
**Aeronavtika - Vložki, navoj UNJ, samozapiralni, s samozagozdnim ključem - 004.
del: Iz toplotnoodporne zlitine na nikljevi osnovi NI-P100HT (Inconel 718),
posrebreni**

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

Luft- und Raumfahrt - Gewindeeinsätze, UNJ-Gewinden, selbstsichernd, mit
selbststräumenden Stiften - Teil 004: Aus Hochwarmfeste Nickellegierung NI-P100HT
(Inconel 718), Versilbern

Série aérospatiale - Douilles filetées, à filetage UNJ, à freinage interne, à clavettes auto-
brochantes - Partie 004 : En alliage résistant à chaud base nickel NI-P100HT (Inconel
718), argentage

Ta slovenski standard je istoveten z: EN 4673-004:2010

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EUROPEAN STANDARD
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EN 4673-004

August 2010

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English Version

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

Série aéronautique - Douilles filetées, à filetage UNJ, à freinage interne, à clavettes auto-brochantes - Partie 004: En alliage résistant à chaud base nickel NI-P100HT (Inconel 718), argentage

Luft- und Raumfahrt - Gewindeeinsätze, UNJ-Gewinden, selbstsichernd, mit selbstbräuhenden Stiften - Teil 004: Aus Hochwarmfeste Nickellegierung NI-P100HT (Inconel 718), Versilbern

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

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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.

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Foreword

This document (EN 4673-004:2010) 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.

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Introduction

For design and installation procedures, see EN 4673-002 and EN 4673-001.

1 Scope

This European Standard specifies the characteristics of self-locking, inserts for Inch series, self-broaching keys, in NI-P100HT, silver plated, for aerospace applications.

Classification: 1 270 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, *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 4673-001, *Aerospace series — Inserts, UNJ threads, self-locking, with self-broaching keys — Part 001: Installation and removal procedure*

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

EN 4673-003, *Aerospace series — Inserts, UNJ threads, self-locking, with self-broaching keys — Part 003: Technical specification*

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

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.

1) Corresponds to the minimum tensile stress which the material is able to withstand at ambient temperature.

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 material.

3) Published as ASD-STAN Prestandard at the date of publication of this standard by Aerospace and Defence Industries Association of Europe-Standardization (ASD-STAN), (www.asd-stan.org).

4) Published as ASD-STAN Technical Report at the date of publication of this standard by Aerospace and Defence Industries Association of Europe-Standardization (ASD-STAN), (www.asd-stan.org).

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

3.3 Surface treatment

See EN 2786.

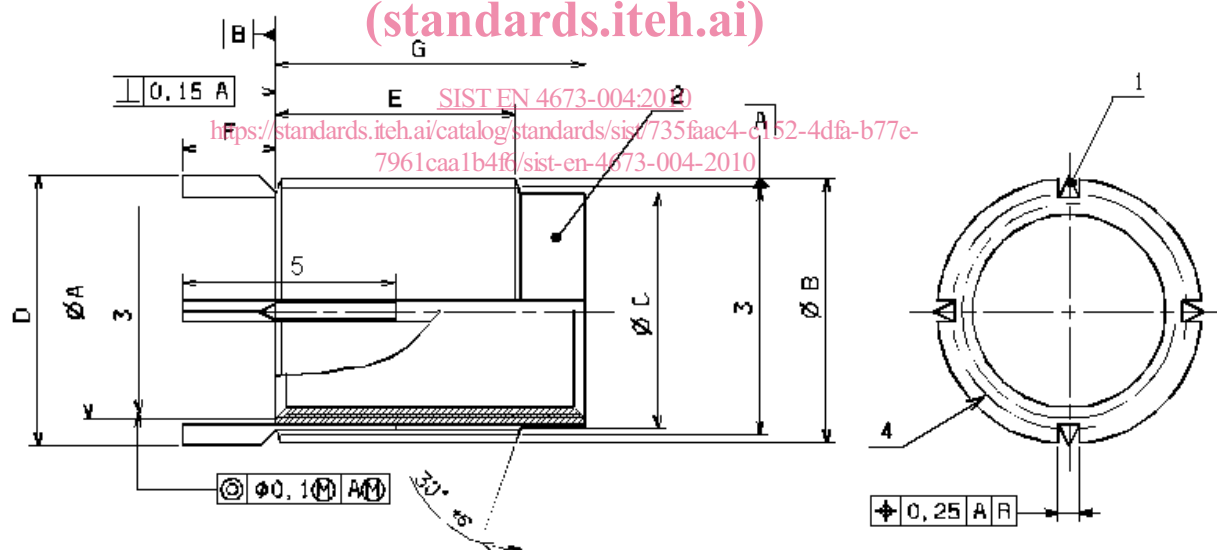
4 Insert definition

See Figure 1.

