

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODISS SPECIFIED IN THE SOLICITATION: MIL-B-7949

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE.

Form Approved
OMB No. 0704-0188

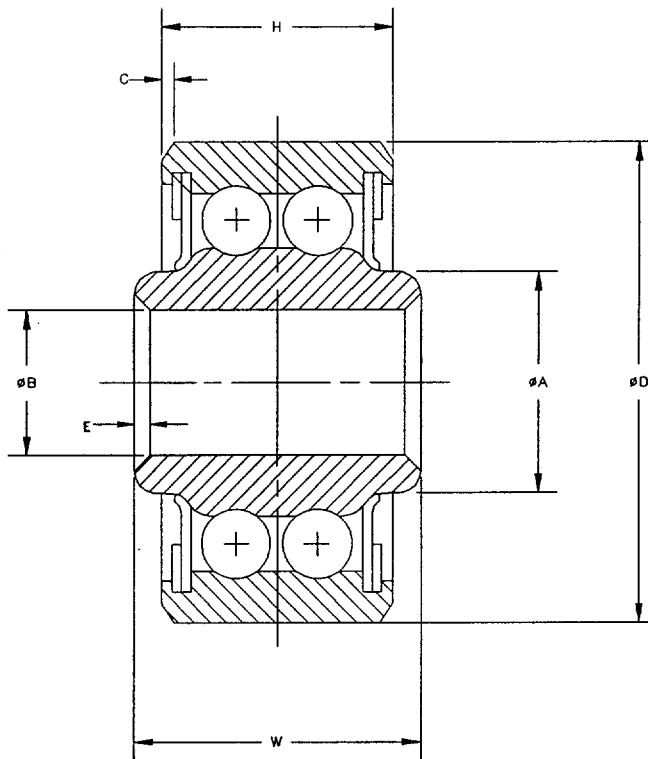


TABLE I. DIMENSIONS AND LOADS

MS DASH NO.	øB	øD	W	H	øA	É	C	AXIAL INTER- NAL CLEAR- ANCE	RADIAL LIMIT LOAD RATING LBS	THRUST LIMIT LOAD RATING LBS	6/ RADIAL LOAD RATING (LBS.) FOR AVERAGE LIFE OF 10,000 COMPLETE 90° CYCLES		5/ WEIGHT POUNDS (APPROX)	MAXIMUM STARTING TORQUE (INCH-OZ)
	BORE 2/ + .0000 - .0005	OUTSIDE DIAMETER 1/ 2/ + .0000 - .0005	WIDTH INNER RING 1/ + .000 - .005	WIDTH OUTER RING 1/ + .000 - .005	SHOULDER DIAMETER INNER RING (APPROX)	4/ INNER RING CORNER CHAMFER + .015 - .000	3/ OUTER RING CORNER CHAMFER + .015 - .000				CASE I	CASE II		
-3	.1900	.7774	.495	.473	.302	.005	.018	.005	8/2950	1700	2950	2830	.04	1
-4	.2500	.9014	.620	.491	.410		.032	.006	8/5370	1800	3550	3020	.06	1
-5	.3125	1.2500	.745	.687	.469				7/11000	4000	7360	6250	.17	1
-6	.3750	1.4375	.870	.794	.551	7/15760			5300	9690	8120	.26	2	
-8	.5000	1.6875	.932	.856	.735	.015	.044	.007	23600	7800	14100	11600	.38	3
-10	.6250	1.9375	.995	.920	.890				28400	9400	15300	13100	.53	3

- 1/ DIMENSIONS TO BE MET AFTER PLATING.
- 2/ OUT-OF-ROUND TOLERANCES: BORE: +.0002, -.0007; OUTER DIA: +.0005, -.0010.
- 3/ 45° CHAMFER OR A RADIUS GIVING APPROXIMATELY THE SAME GRIP FOR STAKING THE BEARING IN THE HOUSING WILL BE ACCEPTABLE.
- 4/ 45° CHAMFER OR A RADIUS GIVING APPROXIMATELY THE SAME FILLET CLEARANCE WILL BE ACCEPTABLE.
- 5/ CASE I - LOAD FIXED WITH RESPECT TO OUTER RING.
CASE II - LOAD FIXED WITH RESPECT TO INNER RING.
- 6/ THESE RATINGS ARE FOR OPERATION UP TO 250°F. FOR OPERATION UP TO 350°F, THE RATINGS SHALL BE REDUCED BY 20%.
- 7/ BOLTS OF 180,000 PSI TENSILE STRENGTH ARE REQUIRED TO DEVELOP THE RADIAL LIMIT LOAD SHOWN.
- 8/ BOLTS OF 160,000 PSI TENSILE STRENGTH ARE REQUIRED TO DEVELOP THE RADIAL LIMIT LOAD SHOWN.

