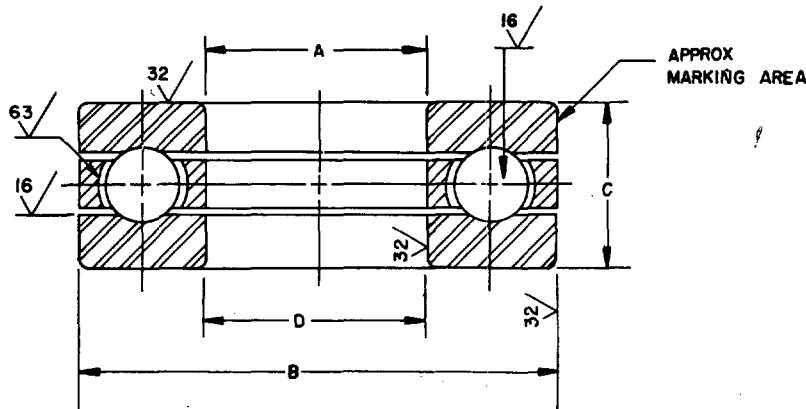


FED. SUP CLASS  
3110

## (C) REQUIREMENTS:

1. MATERIAL: STEEL, ALLOY, HIGH-CARBON CHROMIUM, TYPE AISI E51100 OR TYPE AISI E52100 OF FED-STD-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. BEARING MUST CLEAR MAXIMUM HOUSING OR SHAFT FILLET RADIUS AS SHOWN (✱) IN FILLET RADIUS COLUMN.
6. FORMULA: THE EQUIVALENT THRUST LOAD RATING (IN POUNDS) FOR ANY COMBINATION OF ROTATIONAL SPEED (IN RPM) AND RATING LIFE (IN HOURS) MAY BE FOUND FROM THE FOLLOWING FORMULA:

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

WHERE

$P_A$  = EQUIVALENT THRUST LOAD RATING - (POUNDS)  
 $C$  = BASIC DYNAMIC LOAD RATING - (POUNDS)  
 $N$  = ROTATIONAL SPEED - (RPM)  
 $H$  = RATING LIFE - (HOURS)

"EQUIVALENT THRUST LOAD" IS DEFINED AS THAT CONSTANT, CENTRAL, PURELY AXIAL LOAD WHICH, IF APPLIED TO A BEARING WITH ROTATING SHAFT WASHER AND STATIONARY HOUSING WASHER, WOULD GIVE THE SAME LIFE AS THAT WHICH THE BEARING WILL ATTAIN UNDER THE ACTUAL CONDITIONS OF LOAD AND ROTATION.

"RATING LIFE" IS DEFINED AS THE NUMBER OF HOURS AT SOME CONSTANT SPEED THAT 90% OF A GROUP OF APPARENTLY IDENTICAL BEARINGS WILL COMPLETE OR EXCEED BEFORE THE FIRST EVIDENCE OF FATIGUE DEVELOPS.

"BASIC DYNAMIC LOAD RATING" IS DEFINED AS THAT CONSTANT, CENTRAL, THRUST LOAD WHICH A GROUP OF APPARENTLY IDENTICAL BEARINGS CAN ENDURE FOR A RATING LIFE OF ONE MILLION REVOLUTIONS OF ONE OF THE BEARING WASHERS.

## REFERENCE: AFMA STANDARDS

7. THE MS PART NUMBER CONSISTS OF THE MS NUMBER, PLUS THE DASH NUMBER. EXAMPLE: MS17161-1.
8. MARKING SHALL CONSIST OF THE MS PART NUMBER AND THE MANUFACTURER'S IDENTIFICATION IN ACCORDANCE WITH MIL-STD-130.

## (C) NOTES:

1. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.
2. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BIDS OR REQUEST FOR PROPOSAL EXCEPT THAT REFERENCED ADOPTED INDUSTRY DOCUMENTS SHALL GIVE THE DATE OF THE ISSUE ADOPTED.
3. 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.

(C) DENOTES CHANGES

P.A. ARMY - AT Other Cust AF - 11	TITLE BEARING, BALL, THRUST: INCH AND METRIC SIZES, GROOVED RACE SURFACE RIGID OR FLAT SEAT TYPE	MILITARY STANDARD <b>MS17161</b>
PROCUREMENT SPECIFICATION NONE	SUPERSEDES:	SHEET 1 OF 6

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.

