

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 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.

NOTE: RAISED HEAD MARKINGS PREFERRED. STAMPING ACCEPTABLE.		FED. SUP CLASS 5305						
		OPTIONAL						
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
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 .9375 Min .9220
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
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
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
LENGTH	L	Tolerance	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
3/4			6	32	58	83	107	132
7/8			7	33	59	84	108	133
1			8	34	60	85	109	134
1-1/8			9	35	61	86	110	135
1-1/4		+0	10	36	62	87	111	136
1-3/8		-1/16	11	37	63	88	112	137
1-1/2			12	38	64	89	113	138
1-3/4			13	39	65	90	114	139
2			14	40	66	91	115	140
2-1/4			15	41	67	92	116	141
2-1/2			16	42	68	93	117	142
2-3/4			17	43	69	94	118	143
3			18	44	70	95	119	144
3-1/4		+0	19	45	71	96	120	145
3-1/2		-3/32	20	46	72	97	121	146
3-3/4			21	47	73	98	122	147
4			22	48	74	99	123	148
4-1/4			23	49	75	100	124	149
4-1/2			24	50	76	101	125	150
4-3/4			25	51	77	102	126	151
5			26	52	78	103	127	152
5-1/2						128	128	153
6						129	129	154
			ⓑ CANCELLED SEE SHEET 2					
<p>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".</p> <p>FINISH: Phosphate, Specification MIL-C-16232, Type II.</p> <p>THREADS: The threads shall be in accordance with Screw-Thread Standards for Federal Services Handbook H-28.</p> <p>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".</p> <p>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.</p>								
ⓑ 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 1 OF 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

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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		16UNF	14UNF	12UNF	12UNF	12UNF	12UNF	12UNF
BODY DIAMETER	D	Max	.7500	.8750	1.0000	1.1250	1.2500	1.3750
		Min	.7410	.8660	0.9900	1.1140	1.2390	1.3630
WIDTH ACROSS FLATS	A	Max	1.1250	1.3125	1.5000	1.6875	1.8750	2.0625
		Min	1.1000	1.2850	1.4690	1.6310	1.8120	1.9940
WIDTH ACROSS CORNERS	W	Max	1.2990	1.5160	1.7320	1.9490	2.1650	2.3820
		Min	1.2540	1.4650	1.6750	1.8590	2.0660	2.2730
HEAD HEIGHT	H	Max	.4830	.5630	.6270	.7180	.8130	.8780
		Min	.4550	.5310	.5910	.6580	.7490	.8100
RADIUS	R	Max	.041	.062	.093	.093	.093	.093
		Min	.021	.041	.062	.062	.062	.062
LENGTH	L	TOLERANCE		Dash Number	Dash Number	Dash Number	Dash Number	Dash Number
		Size 3/4 and under	Size 7/8 and over					
3/4		+0	+0	179				
7/8		-1/32	-1/16	180	202			
1				181	203	224		
1-1/8				182	204	225	245	
1-1/4				183	205	226	246	265
1-3/8		+0	+0	184	206	227	247	266
1-1/2		-1/16	-1/8	185	207	228	248	267
1-3/4				186	208	229	249	268
2				187	209	230	250	269
2-1/4				188	210	231	251	270
2-1/2				189	211	232	252	271
2-3/4				190	212	233	253	272
3				191	213	234	254	273
3-1/4				192	214	235	255	274
3-1/2				193	215	236	256	275
3-3/4		+0	+0	194	216	237	257	276
4		-3/32	-3/16	195	217	238	258	277
4-1/4				196	218	239	259	278
4-1/2				197	219	240	260	279
4-3/4				198	220	241	261	280
5				199	221	242	262	281
5-1/2				200	222	243	263	282
6				201	223	244	264	283

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

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 2 OF	