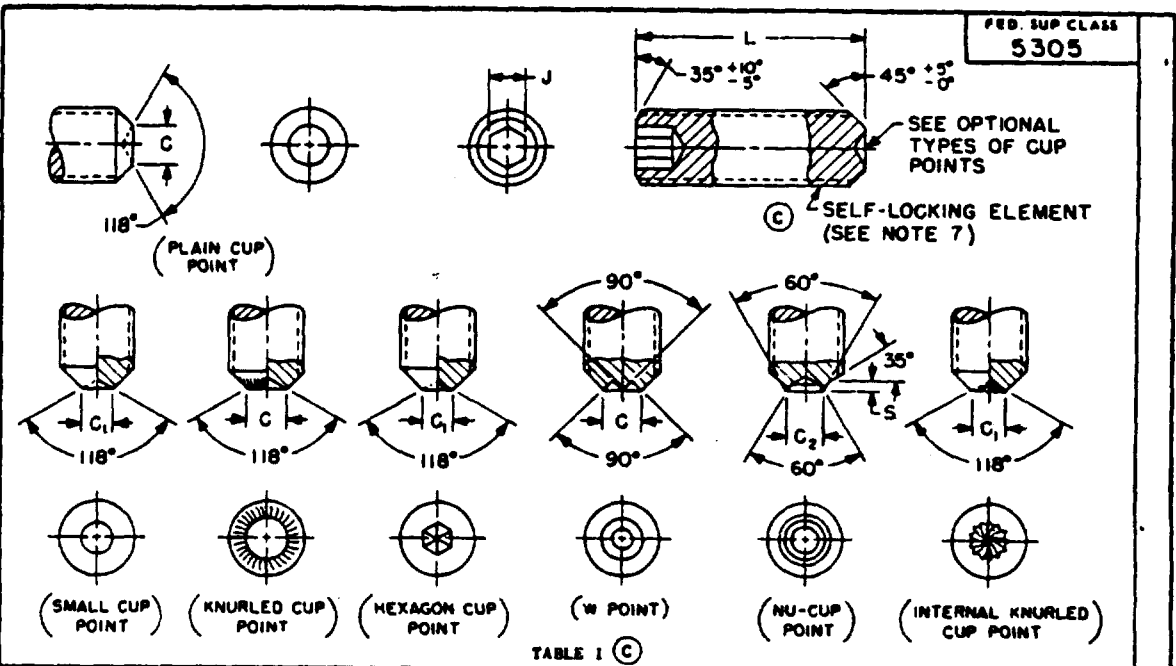


REVISION: AY, EL, IS, MI, MU
1 SER: AT, CL, MC, ME, OS, SH, YD



FED. SUP CLASS
5305

TABLE 1 (C)

NOMINAL SIZE		.086	.112	.138	.164	.190	.250				
THREADS PER INCH (UNC-3A)		56	40	32	32	24	20				
J SOCKET WIDTH ACROSS FLATS	NOM	.035	.050	.062	.078	.094	.125				
C POINT DIAMETER	MAX MIN	.047 .039	.061 .051	.074 .064	.087 .076	.102 .088	.132 .118				
C ₁ POINT DIAMETER	MAX MIN	.043 .038	.056 .051	.069 .062	.082 .074	.095 .086	.125 .114				
C ₂ POINT DIAMETER	MAX MIN	.043 .038	.059 .054	.074 .068	.090 .084	.101 .095	.156 .150				
S POINT LENGTH	MAX MIN	.010 .007	.013 .008	.017 .012	.021 .016	.024 .019	.027 .022				
L LENGTH	TOL	DASH NUMBER									
		PLAIN	PLAIN	SELF-LOCKING	PLAIN	SELF-LOCKING	PLAIN	SELF-LOCKING	PLAIN	PLAIN	
.125	±.010	1	9	210	20	220	33	240			
.188		2	10	211	21	221	34	241	46	62	
.250		3	11	212	22	222	35	242	47	63	
.312				12	213	23	223	36	243	48	64
.375				13	214	24	224	37	244	49	65
.438	±.020		14	215	25	225	38	245	50	66	
.500			15	216	26	226	39	246	51	67	
.562				16	217	27	227	40	247	52	68
.625					218	28	228	41	248	53	69
.750	±.020				29	229	42	249	54	70	
.875					30	230	43	250	55	71	
1.000								251	56	72	
1.250										73	
1.500										74	
1.750									75		

(C) For changes see sheets 1, 2 and 3.

