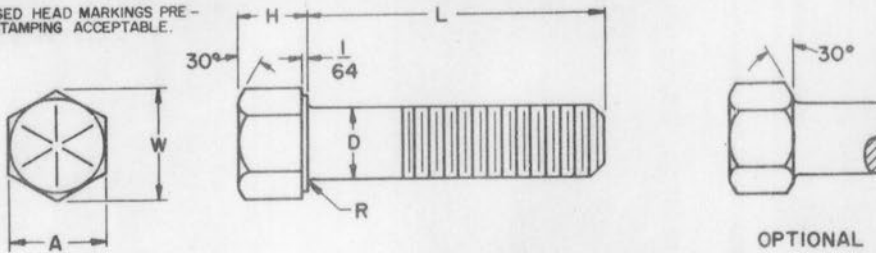


FED. SUP CLASS
5305

NOTE: RAISED HEAD MARKINGS PREFERRED. STAMPING ACCEPTABLE.



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 hereby incurs no responsibility for any obligation whatsoever; and the fact that the Government may have formulated, 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	28UNF		24UNF		24UNF		20UNF		20UNF		18UNF		18UNF	
BODY DIAMETER	D	{ Max .2500 Min .2450	{ Max .3125 Min .3065	{ Max .3750 Min .3690	{ Max .4375 Min .4305	{ Max .5000 Min .4930	{ Max .5625 Min .5545	{ Max .6250 Min .6170	{ Max .6875 Min .6800	{ Max .7500 Min .7430	{ Max .8125 Min .8050	{ Max .8750 Min .8680	{ Max .9375 Min .9300	{ Max 1.0000 Min .9930
WIDTH ACROSS FLATS	A	{ Max .4375 Min .4280	{ Max .5000 Min .4890	{ Max .5625 Min .5510	{ Max .6250 Min .6120	{ Max .7500 Min .7360	{ Max .8125 Min .7930	{ Max .8750 Min .8580	{ Max .9375 Min .9200	{ Max 1.0000 Min .9830	{ Max 1.0625 Min 1.0450	{ Max 1.1250 Min 1.1080	{ Max 1.1875 Min 1.1700	{ Max 1.2500 Min 1.2330
WIDTH ACROSS CORNERS	W	{ Max .5050 Min .4880	{ Max .5770 Min .5570	{ Max .6500 Min .6280	{ Max .7220 Min .6980	{ Max .8660 Min .8400	{ Max .9380 Min .9100	{ Max 1.0830 Min 1.0510	{ Max 1.1550 Min 1.1230	{ Max 1.2300 Min 1.1980	{ Max 1.3050 Min 1.2730	{ Max 1.3800 Min 1.3480	{ Max 1.4550 Min 1.4230	{ Max 1.5300 Min 1.4980
HEAD HEIGHT	H	{ Max .1630 Min .1500	{ Max .2110 Min .1950	{ Max .2430 Min .2260	{ Max .2910 Min .2720	{ Max .3230 Min .3020	{ Max .3710 Min .3480	{ Max .4030 Min .3780	{ Max .4350 Min .4100	{ Max .4670 Min .4420	{ Max .4990 Min .4740	{ Max .5310 Min .5060	{ Max .5630 Min .5380	{ Max .5950 Min .5700
RADIUS	R	{ Max .023 Min .009	{ Max .023 Min .009	{ Max .023 Min .009	{ Max .023 Min .009	{ Max .023 Min .009	{ Max .041 Min .021	{ Max .041 Min .021	{ Max .041 Min .021	{ Max .041 Min .021	{ Max .041 Min .021	{ Max .041 Min .021	{ Max .041 Min .021	{ Max .041 Min .021
LENGTH	L	Tolerance	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number
3/8			1	27	53									
7/16			2	28	54									
1/2			3	29	55	79								
9/16		+0	4	30	56	80	104							
5/8		-1/32	5	31	57	81	105	130						
3/4			6	32	58	82	106	131	155					
						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

MATERIAL: Alloy Steel, Grade 8 of procurement specification. Minimum tensile strengths: 150,000 psi for diameters through 1-1/2"; 125,000 psi for diameters over 1-1/2".
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 35306-1.
 (4) All dimensions in inches.

