

FED. SUPPLY CLASS

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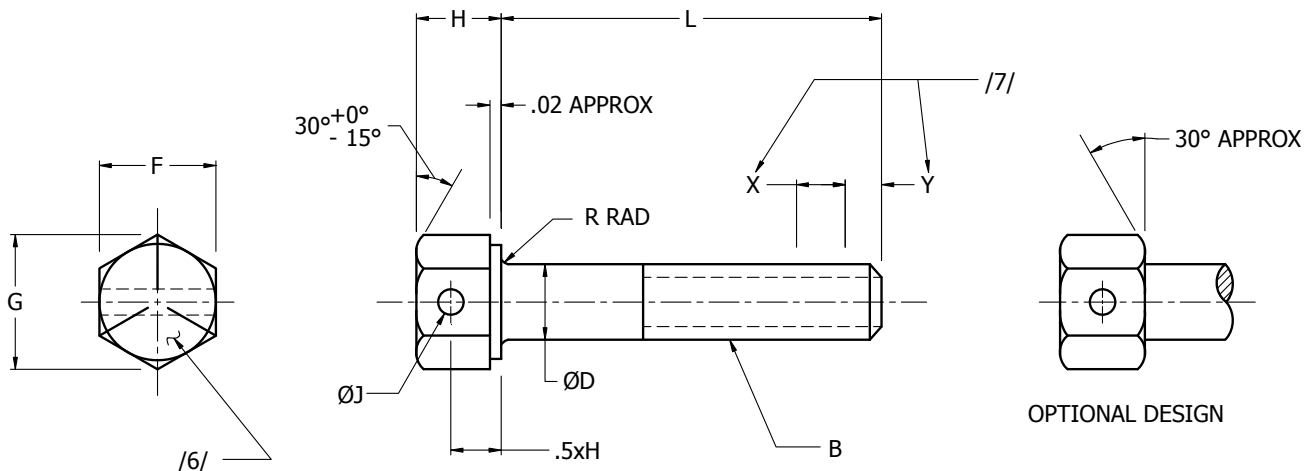


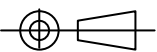
TABLE I – DIMENSIONS

NOMINAL SIZE	B THREAD	ØD BODY		F WIDTH ACROSS FLATS		G WIDTH ACROSS CORNERS		H HEAD HEIGHT		.5xH		ØJ HOLE +.006 -.002	R RADIUS		MIN TENSILE STRENGTH LBF
		MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN		MAX	MIN	
1/4	28 UNF-2A	.2500	.2450	.4375	.4280	.505	.488	.163	.150	.088	.075	.0625	.025	.015	4,350
5/16	24 UNF-2A	.3125	.3065	.5000	.4890	.577	.557	.211	.195	.114	.098	.0625	.025	.015	6,950
3/8	24 UNF-2A	.3750	.3690	.5625	.5510	.650	.628	.243	.226	.130	.113	.0625	.025	.015	10,500
7/16	20 UNF-2A	.4375	.4305	.6250	.6120	.722	.698	.291	.272	.155	.136	.0625	.025	.015	14,200
1/2	20 UNF-2A	.5000	.4930	.7500	.7360	.866	.840	.323	.302	.172	.151	.094	.025	.015	19,200
5/8	18 UNF-2A	.6250	.6170	.9375	.9220	1.083	1.051	.403	.378	.214	.189	.094	.045	.020	30,700
3/4	16 UNF-2A	.7500	.7410	1.1250	1.1000	1.299	1.254	.483	.455	.256	.228	.094	.045	.020	44,800
7/8	14 UNF-2A	.8750	.8660	1.3125	1.2850	1.516	1.465	.563	.531	.298	.266	.125	.065	.040	61,100
1	12 UNF-2A	1.0000	.9900	1.5000	1.4690	1.732	1.675	.627	.591	.332	.296	.125	.095	.060	79,600

① COMPLETELY REVISED

THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MS51096, REVISION E. PART NUMBERS REMAIN MS51096.

