



# SLOVENSKI STANDARD

## SIST EN 4673-001:2010

01-oktober-2010

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**Aeronavtika - Vložki, navoj UNJ, samozapiralni, s samozagozdnim ključem - 001.  
del: Postopek namestitve in odstranitve**

Aerospace series - Inserts, UNJ threads, self-locking, with self-broaching keys - Part 001: Installation and removal procedure

Luft- und Raumfahrt - Gewindeeinsätze, UNJ-Gewinden, selbstsichernd, mit selbsträumenden Stiften - Teil 001: Ein- und Ausbauverfahren

Série aérospatiale - Douilles filetéés, à filetage UNJ, à freinage interne, à clavettes auto-brochantes - Partie 001 : Procédure d'installation et d'extraction

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**Ta slovenski standard je istoveten z: EN 4673-001:2010**

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EUROPEAN STANDARD

**EN 4673-001**

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2010

ICS 49.030.30

English Version

**Aerospace series - Inserts, UNJ threads, self-locking, with self-broaching keys - Part 001: Installation and removal procedure**

Série aéronautique - Douilles filetées, à filetage UNJ, à freinage interne, à clavettes auto-brochantes - Partie 001: Procédure d'installation et d'extraction

Luft- und Raumfahrt - Gewindeeinsätze, UNJ-Gewinden, selbstsichernd, mit selbstbräumenden Stiften - Teil 001: Ein- und Ausbauverfahren

This European Standard was approved by CEN on 12 June 2010.

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## Foreword

This document (EN 4673-001:2010) 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of an identical text or by endorsement, at the latest by February 2011, and conflicting national standards shall be withdrawn at the latest by February 2011.

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 4673-001:2010 (E)****1 Scope**

This European Standard specifies the installation and removal procedure (hole profile, tools) of self-locking, self-broaching key, UNJ thread inserts defined by EN standards, for aerospace applications.

**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 4673-002, *Aerospace series — Inserts, UNJ threads, self-locking, with self-broaching keys — Part 002: Design standard*

EN 4673-004, *Aerospace series — Inserts, UNJ threads, self-locking, with self-broaching keys — Part 004: In heat resisting nickel base alloy Ni-P100HT (Inconel 718), silver plating*

EN 4673-005, *Aerospace series — Inserts, UNJ threads, self-locking, with self-broaching keys — Part 005: In heat resisting nickel base alloy Ni-P101HT (WASPALLOY), silver plating*

EN 4673-006, *Aerospace series — Inserts, UNJ threads, self-locking, with self-broaching keys — Part 006: In heat resisting steel FE-PA2601 (A286), MoS<sub>2</sub> coated*

ISO 3161, *Aerospace series — UNJ threads — General requirements and limit dimensions*

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**3 Insert information**

[SIST EN 4673-001:2010](https://standards.iteh.ai/catalog/standards/sist/e596500d-dfe6-430e-8c8f-763e157566a4/sist-en-4673-001-2010)

Tables 1 to 3 provide the cross reference between the insert codification, the related bolt thread and the tapped hole diameter.

Table 1 — Normal size insert

| Insert reference                                      | Bolt thread diameter <sup>a</sup> | Tapped hole diameter <sup>a</sup> | Tapped hole reference <sup>a</sup> |
|---|-----------------------------------|-----------------------------------|------------------------------------|
| EN 4673-004-3-0<br>EN 4673-005-3-0<br>EN 4673-006-3-0 | .190 0-32UNJF                     | .312 5-18UNJC-3B                  | EN 4673-002-3-0                    |
| EN 4673-004-4-0<br>EN 4673-005-4-0<br>EN 4673-006-4-0 | .250 0-28UNJF                     | .375 0-16UNJFC-3B                 | EN 4673-002-4-0                    |
| EN 4673-004-5-0<br>EN 4673-005-5-0<br>EN 4673-006-5-0 | .312 5-24UNJF                     | .437 5-16UNJ-3B                   | EN 4673-002-5-0                    |
| EN 4673-004-6-0<br>EN 4673-005-6-0<br>EN 4673-006-6-0 | .375 0-24UNJF                     | .500 0-16UNJ-3B                   | EN 4673-002-6-0                    |
| EN 4673-004-7-0<br>EN 4673-005-7-0<br>EN 4673-006-7-0 | .437 5-20UNJF                     | .562 5-16UNJ-3B                   | EN 4673-002-7-0                    |
| EN 4673-004-8-0<br>EN 4673-005-8-0<br>EN 4673-006-8-0 | .500 0-20UNJF                     | .625 0-16UNJ-3B                   | EN 4673-002-8-0                    |

<sup>a</sup> According to ISO 3161.

