

FEDERAL SUPPLY CLASS
3110

REV.
A

AS21439

NOTICE

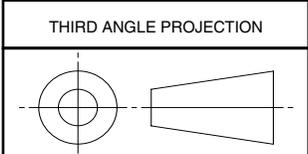
THIS DOCUMENT INCLUDES CADMIUM AS A PLATING MATERIAL. THE USE OF CADMIUM HAS BEEN RESTRICTED AND/OR BANNED FOR USE IN MANY COUNTRIES DUE TO ENVIRONMENTAL AND HEALTH CONCERNS. THE USER SHOULD CONSULT WITH LOCAL OFFICIALS ON APPLICABLE HEALTH AND ENVIRONMENTAL REGULATIONS REGARDING ITS USE.

UNDER DEPARTMENT OF DEFENSE POLICIES AND PROCEDURES, ANY QUALIFICATION REQUIREMENTS AND ASSOCIATED QUALIFIED PRODUCTS LISTS ARE MANDATORY FOR DOD CONTRACTS. ANY REQUIREMENT RELATING TO QUALIFIED PRODUCTS LISTS (QPL'S) HAS NOT BEEN ADOPTED BY SAE AND IS NOT PART OF THIS TECHNICAL REPORT.

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: AS39901.

SAENORM.COM : Click to view the full PDF of as21439a

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user." SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.



CUSTODIAN: AIRFRAME CONTROL BEARINGS GROUP



AEROSPACE STANDARD

(R) BEARING, ROLLER, NEEDLE, DOUBLE ROW,
HEAVY DUTY, TRACK ROLLER, SEALED, TYPE VI,
INCH

AS21439
SHEET 1 OF 4

REV.
A

ISSUED 1998-07 REVISED 2005-07

Copyright 2005 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Fax: 724-776-0790

Tel: 724-776-4970 (outside USA)
Email: custsvc@sae.org

SAE WEB ADDRESS: <http://www.sae.org>

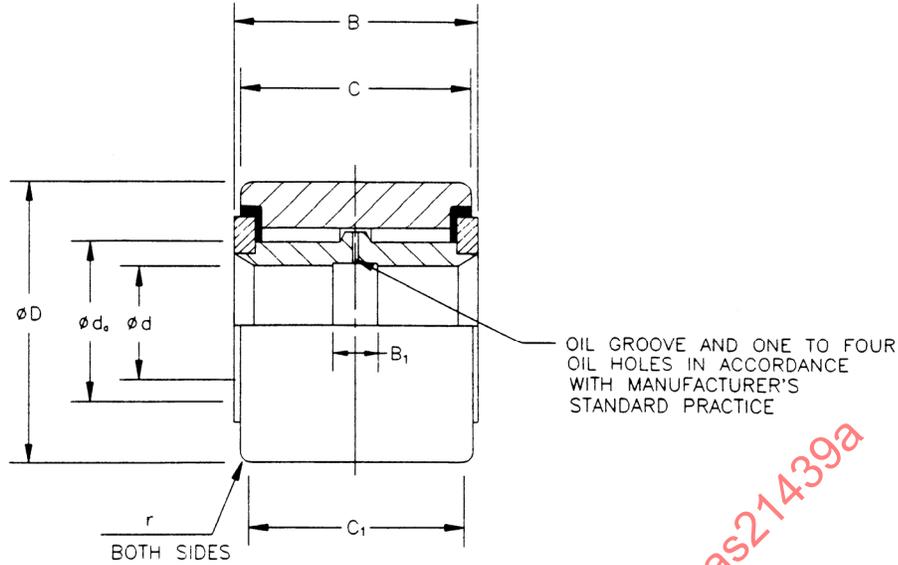


TABLE I. DIMENSIONS IN INCHES

DASH NO.	Ød BORE	ØD OUTSIDE DIA	C OUTER RING WIDTH	B OVERALL WIDTH	Ød _g CLAMPING DIA MIN	r RAD MIN.	B ₁ LUBRI-CATION GROOVE WIDTH	C ₁ MIN TRACK CONTACT WIDTH	CAPACITY AS A TRACK ROLLER LBS.	TRACK CAPACITY 40 HRC LBS.	LIMIT LOAD LBS.	MASS (APPROX.) LBS.
-106	.3750	1.1250	.940	1.000	.672	.022	.188	.750	5370	2600	7130	.24
-108	.5000	1.3750	1.190	1.250	.891	.032	.250	1.000	9370	4250	12500	.44
-110	.6250	1.6250	1.440	1.500	1.109	.032	.375	1.125	15000	5650	19900	.73
-112	.7500	1.8750	1.690	1.750	1.281	.032	.375	1.375	21400	7950	28500	1.13
-114	.8750	2.1250	1.940	2.000	1.469	.032	.375	1.625	28900	10650	38500	1.63
-116	1.0000	2.3750	2.190	2.250	1.578	.032	.375	1.797	33600	13200	44900	2.31
-120	1.2500	2.7500	2.440	2.500	1.844	.032	.375	2.047	44600	17300	59500	3.26
-124	1.5000	3.0000	2.690	2.750	1.984	.032	.375	2.297	53600	21200	71300	4.33
-128	1.7500	3.4375	2.940	3.000	2.281	.032	.375	2.547	69000	27000	92000	6.09
-132	2.0000	3.8750	2.940	3.000	2.562	.032	.375	2.547	76600	30400	102000	7.35

