

USER ACTIVITIES:
ARMY - AV

REVIEWER ACTIVITIES:
ARMY - AR, MI
AIR FORCE - 84
DLA - IS

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Selection for all new engineering and design applications and for repetitive use shall be made from this document.

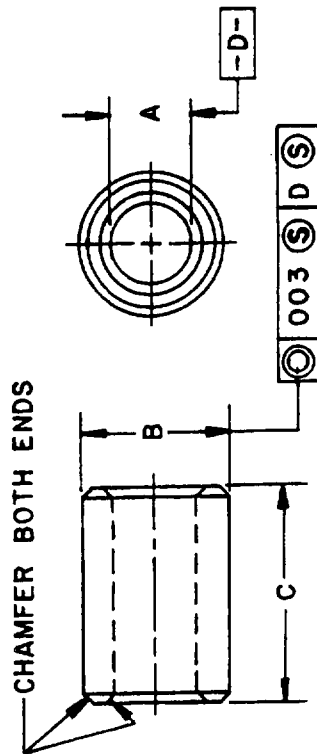


TABLE 1. DIMENSIONS AND DASH NUMBERS.

NOMINAL ID	1/8		5/32		3/16		1/4		5/16		3/8		7/16	
	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS
A-BASIC ID	0.127		0.159		0.1895		0.252		0.3145		0.377		0.439	
B-BASIC OD	0.1005		0.253		0.253		0.378		0.4405		0.503		0.565	
C LENGTH	0.1005		0.253		0.253		0.378		0.4405		0.503		0.565	
3/32	1	97	5	214	161	193	21	386	36	645	43	773	52	1354
1/8	2	120	6	215	242	290	22	516	37	806	44	967	53	1579
3/16	3	194	7	216	322	397	23	645	38	967	45	1160	54	1805
1/4	4	250	8	217	403	483	24	773	39	1128	46	1354	55	1579
5/16	207	323	11	218	483	590	25	902	40	1209	47	1547	56	1805
3/8	208	397	12	219	564	677	26	1031	41	1611	48	1934	57	2256
7/16	209	451	13	220	645	774	27	1289	42	1934	49	2320	58	2707
1/2	210	516	14	221	774	967	28	1547	43	2256	50	2707	59	3158
5/8	—	—	15	222	—	1160	29	1805	44	2578	51	3094	60	3609
3/4	—	—	16	223	—	1354	30	2063	45	2900	52	3480	61	4061
7/8	—	—	17	224	—	1546	31	233	46	3223	53	3867	62	4512
1-1/8	—	—	18	225	—	—	32	258	47	3480	54	4641	63	5414
1-1/4	—	—	19	226	—	—	33	278	48	3667	55	4912	64	—
1-1/2	—	—	20	227	—	—	34	297	49	3867	56	5112	65	—

Ⓐ ENTIRE STANDARD REVISED

P. A. Other Cust	OS AT 99	INTERNATIONAL INTEREST	TITLE BEARING, SLEEVE, PLAIN, SINTERED BRONZE, OIL IMPREGNATED	MILITARY STANDARD MS 17795
PROCUREMENT SPECIFICATION MIL-B-5687			SHEET 1 OF 4	

DD FORM 672-1 (COORDINATED)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

3120-0591

APPROVED 14 FEB 1962 REVISED Ⓐ 9 November 1984

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FED. SUP CLASS
3120

TABLE I. DIMENSIONS AND DASH NUMBERS. -CONTINUED

NOMINAL ID	1/2		5/8		3/4		7/8		1		1-1/8	
	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS
A-BASIC ID	0.502		0.627		0.752		0.877		1.003		1.128	
B-BASIC OD	0.628		0.753		0.879		1.004		1.129		1.254	
C LENGTH	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS
3/8	70	1547	78	1905	86	2320	93	2578	101	3094	117	3967
7/16	71	1905	79	2063	87	2900	94	3223	102	3667	118	4400
1/2	72	2063	80	2221	88	3061	95	3400	103	3967	119	4640
5/8	73	2221	81	2379	89	3221	96	3558	104	4125	120	4883
3/4	74	2379	82	2537	90	3380	97	3716	105	4283	121	5041
7/8	75	2537	83	2695	91	3540	98	3874	106	4441	122	5200
1	76	2695	84	2853	92	3700	99	4032	107	4600	123	5358
1-1/8	261	4641	264	4800	268	4960	270	5118	271	5277	272	5435
1-1/4	77	5156	85	5566	93	5976	100	6386	108	6796	116	7206
1-1/2	262	6188	265	6347	269	6506	273	6665	275	6824	278	6983
1-5/8	263	6347	266	6506	270	6665	274	6824	276	6983	279	7142
1-3/4	—	—	—	—	—	—	—	—	—	—	—	—
1-7/8	267	8050	269	8209	271	8368	273	8527	275	8686	277	8845
2	—	—	—	—	—	—	—	—	—	—	—	—
2-1/4	—	—	—	—	—	—	—	—	—	—	—	—
2-1/2	—	—	—	—	—	—	—	—	—	—	—	—
2-3/4	—	—	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—	—	—	—

