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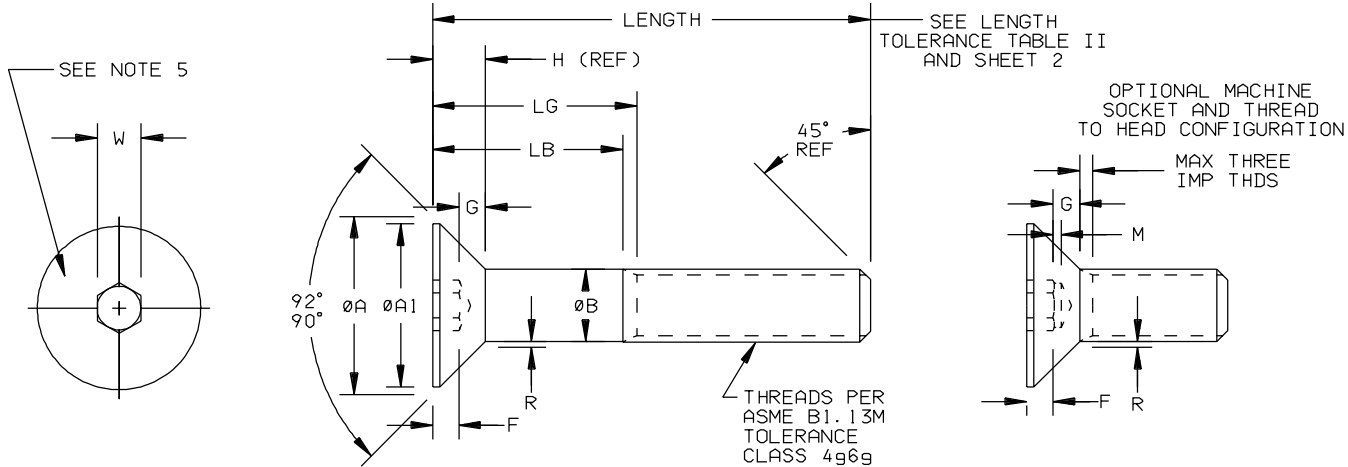


TABLE I

NOM. DIA.	THREADS	ØA MAX (a)	ØA1 MIN (b)	ØB		F MIN	G MIN	H REF	M MAX	R MAX	W NOM	RECOMMENDED SEATING TORQUE N·m PLAIN (c)
				MAX	MIN							
M3	MJ3X0.5	6.72	5.35	3.00	2.86	1.1	0.25	1.86	0.3	0.25	2.0	1.2
M4	MJ4X0.7	8.96	7.80	4.00	3.82	1.5	0.45	2.48	0.4	0.35	2.5	2.8
M5	MJ5X0.8	11.20	9.75	5.00	4.82	1.9	0.66	3.10	0.5	0.40	3.0	5.5
M6	MJ6X1	13.44	11.70	6.00	5.82	2.2	0.70	3.72	0.6	0.50	4.0	9.5
M8	MJ8X1.25	17.92	15.60	8.00	7.78	3.0	1.16	4.96	0.8	0.60	5.0	24.0
M10	MJ10X1.5	22.40	19.50	10.00	9.78	3.6	1.62	6.20	0.9	0.80	6.0	47.0
M12	MJ12X1.75	26.88	23.40	12.00	11.73	4.3	1.80	7.44	1.2	0.90	8.0	82.0
M16	MJ16X2	33.60	28.96	16.00	15.73	4.8	2.20	8.80	1.5	1.00	10.0	205.0
M20	MJ20X2.5	40.32	34.60	20.00	19.67	5.6	2.20	10.16	1.8	1.20	12.0	400.0

(a) MAXIMUM - TO THEORETICAL SHARP CORNERS.

(b) MINIMUM - ABSOLUTE WITH A FLAT.

(c) TORQUE CALCULATED TO INDUCE 420 MPa IN THE SCREW THREADS. TORQUE VALUES ARE FOR PLAIN ALLOY STEEL SCREWS. FOR CADMIUM PLATED SCREWS, MULTIPLY RECOMMENDED SEATING TORQUE BY .75; FOR ZINC PLATED SCREWS MULTIPLY BY 1.40.

