Aerospace series

Nut – self locking, Hexagon, counterbored.

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Contents

1 Scope

This standard specifies the dimensions, required characteristics, and mass of a Counterbored, Hexagon Self Locking Nut for use in aerospace applications.

2 Normative references

This Airbus Standard incorporates by dated or undated reference provisions from other publications. All normative references cited at the appropriate places in the text are listed hereafter. For dated references, subsequent amendments to or revisions of any these publications apply to this Airbus Standard only when incorporated in it by amendment of revision. For undated references, the latest issue of the publication referred to shall be applied.

SAE AS8879	Screw threads, controlled radius root with increased minor diameter, general specification for
MIL-H-6088	Heat treatment of aluminum alloys
MIL-A-8625	Anodic coatings for aluminum and aluminum alloys
SAE AS25027	Nut, self-locking, heavy Hex, 250° and 450°F, UNJC-3B 1/4 through 2-1/2 inch nominal diameters.
EN2000	Aerospace series – Quality assurance EN aerospace products – Approval of the quality system of manufacturers
EN2424	Aerospace series - Marking of aerospace products
ABS0777	General technical specification for standard parts
EN6117	Specification for lubrication of fasteners with Cetyl Alcohol

3 Requirements

3.1 Configuration, dimensions, tolerances and mass

The configuration, dimensions, and mass shall be in accordance with figure 1 and tables 1.
Material shall be in accordance with table 2.

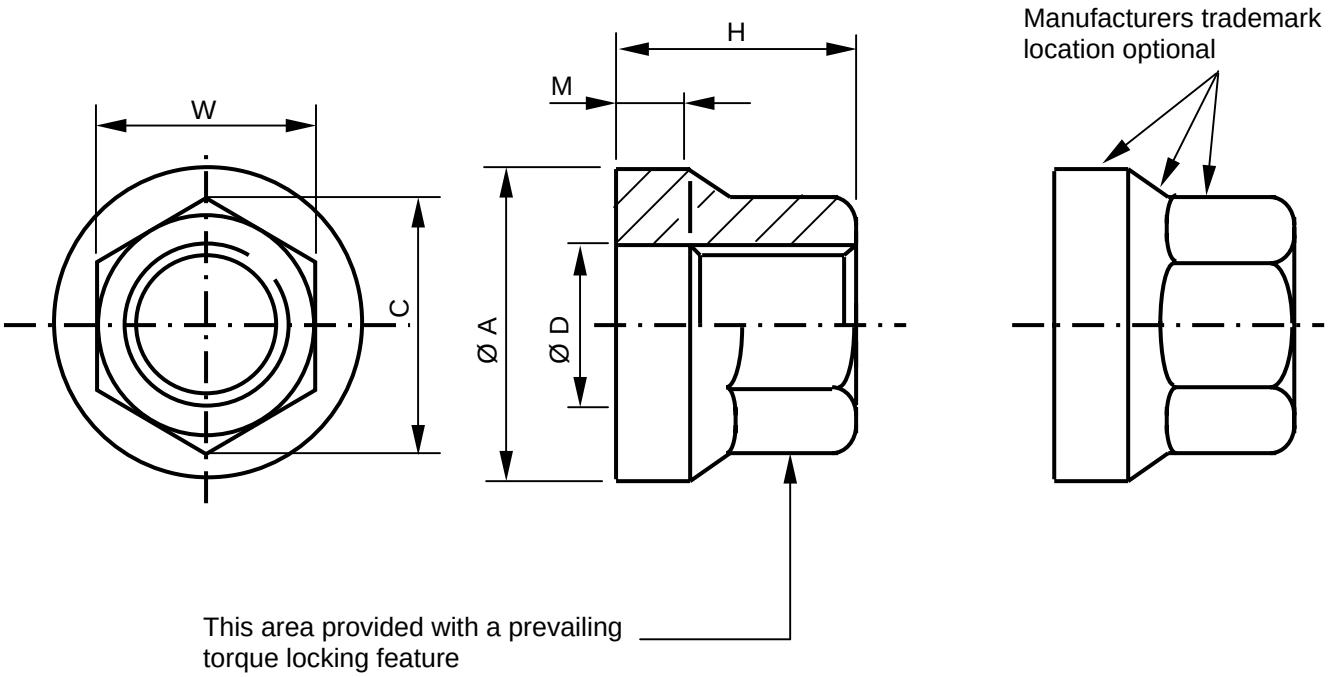


Figure 1: Configuration

Table 1: Dimensions, tolerances and mass

Dimensions in inches (millimeters)

Diameter code	**Thread UNJF-3B to AS8879**	**Ø A** Max	**Ø D** Min	**H** Max	**C** Min	**W** Max	**M** Min	**Weight** Per 1000 / pce
4	0.2500-28	0.422 (10,72)	0.254 (6,45)	0.280 (7,11)	0.348 (8,84)	0.313 (7,95)	0.090 (2,29)	1.48lb 0,67kg
5	0.3125-24	0.538 (13,67)	0.317 (8,05)	0.325 (8,26)	0.419 (10,64)	0.376 (9,55)		2.55lb 1,16kg
6	0.3750-24	0.649 (16,48)	0.379 (9,63)	0.365 (9,27)	0.491 (12,47)	0.439 (11,15)		4.14lb 1,88kg

3.2 Material and surface treatment

The material and surface treatment shall be in accordance with table 2.

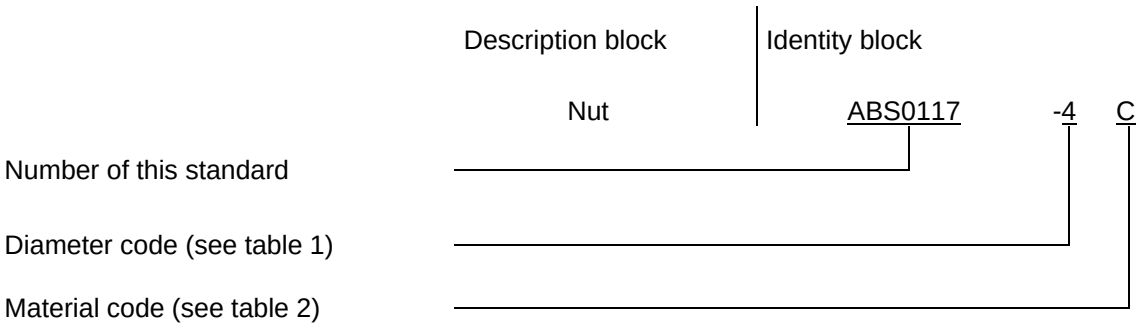
Table 2: Material and surface treatment

Dimensions in inches (millimeters)

Material code	Material	Heat treatment	Surface treatment
K7 [a]	Aluminium alloy 7075 per QQ-A-225/9	Age to T73 condition per MIL-H-6088	Anodise per MIL-A-8625 dye color black, plus SPS lube 7 or Kaylube K76 soluble lubricant
C			Anodise per MIL-A-8625 dye color black, plus Cetyl Alcohol lubricant per EN6117
[a] Note: Code K7 nuts are inactive for procurement after 30th November 1992 superseded by code C nuts.			

4 Designation

This type of Standard shall be designated according to the philosophy of the following example:



5 Marking

EN2424

6 Technical specification

ABS0777

7 Procurement specification

7.1 Procurement specification: AS25027 with the exception that: -

a). The values for maximum locking torque, minimum axial tensile strength and maximum wrench torque as quoted in table 3 shall be attained.

b). All locking torque and break away testing shall be conducted when the nut is installed on an aluminium IVD coated titanium alloy bolt with AS8879 threads having truncated diameters as per table 3.

Table 3: Torque and tensile strength

Dimensions in inches (millimeters)

Thread UNJF-3B	**Bolt Major diameter** Max	Min	**Maximum Locking torque**	**Axial tensile Strength** Min	**Maximum Wrench torque**
0.2500-28	0.244 (6,20)	0.241 (6,12)	20 lbf.in 2,2 N.m	3200 lbf 14234 N	85 lbf.in 9,6 N.m
0.3125-24	0.306 (7,77)	0.302 (7,67)	30 lbf.in 3,4 N.m	5200 lbf 23130 N	145 lbf.in 16,4 N.m
0.3750-24	0.368 (9,35)	0.364 (9,25)	40 lbf.in 4,5 N.m	7000 lbf 31137 N	240 lbf.in 27,1 N.m

Notes:

1). These nuts are primarily for a single fully torqued installation and removal only.

RECORD OF REVISIONS

Issue	Clause modified	Description of modification
1 03/85		New standard for use on A320
2 09/91		Finish / lubricant code ‘C’ added, code ‘K7’ has been made inactive for procurement. Addition and corrections to Annex sheet.
3 10/07		Standard re-formatted, normative references updated. EN6117 added as a replacement for A/DET/0013 alternative lubricant. Section 7.1 Note B amended for clarity.