

User activities:
ARMY- AT, AV, GL
NAVY- MC

Review activities:
ARMY- MI, ME
NSA- NS
DLA- IS

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 when applicable.

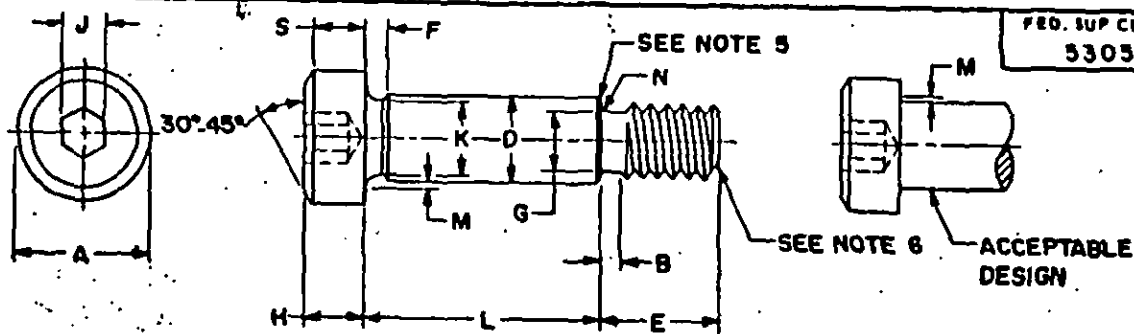


TABLE J

NOMINAL SIZE		.250	.3125	.375	.500	.625	.750	1.000	1.250
THREADS (UNC-3A)		.190-24	.250-20	.3125-18	.375-16	.500-13	.625-11	.750-10	.875-9
D SHOULDER DIAMETER	MAX MIN	.2480 .2460	.3105 .3085	.3730 .3710	.4980 .4960	.6230 .6210	.7480 .7460	.9980 .9960	1.2480 1.2460
A HEAD DIAMETER	MAX MIN	.375 .357	.437 .419	.562 .543	.750 .729	.875 .853	1.000 .977	1.312 1.287	1.750 1.723
H HEAD HEIGHT	MAX MIN	.187 .177	.219 .209	.250 .240	.312 .302	.375 .365	.500 .490	.625 .610	.750 .735
S HEAD SIDE HEIGHT	MIN	.157	.183	.209	.262	.315	.421	.527	.633
E THREAD LENGTH	MAX MIN	.375 .355	.438 .418	.500 .480	.625 .595	.750 .720	.875 .845	1.000 .970	1.125 .995
G THREAD NECK DIAMETER	MAX MIN	.142 .133	.193 .182	.249 .237	.304 .291	.414 .397	.521 .502	.638 .616	.750 .726
B THREAD NECK WIDTH	MAX	.062	.075	.083	.093	.115	.136	.150	.166
J SOCKET WIDTH ACROSS FLATS	NOM	.125	.156	.168	.250	.312	.375	.500	.625
K SHOULDER NECK DIAMETER	MIN	.227	.289	.352	.477	.602	.727	.977	1.227
F SHOULDER NECK WIDTH	MAX	.093	.093	.093	.093	.093	.093	.125	.125
N THREAD NECK FILLET	MAX MIN	.023 .017	.028 .022	.031 .025	.035 .029	.042 .036	.051 .045	.055 .049	.062 .056
M HEAD FILLET	MAX MIN	.014 .009	.017 .012	.020 .015	.026 .020	.032 .024	.039 .030	.050 .040	.060 .050
** SHEAR STRENGTH	SINGLE MIN DOUBLE MIN	1,170 7,980	2,180 12,550	3,700 18,150	5,580 32,450	10,400 50,900	16,600 73,400	25,000 130,900	34,800 204,850
* TENSILE STRENGTH LBS-MIN		1,950	3,640	6,170	9,310	17,300	27,700	41,700	58,000

* Ultimate tensile strength of 140,000 psi min, based on the minimum thread neck area.

