

SLOVENSKI STANDARD

SIST EN 2940:2001

01-januar-2001

Aerospace series - Screws, 100° countersunk head, offset cruciform recess, threaded to head, in heat resisting steel FE-PA92HT (A286), silver plated - Classification: 900 MPa (at ambient temperature)/650 °C

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Luft- und Raumfahrt - 100° Senkschrauben, Flügelkreuzschlitz, Gewinde bis Kopf, aus hochwarmfestem Stahl FE-PA92HT (A286), versilbert - Klasse: 900 MPa (bei Raumtemperatur) / 650 °C

Série aérospatiale - Vis à tête fraisée 100° empreinte cruciforme déportée, filetées sous tête, en acier résistant à chaud FE-PA92HT (A286), argentées - Classification: 900 MPa (à température ambiante) / 650 °C

Ta slovenski standard je istoveten z: EN 2940:1995

ICS:

49.030.20 Sorniki, vijaki, stebelni vijaki Bolts, screws, studs

SIST EN 2940:2001

en

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EUROPEAN STANDARD

EN 2940

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 1995

ICS 49.040

Descriptors: aircraft industry, fastener, screw, countersunk head screw, cross recessed screw, heat resistant steel, silver coating, classification, dimension, surface treatment, screw thread, designation

English version

Aerospace series - Screws, 100° countersunk head, offset cruciform recess, threaded to head, in heat resisting steel FE-PA92HT (A286), silver plated - Classification : 900 MPa (at ambient temperature) / 650 °C

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Série aéronautique - Vis à tête fraisée 100°
empreinte cruciforme déportée, filetées sous
tête, en acier résistant à chaud FE-PA92HT
(A286), argentées - Classification : 900 MPa (à
température ambiante) / 650 °C

Luft- und Raumfahrt - 100° Senkschrauben,
Flügelkreuzschlitz, Gewinde bis Kopf, aus
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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.

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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 April 1996, and conflicting national standards shall be withdrawn at the latest by April 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.

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ALTERNATIVE TO EN 2940:1995
TRONIC IN TECHNICAL DRAWING IS OBLIGATORY
development of equivalent standards as EN EN 2940
ANALOGUE

.....FSIP
-10- IDENTIFICATION SYSTEM OF DOCUMENTS

1 Scope

This standard specifies the characteristics of screws with 100° countersunk head with offset cruciform recess, threaded to head, in FE-PA92HT, silver plated, for aerospace applications.

Classification : 900 MPa ¹⁾ / 650 °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 3353 Aerospace - Rolled threads for bolts - Lead and runout requirements
- ISO 5855-2 Aerospace - MJ threads - Part 2 : Limit dimensions for bolts and nuts
- ISO 7994 Aerospace - Internal drive, offset cruciform recess (Torq-Set [®]) for rotary fastening devices - Metric series
- EN 2398 Heat resisting steel FE-PA92-HT - $R_m \geq 900$ MPa - Bars for machined bolts - $D \leq 25$ mm - Aerospace series ³⁾
- EN 2399 Heat resisting steel FE-PA92-HT - $R_m \geq 900$ MPa - Bars for forged bolts - $D \leq 25$ mm - Aerospace series ³⁾
- EN 2424 Aerospace series - Marking of aerospace products
- EN 2786 Aerospace series - Electrolytic silver plating of fasteners ⁴⁾
- EN 3043 Aerospace series - Fasteners, externally threaded, in heat resisting steel FE-PA92HT (A286) - Classification : 900 MPa / 650 °C - Manufacturing method optional - Technical specification ⁴⁾

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.

3.2 Materials

EN 2398 or EN 2399

3.3 Surface treatment

EN 2786

Thickness :

- thread : 3 μ m to 6 μ m shall be measured at the pitch diameter ;
- other areas may show complete coverage, without thickness requirement.

