



# SLOVENSKI STANDARD

## oSIST prEN 2942:2022

01-april-2022

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**Aeronavtika - Vložek s spiralnim navojem MJ, samozapiralni, za ročno vstavljanje, iz toplotno odporne zlitine na nikljevi osnovi NI-PH2801 (Inconel X750), posrebreni**

Aerospace series - Insert, MJ screw thread, helical coil, self-locking tanged insertion drive, in heat resisting nickel base alloy NI-PH2801 (Inconel X750), silver plated

Luft- und Raumfahrt - Draht-Gewindeeinsätze, selbstsichernd, aus hochwarmfester Nickelbasislegierung NI-PH2801 (Inconel X750 - EN 3018), versilbert

Série aérospatiale - Filet rapportés, à freinage interne, en alliage résistant à chaud à base de nickel NI-PH2801 (Inconel X750), argentés

**Ta slovenski standard je istoveten z: prEN 2942:2022**

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### ICS:

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

**oSIST prEN 2942:2022**

**en,fr,de**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN 2942**

February 2022

ICS

Will supersede EN 2942:1998

English Version

**Aerospace series - Insert, MJ screw thread, helical coil, self-locking tanged insertion drive, in heat resisting nickel base alloy NI-PH2801 (Inconel X750), silver plated**

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Luft- und Raumfahrt - Draht-Gewindeeinsätze, selbstsichernd, aus hochwarmfester Nickelbasislegierung NI-PH2801 (Inconel X750 - EN 3018), versilbert

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee ASD-STAN.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European Foreword

This document (prEN 2942:2022) has been prepared by the Aerospace and Defence Industries Association of Europe — Standardization (ASD-STAN).

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 2942:1998.

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prEN 2942:2022 (E)

## Introduction

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

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## 1 Scope

This document specifies the characteristics of self-locking inserts, helical coil tanged insertion drives, MJ screw threads in NI-PH2801 and silver plated inserts for aerospace applications.

The maximum test temperature is 550 °C.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 2943, *Aerospace series — Inserts, MJ and M screw threads, helical coil — Technical specification*

EN 3018, *Aerospace series — Heat resisting alloy NI-PH2801 (NiCr16Fe7Ti3Nb1Al1) — Consumable electrode remelted — Cold drawn wire for the manufacture of thread inserts —  $D \leq 3$  mm*

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 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

