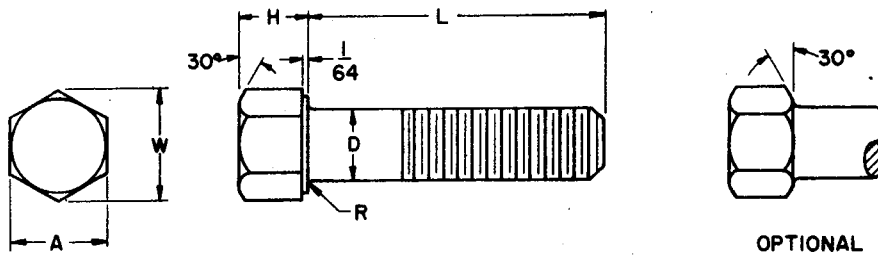


FED. SUP CLASS
5305



NOTICE—When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government incurs no responsibility, nor any obligation whatsoever, and the fact that the Government may have furnished, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder, or any other person or corporation, or conveying any rights, or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

NOMINAL SIZE			1/4	5/16	3/8	7/16	1/2	9/16	5/8
THREADS PER INCH			20UNC	18UNC	16UNC	14UNC	13UNC	12UNC	11UNC
BODY DIAMETER	D	Max	.2500	.3125	.3750	.4375	.5000	.5625	.6250
		Min	.2450	.3065	.3690	.4305	.4930	.5545	.6170
WIDTH ACROSS FLATS	A	Max	.4375	.5000	.5625	.6250	.7500	.8125	.9375
		Min	.4280	.4890	.5510	.6120	.7360	.7980	.9220
WIDTH ACROSS CORNERS	W	Max	.5050	.5770	.6500	.7220	.8660	.9380	1.0830
		Min	.4880	.5570	.6280	.6980	.8400	.9100	1.0510
HEAD HEIGHT	H	Max	.1630	.2110	.2430	.2910	.3230	.3710	.4030
		Min	.1500	.1950	.2260	.2720	.3020	.3480	.3790
RADIUS	R	Max	.023	.023	.023	.023	.023	.041	.041
		Min	.009	.009	.009	.009	.009	.021	.021
LENGTH	L	Tolerance	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number
			3/8			1	27	53	
7/16			2	28	54	79			
1/2			3	29	55	80	104		
9/16		+0	4	30	56	81	105	130	
5/8		-1/32	5	31	57	82	106	131	155
3/4			6	32	58	83	107	132	156
7/8			7	33	59	84	108	133	157
1			8	34	60	85	109	134	158
1-1/8			9	35	61	86	110	135	159
1-1/4		+0	10	36	62	87	111	136	160
1-3/8		-1/16	11	37	63	88	112	137	161
1-1/2			12	38	64	89	113	138	162
1-3/4			13	39	65	90	114	139	163
2			14	40	66	91	115	140	164
2-1/4			15	41	67	92	116	141	165
2-1/2			16	42	68	93	117	142	166
2-3/4			17	43	69	94	118	143	167
3			18	44	70	95	119	144	168
3-1/4		+0	19	45	71	96	120	145	169
3-1/2		-3/32	20	46	72	97	121	146	170
3-3/4			21	47	73	98	122	147	171
4			22	48	74	99	123	148	172
4-1/4			23	49	75	100	124	149	173
4-1/2			24	50	76	101	125	150	174
4-3/4			25	51	77	102	126	151	175
5			26	52	78	103	127	152	176
5-1/2							128	153	177
6							129	154	178

Ⓐ CANCELLED
SEE SHEET 2

This military standard is approved by the Department of Defense and is mandatory on all activities. Selection for all new engineering and design applications and for repetitive use shall be made from this document.

MATERIAL: Low Carbon Steel, Grade 2 of procurement specification. Minimum tensile strengths: 69,000 psi for diameters through 1/2"; 64,000 psi for diameters 9/16" through 3/4"; 55,000 psi for diameters over 3/4".

FINISH: Phosphate, Specification MIL-C-16232, Type II.

THREADS: The threads shall be in accordance with Screw-Thread Standards for Federal Services Handbook H-28.

MINIMUM THREAD LENGTH: Shall be twice the diameter plus 1/4" for lengths up to and including 6". The tolerance shall be plus 3/16" or 2-1/2 threads, whichever is greater. On products that are too short for minimum thread lengths, the distance from the bearing surface of the head to the first complete thread shall not exceed the length of 2-1/2 threads, for sizes up to and including 1" and 3-1/2 threads for sizes larger than 1".

NOTES: (1) Referenced documents of issue in effect on date of invitation for bids shall apply.
(2) In case of conflict with any referenced document, this standard will govern.
(3) The MS part number consists of the MS sheet number, plus the dash number. Example: MS 35293-1.
(4) All dimensions in inches.

Ⓐ For Changes see Sheets 1, 2 and 3.