1) Minimum tensile strength of the material at ambient temperature

2) Maximum test temperature of the parts

3) Published as AECMA Standard at the date of publication of this standard

4) Published as AECMA Prestandard at the date of publication of this standard

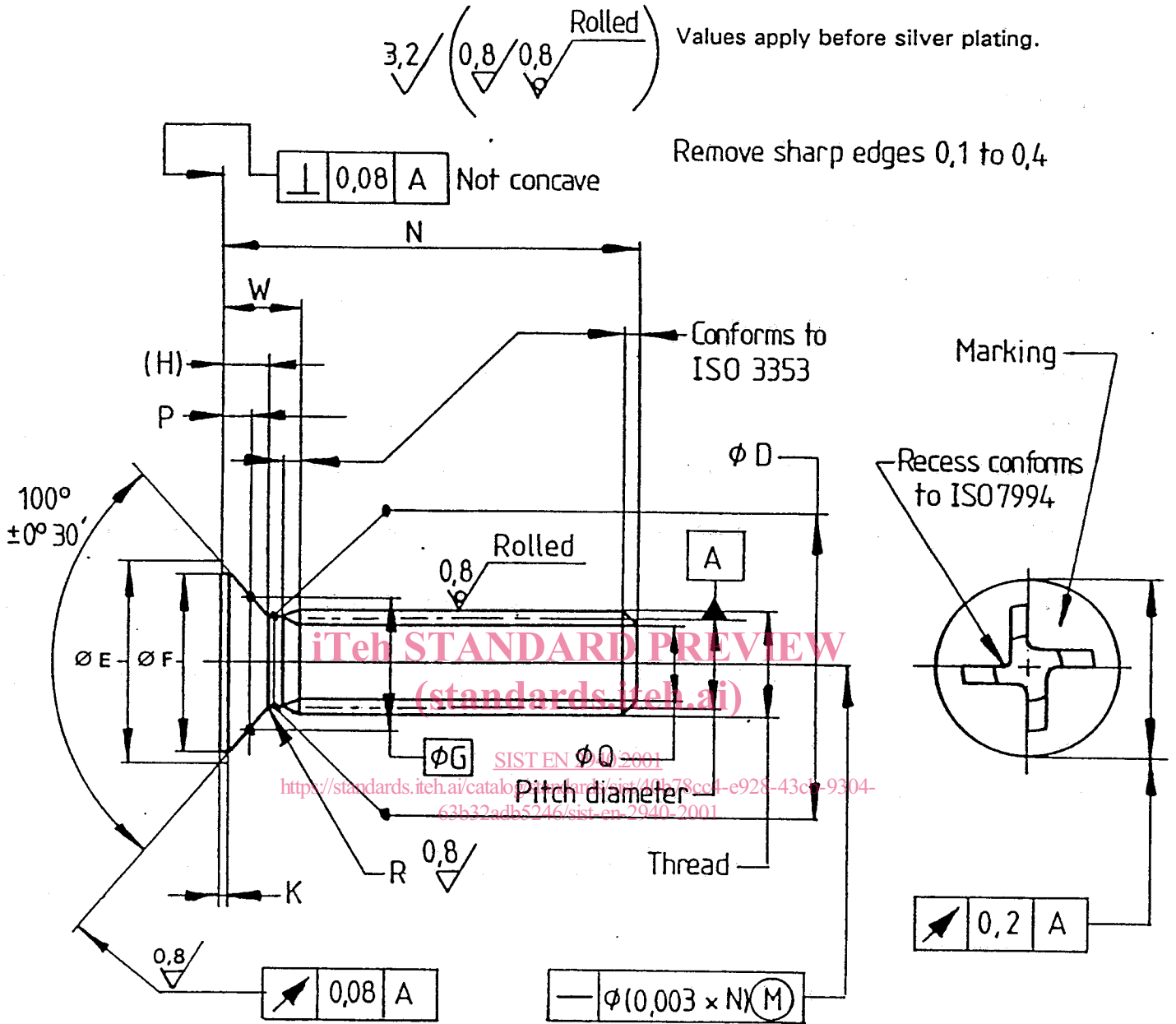


Figure 1

Table 1

| Code | Thread 1) | D ± 0,13 | E 2) | F min. | G | H 2) | K min. | P 0 - 0,08 | Q | | R | | W | | Recess number ISO 7994 |
|------|--------------|-------------|------|-----------|------|------|-----------|------------------|------|-------|------|------|------|------|------------------------------|
| | | | | | | | | | nom. | Tol. | max. | min. | max. | min. | |
| 030 | MJ3x0,5-4h6h | 2,68 | 6 | 5,4 | 4,5 | 1,4 | 0,06 | 0,63 | 2,3 | 0 | 0,4 | 0,2 | 2,4 | 2,15 | R3 |
| 040 | MJ4x0,7-4h6h | 3,55 | 8 | 7,2 | 5,78 | 1,9 | 0,08 | 0,93 | 3 | - 0,5 | 0,4 | 0,2 | 3,27 | 2,92 | R4 |
| 050 | MJ5x0,8-4h6h | 4,48 | 10 | 9 | 7,71 | 2,4 | 0,1 | 0,96 | 3,4 | ± 0,5 | 0,5 | 0,3 | 3,98 | 3,58 | R5 |

1) In accordance with ISO 5855-2
2) Corresponds to maximum condition.

