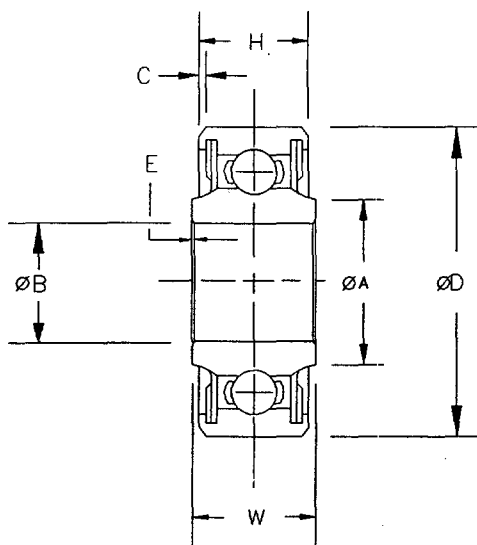


THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODISS SPECIFIED IN THE SOLICITATION: MIL-B-7949

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

Form Approved
OMB No. 0704-0188



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)
	BORE +.0000 -.0005	OUTSIDE DIAMETER +.0000 -.0005	WIDTH INNER RING +.000 -.005	WIDTH OUTER RING +.000 -.005	SHOULDER DIAMETER INNER RING (APPROX)	CORNER CHAMFER x 45						CASE I	CASE II	
						INNER RING BORE +.015 -.000		OUTER RING O.D. +.015 -.000						
						7/ 8/	2/	1/ 2/	1/					
-3A	.1900	.6250	.297	.234	.297	.005	.016	705	385	705	705	.01		
-3B	.1900	.7774	.297	.270	.332	.005	.024	1090	600	1090	1090	.02		
-4A	.2500	.7500	.438	.312	.372	.005	.016	1090	600	1090	1090	.03		
-4B	.2500	.8750	.438	.375	.423	.005	.022	1710	800	1710	1710	.04		
-4C	.2500	.9014	.484	.335	.390	.005	.034	1710	800	1710	1710	.04		
-5A	.3125	.8750	.625	.375	.455	.005	.022	1710	800	1710	1710	.04		
-5B	.3125	.9375	.625	.563	.455	.005	.022	3420	1030	3250	2800	.07		
-8	.5000	1.6875	.750	.563	.768	.005	.032	11800	5200	9320	7730	.24		
-10	.6250	1.1875	.438	.375	.769	.005	.022	2440	1100	2420	2180	.06		

- ALL DIMENSIONS TO BE MET AFTER PLATING.
- OUT-OF-ROUND TOLERANCES: BORE: +.0002, -.0007; OUTER DIA.: +.0005, -.0010.
- A RADIUS GIVING APPROXIMATELY THE SAME GRIP FOR STAKING THE BEARING IN THE HOUSING WILL BE ACCEPTABLE.
- A RADIUS GIVING APPROXIMATELY THE SAME FILLET CLEARANCE WILL BE ACCEPTABLE.
- CASE I = LOAD FIXED WITH RESPECT TO OUTER RING.
CASE II = LOAD FIXED WITH RESPECT TO INNER RING.
- THESE RATINGS ARE FOR OPERATION UP TO 250°F. FOR OPERATION UP TO 350°F, THE RATINGS SHALL BE REDUCED BY 20%.
- 5B ONLY - DOUBLE ROW.
- 8 ONLY - FULL TYPE - NO RETAINER.

(B) DENOTES CHANGES

INCH-POUND

PREPARING ACTIVITY: NAVY-AS

CUSTODIANS: ARMY-Av NAVY-AS

AIR FORCE-99 DLA-

REVIEW: ARMY-AR, NAVY-SH, AF-84, DLA-IS

PROJECT NUMBER: 3110-0924

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

MILITARY SPECIFICATION SHEET

TITLE

BEARING, BALL, AIRFRAME,
ANTI-FRICTION, PULLEY

SPECIFICATION SHEET NUMBER

MS21443

21 JUNE 95
REV B

SUPERSEDING

MS21443A

05 DEC 94

AMSC- N/A

FSC 3110

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REQUIREMENTS:

1. MATERIAL: RINGS: 52100 STEEL PER AMS 6440 OR E52100 STEEL PER FED-STD-66.
BALLS: 52100 STEEL PER AMS 6440 OR 51100 STEEL PER AMS 6449, OR E51100 OR E52100 STEEL PER FED-STD-66.
BALL RETAINER: COLD ROLLED STEEL.
SEALS: POLYTETRAFLUOROETHYLENE PER AMS 3652 OR POLYTETRAFLUOROETHYLENE SHEET, GLASS FABRIC REINFORCED PER AMS 3666.
SEAL RETAINERS: STEEL, CORROSION RESISTANT.
2. REMOVABLE SEALS ARE REQUIRED.
3. 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 MS21443 DASH NUMBER. MIL-G-23827 SHALL NOT BE USED FOR OPERATION UP TO 250°F.
4. HARDNESS: HEAT TREAT RINGS AND BALLS TO ROCKWELL "C" 60 TO 66 AND STABILIZE FOR OPERATION AT 250°F.
5. SURFACE ROUGHNESS: RACEWAYS AND BALLS -8 MICROINCHES R_a PER ANSI/ASME B46.1.
- ⑥ 6. PLATING: ALL EXTERNAL SURFACES EXCEPT BORE, SEALS AND SEAL RETAINERS, ZINC-NICKEL PER AMS 2417, TYPE 2, OR CADMIUM PLATED IN ACCORDANCE WITH QQ-P-416, TYPE I, CLASS 2, A THICKNESS OF .0003 TO .0006 INCHES.
7. RADIAL INTERNAL CLEARANCE: .0004 TO .0010.
8. RADIAL AND 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:
MS21443-3A = BEARING, BALL AIRFRAME ANTIFRICTION, EXTRA LIGHT DUTY, PRECISION, .1900 INCH BORE,
FILLED 80% MINIMUM WITH MIL-G-23827 LUBRICANT, 250°F.
 - LUBRICANT DESIGNATOR (SEE LUBRICANT REQUIREMENTS)
 - DASH NUMBER (SEE TABLE I)
 - MILITARY SPECIFICATION SHEET NUMBER

NOTES:

1. ALL 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 TAKES 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, NAVY-SH, AF-84, DLA-IS	MILITARY SPECIFICATION SHEET TITLE BEARING, BALL, AIRFRAME, ANTIFRICTION, PULLEY TYPE	SPECIFICATION SHEET NUMBER MS21443 21 JUNE 95 REV B SUPERSEDING MS21443A 05 DEC 94 AMSC- N/A FSC 3110
PROJECT NUMBER: 3110-0924 DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.		Page <u>2</u> of <u>2</u>