



SLOVENSKI STANDARD

SIST EN 3020:2008

01-september-2008

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lc`c`hbccXdcfbY[U`Y_`U: 9!D5 - &< H'f5 &, * kZdcgfYVfYbY!'?'`Ug]Z_ UY'U.'%\$\$'A DU
fd]j]hYa dYfUi f]`c_c`]WZ#) \$`š7

Aerospace series - Self-locking plate nuts, floating, two-lug, in heat resisting steel FE-PA92HT (A286), silver plated - Classification: 1 100 MPa (at ambient temperature)/650 °C

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Luft- und Raumfahrt - Selbstsichernde Anniemuttern, beweglich, beidseitiger Flansch, aus hochwarmfestem Stahl FE-PA92HT (A286), versilbert - Klasse: 1 100 MPa (bei Raumtemperatur)/650 °C

Série aérospatiale - Ecrous à river à freinage interne, flottants, double patte, en acier résistant à chaud FE-PA92HT(A286), argentés - Classification: 1 100 MPa (à température ambiante)/650 °C

Ta slovenski standard je istoveten z: EN 3020:2008

ICS:

49.030.30 Matice Nuts

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ICS 49.030.30

English Version

Aerospace series - Self-locking plate nuts, floating, two-lug, in
heat resisting steel FE-PA92HT (A286), silver plated -
Classification: 1 100 MPa (at ambient temperature)/650 °C

Série aérospatiale - Ecrous à river à freinage interne,
flottants, double patte, en acier résistant à chaud FE-
PA92HT(A286), argentés - Classification: 1 100 MPa (à
température ambiante)/650 °C

Luft- und Raumfahrt - Selbstsichernde Anniemuttern,
beweglich, beidseitiger Flansch, aus hochwarmfestem
Stahl FE-PA92HT (A286), versilbert - Klasse: 1 100 MPa
(bei Raumtemperatur)/650 °C

This European Standard was approved by CEN on 12 December 2007.

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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.

CEN members are the national standards bodies of 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 United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This document (EN 3020:2008) 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 November 2008, and conflicting national standards shall be withdrawn at the latest by November 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, floating plate nuts in FE-PA2601, silver plated, for aerospace applications.

Classification: 1 100 MPa¹⁾/650 °C²⁾

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 2399, *Heat resisting steel FE-PA92-HT — $R_m \geq 900$ MPa — Bars for forged bolts — $D \leq 25$ mm — Aerospace series*³⁾

EN 2424, *Aerospace series — Marking of aerospace products*⁴⁾

EN 2786, *Aerospace series — Electrolytic silver plating of fasteners*⁴⁾

EN 3004, *Aerospace series — Nuts, self-locking, MJ threads, in heat resisting steel FE-PA2601 (A286) — Classification: 1 100 MPa (at ambient temperature)/650 °C — Technical specification*

EN 3638, *Aerospace series — Heat resisting alloy FE-PA2601 (X6NiCrTiMoV26-15), consumable electrode remelted, solution and precipitation treated — Sheet, strip and plate $0,5 \text{ mm} \leq a \leq 10 \text{ mm}$* ⁴⁾

EN 3639, *Aerospace series — Heat resisting alloy FE-PA2601 — Softened and cold worked — Wire for forged fasteners $D \leq 15 \text{ mm}$, $900 \text{ MPa} \leq R_m \leq 1 100 \text{ MPa}$* ⁴⁾

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

3 Required characteristics

3.1 Configuration, dimensions, tolerances, masses

See Figure 1 and Table 1. Dimensions and tolerances apply after silver plating.

3.2 Material

Nut element: EN 2399, EN 3638 or EN 3639

Cage: EN 3638

-
- 1) The strength class of the bolt concerned which can withstand the load at ambient temperature when tested at 100 % load without cracking or breaking of the nut.
 - 2) Maximum test temperature of the parts.
 - 3) Published as ASD-prestandard at the date of publication of this standard.
 - 4) Published as ASD-standard.

