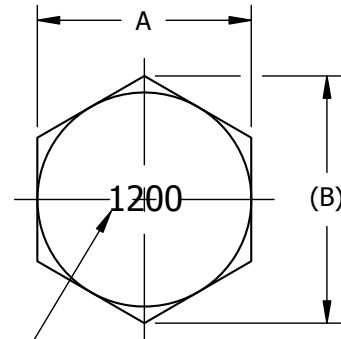


FED. SUPPLY CLASS

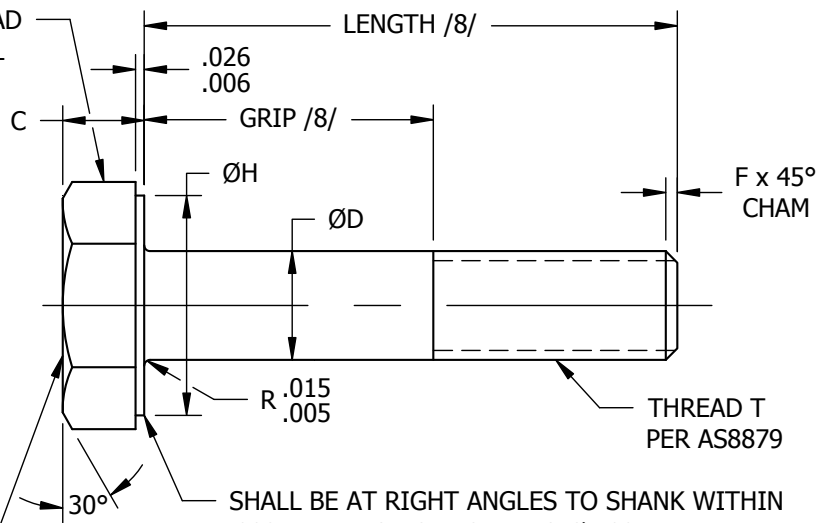
5306

THE TAPER OF THE SIDES OF THE HEAD SHALL NOT EXCEED 4 DEGREES TOTAL INCLUDED ANGLE.



IDENTIFICATION
STAMP

SHALL BE FLAT AND CHAMFERED
WITH DIA OF TOP CIRCLE 85 TO
100 PERCENT OF MIN A



SHALL BE AT RIGHT ANGLES TO SHANK WITHIN
.003 F.I.M. FOR SIZES UP TO Ø.500.
.005 F.I.M. FOR SIZES GREATER THAN Ø.500
AND CONCENTRIC WITH SHANK WITHIN
THREE PERCENT OF ØH.

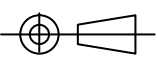
TABLE I – DIMENSIONS

BASIC MS PART NUMBER	T THREAD UNJF-3A	A		(B)	C		ØD		F		ØH	
		MAX	MIN		MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
MS20033	.1900-32	.377	.365	.430	.141	.109	.189	.186	.047	.015	.391	.359
MS20034	.2500-28	.440	.428	.510	.172	.140	.249	.246	.047	.015	.454	.422
MS20035	.3125-24	.502	.490	.580	.204	.172	.312	.309	.063	.031	.516	.484
MS20036	.3750-24	.565	.553	.650	.235	.203	.374	.371	.063	.031	.579	.547
MS20037	.4375-20	.627	.615	.720	.266	.234	.437	.433	.063	.031	.641	.609
MS20038	.5000-20	.752	.740	.870	.297	.265	.499	.495	.063	.031	.766	.734
MS20039	.5625-18	.877	.865	1.010	.328	.296	.562	.558	.078	.046	.891	.859
MS20040	.6250-18	.940	.928	1.090	.360	.328	.624	.620	.078	.046	.954	.922
MS20042	.7500-16	1.066	1.053	1.230	.422	.390	.749	.745	.078	.046	1.079	1.047
MS20044	.8750-14	1.253	1.240	1.440	.485	.453	.874	.869	.094	.062	1.266	1.234
MS20046	1.0000-14	1.441	1.428	1.660	.547	.515	.999	.993	.094	.062	1.454	1.422
MS20045	1.0000-12											

/1/

THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MS20033 THRU MS20046, REV C. PART NUMBERS REMAIN MS20033 THRU MS20046.

