

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

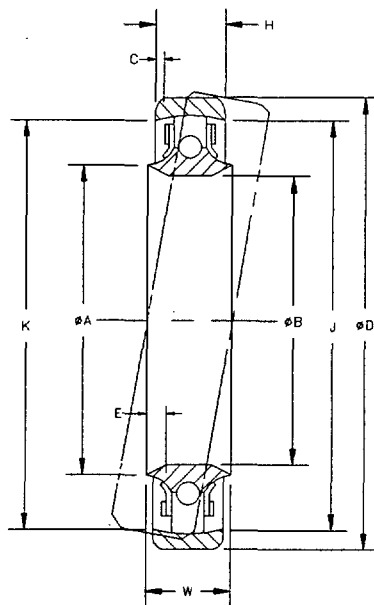


TABLE I. DIMENSIONS AND LOADS

WS DASH NO.	$\frac{7}{2}$ $\frac{2}{2}$ BORE		$\frac{1}{2}$ $\frac{2}{2}$ OUTSIDE DIAMETER		$\frac{1}{1}$ WIDTH INNER RING	$\frac{1}{1}$ WIDTH OUTER RING	ϕA SHOULDER DIAMETER INNER RING APPROX.	$\frac{3}{3}$ $\frac{4}{4}$ INNER & OUTER RING CORNER CHAMFER	K	J	L° MAX	RADIAL LIMIT LOAD RATING LBS	THRUST LIMIT LOAD RATING LBS	$\frac{5}{5}$ RADIAL LOAD RATING (LBS.) FOR AVERAGE LIFE OF 10,000 COMPLETE 90° CYCLES		WEIGHT POUNDS (APPROX)	MAXIMUM STARTING TORQUE (INCH-OZ)
	+0.0000 -0.0010	+0.0000 -0.0010	+0.0000 -0.0010	+0.0000 -0.0010	+0.000 -0.005	+0.000 -0.005		+0.015 -0.000						CASE I	CASE II		
-16	1.0000	1.9375					1.141		1.709	1.740	7° 25'	8085	1600	4260	3960	.18	5
-21	1.3130	2.2500					1.477		2.028	2.052	6° 30'	9840	2000	4590	4290	.20	7
-23	1.4380	2.3750					1.575		2.155	2.178	6°	10500	2200	4650	4360	.22	8
-25	1.5630	2.5000			.437	.375	1.693	.024	2.282	2.302	5° 45'	11300	2300	4680	4420	.25	9
-29	1.8130	2.7500					1.931		2.535	2.552	5°	12700	2600	4760	4530	.27	12
-33	2.0630	3.0000					2.247		2.787	2.802	5°	14400	2900	4820	4630	.30	14
-37	2.3130	3.2500					2.468		3.039	3.052	4° 30'	15600	3200	4880	4690	.33	17
-47	2.9380	4.1250					3.093		3.846	3.865	4° 30'	24700	5000	6660	6390	.64	24
-48	3.0000	4.2500			.531	.469	3.222	.039	3.972	3.990	4°	27500	5500	8150	7840	.69	25
-49	3.0630	4.2500					3.222		3.972	3.990	4°	27500	5500	8150	7840	.69	26

1/ ALL DIMENSIONS TO BE MET AFTER PLATING.

2/ OUT-OF-ROUNDNESS: BORE: +.0003, -0.0013 OUTER DIAMETER: +.0010, -.0020.

3/ A RADIUS GIVING APPROXIMATELY THE SAME GRIP FOR STAKING THE BEARING IN THE HOUSING IS ACCEPTABLE IN LIEU OF THE 45° FLAT SURFACE CHAMFER FOR DIMENSION C.

4/ A RADIUS GIVING APPROXIMATELY THE SAME FILLET CLEARANCE IS ACCEPTABLE IN LIEU OF THE 45° FLAT SURFACE CHAMFER FOR DIMENSION E.

5/ CASE I = LOAD IS FIXED WITH RESPECT TO THE OUTER RING.
CASE II = LOAD IS FIXED WITH RESPECT TO THE INNER RING.

6/ THESE RATINGS ARE FOR OPERATION UP TO 250° F. WHEN SUBJECT TO OPERATION UP TO 350° F, THE RATINGS SHALL BE REDUCED BY 20%.

7/ BORE TOLERANCE FOR -16 IS +.0000 -0.0005.

(E) DENOTES CHANGES

INCH-POUND

PREPARING ACTIVITY: NAVY-AS

CUSTODIANS: ARMY- AV NAVY-AS

AIR FORCE- 99 DLA-

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

USER:

PROJECT NUMBER: 3110-0932

MILITARY SPECIFICATION SHEET

TITLE

BEARING, BALL, AIRFRAME,
ANTI-FRICTION, EXTERNAL SELF ALIGNING,
EXTRA LIGHT DUTY

SPECIFICATION SHEET NUMBER

MS27648

21 JUNE 95
REV E

SUPERSEDING

MS27648 D

05 DEC 94

AMSC- N/A

FSC -3110

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

Page 1 of 2

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 DODISS SPECIFIED IN THE SOLICITATION: MIL-B-7949

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Form Approved
OMB No. 0704-0188

REQUIREMENTS:

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 MS276478 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 MICROINCHES R_a PER ANSI/ASME B46.1.
- (E) 5. PLATING: ALL EXTERNAL SURFACES EXCEPT THE BORE ID OF SELF ALIGNING OUTER RING, OD OF OUTER RING 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 THICKNESS OF .0003 TO .0006.
6. RADIAL INTERNAL CLEARANCE: SHALL BE .0003 - .0010. THIS DOES NOT INCLUDE RADIAL LOOSENESS BETWEEN THE BEARING OUTER RING AND THE SELF-ALIGNING RING.
7. PART NUMBER: THE PART NUMBER SHALL BE SEQUENCED LEFT TO RIGHT WITH DESIGNATIONS IN THE FOLLOWING SEQUENCE:

MS27648-16G = BEARING, BALL, AIRFRAME, ANTIFRICTIONS, EXTERNAL SELF-ALIGNING, EXTRA LIGHT DUTY, 1.0000 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
8. REMOVABLE SEALS ARE REQUIRED.

NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES.
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,AT,ME,MI AF-84, DLA-IS USER: PROJECT NUMBER: 3110-0932	MILITARY SPECIFICATION SHEET TITLE BEARING, BALL, AIRFRAME, ANTI-FRICTION, EXTERNAL SELF ALIGNING, EXTRA LIGHT DUTY	SPECIFICATION SHEET NUMBER MS27648 21 JUNE 95 REV E SUPERSEDING MS27648 D 05 DEC 94 AMSC- N/A FSC -3110
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