
Aeronavtika - Matice, šestrobe, z zarezo/kronske, samozaporne, iz jekla, kadmirane, mazane z MoS2 - Klasifikacija: 900 MPa (pri okoljski temperaturi)/235 °C

Aerospace series - Nuts, hexagon, slotted/castellated, self-locking, in steel, cadmium plated, MoS2 lubricated - Classification: 900 MPa (at ambient temperature)/235 °C

Luft- und Raumfahrt - Sechskant-Kronenmuttern, selbstsichernd, aus Stahl, verkadmet, MoS2-geschmiert - Klasse: 900 MPa (bei Raumtemperatur)/235 °C

Série aérospatiale - Écrous hexagonaux à créneaux, à freinage interne, en acier, cadmiés, lubrifiés MoS2 - Classification: 900 MPa (à température ambiante)/235 °C

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Ta slovenski standard je istoveten z: prEN 3434

ICS:

49.025.10	Jekla	Steels
49.030.30	Matice	Nuts

oSIST prEN 3434:2021

en,fr,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 3434

December 2020

ICS 49.030.30

English Version

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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee ASD-STAN.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN 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-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (prEN 3434:2020) 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-STAN, prior to its presentation to CEN.

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prEN 3434:2020 (E)**1 Scope**

This document specifies the characteristics of self-locking hexagonal slotted/castellated nuts, in steel, cadmium plated, MoS₂ lubricated, for aerospace applications.

Classification: 900 MPa¹⁾/235 °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 2133, *Aerospace series - Cadmium plating of steels with specified tensile strength $\leq 1\ 450$ MPa, copper, copper alloys and nickel alloys*

EN 2367, *Aerospace series - Split pins in steel EN 2573*

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

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

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 degrees C — Procurement specification*

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

TR 3791, *Materials for self-locking nuts, threaded inserts and screw thread inserts of temperature classes ≤ 425 °C³⁾*

3 Terms and definitions

No terms and definitions are listed in this document.

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

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

¹⁾ Corresponds to the minimum tensile stress that 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 cadmium plating.

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

4 Required characteristics

4.1 Configuration — Dimensions — Masses

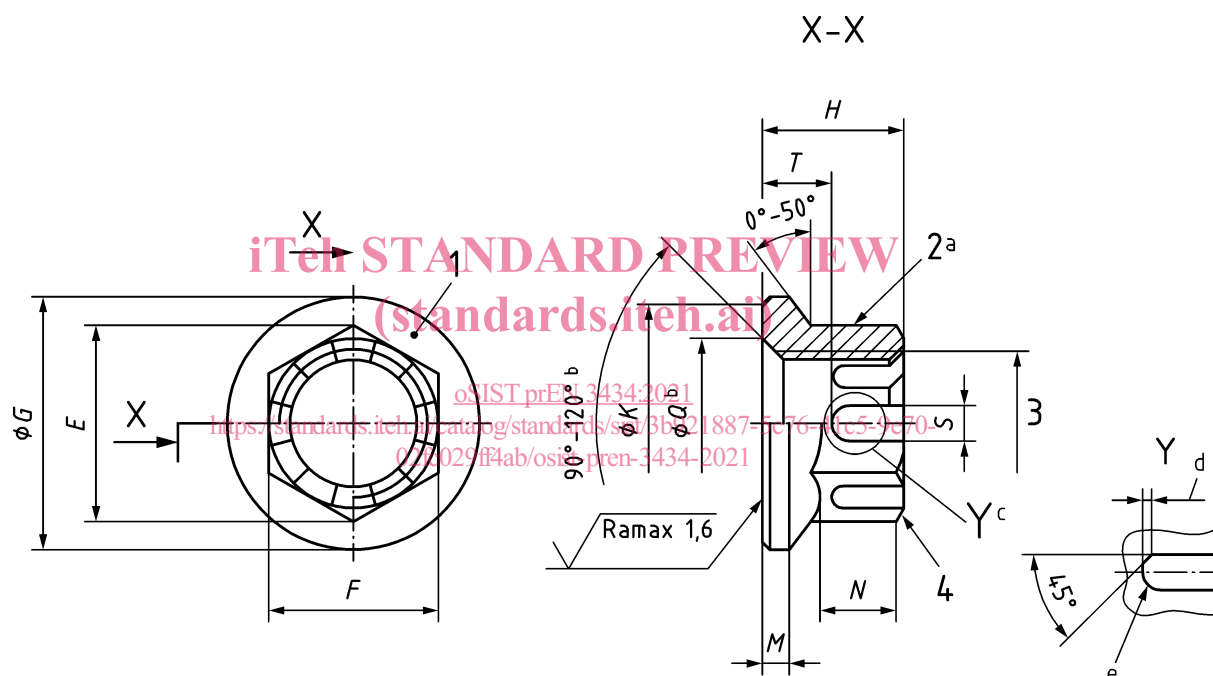
See Figure 1 and Table 1.

Dimensions and tolerances are expressed in millimetres and apply after cadmium plating but before MoS₂ lubricating.

