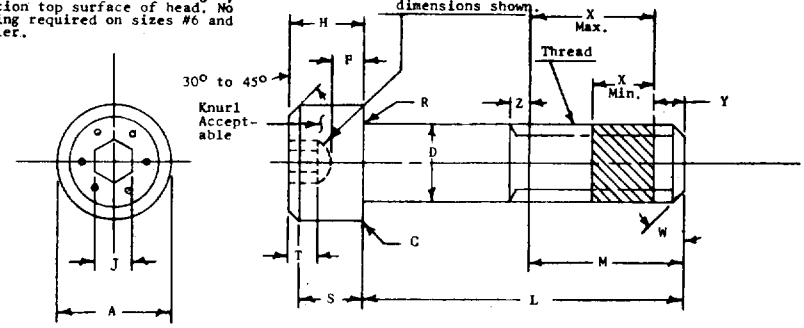
FED. SUP CLASS
5306

Head Marking: A circle of six (minimum) dots raised or depressed .010 maximum on size 8-32 and larger, location top surface of head. No marking required on sizes #6 and smaller.

Shape of socket bottom optional. Must be within dimensions shown.



M = Thread length. The length of the screw thread is measured from the extreme point to the last complete thread pitch.

W = Screw Point Chamfer. The point shall be flat and chamfered. The flat shall be normal to the axis of the screw and the chamfer (W) shall be at an angle of 35° +10°, -0° with the plane of the flat. The chamfer shall extend slightly below the root of the thread, and the edge between flat and chamfer shall be slightly rounded. (A)

X = X min represents the minimum length of external threads required for engagement with complete internal thread pitches. The element shall engage within this minimum length and meet requirements of MIL-F-18240. X, min is equal to 5 thread pitches. X maximum equals the length of complete thread between Y and Z.

Y = Y min shall have at least one pitch of complete thread. Y maximum equals 2 pitches of complete thread plus 2 pitches which includes the incomplete thread and chamfer. The locking element shall not be effective within the area of Y minimum.

Z = Equals incomplete thread and/or extrusion angle permissible up to 2 thread pitches length maximum. The element or any machine holes or grooves for the element shall not penetrate this area.

(1) THREAD	D Body Dia. MAX - MIN	A Head Dia. MAX - MIN	H Head Heigh MAX - MIN	F Hole Depth Limit MIN	S Head Side Height MIN	J Socket Width Across Flats MAX - MIN	T Key Depth MIN	C Radius or Chamfer MAX	R Radius MAX - MIN	(2) M Thread Length MIN	X MIN	(A) (3) Ultimate Tensile Strength Pounds (wtu) MIN
#4-40 UNC-3A	.1120 .1075	.183 .176	.112 .108	.009	.101	.0952 .0937	.051	.005	.009 .005	.750	.125	480
#6-32 UNC-3A	.1380 .1329	.226 .218	.138 .134	.013	.124	.1111 .1094	.064	.005	.010 .006	.750	.156	720
#8-32 UNC-3A	.1640 .1585	.270 .262	.164 .159	.011	.148	.1426 .1406	.077	.005	.012 .007	.875	.156	1,120
#10-32 UNF-3A	.1900 .1840	.312 .303	.190 .185	.016	.171	.1587 .1562	.090	.005	.014 .009	.875	.156	1,600
1/4-28 UNF-3A	.2500 .2435	.375 .365	.250 .244	.026	.225	.1900 .1875	.120	.008	.014 .009	1.000	.178	2,910
5/16-24 UNF-3A	.3125 .3053	.468 .457	.312 .306	.027	.281	.2530 .2500	.151	.008	.017 .012	1.125	.208	4,640
3/8-24 UNF-3A	.3750 .3678	.562 .550	.375 .368	.029	.337	.3160 .3125	.182	.008	.020 .015	1.250	.208	7,020
7/16-20 UNF-3A	.4375 .4294	.656 .642	.437 .430	.031	.394	.3790 .3760	.213	.010	.023 .018	1.375	.250	9,490
1/2-20 UNF-3A	.5000 .4919	.750 .735	.500 .492	.051	.450	.3790 .3750	.245	.010	.026 .020	1.500	.250	12,790
5/8-18 UNF-3A	.6250 .6163	.937 .921	.625 .616	.055	.562	.5050 .5000	.307	.010	.032 .024	1.750	.278	19,200

(1) Threads shall be fully formed by any single rolling process and in accordance with Specification MIL-S-7742.

