

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-1990

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

Form Approved
OMB No. 0704-0188

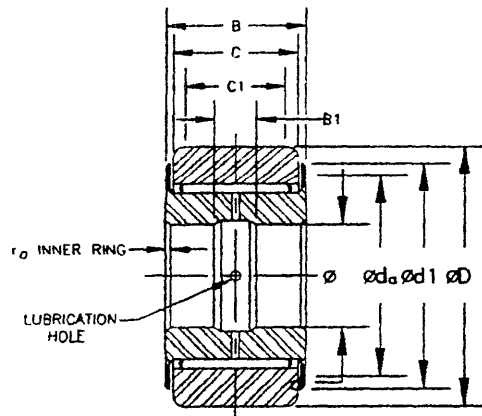


TABLE I DIMENSIONS IN INCHES

Dash No.	ϕd Bore	ϕD Outer Ring Outside Dia	B Overall width	C Outer Ring width	C_1 Track Contact Width Min	ϕd_1 Washer Outside Dia	ϕd_2 Min Clamping Dia	B_1 Lubrication Groove Width	r_a Fillet Max	Radial Internal Clearance Max.	Limit Load Rating lbs.	Rating As a Track Roller lbs.	Track Capacity 40 HRC lbs.	Mass Approx. lbs.
-3	.1900	.7500	.312	.218	.125	.688	.438	.094	.022	.0015	1200	900	290	.029
-4	.2500	.8750	.375	.281	.128	.750	.516	.125	.022	.0015	1910	1430	575	.049
-6	.3750	1.0625	.500	.375	.312	.938	.672	.188	.022	.0014	3600	2700	1000	.098
-8	.5000	1.3125	.625	.500	.438	1.188	.844	.168	.032	.0014	5780	4300	1785	.178
-10	.6250	1.5000	.750	.625	.562	1.375	.953	.250	.032	.0014	8530	6400	2600	.266
-12	.7500	1.7500	1.000	.875	.750	1.625	1.109	.250	.032	.0014	14200	10700	4050	.495
-14	.8750	2.0000	1.125	1.000	.875	1.875	1.219	.250	.032	.0014	19300	14400	5350	.713
-20	1.2500	2.5000	1.250	1.049	.938	1.906	1.625	.375	.032	.0014	25300	18900	7100	1.100
-24	1.5000	3.0000	1.500	1.299	1.172	2.875	1.984	.375	.032	.0015	37900	28400	10900	2.250
-28	1.7500	3.4375	1.500	1.299	1.172	3.312	2.281	.375	.032	.0015	44100	33000	12400	3.160
-32	2.0000	3.8750	1.500	1.299	1.172	3.750	2.562	.375	.032	.0015	48900	36700	14000	3.820
-36	2.2500	4.3125	1.500	1.299	1.172	4.188	2.859	.375	.032	.0017	55000	41200	15600	4.810
-40	2.5000	4.7500	1.500	1.299	1.172	4.625	3.109	.375	.032	.0017	59900	44900	17200	5.940
-44	2.7500	5.0000	1.500	1.299	1.172	4.875	3.344	.375	.032	.0017	64800	48600	18100	7.200

TABLE II DIMENSIONS IN MILLIMETERS

Dash No.	ϕd Bore	ϕD Outer Ring Outside Dia	B Overall width	C Outer Ring width	C_1 Track Contact Width Min	ϕd_1 Washer Outside Dia	ϕd_2 Min Clamping Dia	B_1 Lubrication Groove Width	r_a Fillet Max	Radial Internal Clearance Max.	Limit Load Rating N	Rating As a Track Roller N	Track Capacity 40 HRC N	Mass Approx. KG
-3	4.826	19.050	7.92	5.54	3.18	14.48	11.13	2.39	.6	.038	5300	4000	1290	.013
-4	6.350	22.225	9.52	7.14	5.54	19.05	13.11	3.18	.6	.038	8470	6360	2560	.022
-6	9.525	26.988	12.70	9.52	7.92	23.83	17.07	4.78	.6	.036	16000	12000	4450	.045
-8	12.700	33.338	15.88	12.70	11.13	30.18	21.44	4.78	.8	.036	25700	19100	7940	.081
-10	15.875	38.100	19.05	15.88	14.27	34.92	24.21	6.35	.8	.036	37900	28500	11500	.121
-12	19.050	44.450	25.40	22.22	19.05	41.28	28.17	6.35	.8	.036	63100	47600	18000	.225
-14	22.225	50.800	28.58	25.40	22.22	47.62	30.96	6.35	.8	.036	86000	64000	23800	.324
-20	31.750	63.500	31.75	26.54	23.83	48.41	41.28	9.52	.8	.036	113000	84100	31600	.500
-24	38.100	76.200	38.10	32.99	29.77	73.02	50.39	9.52	.8	.038	169000	126000	48500	1.020
-28	44.450	87.312	38.10	32.99	29.77	84.12	57.94	9.52	.8	.038	196000	147000	55200	1.440
-32	50.800	98.425	38.10	32.99	29.77	95.25	65.07	9.52	.8	.038	218000	163000	62300	1.740
-36	57.150	109.538	38.10	32.99	29.77	106.38	72.62	9.52	.8	.043	245000	183000	69400	2.156
-40	63.500	120.650	38.10	32.99	29.77	117.48	78.97	9.52	.8	.043	267000	200000	76500	2.700
-44	69.850	127.000	38.10	32.99	29.77	123.82	84.94	9.52	.8	.043	289000	216000	80500	3.270

