NUMBER  
EXAMPLES: MS27469-3, MS27469-3G.
- 11. REMOVABLE SEALS ARE REQUIRED.

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document.

P.A. AIR FORCE - 11	INTERNATIONAL INTEREST	TITLE BEARING, BALL, AIRFRAME, ANTIFRICTION, INTERMEDIATE DUTY	MILITARY STANDARD
OTHER CUST ARMY - AV NAVY - AS			MS 27649
PROCUREMENT SPECIFICATION MIL-B-7949	SUPERSEDES:		SHEET 1 OF 1

APPROVED 18 JUNE 71 REVISED 8 DEC 72 5 NOV 76 9 APR 81 28 MAY 82