



SLOVENSKI STANDARD

SIST EN 4619:2010

01-maj-2010

Aeronavtika - Vložki, navoj MJ, samozapiralni, s samozagodnim ključem - Postopek namestitve in odstranitve

Aerospace series - Inserts, MJ threads, self-locking, with self-broaching keys -
Installation and removal procedure

Luft- und Raumfahrt - Gewindeeinsätze, MJ-Gewinden, selbstsichernd, mit
selbsträumenden Stiften - Ein- und Ausbaurverfahren

Série aérospatiale - Douilles filetées, à filetage MJ, à freinage interne, à clavettes auto-
brochantes - Procédure d'installation et d'extraction

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EUROPEAN STANDARD

EN 4619

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2010

ICS 49.030.30

English Version

Aerospace series - Inserts, MJ threads, self-locking, with self-broaching keys - Installation and removal procedure

Série aérospatiale - Douilles filetées, à filetage MJ, à freinage interne, à clavettes auto-brochantes - Procédure d'installation et d'extraction

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This European Standard was approved by CEN on 9 January 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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, 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 United Kingdom.

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Foreword

This document (EN 4619:2010) 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of an identical text or by endorsement, at the latest by September 2010, and conflicting national standards shall be withdrawn at the latest by September 2010.

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, Croatia, 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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EN 4619:2010 (E)**1 Scope**

This standard specifies the installation and removal procedure (hole profile, tools) of self-locking, self-broaching key, MJ thread inserts defined by EN standards, for aerospace applications.

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 4620, *Aerospace series — Inserts, MJ threads, self-locking, with self-broaching keys — Design standard*

EN 4622, *Aerospace series — Inserts, MJ threads, self-locking, with self-broaching keys, in heat resisting steel FE-PA2601 (A286), MoS₂ coated*

EN 4623, *Aerospace series — Inserts, MJ threads, self-locking, with self-broaching keys, in heat resisting nickel base alloy NI-PH2601 (Inconel 718), silver plated*

EN 4624, *Aerospace series — Inserts, MJ threads, self-locking, with self-broaching keys, in heat resisting nickel base alloy NI-PH1302 (Waspaloy), silver plate*

ISO 5855-1, *Aerospace — MJ threads — Part 1: General requirements*

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

3 Insert information

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Tables 1 to 3 provide the cross reference between the insert codification, the related bolt thread and the tapped hole diameter.

Table 1 — Normal size insert

Insert reference	Bolt thread diameter ^{a, b}	Tapped hole diameter ^b	Tapped hole reference
EN 4622-050-0 EN 4624-050-0 EN 4623-050-0	MJ5×0,8	MJ9×1-4H5H	EN 4620-050-0
EN 4622-060-0 EN 4624-060-0 EN 4623-060-0	MJ6×1	MJ10×1-4H5H	EN 4620-060-0
EN 4622-070-0 EN 4624-070-0 EN 4623-070-0	MJ7×1	MJ11×1-4H5H	EN 4620-070-0
EN 4622-080-0 EN 4624-080-0 EN 4623-080-0	MJ8×1	MJ12×1-4H5H	EN 4620-080-0
EN 4622-100-0 EN 4624-100-0 EN 4623-100-0	MJ10×1,25	MJ14×1-4H5H	EN 4620-100-0
^a According to ISO 5855-2. ^b According to ISO 5855-1.			

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Table 2 — First repair size insert

Insert reference	Bolt thread diameter ^{a, b}	Tapped hole diameter ^b	Tapped hole reference
EN 4622-050-1 EN 4624-050-1 EN 4623-050-1	MJ5×0,8	MJ10×1-4H5H	EN 4620-050-1
EN 4622-060-1 EN 4624-060-1 EN 4623-060-1	MJ6×1	MJ11×1-4H5H	EN 4620-060-1
EN 4622-070-1 EN 4624-070-1 EN 4623-070-1	MJ7×1	MJ12×1-4H5H	EN 4620-070-1
EN 4622-080-1 EN 4624-080-1 EN 4623-080-1	MJ8×1	MJS13×1-4H5H	EN 4620-080-1
EN 4622-100-1 EN 4624-100-1 EN 4623-100-1	MJ10×1,25	MJ15×1-4H5H	EN 4620-100-1
^a According to ISO 5855-2. ^b According to ISO 5855-1 except MJS13×1 (see Table 4).			