✓ The chamfer on bearings must clear the maximum fillet radius given in the table.
This Specification does not control bearing chamfer contours

INACTIVE FOR NEW DESIGN: USE MS21438

① DENOTES CHANGES

INCH-POUND

PREPARING ACTIVITY: NAVY-AS		MILITARY SPECIFICATION SHEET		SPECIFICATION SHEET NUMBER	
CUSTODIANS: ARMY- AT	NAVY- AS	TITLE		MS24465	
AIR FORCE- 99	DLA-	BEARING, ROLLER, NEEDLE-SINGLE ROW, HEAVY DUTY, TRACK ROLLER, TYPE V, ANTIFRICTION, INCH		05 DEC 94 REV J	
REVIEW: MI, 84, DLA-IS				SUPERSEDING MS24465 H 21 NOV 80	
USER:				AMSC- N/A FSC 3110	
PROJECT NUMBER: 3110-0857					
DISTRIBUTION STATEMENT		A Approved for public release, distribution is unlimited.		Page 1 of 3	

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

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Form Approved
OMB No. 0704-0188

TABLE III-TOLERANCE LIMITS

DIMENSIONS IN INCHES

ød BASIC BORE		ALLOWABLE DEVIATION FROM d OF SINGLE MEAN ødmp		ALLOWABLE DEVIATION FROM OVER- ALL WIDTH, B		ALLOWABLE DEVIATION FROM WASHER OUTSIDE DIA, ød ₁		ALLOWABLE DEVIATION FROM LUBRI- CATION GROOVE WIDTH, B ₁		øD BASIC OUTER RING OUTSIDE DIA		ALLOWABLE DEVIATION FROM D OF SINGLE MEAN øDmp		ALLOWABLE DEVIATION FROM OUTER RING WIDTH, C	
OVER	INCL	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	OVER	INCL	HIGH	LOW	HIGH	LOW
.1250	2.7500	+0.000	-.0007	+0.000	-.005	+0.010	-.010	+0.000	-.062	.6875	5.0000	+0.000	-.001	+0.000	-.005

TABLE IV TOLERANCE LIMITS

DIMENSIONS IN MILLIMETERS

ød BASIC BORE		ALLOWABLE DEVIATION FROM d OF SINGLE MEAN ødmp		ALLOWABLE DEVIATION FROM OVER- ALL WIDTH, B		ALLOWABLE DEVIATION FROM WASHER OUTSIDE DIA, ød ₁		ALLOWABLE DEVIATION FROM LUBRI- CATION GROOVE WIDTH, B ₁		øD BASIC OUTER RING OUTSIDE DIA		ALLOWABLE DEVIATION FROM D OF SINGLE MEAN øDmp		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	69.850	+0.000	-.018	+0.000	-.13	+.25	-.25	+0.000	-1.60	17.462	127.000	+0.000	.025	+0.000	-.13

TABLE V OIL HOLE DATA

BORE-DASH NO.		NUMBER OF HOLES
OVER	INCL	INNER RING
-2	-10	2
-10	-20	4

REQUIREMENTS:

1. MATERIAL: STEEL, MIL-S-8690, ASTM A304, ASTM A576, ASTM A675, QQ-S-700, FED. STD. NO. 66, STEEL NO. 50100, 51100, 52100.

2. PLATING: O.D. AND SIDES OF OUTER RING, CHROMIUM PLATE, QQ-C-320, CLASS 2. THICKNESS: .013-.025 mm (.0005-.0010 INCHES).

OTHER SURFACES, EXCLUDING INNER RING BORE, ZINC-NICKEL PLATE AMS 2417, TYPE 2, OR CADMIUM PLATED IN ACCORDANCE WITH QQ-P-416, TYPE II, CLASS 2, WITH A THICKNESS OF .0003 TO .0006 INCHES.

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 MS24465 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: MS24465-10L G



PREPARING ACTMITY: NAVY-AS

CUSTODIANS: ARMY- AT NAVY- AS

AIR FORCE- 99 DLA-

REVIEW: MI, 84, DLA-IS

USER:

PROJECT NUMBER 3110-0857

DISTRIBUTION STATEMENT

MILITARY SPECIFICATION SHEET

TITLE

BEARING, ROLLER, NEEDLE-SINGLE ROW,
HEAVY DUTY, TRACK ROLLER, TYPE V,
ANTI-FRICTION, INCH

SPECIFICATION SHEET NUMBER

MS24465

05 DEC 94
REV J

SUPERSEDING

MS24465 H 21 NOV 80

AMSC- N/A

FSC 3110

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. THIS SPECIFICATION TAKES PRECEDENCE OVER ANY DOCUMENT REFERENCED HEREIN.
2. REFERENCED DOCUMENTS ARE THE ISSUE IN EFFECT AT THE DATE OF INVITATION FOR BID.

PREPARING ACTIVITY: NAVY-AS CUSTODIANS: ARMY- AT NAVY- AS AIR FORCE- 99 DLA- REVIEW MI, 84, DLA-IS USER PROJECT NUMBER: 3110-0857	MILITARY SPECIFICATION SHEET TITLE BEARING, ROLLER, NEEDLE-SINGLE ROW, HEAVY DUTY, TRACK ROLLER, TYPE V, ANTIFRICTION, INCH	SPECIFICATION SHEET NUMBER MS24465 05 DEC 94 REV J SUPERSEDING MS24465 H 21 NOV 80 AMSC - N/A FSC 3110
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