

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 DODDS 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

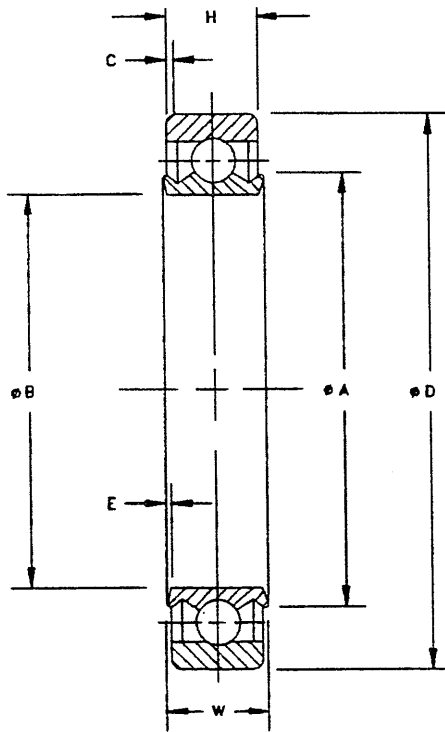


FIGURE 1. BEARING

TABLE I. DIMENSIONS AND LOADS

MS DASH NO.	ØB		ØD		W	H	ØA	E & C		RADIAL LOAD RATING LBS	THRUST LIMIT LOAD RATING LBS	4/ 5/ RADIAL LOAD RATING (LBS.) FOR AVERAGE LIFE OF 10,000 COMPLETE 90° CYCLES		WEIGHT POUNDS (APPROX)	MAXIMUM STARTING TORQUE (INCH-OZ)
	5/ BORE	1/ 6/ OUTSIDE DIAMETER	1/ WIDTH INNER RING	1/ WIDTH OUTER RING				2/ CORNER CHAMFER X 45°	3/			CASE I	CASE II		
	+ .0007 - .0007	+ .0000 - .0010	+ .000 - .005	+ .000 - .005				+ .020 - .000							
-38	.6250	1.0625	.281	.250	.777	.015	3280	1500	1990	1820	.03	2			
-39	.7500	1.1875			.895		3750	1700	2050	1900	.04	2			
-40	.8750	1.3125			1.018		4220	1900	2110	1970	.05	3			
-41	1.0625	1.5000			1.216		5000	2200	2170	2020	.06	4			
-42	1.3125	1.7500			1.451		5950	2700	2220	2130	.09	4			
-43	1.5625	2.0000			1.702		6880	3200	2280	2180	.10	5			
-44	1.8125 ^{B/}	2.2500 ^{7/}			1.970		7980	3600	2300	2220	.11	5			
-45	2.0625 ^{B/}	2.6250 ^{7/}			2.286		9220	4000	2340	2260	.15	6			
-46	2.3125 ^{B/}	2.8750 ^{7/}			2.527		10150	4400	2360	2280	.17	6			

- 1/ DIMENSIONS TO BE MET AFTER PLATING.
- 2/ A RADIUS GIVING APPROXIMATELY THE SAME GRIP FOR STAKING THE BEARING IN THE HOUSING WILL BE ACCEPTABLE.
- 3/ A RADIUS GIVING APPROXIMATELY THE SAME FILLET CLEARANCE WILL BE ACCEPTABLE.
- 4/ CASE I = LOAD FIXED WITH RESPECT TO OUTER RING.
CASE II = LOAD FIXED WITH RESPECT TO THE INNER RING.
- 5/ THESE RATINGS ARE FOR OPERATION UP TO 250°F. WHEN SUBJECT TO OPERATION UP TO 350°F, THE RATINGS SHALL BE REDUCED BY 20 PERCENT.
- 6/ OUT-OF-ROUND TOLERANCES: BORE: -38 THRU -43 ±.0010; -44 THRU -46: ±.0016
OUTSIDE DIAMETER: -38 THRU -43 +.0005, -.0015; -44 THRU -46: +.0008, -.0023
- 7/ FOR DASH NUMBER SIZES -44, -45, AND -46, THE OUTSIDE DIAMETER TOLERANCE SHALL BE +.0000 TO -.0015 INCHES.
- 8/ FOR DASH NUMBER SIZES -44, -45, AND -46 THE BORE TOLERANCE SHALL BE +.0010 TO -.0010 INCHES.