THIRD
ANGLE
PROJECTION



CUSTODIAN
NATIONAL AEROSPACE STANDARDS COMMITTEE

REVISION

3

PROCUREMENT
SPECIFICATION

NASM7874

TITLE

**BOLT, TENSION, HEXAGON HEAD,
MACHINE, A286 CRES, 1200 °F, 140 KSI FtU**

CLASSIFICATION
PART STANDARD

**NASM20033 THRU
NASM20046**

SHEET 1 OF 3

MATERIAL:

A286 CORROSION AND HEAT RESISTANT STEEL, SEE PROCUREMENT SPECIFICATION.

CODE:

PART NUMBER CONSISTS OF BASIC MS NUMBER PLUS DASH NUMBER FROM TABLE II.

EXAMPLE OF PART NUMBER:

MS20034-10 = .2500 INCH DIA BOLT, 1.516 INCHES LONG, 1 INCH GRIP. ③

NOTES:

- /1/ INACTIVE FOR DESIGN. /3/
- ③ (2) GRIP LENGTHS IN ADDITION TO THOSE TABULATED IN TABLE II ARE AVAILABLE IN .125 INCH INCREMENTS BY THE USE OF SIGNIFICANT DASH NUMBERS. EACH ADDITIONAL WHOLE INCH SHALL HAVE DASH NUMBERS IN UNITS OF TEN WITH DASH 1 TO 7 INDICATING EIGHTHS OF AN INCH. EX: DASH NO. 70 = GRIP 7, DASH NO. 77 = GRIP 7.875.
- /3/ FOR DESCRIPTION OF STATUS NOTES, SEE NAS380.
- (4) REMOVE ALL BURRS AND SHARP EDGES.
- (5) DIMENSIONS IN INCHES. TOLERANCES UNLESS OTHERWISE SPECIFIED: ANGLES $\pm 5^\circ$.
- ~~(6) UNLESS OTHERWISE SPECIFIED, THREADS IN ACCORDANCE WITH MIL-S-7742 ARE ACCEPTABLE UNTIL 31 DECEMBER 1970.~~
- (7) FOR INFORMATION: MS20500 AND MS20501 NUTS WERE DESIGNED FOR USE WITH THIS BOLT STANDARD.
- /8/ SEE TABLE II FOR GRIP AND LENGTH DIMENSIONS. GRIP LENGTH OF BOLTS SHALL BE MEASURED FROM THE UNDERSIDE OF THE HEAD TO THE END OF THE FULL CYLINDRICAL PORTION OF THE SHANK. COMPLETE THREADS SHALL BEGIN WITHIN TWO THREAD PITCH MAXIMUM.
- ③ ~~/9/ TENSILE AND RUPTURE STRENGTH FIGURES GIVEN IN TABLE III ARE FOR MINIMUM VALUES ONLY AND ARE CALCULATED FROM THE MEDIAN (MEAN BETWEEN BASIC PITCH AND BASIC ROOT DIAMETERS) AREA OF THE THREAD. MAXIMUM VALUES WILL NOT BE CAUSE FOR REJECTION, PROVIDED BOLTS SHOW SATISFACTORY DUCTILITY AS MEASURED BY THE BEND TEST. SHEAR STRENGTH FIGURES ARE CALCULATED ON THE BASIS OF 60 PERCENT OF THE TENSILE STRENGTH OF THE MATERIAL AT THE MINIMUM SHANK DIAMETER.~~
- ③ (10) THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
- ③ (11) 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 (12) UNLESS OTHERWISE SPECIFIED, PART INVENTORY MANUFACTURED TO PREVIOUS REVISIONS OF THE APPLICABLE DRAWING OR SPECIFICATION MAY BE PROCURED AND USED UNTIL STOCK IS DEPLETED.
- ③ (13) DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1982.

REVISION

3

NASM20033 THRU
NASM20046

SHEET 2