(A) (2) On short screws the complete (full formed) threads shall extend to within two thread pitch lengths of the head.

(A) (3) Based on 80,000 psi ultimate tensile strength, and stress area $=3.1416\left(\frac{E}{2}-\frac{3H}{16}\right)^2$. See Handbook H28 (1957)-Part I.

(A) MATERIAL: Steel Corrosion Resisting; Procurement Specification FF-S-96 or Carpenter no. 10.

TREATMENT: Passivated (See Procurement Specification).

SURFACE ROUGHNESS: The surface of the shank, fillet and bearing area shall not exceed 125 RMS.

(A) LOCKING ELEMENT: In accordance with Specification MIL-F-18240. Locking element area must pass thru a plain ring gage, equal to the maximum major thread diameter + .010, freely or with finger pressure.

(A) MAGNETIC PERMEABILITY: These screws shall have a magnetic permeability of 2.0 max (Air=1.0) for a field of H=200 orsteds using a magnetic indicator per MIL-I-17214.

DESIGN AND USAGE LIMITATIONS: See MS15981.

DIMENSIONS: In inches.

EXAMPLE OF PART NUMBER: MS21295-56 =1/4-28 Screw, 1 inch long.

This standard takes precedence over documents referenced herein.
Referenced documents shall be of the issue in effect on date of invitations for bid.

APPROVED 13 FEB 1961 REVISED (A) 20 Feb 63

P.A. Navy - Wep Other Cust USAF - AFSC	TITLE SCREWS, SELF LOCKING, 250°F, CYLINDRICAL HEAD, HEXAGONAL WRENCHING SOCKET, CORROSION RESISTING STEEL, 80 KSI Ftu (Socket Head Cap Screws)	MILITARY STANDARD MS 21295(ASG)
PROCUREMENT SPECIFICATION FF-S-86 & MIL-F-18240	SUPERSEDES: MS21295(Wep)	SHEET 1 OF 2

DD FORM 1 SEP 57 672-1 (Limited coordination) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

This standard has been approved by the BuWep (Department of the Navy) and the Department of the USAF and is mandatory for use by that activity. All other military activities are required to employ this standard where suitable.

FED. SUP CLASS
5306

(A) L SCREW LENGTH	DASH NUMBERS — THREAD SIZE 4-40	6-32	8-32	10-32	1/4-28	5/16-24	3/8-24	7/16-20	1/2-20	5/8-18
.1875 ±.015	1	2	3							
.250 ±.015 (1)	4	5	6							
.3125 ±.015	7	8	9	10	11	12				
.375 ±.015	13	14	15	16	17	18				
.4375 ±.015	19	20	21	22	23	24	25			
.500 ±.015	26	27	28	29	30	31	32			
.625 ±.015	33	34	35	36	37	38	39			
.750 ±.015	40	41	42	43	44	45	46			
.875 ±.015		47	48	49	50	51	52			
1.000 +.031 -.015		53	54	55	56	57	58	59	60	61
1.250 +.031 -.015			62	63	64	65	66	67	68	69
1.500 +.031 -.015			70	71	72	73	74	75	76	77
1.750 +.031 -.015				78	79	80	81	82	83	84
2.000 ±.031				85	86	87	88	89	90	91
2.250 ±.031					92	93	94		95	
2.500 ±.031						96	97		98	99
3 ±.031							100		101	

(1) MIL-F-18240 establishes performance requirements for the element when within X min. Therefore, only positive indication of torque is required for screws having lengths above this heavy line.

(1)

APPROVED 19 FEB 1981 REVISED (A) FOR CHANGES SEE SHEETS 1 AND 2.

P.A. Navy - Wep Other Cust USAF - AFSC	TITLE SCREWS, SELF LOCKING, 250°F, CYLINDRICAL HEAD, HEXAGONAL WRENCHING SOCKET, CORROSION RESISTING STEEL, 80KSI Ftu (Socket Head Cap Screws)	MILITARY STANDARD MS21295(ASG)
PROCUREMENT SPECIFICATION FF-S-86 & MIL-F-18240	SUPERSEDES: MS21295(WEP)	SHEET 2

DD FORM 1 SEP 67 672-1 (Limited coordination)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.