REVIEW ACTIVITIES: ARMY-AR, MI; DIA-IS  
 USER ACTIVITIES: NAVY-MC

APPROVED 8 JUNE 1960 REVISED (A) 20 FEBRUARY 1968 (B) 10 FEBRUARY 1969 (C) 30 JUNE 1980

FED. SUP CLASS  
3110

DASH NO.	A SMALL		BORE		D (MIN)		B OUTSIDE DIAMETER		C HEIGHT		R * FILLET RADIUS MAX REF	BASIC DYNAMIC LOAD RATINGS POUNDS	BASIC STATIC LOAD RATINGS POUNDS	MIL-STD-102 CODE NUMBER
	MM	INCH	TOLERANCE		MM	INCH	MM	INCH	MM	INCH				
1	1	.3750	-.0000 +.0008		10.2	.4063	30	1.1811	.5313	.005	.030	1220	1500	413x00609x0000
2	10	.3937	-.0004 +.0004		10.2	.4016	26	1.0236	.4724	.005	.020	1960	2720	443x01043x0000
3	10	.3937	-.0004 +.0004		10.2	.4016	26	1.0236	.4724	.005	.020	1910	2720	443x01062x0000
4	12	.4724	-.0004 +.0004		12.2	.4803	28	1.1024	.4724	.005	.020	1650	2500	443x01242x0000
5		.5000	+.0004 +.0006			.5000		1.2188	.5625	.005	.030	1810	3000	413x00816x0000
6		.5000	-.0000 +.0008			.5313		1.2813	.6250	.005	.030	2370	3500	413x00820x0000
7		.5625	+.0004 +.0006			.5625		1.2188	.5625	.005	.030	1790	3000	413x00904x0000
8	15	.5906	-.0004 +.0004		15.2	.5985	31	1.2205	.4724	.005	.020	1780	3000	443x01506x0000
9	15	.5906	-.0004 +.0004		15.2	.5985	35	1.3780	.5512	.005	.020	2260	3550	443x01536x0000
10		.6250	+.0004 +.0006			.6250		1.3438	.5625	.005	.030	1640	2750	413x01013x0000
11		.6250	-.0000 +.0008			.6563		1.4063	.6250	.005	.030	2250	3550	413x01018x0000
12	18	.7087	-.0004 +.0004		18.2	.7166	35	1.3780	.4724	.005	.020	1710	3000	443x01806x0000
13		.7500	+.0004 +.0006			.7500		1.4688	.5625	.005	.030	1860	3500	413x01207x0000
14		.7500	-.0000 +.0008			.7813		1.5313	.6250	.005	.030	2550	4440	413x01212x0000
15	20	.7874	-.0004 +.0004		20.2	.7953	37	1.4567	.4724	.005	.020	1670	3000	443x02006x0000
16	20	.7874	-.0004 +.0004		20.2	.7953	40	1.5748	.5512	.005	.020	2790	4880	443x02012x0000
17		.8125	+.0004 +.0006			.8125		1.4688	.5625	.005	.030	1840	3500	413x01305x0000
18	22	.8661	-.0004 +.0004		22.2	.8740	42	1.6335	.5512	.005	.020	2790	5320	443x02206x0000
19		.8750	-.0000 +.0008			.9063		1.6563	.6250	.005	.030	2790	4880	413x01411x0000
20		.8750	+.0004 +.0006			.8750		1.8438	.6250	.005	.030	2890	5320	413x01420x0000
21		.9375	+.0004 +.0006			.9375		1.8438	.6250	.005	.030	2870	5320	413x01504x0000
22	25	.9843	-.0004 +.0004		25.2	.9922	45	1.7717	.5512	.005	.020	2880	5320	443x02506x0000
23	25	.9843	-.0004 +.0004		25.2	.9922	48	1.8698	.6103	.005	.020	2880	5770	443x02556x0000
24		1.0000	-.0000 +.0008			1.0313		1.7813	.6250	.005	.030	2870	5270	413x01607x0000
25		1.0000	+.0005 +.0007			1.0000		1.9688	.6250	.005	.030	2810	5320	413x01621x0000
26		1.0000	+.0005 +.0007			1.0000		2.0625	.7500	.005	.030	4200	7630	413x01626x0000
27		1.0625	+.0005 +.0007			1.0625		1.9688	.6250	.005	.030	2800	5320	413x01707x0000
28		1.1250	+.0005 +.0007			1.1250		2.1875	.7500	.005	.030	4110	7630	413x01818x0000
29		1.1250	-.0000 +.0008			1.1563		1.9063	.6250	.005	.030	2800	5320	413x01805x0000
30	30	1.1811	-.0004 +.0004		30.2	1.1890	50	1.9685	.5512	.005	.020	2920	5770	443x03006x0000

