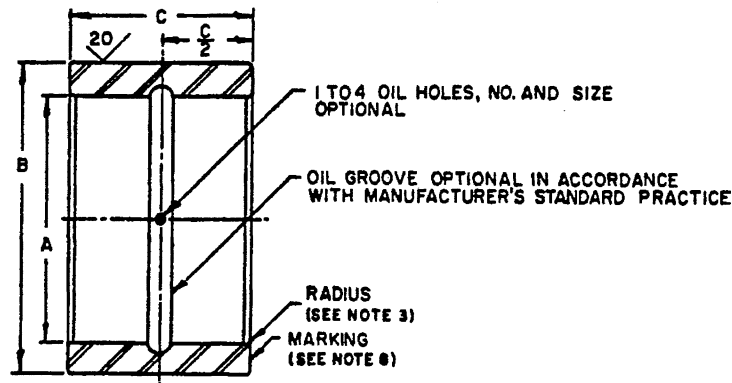


REVIEW ACTIVITIES: ARMY-AV, MI, ME; AF-99; DLA-19
 USER ACTIVITIES: ARMY-GL, AR; NAVY-MC, YD

FED. SUP CLASS
 3110



- (F) MATERIAL: STEEL, ALLOY OR CARBON, CARBURIZING GRADE, 4620, 4720, 3620, 8720, OR 1018, 1022 OR 1117; SAE E51100, SAE 52100 PER FED-STD-66 OR SAE J-404.
- HEAT TREATMENT: STEEL, 4620, 4720, 8620, 4720, 1018, 1022 OR 1117, CASE HARDENED TO RC 58-65. CASE DEPTH .025 MIN. STEEL, SAE E51100, SAE 52100, THROUGH HARDENED TO RC 58-65.
- SURFACE FINISH: SURFACE MARKED $\frac{20}{\sqrt{R}}$ SHALL HAVE MAXIMUM SURFACE ROUGHNESS PER ANSI B46.1.
- PROTECTIVE COATING: UNLESS OTHERWISE SPECIFIED, PLAIN (NOT PLATED) BEARINGS TO BE COATED WITH RUST PREVENTIVE FILM BY MANUFACTURER.

(F) NOTES:

1. DIMENSIONS ARE IN INCHES.
2. INTENDED FOR USE ON UNHARDENED SHAFTS IN CONJUNCTION WITH ROLLER BEARINGS SHOWN ON MS51961. TAPER IN SHAFT SHALL NOT EXCEED .0005 IN. PER INCH OF BEARING WIDTH.
3. RING MUST CLEAR THE MAX. SHAFT FILLET RADIUS SHOWN IN RAD. COLUMN. THE RADII OR CHAMFERS ON THE INNER DIAMETER OF THE RING MAY BE UNEQUAL. WHERE THE RADII ARE UNEQUAL THE SURFACE WITH THE LARGER RELIEF SHOULD BE MOUNTED AGAINST THE SHAFT SHOULDER.
4. GIVEN THE SHAFT DIAMETER AND RADIAL LOAD FOR A PARTICULAR BEARING APPLICATION, THE BORE DIAMETER OF THE INNER RING IS SELECTED FROM THE SHAFT SIZE, THE OUTSIDE DIAMETER AND WIDTH ARE CHOSEN BY DIMENSIONALLY MATING THE INNER RING WITH THE OUTER RING ON MS51961 WHICH EXHIBITS THE REQUIRED LOAD CAPACITY.
5. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
6. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BIDS OR REQUEST FOR PROPOSAL, EXCEPT THAT REFERENCED ADOPTED INDUSTRY DOCUMENTS SHALL GIVE THE DATE OF THE ISSUE ADOPTED.
7. THE MS PART NUMBER SHALL CONSIST OF THE MS NUMBER PLUS THE DASH NUMBER. EXAMPLE: MS51962-2
8. MARKING SHALL CONSIST OF THE MS PART NUMBER AND THE MANUFACTURER'S IDENTIFICATION IN ACCORDANCE WITH MIL-STD-130. ON INNER RINGS WHERE THE INSIDE DIAMETER RELIEF RADII ARE NOT EQUAL, THE MARKING SHALL APPEAR ON THE SURFACE WITH THE LESSER RADIUS.
9. THE USE OF RECYCLED MATERIALS WHICH MEET THE REQUIREMENTS OF THE APPLICABLE MATERIAL SPECIFICATIONS WITHOUT JEOPARDIZING THE INTENDED USE OF THE ITEM SHALL BE ENCOURAGED.

(F) DENOTES CHANGES

APPROVED 26 DEC 1963 REVISED (A) 19 DECEMBER 1966 (B) 21 NOVEMBER 1967 (C) 20 MAY 1969 (D) 23 MAY 1975 (E) 25 JULY 1975 (F) 30 APRIL 1980

P.A. ARMY-AT	TITLE	MILITARY STANDARD
Other Cust NAVY-OS AF-11	RING, BEARING, INNER: FOR NEEDLE ROLLER BEARING WITH THICK OUTER RING	MS51962
PROCUREMENT SPECIFICATION NONE	SUPERSEDES:	SHEET 1 OF 2

DD FORM 1327 17 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

3110-0575

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document when applicable.