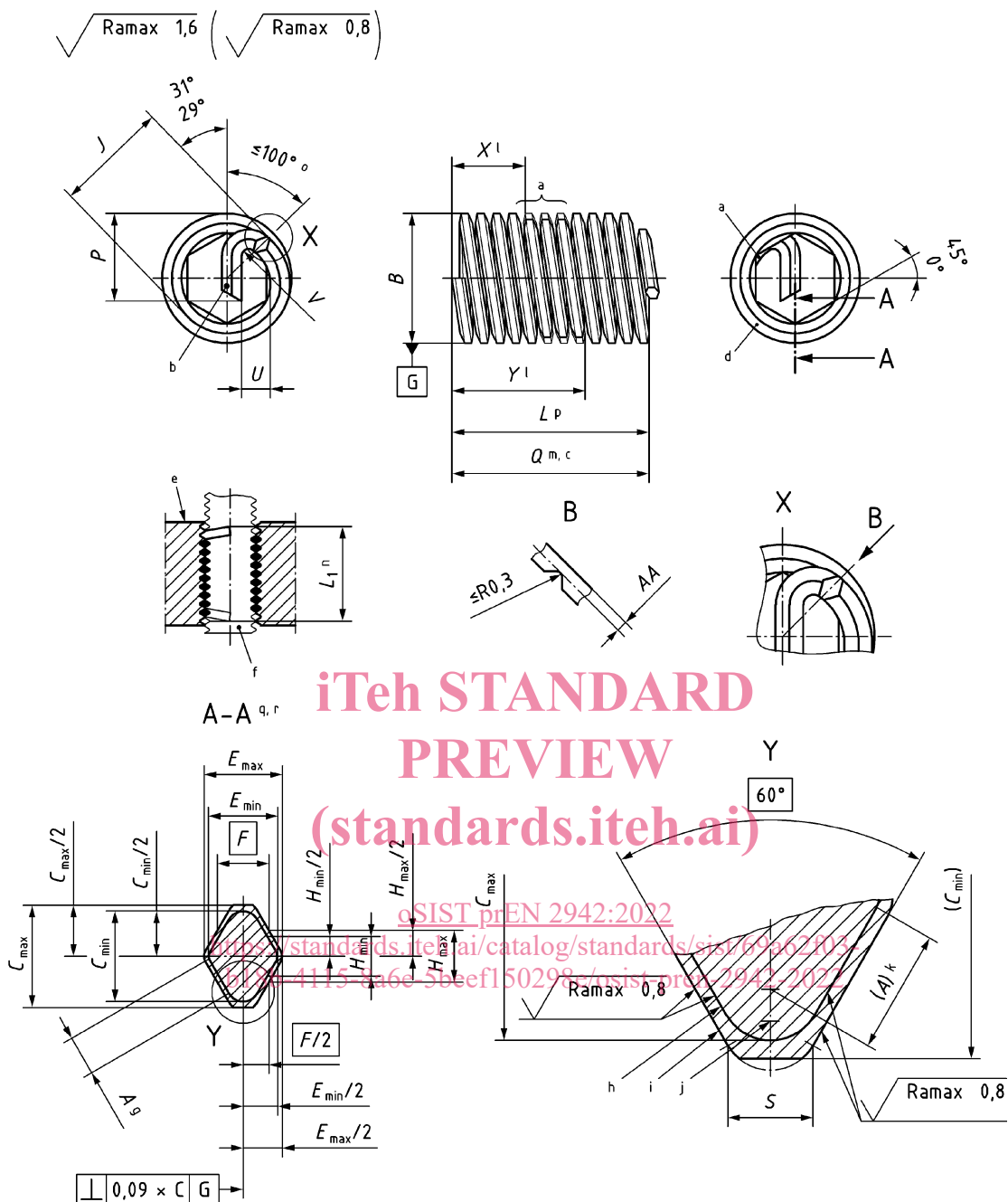
## 4 Required characteristics

### 4.1 Configuration — Dimensions — Tolerances — Masses

See Figure 1, Table 1 and Table 2.

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

The roughness values Ra apply before silver plating. Details of form not stated are at the manufacturer's discretion.



**Key**

- a form out-of-round in this area to achieve the self-locking requirements (tool marks permissible)
- b tang
- c number of coils
- d marking
- e lead-in face of installation hole
- f installation
- g see detail Y
- h min. profile
- i max. profile
- j  $R_1$  min, tangential to flanks
- k straight portion of flank
- l locking feature shall be in the zone Y max. – X min. The number of gripcoils and number of sides per gripcoil are in accordance with the manufacturer’s design
- m the number of coils is counted from the notch
- n length of installed thread L1 up to the notch
- p length of fitted insert to notch
- q dimensions after coiling, corresponding to an insert fitted in an installation hole to EN 3044
- r section A-A is perpendicular to the helical axis

**Figure 1 — Layout drawing, dimensions destined for design depts**



## prEN 2942:2022 (E)

Table 1— Dimensions

Thread code	Thread <sup>a</sup> (Associated screw)	A min.	B +0,55 0	C		E		F	H		J		P		R <sub>1</sub> min.	S min.	U		V max.	AA		
				max.	min.	max.	min.		max.	min.	max.	min.	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	0,444	5	5,6	4,9	3,55	2,5	0,126	0,219	1,67	1,02	0,45	0,34	0,31
050	MJ5 × 0,8	0,209	6,25	0,866	0,775	0,7	0,598	0,4	0,52	0,508	5	6,8	6,1	4,55	3,15	0,144	0,25	2,09	1,41	0,6	0,37	0,34
060	MJ6 × 1	0,267	7,4	1,083	0,975	0,875	0,748	0,5	0,65	0,637	7,95	7,25	4,85	3,7	0,18	0,312	2,55	1,65	0,75		0,5	0,45
070	MJ7 × 1		8,65								9,2	8,4	5,5	4,3			3,1	2,09		0,5	0,45	
080	MJ8 × 1		9,7								10	9,2	6,5	4,75			3,88	2,27		0,6	0,55	
100	MJ10 × 1,25	0,415	12,1	1,353	1,251	1,094	0,967	0,625	0,812	0,799	12,3	11,5	8	5,5	0,226	0,391	4,77	2,86	0,6	0,55		

<sup>a</sup> In accordance with ISO 5855-2.

