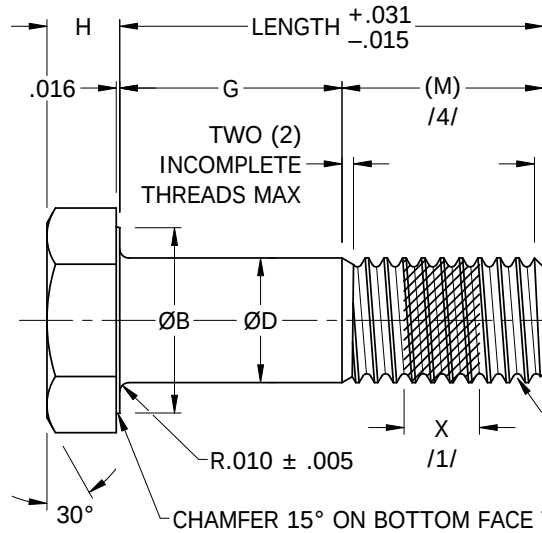
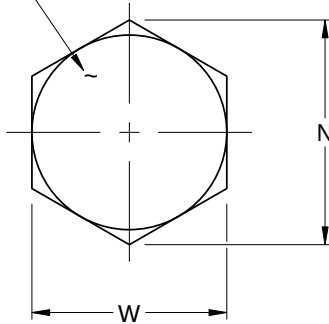


FED. SUPPLY CLASS

5306

MARK WITH DASH
TO INDICATE CRES



THREAD RELIEF. LENGTH FROM
END TO FIRST COMPLETE THREAD
NOT TO EXCEED TWO (2) THREAD
PITCHES INCLUDING THREAD
RELIEF. /3/

THREAD IN ACCORDANCE
WITH MIL-S-7742

CHAMFER 15° ON BOTTOM FACE TO DIMENSION "ØB" OPTIONAL

TABLE I – DIMENSIONS AND STRENGTH VALUES

DIA DASH NO.	T THREAD /2/	ØB /6/ MIN	ØD		H		(M)	N MIN	W		TENSILE STRENGTH /5/ LBF MIN	DOUBLE SHEAR STRENGTH LBF MIN
			MAX	MIN	MAX	MIN			MAX	MIN		
1	.1380-32 UNC-3A	.213	.138	.135	.106	.094	.312	.277	.251	.243	720	1,420
2	.1640-32 UNC-3A	.275	.164	.161	.118	.106	.437	.348	.313	.305	1,120	2,030
3	.1900-32 UNF-3A	.335	.189	.186	.141	.109	.469	.416	.377	.365	1,600	2,720
4	.2500-28 UNF-3A	.398	.249	.246	.172	.140	.506	.488	.440	.428	2,910	4,700
5	.3125-24 UNF-3A	.460	.312	.309	.204	.172	.531	.558	.502	.490	4,640	7,370
6	.3750-24 UNF-3A	.523	.374	.371	.235	.203	.641	.630	.565	.553	7,020	10,600
7	.4375-20 UNF-3A	.585	.437	.433	.266	.234	.656	.701	.627	.615	9,490	14,400
8	.5000-20 UNF-3A	.710	.499	.495	.297	.265	.781	.843	.752	.740	12,790	18,800
9	.5625-18 UNF-3A	.835	.562	.558	.328	.296	.906	.986	.877	.865	16,250	23,900
10	.6250-18 UNF-3A	.898	.624	.620	.360	.328	.953	1.058	.940	.928	19,200	29,500
12	.7500-16 UNF-3A	1.023	.749	.744	.422	.390	.969	1.200	1.066	1.053	28,000	42,400
14	.8750-14 UNF-3A	1.210	.874	.869	.485	.453	1.250	1.413	1.253	1.240	38,200	57,700
16	1.0000-12 UNF-3A	1.398	.999	.993	.547	.515	1.375	1.628	1.441	1.428	49,700	75,400
18	1.1250-12 UNF-3A	1.585	1.124	1.118	.610	.578	1.500	1.841	1.628	1.615	64,200	94,400
20	1.2500-12 UNF-3A	1.772	1.249	1.243	.672	.640	1.687	2.054	1.815	1.802	80,500	116,500

MATERIAL:

CRES 300 SERIES, WITH THE EXCEPTION OF ANY OF THE 303 GRADES, THAT PROVIDES IN THE FINISHED BOLT THE STRENGTH AND MAGNETIC PERMEABILITY SPECIFIED.

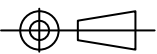
FINISH:

PASSIVATE PER AMS2700, METHOD 1, CLASS 4.