$R_a 3,2$  $R_a 1,6$  only for key grooves and keys

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 4673-003 requirements.

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

Figure 1

EN 4673-004:2010 (E)

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 ≈
Code	Designation	Designation				4,35			
3-0	.190 0-32UNJF-3B	.312 5-18UNS-2A	6,30	7,9	6,0		7,7	2	1,4
4-0	.250 0-28UNJF-3B	.375 0-16UNS-2A	7,90	9,5	8,0		10,0	2	2,4
5-0	.312 5-24UNJF-3B	.437 5-16UNS-2A	9,50	11,1	9,5		12,3	2	3,7
6-0	.375 0-24UNJF-3B	.500 0-16UNS-2A	11,05	12,7	11,5		14,5	4	5,2
7-0	.437 5-20UNJF-3B	.562 5-16UNS-2A	12,65	14,2	13,5		17,1	4	7,3
8-0	.500 0-20UNJF-3B	.625 0-16UNS-2A	14,25	15,8	15,5	19,4	4	9,5	
^a In accordance with ISO 3161.									
^b See Table 4.									
^c After deformation.									

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4.2 First repair size insert

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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 ≈
Code	Designation	Designation				4,35			
3-1	.190 0-32UNJF-3B	.375 0-16UNS-2A	7,90	9,5	6,0		7,7	2	2,5
4-1	.250 0-28UNJF-3B	.437 5-16UNS-2A	9,50	11,1	8,0		10,0	2	4,3
5-1	.312 5-24UNJF-3B	.500 0-16UNS-2A	11,05	12,7	9,5		12,3	2	6,4
6-1	.375 0-24UNJF-3B	.562 5-16UNS-2A	12,65	14,2	11,5		14,5	4	8,8
7-1	.437 5-20UNJF-3B	.625 0-16UNS-2A	14,25	15,8	13,5		17,1	4	12,2
8-1	.500 0-20UNJF-3B	.687 5-16UNS-2A	15,80	17,4	15,5		19,4	4	15,6
^a In accordance with ISO 3161.									
^b See Table 4.									
^c After deformation.									

4.3 Second repair size insert

See Table 3.

Table 3

<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 ≈
Code	Designation	Designation							
3-2	.190 0-32UNJF-3B	.437 5-16UNS-2A	9,50	11,1	6,0	4,35	7,7	2	4,0
4-2	.250 0-28UNJF-3B	.500 0-16UNS-2A	11,05	12,7	8,0		10,0	2	6,5
5-2	.312 5-24UNJF-3B	.562 5-16UNS-2A	12,65	14,2	9,5		12,3	2	9,5
6-2	.375 0-24UNJF-3B	.625 0-16UNS-2A	14,25	15,8	11,5		14,5	4	13,0
7-2	.437 5-20UNJF-3B	.687 5-16UNS-2A	15,80	17,4	13,5		17,1	4	17,6
8-2	.500 0-20UNJF-3B	.750 0-16UNS-2A	17,40	19,0	15,5		19,4	4	22,4

^a In accordance with ISO 3161.
^b See Table 4.
^c After deformation.

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4.4 External thread dimension

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See Table 4.

Table 4

External thread Designation	Major diameter		Pitch diameter		Minor diameter	
	min.	max.	min.	max.	min.	max.
.312 5-18UNS-2A	7,69	7,91	6,89	6,99	6,32	6,50
.375 0-16UNS-2A	9,25	9,49	8,35	8,46	7,92	8,13
.437 5-16UNS-2A	10,84	11,08	9,93	10,05	9,50	9,72
.500 0-16UNS-2A	12,43	12,67	11,51	11,63	11,09	11,30
.562 5-16UNS-2A	14,01	14,25	13,10	13,22	12,67	12,89
.625 0-16UNS-2A	15,60	15,84	14,69	14,81	14,26	14,48
.687 5-16UNS-2A	17,19	17,43	16,27	16,39	15,84	16,07
.750 0-16UNS-2A	18,77	19,01	17,85	17,98	17,42	17,65