
5 YfcbUj h_U!'NU_cj] YbY'a UhjWžgUa cj Ufcj UbYžn'nUXfýYj Ubc`df]fcVb]Wt'!
DcghcdY_'j [fUXb^Y

Aerospace series - Shank nuts, self-locking, flange restrained - Installation procedure

Luft- und Raumfahrt - Einnietmuttern, selbstsichernd, mit Anlagefläche - Einbauverfahren

Série aérospatiale - Écrous à sertir, auto-freinants, à flancs de retenue - Procédure
d'installation

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Ta slovenski standard je istoveten z: **EN 3148:2008**

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ICS:

49.030.30 Matice Nuts

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English Version

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This European Standard was approved by CEN on 12 December 2007.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 3148:2008) 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of an identical text or by endorsement, at the latest by October 2008, and conflicting national standards shall be withdrawn at the latest by October 2008.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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1 Scope

This process standard details the installation of shank nuts to EN 2910 and EN 2911 in engine components.

It applies to flange restrained shank nuts and shall be observed whenever invoked in drawings and working documents.

It is to ensure proper installation for adequate retention of the shank nuts and freedom from damage to the components involved.

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 2910, *Aerospace series — Shank nuts, self-locking, in heat resisting steel FE-PA92HT (A286) — Classification: 1 100 MPa (at ambient temperature) / 650 °C.*

EN 2911, *Aerospace series — Shank nuts, self-locking, in heat resisting steel FE-PA92HT (A286), silver plated — Classification: 1 100 MPa (at ambient temperature) / 650 °C.*

3 Swaging procedure

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Swaging of shank nuts is carried out by deforming the end of the shank using a 60° swaging cone.

Shank nuts are swaged with the aid of a swaging tool either manually or by machine.

Swaging cones and anvils of the swaging tools are replaceable.

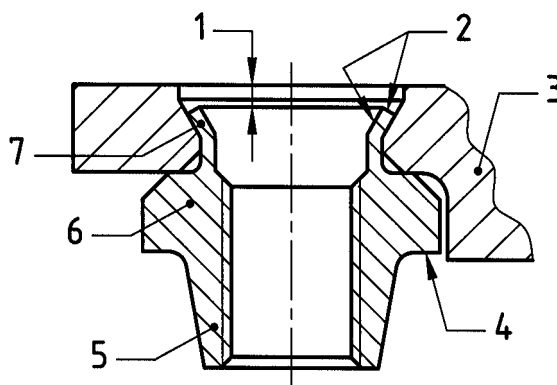
Before swaging, make sure you are using the proper combination of cone, anvil and shank nut (see Table 1 in Clause 4) to prevent excessive load on the components.

To prevent damage to the locking element of the shank nut the tool shall not be located on the end of the nut locking element, but on the flange of the shank nut.

The component flange shall be firmly held against the nut before swaging commences because the angle of the cone will not automatically ensure tightness.

Care shall be taken not to damage the components during assembly.

Figure 1 shows a swaged shank nut.



Key

- 1 Nut shank must be underflush after swaging
- 2 Swaging of shanks may result in "rub off" or coating damage in these areas. This is permissible.
- 3 Component flange
- 4 Flange for locating swaging tool
- 5 Shank nut end with locking element
- 6 Shank nut
- 7 Shank

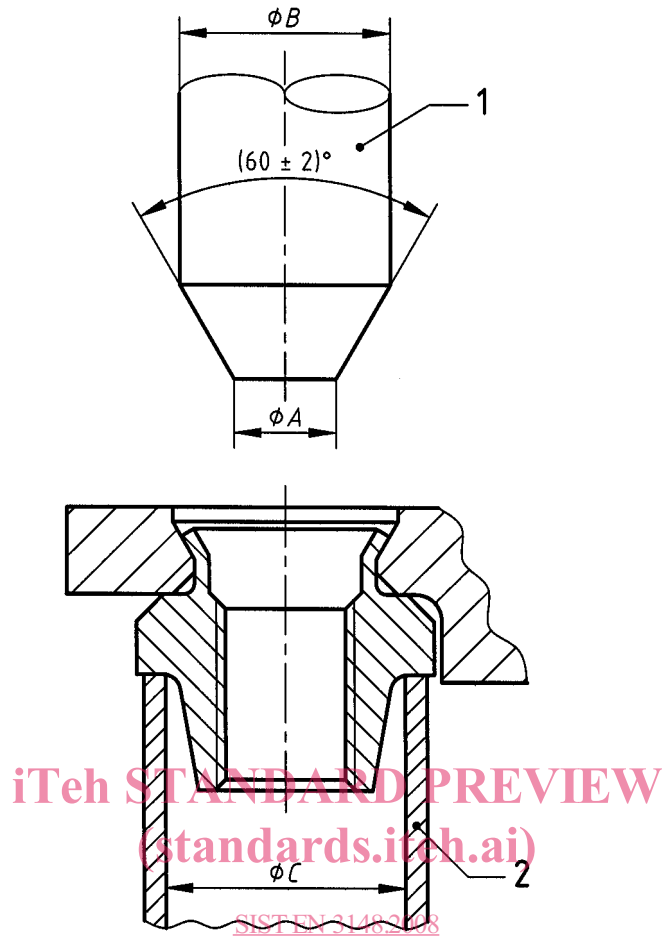
iTeh STANDARD PREVIEW Figure 1 — Swaged shank nut (standards.iteh.ai)

4 Swaging tool dimensions

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The dimensions of the swaging cone and the anvil to be used for swaging of the relevant shank nut sizes are shown in Figure 2 and Table 1.

All other tool dimensions depend on the means of production of each user of the shank nuts.



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Key

- 1 Swaging cone
- 2 Anvil

Figure 2 — Tool dimensions

Table 1 — Dimensions

Dimensions in millimetres

| Diameter code | Shank nut thread size | A +0,2 0 | B Ref. | C +0,2 0 |
|---------------|-----------------------|----------------|-----------|----------------|
| 050 | MJ5×0,8-4H6H | 3,8 | 7,5 | 8,7 |
| 060 | MJ6×1-4H5H | 4,8 | 8,5 | 9,7 |
| 070 | MJ7×1-4H5H | | 9,5 | 10,7 |
| 080 | MJ8×1-4H5H | 5,4 | 11,0 | 11,7 |