



**SLOVENSKI STANDARD**  
**SIST EN 2945:2001**

**01-januar-2001**

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**Aerospace series - Inserts, screw thread, helical coil, self-locking - Assembly procedure**

Aerospace series - Inserts, screw thread, helical coil, self-locking - Assembly procedure

Luft- und Raumfahrt - Draht-Gewindeeinsätze, selbstsichernd - Einbauverfahren

Série aérospatiale - Filets rapportés, à freinage interne - Procédure de montage

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**Ta slovenski standard je istoveten z: EN 2945:1998**

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**ICS:**

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

**SIST EN 2945:2001**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN 2945

May 1998

ICS 49.030.30

Descriptors: aircraft industry, screw thread, self-locking screw thread, assembling, inspection

English version

## Aerospace series - Inserts, screw thread, helical coil, self-locking - Assembly procedure

Série aérospatiale - Filets rapportés, à freinage interne -  
Procédure de montage

Luft- und Raumfahrt - Draht-Gewindeeinsätze,  
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This European Standard was approved by CEN on 23 February 1998.

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. 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.

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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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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 received the approval of the National Associations and the Official Services of the member countries of AECMA, prior to its presentation to CEN.

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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 November 1998, and conflicting national standards shall be withdrawn at the latest by November 1998.

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According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

REPUBLIKA SLOVENIJA  
AGENCIJA REPUBLIKE SLOVENIJE  
ZA VARNOST IN KVALITETO  
PROJEKCIJSKI INŠTITUT  
LJUBLJANA

..... 2010  
EVROPEJSKI KOMISIJA



## 1 Scope

This standard specifies the assembly procedure (tools and inspection) for self-locking, helical coil, screw thread inserts defined by EN standards, for aerospace applications.

## 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 5855-2	Aerospace - MJ threads - Part 2: Limit dimensions for bolts and nuts
EN 2942	Aerospace series - Inserts, screw thread, helical coil, self-locking, in heat resisting nickel base alloy NI-PH2801 (Inconel X750), silver plated
EN 2944	Aerospace series - Inserts, screw thread, helical coil, self-locking, in corrosion resisting steel FE-PA3004
EN 3542	Aerospace series - Inserts, screw thread, helical coil, self-locking, in heat resisting nickel base alloy NI-PH2801 (Inconel X750)

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## 3 Tools

Configuration, see figures 1, 2, 3, 4, 5 and 6 and tables 1, 2, 3, 4 and 5. Dimensions and tolerances are in millimetres.

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### 3.1 Manual insertion tools

Of the following type or equivalent

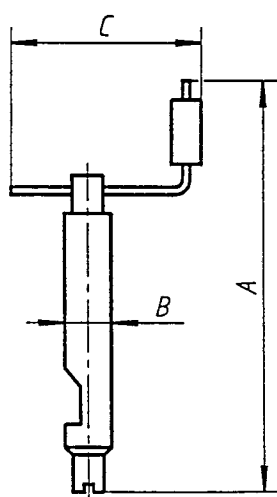


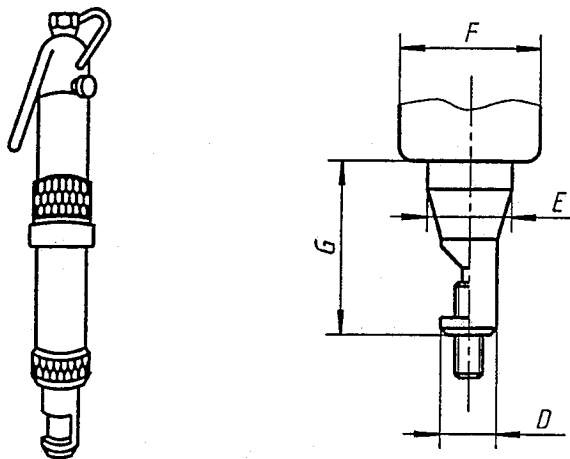
Figure 1

Table 1

Diameter code of thread insert	A <sup>1)</sup>	B <sup>1)</sup>	C <sup>1)</sup>
040	193	16	68
050	202		
060	211		83
070	216		
080	224	23	92
100	238		
1) Recommended envelope dimensions			

**3.2 Pneumatic insertion tools**

Of the following type or equivalent



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 Figure 2  
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**Table 2**

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Diameter code of thread insert	$D^{1)}$	$E^{1)}$	$F^{1)}$	$G^{1)}$
040	8	13	28	32
050	11	11		
060		13	42	49
070	13			
080	15	15		
100	17	17	57	

1) Recommended envelope dimensions

### 3.3 Profile of insertion tool front portion and wear limit

The insertion tool shall have a threaded front portion which conforms to figures 3 or 4 and table 3.

