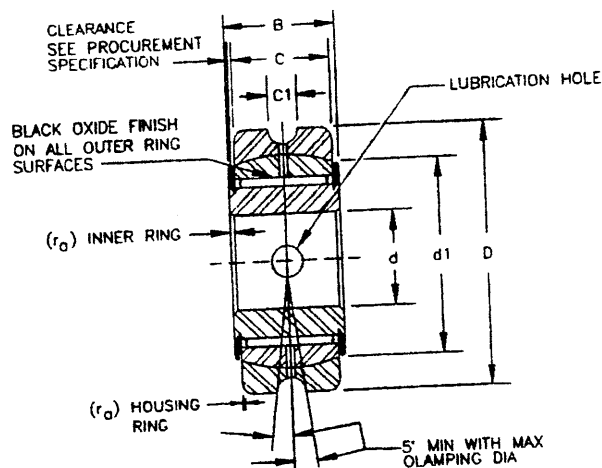


INCH DESIGN



DIMENSIONS IN INCHES

DASH NO.	ød BORE	D HOUSING RING OUTSIDE DIA.	D OVERALL WIDTH	C OUTER RING WIDTH	d1 WASHER OUTSIDE DIA.	C1 LUBRICATION GROOVE WIDTH	r_o 1/ FILLET MAX	TOTAL RADIAL PLAY MAX	d_o CLAMPING DIAMETER		LIMIT LOAD RATING LBF	MASS (APPROX) LB	HOUSING SIZE GAGE +0.0000 -0.0001	
									MAX	MIN			LOW	HIGH
-3	0.1900	0.8750	0.312	0.218	0.625	0.042	0.022	0.0029	0.525	0.438	1800	0.041	0.8742	0.8747
-4	0.2500	0.9375	0.375	0.281	0.687	0.093	0.022	0.0029	0.688	0.516	2870	0.053	0.9367	0.9372
-5	0.3125	1.0625	0.437	0.344	0.750	0.093	0.022	0.0029	0.734	0.578	4070	0.079	1.0617	1.0622

DIMENSIONS IN MILLIMETERS

DASH NO.	ød BORE	D HOUSING RING OUTSIDE DIA.	D OVERALL WIDTH	C OUTER RING WIDTH	d1 WASHER OUTSIDE DIA.	C1 LUBRICATION GROOVE WIDTH	r_o 1/ FILLET MAX	TOTAL RADIAL PLAY MAX	d_o CLAMPING DIAMETER		LIMIT LOAD RATING M	MASS (APPROX) KG	HOUSING SIZE GAGE +0.0000 -0.0003	
									MAX	MIN			LOW	HIGH
-3	4.826	22.225	7.92	5.54	15.88	1.37	0.6	0.074	15.88	11.13	8000	0.019	22.205	22.217
-4	6.350	22.812	9.52	7.14	17.45	2.36	0.6	0.074	17.48	13.11	12700	0.024	23.792	23.605
-5	7.938	26.988	11.10	8.74	19.05	2.36	0.6	0.074	18.64	14.68	18100	0.036	26.967	26.950

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

(H) DENOTES CHANGE

INCH-POUND

PREPARING ACTIVITY: NAVY-AS
CUSTODIANS: ARMY- AT NAVY-AS
AIR FORCE- 99 DLA-
REVIEW AF-84 DLA-IS
USER
PROJECT NUMBER: 3110-0856

MILITARY SPECIFICATION SHEET
TITLE
BEARING, ROLLER, NEEDLE-SINGLE ROW,
HEAVY DUTY, SELF-ALIGNING, TYPE III,
ANTIFRICTION, INCH

SPECIFICATION SHEET NUMBER
MS24463
05 DEC 94
REV H
SUPERSEDING
MS24463G 17 JUN 77
AMSC- N/A FSC 3110

DISTRIBUTION STATEMENT

A Approved for public release, distribution is unlimited

Page 1 of 2

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 DODDS SPECIFIED IN THE SOLICITATION: MIL-B-3990

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

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Form Approved
OMB No. 0704-0188

