

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 DODSS SPECIFIED IN THE SOLICITATION: MIL-B-399D

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

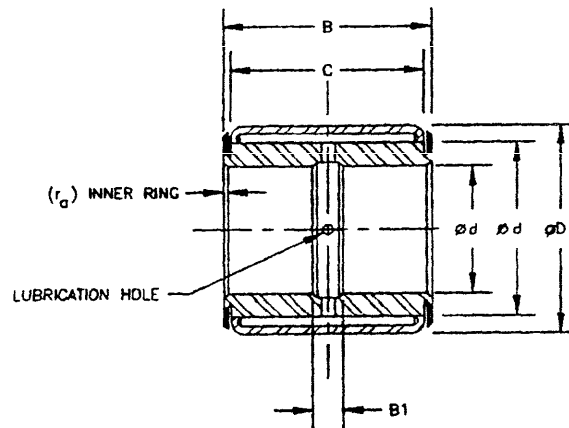


TABLE I

Dimensions in inches

| Dash | ϕd Bore | ϕD Outer Ring Outside Dia. 2/ | B Over- all Width | c Outer Ring Width | ϕd_1 Washer Outside Dia. | B1 Lubri- cation Groove Width | r_a 1/ Fillet Max. | Radial Internal Clearance Max. | Limit Load Rating Lbs 3/ | Mass (approx) lb |
|------|------------------|---|-------------------------|--------------------------|--------------------------------------|---|----------------------------|---|-----------------------------------|------------------------|
| -3 | .1900 | .6250 | .625 | .500 | .562 | None | .022 | .0015 | 679 | .040 |
| -4 | .2500 | .6250 | .562 | .500 | .562 | None | .022 | .0015 | 878 | .025 |
| -5 | .3125 | .6875 | .625 | .500 | .625 | None | .022 | .0015 | 988 | .050 |
| -6 | .3750 | .7500 | .812 | .750 | .688 | .188 | .022 | .0015 | 1920 | .060 |
| -7 | .4375 | .8125 | .875 | .750 | .750 | .188 | .032 | .0015 | 2110 | .090 |
| -8 | .5000 | 1.0000 | .875 | .750 | .938 | .188 | .032 | .0015 | 2350 | .120 |
| -10 | .6250 | 1.1250 | .875 | .750 | 1.062 | .250 | .032 | .0015 | 2690 | .150 |
| -12 | .7500 | 1.2500 | 1.125 | 1.000 | 1.188 | .250 | .032 | .0015 | 4480 | .210 |
| -14 | .8750 | 1.3750 | 1.125 | 1.000 | 1.312 | .375 | .032 | .0015 | 5000 | .240 |
| -16 | 1.0000 | 1.5000 | 1.125 | 1.000 | 1.438 | .375 | .032 | .0015 | 5510 | .270 |
| -20 | 1.2500 | 1.8750 | 1.375 | 1.250 | 1.812 | .375 | .032 | .0017 | 8180 | .300 |

TABLE II

Dimensions in millimeters

| Dash NO. | ϕd Bore | ϕD Outer Ring Outside Dia. | B Over- all Width | c Outer Ring Width | ϕd_1 Washer Outside Dia. | B1 Lubri- cation Groove Width | r_a 1/ Fillet Max. | Radial Internal Clearance Max. | Limit Load Rating N | Mass (approx) kg |
|----------|------------------|--|-------------------------|--------------------------|--------------------------------------|---|----------------------------|---|------------------------------|------------------------|
| -3 | 4.826 | 15.875 | 15.88 | 12.70 | 14.27 | None | .6 | .038 | 3020 | .018 |
| -4 | 6.350 | 15.875 | 14.27 | 12.70 | 14.27 | None | .6 | .038 | 3910 | .011 |
| -5 | 7.938 | 17.462 | 15.88 | 12.70 | 15.88 | None | .6 | .038 | 4390 | .023 |
| -6 | 9.525 | 19.050 | 20.62 | 19.05 | 17.48 | 4.78 | .6 | .038 | 8540 | .027 |
| -7 | 11.112 | 20.638 | 22.22 | 19.05 | 19.05 | 4.78 | .8 | .038 | 9390 | .041 |
| -8 | 12.700 | 25.400 | 22.22 | 19.05 | 23.82 | 4.78 | .8 | .038 | 10500 | .055 |
| -10 | 15.875 | 28.575 | 22.22 | 19.05 | 26.97 | 6.35 | .8 | .038 | 12000 | .068 |
| -12 | 19.050 | 31.750 | 28.58 | 25.40 | 30.18 | 6.35 | .8 | .038 | 19900 | .095 |
| -14 | 22.223 | 34.925 | 28.58 | 25.40 | 33.32 | 9.52 | .8 | .038 | 22200 | .109 |
| -16 | 25.400 | 38.100 | 28.58 | 25.40 | 36.52 | 9.52 | .8 | .038 | 24500 | .123 |
| -20 | 31.750 | 47.625 | 34.92 | 31.75 | 46.02 | 9.52 | .8 | .043 | 36400 | .136 |

1/ THE CHAMFER ON BEARINGS MUST CLEAR THE MAXIMUM FILLET RADIUS GIVEN IN THE TABLE. THIS SPECIFICATION DOES NOT CONTROL BEARING CHAMFER CONTOURS.

