



SLOVENSKI STANDARD

SIST EN 4493:2008

01-julij-2008

Aeronavtika - Vložki s spiralnim navojem, samozapiralni, iz zlitine, odporne proti toploti, na nikljevi osnovi NI-PH1801 (NI-P96HT, Nimonic 90), posrebreni

Aerospace series - Inserts, screw thread, helical coil, self-locking, in heat resisting nickel base alloy NI-PH1801 (NI-P96HT, Nimonic 90), silver plated

Luft- und Raumfahrt - Draht-Gewindeeinsätze, selbstsichernd, aus hochwarmfester Nickelbasislegierung NI-PH1801 (NI-P96HT, Nimonic 90), versilbert

Série aérospatiale - Filets rapportés, à freinage interne, en alliage résistant à chaud à base de nickel NI-PH1801 (NI-P96HT, Nimonic 90), argentés

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Ta slovenski standard je istoveten z: EN 4493:2008

ICS:

49.030.10 Navoji Screw threads

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ICS 49.030.10

English Version

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This European Standard was approved by CEN on 29 February 2008.

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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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| Contents | | Page |
|---|--|------|
| Foreword..... | | 3 |
| Introduction | | 4 |
| 1 Scope | | 4 |
| 2 Normative references | | 4 |
| 3 Required characteristics | | 4 |
| 3.1 Configuration – Dimensions – Tolerances – Masses | | 4 |
| 3.2 Material | | 5 |
| 3.3 Surface treatment | | 5 |
| 4 Designation | | 8 |
| 5 Marking | | 8 |
| 6 Technical specification | | 8 |

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SIST EN 4493:2008
<https://standards.iteh.ai/catalog/standards/sist/1082405a-510c-487b-9261-3e9f99e499eb/sist-en-4493-2008>

Foreword

This document (EN 4493:2008) 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 2008, and conflicting national standards shall be withdrawn at the latest by October 2008.

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, 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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Introduction

For design and assembly procedures see EN 3044 and EN 2945.

1 Scope

This standard specifies the characteristics of self-locking, helical coil, screw thread inserts in NI-PH1801 (NI-P96HT), silver plated, for aerospace applications.

Maximum test temperature: 550 °C.

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 2400, *Heat resisting nickel base alloy NI-P96HT — Cold drawn and precipitation treated — Wires $D \leq 10$ mm — Aerospace series.*

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

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

EN 2943, *Aerospace series — Inserts, screw thread, helical coil, self-locking — Technical specification.*

EN 2945, *Aerospace series — Inserts, screw thread, helical coil, self-locking — Assembly procedure.*

EN 3044, *Aerospace series — Installation holes for inserts, screw thread, helical coil, self-locking — Design standard.*

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

3 Required characteristics

3.1 Configuration – Dimensions – Tolerances – Masses

See Figure 1 and Tables 1 and 2. Dimensions and tolerances are in millimetres. They apply after silver plating.

1) Published as ASD Standard at the date of publication of this standard.

