SIST

SLOVENSKI STANDARD
SIST EN 3013:2001

01-januar-2001

Aerospace series - Nuts, bihexagonal, self-locking, in heat resisting nickel base alloy NI-P101HT (Waspaloy), silver plated - Classification: 1 210 MPa (at ambient temperature) / 730°C

Aerospace series - Nuts, bihexagonal, self-locking, in heat resisting nickel base alloy NI-P101HT (Waspaloy), silver plated - Classification: 1 210 MPa (at ambient temperature) / 730 °C

Luft- und Raumfahrt - Zwölfkantmuttern, selbstsichernd, aus hochwarmfester Nickelbasislegierung NI-P101HT (Waspaloy), versilbert - Klasse: 1 210 MPa (bei Raumtemperatur) / 730 °C

Série aérospatiale - Ecrous bihexagonaux, a freinage interne, en alliage résistant a chaud a base de nickel NI-P101HT (Waspaloy), argentés - Classification: 1 210 MPa (a température ambiante) / 730 °C

Ta slovenski standard je istoveten z: **EN 3013:1995**

ICS:

49.030.30	Matice	Nuts

SIST EN 3013:2001 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 3013

September 1995

ICS 49.040.20

Descriptors: aircraft industry, fastener, nut: fastener, self locking nut, nickel alloy, silver, heat resistant material, classification, surface treatment, dimension, screw thread, designation

English version

Aerospace series - Nuts, bihexagonal, self-locking, in heat resisting nickel base alloy NI-P101HT (Waspaloy), silver plated - Classification: 1 210 MPa (at ambient temperature) / 730 °C

Série aérospatiale - Ecrous bihexagonaux, à freinage interne, en alliage résistant à chaud à base de nickel NI-P101HT (Waspaloy), argentés - Classification: 1 210 MPa (à température ambiante) / 730 °C

Luft- und Raumfahrt - Zwölfkantmuttern, selbstsichernd, aus hochwarmfester Nickelbasislegierung NI-P101HT (Waspaloy), versilbert - Klasse: 1 210 MPa (bei Raumtemperatur) / 730 °C

This European Standard was approved by CEN on 1995-03-02. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries and votes carried out in accordance with the rules of this Association, this Standard has successively received the approval of the National Associations and the Official Services of the member countries of AECMA, 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 March 1996, and conflicting national standards shall be withdrawn at the latest by March 1996.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard:
Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

1 Scope

This standard specifies the characteristics of self-locking bihexagonal nuts in NI-P101HT, silver plated, for aerospace applications.

Classification : 1 210 MPa [1] / 730 °C [2]

2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

ISO 4095	Fasteners for aerospace construction - Bi-hexagonal wrenching configuration
ISO 5855-2	Aerospace - MJ threads - Part 2 : Limit dimensions for bolts and nuts
EN 2424	Aerospace series - Marking of aerospace products
EN 2786	Aerospace series - Electrolytic silver plating of fasteners [3]
EN 2959	Aerospace series - Heat resisting nickel base alloy (NI-P101HT) - Solution treated and cold worked - Bars for hot upset forging for fasteners - $3 \leq D \leq 30$ mm [3]
EN 3005	Aerospace series - Nuts, self-locking, in heat resisting nickel base alloy NI-P101HT (Waspaloy) - Classification : 1 210 MPa / 730 °C - Technical specification [3]
EN 3220	Aerospace series - Heat resisting nickel base alloy (NI-P101HT) - Cold worked and softened - Bar and wire for continuous forging or extrusion for fasteners - $3 \leq D \leq 30$ mm [3]

3 Required characteristics

3.1 Configuration - Dimensions - Tolerances - Masses

See figure 1 and table 1. Dimensions and tolerances are in millimetres. They apply after silver plating.

3.2 Materials

EN 2959 or EN 3220

3.3 Surface treatment

EN 2786

Thickness :