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Table 2 — First repair size insert  
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| Insert reference                                      | Bolt thread diameter <sup>a</sup> | Tapped hole diameter <sup>a</sup> | Tapped hole reference <sup>a</sup> |
|---|-----------------------------------|-----------------------------------|------------------------------------|
| EN 4673-004-3-1<br>EN 4673-005-3-1<br>EN 4673-006-3-1 | .190 0-32UNJF                     | .375 0-16UNJC-3B                  | EN 4673-002-3-1                    |
| EN 4673-004-4-1<br>EN 4673-005-4-1<br>EN 4673-006-4-1 | .250 0-28UNJF                     | .437 5-16UNJ-3B                   | EN 4673-002-4-1                    |
| EN 4673-004-5-1<br>EN 4673-005-5-1<br>EN 4673-006-5-1 | .312 5-24UNJF                     | .500 0-16UNJ-3B                   | EN 4673-002-5-1                    |
| EN 4673-004-6-1<br>EN 4673-005-6-1<br>EN 4673-006-6-1 | .375 0-24UNJF                     | .562 5-16UNJ-3B                   | EN 4673-002-6-1                    |
| EN 4673-004-7-1<br>EN 4673-005-7-1<br>EN 4673-006-7-1 | .437 5-20UNJF                     | .625 0-16UNJ-3B                   | EN 4673-002-7-1                    |
| EN 4673-004-8-1<br>EN 4673-005-8-1<br>EN 4673-006-8-1 | .500 0-20UNJF                     | .687 5-16UNJ-3B                   | EN 4673-002-8-1                    |

<sup>a</sup> According to ISO 3161.

Table 3 — Second repair size insert

| Insert reference                                      | Bolt thread diameter <sup>a</sup> | Tapped hole diameter <sup>a</sup> | Tapped hole reference <sup>a</sup> |
|---|-----------------------------------|-----------------------------------|------------------------------------|
| EN 4673-004-3-2<br>EN 4673-005-3-2<br>EN 4673-006-3-2 | .190 0-32UNJF                     | .437 5-16UNJ-3B                   | EN 4673-002-3-2                    |
| EN 4673-004-4-2<br>EN 4673-005-4-2<br>EN 4673-006-4-2 | .250 0-28UNJF                     | .500 0-16UNJ-3B                   | EN 4673-002-4-2                    |
| EN 4673-004-5-2<br>EN 4673-005-5-2<br>EN 4673-006-5-2 | .312 5-24UNJF                     | .562 5-16UNJ-3B                   | EN 4673-002-5-2                    |
| EN 4673-004-6-2<br>EN 4673-005-6-2<br>EN 4673-006-6-2 | .375 0-24UNJF                     | .625 0-16UNJ-3B                   | EN 4673-002-6-2                    |
| EN 4673-004-7-2<br>EN 4673-005-7-2<br>EN 4673-006-7-2 | .437 5-20UNJF                     | .687 5-16UNJ-3B                   | EN 4673-002-7-2                    |
| EN 4673-004-8-2<br>EN 4673-005-8-2<br>EN 4673-006-8-2 | .500 0-20UNJF                     | .750 0-16UNJF-3B                  | EN 4673-002-8-2                    |

<sup>a</sup> According to ISO 3161.

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#### 4 Inspection requirements before installation

Prior to installation check the installation hole to receive the insert are free from burrs and any foreign objects, grease, oil, etc.

Inspect insert to be installed and ensure that it is clean and free from protective grease, etc.

#### 5 Installation tools

##### 5.1 General

In order to facilitate the correct assembly of the inserts use the appropriate tools. It is necessary to use one tool by insert reference.

The tools and their methods of application described in this standard are not mandatory and show only the basic principles to be observed to achieve the satisfactory installation and subsequent broaching and the satisfactory removal of the inserts.

The maximum dimensional requirements provided shall be achieved and on no account shall the design of the tools or their methods of application be such that damage may occur to the threads or the locking zone of the insert or the component into which it is being installed.