Ⓡ For Changes see Sheets 1 and 2.

P.A.	WC	TITLE	MILITARY STANDARD
Other Cust	SHIPS ASD	SCREW, CAP, HEXAGON HEAD (FINISHED HEXAGON BOLT), ALLOY STEEL, PHOSPHATE FINISH, UNF-2A	MS35306
PROCUREMENT SPECIFICATION FF-S-85	SUPERSEDES:	SHEET	OF
		1	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.

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 thereby incurs no responsibility, nor any obligation whatsoever, and the fact that the Government may have formulated, 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		3/4	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	
THREADS PER INCH		16UNF	14UNF	12UNF	12UNF	12UNF	12UNF	12UNF	
BODY DIAMETER	D	Max	.7500	.8750	1.0000	1.1250	1.2500	1.3750	1.5000
		Min	.7410	.8660	0.9900	1.1140	1.2390	1.3630	1.4880
WIDTH ACROSS FLATS	A	Max	1.1250	1.3125	1.5000	1.6875	1.8750	2.0625	2.2500
		Min	1.1000	1.2850	1.4690	1.6310	1.8120	1.9940	2.1750
WIDTH ACROSS CORNERS	W	Max	1.2990	1.5160	1.7320	1.9490	2.1650	2.3820	2.5980
		Min	1.2540	1.4650	1.6750	1.8590	2.0660	2.2730	2.4800
HEAD HEIGHT	H	Max	.4830	.5630	.6270	.7180	.8130	.8780	.9740
		Min	.4550	.5310	.5910	.6580	.7490	.8100	.9020
RADIUS	R	Max	.041	.062	.093	.093	.093	.093	.093
		Min	.021	.041	.062	.062	.062	.062	.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	+0 -1/32	+0 -1/16	179					
				180	202				
1-1/8	1-1/4	+0 -1/16	+0 -1/8	181	203	224	245		
				182	204	225	246	265	
1-3/8	2	+0 -1/16	+0 -1/8	183	205	226	247	266	284
				184	206	227	248	267	285
1-1/2	3	+0 -1/16	+0 -1/8	185	207	228	248	267	285
				186	208	229	249	268	286
1-3/4	4	+0 -1/16	+0 -1/8	187	209	230	250	269	287
				188	210	231	251	270	288
2-1/4	5	+0 -1/16	+0 -1/8	189	211	232	252	271	289
				190	212	233	253	272	290
2-1/2	6	+0 -1/16	+0 -1/8	191	213	234	254	273	291
				192	214	235	255	274	292
3	7	+0 -3/32	+0 -3/16	193	215	236	256	275	293
				194	216	237	257	276	294
3-1/4	8	+0 -3/32	+0 -3/16	195	217	238	258	277	295
				196	218	239	259	278	296
4-1/4	9	+0 -3/32	+0 -3/16	197	219	240	260	279	297
				198	220	241	261	280	298
4-1/2	10	+0 -3/32	+0 -3/16	199	221	242	262	281	299
				200	222	243	263	282	300
5-1/2	11	+0 -3/32	+0 -3/16	201	223	244	264	283	301

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

ⓑ CANCELLED AFTER 6 May 1963. USE MS90727 INTERCHANGEABILITY RELATIONSHIP - MS 90727 can replace the cancelled screws of the same size. The cancelled MS35306 cannot always replace MS90727 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. Other Cust	WC SHIPS ASD	TITLE SCREW, CAP, HEXAGON HEAD (FINISHED HEXAGON BOLT), ALLOY STEEL, PHOSPHATE FINISH, UNF--2A	MILITARY STANDARD MS35306
PROCUREMENT SPECIFICATION FF-3-85	SUPERSEDES:	SHEET	2 OF

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