MS DASH NO.	A BORE DIAMETER			B OUTSIDE DIAMETER			C WIDTH +.000 -.005	RAD.	F 2 MATING BEARING MS 51961 DASH NO.
	NOM	MIN	MAX	NOM	MIN	MAX			
- 1	3/8	.3746	.3750	5/8	.6241	.6245	.760	.025	- 1
- 2	1/2	.4996	.5000	3/4	.7486	.7493	.760	.040	- 2
- 3	1/2	.4996	.5000	3/4	.7488	.7493	1.010	.040	- 3
- 4	5/8	.6246	.6250	7/8	.8738	.8743	.760	.040	- 4
- 5	3/4	.7496	.7500	1	.9988	.9993	.760	.040	- 5
- 6	13/16	.8120	.8125	1	.9988	.9993	.760	.040	- 6
- 7	13/16	.8120	.8125	1	.9988	.9993	1.010	.040	- 7
- 8	7/8	.8745	.8750	1 1/8	1.1236	1.1241	1.010	.040	- 8
- 9	15/16	.9370	.9375	1 1/8	1.1236	1.1241	1.010	.040	- 9
- 10	1	.9995	1.0000	1 1/4	1.2485	1.2491	1.010	.040	- 10
- 11	1	.9995	1.0000	1 1/4	1.2485	1.2491	1.260	.040	- 11
- 12	1 1/8	1.1245	1.1250	1 3/8	1.3735	1.3741	1.010	.040	- 12
- 13	1 1/8	1.1245	1.1250	1 3/8	1.3735	1.3741	1.260	.040	- 13
- 14	1 3/16	1.1870	1.1875	1 1/2	1.4984	1.4990	1.260	.060	- 14
- 15	1 1/4	1.2495	1.2500	1 1/2	1.4984	1.4990	1.010	.060	- 15
- 16	1 1/4	1.2495	1.2500	1 1/2	1.4984	1.4990	1.260	.060	- 16
- 17	1 5/16	1.3120	1.3125	1 5/8	1.6234	1.6240	1.010	.060	- 17
- 18	1 3/8	1.3745	1.3750	1 5/8	1.6234	1.6240	1.260	.060	- 18
- 19	1 3/8	1.3745	1.3750	1 3/4	1.7484	1.7490	1.260	.060	- 19
- 20	1 7/16	1.4370	1.4375	1 3/4	1.7484	1.7490	1.260	.060	- 20
- 21	1 1/2	1.4995	1.5000	1 3/4	1.7484	1.7490	1.010	.060	- 21
- 22	1 1/2	1.4995	1.5000	1 3/4	1.7484	1.7490	1.260	.060	- 22
- 23	1 5/8	1.6245	1.6250	2	1.9982	1.9989	1.260	.060	- 23
- 24	1 3/4	1.7495	1.7500	2 1/4	2.2482	2.2489	1.510	.060	- 24
- 25	1 3/4	1.7495	1.7500	2 1/4	2.2482	2.2489	1.760	.060	- 25
- 26	1 15/16	1.9370	1.9375	2 1/2	2.4982	2.4989	1.760	.080	- 26
- 27	2	1.9995	2.0000	2 1/2	2.4982	2.4989	1.510	.080	- 27
- 28	2 3/16	2.1869	2.1875	2 3/4	2.7482	2.7489	1.760	.080	- 28
- 29	2 1/4	2.2494	2.2500	2 3/4	2.7482	2.7489	1.510	.080	- 29
- 30	2 3/8	2.3744	2.3750	3	2.9982	2.9989	1.760	.080	- 30
- 31	2 1/2	2.4994	2.5000	3	2.9982	2.9989	1.510	.080	- 31
- 32	2 3/4	2.7494	2.7500	3 1/4	3.2478	3.2487	1.760	.080	- 32
- 33	2 3/4	2.7494	2.7500	3 1/4	3.2478	3.2487	2.010	.080	- 33
- 34	2 15/16	2.9369	2.9375	3 1/2	3.4978	3.4987	2.010	.080	- 34
- 35	3 1/8	3.1244	3.1250	3 3/4	3.7478	3.7487	2.010	.100	- 35
- 36	3 1/4	3.2494	3.2500	3 3/4	3.7478	3.7487	2.010	.100	- 36
- 37	3 1/4	3.2494	3.2500	4	3.9976	3.9985	2.010	.100	- 37
- 38	3 3/8	3.3742	3.3750	4	3.9976	3.9985	2.010	.100	- 38
- 39	3 1/2	3.4992	3.5000	4 1/4	4.2476	4.2485	2.010	.100	- 39
- 40	3 3/4	3.7492	3.7500	4 1/4	4.2476	4.2485	2.010	.100	- 40
- 41	3 3/4	3.7492	3.7500	4 1/2	4.4976	4.4985	2.510	.100	- 41
- 42	4	3.9992	4.0000	5	4.9975	4.9985	2.510	.100	- 42
- 43	4 1/2	4.4992	4.5000	5 1/2	5.4975	5.4985	2.515	.100	- 43
- 44	4 1/2	4.4992	4.5000	5 1/2	5.4975	5.4985	3.015	.100	- 44
- 45	4 3/4	4.7492	4.7500	5 3/4	5.7473	5.7483	3.015	.120	- 45
- 46	5	4.9990	5.0000	6	5.9973	5.9983	2.515	.120	- 46
- 47	5	4.9990	5.0000	6	5.9973	5.9983	3.015	.120	- 47
- 48	5 1/2	5.4990	5.5000	6 1/2	6.4973	6.4983	2.515	.120	- 48
- 49	5 1/2	5.4990	5.5000	6 1/2	6.4973	6.4983	3.015	.120	- 49
- 50	6	5.9990	6.0000	7 1/4	7.2469	7.2481	3.015	.120	- 50

(F) (2) SEE NOTE 2 ON SHEET 1.

FOR NEEDLE ROLLER BEARING WITH THIN OUTER RING, USE INNER RING MS17130

P.A. Other Cust	TITLE RING, BEARING, INNER: FOR NEEDLE ROLLER BEARING WITH THICK OUTER RING	MILITARY STANDARD MS 51962
PROCUREMENT SPECIFICATION	SUPERSEDES:	SHEET 2 OF 2