TABLE I-TOLERANCE LIMITS

#d BASIC BORE		ALLOWABLE DEVIATION FROM d OF SINGLE MEAN DIA, d		ALLOWABLE DEVIATION FROM OVER-- ALL WIDTH, B		ALLOWABLE DEVIATION FROM WASHER OUTSIDE DIA, d ₁	
OVER	INCL	HIGH	LOW	HIGH	LOW	HIGH	LOW
0.1250	0.3125	+0	-0.0007	+0	-0.005	+0.010	-0.010

DIMENSIONS IN INCHES

#D BASIC OUTSIDE DIAMETER		ALLOWABLE DEVIATION FROM D OF SINGLE MASS DIA., D		ALLOWABLE DEVIATION FROM OUTER RING WIDTH, C		ALLOWABLE DEVIATION FROM LUBRI- CATION GROOVE WIDTH, C ₁	
OVER	INCL	HIGH	LOW	HIGH	LOW	HIGH	LOW
0.7500	1.0625	+0	-0.0005	+0	-0.005	+0.031	-0.031

DIMENSIONS IN MILLIMETERS

#d BASIC BORE		ALLOWABLE DEVIATION FROM d OF SINGLE MEAN DIA, d		ALLOWABLE DEVIATION FROM OVER-- ALL WIDTH, B		ALLOWABLE DEVIATION FROM WASHER OUTSIDE DIA, d ₁	
OVER	INCL	HIGH	LOW	HIGH	LOW	HIGH	LOW
3.175	7.938	+0	-0.0018	+0	-0.13	+0.25	-0.25

#D BASIC OUTSIDE DIAMETER		ALLOWABLE DEVIATION FROM D OF SINGLE MASS DIA., D		ALLOWABLE DEVIATION FROM OUTER RING WIDTH, C		ALLOWABLE DEVIATION FROM LUBRI- CATION GROOVE WIDTH, C ₁	
OVER	INCL	HIGH	LOW	HIGH	LOW	HIGH	LOW
19.050	26.988	+0	-0.013	+0	-0.13	+0.80	-0.80

TABLE II OIL HOLE DATA

BORE-DASH NO.		NUMBER OF HOLES		
OVER	INCL	INNER RING	OUTER RING	SPHERICAL HOUSING
2	5	NONE	2	2

REQUIREMENTS:

- MATERIAL: STEEL, MIL-S-8690, MIL-S-7493, QQ-S-624, QQ-S-631, QQ-S-700, FED STD NO. 66 4Si/SAE STEEL NO. 50100, 51100, 52100.
- PLATING: ZINC-NICKEL IN ACCORDANCE WITH AMS 2417, TYPE 2, OR CADMIUM PLATED IN ACCORDANCE WITH QQ-P-416, TYPE II, CLASS 2, WITH A MINIMUM THICKNESS OF .0003 INCHES, AND MAXIMUM THICKNESS OF .0006 INCHES.
- MACHINE FINISH: ANSI/ASME B46.1, SEE PRECUREMENT SPECIFICATION.
- LUBRICATION: GREASE CONFORMING TO MIL-G-B1322
- DIMENSIONS TO BE MET AFTER PLATING. REMOVE ALL BURRS AND SHARP EDGES.

NOTES:

- THIS STANDARD TAKES PRECEDENCE OVER ANY OTHER DOCUMENTS REFERENCED HEREIN.
- REFERENCED DOCUMENTS ARE THE ISSUES IN EFFECT AT THE DATE INVITATION FOR BID.
- 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 IN AIRFRAME APPLICATIONS. THE ULTIMATE OR STATIC FRACTURE LOAD RATING IS NOT LESS THAN 1.5 TIMES THE LOAD RATING.

PREPARING ACTIVITY: NAVY-AS
CUSTODIANS: ARMY-AT NAVY-AS
AIP FORCE-99 DLA-
REVIEW AF-84 DLA-IS
USER:
PROJECT NUMBER: 3110-0856

MILITARY SPECIFICATION SHEET

TITLE
BEARING, ROLLER, NEEDLE-SINGLE ROW,
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