APPROVED 8 JUNE 1960 REVISED (C) FOR CHANGES SEE SHEETS 1-6

P.A. Other Cust	TITLE BEARING, BALL, THRUST: INCH AND METRIC SIZES, GROOVED RACE SURFACE RIGID OR FLAT SEAT TYPE	MILITARY STANDARD <b>MS17161</b>
PROCUREMENT SPECIFICATION	SUPERSEDES:	SHEET 2 OF 6

FED. SUP CLASS  
3110

DASH NO.	BORE			D (MIN) LARGE			OUTSIDE DIAMETER			C			R * FILLET RADIUS MAX REF	BASIC DYNAMIC LOAD RATING POUNDS	BASIC STATIC LOAD RATING POUNDS	MIL-STD-102 CODE NUMBER
	A SMALL MM	INCH	TOLERANCE	MM	INCH	MM	MM	INCH	TOL	MM	INCH	TOL				
31	30	1.1811	±.0004	30.2	1.1890	53	2.0866	±.002	15.5	.6103	.005	.005	.020	4740	9710	443x03032x0000
32		1.1875	±.005		1.1875		2.0938	±.002		.6250	.005	.005	.030	3020	6210	413x01904x0000
33		1.2500	±.005		1.2500		2.3125	±.002		.7500	.005	.005	.030	4480	9020	413x02009x0000
34		1.2500	±.0000		1.2813		2.0938	±.002		.7188	.005	.005	.030	4350	9000	413x02003x0000
35		1.2500	±.005		1.2500		2.3438	±.002		.6250	.005	.005	.030	3350	7540	413x02010x0000
36		1.3125	±.005		1.3125		2.3438	±.002		.6250	.005	.005	.030	3340	7540	413x02116x0000
37		1.3750	±.005		1.3750		2.4688	±.002		.6250	.005	.005	.030	3280	7540	413x02237x0000
38		1.3750	±.0000		1.4063		2.2188	±.002		.7188	.005	.005	.030	3350	7540	413x02203x0000
39	35	1.3780	±.0005	35.2	1.3859	55	2.1654	±.002	16	.6299	.005	.005	.020	3350	7920	443x03506x0000
40	35	1.3780	±.0005	35.2	1.3859	62	2.4409	±.002	18	.7087	.005	.005	.020	4370	9220	443x03512x0000
41		1.5000	±.005		1.5000		2.5625	±.002		.7500	.005	.005	.040	4960	11100	413x02409x0000
42		1.5000	±.005		1.5000		2.5938	±.002		.6250	.005	.005	.040	3340	7990	413x02411x0000
43		1.5000	±.0000		1.5313		2.3438	±.002		.7188	.005	.005	.040	4370	9710	413x02405x0000
44		1.5625	±.005		1.5625		2.5625	±.002		.7500	.005	.005	.040	3340	7990	413x02501x0000
45		1.5625	±.005		1.5625		2.5938	±.002		.6250	.005	.005	.040	3330	7990	413x02502x0000
46	40	1.5748	±.0005	40.2	1.5827	64	2.5197	±.002	18	.7087	.005	.005	.020	5010	12000	443x04006x0000
47	40	1.5748	±.0005	42	1.6535	60	2.3622	±.002	13	.5118	.005	.005	.024	4660	11100	443x04011x0000
48	40	1.5748	±.0005	40.2	1.5827	60	2.3622	±.002	16	.6299	.005	.005	.020	4660	11100	443x04051x0000
49		1.6250	±.005		1.6250		2.8125	±.002		.8750	.005	.005	.040	6780	15000	413x02609x0000
50		1.6250	±.005		1.6250		2.9688	±.002		.8125	.005	.005	.040	4770	11100	413x02614x0000
51		1.6250	±.0000		1.6563		2.4688	±.002		.7188	.005	.005	.040	3960	8990	413x02603x0000
52		1.6875	±.005		1.6875		2.8125	±.002		.8750	.005	.005	.040	6750	15000	413x02706x0000
53		1.6875	±.005		1.6875		2.9688	±.002		.8125	.005	.005	.040	4760	11100	413x02707x0000
54		1.7500	±.005		1.7500		2.9375	±.002		.8750	.005	.005	.040	6370	14000	413x02807x0000
55		1.7500	±.0000		1.7813		2.6875	±.002		.7500	.005	.005	.040	4760	11800	413x02802x0000
56		1.7500	±.005		1.7500		3.0937	±.002		.8125	.005	.005	.040	4690	11100	413x02812x0000
57	45	1.7717	±.0005	45.2	1.7796	68	2.6772	±.002	16	.6299	.005	.005	.024	4500	11200	443x04506x0000
58	45	1.7717	±.0005	47	1.8500	65	2.5591	±.002	14	.5512	.005	.005	.024	4500	11200	443x04511x0000
59	45	1.7717	±.0005	45.2	1.7796	73	2.8740	±.002	22	.8661	.005	.005	.020	7260	17000	443x04552x0000
60		1.8125	±.005		1.8125		2.9375	±.002		.8750	.005	.005	.040	6950	15970	413x02903x0000

