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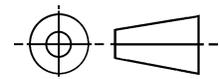
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THIRD ANGLE PROJECTION



ISSUED 2002-11

CUSTODIAN: ACBG/ROLLING ELEMENT SUBCOMMITTEE



AEROSPACE STANDARD

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

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SHEET 1 OF 4

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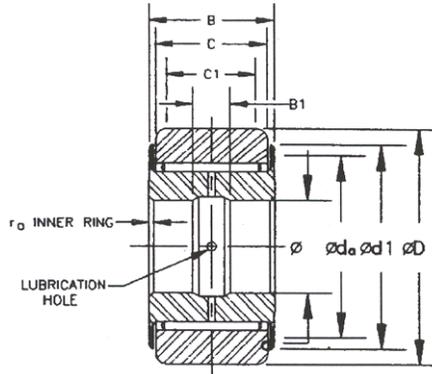


TABLE I DIMENSIONS IN INCHES

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 _o ^{1/} 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	.125	.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	.188	.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	2.984	.375	.032	.0015	37900	28400	10900	3.160
-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 _o ^{1/} 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	11600	.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	26.64	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	2.150
-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

1/ 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

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TABLE III—TOLERANCE LIMITS

DIMENSIONS IN INCHES

ø d BASIC BORE		ALLOWABLE DEVIATION FROM d OF SINGLE MEAN ø d _{mp}		ALLOWABLE DEVIATION FROM OVER- ALL WIDTH, B		ALLOWABLE DEVIATION FROM WASHER OUTSIDE DIA, ø d ₁		ALLOWABLE DEVIATION FROM LUBRI- CATION GROOVE WIDTH, B ₁		ø D BASIC OUTER RING OUTSIDE DIA		ALLOWABLE DEVIATION FROM D OF SINGLE MEAN ø D _{mp}		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	+ .0000	- .0007	+ .0000	- .005	+ 010	- 010	+ .0000	- .062	6875	5 0000	+ 0000	- .001	+ 0000	- .005

TABLE IV TOLERANCE LIMITS

DIMENSIONS IN MILLIMETERS

ø d BASIC BORE		ALLOWABLE DEVIATION FROM d OF SINGLE MEAN ø d _{mp}		ALLOWABLE DEVIATION FROM OVER- ALL WIDTH, B		ALLOWABLE DEVIATION FROM WASHER OUTSIDE DIA, ø d ₁		ALLOWABLE DEVIATION FROM LUBRI- CATION GROOVE WIDTH, E ₁		ø D BASIC OUTER RING OUTSIDE DIA		ALLOWABLE DEVIATION FROM D OF SINGLE MEAN ø D _{mp}		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	+ 0000	- 016	+ .0000	- .13	+ .25	- .25	+ 0000	- 1 00	17 462	127 000	+ 0000	- 025	+ 0000	- .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.