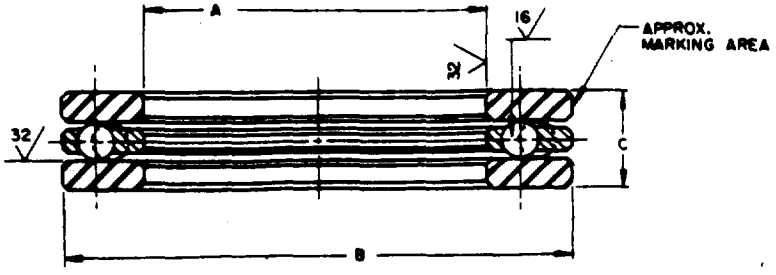
FED SUP CLASS
3110



NOTES:

1. MATERIAL: STEEL, ALLOY, HIGH-CARBON CHROMIUM, TYPE AISI E51100 OR TYPE AISI E52100 OF FEDERAL STD. NO. 66.
2. SURFACE FINISH: SURFACES MARKED ✓ SHALL HAVE SURFACE FINISH IN ACCORDANCE WITH USAS B46.1.
3. HEAT-TREAT: BEARING SHALL BE THROUGH HARDENED TO ROCKWELL C-58 TO C-66.
4. BEARING SHALL BE FREE OF ALL DEFECTS WHICH WOULD AFFECT ITS SERVICEABILITY.
5. * THE CORNER RADIUS OR CHAMFER ON BEARING MUST CLEAR THE MAXIMUM FILLET RADIUS.
6. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
7. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.
8. THE MS PART NUMBER CONSISTS OF THE MS NUMBER, PLUS THE DASH NUMBER. EXAMPLE: MS17162-1.
9. MARKING SHALL CONSIST OF THE MS PART NUMBER AND THE MANUFACTURER'S IDENTIFICATION IN ACCORDANCE WITH MIL-STD-130.

BEARING LOAD FORMULA:

THE DYNAMIC LOAD RATING (IN POUNDS) FOR ANY COMBINATION OF ROTATIONAL SPEED (IN RPM) AND RATING LIFE (IN HOURS) MAY BE FOUND FROM THE FOLLOWING FORMULA:

$$P_A = \frac{100\ C}{(60\ N\ H)^{1/3}}$$

WHERE:

P_A = REQUIRED DYNAMIC LOAD RATING - POUNDS
C = BASIC DYNAMIC LOAD RATING - POUNDS
N = ROTATIONAL SPEED - RPM
H = RATING LIFE - HOURS

THE ABOVE FORMULA IS IN AGREEMENT WITH THE LATEST AFBMA STANDARD METHOD OF EVALUATING LOAD RATINGS OF THRUST BALL BEARINGS.

BASIC LOAD RATINGS HAVE ALSO BEEN DETERMINED ACCORDING TO AFBMA STANDARD METHODS.

THE DEFINITION OF RATING LIFE IS THE NUMBER OF HOURS AT SOME CONSTANT SPEED OF THE INNER RING THAT 90 PERCENT OF A GROUP OF APPARENTLY IDENTICAL BEARINGS WILL COMPLETE OR EXCEED BEFORE THE FIRST EVIDENCE OF FATIGUE DEVELOPS.

Ⓐ ENTIRE STANDARD REVISED

REVIEW ACTIVITIES ARMY-WC
USER ACTIVITIES ARMY-MI ; NAVY-YD,MC

This military standard is mandatory 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.

APPROVED 13 JUNE 1960 REVISED Ⓐ 20 FEBRUARY 1968

P.A. ARMY-AT Other Cust AF - N	TITLE BEARING, BALL, THRUST: INCH SIZE, SINGLE DIRECTION, FLAT RACE SURFACE, STAGGERED BALL TYPE	MILITARY STANDARD MS17162
PROCUREMENT SPECIFICATION NONE	SUPERSEDES	SHEET 1 OF 2

DD FORM 672-1 (Continued)

PREVIOUS EDITION OF THIS FORM ARE OBSOLETE

This military standard is mandatory 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.