(C)

(C)

APPROVED 8 JUNE 1960 REVISED (C) FOR CHANGES SEE SHEETS 1-6

P.A. Other Cust	TITLE BEARING, BALL, THRUST: INCH AND METRIC SIZES, GROOVED RACE SURFACE RIGID OR FLAT SEAT TYPE	MILITARY STANDARD <b>MS17161</b>
PROCUREMENT SPECIFICATION	SUPERSEDES:	SHEET 3 OF 6

FED. SUP CLASS  
3110

DASH NO.	BORE			B			C		R # FILLET MAX REF	BASIC LOAD RATINGS POUNDS	BASIC LOAD RATINGS POUNDS	MIL-STD-102 CODE NUMBER
	A SMALL MM	TOLERANCE	D (MIN) LARGE MM	OUTSIDE DIAMETER MM	INCH	TOL +000	HEIGHT MM	INCH				
61	1.8125	+0.005 +0.007	1.8125	3.0937		-0.002		.8125	-0.040	4680	11100	413x02907x0000
62	1.8750	+0.000 +0.010	1.9063	2.8125		-0.002		.7500	-0.040	4460	11080	413x03004x0000
63	1.8750	+0.005 +0.007	1.8750	3.0625		-0.002		.8750	-0.040	5970	13000	413x03006x0000
64	1.8750	+0.005 +0.007	1.8750	3.2188		-0.002		.8125	-0.040	5370	13900	413x03011x0000
65	1.9375	+0.005 +0.007	1.9375	3.0625		-0.002		.8750	-0.040	5940	13000	413x030105x0000
66	1.9375	+0.005 +0.007	1.9375	3.2188		-0.002		.8125	-0.040	5350	13900	413x030107x0000
67	1.9685	+0.005 +0.005	1.9764	2.9134		-0.002	18	.7087	-0.020	4690	11100	443x05006x0000
68	1.9685	+0.005 +0.005	2.0470	2.7559		-0.002	14	.5512	-0.024	-----	-----	443x05011x0000
69	1.9685	+0.005 +0.005	1.9764	3.0709		-0.002	22	.8661	-0.020	6540	15000	443x05012x0000
70	2.0000	+0.000 +0.010	2.0313	2.9688		-0.002		.7500	-0.040	4660	11100	413x03203x0000
71	2.0000	+0.006 +0.008	2.0000	3.1875		-0.002		.8750	-0.040	6760	16000	413x03208x0000
72	2.0000	+0.006 +0.008	2.0000	3.3438		-0.002		.8125	-0.040	5290	13900	413x03217x0000
73	2.0625	+0.006 +0.008	2.0625	3.1875		-0.002		.8750	-0.060	6740	16000	413x03301x0000
74	2.0625	+0.006 +0.008	2.0625	3.3438		-0.002		.8125	-0.060	5280	13900	413x03305x0000
