

SLOVENSKI STANDARD

SIST EN 3015:2015

01-september-2015

Nadomešča:

SIST EN 3015:2002

Aeronavtika - Sidrne/utrdilne matice, samoblokirne, nazobčane, iz toplotnoodpornega jekla FE-PA2601 (A286), posrebrene - Klasifikacija: 1100 MPa (pri okoljski temperaturi)/650 °C

Aerospace series - Shank nuts, self-locking, serrated, in heat resisting steel FE-PA2601 (A286), silver plated - Classification: 1 100 MPa (at ambient temperature) / 650 °C

iTeh STANDARD PREVIEW

Luft- und Raumfahrt - Einnietmuttern, schraubensichernd, verzahnt, aus hochwarmfestem Stahl FE-PA2601 (A286), versilbert - Klassifikation: 1 100 MPa (bei Raumtemperatur) / 650 °C

[SIST EN 3015:2015](https://standards.iteh.ai/catalog/standards/sist/7ec5dd3b-768d-47cd-8b7e-1298e43e0746/sist-en-3015-2015)

[https://standards.iteh.ai/catalog/standards/sist/7ec5dd3b-768d-47cd-8b7e-](https://standards.iteh.ai/catalog/standards/sist/7ec5dd3b-768d-47cd-8b7e-1298e43e0746/sist-en-3015-2015)

Série aérospatiale - Ecrous à sertir, denteles, à freinage interne, en acier résistant à chaud FE-PA2601 (A286), argentés - Classification : 1 100 MPa (à température ambiante) / 650 °C

Ta slovenski standard je istoveten z: EN 3015:2015

ICS:

49.030.30

Matice

Nuts

SIST EN 3015:2015

en,fr,de

iTeh STANDARD PREVIEW **(standards.iteh.ai)**

SIST EN 3015:2015

<https://standards.iteh.ai/catalog/standards/sist/7ec5dd3b-768d-47cd-8b7e-d29f4cd3cf74/sist-en-3015-2015>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 3015

June 2015

ICS 49.030.30

Supersedes EN 3015:2001

English Version

**Aerospace series - Shank nuts, self-locking, serrated, in heat
resisting steel FE-PA2601 (A286), silver plated - Classification: 1
100 MPa (at ambient temperature) / 650 °C**

Série aéronautique - Ecrous à sertir, dentelés, à freinage
interne, en acier résistant à chaud FE-PA2601 (A286),
argentés - Classification : 1 100 MPa (à température
ambiante) / 650 °C

Luft- und Raumfahrt - Einnietmuttern, schraubensichernd,
verzahnt, aus hochwarmfestem Stahl FE-PA2601 (A286),
versilbert - Klassifikation: 1 100 MPa (bei Raumtemperatur)
/ 650 °C

This European Standard was approved by CEN on 5 December 2014.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

	Page
European foreword	3
1 Scope	4
2 Normative references	4
3 Required characteristics	4
3.1 Configuration – Dimensions – Tolerances — Masses	4
3.2 Materials	5
4 Designation	6
5 Marking	6
6 Technical specification	6
7 Installation	6
Annex A (informative) Standard evolution form	7

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 3015:2015

<https://standards.iteh.ai/catalog/standards/sist/7ec5dd3b-768d-47cd-8b7e-d29f4cd3cf74/sist-en-3015-2015>

European foreword

This document (EN 3015:2015) 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 December 2015, and conflicting national standards shall be withdrawn at the latest by December 2015.

This document supersedes EN 3015:2001.

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

(standards.iteh.ai)

SIST EN 3015:2015

<https://standards.iteh.ai/catalog/standards/sist/7ec5dd3b-768d-47cd-8b7e-d29f4cd3cf74/sist-en-3015-2015>

EN 3015:2015 (E)

1 Scope

This European Standard specifies the characteristics of self-locking serrated shank nuts in FE-PA2601, for aerospace applications.

Classification: 1 100 MPa¹⁾ / 650 °C²⁾.

NOTE FE-PA2601 is the new designation for FE-PA92HT, see TR 3900.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2399, *Aerospace series — Heat resisting steel FE-PA2601 (X4NiCrTiMoV26-15) — $R_m \geq 900$ MPa — Bars for forged bolts — $D \leq 25$ mm*

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

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 3064, *Aerospace series — Shank nuts, self-locking, serrated — Installation procedure*

EN 3065, *Aerospace series — Installation holes for self-locking, serrated shank nuts — Design standard*

EN 3639, *Aerospace series — Heat resisting alloy FE-PA2601 — Softened and cold worked — Wire for forged fasteners — $D \leq 15$ mm — $900 \text{ MPa} \leq R_m \leq 1\,100 \text{ MPa}$ ³⁾*

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

TR 3900, *Metallic materials — Relationship between AECMA designation systems*⁴⁾

3 Required characteristics

3.1 Configuration – Dimensions – Tolerances — Masses

Figure 1 and Table 1.

Dimensions and tolerances are in millimetres.

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 test temperature of the parts.

³⁾ Published as ASD-STAN Prestandard at the date of publication of this standard (<http://www.asd-stan.org/>)

⁴⁾ Published as ASD-STAN Technical Report at the date of publication of this standard (<http://www.asd-stan.org/>).