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

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

Remove sharp edges 0,1 mm to 0,4 mm.



Key

- 1 Marking
- 2 Form out-of-round in this area to achieve the self-locking torque requirement
- 3 Thread
- 4 Chamfer, radius or broken edge
- a Tooling marks are permitted in this area.
- b All forms of entry (chamfer or radius) optional within these limiting dimensions.
- c Form (radius or chamfer) at bottom of slot at manufacturer's option
- d $\frac{S}{4}$ to $\frac{S}{10}$
- e $R \text{ max.} = \frac{S_{\text{min.}}}{2}$; $R \text{ min.} = \frac{S_{\text{min.}}}{10}$

Figure 1 — Self-locking hexagonal slotted/castellated nut

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Table 1 — Dimensions, masses

Diameter code	Thread ^a	E^b min.	F^b		$\varnothing G$ max.	H max.	$\varnothing K$ min.	M min.	N^c min.	$\varnothing Q$ max.	min.	S H14	T h14	Mass ^d	Split pin diameter ^e
			Nom.	Tol.											
050	MJ5 × 0,8-4H6H	6,5	6	h12	9,1	5,0	8,3	0,6	2,0	5,8	5,2	1,5	2,5	0,8	1,0
060	MJ6 × 1-4H5H	7,6	7		10,6	5,4	9,8	0,7	2,3	7,1	6,3	2	2,9	1,1	1,4
070	MJ7 × 1-4H5H	8,7	8		12,1	6,3	11,3	0,8	2,7	8,1	7,3		3,4	1,7	
080	MJ8 × 1-4H5H	10,9	10		13,6	7,2	12,8	0,9	3,2	9,1	8,3		3,9	3,2	
100	MJ10 × 1,25-4H5H	13,2	12	h13	16,8	9,0	15,8	1,1	3,8	11,1	10,3	2,5	4,4	4,8	
120	MJ12 × 1,25-4H5H	15,5	14		19,9	10,8	18,8	1,4	4,5	13,1	12,3	3,5	5,4	10	2,9
140	MJ14 × 1,5-4H5H	17,7	16		23	12,6	21,9	1,7	5,0	15,2	14,4		6,0	12	
160	MJ16 × 1,5-4H5H	21,1	19		26	14,4	24,9	1,9	5,7	17,2	16,4		8,4	21	
180	MJ18 × 1,5-4H5H	24,5	22		29,1	16,2	28,0	2,1	6,5	19,2	18,4	5	9,4	30	
200	MJ20 × 1,5-4H5H	26,8	24		32,3	18,0	31,2	2,3	7,4	21,2	20,4		10,4	38	
220	MJ22 × 1,5-4H5H	30,2	27		35,4	19,8	34,3	2,5	8,4	23,2	22,4		11,4	52	
240	MJ24 × 2-4H5H	33,6	30		38	21,6	36,9	2,7	9,4	25,3	24,5		12,4	64	

- 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 Wrench pad engagement.
- d Approximate values (kg/1 000 pieces), given for information purposes only.
- e In accordance with EN 2367.

4.2 Tolerances of form and position

According to ISO 8788.

4.3 Materials

According to TR 3791.

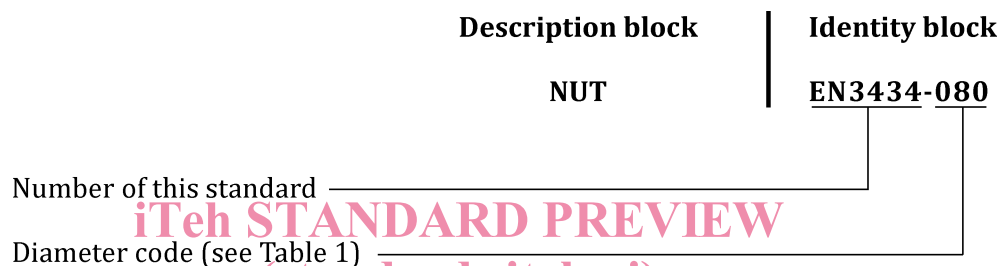
4.4 Surface treatments

EN 2133, 5 µm min. on threads and all surfaces which can be contacted by a 20 mm diameter ball. On all other surfaces, a continuous deposit shall be present.

EN 2491, thickness not specified.

5 Designation

EXAMPLE



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

6 Marking

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EN 2424, style N. See Figure 1.

7 Technical specification

ISO 5858, except for:

- Self-locking torque limited to five (5) assemblies and disassemblies at ambient temperature.

8 Quality management systems

The manufacturer's operations shall be an approved production organisation for aerospace products and shall demonstrate that it has implemented and is able to maintain a quality management system (e.g. according to EN 9100 or an equivalent aerospace accepted and established quality management system).

The qualification procedure for aerospace standard products (e.g. according to EN 9133 or an equivalent aerospace accepted and established qualification procedure) shall be used and documented according to the specified tests if not otherwise agreed between customer and supplier.

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Bibliography

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

EN 9133, *Aerospace series - Quality Management Systems - Qualification Procedure for Aerospace Standard Products*

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