TABLE II

LENGTH TOLERANCE, mm	
NOMINAL SCREW LENGTH	TOLERANCE
UP TO 16, INCL	±0.3
OVER 16 TO 60, INCL	±0.5
OVER 60 TO 150, INCL	±0.8

TABLE I CONTINUED

NOM. DIA.	*TENSILE STRENGTH kN MIN	DOUBLE SHEAR STRENGTH kN (REF ONLY)
M3	5.3	8.9
M4	9.2	15.8
M5	14.9	24.7
M6	21.1	35.6
M8	38.4	63.3
M10	60.9	99.0
M12	88.5	142.5
M16	164.5	253.3
M20	257.0	395.8

* ULTIMATE TENSILE STRENGTH IS CALCULATED USING TENSILE STRESS AREA PER APPENDIX B OF ASME B1.13M AND 1050MPa STRESS LEVEL

1. MATERIAL: ALLOY STEEL PER ASTM F835M.
2. HARDNESS: PER THE REQUIREMENTS OF ASTM F835M.
3. FINISH: SEE NOTE 6.
4. DIMENSIONS AND GEOMETRIC TOLERANCING PER ASME B18.3.5M - INCLUDING MANUFACTURING NOTES NOT LISTED IN THIS DRAWING.
5. MARK MANUFACTURER'S IDENTIFICATION.
6. PART NUMBER: 95847()-()-()

FINISH: B = CHEMICAL BLACK OXIDE PER MIL-DTL-13924.
 C = CADMIUM PLATE PER AMS-QQ-P-416, TYPE I, CLASS 3.
 D = CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 3.
 H = CADMIUM PLATE PER AMS-QQ-P-416, TYPE I, CLASS 2.
 J = CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2.
 (YELLOW CHROMATE)
 M = CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2. (OLIVE DRAB)
 S = SILVER PLATE PER AMS 2410.
 U = ZINC PLATE PER ASTM B633 TYPE III SCI.
 Z = ZINC PLATE PER ASTM B633 TYPE II SCI.
 NO LETTER = THERMAL OXIDE (BLACK) PLUS RUST PREVENTATIVE OIL.
 LENGTH IN MILLIMETERS
 DIAMETER PER TABULATION
 LOCKING FEATURE - NO LETTER = NO LOCKING FEATURE
 E = TYPE P (PATCH) PER MIL-DTL-18240
 K = TYPE N (PELLET) PER MIL-DTL-18240.

7. DIMENSIONS ARE IN MILLIMETERS.

TOLERANCES ±0.25 AND ±2°	FSCM NO. 56878	TITLE SCREW, FLAT HEAD, HEXAGON RECESS ALLOY STEEL, 1050MPa	STANDARDS AND SPECIFICATIONS ASTM F835M
SURFACE ROUGHNESS 3.2	CUSTODIAN: JENKINTOWN, PA.		PART NUMBER: 95847()-()-()
UNLESS OTHERWISE NOTED	DRAFTED IN ACCORDANCE WITH ANSI Y14.5M-1982		
APPROVED: S FOSTER	DATE: 10/26/04		
APPROVED: F CICCARONE	DATE: 3/14/01		



TABLE III

FOR LENGTHS SHORTER THAN LISTED. (LENGTHS ABOVE HEAVY LINE) SCREWS WILL BE THREADED TO WITHIN 3 THREAD PITCHES OF THE HEAD

BODY AND GRIP LENGTHS FOR FLAT HEAD SOCKET SCREWS

NOM. DIA.	M3		M4		M5		M6		M8		M10		M12		M14		M16		M20	
	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B
35	17	14.5	15	11.5																
40	22	19.5	20	16.5	18	14														
45	27	24.5	25	21.5	23	19	21	16												
50	32	29.5	30	26.5	28	24	26	21	22	15.7										
55	37	34.5	35	31.5	33	29	31	26	27	20.7										
60			40	36.5	38	34	36	31	32	25.7	28	20.5								
65			45	41.5	43	39	41	36	37	30.7	33	25.5	29	20.2						
70			50	46.5	48	44	46	41	42	35.7	38	30.5	34	25.2	30	20				
80			60	56.5	58	54	56	51	52	45.7	48	40.5	44	35.2	40	30	36	26		
90					68	64	66	61	62	55.7	58	50.5	54	45.2	50	40	46	36		
100					78	74	76	71	72	65.7	68	60.5	64	55.2	60	50	56	46		
110							86	81	82	75.7	78	70.5	74	65.2	70	60	66	56	58	45.5
120							96	91	92	85.7	88	80.5	84	75.2	80	70	76	66	68	55.5
130									102	95.7	98	90.5	94	85.2	90	80	86	76	78	65.5
140									112	105.7	108	100.5	104	95.2	100	90	96	86	88	75.5
150									122	115.7	118	110.5	114	105.2	110	100	106	96	98	85.5

