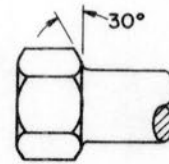
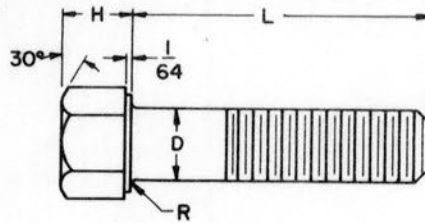
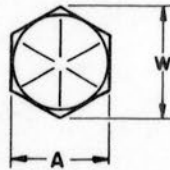


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NOTE: RAISED HEAD MARKINGS
PREFERRED. STAMPING
ACCEPTABLE.



OPTIONAL

FED. SUP CLASS
5305

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	.7930	.9220
WIDTH ACROSS CORNERS	W	Max	.5050	.5770	.6500	.7220	.8660	.9380	1.0330
		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	.3750
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 7/16 1/2 9/16 5/8 3/4		+0 -1/32	1	27	53				
			2	28	54	79			
			3	29	55	80	104		
			4	30	56	81	105	130	
			5	31	57	82	106	131	155
			6	32	58	83	107	132	156
7/8 1 1-1/8 1-1/4 1-3/8 1-1/2		+0 -1/16	7	33	59	84	108	133	157
			8	34	60	85	109	134	158
			9	35	61	86	110	135	159
			10	36	62	87	111	136	160
			11	37	63	88	112	137	161
			12	38	64	89	113	138	162
1-3/4 2 2-1/4 2-1/2 2-3/4 3		+0 -3/32	13	39	65	90	114	139	163
			14	40	66	91	115	140	164
			15	41	67	92	116	141	165
			16	42	68	93	117	142	166
			17	43	69	94	118	143	167
			18	44	70	95	119	144	168
3-1/4 3-1/2 3-3/4 4 4-1/4 4-1/2		+0 -3/32	19	45	71	96	120	145	169
			20	46	72	97	121	146	170
			21	47	73	98	122	147	171
			22	48	74	99	123	148	172
			23	49	75	100	124	149	173
			24	50	76	101	125	150	174
4-3/4 5 5-1/2 6		+0 -3/32	25	51	77	102	126	151	175
			26	52	78	103	127	152	176
							128	153	177
							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: Cadmium or Zinc plated, Specification QQ-P-416, Type II, Class C, or Specification QQ-Z-325, Type II, Class 3.

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 35303-1
(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), ALLOY STEEL, CADMIUM OR ZINC FINISH, UNC-2A	MS 35303
PROCUREMENT SPECIFICATION FF-S-85	SUPERSEDES:	SHEET 1 OF 3	

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	5UNC
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	Dash	Dash	Dash	Dash	Dash
		Size 3/4 and under	Size 7/8 and over	Number	Number	Number	Number	Number	Number
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	284
1-1/2		-1/16	-1/8						
1-3/4				185	207	228	248	267	285
2				186	208	229	249	268	286
2-1/4				187	209	230	250	269	287
2-1/2				188	210	231	251	270	288
2-3/4				189	211	232	252	271	289
3				190	212	233	253	272	290
3-1/4				191	213	234	254	273	291
3-1/2				192	214	235	255	274	292
3-3/4				193	215	236	256	275	293
4		+0	+0	194	216	237	257	276	294
4-1/4		-3/32	-3/16	195	217	238	258	277	295
4-1/2				196	218	239	259	278	296
4-3/4				197	219	240	260	279	297
5				198	220	241	261	280	298
5-1/2				199	221	242	262	281	299
6				200	222	243	263	282	300
				201	223	244	264	283	301

(A) CANCELLED-
SEE NOTE

CANCELLED
SEE NOTE

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

Ⓐ CANCELLED AFTER 7 May 1963. USE MS90728. INTERCHANGEABILITY RELATIONSHIP - MS90728 can replace the cancelled screws of the same size. The cancelled MS35303 cannot always replace MS90728 and should be used until existing stock is depleted. Then use only the superseding MS screws of the same size for design and replacement.

APPROVED MAR 4, 1954 REVISED Ⓐ 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), ALLOY STEEL, CADMIUM OR ZINC FINISH, UNC-2A	MS 35303
PROCUREMENT SPECIFICATION FF-8-85	SUPERSEDES:	SHEET 2 OF

FED. SUP CLASS
5305

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NOMINAL SIZE	1-3/4	2	2-1/4	2-1/2				
THREADS PER INCH	5 UNC	4-1/2 UNC	4-1/2 UNC	4 UNC				
BODY DIAMETER	D	{Max 1.7500 Min 1.7380	{Max 2.0000 Min 1.9880	{Max 2.2500 Min 2.2380	{Max 2.5000 Min 2.4880			
WIDTH ACROSS FLATS	A	{Max 2.6250 Min 2.5380	{Max 3.0000 Min 2.9000	{Max 3.3750 Min 3.2620	{Max 3.7500 Min 3.6250			
WIDTH ACROSS CORNERS	W	{Max 3.0310 Min 2.8930	{Max 3.4640 Min 3.3060	{Max 3.8970 Min 3.7190	{Max 4.3300 Min 4.1330			
HEAD HEIGHT	H	{Max 1.1340 Min 1.0540	{Max 1.2630 Min 1.1750	{Max 1.4230 Min 1.3270	{Max 1.5830 Min 1.4790			
RADIUS	R	{Max .093 Min .062	{Max .093 Min .062	{Max .093 Min .062	{Max .093 Min .062			
LENGTH	L	Tolerance	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number	Dash Number
1-3/4	+0	319						
2	-1/8	320						
2-1/4		321	335					
2-1/2		322	336					
2-3/4		323	337	349	361			
3		324	338	350	362			
3-1/4		325	339	351	363			
3-1/2		326	340	352	364			
3-3/4	+0	327	341	353	365			
4	-3/16	328	342	354	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			

Ⓐ CANCELLED
SEE SHEET 2

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

APPROVED MAR 4, 1954 REVISED Ⓐ 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), ALLOY STEEL, CADMIUM OR ZINC FINISH, UNC-2A	MS35303
PROCUREMENT SPECIFICATION FF-S-85	SUPERSEDES:	SHEET 3	OF

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

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.