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PROCUREMENT SPECIFICATION MIL-B-5687			SUPERSEDES:	SHEET 2 OF 4

USER ACTIVITIES
ARMY - AVREVIEWER ACTIVITIES
ARMY - AR, M1
AIR FORCE - 84
DLA - ISThis military standard is approved for use by all Departments and Agencies of the Department of Defense
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TABLE 1. DIMENSIONS AND DASH NUMBERS. CONTINUED.

NOMINAL ID	1-1/4		1-3/8		1-1/2		1-3/4		2		2-1/4		2-1/2		3	
	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS	DASH NO	STAT CAP LBS
A-BASIC ID	1.2535		1.378		1.504		1.753		2.004		2.254		2.505		3.006	
P-BASIC ID	1.504		1.629		1.755		1.880		2.005		2.130		2.255		2.380	
C LENGTH																
1	155	10313	312	11344	173	12375	330									
1-1/8	309	11602	313	324	327	13922	331									
1-1/4	156	12991	314	165	174	15469	332									
1-1/2	157	15469	315	166	17016	175	18563	333								
1-5/8	310	16798	316	325	18434	334	20109	334								
1-3/4	158	18047	317	167	19452	176	21656	335								
1-7/8	311	19336	318	326	21270	336	23205	336								
2	159	20625	319	168	22688	177	24750	337								
2-1/4	160	22003	320	169	24523	178	27844	338								
2-1/2	161	25781	321	170	28359	179	30938	339								
2-3/4	162	28359	322	171	31195	180	34031	340								
3	163	30938	323	172	34031	181	37125	341								
3-1/4																
3-1/2																
3-3/4																
4																

REQUIREMENTS:

1. THESE BEARINGS ARE NOT INTENDED FOR REAMING ON ASSEMBLY.
2. MATERIAL: SINTERED, COPPER BASE, POWDERED METAL IN ACCORDANCE WITH MIL-B-5687. TYPE I, GRADE 1 OR 2. YIELD STRENGTH IN COMPRESSION, 11,000 PSI (MIN) FOR 0.1% PERMANENT SET.
3. HARDNESS: 30-70 HR.
4. POROSITY: (OIL CONTENT BY VOLUME) 20% MINIMUM.
5. LUBRICATION: BEARINGS ARE TO BE IMPREGNATED 10% BY VOLUME WITH OIL CONFORMING TO MIL-L-17531.
6. DIMENSIONS: ALL DIMENSIONS ARE IN INCHES.
7. DIMENSIONAL TOLERANCES AND CHAMFERS: SEE TABLES II, III, IV, AND V.
8. LOAD RATINGS: SEE TABLE VI AND REQUIREMENT 9.
9. PERMISSIBLE LOAD: FOR SHAFT VELOCITIES ABOVE 200 FEET PER MINUTE, THE PERMISSIBLE LOAD IS FOUND FROM THE FOLLOWING:
$$P = \frac{50,000}{V} \text{ WHERE } P = \text{SAFE LOAD, PSI OF PROJECTED AREA (} \pi \times \text{BEARING ID} \times \text{LENGTH)} \\ V = \text{SHAFT VELOCITY IN FT/MIN}$$

