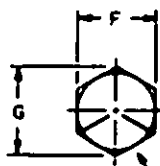
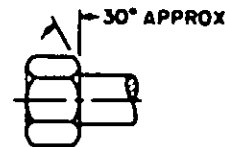
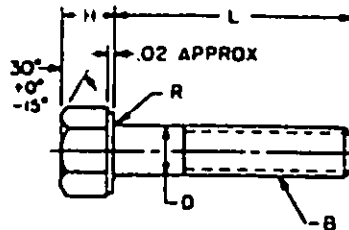


REVISION: AV, JS, AT, MJ, ML, NSA, OS, OS  
 (SERIES: CL, MC, YD, AS)



SEE NOTE 6



OPTIONAL DESIGN

FED. SUP CLASS  
 5305

TABLE 1

NOMINAL SIZE	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8
B THREAD UNC-2A	20	18	16	14	13	12	11	10	9
D BODY DIAMETER	MAX MIN	.2500 .2450	.3125 .3065	.3750 .3690	.4375 .4305	.5000 .4930	.5625 .5545	.6250 .6170	.6875 .6760
F WIDTH ACROSS FLATS	MAX MIN	.4375 .4290	.5000 .4890	.5625 .5510	.6250 .6120	.7500 .7360	.8125 .7980	.9375 .9220	1.1250 1.1000
G WIDTH ACROSS CORNERS	MAX MIN	.505 .488	.577 .557	.650 .628	.722 .698	.844 .840	.938 .910	1.083 1.051	1.299 1.254
H HEAD HEIGHT	MAX MIN	.163 .150	.211 .195	.243 .228	.291 .272	.323 .302	.371 .348	.403 .378	.483 .455
R RADIUS	MAX MIN	.025 .015	.025 .015	.025 .015	.025 .015	.025 .015	.045 .020	.045 .020	.065 .040
* MIN TENSILE STRENGTH - LBS		1,800	2,300	2,800	3,300	3,800	4,300	4,800	5,300

L LENGTH	TOLERANCE		DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.
	SIZE 3/4 AND UNDER	SIZE 7/8									
.375	+0 -.031	+0 -.062	1	27	53						
.438			2	28	54						
.500			3	29	55	79					
.562			4	30	56	80	104				
.625			5	31	57	81	105	130			
.750			6	32	58	82	106	131	155		
.875			7	33	59	83	107	132	156	179	
1.000			8	34	60	84	108	133	157	180	202
									</		

(D)

CROSS REFERENCE OF PART NUMBERS

The screws covered by dash numbers given in MS15240, MS15291, MS15293, MS15295, MS15297 and MS15399 are cancelled after the dates indicated on the cancelled documents. Use dash numbers used in this standard. The cancelled screws cannot always replace the new screws and should be used until existing stocks are depleted. Use only the new screws for design and replacement. Dash numbers representing old and new screws are identical, making it unnecessary to prepare an interchangeability table.

(D) For changes see sheet 1.

P.A. VC	TITLE	MILITARY STANDARD
Other Cont. SH 82	SCREW, CAP, HEXAGON HEAD (FINISHED HEXAGON BOLT), STEEL, GRADE 5, CADMIUM PLATED, UNC-2A	MS90725
PROCUREMENT SPECIFICATION FF-34-85	SUPERSEDES See note 11	SHEET 1 OF 2

DD FORM 672-1 (Continued)

APPROVED FOR PRINTING ON 10-10-66 AND 05-10-67

APPROVED 26 APR 63 REVISED 1 AUG 67 14 OCT 68 1 MAY 1969 2 JUL 1974

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document.

REVIEWER: AV, 15, AT, MI, MU, NSA, OS, 85  
15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