② COMPLETELY REVISED

THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MS21095, REV A. PART NUMBERS REMAIN MS21095.

THIRD
ANGLE
PROJECTION



CUSTODIAN
NATIONAL AEROSPACE STANDARDS COMMITTEE

REVISION
2

PROCUREMENT
SPECIFICATION
NASM6812
EXCEPT AS NOTED

TITLE
**BOLT, TENSION, HEX HEAD, SELF-LOCKING,
250 °F, CRES, 80 KSI Ft_u, 48 KSI Fs_u**

CLASSIFICATION
PART STANDARD

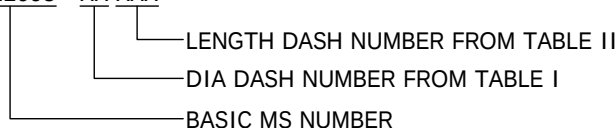
NASM21095

SHEET 1 OF 4

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CODE: THE PART NUMBER CONSISTS OF THE BASIC MS NUMBER FOLLOWED BY A DIA DASH NUMBER TAKEN FROM TABLE I. A LENGTH DASH NUMBER FROM TABLE II SHALL BE ADDED TO A DIA DASH NUMBER.

MS21095 - XX XXX



EXAMPLE OF PART NUMBER:

MS21095-4008 = .2500-28 BOLT, .969 LONG, .500 GRIP LENGTH.

MS21095-18018 = 1.1250-12 BOLT, 2.625 LONG, 1.125 GRIP LENGTH.

NOTES:

- /1/ LOCATION OF THE EFFECTIVE LOCKING AREA "X" SHALL BE IN ACCORDANCE WITH NASM15981.
- /2/ THREADS SHALL BE FORMED BY ANY SINGLE ROLLING PROCESS AND IN ACCORDANCE WITH MIL-S-7742.
- /3/ CHAMFER 45° ± 5°. CHAMFER TO EXTEND TO ROOT OF THREAD.
- /4/ REFERENCE DIMENSIONS FOR DESIGN PURPOSES ONLY AND ARE NOT AN INSPECTION OR MANUFACTURING REQUIREMENT.
- /5/ TENSILE VALUES BASED ON 80 KSI ULTIMATE TENSILE STRENGTH FOR SIZES UP TO AND INCLUDING DIA DASH NUMBER "9", 76 KSI ULTIMATE TENSILE STRENGTH FOR SIZES DIA DASH NUMBER "10" AND LARGER. $STRESS\ AREA = 3.1416 \left(\frac{E}{2} - \frac{3H}{16} \right)^2$. SEE FED-STD-H28.
- /6/ THE DIAMETER OF THE WASHER FACE SHALL NOT EXCEED THE ACTUAL WIDTH ACROSS FLATS.
- (7) SURFACE ROUGHNESS OF THE SHANK, FILLET AND BEARING AREA SHALL NOT EXCEED 125 MICROINCHES AND SHALL BE IN ACCORDANCE WITH ASME B46.1.
- (8) LOCKING ELEMENT IN ACCORDANCE WITH SPECIFICATION MIL-DTL-18240. LOCKING ELEMENT AREA MUST PASS THROUGH A RING GAGE EQUAL TO THE MAXIMUM MAJOR THREAD DIAMETER + .003, FREELY OR WITH FINGER PRESSURE.
- (9) MAGNETIC PERMEABILITY SHALL BE LESS THAN 2.0 (AIR = 1.0) FOR A FIELD STRENGTH H = 200 OERSTEDS USING A MAGNETIC PERMEABILITY INDICATOR PER ASTM A342/A342M, TEST METHOD 3.
- (10) PENETRANT INSPECTION PER ASTM E1417/E1417M. ACCEPTANCE PER NASM6812 INSPECTION REQUIREMENTS.
- (11) ALL DIMENSIONS ARE IN INCHES AND APPLY AFTER FINISH UNLESS OTHERWISE SPECIFIED.
- (12) DESIGN AND USAGE: SEE LIMITATIONS PER NASM15981.
- (13) THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
- (14) UNLESS OTHERWISE SPECIFIED, PART INVENTORY MANUFACTURED TO PREVIOUS REVISIONS OF THE APPLICABLE DRAWING OR SPECIFICATION MAY BE PROCURED AND USED UNTIL STOCK IS DEPLETED.
- (15) 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.
- (16) DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1982.

② COMPLETELY REVISED

REVISION
2
NASM21095
SHEET 2



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