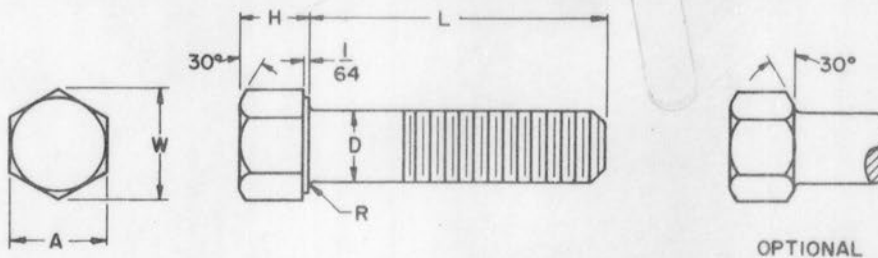


FED. SUP CLASS
5305



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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 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 .7980	{ 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 .3750	
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	+0 -1/32		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			5	31	57	82	106	131	155
3/4			6	32	58	83	107	132	156
7/8	+0 -1/16		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			10	36	62	87	111	136	160
1-3/8			11	37	63	88	112	137	161
1-1/2			12	38	64	89	113	138	162
1-3/4	+0 -3/32		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			19	45	71	96	120	145	169
3-1/2			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
							129	154	178

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-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 35289-1.
(4) All dimensions in inches.

(A) For Changes see Sheets 1, 2 and 3.

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.	WC	TITLE	MILITARY STANDARD
Other Cust	SHIPS ASD	SCREW, CAP, HEXAGON HEAD (FINISHED HEXAGON BOLT), LOW CARBON STEEL, PLAIN FINISH, UNC-2A	MS35289
PROCUREMENT SPECIFICATION FF-S-85	SUPERSEDES:	SHEET	1 OF 3

REVISED 26 APRIL 63
APPROVED 4 MAR 54

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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		+0	+0	179					
7/8		-1/32	-1/16	180					
1				181		224			
1-1/8				182		225	245		
1-1/4				183		226	246	265	
1-3/8		+0	+0	184		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

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 MS35289 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. Submitter for all manufacturing and design applications and for repetitive use shall be made from this document.

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

P.A. Other Case	WC SKIPS ASB	TITLE SCREW, CAP, HEXAGON HEAD (FINISHED HEXAGON BOLT), LOW CARBON STEEL, PLAIN FINISH, UNC-2A	MILITARY STANDARD MS35289
PROCUREMENT SPECIFICATION FF-3-85		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	5UNC	4-1/2UNC	4-1/2UNC	4UNC				
BODY DIAMETER D	Max 1.7500 Min 1.7380	2.0000 1.9880	2.2500 2.2380	2.5000 2.4880				
WIDTH ACROSS FLATS A	Max 2.6250 Min 2.5380	3.0000 2.9000	3.3750 3.2620	3.7500 3.6250				
WIDTH ACROSS CORNERS W	Max 3.0310 Min 2.8930	3.4640 3.3060	3.8970 3.7190	4.3300 4.1330				
HEAD HEIGHT H	Max 1.1340 Min 1.0540	1.2630 1.1750	1.4230 1.3270	1.5830 1.4790				
RADIUS R	Max .093 Min .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	319 320 321						
2-1/4 2-1/2 2-3/4 3		322 323 324	335 336 337 338	349 350	361 362			
3-1/4 3-1/2 3-3/4 4 4-1/4 4-1/2	+0 -3/16	325 326 327 328 329 330	339 340 341 342 343 344	351 352 353 354 355 356	363 364 365 366 367 368			
4-3/4 5 5-1/2 6		331 332 333 334	345 346 347 348	357 358 359 360	369 370 371 372			

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. WC Other Cust SHIPS ASD	TITLE SCREW, CAP, HEXAGON HEAD (FINISHED HEXAGON BOLT), LOW CARBON STEEL, PLAIN FINISH, UNC-2A	MILITARY STANDARD MS35289
PROCUREMENT SPECIFICATION FF-S-35	SUPERSEDES:	SHEET 3 OF