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**Aerospace series — Nuts, hexagon, plain,
reduced height, normal across flats, in
aluminium alloy, anodized — Classification:
450 MPa (at ambient temperature)/120 °C**

National foreword

This British Standard is the UK implementation of EN 2876:2023. It supersedes BS EN 2876:2019, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ACE/12, Aerospace fasteners and fastening systems.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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EUROPEAN STANDARD

EN 2876

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2023

ICS 49.030.30

Supersedes EN 2876:2019

English Version

Aerospace series - Nuts, hexagonal plain, reduced height,
normal across flats, in aluminium alloy, anodized -
Classification: 450 MPa (at ambient temperature)/120 °C

Série aérospatiale - Écrous hexagonaux ordinaires,
hauteur réduite, surplats normaux, en alliage
d'aluminium, anodisés - Classification : 450 MPa (à
température ambiante)/120 °C

Luft- und Raumfahrt - Flache Sechskantmuttern,
verringerte Höhe, normale Schlüsselweite, aus
Aluminiumlegierung, anodisiert - Klasse: 450 MPa (bei
Raumtemperatur)/120 °C

This European Standard was approved by CEN on 7 August 2023.

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COMITÉ EUROPÉEN DE NORMALISATION
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Contents

	Page
European foreword	3
1 Scope.....	4
2 Normative references.....	4
3 Terms and definitions	4
4 Required characteristics	4
4.1 Configuration — Dimensions — Mass	5
4.2 Tolerances of form and position	7
4.3 Materials	7
4.4 Surface treatment.....	7
5 Designation	7
6 Marking	7
7 Technical specification	7
Bibliography	8

European foreword

This document (EN 2876:2023) has been prepared by the Aerospace and Defence Industries Association of Europe — Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this document has received the approval of the National Associations and the Official Services of the member countries of ASD-STAN, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2024, and conflicting national standards shall be withdrawn at the latest by March 2024.

This document supersedes EN 2876:2019.

EN 2876:2023 includes the following significant technical changes with respect to EN 2876:2019:

normative references updated;

Figure 1 updated;

Bibliography updated;

document editorially revised.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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1 Scope

This document specifies the characteristics of hexagonal plain nuts, reduced height, normal across flats, in aluminium alloy, anodized, for aerospace applications.

Classification: 450 MPa¹/120 °C².

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2284, *Aerospace series — Sulphuric acid anodizing of aluminium and wrought aluminium alloys*

EN 2424, *Aerospace series — Marking of aerospace products*

ISO 286-2, *Geometrical product specifications (GPS) — ISO code system for tolerances on linear sizes — Part 2: Tables of standard tolerance classes and limit deviations for holes and shafts*

ISO 5855-2, *Aerospace — MJ threads — Part 2: Limit dimensions for bolts and nuts*

ISO 8788, *Aerospace — Nuts, metric — Tolerances of form and position*

ISO 9139, *Aerospace — Nuts, plain or slotted (castellated) — Procurement specification*

ISO 9609, *Aerospace — Nuts, hexagonal, plain, reduced height, normal across flats, with MJ threads, classifications: 450 MPa (at ambient temperature)/120 degrees C, 450 MPa (at ambient temperature)/235 degrees C, 600 MPa (at ambient temperature)/425 degrees C, 900 MPa (at ambient temperature)/235 degrees C, 900 MPa (at ambient temperature)/315 degrees C, 900 MPa (at ambient temperature)/650 degrees C, 1 100 MPa (at ambient temperature)/235 degrees C, 1 100 MPa (at ambient temperature)/730 degrees C and 1 250 MPa (at ambient temperature)/600 degrees C — Dimensions*

TR 3823-002, *Materials for plain, slotted and self-locking by plastic ring hexagonal nuts*³

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

Corresponds to the minimum tensile stress which the nut is able to withstand at ambient temperature without breaking or cracking when tested with a bolt of a higher strength class.

Maximum temperature that the nut is able to withstand, without permanent alteration to its original characteristics, after ambient temperature has been restored. The maximum temperature is conditioned by the material.

³ Published as ASD-STAN Technical Report at the date of publication of this standard by AeroSpace and Defence Industries Association of Europe — Standardization (ASD-STAN) (www.asd-stan.org).

4 Required characteristics

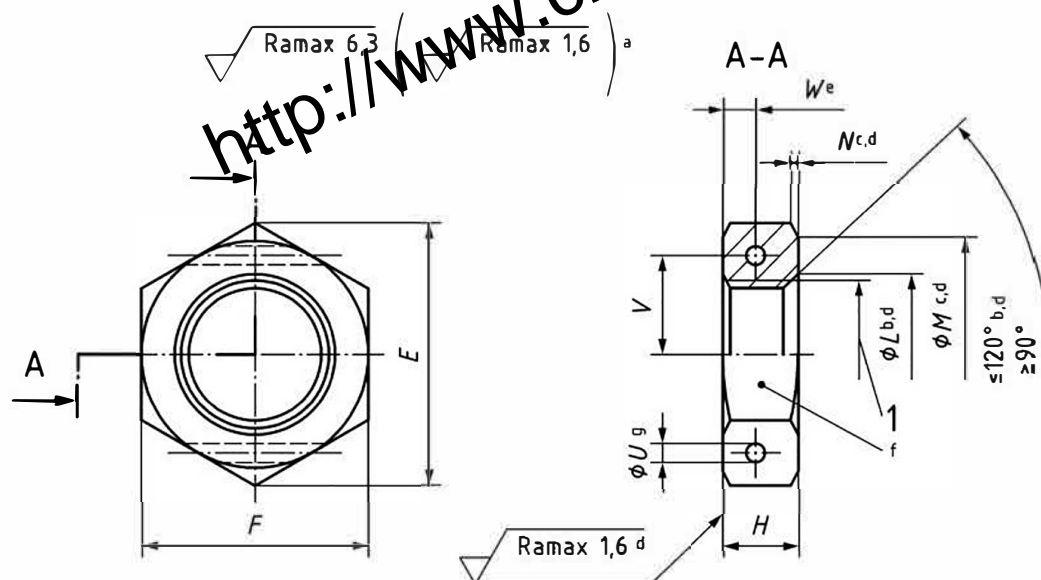
4.1 Configuration — Dimensions — Masses

See Figure 1 and Table 1.

Dimensions and tolerances shall be in accordance with ISO 9609, expressed in micrometres and apply after surface treatment.

Details of form not stated are at the manufacturer's option.

Remove sharp edges 0,1 to 0,4.



Key

- 1 thread
- a These values in micrometres apply before surface treatment. They do not apply to threads where the surface texture of which will be as achieved by usual manufacturing methods.
- b All forms of entry (chamfer or radius) optional within these limiting dimensions.
- c Diameter M may be tangential to, but shall not intrude on the flats.
- d applicable to both faces
- e from either face
- f marking
- g optional

Figure 1 — Plain hexagon nut

Table 1 — Dimensions and masses

Diameter code	Thread ^a	E min.	F ^c	H ^c	M		N		U ^c	V ±0,2	W min.	Mass ^b
					min.	max.	min.	max.				
040	MJ4 × 0,7 – 4H6H	7,6	7	h14 3,0	4,2	6,4			—	—	—	0,23
050	MJ5 × 0,8 – 4H6H	8,7	8	h14 3,0	5,2	7,4			—	—	—	0,32
060	MJ6 × 1 – 4H5H	10,9	10	h13 3,5	6,3	9,3	0,5	0,2	—	3,9	1,4	0,57
070	MJ7 × 1 – 4H5H	12,0	11	h13 4,0	7,3	10,2			1	4,4	1,6	0,75
080	MJ8 × 1 – 4H5H	14,3	13	h13 4,0	8,3	12,2			1	5,0	1,6	1,11
100	MJ10 × 1,25 – 4H5H	18,9	17	h13 5,0	10,3	16,0				6,9	2,1	2,46
120	MJ12 × 1,25 – 4H5H	21,1	19	h13 6,0	12,3	18,0				8,0	2,6	3,46
140	MJ14 × 1,5 – 4H5H	24,5	22	h13 7,0	14,4	21,0				9,6	3,1	5,36
160	MJ16 × 1,5 – 4H5H	26,8	24	h13 8,0	16,4	23,0				10,7	3,6	6,93
180	MJ18 × 1,5 – 4H5H	30,2	27	h13 9,0	18,4	26,0	0,6	0,3	1,5	12,0	4,1	9,64
200	MJ20 × 1,5 – 4H5H	33,6	30	h13 10,0	20,4	29,0				13,4	4,6	13,20
220	MJ22 × 1,5 – 4H5H	35,8	32	h13 11,0	22,4	30,9				14,4	5,0	15,30
240	MJ24 × 2 – 4H5H	40,4	36	h13 12,0	24,5	34,9				16,1	5,5	20,70

^a Thread shall be in accordance with ISO 5855-2.

^b Approximate values (kg/1 000 pieces), calculated on the basis of 2,83 kg/dm³, given for information purposes only. They apply to nuts without holes.

^c Tolerances shall be in accordance with ISO 286-2.

4.2 Tolerances of form and position

Tolerances of form and position shall be in accordance with ISO 8788.

4.3 Materials

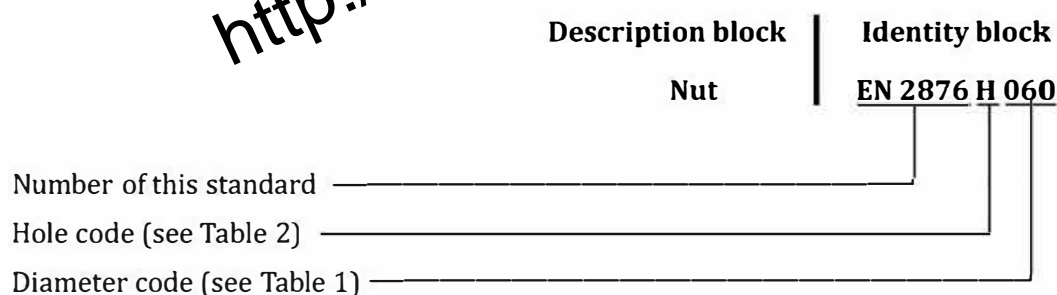
Materials shall be in accordance with TR 3823-002.

4.4 Surface treatment

Surface treatment shall be in accordance with EN 2284.

5 Designation

EXAMPLE



If necessary, the code I9005 shall be placed between the description block and the identity block.

Table 2 — Hole code

Hole	Code
with	H
without	- (hyphen)

6 Marking

Marking shall be according to Table 3.

Table 3 — Marking

Diameter code	EN 2424 Style
040 to 070	N
080 to 240	C + MJ

7 Technical specification

The technical specification shall be in accordance with ISO 9139; except for approval of manufacturers which should be in accordance with EN 9100.

Bibliography

EN 9100, *Quality Management Systems — Requirements for Aviation, Space and Defence Organizations*

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