This military standard is mandatory 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.

APPROVED 29 JAN 1964 REVISED (A) 28 NOV 1967 (B) 10 SEP 1969 (C) 29 DEC 1972

P.A. WC Other Code 82	TITLE SETScrew-HEXAGON SOCKET, CUP POINT, ALLOY STEEL, CADMIUM PLATED, UNC-3A, PLAIN AND SELF-LOCKING	MILITARY STANDARD MS 51963
PROCUREMENT SPECIFICATION FF-S-200	SUPERSEDES: MSS1017, MSS1019, MSS1055 and in part MS18063, MSS1053, BCTX1, 1.1, 1.2, 3 and 5, BCUX5 and 5.1.	SHEET 1 OF 3

TABLE 1 (Cont'd) (C)							FED. SUP CLASS 5305			
NOMINAL SIZE	.1125	.175	.4175	.500	.625	.750	.875	1.000		
THREADS PER INCH (UNC-1A)	14	16	14	11	11	10	9	8		
J SOCKET WIDTH ACROSS FLATS	NOM .156	.188	.219	.250	.312	.375	.500	.562		
C POINT DIAMETER	MAX .172	.212	.252	.291	.371	.450	.530	.609		
MIN .156	.194	.232	.270	.347	.425	.502	.579			
C ₁ POINT DIAMETER	MAX .156	.187	.218	.250	.312	.375	.437	.500		
MIN .144	.174	.204	.235	.295	.357	.418	.480			
C ₂ POINT DIAMETER	MAX .190	.241	.286	.333	.425	.523	---	---		
MIN .185	.236	.281	.328	.420	.518	---	---			
S POINT LENGTH	MAX .038	.041	.047	.054	.067	.081	---	---		
MIN .033	.036	.042	.049	.062	.076	---	---			
L LENGTH	TOL	DASH NUMBER								
		PLAIN	PLAIN	PLAIN	PLAIN	PLAIN	PLAIN	PLAIN	PLAIN	
.250	±.010	81	99							
.312		82	100							
.375		83	101	118	135					
.438	±.010	84	102	119	136					
.500		85	103	120	137	153				
.625		86	104	121	138	154	169			
.750	±.020	87	105	122	139	155	170			
.875		88	106	123	140	156	171	184		
1.000		89	107	124	141	157	172	185	197	
1.250	±.020	90	108	125	142	158	173	186	198	
1.500		91	109	126	143	159	174	187	199	
1.750		92	110	127	144	160	175	188	200	
2.000	±.031	93	111	128	145	161	176	189	201	
2.500				112	129	146	162	177	190	202
3.000						147	163	178	191	203

NOTES:

- MATERIAL:** Alloy steel in accordance with procurement specification, having a Rockwell Hardness of C45-53.
- PROTECTIVE COATING:** Cadmium plated in accordance with procurement specification.
- THREADS:** The threads shall be in accordance with MIL-S-7742.
- DIMENSIONS:** All dimensions are in inches, unless otherwise specified.
- TOLERANCES:** Angles 25°, unless otherwise specified.
- PART NUMBER:** The MS part number consists of the MS number, plus the dash number.
Example: MS51963-1.
- SELF-LOCKING ELEMENT:**
 - The self-locking element shall be in accordance with MIL-F-18240.
 - For design and usage limitations, see MS15981.
 - Location of effective locking area shall be in accordance with MS15981.
 - Maximum ring gage diameter that locking region of setscrew must pass thru freely or with finger pressure shall be the nominal size plus 0.010.
 - MIL-F-18240 doesn't establish torque requirements for lengths above the dashed line. Only a positive indication of torque is required.
- Referenced documents shall be of the issue in effect on date of invitations for bid.
- For design feature purposes, this standard takes precedence over procurement documents referenced herein.