## 5.2 Hand installation

### 5.2.1 Installation tool

Figure 1 illustrates a combined tool used for hand screwing and hand broaching and its overall dimensions.

Figure 1 and Table 4 give the overall dimensions.

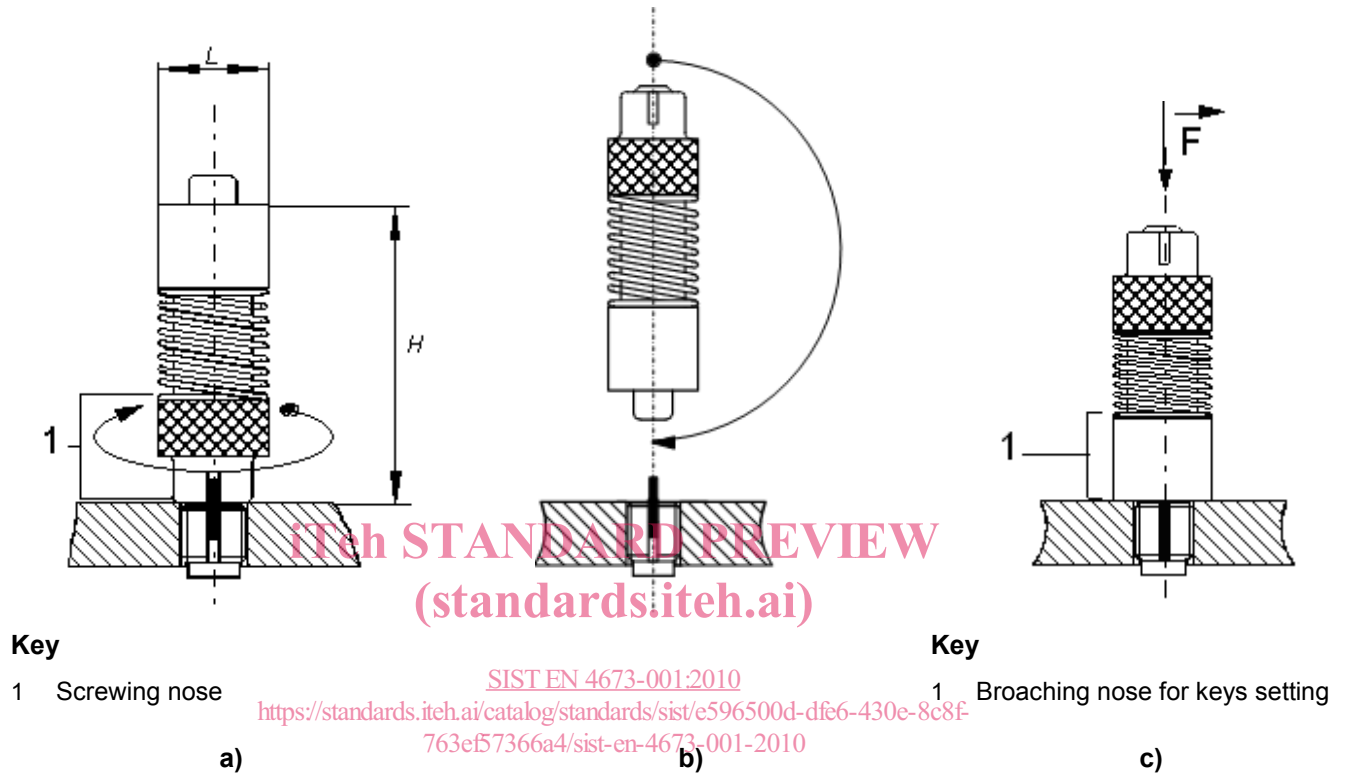


Figure 1

Table 4

Dimensions in millimetres

| Insert external thread | $H$ | $\varnothing L$ |
|------------------------|-----|-----------------|
| .312 5-18UNJC-3B       | 71  | 12,7            |
| .375 0-16UNJC-3B       |     | 14,3            |
| .437 5-16UNJ-3B        |     | 15,9            |
| .500 0-16UNJ-3B        |     | 17,5            |
| .562 5-16UNJ-3B        |     | 19,0            |
| .625 0-16UNJ-3B        |     | 20,6            |
| .687 5-16UNJ-3B        |     | 22,2            |
| .750 0-16UNJF-3B       |     | 25,4            |