
Aeronavtika - Matice, šestrobe, samozapiralne, z ugreznjeno in robljeno podložko, iz toplotnoodpornega jekla, posrebrene - Klasifikacija: 1 100 MPa (pri temperaturi okolice) / 425 °C

Aerospace series - Nuts, hexagonal, self-locking, with counterbore and captive washer, in heat resisting steel, silver plated - Classification: 1 100 MPa (at ambient temperature) / 425 °C

Luft- und Raumfahrt - Sechskantmuttern, selbstsichernd, mit zylindrischer Aussenkung und Bördelscheibe, aus hochwarmfestem Stahl, versilbert - Klasse: 1 100 MPa (bei Raumtemperatur) / 425 °C

Série aérospatiale - Écrous hexagonaux, à freinage interne, avec chambrage et rondelle captive, en acier résistant à chaud, argentés - Classification : 1 100 MPa (à température ambiante) / 425 °C

Ta slovenski standard je istoveten z: EN 3431:2007

ICS:

49.030.30

SIST EN 3431:2008

en

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ICS 49.030.30

English Version

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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Foreword

This document (EN 3431:2007) 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of an identical text or by endorsement, at the latest by June 2008, and conflicting national standards shall be withdrawn at the latest by June 2008.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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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, silver plated.

Classification: 1 100 MPa ¹⁾ / 425 °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.

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.*

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

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

EN 2786, *Aerospace series — Electrolytic silver plating of fasteners.* ³⁾

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.*

TR 3791, *Aerospace series — Materials for self-locking nuts, threaded inserts and screw thread inserts of temperature classes ≤ 425 °C.* ⁴⁾

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

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

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

3 Required characteristics

3.1 Configuration - Dimensions - Masses

See Figure 1 and Table 1. Dimensions and tolerances are in conformity with ISO 8538, expressed in millimetres and apply after surface treatment.

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

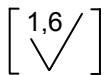
Nut: EN 2786, thickness:

- on external surfaces: 5 µm to 15 µm;
- on pitch diameter: 5 µm min. for nuts MJ6 and larger. Nuts MJ5 and smaller shall show complete coverage over complete profile.

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

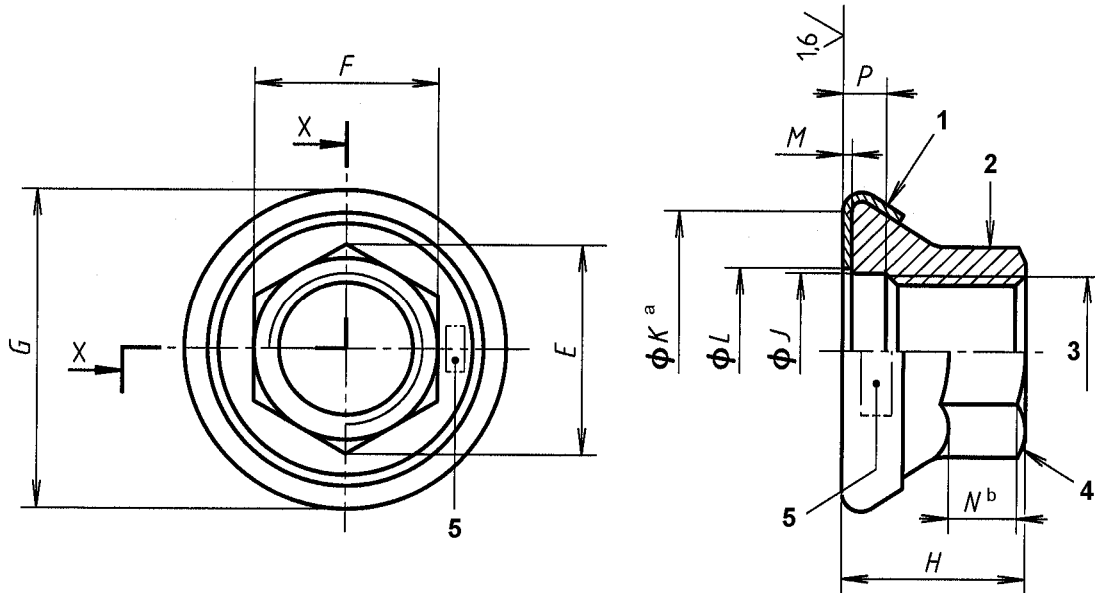
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These values in micrometres apply before surface treatment. They do not apply to threads and sheared edges the surface texture of which will be as achieved by usual manufacturing methods.

Remove sharp edges 0,1 to 0,4



Key

- 1 Washer shall be free to rotate on the nut
 - 2 Form out-at-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

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Figure 1

Table 1

Diameter code	Thread ^a	E ^b min.	F ^b	G max.	H max.	J min.	K min.	L max.	M min.	N min.	P min.	Mass ^c	
030	MJ3×0,5-4H6H	4,2	4	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	h12	9,6	7,4	5,5	7,6	5,8	0,6	2	2,4	1,15
060	MJ6×1-4H5H	7,6	7		11,1	8,1	6,5	9	6,8		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	h13	14,6	9,9	8,5	12	9		3,2	3	3,8
100	MJ10×1,25-4H5H	13,2	12		17,2	12	10,5	14,7	11		3,8		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