TABLE II. TOLERANCE VALUE

DIMENSIONS IN INCHES													
Ød BASIC BORE		ALLOWABLE DEVIATION FROM d OF SINGLE MEAN DIAMETER d _{mp}		ALLOWABLE DEVIATION FROM OVERALL WIDTH B		ALLOWABLE DEVIATION FROM LUBRICATION GROOVE WIDTH B ₁		ØD BASIC OUTER RING OUTSIDE DIA		ALLOWABLE DEVIATION FROM D OF SINGLE MEAN DIAMETER D _{mp}		ALLOWABLE DEVIATION FROM OUTER RING WIDTH C	
OVER	INCL	HIGH	LOW	HIGH	LOW	HIGH	LOW	OVER	INCL	HIGH	LOW	HIGH	LOW
.2500	2.0000	.0000	-.0007	.0000	-.010	.0000	-.062	1.0000	3.8750	+.001	-.001	.0000	-.005

1. MATERIAL:
 - a. INNER RING, OUTER RING, AND NEEDLES: 52100 STEEL PER AMS 6440, AMS 6444, AMS 6447 OR ASTM A295.
 - b. ENDWASHERS: 52100 STEEL PER AMS 6440, AMS 6444, AMS 6447 OR ASTM A295. AISI 1074 STEEL PER ASTM A684.
 - c. SEALS AND BACKING RINGS: ACETAL RESIN PER ASTM D 4181 POM 111 OR NYLON PER L-P-410, TYPE 6/6, WEAR RESISTANT GRADE, OR POLYESTER ELASTOMER. CONSTRUCTION OPTIONAL.
 - d. RETAINING RINGS: BRASS (OPTIONAL)
2. HEAT TREAT:
 - a. OUTER RING: HARDEN AND TEMPER TO 58-62 HRC
 - b. INNER RING: HARDEN AND TEMPER TO 60-64 HRC OR INDUCTION HARDEN TO 60-64 HRC FOR .015 MINIMUM DEPTH AND 50 HRC AT .030 MINIMUM DEPTH.
 - c. NEEDLES: HARDEN AND TEMPER TO 60-64 HRC
 - d. ENDWASHERS: HARDEN AND TEMPER TO 51-56 HRC.
3. FINISH OR PLATING:
 - a. OUTER RING - OUTER RING CHROME PLATED PER AMS-QQ-C-320, CLASS 2. O.D. AND O.D. CORNERS .0004 - .0010 INCH THICKNESS, FACES MINIMUM .0003 IN THICKNESS.
 - b. INNER RING - ALL EXTERNAL SURFACES, EXCEPT THE INNER RING BORE: ZINC-NICKEL IN ACCORDANCE WITH AMS 2417, TYPE 2, OR CADMIUM PLATED IN ACCORDANCE WITH AMS-QQ-P-416, TYPE I, CLASS 2, WITH A THICKNESS OF .0003 TO .0006 INCHES. OPTIONAL INNER RING FINISH BLACK OXIDE PER MIL-DTL-13924.
 - c. ENDPLATES - ALL EXPOSED SURFACES ZINC-NICKEL PLATED IN ACCORDANCE AMS 2417, TYPE 2, OR CADMIUM PLATED IN ACCORDANCE WITH AMS-QQ-P-416, TYPE I, CLASS 2, WITH A THICKNESS OF .0003 TO .0006 INCHES.
4. LUBRICANT: MIL-PRF-81322 OR MIL-PRF-23827. ALL BEARINGS SHALL BE PREPACKED WITH GREASE CONFORMING TO MIL-PRF-81322 UNLESS OTHERWISE SPECIFIED. ALL BEARINGS SHALL BE FILLED 80% MINIMUM WITH GREASE. IF MIL-PRF-23827 IS REQUIRED, ADD THE SUFFIX "G" TO THE MS PART NUMBER.
5. MARKING: THE MARKING SHALL CONSIST OF THE MS PART NUMBER AND THE MANUFACTURER'S CAGE CODE MARKED IN ACCORDANCE WITH MIL-STD-130. AND A LOT CONTROL NUMBER IF SPACE IS AVAILABLE.
6. PART NUMBER: THE PART NUMBER SHALL CONSIST OF THE MS SPECIFICATION NUMBER FOLLOWED BY A DASH NUMBER TAKEN FROM TABLE I AND APPLICABLE SUFFIX.

EXAMPLE: MS21439-106G
7. PACKAGING: BEARINGS SHALL BE INDIVIDUALLY PACKAGED TO THE REQUIREMENTS OF MIL-DTL-197. PACKAGE MARKED WITH MANUFACTURER'S NAME OR TRADEMARK, AND DATE OF LUBRICATION BY MONTH AND YEAR AND LOT CONTROL NUMBER.
8. DIMENSIONS: ALL DIMENSIONS ARE AFTER PLATING AND ARE IN INCHES.