10. STATIC CAPACITY: SPECIFIC STATIC CAPACITY IS 75% OF THE MAXIMUM PURE RADIAL LOAD WHICH WILL PRODUCE A PERMANENT SET OF LESS THAN 0.1% IN BEARING AT ANY CONTACT AREA BETWEEN SHAFT AND BEARING AT ZERO VELOCITY.
(NOTE: THE SPECIFIC STATIC CAPACITY GIVEN IS INTENDED AS A GUIDE IN SELECTING THE PROPER BEARING AND NO TESTS ARE REQUIRED TO DETERMINE THIS FACTOR FOR ACCEPTANCE OF BEARING.)
11. STATIC LOAD: THE MAXIMUM LOAD SHOULD NOT EXCEED 8,500 PSI OF PROJECTED BEARING AREA (LENGTH \times INSIDE DIAMETER OF BEARING).
12. RADIAL CRUSHING STRENGTH: THE RADIAL CRUSHING STRENGTH OF CYLINDRICAL PARTS SHALL BE NOT LESS THAN THE VALUE DETERMINED FROM THE FOLLOWING:
$$S = \frac{L^2 \times 22,500 \text{ WHERE}}{D-t}$$

S = RADIAL CRUSHING STRENGTH IN POUNDS
D = OD OF BEARING IN INCHES
t = WALL THICKNESS IN INCHES
L = LENGTH OF BEARING IN INCHES

P. A	OS	INTERNATIONAL INTEREST	TITLE
Other Cust	AT		BEARING, SLEEVE, PLAIN, SINTERED
	99		BRONZE, OIL IMPREGNATED
PROCUREMENT SPECIFICATION		SUPERSEDES:	
MIL - B - 5687			

MILITARY STANDARD

MS 17795

SHEET 3 OF 4

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TABLE II. DIMENSIONAL TOLERANCES.

DIMENSION	BEARING SIZE	TOLERANCE
INSIDE DIAMETER "A" AND OUTSIDE DIAMETER "B"	UP TO 1.510 ID INCL	+ .000 - .001
	1.511 TO 2.510	+ .0000 - .0015
	2.511 TO 3.010	+ .000 - .002
LENGTH "C"	3.011 TO 3.507	+ .000 - .003
	UP TO 1.495 INCL	+0.005
	1.496 TO 2.990	+0.0075
CONCENTRICITY (C) FULL INDICATOR MOVEMENT (FTM)	2.991 TO 4.000	+0.010
	CUSTOMER DIAMETER (BASIC)	TOLERANCE
	UP TO 1.379 1.380 TO 2.005 2.006 TO 3.507	0.003 0.004 0.005

TABLE III. CRAMPERS.

RANGE	SIZE
WALL THICKNESS UP TO AND INCLUDING 3/32"	BRAK FIBER
WALL THICKNESS GREATER THAN 3/32" UP TO 5" OUTSIDE DIAMETER	1/64 INCH x45 DEGREES
ALL BEARINGS 3" OUTSIDE DIAMETER AND OVER	1/32 INCH x45 DEGREES

REQUIREMENTS - CONTINUED:

1. PART NUMBER. THE BASIC MILITARY STANDARD (MS) PART NUMBER IS FOLLOWED BY A DASH NUMBER SELECTED FROM TABLE I.

EXAMPLE: MS17795-1
DASH NUMBER FROM TABLE I
BASIC MS NUMBER

NOTES:

- FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.
- REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON THE DATE OF INVITATIONS FOR BIDS OR REQUEST FOR PROPOSALS, EXCEPT THAT REFERENCED ADOPTED INDUSTRY DOCUMENTS SHALL GIVE THE DATE OF THE ISSUE ADOPTED.
- NOT RECOMMENDED FOR MILITARY AIRCRAFT APPLICATIONS.

TABLE IV. SHAFT RUNNING CLEARANCE.

SHAFT SIZE	CLEARANCE MIN
UP TO 0.760	0.0005
0.761 TO 1.510	0.0010
1.511 TO 2.510	0.0015
OVER 2.510	0.0020

TABLE V. RECOMMENDED PRESS FITS.

OUTSIDE DIAMETER "B"	PRESS FITS	
	MAX	MIN
UP TO 0.760	0.003	0.001
0.760 TO 1.510	0.004	0.0015
1.511 TO 2.510	0.005	0.002
2.511 TO 3.010	0.006	0.002
OVER 3.010	0.007	0.002

TABLE VI. PERMISSIBLE LOAD RATINGS.

SHAFT VELOCITY (FEET PER MINUTE)	PERMISSIBLE LOAD (POUNDS PER SQUARE INCH)
SLOW AND INTERMITTENT	4000
25	2000
26 TO 50 INCL	1000
51 TO 100 INCL	500
101 TO 150 INCL	325
151 TO 200 INCL	250
OVER 200	SEE REQUIREMENT B

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APPROVED 14 FEB 1962 REVISED (A) FOR CHANGES SEE PAGE 1