TABLE 11										FED. SUP CLASS 5305	
NOMINAL SIZE		1	1-1/8	1-1/4	1-1/2	1-3/4	2	2-1/4	2-1/2		
B	THREAD UNC-2A	6	7	7	6	6	5	4-1/2	4-1/2	4	
D	BODY DIAMETER	MAX MIN	1.0000 .9900	1.1250 1.1140	1.2500 1.2390	1.3750 1.3630	1.5000 1.4880	1.7500 1.7380	2.0000 1.9880	2.2500 2.2380	2.5000 2.4880
F	WIDTH ACROSS FLATS	MAX MIN	1.5000 1.4890	1.6875 1.6710	1.8750 1.8620	2.0625 2.0490	2.2500 2.2370	2.6250 2.6120	3.0000 2.9870	3.3750 3.3620	3.7500 3.7370
G	WIDTH ACROSS CORNERS	MAX MIN	1.732 1.675	1.949 1.899	2.165 2.066	2.382 2.273	2.598 2.480	3.031 2.893	3.464 3.306	3.897 3.719	4.330 4.133
H	HEAD HEIGHT	MAX MIN	.627 .591	.714 .656	.813 .749	.878 .810	.974 .902	1.134 1.054	1.263 1.175	1.423 1.327	1.583 1.479
R	RADIUS	MAX MIN	.095 .060	.095 .060	.095 .060	.095 .060	.095 .060	.095 .060	.095 .060	.095 .060	.095 .060
MIN TENSILE STRENGTH - LBS			72,700	80,100	101,700	121,300	147,500	171,000	225,000	292,500	360,000
L	TOLERANCE	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.
1.000	+0, -.002	224									
1.125		225	245	265							
1.250		226	246	266							
1.375	+0	227	247	266	284						
1.500	-.125	228	248	267	285	302					
1.750		229	249	268	286	303	319				
2.000		230	250	269	287	304	320				
2.250		231	251	270	288	305	321	335			
2.500		232	252	271	289	306	322	336			
2.750		233	253	272	290	307	323	337	349	361	
3.000		234	254	273	291	308	324	338	350	362	
3.250		235	255	274	292	309	325	339	351	363	
3.500		236	256	275	293	310	326	340	352	364	
3.750	+0	237	257	276	294	311	327	341	353	365	
4.000	-.188	238	258	277	295	312	328	342	354	366	
4.250		239	259	278	296	313	329	343	355	367	
4.500		240	260	279	297	314	330	344	356	368	
4.750		241	261	280	298	315	331	345	357	369	
5.000		242	262	281	299	316	332	346	358	370	
5.500		243	263	282	300	317	333	347	359	371	
6.000		244	264	283	301	318	334	348	360	372	

## NOTES:

1. **MATERIAL:** Medium carbon steel, Grade 5, in accordance with procurement specification.
2. **PROTECTIVE COATING:** Cadmium plating in accordance with procurement specification.
3. **THREADS:** The threads shall be in accordance with Screw-Thread Standards for Federal Services, Handbook H28.
4. **THREAD LENGTH:** Minimum thread length shall be twice the diameter plus 1/4 inch. The tolerance shall be plus 1/16 inch or 2-1/2 threads, whichever is greater. On screws 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 inch and 3-1/2 threads for sizes larger than 1 inch.
5. **DIMENSIONS:** All dimensions are in inches, unless otherwise specified.
6. **HEAD MARKING:** Heads shall be marked in accordance with MIL-HDBK-131. Raised markings are preferred, stampings are acceptable.
7. **PART NUMBER:** The MS part number consists of the MS number, plus the dash number.  
Example: MS90725-1.
8. Based on minimum ultimate tensile strength of 120,000 p.s.i. for diameters thru 1 inch; 105,000 p.s.i. for 1-1/8 inch thru 1-1/2 inch diameters; 90,000 p.s.i. for diameters over 1-1/2 inches. Tensile strengths are calculated by the stress areas indicated in Screw-Thread Standards for Federal Services, Handbook H28.
9. Referenced documents shall be of the issue in effect on date of invitations for bid.
10. For design feature purposes, this standard takes precedence over procurement documents referenced herein.
11. Supersedes: MS15289, MS15291, MS15293, MS15295 in part, MS15297 and MS15299; (BCA12, 2.1, 3.1, 3.2, 3.3, 4.2) in part; BCV12, 2.1, 4, 4.1, 4.2, 4.3, 4.8, 4.9, 10; (BCV12, 2.1, 2.2, 2.3, 10.2, 10.3) in part; BQL12, 1 in part, 4QL12, 1; 9UR12, 2.1, 2.2, 3, 3.1, 4, 4.1, 8, 8.1, 9, 9.1, 10, 10.1.

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document.

P.A. LC	TITLE	MILITARY STANDARD
Other Case SH 92	SCREW, CAP, HEXAGON HEAD (FINISHED HEXAGON BOLT), STEEL, GRADE 5, CADMIUM PLATED, UNC-2A	MS 90725
PROCUREMENT SPECIFICATION FF-3-d5	SUPERSEDES: See note 11	SHEET 2 OF