Table 2— Dimensions and masses  
(standards.itech.ai)

Thread code	Thread <sup>a</sup> (Associated screw)	L		L <sub>1</sub>		X <sup>b</sup>		Y <sup>b</sup>		Q		Mass ≈	
		nom.		+0,25 -0		min.		max.		Number of coils ±0,25		kg/1 000 pieces	
		1,25 D	1,5 D	1,25 D	1,5 D	1,25 D	1,5 D	1,25 D	1,5 D	1,25 D	1,5 D	1,25 D	1,5 D
040	MJ4 × 0,7	5	6	4,47	5,47	1,5		3	3,7	4,9	6,1	0,19	0,23
050	MJ5 × 0,8	6,3	7,5	5,65	6,9	2		3,8	4,2	5,5	6,9	0,34	0,42
060	MJ6 × 1	7,5	9	6,75	8,25	2,3		4,5	5,5	5,4	6,8	0,61	0,75
070	MJ7 × 1	8,8	10,5	8	9,75	2,5		5,5	6,5	6,5	8	0,84	1,03
080	MJ8 × 1	10	12	9,25	11,25	3		7	7	7,5	9,4	1,12	1,38
100	MJ10 × 1,25	12,5	15	11,56	14,06	3,5		9	9	7,6	9,5	2,19	2,68

<sup>a</sup> In accordance with ISO 5855-2.

<sup>b</sup> X and Y dimensions apply after installation of the thread insert.

**prEN 2942:2022 (E)****4.2 Material**

Material shall be according to EN 3018.

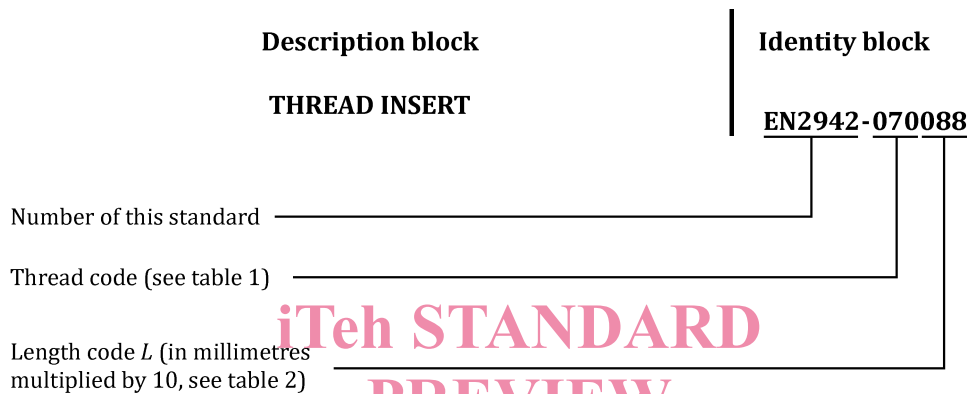
**4.3 Surface treatment**

Surface treatment shall be according to EN 2786.

Thickness: 2  $\mu\text{m}$  to 5  $\mu\text{m}$ .

**5 Designation**

EXAMPLE:



If necessary, the code I9005 shall be placed between the description block and the identity block.

**6 Marking**

Marking shall be according to EN 2424: <https://standards.iteh.ai/catalog/standards/sist/69a62f03-b18b-4115-8a6e-5beef150298e/osist-pren-2942-2022>

- style G;
- additionally style F permitted, as indicated on Figure 1.

**7 Technical specification**

Technical specifications shall be according to EN 2943.

**8 Quality management systems**

The manufacturer's operations shall be an approved production organization for aerospace products and shall demonstrate that it has implemented and is able to maintain a quality management system (e.g. according to EN 9100 or an equivalent aerospace accepted and established quality management system).

The qualification procedure for aerospace standard products (e.g. according to EN 9133 or an equivalent aerospace accepted and established qualification procedure) shall be used and documented according to the specified tests if not otherwise agreed between customer and supplier.