** Single shear strength of 84,000 psi min in thread neck area, based on the minimum thread neck area.
Double shear strength of 168,000 psi min in shoulder area, based on the minimum shoulder.

(C) DENOTES CHANGES.

APPROVED 17 FEB 64 REVISED (A) 11 JAN 68 (B) 10 DEC 1974 (C) 30 OCT 84

P.A. Other Case	AR OS 99	TITLE SCREW, SHOULDER-SOCKET HEAD, HEXAGON, ALLOY STEEL, CADMIUM PLATED, UNC-3A	MILITARY STANDARD MS 51975
PROCUREMENT SPECIFICATION MIL-S-21472	SUPERSEDES: MS16637 and MS16639	PAGE 1 OF 2	

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TABLE II								FED. SUP CLASS 5305	
NOMINAL SIZE		.250	.3125	.375	.500	.625	.750	1.000	1.250
THREADS (UNC-3A)		.190-24	.250-20	.3125-18	.375-16	.500-13	.625-11	.750-10	.875-9
L	SHOULDER LENGTH	TOL	DASH NUMBER	DASH NUMBER	DASH NUMBER	DASH NUMBER	DASH NUMBER	DASH NUMBER	DASH NUMBER
	.375		1						
	.500		2	8	16		38***		
	.625		3	9	17		39***		
	.750		4	10	18	28	40***		
	.875						41***		
	1.000		5	11	19	29	42***	51***	
	1.250	2.005	6	12	20	30	43	52***	
	1.500		7	13	21	31	44	53	60***
	1.750			14	22	32	45	54	61*** 71***
	2.000			15	23	33	46	55	62*** 72***
	2.250				24	34	47	56	63*** 73***
	2.500				25	35	48	57	64*** 74***
	2.750				26	36	49	58	65*** 75***
	3.000				27	37	50	59	66*** 76***
	3.500						80	81	68*** 77***
	3.750								
	4.000							70***	78***

*** Indicates manufacturer's non-stock production item.

NOTES:

- MATERIAL:** Alloy steel in accordance with procurement specification.
- PROTECTIVE COATING:** Cadmium plated in accordance with QQ-P-416, Type II, Class 3.
- THREADS:** The threads shall be in accordance with MIL-S-7742.
- HEAD:** Plain or knurled heads are acceptable.
- EDGE OF SHOULDER:** The edge of the shoulder may be broken. The radius or chamfer may not exceed 0.005 for shoulders to 3/8 diameter and 0.008 for larger diameters.
- POINT CHAMFER:** The point shall be flat and chamfered. The flat shall be normal to the axis of the screw. The chamfer shall extend slightly below the root of the thread, and the edge between the flat and the chamfer may be slightly rounded. The included angle of the point should be approximately 90 degrees.
- DIMENSIONS:** All dimensions are in inches unless otherwise specified.
- PART NUMBER:** The MS part number consists of the MS number, plus the dash number. Example: MS51975-1.
- For design feature purposes, this standard takes precedence over procurement documents referenced herein.
- Referenced documents shall be of the issue in effect on date of invitations for bid.

INTERCHANGEABILITY

Screws covered by dash numbers 1 thru 70 given in MS16637 and MS16638 are canceled after 15 December 1964 and superseded by the screws given in MS51975 having the same dash numbers. The canceled screws cannot always replace the superseding screws and should be used until existing stocks are depleted. Use only the superseding screws for new design and replacement.

APPROVED 17 FEB 64 REVISED C FOR CHANGE SEE PAGE 2

PA 12 18 OS 99	TITLE: SCREW, SHOULDER-SOCKET HEAD, HEXAGON, ALLOY STEEL, CADMIUM PLATED, UNC-3A	MILITARY STANDARD MS 51975
PROCUREMENT SPECIFICATION MIL-S-21472	SUPERSEDES: MS16637 and MS16638	PAGE 2 OF 2