THIRD
ANGLE
PROJECTION



CUSTODIAN

NATIONAL AEROSPACE STANDARDS COMMITTEE

REVISION

1

PROCUREMENT
SPECIFICATION

FF-S-85

TITLE

**SCREW, CAP, HEXAGON HEAD (FINISHED HEXAGON BOLT),
HEAD DRILLED FOR LOCKING WIRE, STEEL, GRADE 5,
CADMIUM PLATED, UNF-2A, PLAIN AND SELF-LOCKING**

CLASSIFICATION
PART STANDARD

MS51096

SHEET 1 OF 3

MATERIAL:

MEDIUM CARBON STEEL, GRADE 5, IN ACCORDANCE WITH PROCUREMENT SPECIFICATION. MINIMUM
ULTIMATE TENSILE STRENGTH: 120 KSI.

FINISH:

CADMIUM PLATED IN ACCORDANCE WITH PROCUREMENT SPECIFICATION.

CODE:

THE MS PART NUMBER CONSISTS OF THE MS NUMBER, PLUS THE DASH NUMBER.
FOR SCREWS WITH SELF-LOCKING ELEMENT ADD THE LETTER "L" AFTER THE DASH NUMBER.

EXAMPLES OF PART NUMBER:

MS51096-301 = PLAIN SCREW
MS51096-301L = SELF-LOCKING SCREW

NOTES:

- (1) THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
- (2) UNLESS OTHERWISE SPECIFIED HEREIN, REFERENCED DOCUMENTS SHALL BE THE ISSUE IN EFFECT ON DATE OF MANUFACTURE. HOWEVER, EXISTING MATERIAL INVENTORY CERTIFIED TO A PREVIOUS REVISION OF THE APPLICABLE MATERIAL SPECIFICATION(S) IS ACCEPTABLE FOR USE UNTIL DEPLETION.
- (3) THE THREADS SHALL BE IN ACCORDANCE WITH FED-STD-H28.
- (4) MINIMUM THREAD LENGTH SHALL BE TWICE THE DIAMETER PLUS 1/4 INCH. THE TOLERANCE SHALL BE PLUS 3/16 INCH OR 2-1/2 THREADS, WHICHEVER IS GREATER. ON SCREWS THAT ARE TOO SHORT FOR MINIMUM THREAD LENGTH, THE DISTANCE FROM THE BEARING SURFACE OF THE HEAD TO THE FIRST COMPLETE THREAD SHALL NOT EXCEED THE LENGTH OF 2-1/2 THREADS.
- (5) DIMENSIONS IN INCHES AND APPLY AFTER FINISH UNLESS OTHERWISE SPECIFIED.
- /6/ HEADS SHALL BE MARKED IN ACCORDANCE WITH MIL-HDBK-131. SCREWS WITH SELF-LOCKING ELEMENTS SHALL ALSO HAVE SIX DOTS IN A CIRCULAR PATTERN ON THE HEAD. RAISED MARKINGS ARE PREFERRED, RECESSED MARKINGS ARE ACCEPTABLE.
- /7/ SELF-LOCKING ELEMENT:
 - (a) THE SELF-LOCKING ELEMENT SHALL BE A PATCH TYPE OR LONGITUDINAL STRIP IN ACCORDANCE WITH MIL-DTL-18240.
 - (b) FOR "X" AND "Y" DIMENSIONS AND DESIGN AND USAGE LIMITATIONS, SEE NASM15981.
 - (c) MAXIMUM RING GAGE DIAMETER THAT LOCKING REGION OF SCREW MUST PASS THRU FREELY OR WITH FINGER PRESSURE SHALL BE THE NOMINAL SIZE PLUS .010.
 - (d) SIZES 5/16, 7/16 AND 7/8 SHALL NOT BE AVAILABLE WITH SELF-LOCKING ELEMENT.

① COMPLETELY REVISED

REVISION

1

NASM51096

SHEET 2



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