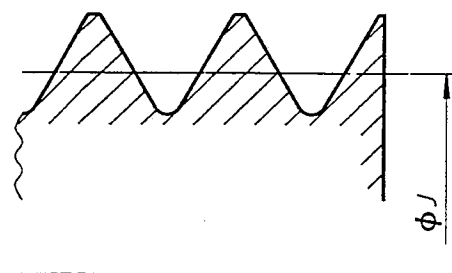
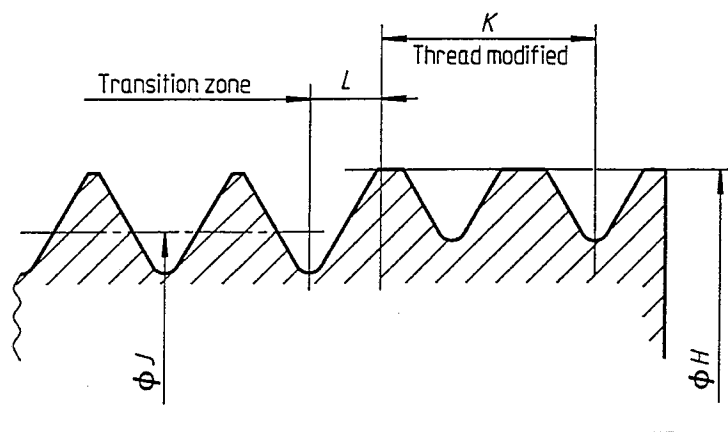


Figure 3

Figure 4

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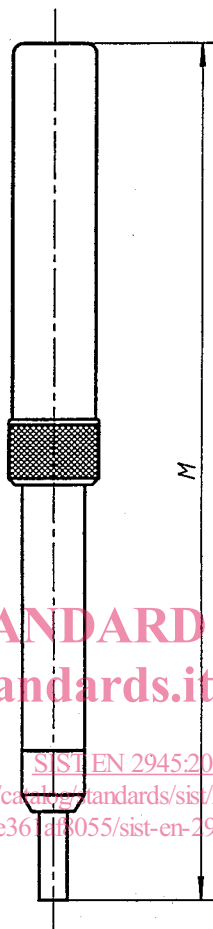
Table 3

Diameter code of thread insert	H		J		K <sup>1)</sup> nom.	L <sup>2)</sup> nom.
	0 - 0,05	Wear limit	0 - 0,05	Wear limit		
040	3,45	3,35	3,2	3,10	1,05	0,35
050	4,4	4,3	4,1	3,95	1,2	0,4
060	5,25	5,15	4,9	4,75	1,5	0,5
070	6,25	6,15	5,9	5,75		
080	7,25	7,15	6,9	6,75		
100	9,1	9	8,7	8,5	1,875	0,625

1)  $K = 1,5$  pitches  
2)  $L = 0,5$  pitches

### 3.4 Tang break tool

With trigger device, of the type shown or equivalent



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Figure 5

Table 4

Diameter code of thread insert	$M$ <sup>1)</sup>
040	100
050	150
060	
070	
080	
100	200
1) Recommended envelope dimension	



### 3.5 Extraction tool

Of the following type or equivalent

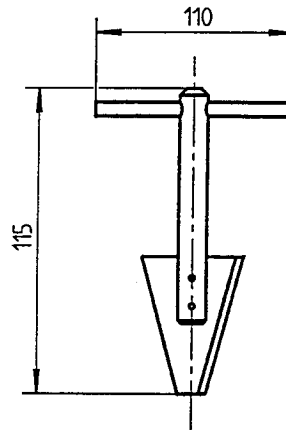


Figure 6

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## 4 Assembly of thread inserts

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4.1 The top coil of the thread insert shall be 0,5 pitches to 1,25 pitches below the lead in face of the installation hole (see figure 7). <https://standards.iteh.ai/catalog/standards/sist/26d252d6-99e3-4b56-a7f7-6de361af8055/sist-en-2945-2001>

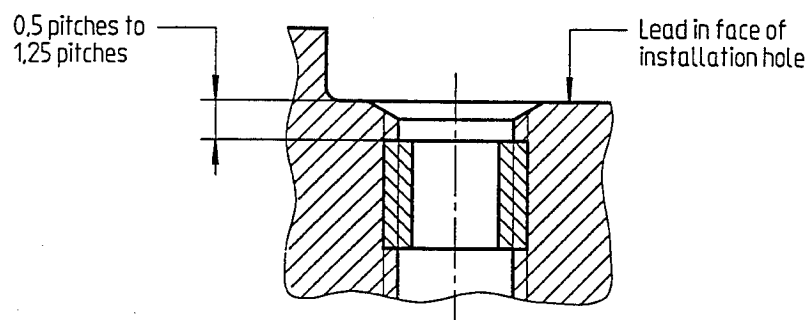


Figure 7

4.2 Break off tang with tool specified in 3.4 and remove the broken off tang.