

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		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 Min	.2500 .2450	.3125 .3065	.3750 .3690	.4375 .4305	.5000 .4930	.5625 .5545
WIDTH ACROSS FLATS	A	Max Min	.4375 .4280	.5000 .4890	.5625 .5510	.6250 .6120	.7500 .7360	.8125 .7990
WIDTH ACROSS CORNERS	W	Max Min	.5050 .4880	.5770 .5570	.6500 .6280	.7220 .6980	.8660 .8400	.9380 .9100
HEAD HEIGHT	H	Max Min	.1630 .1500	.2110 .1950	.2430 .2260	.2910 .2720	.3230 .3020	.3710 .3480
RADIUS	R	Max Min	.023 .009	.023 .009	.023 .009	.023 .009	.023 .009	.041 .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			4	30	56	81	105	130
5/8		+0 -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			10	36	62	87	111	136
1-3/8		+0 -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			19	45	71	96	120	145
3-1/2		+0 -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	153
6							129	154

@ CANCELLED
SEE SHEET 2

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: Plain (untreated).

THREADS: The threads shall be in accordance with Screw-Thread Standards for Federal Services Handbook H-23.

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 35290-1.
(4) All dimensions in inches.

(A) For Changes see Sheets 1 and 2.

P.A.	WC	TITLE	MILITARY STANDARD
Other Cust	SHIPS ASD	SCREW, CAP, HEXAGON HEAD (FINISHED HEXAGON BOLT), LOW CARBON STEEL, PLAIN FINISH, UNF-2A	MS35290
PROCUREMENT SPECIFICATION FF-8-85	SUPERSEDES:	SHEET	OF 2

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This drawing is issued by the Department of Defense and is mandatory on all activities. Substitution for all new engineering and design applications and for replacement parts shall be made from this document.

FED. SUP CLASS 5305								
NOMINAL SIZE	3/4		7/8		1		1-1/8	
THREADS PER INCH	16UNF		14UNF		12UNF		12UNF	
BODY DIAMETER D	Max	.7500	Max	.8750	Max	1.0000	Max	1.1250
	Min	.7410		.8660		0.9900		1.1140
WIDTH ACROSS FLATS A	Max	1.1250	Max	1.3125	Max	1.5000	Max	1.6875
	Min	1.1000		1.2850		1.4690		1.6310
WIDTH ACROSS CORNERS W	Max	1.2990	Max	1.5160	Max	1.7320	Max	1.9490
	Min	1.2540		1.4650		1.6750		1.8590
HEAD HEIGHT H	Max	.4830	Max	.5630	Max	.6270	Max	.7180
	Min	.4550		.5310		.5910		.6580
RADIUS R	Max	.041	Max	.062	Max	.093	Max	.093
	Min	.021		.041		.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	+0	+0	179					
7/8	-1/32	-1/16	180	202				
			181	203				
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
	-1/16	-1/8						
1-1/2			185	207	228	248	267	285
1-3/4			186	208	229	249	268	286
2			187	209	230	250	269	287
2-1/4			188	210	231	251	270	288
2-1/2			189	211	232	252	271	289
2-3/4			190	212	233	253	272	290
3			191	213	234	254	273	291
3-1/4			192	214	235	255	274	292
3-1/2			193	215	236	256	275	293
3-3/4	+0	+0	194	216	237	257	276	294
4	-3/32	-3/16	195	217	238	258	277	295
4-1/4			196	218	239	259	278	296
4-1/2			197	219	240	260	279	297
4-3/4			198	220	241	261	280	298
5			199	221	242	262	281	299
5-1/2			200	222	243	263	282	300
6			201	223	244	264	283	301

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

- Ⓐ CANCELLED AFTER 30 April 1963. USE MS90726. INTERCHANGEABILITY RELATIONSHIP - MS90726 can replace the cancelled screws of the same size. The cancelled MS35290 cannot always replace MS90726 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.	RE	TITLE	MILITARY STANDARD
Other than	SEE MS	SCREW, CAP, HEXAGON HEAD (FINISHED HEXAGON BOLT),	
	ASD	LOW CARBON STEEL, PLAIN FINISH, UNF-2A	
PRELIMINARY SPECIFICATION	REVISION		MS35290
FP-S-85			SHEET 2 OF

DD FORM 672-1 (10-1962)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

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