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.

APPROVED 29 JAN 1964 REVISED (A) 28 NOV 1967 (B) 10 SEP 1969 (C) FOR CHANGES SEE SHEETS 1, 2 AND 3

P.A. WC Other Cont 82	TITLE SETScrew-HEXAGON SOCKET, CUP POINT, ALLOY STEEL, CADMIUM PLATED, UNC-3A, PLAIN AND SELF-LOCKING (C)	MILITARY STANDARD MS 51963
PROCUREMENT SPECIFICATION FF-S-200	SUPERSEDES MS51017, MS51019, MS51055 and in part MS18063, MS51053, BCX11, 1.1, 1.2, 3 and 5, BCUX5 and 3.1.	SHEET 2 OF 3

FED. SUP CLASS
5305

INTERCHANGEABILITY

Effective 31 December 1960, MS51055 was cancelled and superseded by MS51017.

Screws covered by the dash numbers given in MS51017 and MS51019 are cancelled after 29 January 1964 and superseded by the screws covered on MS51963 having the same dash numbers. Cancelled screws may be used until existing stocks are depleted. Use only MS51963 screws for new design.

Screws covered by the dash numbers given in MS51053 in part are cancelled/inactivated after 10 September 1969. Cancelled screws may be used until existing stocks are depleted. Use only the superseding screws for new design. Replacement shall be in accordance with Table II.

TABLE II

CANCELLED	SUPERSEDING	CANCELLED	SUPERSEDING	CANCELLED	SUPERSEDING	CANCELLED	SUPERSEDING
MS51053	MS51963	MS51053	MS51963	MS51053	MS51963	MS51053	MS51963
DASH NUMBER		DASH NUMBER		DASH NUMBER		DASH NUMBER	
101	00	114	11	120	16	131	25
102	1	115	12	126	20	132	26
103	2	116	13	127	21	133	00
104	3	117	14	128	22	134	27
105	00	118	15	129	23	135	28
111	00	119	00	130	24	136	29
113	10						

00 No Replacement

Screws covered by the dash numbers given in MS18063 in part are cancelled. Cancelled screws may be used until existing stocks are depleted. Use only the superseding screws for new design. Replacement shall be in accordance with Table III.

TABLE III

CANCELLED	SUPERSEDING	CANCELLED	SUPERSEDING	CANCELLED	SUPERSEDING	CANCELLED	SUPERSEDING
MS18063	MS51963	MS18063	MS51963	MS18063	MS51963	MS18063	MS51963
DASH NUMBER		DASH NUMBER		DASH NUMBER		DASH NUMBER	
1	210	46	218	42	227	24	244
5	211	2	220	47	228	30	245
10	212	6	221	54	229	35	246
16	213	11	222	61	230	43	247
22	214	17	223	3	240	48	248
89	215	23	224	7	241	55	249
33	216	90	225	12	242	62	250
41	217	34	226	18	243	67	251

This military standard is mandatory 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. VC
Other Code
82

TITLE
SETSCREW - HEXAGON SOCKET, CUP POINT,
ALLOY STEEL, CADMIUM PLATED, UNC-3A,
PLAIN AND SELF-LOCKING

MILITARY STANDARD
MS 51963

PROCUREMENT SPECIFICATION
FF-S-200

SUPERSEDES MS51017, MS51019, MS51055 and in part MS18063,
MS51053, BCTXL, 1.1, 1.2, 3 and 5, BCUX5 and 5.1.

SHEET 3 OF 3

DD FORM 672-1 (Continued)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

NEVER:AV, EL, IS, MI, MU, SH, YD
SERIAL, CI, MC, ME, OS

APPROVED 29 JAN 1964 REVISED (A) 28 NOV 1967 (B) 10 SEP 1969 (C) FOR CHANGES SEE SHEETS 1, 2 AND 3