① DENOTES CHANGE

INCH-POUND

PREPARING ACTIVITY: NAVY-AS

CUSTODIANS: ARMY- AV NAVY-AS

AIR FORCE- 99 DLA-

REVIEW: ARMY-AR,AT,MI AF-84 DLA-IS

USER: ARMY-ME

PROJECT NUMBER: 3110-0863

DISTRIBUTION STATEMENT

MILITARY SPECIFICATION SHEET

TITLE

BEARING, BALL, AIRFRAME,
ANTI-FRICTION, DOUBLE ROW,
HEAVY DUTY

SPECIFICATION SHEET NUMBER

MS27644

05 DEC 94
REV D

SUPERSEDING

MS27644 C 9 APR 1981

AMSC-

N/A

FSC 3110

A. Approved for public release; distribution is unlimited.

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PREVIOUS EDITIONS ARE OBSOLETE

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REQUIREMENTS:

- ① 1. MATERIAL: RINGS: 52100 STEEL PER AMS6440, OR E52100 STEEL PER FED-STD-66.
BALLS: 52100 STEEL PER AMS6440 OR 51100 STEEL PER AMS6449, OR E51100 OR E52100 STEEL PER FED-STD-66.
SEALS: POLYTETRAFLUOROETHYLENE PER AMS3652 OR POLYTETRAFLUOROETHYLENE SHEET, GLASS FABRIC REINFORCED PER AMS3666.
SEAL RETAINERS: ANY CORROSION RESISTANT STEEL.
- ② 2. LUBRICANT: MIL-G-81322 OR MIL-G-23827. ALL BEARINGS SHALL BE PACKED WITH GREASE CONFORMING TO MIL-G-81322 UNLESS OTHERWISE SPECIFIED. IF MIL-G-23827 IS REQUIRED, ADD THE LETTER "G" AFTER THE MS27644 DASH NUMBER. MIL-G-23827 SHALL NOT BE USED FOR OPERATION WHERE TEMPERATURES EXCEED 250°F.
3. HARDNESS: HEAT TREAT RINGS AND BALLS TO ROCKWELL "C" 60 TO 66 AND STABILIZE FOR OPERATION AT 250°F.
4. SURFACE ROUGHNESS: RACEWAYS AND BALLS SHALL BE 8 MICROINCHES R_a PER ANSI/ASME B46.1.
- ⑤ 5. PLATING: ALL EXTERNAL SURFACES EXCEPT BORE, SEALS AND SEAL RETAINERS SHALL BE ZINC-NICKEL IN ACCORDANCE WITH AMS 2417, TYPE 2, OR CADMIUM PLATED IN ACCORDANCE WITH QQ-P-416, TYPE II, CLASS 2, WITH A THICKNESS OF .0003 TO .0006 INCHES.
6. RADIAL INTERNAL CLEARANCE: .0004 TO .0010
7. RADIAL ECCENTRICITY: INNER RING, .0010 MAX, OUTER RING, .0016 MAX.
8. LATERAL ECCENTRICITY: INNER RING, .0010 MAX, OUTER RING, .0016 MAX.
- ⑨ 9. PART NUMBER: THE PART NUMBER SHALL BE SEQUENCED LEFT TO RIGHT WITH DESIGNATIONS IN THE FOLLOWING SEQUENCE:
- EXAMPLE OF PART NUMBER:
- MS27644-4G = BEARING, BALL AIRFRAME, ANTIFRICTION, DOUBLE ROW, HEAVY DUTY, .2500 INCH BORE, FILLED 80% MINIMUM WITH MIL-G-23827 LUBRICANT, 250°F MAX.
- LUBRICANT DESIGNATOR (SEE LUBRICANT REQUIREMENTS)
- DASH NUMBER (SEE TABLE I)
- MILITARY SPECIFICATION SHEET NUMBER

10. REMOVABLE SEALS ARE REQUIRED.

NOTES:

- UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES.
- THIS SPECIFICATION TAKES PRECEDENCE OVER ANY OTHER DOCUMENTS REFERENCED HEREIN.
- REFERENCED DOCUMENTS ARE THE ISSUES IN EFFECT AT THE DATE OF INVITATION FOR BID.
- THE PARTS COVERED BY MS20207 ARE CANCELLED. USE MS27644 FOR NEW DESIGN AND REPLACEMENT.

PREPARING ACTIVITY: NAVY-AS CUSTODIANS: ARMY-AV NAVY-AS AIR FORCE-99 DLA- REVIEW: ARMY-AR,AT,MI AF-84 DLA-IS USER: ARMY-ME PROJECT NUMBER: 3110-0863 DISTRIBUTION STATEMENT	MILITARY SPECIFICATION SHEET TITLE BEARING, BALL, AIRFRAME, ANTI-FRICTION, DOUBLE ROW, HEAVY DUTY	SPECIFICATION SHEET NUMBER MS27644 05 DEC 94 REV D SUPERSEDING MS27644 C 9 APR 1981 AMSC- N/A FSC 3110
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