FEDERAL SUPPLY CLASS
4730

RATIONALE

MA2047C HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

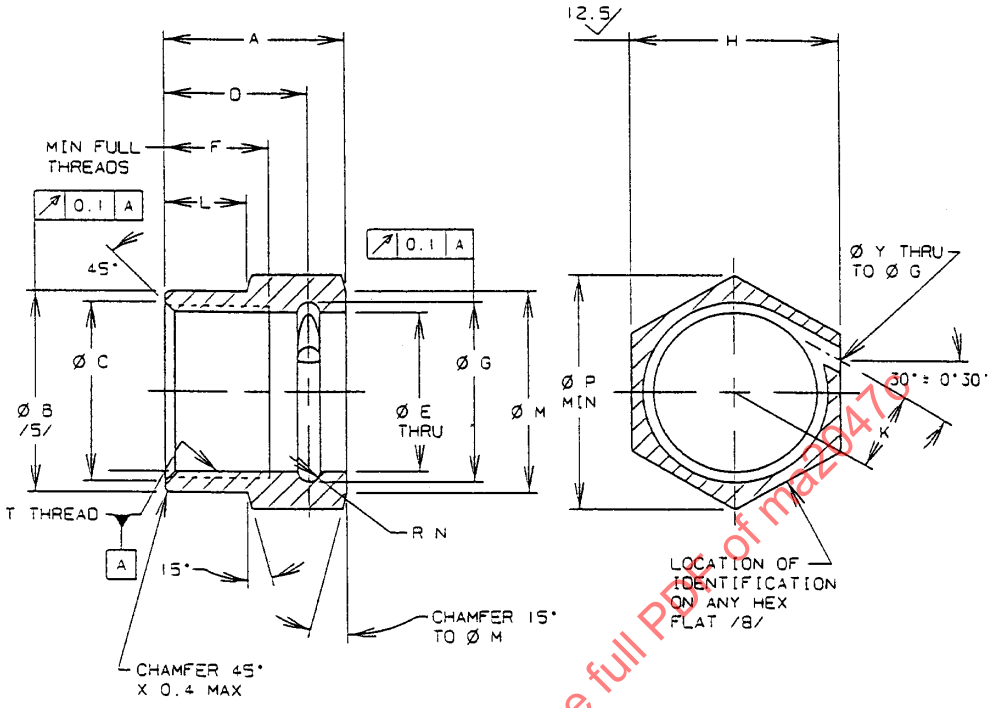


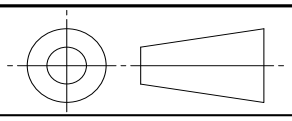
FIGURE 1 - NUT

TABLE 1A - DIMENSIONS

BASIC NO. MA2047 /17/ SIZE CODE	(NOMINAL TUBE SIZE DN) /3/	T PER MA1370 4H5H /6/	A ±0.3	B ±0.06	C	D
05	5	MJ10 X 1	15.5	--	10.4-10.9	12.0
06	6	MJ12 X 1.25	16.5	--	12.4-12.9	13.0
08	8	MJ14 X 1.5	17.5	16.06	14.4-14.9	14.0
10	10	MJ16 X 1.5	19.0	18.06	16.4-16.9	15.0
12	12	MJ18 X 1.5	20.5	21.06	18.4-18.9	15.7
14	14	MJ20 X 1.5	20.5	23.06	20.4-20.9	15.7
16	16	MJ22 X 1.5	21.5	25.06	22.4-22.9	16.2
20	20	MJ27 X 1.5	22.0	31.06	27.4-27.9	16.7
25	25	MJ33 X 1.5	25.0	38.06	33.4-33.9	18.2
32	32	MJ42 X 2	27.2	45.06	42.4-42.9	20.7
40	40	MJ50 X 2	28.4	57.06	50.4-50.9	21.4

SAE values your input. To provide feedback on this Technical Report, please visit
http://www.sae.org/technical/standards/MA2047C