Ⓡ DENOTES CHANGES

INCH-POUND

PREPARING ACTIVITY: NAVY-AS	MILITARY SPECIFICATION SHEET	SPECIFICATION SHEET NUMBER
CUSTODIANS: ARMY- AV NAVY- AS	TITLE	MS27646 21 JUNE 95 REV F
AIR FORCE- 99 DLA-	BEARING, BALL, AIRFRAME, ANTI-FRICTION, EXTRA LIGHT DUTY	SUPERSEDING
REVIEW ARMY-AR, ME, AF-84 DLA-IS		MS27646 E 05 DEC 94
USER		AMSC- N/A ISC-3110
PROJECT NUMBER 3110-0930		
DISTRIBUTION STATEMENT A Approved for public release; distribution is unlimited		Page 1 of 2

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Form Approved OMB No. 0704 0188									
REQUIREMENTS: <ol style="list-style-type: none"> 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 AMS 3652 OR POLYTETRAFLUOROETHYLENE SHEET, GLASS FABRIC REINFORCED PER AMS 3666. 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 MS27646 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 HAVE A SURFACE ROUGHNESS OF 8 R_a PER ANSI/ASME B46.1. 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 1, CLASS 2, THICKNESS .0003 TO .0006 INCHES. 6. RADIAL INTERNAL CLEARANCE SHALL BE .0008 TO .0018 INCHES. 7. RADIAL AND LATERAL ECCENTRICITY SHALL BE: FOR THE INNER RING .0020 INCHES MAX. FOR THE OUTER RING .0016 INCHES MAX. 8. PART NUMBER: THE PART NUMBER SHALL BE SEQUENCED LEFT TO RIGHT WITH DESIGNATIONS IN THE FOLLOWING SEQUENCE: <table style="margin-left: 20px; border-collapse: collapse;"> <tr> <td style="border-left: 1px solid black; border-bottom: 1px solid black; padding: 2px;">MS27646-38G</td> <td style="padding: 2px;">= BEARING, BALL, AIRFRAME, ANTI-FRICTIONS, EXTRA LIGHT DUTY, .6250 INCH NOMINAL BORE, FILLED 80% MINIMUM WITH MIL-G-23827 LUBRICANT</td> </tr> <tr> <td style="border-left: 1px solid black; border-bottom: 1px solid black; padding: 2px;">38</td> <td style="padding: 2px;">LUBRICANT DESIGNATOR (SEE LUBRICANT REQUIREMENTS)</td> </tr> <tr> <td style="border-left: 1px solid black; border-bottom: 1px solid black; padding: 2px;">G</td> <td style="padding: 2px;">DASH NUMBER (SEE TABLE I)</td> </tr> <tr> <td style="border-left: 1px solid black; padding: 2px;">27646</td> <td style="padding: 2px;">MILITARY SPECIFICATION SHEET NUMBER</td> </tr> </table> 9. REMOVABLE SEALS ARE OPTIONAL. 		MS27646-38G	= BEARING, BALL, AIRFRAME, ANTI-FRICTIONS, EXTRA LIGHT DUTY, .6250 INCH NOMINAL BORE, FILLED 80% MINIMUM WITH MIL-G-23827 LUBRICANT	38	LUBRICANT DESIGNATOR (SEE LUBRICANT REQUIREMENTS)	G	DASH NUMBER (SEE TABLE I)	27646	MILITARY SPECIFICATION SHEET NUMBER
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NOTES: <ol style="list-style-type: none"> 1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED. 2. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS SPECIFICATION AND REFERENCES CITED HEREIN, THE TEXT OF THIS STANDARD SHALL TAKE PRECEDENCE. 3. REFERENCED GOVERNMENT (OR NON-GOVERNMENT) DOCUMENTS OF THIS ISSUE LISTED IN THAT ISSUE OF THE DEPARTMENT OF DEFENSE INDEX OF SPECIFICATIONS AND STANDARDS (DoDISS) SPECIFIED IN THE SOLICITATION FORM A PART OF THIS STANDARD TO THE EXTENT SPECIFIED HEREIN. 									
PREPARING ACTIVITY: NAVY-AS CUSTODIANS: ARMY- AV NAVY- AS AIR FORCE- 99 DLA- REVIEW ARMY- AR, ME, DLA-IS USER PROJECT NUMBER 3110-0930	MILITARY SPECIFICATION SHEET TITLE BEARING, BALL, AIRFRAME, ANTI-FRICTION, EXTRA LIGHT DUTY	SPECIFICATION SHEET NUMBER <div style="font-size: 1.2em; font-weight: bold;">MS27646</div> <div style="text-align: right;">21 JUNE 95 REV F</div> <hr/> SUPPLYSIDING MS28915 E 05 DEC 94 <hr/> AM J N/A INC 3110							
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