2/ DO NOT MEASURE O.D. WHEN BEARING IS IN FREE STATE. DIMENSIONS ABOVE ARE FOR BASIC OUTSIDE DIAMETER

INACTIVE FOR NEW DESIGN

(H) DENOTES CHANGES

INCH-POUND

PREPARING ACTIVITY: NAVY-AS

CUSTODIANS: ARMY- AT

NAVY- AS

AIR FORCE- 99

DLA-

REVIEW: AF-B4 DLA-IS

USER:

PROJECT NUMBER: 3110-0855

DISTRIBUTION STATEMENT

MILITARY SPECIFICATION SHEET

TITLE

BEARING, ROLLER, NEEDLE-SINGLE ROW,
THIN SHELL, TYPE II, ANTIFRICTION

SPECIFICATION SHEET NUMBER

05 DEC 94

MS24462

REV H

SUPERSEDING

MS24462 C

17 JUN 77

AMSC- N/A

FSC 3110

A. Approved for public release; distribution is unlimited

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DD Form 672, MAY 88

PREVIOUS EDITIONS ARE OBSOLETE

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-3990

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

Form Approved
OMB No 0704-0188

TABLE III - TOLERANCE LIMITS

DIMENSIONS IN INCHES

| ϕ D BASIC BORE MEAN | | ALLOWABLE DEVIATION FROM ϕ OF SINGLE MEAN ϕ_{Dmp} | | ALLOWABLE DEVIATION FROM OVER- ALL WIDTH, B | | ALLOWABLE DEVIATION FROM WASHER OUTSIDE DIA, ϕ_{d_1} | | ALLOWABLE DEVIATION FROM LUBRI- CATION GROOVE WIDTH, B ₁ | | ϕ D BASIC OUTER RING OUTSIDE DIA | | ALLOWABLE DEVIATION FROM ϕ OF SINGLE MEAN ϕ_{Dmp} | | ALLOWABLE DEVIATION FROM OUTER RING WIDTH, C | |
|-----------------------------------|--------|---|----------------|---|-------|---|-------|--|-------|---|--------|---|--------|--|-------|
| OVER | INCL | HIGH | LOW | HIGH | LOW | HIGH | LOW | HIGH | LOW | OVER | INCL | HIGH | LOW | HIGH | LOW |
| .1250 | 1.2500 | + .0000 | -.005 -.005 | + .0000 | -.005 | + .010 | -.010 | + .0000 | -.062 | .5625 | 1.8750 | + .0005 | -.0005 | + .0000 | -.010 |

TABLE IV

DIMENSIONS IN MILLIMETERS

| ϕ D BASIC BORE MEAN | | ALLOWABLE DEVIATION FROM ϕ OF SINGLE MEAN ϕ_{Dmp} | | ALLOWABLE DEVIATION FROM OVER- ALL WIDTH, B | | ALLOWABLE DEVIATION FROM WASHER OUTSIDE DIA, ϕ_{d_1} | | ALLOWABLE DEVIATION FROM LUBRI- CATION GROOVE WIDTH, B ₁ | | ϕ D BASIC OUTER RING OUTSIDE DIA | | ALLOWABLE DEVIATION FROM ϕ OF SINGLE MEAN ϕ_{Dmp} | | ALLOWABLE DEVIATION FROM OUTER RING WIDTH, C | |
|-----------------------------------|--------|---|-------|---|------|---|------|--|-------|---|--------|---|-------|--|------|
| OVER | INCL | HIGH | LOW | HIGH | LOW | HIGH | LOW | HIGH | LOW | OVER | INCL | HIGH | LOW | HIGH | LOW |
| 3.175 | 31.750 | + .0000 | -.013 | + .0000 | -.13 | + .25 | -.25 | + .0000 | -1.60 | 14.288 | 47.625 | + .013 | -.013 | + .0000 | -.25 |

TABLE V OIL HOLE DATA

| BORE-DASH NO. | | NUMBER OF HOLES |
|---------------|------|-----------------|
| OVER | INCL | INNER RING |
| 2 | 5 | None |
| 5 | 10 | 2 |
| 10 | 20 | 4 |

REQUIREMENTS:

1. MATERIAL: STEEL, MIL-S-8690, FED. STD. NO. 66, AISI/SAE STEEL No. 50100, 51100 AND 52100.

(H) 2. FINISH:

A. PLATING: ZINC-NICKEL PLATE, AMS 2417, TYPE 2, OR CADMIUM PLATED IN ACCORDANCE WITH QQ-P-416, TYPE II, CLASS 2. TO A MINIMUM THICKNESS OF .0003 to .0006 INCHES.