THIRD ANGLE PROJECTION



ISSUED 1986-02 REVISED 1997-09 REAFFIRMED 2015-04

CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: /7/ MA2005 (ISO 7169)

AEROSPACE STANDARD

NUT, RETAINED, FLARELESS, METRIC

TABLE 1B - DIMENSIONS

BASIC NO. MA2047 /17/ SIZE CODE	E /4/	F	G ±0.05	H	K	L
05	9.026- 9.216	9.1	11.0	13.60-14.06	4.2- 4.3	--
06	10.782-10.994	9.9	12.75	15.60-16.10	5.1- 5.2	--
08	12.539-12.775	10.7	14.50	16.60-17.10	6.0- 6.1	10.0
10	14.539-14.775	11.7	16.50	18.60-19.10	7.0- 7.1	10.0
12	16.539-16.775	12.1	19.00	21.60-22.10	8.0- 8.1	10.0
14	18.539-18.775	12.0	21.00	23.60-24.10	9.0- 9.1	10.0
16	20.539-20.775	12.1	23.00	26.60-27.10	10.0-10.1	10.0
20	25.539-25.775	12.7	28.45	31.30-32.10	12.4-12.5	11.0
25	31.539-31.775	13.7	34.45	40.30-41.20	15.4-15.5	11.0
32	40.051-40.351	14.4	42.95	45.30-46.20	19.7-19.8	11.0
40	48.051-48.351	13.6	51.45	59.20-60.30	23.7-23.8	11.0

TABLE 1C - DIMENSIONS AND WEIGHTS

BASIC NO. MA2047 /17/ SIZE CODE	M ±0.2	N ±0.03	P	Y	KG/100 MAX ALUM	KG/100 MAX CRES	KG/100 MAX TI
05	13.40	1.05	15.37	2.2-2.3	.430	1.21	.701
06	15.40	1.05	17.65	2.2-2.3	.568	1.60	.927
08	16.40	1.05	18.78	2.2-2.3	.462	1.30	.753
10	18.4	1.05	21.07	2.2-2.3	.588	1.66	.959
12	21.4	1.35	24.10	2.7-2.8	.929	2.63	1.51
14	23.4	1.35	26.31	2.7-2.8	1.03	2.93	1.68
16	26.4	1.35	29.67	2.7-2.8	1.35	3.84	2.21
20	31.10	1.60	34.87	3.2-3.3	1.80	5.11	2.94
25	40.10	1.60	44.09	3.2-3.3	3.59	10.1	5.85
32	45.10	1.60	49.54	3.2-3.3	3.42	9.69	5.58
40	59.00	1.85	64.87	3.7-3.8	8.33	23.5	13.5

NOTES:

/1/ MATERIAL:

a. NO CODE LETTER (USE HYPHEN) - TYPE 4130 STEEL BAR PER MIL-S-6758.
b. CODE LETTER D - TYPE 2024-T6 ALUMINUM ALLOY BAR PER AMS 4112 OR TYPE 2024-T6 OR 2024-T851 ALUMINUM ALLOY BAR PER QQ-A-225/6.
c. CODE LETTER J - TYPE 304 CORROSION RESISTANT STEEL BAR PER QQ-S-763, CLASS 304 OR AMS 5639.
d. CODE LETTER K - TYPE 316 CORROSION RESISTANT STEEL BAR PER QQ-S-763, CLASS 316 OR AMS 5648.
e. CODE LETTER R - TYPE 321 CORROSION RESISTANT STEEL BAR PER QQ-S-763, CLASS 321 OR AMS 5645.
f. CODE LETTER T - TYPE 6AL-4V TITANIUM ALLOY BAR PER AMS 4928.
g. CODE LETTER W - TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS 4124 OR TYPE 7075-T73 ALUMINUM ALLOY BAR PER QQ-A-225/9.