3.3 Surface treatment

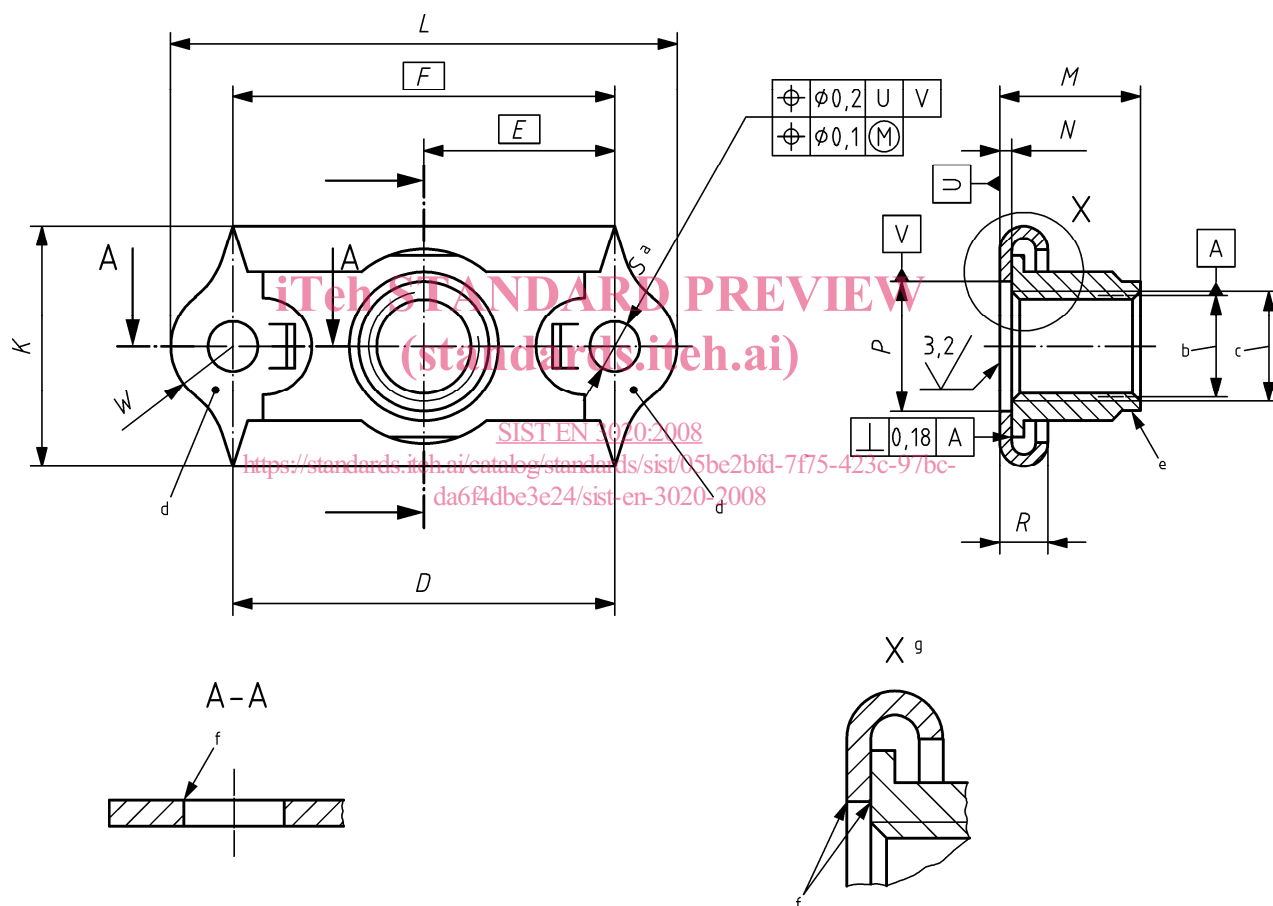
EN 2786, only nut element.

Thickness:

- External surface: 5 μm to 15 μm ;
- Thread \geq MJ 6: 5 μm min. shall be measured at the pitch diameter;
- Thread MJ 5: shall show complete coverage, without thickness requirement.

Dimensions in millimetres

$\sqrt{6,3} / \left(\sqrt{3,2} \right)$ Values applicable before silver plating. Thread surface will be as achieved by normal methods of manufacture.



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

Details of form not stated are left to the manufacturer's discretion.

- a Radial float in all lines (see table)
- b Pitch diameter
- c Thread
- d Marking in these areas
- e Form out-of-round in this area to achieve the self-locking requirement (tooling marks permissible)
- f Chamfer or radius max. 0,1
- g Enlarged

Figure 1 — Configuration

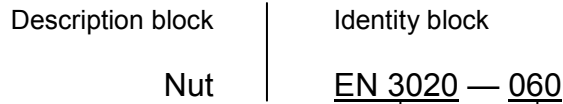
Table 1 — Dimensions and masses

Code	Thread ^a Designation	D	E	F	K	L	M	N	P	R	S	W	Radial float Z	Mass 1 000 pieces
		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
		max.			max.	max.	max.	nom.	0/-0,5	min.	+ 0,2 0	nom.	min.	≈
050	MJ5 × 0,8-4H6H	19	9,5	19	12	25,2	7	0,6	∅ 6,5	2,4	∅ 2,5	3	0,5	2,54
060	MJ6 × 1-4H5H	22	11	22	13,5	29,2	9		∅ 7,5			4,75		
070	MJ7 × 1-4H5H	26	13	26	16	33,2	10	0,8	∅ 8,5	3,2	∅ 3,5	3,5		6,40

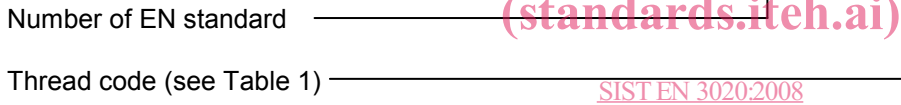
^a In accordance with ISO 5855-2. In the self-locking zone, the tolerances apply before forming out-of-round.

4 Designation

EXAMPLE



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If necessary the originator code <https://standards.iteh.ai/catalog/standards/sist/05be2bfd-7f75-423c-97bc-6a6f40c3c24/sist-en-3020-2008> shall be placed between the description block and the identity block.

5 Marking

EN 2424, Style N, as indicated in Figure 1.

6 Technical specification

According to EN 3004.