75	2.1250	+0.006 +0.008	2.1250	3.3125		-0.002		.8750	-0.060	7140	17970	413x03407x0000
76	2.1250	+0.006 +0.008	2.1250	3.5938		-0.002		.8125	-0.060	7090	18000	413x03412x0000
77	2.1654	+0.006 +0.006	55.2	3.4646		-0.002	24.5	.9646	-0.020	8580	21700	443x05526x0000
78	2.1654	+0.006 +0.006	55.2	3.0709		-0.002	18	.7087	-0.020	5220	14600	443x05551x0000
79	2.1875	+0.006 +0.008	2.1875	3.3125		-0.002		.8750	-0.060	7140	17970	413x03503x0000
80	2.1875	+0.006 +0.008	2.1875	3.5938		-0.002		.8125	-0.060	7070	18000	413x03505x0000
81	2.2500	+0.000 +0.010	2.2813	3.3438		-0.002		.8750	-0.060	5230	13900	413x03606x0000
82	2.2500	+0.006 +0.008	2.2500	3.4375		-0.002		.8750	-0.060	6560	16000	413x03608x0000
83	2.2500	+0.006 +0.008	2.2500	3.7188		-0.002		.8125	-0.060	7000	18000	413x03615x0000
84	2.3125	+0.006 +0.008	2.3125	3.4375		-0.002		.8750	-0.060	6540	16000	413x03702x0000
85	2.3125	+0.006 +0.008	2.3125	3.7188		-0.002		.8125	-0.060	6980	18000	413x03703x0000
86	2.3622	+0.006 +0.006	60.2	3.2284		-0.002	18	.7087	-0.020	5420	15300	443x06006x0000
87	2.3622	+0.006 +0.006	60.2	3.5433		-0.002	24.5	.9646	-0.020	8830	23070	443x06046x0000
88	2.3750	+0.006 +0.008	2.3750	3.5625		-0.002		.8750	-0.060	9690	24500	413x03802x0000
89	2.3750	+0.006 +0.008	2.3750	3.8438		-0.002		.8125	-0.060	6920	18000	413x03806x0000
90	2.4375	+0.006 +0.008	2.4375	3.5625		-0.002		.8750	-0.060	9680	24500	413x03905x0000

APPROVED 8 JUNE 1960 REVISED (C) FOR CHANGES SEE SHEETS 1-6

(C)

(C)

P.A. Other Cust	TITLE BEARING, BALL, THRUST: INCH AND METRIC SIZES, GROOVED RACE SURFACE RIGID OR FLAT SEAT TYPE	MILITARY STANDARD <b>MS17161</b>
PROCUREMENT SPECIFICATION	SUPERSEDES:	SHEET 4 OF 6