2. FINISH:

   a. NO MATERIAL CODE LETTER (HYPHEN) - CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2. DIP IN OIL PER MIL-H-6083 OR MIL-H-46170.
   b. MATERIAL CODE LETTER T - ANODIZE PER AMS 2488 OR FLUORIDE PHOSPHATE CONVERSION COAT PER AMS 2486.
   c. MATERIAL CODE LETTERS D AND W - ANODIZE PER MIL-A-8625, TYPE 2.
   d. MATERIAL CODE LETTERS J, K, AND R - PASSIVATE PER QQ-P-35, TYPE VI OR VII. THE INSIDE ONLY OF SIZES 25 THROUGH 40 NUTS SHALL BE COATED WITH SOLID FILM LUBRICANT PER MIL-L-46010, TYPE I. MINOR OVERSPRAY OF THE LUBRICANT ON THE OUTSIDE OF THE NUT IS PERMITTED.

/3/ DN = NOMINAL TUBE OUTSIDE DIAMETER.

/4/ “E” DIAMETER EQUAL TO MINOR DIAMETER OF THREAD.

/5/ FLATS OCCURRING ON “B” DIAMETER SHALL NOT BE CAUSE FOR REJECTION OF PART.

/6/ THREAD GAGING SHALL BE IN ACCORDANCE WITH MA1566.

/7/ PROCUREMENT SPECIFICATION: MA2005 (ISO 7169). THIS PART SHALL BE QUALIFIED TO THE PROCUREMENT SPECIFICATION AS APPLICABLE IN A COMPLETE ASSEMBLY. USERS OF THIS STANDARD ARE ADVISED TO CONTROL SOURCE APPROVAL(S) BY STANDARD PAGE SUPPLEMENT SHEET OR SIMILAR MEANS.

/8/ IDENTIFICATION AT LOCATION SHOWN:

   a. MARK PER AS478 CLASS C OR D OR METHOD 7A3, 15A3, OR 15B.
   b. MANUFACTURER’S NAME, TRADEMARK OR CAGE CODE, BASIC PART NUMBER AND MATERIAL CODE LETTER.

9. THIS PART IS DESIGNED FOR USE WITH MA2117 WIRE AND MA2014 OR MA2076 FITTING ENDS AT TYPE II TEMPERATURE (-55 TO 135 °C) WITH OPERATING PRESSURES AS FOLLOWS:

   a. ALL SIZES TITANIUM ALLOY AND CORROSION RESISTANT STEEL AND SIZES -05 THROUGH -20 ALUMINUM ALLOY AT CLASS E (21,000 kPa).
   b. SIZES -25 AND -32 ALUMINUM ALLOY AT CLASS B (10,500 kPa) AND SIZE -40 ALUMINUM ALLOY AT CLASS A (4000 kPa).
   c. TYPE AND CLASSES PER MA2001 (ISO 6771).

10. THE CHANGE BAR (**I**) LOCATED IN THE LEFT MARGIN IS FOR THE CONVENIENCE OF THE USER IN LOCATING AREAS WHERE TECHNICAL REVISIONS, NOT EDITORIAL CHANGES, HAVE BEEN MADE TO THE PREVIOUS ISSUE OF THIS DOCUMENT. AN (R) SYMBOL TO THE LEFT OF THE DOCUMENT TITLE INDICATES A COMPLETE REVISION OF THE DOCUMENT.

11. INVENTORIED PARTS CONFORMING TO THE PREVIOUS “LETTER CHANGE” OF THIS STANDARD SHALL NOT BE USED AS THE DATE OF THIS REVISION.

12. INTERPRETATION OF DRAWING PER MAP4296.

13. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36; REQUIREMENTS PER ANSI/ASME B46.1. UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES TO BE 3.2 µm Ra.

14. BREAK EDGES 0.1 TO 0.4 UNLESS OTHERWISE SPECIFIED.

15. DIMENSIONING AND TOLERANCING: ASME Y14.5M-1994.

16. DIMENSIONS IN MILLIMETERS. UNLESS OTHERWISE SPECIFIED, TOLERANCES: LINEAR DIMENSIONS ±0.1, ANGULAR DIMENSIONS ±5°.