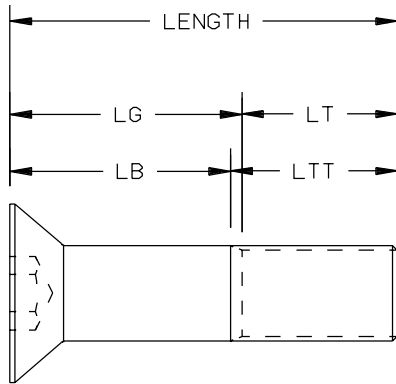


TABLE IV

NOM. DIA.	LT THREAD LENGTH MIN	LTT TOTAL THREAD LENGTH MAX
M3	18.0	20.5
M4	20.0	23.5
M5	22.0	26.0
M6	24.0	29.0
M8	28.0	34.3
M10	32.0	39.5
M12	36.0	44.8
M14	40.0	50.0
M16	44.0	54.0
M20	52.0	64.5

- A) THE LENGTH OF THE THREAD SHALL BE MEASURED, PARALLEL TO THE AXIS OF THE SCREW, FROM THE EXTREME POINT TO THE LAST COMPLETE (FULL-FORM) THREAD. THREAD LENGTH, ON SOCKET FLAT COUNTERSUNK HEAD CAP SCREWS, SHALL BE AS DEFINED BY TABLE IV AND APPLICABLE NOTES.
- B) GRIP GAGING LENGTH (LG): GRIP GAGING LENGTH IS THE DISTANCE, MEASURED PARALLEL TO THE AXIS OF THE SCREW, FROM THE TOP OF THE HEAD TO THE FIRST COMPLETE (FULL-FORM) THREAD UNDER THE HEAD - SEE ABOVE.
- C) BODY LENGTH (LB): BODY LENGTH IS THE LENGTH, MEASURED PARALLEL TO THE AXIS OF THE SCREW, OF THE UNTHREADED PORTION OF THE SHANK AND THE HEAD HEIGHT - SEE ABOVE.
- D) TABULATED (LG) VALUES ARE MAXIMUM AND REPRESENT THE MINIMUM DESIGN GRIP LENGTH, INCLUDING THE REFERENCE HEAD HEIGHT, OF THE SCREW. THEY SHALL BE MEASURED FROM THE TOP OF THE HEAD TO THE FACE OF A GO THREAD RING GAGE, HAVING THE THREAD COUNTERSINK AND/OR COUNTERBORE REMOVED, WHICH HAS BEEN ASSEMBLED BY HAND AS FAR AS THE THREAD WILL PERMIT. THE TABULATED (LB) VALUES ARE MINIMUM AND REPRESENT THE MINIMUM BODY LENGTH, INCLUDING THE REFERENCE HEAD HEIGHT OF THE SCREW. THEY ARE EQUAL TO (LG) MINUS 5 TIMES THE PITCH OF THE THREAD FOR THE RESPECTIVE SCREW SIZE.
- E) SCREWS HAVING NOMINAL LENGTHS FALLING BETWEEN THOSE FOR WHICH (LG) AND (LB) VALUES ARE TABULATED IN TABLE IV SHALL HAVE (LG) AND (LB) DIMENSIONS CONFORMING WITH THOSE OF THE NEXT SHORTER TABULATED NOMINAL LENGTH FOR THE RESPECTIVE SCREW SIZE.
- F) FOR SCREWS OF NOMINAL LENGTHS LONGER THAN THOSE FOR WHICH (LG) AND (LB) VALUES ARE TABULATED IN TABLE IV, THE GRIP GAGING LENGTH OF THE SCREWS SHALL BE DETERMINED AS FOLLOWS:

LG = L - LT
 LB = L - LTT
 WHERE: L = NOMINAL LENGTH; LT = MINIMUM THREAD LENGTH; LTT = MAXIMUM TOTAL THREAD LENGTH

TOLERANCES ±0.25 AND ±2"
 SURFACE ROUGHNESS 3.2
 UNLESS OTHERWISE NOTED

DRAFTED
 IN ACCORDANCE
 WITH ANSI Y14.5M
 1982



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