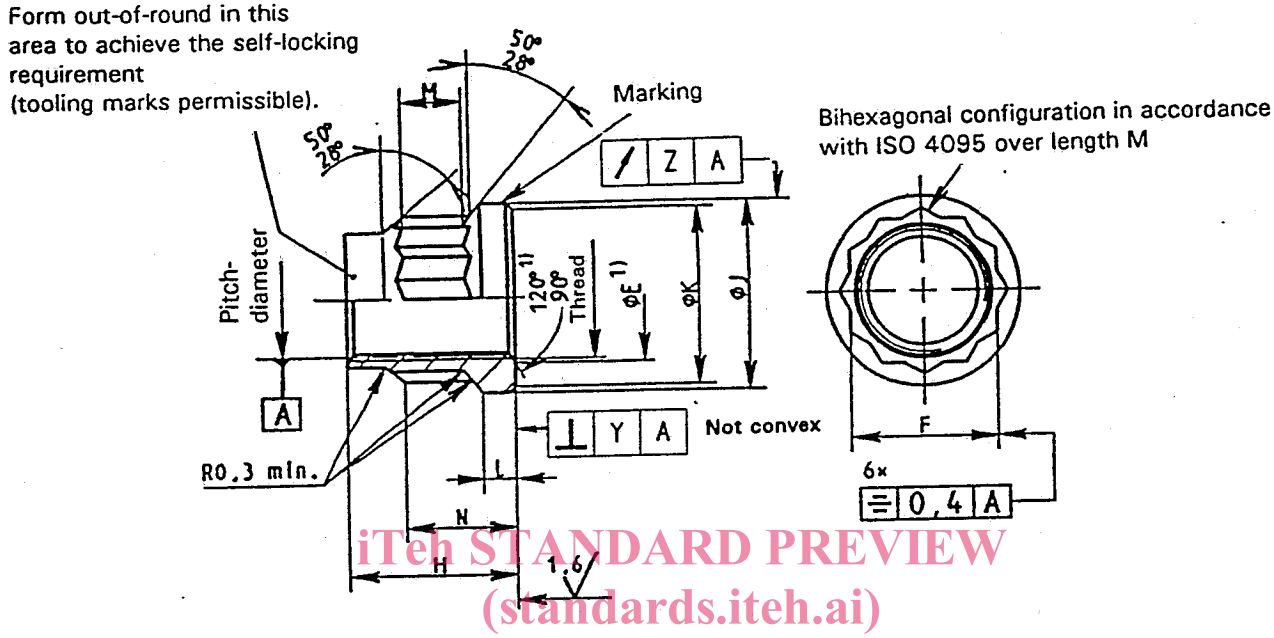
- external surfaces : 5 µm to 15 µm ;
- thread ≥ MJ6 : 5 µm min. on thread flanks ;
- thread MJ5 : shall show complete coverage, without thickness requirement.

---

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 AECMA Prestandard at the date of publication of this standard

6,3 (1,6) Values applicable before silver plating. Thread surface will be achieved by normal methods of manufacture.

Remove sharp edges 0,1 to 0,4



1) All forms of entry (radius or chamfer) are permissible within these limiting dimensions.

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

Figure 1

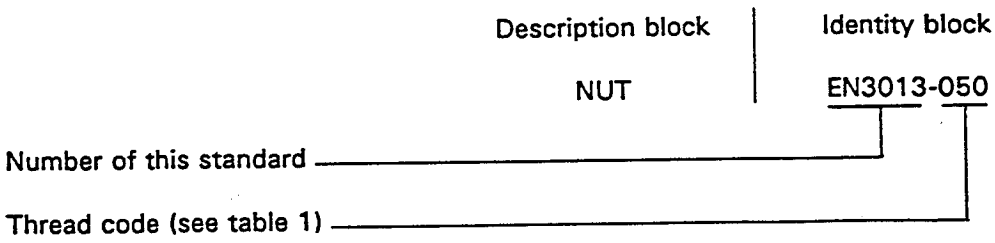
Table 1

Thread 1)		E		F	H	J	K	L	M	N	Y	Z	Mass kg/1 000 parts ≈
Code	Designation	max.	min.		max.	max.	min.	min.	min.	max.			
050	MJ5x0,8-4H6H	5,8	5,2	8	8,3	10,2	9	1,5	2	5,6	0,1	0,2	3
060	MJ6x1-4H5H	7,1	6,3	9	9,4	11,6	10,2	1,6	2,3	5,8			4
070	MJ7x1-4H5H	8,1	7,3	10	10,4	12,6	11,5	1,7	2,6	6,5			5
080	MJ8x1-4H5H	9,1	8,3	12	11,5	15	13,6	2	2,8	7,3	0,13		8
100	MJ10x1,25-4H5H	11,1	10,3	14	13,2	18	16,1	2,3	3,1	8,1		0,3	12
120	MJ12x1,25-4H5H	13,1	12,3	17	16	21,5	19,7	2,8	3,5	10	0,15		20
140	MJ14x1,5-4H5H	15,2	14,4	19	17,5	24	22	3	4	11,2	0,18		28
160	MJ16x1,5-4H5H	17,2	16,4	22	20	28	25,6	3,5	4,7	12,1			42

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

4 Designation

EXAMPLE :



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 3005