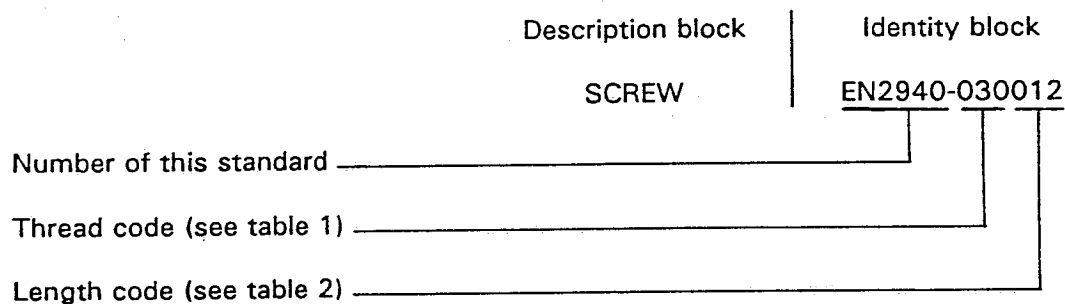
Table 2

| Length code | N ± 0,3 | Thread code | | |
|-------------|------------|--------------------|--------------------|--------------------|
| | | 030 | 040 | 050 |
| | | Mass ¹⁾ | Mass ¹⁾ | Mass ¹⁾ |
| 006 | 6 | 0,43 | 0,84 | |
| 008 | 8 | 0,51 | 0,99 | |
| 010 | 10 | 0,60 | 1,15 | 1,75 |
| 012 | 12 | 0,69 | 1,31 | 2,00 |
| 014 | 14 | 0,78 | 1,46 | 2,25 |
| 016 | 16 | 0,87 | 1,62 | 2,50 |
| 018 | 18 | 0,96 | 1,77 | 2,75 |
| 020 | 20 | 1,05 | 1,93 | 3,00 |
| 022 | 22 | 1,14 | 2,08 | 3,25 |
| 024 | 24 | 1,22 | 2,24 | 3,50 |
| 026 | 26 | 1,31 | 2,40 | 3,75 |
| 028 | 28 | 1,40 | 2,55 | 4,00 |
| 030 | 30 | 1,49 | 2,71 | 4,25 |
| 032 | 32 | 1,58 | 2,86 | 4,50 |
| 034 | 34 | 1,67 | 3,02 | 4,75 |
| 036 | 36 | 1,76 | 3,18 | 5,00 |
| 038 | 38 | 1,84 | 3,33 | 5,25 |
| 040 | 40 | 1,93 | 3,49 | 5,50 |
| 042 | 42 | 2,02 | 3,64 | 5,75 |
| 044 | 44 | 2,11 | 3,80 | 6,00 |
| 046 | 46 | 2,20 | 3,96 | 6,25 |
| 048 | 48 | 2,29 | 4,11 | 6,50 |
| 050 | 50 | 2,38 | 4,27 | 6,75 |
| 052 | 52 | 2,47 | 4,42 | 7,00 |
| 054 | 54 | 2,56 | 4,58 | 7,25 |
| 056 | 56 | 2,65 | 4,74 | 7,50 |
| 058 | 58 | 2,74 | | 7,75 |
| 060 | 60 | | | 8,00 |
| 062 | 62 | | | 8,25 |
| 064 | 64 | | | 8,50 |
| 066 | 66 | | | 8,75 |
| 068 | 68 | | | 9,00 |
| 070 | 70 | | | 9,25 |
| | | | | 9,50 |

1) Mass \approx quoted in kg/1 000 parts

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 see table 3 and as indicated on figure 1.

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Table 3

| Thread code | Style |
|-------------|-------|
| 030 and 040 | F |
| 050 | C |

6 Technical specification

EN 3043