DASH NUMBER	A BORE INCH	A BORE TOLERANCE	B OUTSIDE DIAMETER INCH	B OUTSIDE DIAMETER TOLERANCE +.000	C HEIGHT INCH	C HEIGHT TOL ±	R* FILLET RADIUS MAX	BASIC DYNAMIC LOAD RATINGS POUNDS	BASIC STATIC LOAD RATINGS POUNDS	MIL-STD-102 CODE NUMBER
1	1/2	+.004 +.006	1-7/32	-.002	9/16	.005	.030	450	740	412x00816x0000
2	5/8	+.004 +.006	1-11/32	-.002	9/16	.005	.030	430	740	412x01013x0000
3	11/16	+.004 +.006	1-11/32	-.002	9/16	.005	.030	430	740	412x01101x0000
4	3/4	+.004 +.006	1-15/32	-.002	9/16	.005	.030	460	860	412x01207x0000
5	13/16	+.004 +.006	1-15/32	-.002	9/16	.005	.030	460	860	412x01305x0000
6	7/8	+.004 +.006	1-27/32	-.002	5/8	.005	.030	600	1530	412x01420x0000
7	1	+.005 +.007	1-31/32	-.002	5/8	.005	.030	850	1750	412x01621x0000
8	1-1/16	+.005 +.007	1-31/32	-.002	5/8	.005	.030	850	1750	412x01707x0000
9	1-1/8	+.005 +.007	2-3/32	-.002	5/8	.005	.030	890	1750	412x01810x0000
10	1-3/16	+.005 +.007	2-3/32	-.002	5/8	.005	.030	890	1750	412x01904x0000
11	1-1/4	+.005 +.007	2-11/32	-.002	5/8	.005	.030	870	1970	412x02010x0000
12	1-5/16	+.005 +.007	2-11/32	-.002	5/8	.005	.030	870	1970	412x02116x0000
13	1-3/8	+.005 +.007	2-15/32	-.002	5/8	.005	.030	920	2190	412x02237x0000
14	1-1/2	+.005 +.007	2-19/32	-.002	5/8	.005	.040	900	2190	412x02411x0000
15	1-9/16	+.005 +.007	2-19/32	-.002	5/8	.005	.040	890	2190	412x02502x0000
16	1-5/8	+.005 +.007	2-31/32	-.002	13/16	.005	.040	1380	3420	412x02614x0000
17	1-11/16	+.005 +.007	2-31/32	-.002	13/16	.005	.040	1380	3420	412x02707x0000
18	1-3/4	+.005 +.007	3-3/32	-.002	13/16	.005	.040	1380	3420	412x02812x0000
19	1-7/8	+.005 +.007	3-7/32	-.002	13/16	.005	.040	1420	3760	412x03011x0000
20	1-15/16	+.005 +.007	3-7/32	-.002	13/16	.005	.040	1420	3760	412x03107x0000
21	2	+.006 +.008	3-11/32	-.002	13/16	.005	.040	1400	3760	412x03217x0000
22	2-3/16	+.006 +.008	3-19/32	-.002	13/16	.005	.060	1630	4780	412x03505x0000
23	2-1/4	+.006 +.008	3-23/32	-.002	13/16	.005	.060	1680	5130	412x03615x0000
24	2-1/2	+.006 +.008	3-31/32	-.002	13/16	.005	.060	1710	5470	412x04008x0000
25	2-15/16	+.006 +.008	4-19/32	-.002	1	.005	.080	2290	7380	412x04703x0000
26	3	+.006 +.008	4-23/32	-.002	1	.005	.080	2290	7380	412x04815x0000
27	3-1/2	+.008 +.010	5-7/32	-.002	1	.010	.060	2460	8860	412x05607x0000

FSC 3110

APPROVED 13 JUNE 1960 REVISED (A) ENTIRE STANDARD REVISED

P.A. Army-AV
Other Cust AF-11

PROCUREMENT SPECIFICATION
NONE

SUPERSEDES

TITLE
BEARING, BALL, THRUST: INCH SIZE, SINGLE DIRECTION, FLAT RACE SURFACE, STAGGERED BALL TYPE

MILITARY STANDARD
MS17162

SHEET 2

DD FORM 1 SEP 61 672-1 (Continued)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE