

**Aerospace series
— Nuts, hexagonal,
self locking, with
counterbore and
captive washer, in
heat resisting steel,
MoS₂ lubricated —
Classification: 1 100
MPa (at ambient
temperature) / 315 °C**

ICS 49.030.20

National foreword

This British Standard is the UK implementation of EN 2883:2009.

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 secretary.

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English Version

Aerospace series - Nuts, hexagonal, self-locking, with counterbore and captive washer, in heat resisting steel, MoS2 lubricated - Classification: 1 100 MPa (at ambient temperature) / 315 °C

Série aérospatiale - Écrous hexagonaux, à freinage interne, avec chambrage et rondelle captive, en acier résistant à chaud, lubrifiés MoS2 - Classification: 1 100 MPa (à température ambiante) / 315 °C

Luft- und Raumfahrt - Sechskantmuttern, sebstsichernd, mit zylindrischer Aussenkung und Bördelscheibe, aus hochwarmfestem Stahl, MoS2-geschmiert - Klasse: 1 100 MPa (bei Raumtemperatur) / 315 °C

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Foreword

This document (EN 2883:2009) 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 Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, 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of an identical text or by endorsement, at the latest by January 2010, and conflicting national standards shall be withdrawn at the latest by January 2010.

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1 Scope

This standard specifies the characteristics of self-locking hexagonal nuts, with counterbore and captive washer, in heat resisting steel, MoS₂ lubricated.

Classification: 1 100 MPa ¹⁾ / 315 °C ²⁾

2 Normative references

The following referenced documents are indispensable for the application 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 2424, *Aerospace series — Marking of aerospace products.*

EN 2491, *Aerospace series — Molybdenum disulphide dry lubricants — Coating methods.*

EN 2516, *Aerospace series — Passivation of corrosion resisting steels and decontamination of nickel base alloys.*

EN 9100, *Aerospace series — Quality management systems — Requirements (based on ISO 9001:2000) and Quality systems — Model for quality assurance in design, development, production, installation and servicing (based on ISO 9001:1994).*

EN 9133, *Aerospace series — Quality management systems — Qualification procedure for aerospace standard parts.*

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

ISO 5858, *Aerospace — Nuts, self-locking, with maximum operating temperature less than or equal to 425 °C — Procurement specification.*

ISO 8538, *Aerospace — Nuts, hexagonal, self-locking, with counterbore and captive washer, with MJ threads, classifications: 1 100 MPa (at ambient temperature)/235 °C, 1 100 MPa (at ambient temperature)/315 °C and 1 100 MPa (at ambient temperature)/425 °C — Dimensions.*

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

TR 3791, *Aerospace series — Materials for self-locking nuts, threaded inserts and screw thread inserts of temperature classes ≤ 425 °C.* ³⁾

3 Required characteristics

3.1 Configuration — Dimensions — Masses

See Figure 1 and Table 1.

1) 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.

2) Maximum temperature that the nut can withstand without continuous change in its original characteristics, after return to ambient temperature. The maximum temperature is determined by the surface treatment.

3) Published as ASD Technical Report at the date of publication of this standard.

Dimensions and tolerances are: in conformity with ISO 8538, expressed in millimetres and apply before MoS₂ lubrication.

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

3.2 Tolerances of form and position

ISO 8788

3.3 Materials

TR 3791

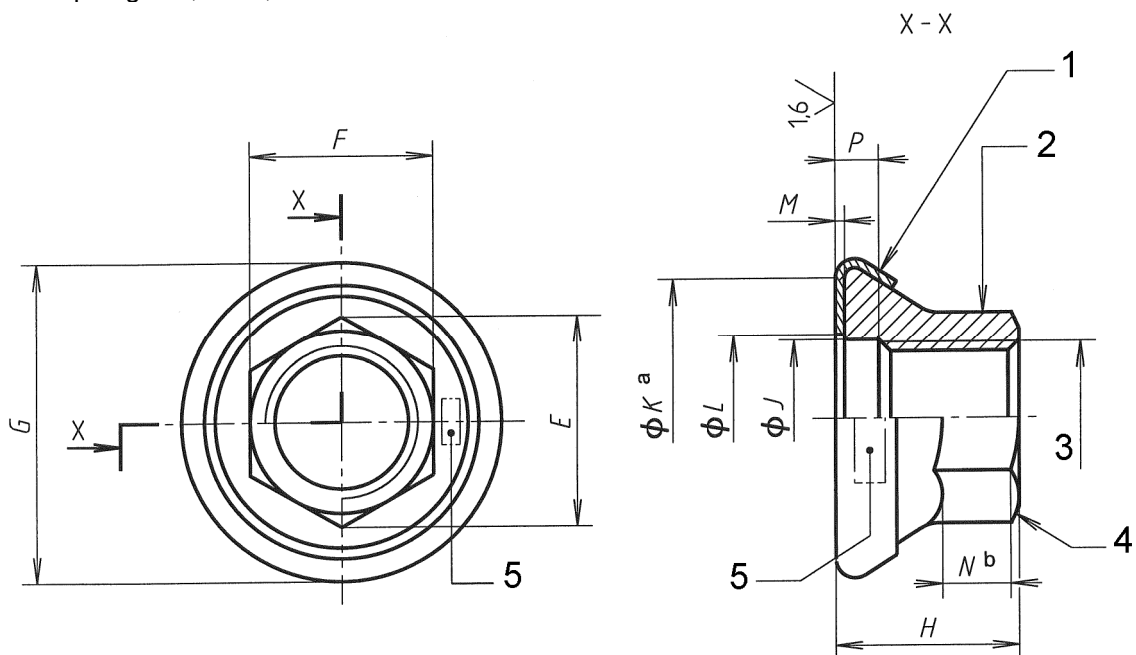
3.4 Surface treatment

Nut: threaded element only, EN 2491, thickness not specified.

Washer: EN 2516, process class appropriate to the material.

$\sqrt{6,3}$ $\left[\sqrt{1,6} \right]$ These values in micrometres apply before surface treatment. They do not apply to threads and sheared edges the surface texture of which will be as achieved by usual manufacturing methods.

Remove sharp edges 0,1 to 0,4.



Key

- 1 Washer shall be free to rotate on the nut
- 2 Form out-of-round in this area to achieve the self-locking torque requirements (Tool marks acceptable)
- 3 Thread
- 4 Chamfer, radius or broken edge
- 5 Marking

^a Bearing surface diameter of the washer

^b Wrench pad engagement

Figure 1

Table 1

Diameter code	Thread ^a	<i>E</i> ^b		<i>F</i> ^b		<i>G</i> max.	<i>H</i> max.	<i>J</i> min.	<i>K</i> min.	<i>L</i> max.	<i>M</i> min.	<i>N</i> min.	<i>P</i> min.	Mass ^c
		min.	Nom.	Tol.										
030	MJ3×0,5-4H6H	4,2	4	h12	6,7	4,6	3,4	5,2	3,8	0,4	1,2	1,6	0,4	
040	MJ4×0,7-4H6H	5,3	5		8,4	6,2	4,4	6,4	4,8		1,5	2,2	0,85	
050	MJ5×0,8-4H6H	6,5	6		9,6	7,4	5,5	7,6	5,8		2	2,4	1,15	
060	MJ6×1-4H5H	7,6	7	h13	11,1	8,1	6,5	9	6,8	0,6	2,3	2,7	1,6	
070	MJ7×1-4H5H	8,7	8		13,3	9	7,5	11	8		2,7		2,6	
080	MJ8×1-4H5H	10,9	10		14,6	9,9	8,5	12	9		3,2	3,8		
100	MJ10×1,25-4H5H	13,2	12	h13	17,2	12	10,5	14,7	11	3,8	3	7,5		
120	MJ12×1,25-4H5H	15,5	14		21	13,8	12,5	18,5	13			4,5	11	

^a In accordance with ISO 5855-2. In the self-locking zone the tolerances apply before forming out-of-round.

^b These dimensions apply before forming out-of-round, but finished nuts shall fit a standard socket wrench.

^c Approximate values (kg/1 000 pieces), calculated on the basis of 7,85 kg/dm³, given for information purposes only.

4 Designation

EXAMPLE

Description block

NUT

Identity block

EN2883-050

Number of this standard

Diameter code (see Table 1)

NOTE If necessary the originator code I9005 should be placed between the description block and the identity block.

5 Marking

EN 2424, style N (see Figure 1).

6 Technical specification

ISO 5858, except for clauses:

a) Approval of manufacturers: see EN 9100;

b) Qualification of bolts: see EN 9133.

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