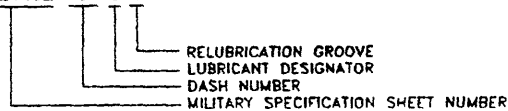
B. MACHINE FINISH: ANSI/ASME B46.1, SEE PROCUREMENT SPECIFICATION.

3. LUBRICANT: MIL-G-81322 OR MIL-G-23827. ALL BEARINGS SHALL BE PREPACKED WITH GREASE CONFORMING TO MIL-G-81322 UNLESS OTHERWISE SPECIFIED. ALL BEARINGS SHALL BE FILLED 80% MINIMUM WITH GREASE. IF MIL-G-23827 IS REQUIRED, ADD THE LETTER "L" AFTER THE MS21439 DASH NUMBER. IF A RELUBRICATION GROOVE IS DESIRED, ADD THE CODE "G" AFTER THE MS21439 DASH NUMBER AND BEFORE THE LUBRICANT DESIGNATOR IF APPLICABLE. MIL-G-23827 SHALL NOT BE USED FOR OPERATIONS WHERE TEMPERATURES EXCEED 250° F.

4. MARKING: THE MARKING SHALL CONSIST OF THE MS PART NUMBER AND THE MANUFACTURER'S IDENTIFICATION IN ACCORDANCE WITH MIL-STD-130.

5. PART NUMBER: THE MS PART NUMBER SHALL CONSIST OF THE MS NUMBER PLUS THE DASH NUMBER.

EXAMPLE: MS24462-106 L G



PREPARING ACTMITY: NAVY-AS
CUSTODIANS: ARMY- AT NAVY- AS
AIR FORCE- 99 DLA-
REVIEW: AF-84 DLA-IS
USER:
PROJECT NUMBER 3110-0855

MILITARY SPECIFICATION SHEET

TITLE
BEARING, ROLLER, NEEDLE-SINGLE ROW,
THIN SHELL, TYPE II, ANTI-FRICTION

SPECIFICATION SHEET NUMBER

MS24462 05 DEC 94
REV H

SUPERSEDING
MS24462 G 17 JUN 77

AMSC- N/A FSC 3110

DISTRIBUTION STATEMENT

A. Approved for public release, distribution is unlimited.

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6. PACKAGING: BEARINGS SHALL BE INDIVIDUALLY PACKAGED TO THE REQUIREMENTS OF MIL-P-197. PACKAGE MARKED WITH MANUFACTURER'S NAME OR TRADEMARK, AND DATE OF LUBRICATION BY MONTH AND YEAR.
7. DIMENSIONS: ALL DIMENSIONS ARE AFTER PLATING AND ARE IN INCHES.
8. LOAD RATING: THE LIMIT LOAD RATING LISTED CAN BE DEFINED AS THE MAXIMUM RADIAL LOAD WHICH CAN BE APPLIED TO A BEARING WITHOUT IMPAIRING THE SUBSEQUENT FUNCTIONING OF THE BEARING. THE ULTIMATE OR STATIC FRACTURE LOAD RATING IS NOT LESS THAN 1.5 TIMES THE LIMIT LOAD RATING. THE LOAD RATING AS A TRACK ROLLER IS THE LOAD THE BEARING WILL CARRY AS A TRACK ROLLER FOR AN L-10 LIFE OF 20,000 REVOLUTIONS.
9. RADIAL INTERNAL CLEARANCE SHALL BE .0018 MAX.
10. TEMPERATURE: BEARING OPERATING TEMPERATURE RANGE -65° F TO 350° F.

NOTES:

1. REFERENCED DOCUMENTS ARE THE ISSUES IN EFFECT AT THE DATE OF INVITATION FOR BID.
2. FOR DESIGN FEATURE PURPOSES, THIS TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS HEREIN.

| | | |
|---|---|--|
| PREPARING ACTIVITY: NAVY-AS CUSTODIANS: ARMY- AT NAVY- AS AIR FORCE- 99 DLA- REVIEW: AF-84 DLA-IS USER: PROJECT NUMBER 3110-0855 | MILITARY SPECIFICATION SHEET TITLE BEARING, ROLLER, NEEDLE-SINGLE ROW, THIN SHELL, TYPE II, ANTIFRICTION | SPECIFICATION SHEET NUMBER MS24462 05 DEC 94 REV H SUPERSEDING MS24462 G 17 JUN 77 AMSC- N/A FSC 3110 |
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