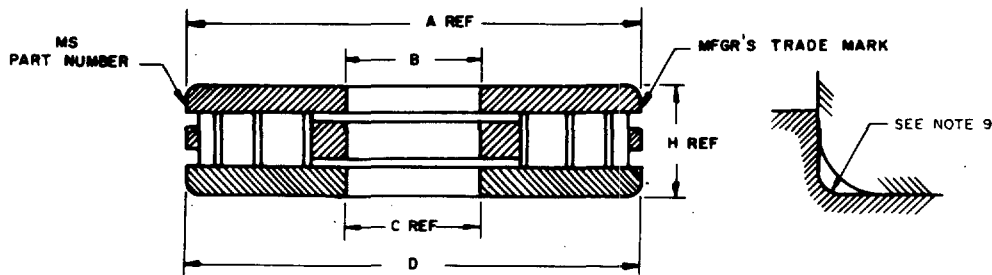


FED. SUP CLASS
3110.

MS DASH NO.	BORE			OUTSIDE DIAMETER			HEIGHT "H" REF	FILLET RADIUS "R"	MIL-STD-102 CODE NUMBER
	SMALL BORE		LARGE BORE "C" REF	LARGE O.D.		SMALL O.D. "A" REF			
	"B"	TOL. + .0000		"D"	TOL. - .0000				
1	1.0000	-.0005	1.062	2.1250	+ .0005	2.062	.8125	.031	461x01630x0000
2	1.1250	-.0005	1.187	2.2500	+ .0005	2.187	.8125	.031	461x01822x0000
3	1.2500	-.0006	1.312	2.3750	+ .0005	2.312	.8125	.031	461x02014x0000
4	1.3750	-.0007	1.437	2.8750	+ .0007	2.812	.8125	.031	461x02224x0000
5	1.5000	-.0007	1.562	3.0000	+ .0007	2.937	.8125	.031	461x02425x0000
6	1.6250	-.0008	1.687	3.2500	+ .0007	3.187	1.0000	.062	461x02622x0000
7	1.7500	-.0009	1.812	3.3750	+ .0009	3.312	1.0000	.062	461x02824x0000
8	1.8750	-.0009	1.937	3.5000	+ .0009	3.437	1.0000	.062	461x03018x0000
9	2.0000	-.0010	2.062	3.6250	+ .0009	3.562	1.0000	.062	461x03225x0000
10	2.1250	-.0010	2.187	3.7500	+ .0011	3.687	1.0000	.062	461x03416x0000
11	2.2500	-.0011	2.312	3.8750	+ .0011	3.812	1.0000	.062	461x03624x0000
12	2.3750	-.0011	2.437	4.0000	+ .0011	3.937	1.0000	.062	461x03809x0000
13	2.5000	-.0011	2.562	4.1250	+ .0013	4.062	1.0000	.062	461x04015x0000
14	2.6250	-.0012	2.687	4.3430	+ .0013	4.281	1.0000	.062	461x04213x0000

NOTES:

1. MATERIAL: ROLLERS AND RACES; STEEL ALLOY, HIGH CARBON CHROMIUM IN ACCORDANCE WITH TYPE AISI E51100 OR TYPE AISI E52100 OF FEDERAL STANDARD 66.
2. MATERIAL: RETAINER; BRASS, BRONZE, OR MANUFACTURER'S STANDARD COMMERCIAL PRACTICE.
3. HEAT-TREAT: ROLLERS AND RACES; ROCKWELL C58 TO C66.
4. SURFACE FINISH: SEE PROCUREMENT SPECIFICATION.
5. PROTECTIVE FINISH: UNLESS OTHERWISE SPECIFIED, A COATING OF RUST PREVENTIVE FILM SHALL BE APPLIED BY THE MANUFACTURER.
6. BEARINGS SHALL BE SUPPLIED WITHOUT LUBRICATION.
7. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES AS SHOWN OR ACCORDING TO AFMA STANDARDS.
8. BEARINGS DEPICTED CONFORM TO STANDARDS OF THE ANTI-FRICTION BEARING MANUFACTURERS ASSOCIATION.
9. BEARING MUST CLEAR MAX. HOUSING OR SHAFT FILLET RADIUS SHOWN IN "FILLET RADIUS" COLUMN.
10. FOR DESIGN FEATURE PURPOSES THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
11. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BID.
12. THE MS PART NUMBER SHALL CONSIST OF THE MS NUMBER PLUS THE DASH NUMBER. EXAMPLE: MS17103-14.
13. MARKING SHALL CONSIST OF THE MS PART NUMBER AND THE MANUFACTURER'S IDENTIFICATION IN ACCORDANCE WITH MIL-STD-130.

REDRAWN

(A) ENTIRE STANDARD REVISED

P.A. ARMY- AT	TITLE	MILITARY STANDARD
Other Cust NAVY-YD AF- B4	BEARING, ROLLER, THRUST, GROUND, SINGLE DIRECTION, INCH SIZE, FLAT RACE SURFACE, RIGID OR FLAT SEAT TYPE, WITH RETAINER	MS 17103
PROCUREMENT SPECIFICATION MIL-B-17380	SUPERSEDES: CAFX18	SHEET 1 OF 2

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

APPROVED 11 SEPT 1959 REVISED (A) 18 OCTOBER 1966

REVIEW ACTIVITIES: ARMY-WC; NAVY-YD ; AF-84;
USER ACTIVITIES: ARMY-MR,MU; NAVY-MC

This standard has been approved by the Department of Defense and 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.

FED. SUP CLASS
3110RATED THRUST LOAD CAPACITY IN POUNDS AT VARIOUS R.P.M.
(BASED ON A RATING LIFE OF 3000 HOURS)

MS DASH NO.	REVOLUTIONS PER MINUTE				
	10	25	100	500	1000
1	7200	5300	3350	1975	1550
2	9700	7150	4525	2650	2100
3	11250	8250	5225	3075	2425
4	13650	10050	6350	3725	2950
5	14700	10800	6800	3975	3150
6	23350	17150	10850	6375	5050
7	18900	13900	8750	5125	4075
8	22900	16850	10650	6275	4950
9	23500	17225	10900	6425	5075
10	23000	16900	10700	6300	4975
11	22900	16850	10650	6275	4950
12	27400	20150	12750	7500	5925
13	22450	16500	10400	6075	4825
14	31700	23300	14750	8675	6850

NOTE: FOR DIMENSIONAL AND OTHER PERTINENT DATA, SEE SHEET 1.**FORMULA:** THE FORMULA USED FOR COMPUTING THE ALLOWABLE THRUST LOAD AT RATING LIFE OTHER THAN 3000 HOURS AND/OR RPM'S OTHER THAN THOSE SHOWN ABOVE, IS AS FOLLOWS:

$$P_N = \frac{44}{(LN)^{.3}} P_{3000}$$

WHERE: P_N = ALLOWABLE LOAD AT N RPM'S P_{3000} = LOAD CAPACITY FOR RATING LIFE OF 3000 HOURS, 100 RPM (FROM TABLE ABOVE)

L = RATING LIFE IN HOURS

N = RPM

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.

APPROVED 11 SEPT 1959 REVISED (A) 18 OCTOBER 1966

P.A. ARMY-AT Other Cust NAVY-YD AF-84	TITLE BEARING, ROLLER, THRUST, GROUND, SINGLE DIRECTION INCH SIZE, FLAT RACE SURFACE, RIGID OR FLAT SEAT TYPE, WITH RETAINER	MILITARY STANDARD MS 17103
PROCUREMENT SPECIFICATION MIL-B-17380	SUPERSEDES: CAFX:8	SHEET 2