



SLOVENSKI STANDARD

SIST EN 4623:2010

01-julij-2010

Aeronavtika - Vložki, navoj MJ, samozapiralni, s samozagozdnim ključem, iz toplotnoodporne zlitine na nikljevi osnovi NI-PH2601 (Inconel 718), posrebreni

Aerospace series - Inserts, MJ threads, self-locking, with self-broaching keys, in heat resisting nickel base alloy NI-PH2601 (Inconel 718), silver plated

Luft- und Raumfahrt - Gewindeeinsätze, MJ-Gewinden, selbstsichernd, mit selbsträumenden Stiften aus Hochwarmfeste Nickellegierung NI-PH2601 (Inconel 718), Versilbert

Série aérospatiale - Douilles filetéés, à filetage MJ, à freinage interne, à clavettes auto-brochantes, en alliage résistant à chaud à base de nickel NI-PH2601 (Inconel 718), argentées

Ta slovenski standard je istoveten z: EN 4623:2010

ICS:

49.030.10 Navoji Screw threads

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EUROPEAN STANDARD
NORME EUROPÉENNE
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EN 4623

April 2010

ICS 49.030.30

English Version

Aerospace series - Inserts, MJ threads, self-locking, with self-broaching keys, in heat resisting nickel base alloy NI-PH2601 (Inconel 718), silver plated

Série aérospatiale - Douilles filetées, à filetage MJ, à freinage interne, à clavettes auto-brochantes, en alliage résistant à chaud à base de nickel NI-PH2601 (Inconel 718), argentées

Luft- und Raumfahrt - Gewindeeinsätze, MJ-Gewinden, selbstsichernd, mit selbststräumenden Stiften, aus Hochwärmefeste Nickellegierung NI-PH2601 (Inconel 718), Versilbert

This European Standard was approved by CEN on 16 January 2010.

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 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 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This document (EN 4623:2010) 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 October 2010, and conflicting national standards shall be withdrawn at the latest by October 2010.

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, 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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EN 4623:2010 (E)

Introduction

For design and installation procedures, see EN 4620 and EN 4619.

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1 Scope

This standard specifies the characteristics of self-locking, MJ thread inserts, self-broaching keys, in NI-PH2601, silver plated, for aerospace applications.

Classification: 1 550 MPa ¹⁾ / 600 °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.

EN 2424:2008, *Aerospace series — Marking of aerospace products*

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

EN 2952, *Aerospace series — Heat resisting alloy NI-PH2601 — Solution treated and cold worked — Bar for forged fasteners — $D \leq 50$ mm — $1\ 270\ \text{MPa} \leq R_m \leq 1\ 550\ \text{MPa}$ ³⁾*

EN 4619, *Aerospace series — Inserts, MJ threads, self-locking, with self-broaching keys — Installation and removal procedure*

EN 4620, *Aerospace series — Inserts, MJ threads, self-locking, with self-broaching keys — Design standard*

EN 4621, *Aerospace series — Inserts, MJ threads, self-locking, self-broaching keys — Technical specification*

ISO 5855-1, *Aerospace — MJ threads — Part 1: General requirements*
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ISO 5855-2, *Aerospace — MJ threads — Part 2: Limit dimensions for bolts and nuts*

TR 3198, *Aerospace series — Manufacturers' identification monograms and marks for EN aerospace products* ⁴⁾

3 Required characteristics

3.1 Configuration – Dimensions – Tolerances – Masses

See Figure 1 and Tables 1, 2, 3 and 4.

Dimensions and tolerances are in millimetres. They apply after silver plating.

3.2 Material

Insert: EN 2952 treated for 370 HV to 480 HV.

Keys: Stainless steel or Nickel alloy treated for HV > 600.

1) Corresponds to the minimum tensile stress which the insert 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 insert is able to withstand, without permanent alteration to its original characteristics, after ambient temperature has been restored. The maximum temperature is conditioned by the MoS₂ lubricant.

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.

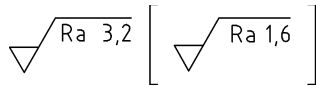
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3.3 Surface treatment

See EN 2786.