3.2 Material

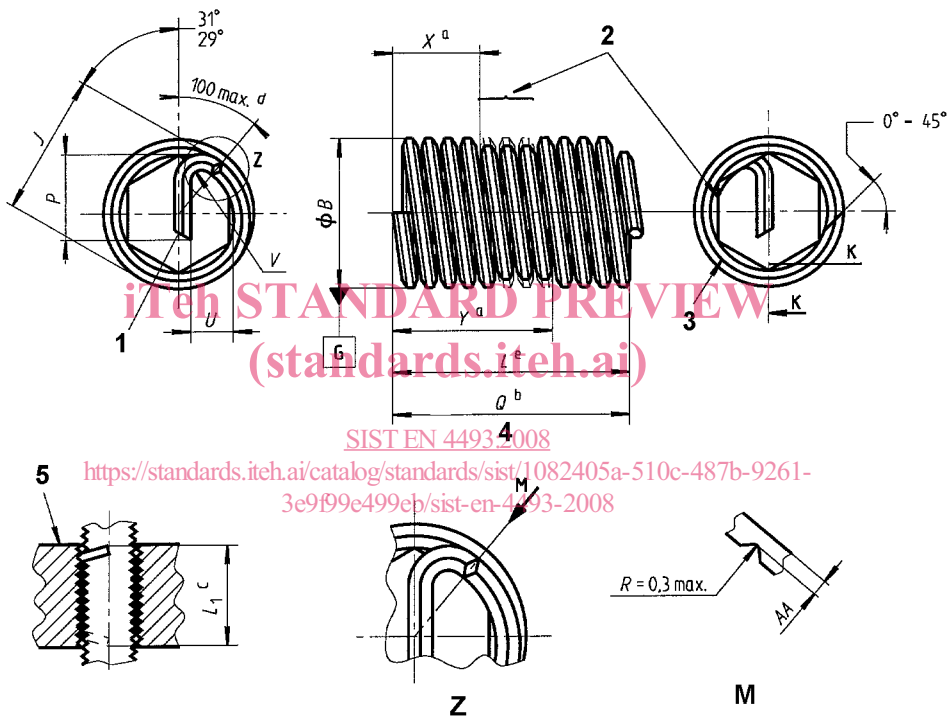
EN 2400

3.3 Surface treatment

EN 2786

Thickness: 2 µm to 5 µm

$R_a 1,6$ $\left[R_a 0,8 \right]$ Values apply before silver plating



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Table 1

| Diameter code | Thread ^a (Associated bolt) | A | | B | | C | | E | | F | H | |
|---------------|--|-------|--|-------------|-------|-------|-------|-------|-------|-------|-------|--------|
| | | min. | | + 0,55 0 | | max. | min. | max. | min. | | max. | min. |
| 040 | MJ4 × 0,7 | 0,163 | | 5,05 | | 0,758 | 0,683 | 0,612 | 0,51 | 0,35 | 0,455 | 0,4445 |
| 050 | MJ5 × 0,8 | 0,209 | | 6,25 | | 0,866 | 0,775 | 0,7 | 0,598 | 0,4 | 0,52 | 0,5085 |
| 060 | MJ6 × 1 | 0,267 | | 7,4 | 1,083 | 0,975 | 0,875 | 0,748 | 0,5 | 0,65 | 0,637 | |
| 070 | MJ7 × 1 | | | 8,65 | | | | | | | | |
| 080 | MJ8 × 1 | | | 9,7 | | | | | | | | |
| 100 | MJ10 × 1,25 | 0,415 | | 12,1 | | 1,353 | 1,251 | 1,094 | 0,967 | 0,625 | 0,812 | 0,799 |

| Diameter code | J | | P | | R ₁ | S | U | | V | AA | |
|---------------|------|------|------|------|----------------|-------|------|------|------|------|------|
| | max. | min. | max. | min. | min. | min. | max. | min. | max. | max. | min. |
| 040 | 5,6 | 4,9 | 3,55 | 2,5 | 0,126 | 0,219 | 1,67 | 1,02 | 0,45 | 0,34 | 0,31 |
| 050 | 6,8 | 6,1 | 4,55 | 3,15 | 1,144 | 0,25 | 2,09 | 1,41 | 0,6 | 0,37 | 0,34 |
| 060 | 7,95 | 7,25 | 4,85 | 3,7 | 0,18 | 0,312 | 2,55 | 1,65 | | 0,75 | 0,5 |
| 070 | 9,2 | 8,4 | 5,5 | 4,3 | | | 3,1 | 2,09 | | | |
| 080 | 10 | 9,2 | 6,5 | 4,75 | | | 3,88 | 2,27 | | | |
| 100 | 12,3 | 11,5 | 8 | 5,5 | 0,226 | 0,391 | 4,77 | 2,86 | | 0,6 | 0,55 |

^a In accordance with ISO 5855-2.

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Table 2

| Diameter code | Thread ^a (Associated bolt) | L ^b nom. | | | | | | X ^b min. | | |
|---------------|--|------------------------|-------|-----|--------|-------|-------|------------------------|-------|-----|
| | | 1,25 D | 1,5 D | 2 D | 1,25 D | 1,5 D | 2 D | 1,25 D | 1,5 D | 2 D |
| 040 | MJ4 × 0,7 | 5 | 6 | 8 | 4,47 | 5,47 | 7,47 | 1,5 | 1,5 | 1,6 |
| 050 | MJ5 × 0,8 | 6,3 | 7,5 | 10 | 5,65 | 6,9 | 9,4 | 2 | 2 | 2,4 |
| 060 | MJ6 × 1 | 7,5 | 9 | 12 | 6,75 | 8,25 | 11,25 | 2,3 | 2,3 | 2,5 |
| 070 | MJ7 × 1 | 8,8 | 10,5 | 14 | 8 | 9,75 | 13,25 | 2,5 | 2,5 | 3 |
| 080 | MJ8 × 1 | 10 | 12 | 16 | 9,25 | 11,25 | 15,25 | 3 | 3 | 4 |
| 100 | MJ10 × 1,25 | 12,5 | 15 | 20 | 11,56 | 14,06 | 19,06 | 3,5 | 3,5 | 4,7 |

| Diameter code | Y ^b max. | | | Q Number of coils ± 0,25 | | | Mass ≈ kg/1 000 pieces | | |
|---------------|------------------------|-------|-----|--------------------------------|-------|------|---------------------------|-------|------|
| | 1,25 D | 1,5 D | 2 D | 1,25 D | 1,5 D | 2 D | 1,25 D | 1,5 D | 2 D |
| | 040 | 3 | 3,7 | 5,7 | 4,9 | 6,1 | 8,6 | 0,19 | 0,23 |
| 050 | 3,8 | 4,2 | 6,8 | 5,5 | 6,9 | 9,6 | 0,34 | 0,42 | 0,55 |
| 060 | 4,5 | 5,5 | 8,5 | 5,4 | 6,8 | 9,5 | 0,61 | 0,75 | 0,99 |
| 070 | 5,5 | 6,5 | 10 | 6,5 | 8 | 11,1 | 0,84 | 1,03 | 1,36 |
| 080 | 7 | 7 | 11 | 7,5 | 9,4 | 13 | 1,12 | 1,38 | 1,8 |
| 100 | 9 | 9 | 14 | 7,6 | 9,5 | 13,1 | 2,19 | 2,68 | 3,52 |

^a In accordance with ISO 5855-2.

^b X and Y dimensions apply after installation of the thread insert.