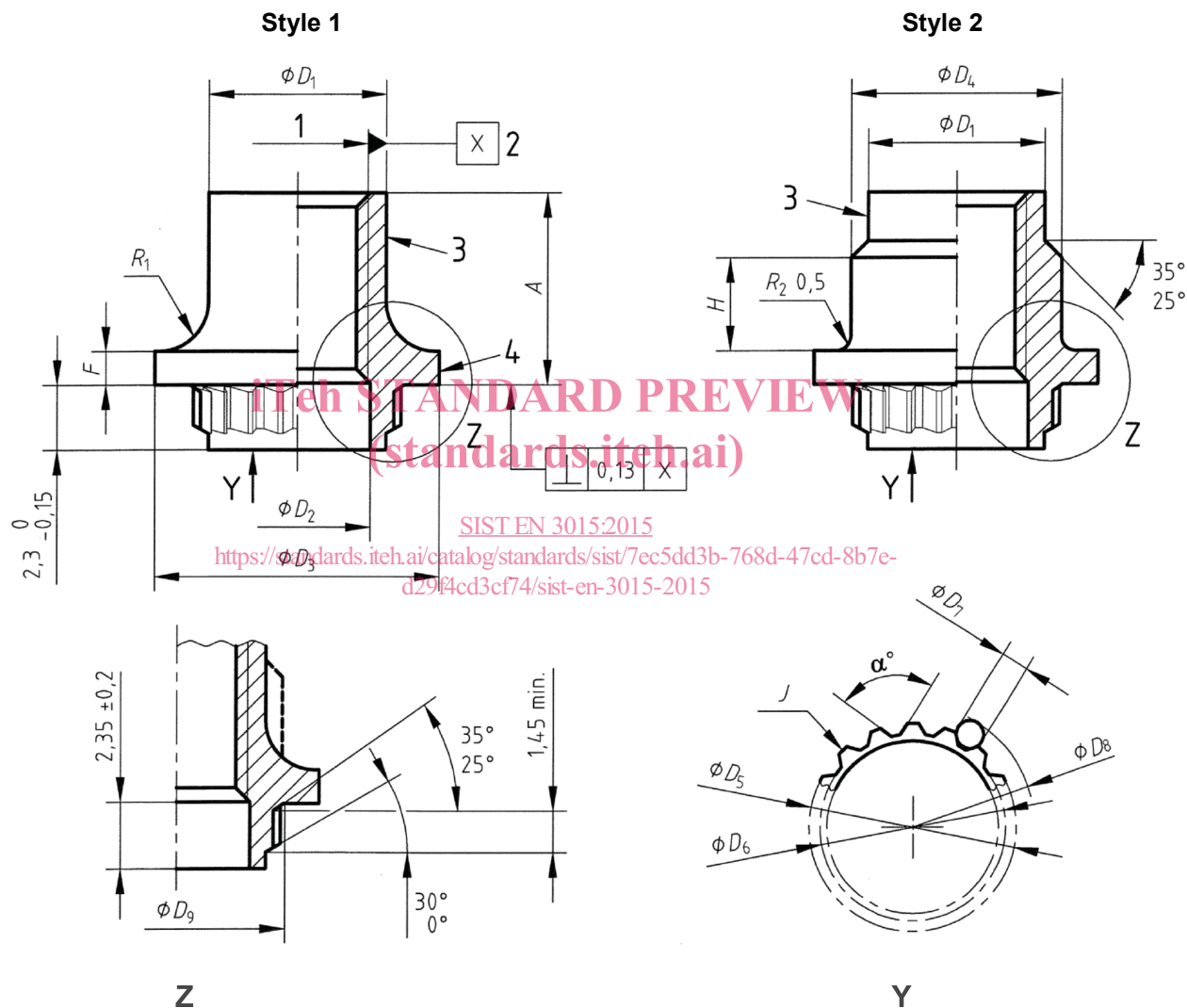
3.2 Materials

EN 2399 or EN 3639.

3,2  Thread surface will be as achieved by normal methods of manufacture.

Remove sharp edges 0,1 to 0,4.

Details of form not stated as well as style 1 or style 2, are at the manufacturer's discretion.



Key

- 1 Thread
- 2 Pitch diameter
- 3 Form out-of-round in this area to achieve the self-locking requirement (tooling marks permissible)
- 4 Marking

Figure 1

EN 3015:2015 (E)

Table 1

Thread ^a		A	D_1 ^b	D_2	D_3	D_4	D_5	D_6	Wire	
Code	Designation	0 - 0,7	min.	min.	0 - 0,3	max.	0 - 0,23	+ 0,26 0	No.	D_7
050	MJ5×0,8-4H6H	6,8	6,3	5,12	10,1	7,7	7,38	6,36	3	1,0
060	MJ6×1-4H5H	8,6	7,7	6,56	11,5	8,7	8,98	7,91	2	1,2
070	MJ7×1-4H5H	9,7	8,4	8,10	12,7	9,8	10,28	9,18	3	1,5
080	MJ8×1-4H5H	10	9,5			10,9				

	Thread Code	D_8		D_9	F	H	J	R_1	α°	Mass	
		max.	min.	max.	min.	max.	Number of teeth	$\pm 0,4$	$\pm 0,1^\circ$	kg/1 000 parts max.	min.
	050	8,730	8,639	7,75	0,9	3,3	17	2,0	86°30'	1,97	1,71
	060	10,638	10,547	9,15	1,4	3,6	20		102°	3,02	2,73
	070	12,536	12,445	10,4		5	23	2,5		3,84	3,46
	080					7				4,21	3,58

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

^b Dimensions apply before forming out-of-round.

4 Designation

EXAMPLE

SIST EN 3015:2015
<https://standards.iteh.ai/catalog/standards/sist/7ec5dd3b-768d-47cd-8b7e-629f4cd3cf74/sist-en-3015-2015>

Description block Identity block

NUT

EN3015-080

Number of this standard _____

Thread code (see Table 1) _____

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

5 Marking

EN 2424, style A, as indicated on Figure 1.

6 Technical specification

EN 3004.

7 Installation

The nuts shall be installed according to the procedure specified in EN 3064 in installation holes to EN 3065. Careful attention shall be paid to notch sensitivity of the materials in which they are to be installed.