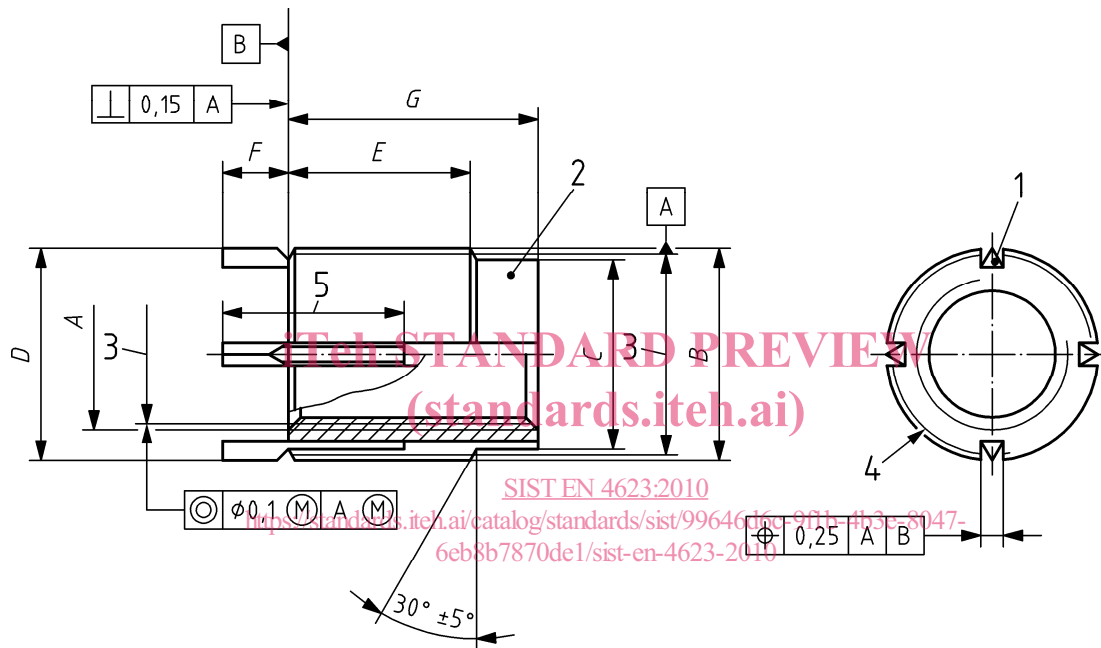
4 Insert definition

See Figure 1.



Values apply after silver plating.

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



Key

- 1 N keys equally spaced
- 2 form out-of-round in this area to achieve the self-locking requirement. Mark of tools allowed.
- 3 pitch diameters
- 4 marking area or on keys left to producer's option
- 5 total length of the key shall not exceed E min. Dimensions and location of keys shall meet EN 4623 requirements.

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

Figure 1

4.1 Normal size insert

See Table 1.

Table 1

<i>A</i> Internal thread ^a		<i>B</i> External thread ^b	<i>C</i> ^c max.	<i>D</i> 0 - 0,2	<i>E</i> max.	<i>F</i> 0 - 0,2	<i>G</i> max.	<i>N</i>	Mass kg/1 000 parts ≈
Code	Designation	Designation							
050-0	MJ5x0,8-4H6H	MJ9x1-4h6h	7,5	9	5	4,35	8	2	2,3
060-0	MJ6x1-4H5H	MJ10x1-4h6h	8,5	10	6,5		10	2	3,4
070-0	MJ7x1-4H5H	MJ11x1-4h6h	9,5	11	8		11,5	2	4,5
080-0	MJ8x1-4H5H	MJ12x1-4h6h	10,5	12	9,5		13,5	4	5,9
100-0	MJ10x1,25-4H5H	MJ14x1-4h6h	12,5	14	12		16,5	4	9,2
^a In accordance with ISO 5855-2. ^b In accordance with ISO 5855-1. ^c After deformation.									

4.2 First repair size insert

See Table 2.

Table 2

<i>A</i> Internal thread ^a		<i>B</i> External thread ^b	<i>C</i> ^c max.	<i>D</i> 0 - 0,2	<i>E</i> max.	<i>F</i> 0 - 0,2	<i>G</i> max.	<i>N</i>	Mass kg/1 000 parts ≈
Code	Designation	Designation							
050-1	MJ5x0,8-4H6H	MJ10x1-4h6h	7,5	10	5	4,35	8	2	2,8
060-1	MJ6x1-4H5H	MJ11x1-4h6h	8,5	11	6,5		10	2	4,2
070-1	MJ7x1-4H5H	MJ12x1-4h6h	9,5	12	8		11,5	2	5,6
080-1	MJ8x1-4H5H	MJS13x1-4h6h	10,5	13	9,5		13,5	4	7,4
100-1	MJ10x1,25-4H5H	MJ15x1-4h6h	12,5	15	12		16,5	4	11,3
^a In accordance with ISO 5855-2. ^b In accordance with ISO 5855-1 except MJS13x1-4h6h thread which shall be in accordance with Table 4. ^c After deformation.									