Table 3 — Second repair size insert

Insert reference	Bolt thread diameter ^{a, b}	Tapped hole diameter ^b	Tapped hole reference
EN 4622-050-2 EN 4624-050-2 EN 4623-050-2	MJ5×0,8	MJ11×1-4H5H	EN 4620-050-2
EN 4622-060-2 EN 4624-060-2 EN 4623-060-2	MJ6×1	MJ12×1-4H5H	EN 4620-060-2
EN 4622-070-2 EN 4624-070-2 EN 4623-070-2	MJ7×1	MJS13×1-4H5H	EN 4620-070-2
EN 4622-080-2 EN 4624-080-2 EN 4623-080-2	MJ8×1	MJ14×1-4H5H	EN 4620-080-2
EN 4622-100-2 EN 4624-100-2 EN 4623-100-2	MJ10×1,25	MJ16×1-4H5H	EN 4620-100-2
^a According to ISO 5855-2. ^b According to ISO 5855-1 except MJS13×1 (see Table 4).			

Table 4
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Dimensions in millimetres

Thread designation	Major diameter		Pitch diameter		Minor diameter	
	max.	min.	max.	min.	max.	min.
MJS13×1-4H5H	13,244	12,450	12,350	12,216	12,026	

4 Inspection requirements before installation

Prior to installation check the installation hole to receive the insert are free from burrs and any foreign objects, grease, oil, etc.

Inspect insert to be installed and ensure that it is clean and free from protective grease, etc.

5 Installation tools

5.1 General

In order to facilitate the correct assembly of the inserts use the appropriate tools. It is necessary to use one tool by insert reference.

The tools and their methods of application described in this standard are not mandatory and show only the basic principles to be observed to achieve the satisfactory installation and subsequent broaching and the satisfactory removal of the inserts.

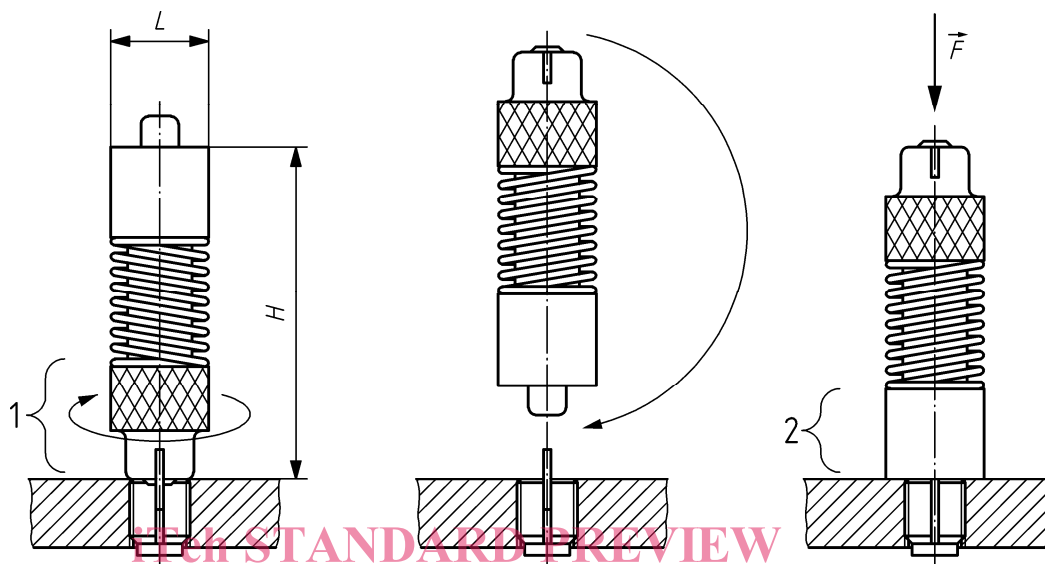
The maximum dimensional requirements provided shall be achieved and on no account shall the design of the tools or their methods of application be such that damage may occur to the threads or the locking zone of the insert or the component into which it is being installed.

5.2 Hand installation

5.2.1 Installation tool

Figure 1 illustrates a combined tool used for hand screwing and hand broaching and its overall dimensions.

Figure 1a) and Table 5 give the overall dimensions.



Key

1 Screwing nose

2 Broaching nose for keys setting

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a)

b)

c)

Figure 1

Table 5

Dimensions in millimetres

Insert external thread	H	$\varnothing L$
MJ9×1	71	14,3
MJ10×1		15,9
MJ11×1		14,3
MJ12×1		17,5
MJS13×1		17,5
MJ14×1		19,0
MJ15×1		20,6
MJ16×1		20,6