

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 DODSS SPECIFIED IN THE SOLICITATION: MIL-9-7949

Form Approved
OMB No. 0704-0188

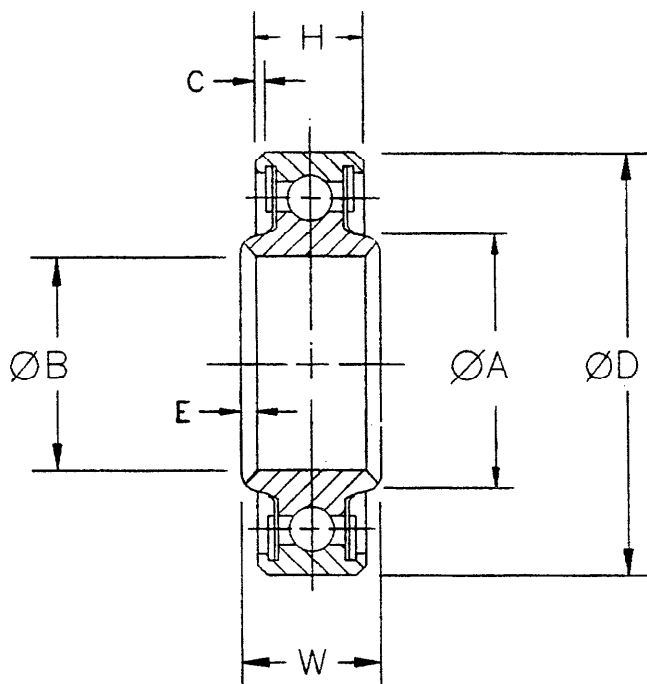


TABLE I. DIMENSIONS AND LOADS

MS DASH NO.	ØB	ØD	W	H	ØA	E	C	RADIAL LIMIT LOAD RATING LBS	THRUST LIMIT LOAD RATING LBS	5/ RADIAL LOAD RATING (LBS.) FOR AVERAGE LIFE OF 10,000 COMPLETE 90° CYCLES		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	.6250	.297	.234	.297	.005	.016	1560	700	1500	1250	.01	1.0
-4	.2500	.7500	.281	.219	.380			1880	900	1690	1450	.02	1.5
-5	.3125	.8125	.297	.234	.415			2190	1000	1820	1600	.02	1.5
-6	.3750	.8750	.313	.250	.495			2500	1100	1920	1710	.03	2.0
-8	.5000	1.1250	.375	.313	.616			3910	1700	2870	2550	.05	2.5
-10	.6250	1.3750	.406	.344	.768	.015	.032	6700	3000	4980	4360	.08	3.0
-12	.7500	1.6250	.437	.375	.919			8790	3900	5980	5320	.13	3.0
-16	1.0000	2.0000	.500	.438	1.241			11900	5200	7070	6400	.22	4.0
-20	1.2500	2.2500	.500	.438	1.478			13800	6100	7400	6810	.26	5.0

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%.

(F) DENOTES CHANGES

INCH-POUND

PREPARING ACTIVITY: NAVY-AS
CUSTODIANS: ARMY- AV NAVY-AS
AIR FORCE-99 DLA-
REVIEW: ARMY-AR,AT,MI AIR FORCE-84, DLA-IS
ARMY-ME
PROJECT NUMBER: 3110-0927
DISTRIBUTION STATEMENT

MILITARY SPECIFICATION SHEET
TITLE
BEARING, BALL, AIRFRAME,
ANTI-FRICTION, INTERMEDIATE DUTY

SPECIFICATION SHEET NUMBER
MS27641 21 JUNE 95
REV F
SUPERSEDING
MS27641 E 05 DEC 94
AMSC- N/A FSC 3110

A. Approved for public release, distribution is unlimited.

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

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 DODDS SPECIFIED IN THE SOLICITATION: MIL-8-7949

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REQUIREMENTS:

1. MATERIAL: RINGS: S2100 STEEL PER AMS6440, OR E52100 STEEL PER FED-STD-66.
BALLS: S2100 STEEL PER AMS6440 OR S1100 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.
SEAL RETAINERS: ANY CORROSION RESISTANT STEEL.
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 MS27641 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.
- (F) 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 I, CLASS 2, WITH A MINIMUM THICKNESS OF .0003 TO .0006 INCHES.
6. RADIAL INTERNAL CLEARANCE: WITHOUT DESIGNATOR "R" THE PART NUMBER INDICATES .0004 TO .0010
WITH DESIGNATOR "R" THE PART NUMBER INDICATES .0002 TO .0005.
7. RADIAL ECCENTRICITY: INNER RING, .0010 MAX, OUTER RING, .0016 MAX.
8. LATERAL ECCENTRICITY: INNER RING, .0010 MAX, OUTER RING, .0016 MAX.
9. PART NUMBER: THE PART NUMBER SHALL BE SEQUENCED LEFT TO RIGHT WITH DESIGNATIONS IN THE FOLLOWING SEQUENCE:

EXAMPLE OF PART NUMBER:

MS27641-4RG = BEARING, BALL AIRFRAME, ANTIFRICTION, INTERMEDIATE DUTY, .2500
INCH BORE, .0002 TO .0005 RADIAL CLEARANCE, FILLED 80% MINIMUM
WITH MIL-G-23827, 250°F MAX.

— LUBRICANT DESIGNATOR (SEE LUBRICANT REQUIREMENTS)

— RADIAL INTERNAL CLEARANCE DESIGNATOR (SEE RADIAL INTERNAL CLEARANCE REQUIREMENTS)

— DASH NUMBER (SEE TABLE I)

— MILITARY SPECIFICATION SHEET NUMBER

NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES.
2. THIS SPECIFICATION TAKES PRECEDENCE OVER ANY OTHER DOCUMENTS REFERENCED HEREIN.
3. FOR EXISTING INVENTORY, CADMIUM PLATED BEARINGS ARE ACCEPTABLE.
4. THE PARTS COVERED BY MS20201 ARE CANCELLED BY MS27641. USE MS27641 FOR NEW DESIGN AND REPLACEMENT.

PREPARING ACTIVITY: NAVY-AS CUSTODIANS: ARMY-AV NAVY-AS AIR FORCE-99 DLA- REVIEW: ARMY-AR,AT,MI AIR FORCE-84, DLA-IS ARMY-ME PROJECT NUMBER: 3110-0927	MILITARY SPECIFICATION SHEET TITLE BEARING, BALL, AIRFRAME, ANTI-FRICTION, INTERMEDIATE DUTY	SPECIFICATION SHEET NUMBER MS27641 21 JUNE 95 REV F SUPERSEDING MS27641 E 05 DEC 94 AMSC- N/A FSC 3110
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