P.A.	WC	TITLE	MILITARY STANDARD
Other Cust	SHIPS ASD	SCREW, CAP, HEXAGON HEAD (FINISHED HEXAGON BOLT), LOW CARBON STEEL, PHOSPHATE FINISH, UNC-2A	MS35293
PROCUREMENT SPECIFICATION FF-S-85	SUPERSEDES:		SHEET 1 OF 3

APPROVED 4 MAR 54 REVISED Ⓐ 26 APRIL 63

FED. SUP CLASS
5305

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NOMINAL SIZE		3/4	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2		
THREADS PER INCH		10UNC	9UNC	8UNC	7UNC	7UNC	6UNC	6UNC		
BODY DIAMETER	D	{Max Min	.7500 .7410	.8750 .8660	1.0000 0.9900	1.1250 1.1140	1.2500 1.2390	1.3750 1.3630	1.5000 1.4880	
WIDTH ACROSS FLATS	A	{Max Min	1.1250 1.1000	1.3125 1.2850	1.5000 1.4690	1.6875 1.6310	1.8750 1.8120	2.0625 1.9940	2.2500 2.1750	
WIDTH ACROSS CORNERS	W	{Max Min	1.2990 1.2540	1.5160 1.4650	1.7320 1.6750	1.9490 1.8590	2.1650 2.0660	2.3820 2.2730	2.5980 2.4800	
HEAD HEIGHT	H	{Max Min	.4830 .4550	.5630 .5310	.6270 .5910	.7180 .6580	.8130 .7490	.8780 .8100	.9740 .9020	
RADIUS	R	{Max Min	.041 .021	.062 .041	.093 .062	.093 .062	.093 .062	.093 .062	.093 .062	
LENGTH	L	TOLERANCE		Dash Number	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number	
		Size 3/4 and under	Size 7/8 and over							
3/4 7/8	1	+0 -1/32	+0 -1/16	179						
				180	202					
1-1/8 1-1/4 1-3/8	2	+0 -1/16	+0 -1/8	181	203	224				
				182	204	225	245			
				183	205	226	246	265		
				184	206	227	247	266	284	
1-1/2 1-3/4	3	+0 -3/32	+0 -3/16	185	207	228	248	267	285	302
				186	208	229	249	268	286	303
				187	209	230	250	269	287	304
				188	210	231	251	270	288	305
				189	211	232	252	271	289	306
				190	212	233	253	272	290	307
3-1/4 3-1/2 3-3/4 4 4-1/4 4-1/2 4-3/4 5 5-1/2 6	4	+0 -3/32	+0 -3/16	191	213	234	254	273	291	308
				192	214	235	255	274	292	309
				193	215	236	256	275	293	310
				194	216	237	257	276	294	311
				195	217	238	258	277	295	312
				196	218	239	259	278	296	313
				197	219	240	260	279	297	314
				198	220	241	261	280	298	315
				199	221	242	262	281	299	316
				200	222	243	263	282	300	317
201	223	244	264	283	301	318				

NOTE: For illustration, material, finish and other pertinent data, see sheet 1.

Ⓐ CANCELLED AFTER 26 April 1963. USE MS90725. INTERCHANGEABILITY RELATIONSHIP - MS90725 can replace the cancelled screws of the same size. The cancelled MS35293 cannot always replace MS90725 and should be used until existing stock is depleted. Then use only the superseding MS screws of the same size for design and replacement.

Ⓐ CANCELLED
SEE NOTE

This military standard is approved by the Department of Defense and is mandatory on all activities. Selection for all new engineering and design applications and for repetitive use shall be made from this document.

P.A.	VC	TITLE	MILITARY STANDARD
Other Cust	SHIPS ASD	SCREW, CAP, HEXAGON HEAD (FINISHED HEXAGON BOLT), LOW CARBON STEEL, PHOSPHATE FINISH, UNC-2A	MS35293
PROCUREMENT SPECIFICATION FF-S-85	SUPERSEDES:	SHEET	OF
		2	

FED. SUP CLASS
5305

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NOMINAL SIZE			1-3/4	2	2-1/4	2-1/2			
THREADS PER INCH			5UNC	4-1/2UNC	4-1/2UNC	4UNC			
BODY DIAMETER	D	Max Min	1.7500 1.7380	2.0000 1.9880	2.2500 2.2380	2.5000 2.4880			
WIDTH ACROSS FLATS	A	Max Min	2.6250 2.5380	3.0000 2.9000	3.3750 3.2620	3.7500 3.6250			
WIDTH ACROSS CORNERS	W	Max Min	3.0310 2.8930	3.4640 3.3060	3.8970 3.7190	4.3300 4.1330			
HEAD HEIGHT	H	Max Min	1.1340 1.0540	1.2630 1.1750	1.4230 1.3270	1.5830 1.4790			
RADIUS	R	Max Min	.093 .062	.093 .062	.093 .062	.093 .062			
LENGTH	L	Tolerance	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number
	1-3/4 2	+0 -1/8	319 320						
	2-1/4		321	335					
	2-1/2		322	336					
	2-3/4 3		323 324	337 338	349 350	361 362			
	3-1/4		325	339	351	363			
	3-1/2		326	340	352	364			
	3-3/4 4	+0 -3/16	327 328	341 342	353 354	365 366			
	4-1/4		329	343	355	367			
	4-1/2		330	344	356	368			
	4-3/4		331	345	357	369			
	5		332	346	358	370			
	5-1/2		333	347	359	371			
	6		334	348	360	372			

NOTE: For illustration, material, finish and other pertinent data, see sheet 1.

Ⓢ CANCELLED
SEE SHEET 2

APPROVED 4 MAR 54 REVISED Ⓐ FOR CHANGES SEE SHEETS 1, 2 AND 3.

P.A. Other Cost WC SPTS ASD	SPECIFICATION FT-3-85	EXPENSES	MILITARY STANDARD MS35293
SHEET 3 OF			SHEET 3 OF

672-1 (Continued)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.