FED. SUP CLASS

3110

DASH NO.	BORE			B			C			R * FILLET RADIUS MAX REF	BASIC DYNAMIC LOAD RATINGS POUNDS	BASIC STATIC LOAD RATINGS POUNDS	MIL-STD-102 CODE NUMBER
	A SMALL MM	TOLERANCE	D (MIN) LARGE MM	OUTSIDE MM	DIAMETER INCH	TOL +000	HEIGHT MM	INCH	TOL ±				
91	2.4375	+0.006 +0.008	2.4375		3.8438	-0.002		.8125	.005	.060	6890	18000	413x03907x0000
92	2.5000	-0.000 +0.012	2.5313		3.7188	-0.002		1.0000	.005	.060	8740	23070	413x04005x0000
93	2.5000	+0.006 +0.008	2.5000		3.9688	-0.002		.8125	.005	.060	6840	18000	413x04008x0000
94	2.5000	+0.006 +0.008	2.5000		4.0000	-0.002		1.1250	.005	.060	9430	24500	413x04011x0000
95	2.5591	-0.0006 +0.0006	65.2	100	3.9370	-0.002	27	1.0630	.005	.040	11600	28400	443x06512x0000
96	2.5591	-0.0006 +0.0006	65.2	90	3.5433	-0.002	20	.7874	.005	.020	6400	18900	443x06551x0000
97	2.5625	+0.006 +0.008	2.5625		3.9688	-0.002		.8125	.005	.060	6820	18000	413x04102x0000
98	2.5625	+0.006 +0.008	2.5625		4.0000	-0.002		1.1250	.005	.060	9400	24500	413x04105x0000
99	2.6250	+0.006 +0.008	2.6250		4.1250	-0.002		1.1250	.005	.060	10870	26620	413x04210x0000
100	2.6250	+0.006 +0.008	2.6250		4.3438	-0.002		1.0000	.005	.060	9920	27200	413x04213x0000
101	2.6875	+0.006 +0.008	2.6875		4.1250	-0.002		1.1250	.005	.060	10870	26620	413x04301x0000
102	2.6875	+0.006 +0.008	2.6875		4.3438	-0.002		1.0000	.005	.060	9880	27200	413x04302x0000
103	2.7500	-0.0000 +0.012	2.7813		4.0313	-0.002		1.0000	.005	.060	8600	21700	413x04403x0000
104	2.7500	+0.006 +0.008	2.7500		4.2500	-0.002		1.1250	.005	.060	11720	30180	413x04405x0000
105	2.7500	+0.006 +0.008	2.7500		4.3125	-0.002		1.0000	.005	.060	11300	28400	413x04406x0000
106	2.7500	+0.006 +0.008	2.7500		4.4688	-0.002		1.0000	.005	.060	11200	28400	413x04409x0000
107	2.7559	-0.0006 +0.0006	70.2	103	4.0551	-0.002	27	1.0630	.005	.040	9630	25800	443x07015x0000
108	2.7559	-0.0006 +0.0006	70.2	95	3.7402	-0.002	20	.7874	.005	.020	7390	22000	443x07051x0000
109	2.8125	+0.006 +0.008	2.8125		4.2500	-0.002		1.1250	.005	.060	11720	30180	413x04502x0000
110	2.8125	+0.006 +0.008	2.8125		4.4688	-0.002		1.0000	.005	.060	11200	28400	413x04503x0000
111	2.8750	+0.006 +0.008	2.8750		4.4375	-0.002		1.1250	.005	.060	12470	33720	413x04605x0000
112	2.8750	+0.006 +0.008	2.8750		4.5938	-0.002		1.0000	.005	.060	12400	33700	413x04609x0000
113	2.9375	+0.006 +0.008	2.9375		4.4375	-0.002		1.1250	.005	.080	12470	33720	413x04701x0000
114	2.9375	+0.006 +0.008	2.9375		4.5938	-0.002		1.0000	.005	.080	12400	33700	413x04703x0000
115	2.9528	-0.0006 +0.0006	75.2	110	4.3307	-0.002	27	1.0630	.005	.040	11410	31950	443x07512x0000
116	2.9528	-0.0006 +0.0006	75.2	100	3.9370	-0.002	20	.7874	.005	.020	7150	21800	443x07551x0000
117	3.0000	-0.0000 +0.012	3.0313		4.3750	-0.002		1.1250	.005	.080	11410	32000	413x04805x0000
118	3.0000	+0.006 +0.008	3.0000		4.5000	-0.002		1.1250	.005	.080	9370	25800	413x04808x0000
119	3.0000	+0.006 +0.008	3.0000		4.7188	-0.002		1.0000	.005	.080	12700	35500	413x04815x0000
120	3.1496	-0.0006 +0.0006	80.2	110	4.3307	-0.002	22	.8661	.005	.020	7370	23490	443x08006x0000

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APPROVED 8 JUNE 1960 REVISED (C) FOR CHANGES SEE SHEETS 1-6

P.A.  
Other CustTITLE  
BEARING, BALL, THRUST:  
INCH AND METRIC SIZES, GROOVED RACE SURFACE  
RIGID OR FLAT SEAT TYPE

MILITARY STANDARD

MS17161

PROCUREMENT SPECIFICATION

SUPERSEDES:

SHEET

5

OF

6

FED. SUP CLASS  
3110

DASH NO.	A SMALL			TOLERANCE		D (MIN) LARGE		B OUTSIDE DIAMETER			C HEIGHT		R * FILLET RADIUS MAX REF	BASIC LOAD RATINGS POUNDS DYNAMIC	BASIC LOAD RATINGS POUNDS STATIC	MIL-STD-102 CODE NUMBER
	MM	INCH				MM	INCH	MM	INCH	TOL +000	MM	INCH				
121	80	3.1469		-.0006 +.0006		80.2	3.1575	115	4.5276	-.002	29	1.1417	.040	11180	38120	443x08042x0000
122	85	3.3465		-.0008 +.0008		85.2	3.3544	115	4.5276	-.002	22	.8661	.020	7450	24300	443x08506x0000
123	85	3.3465		-.0008 +.0008		85.2	3.3544	125	4.9213	-.002	30.5	1.2008	.040	16210	44400	443x08542x0000
124		3.5000		+.008 +.010			3.5000		5.0000	-.002		1.1250	.080	9640	28500	413x05603x0000
125		3.5000		+.0000 +.0012			3.5313		5.0625	-.002		1.2500	.080	14480	42680	413x05605x0000
126	90	3.5433		-.0008 +.0008		90.2	3.5512	120	4.7244	-.002	22	.8661	.020	8840	29300	443x09011x0000
127	90	3.5433		-.0008 +.0008		90.2	3.5512	135	5.3150	-.002	30.5	1.2008	.040	17170	49900	443x09032x0000
128	95	3.7402		-.0008 +.0008		95.2	3.7481	130	5.1181	-.002	25	.9843	.020	11170	39000	443x09506x0000
129	95	3.7402		-.0008 +.0008		95.2	3.7481	140	5.5118	-.002	32.5	1.2795	.040	19930	57000	443x09526x0000
130	100	3.9370		-.0008 +.0008		100.2	3.9449	135	5.3150	-.002	25	.9843	.020	11890	40600	443x10011x0000
131	100	3.9370		-.0008 +.0008		100.2	3.9449	150	5.9055	-.002	32.5	1.2795	.040	20300	60400	443x10042x0000
132		4.0000		-.0000 +.0012			4.0313		5.8125	-.002		1.3750	.080	15350	49400	413x06406x0000
133		4.0000		+.008 +.010			4.0000		6.0000	-.002		1.3750	.080	18970	55470	413x06408x0000
134	105	4.1339		-.0008 +.0008		105.2	4.1418	140	5.5118	-.002	25	.9843	.020	11990	42100	443x10506x0000
135	105	4.1339		-.0008 +.0008		105.2	4.1418	155	6.1024	-.002	40	1.5748	.040	23250	67900	443x10536x0000
136	110	4.3307		-.0008 +.0008		110.2	4.3386	145	5.7087	-.002	25	.9843	.020	13290	46200	443x11011x0000
137		4.5000		+.008 +.010			4.5000		6.7500	-.002		1.6250	.120	26450	79880	413x07206x0000
138	115	4.5276		-.0008 +.0008		115.2	4.5355	150	5.9055	-.002	25	.9843	.020	13450	47900	443x11506x0000
139	115	4.5276		-.0008 +.0008		115.2	4.5355	165	6.4961	-.002	43	1.6929	.040	27900	84400	443x11516x0000
140	120	4.7244		-.0008 +.0008		120.2	4.7323	160	6.2992	-.002	27	1.0630	.020	14700	51500	443x12067x0000
141	125	4.9213		-.0010 +.0010		125.2	4.9292	165	6.4961	-.002	27	1.0630	.020	15190	56100	443x12508x0000
142	125	4.9213		-.0010 +.0010		125.2	4.9292	175	6.8898	-.002	46.5	1.8307	.040	26410	87900	443x12526x0000
143	140	5.5118		-.0010 +.0010		140.2	5.5197	200	7.8740	-.002	52	2.0472	.040	40760	127800	443x14042x0000

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APPROVED 8 JUNE 1960 REVISED (C) FOR CHANGES SEE SHEETS 1-6

P.A. Other Cust	TITLE BEARING, BALL, THRUST: INCH AND METRIC SIZES, GROOVED RACE SURFACE RIGID OR FLAT SEAT TYPE	MILITARY STANDARD <b>MS17161</b>
PROCUREMENT SPECIFICATION	SUPERSEDES:	SHEET 6 OF 6