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Aerospace series - Screws, pan head, Spiral Drive Recess, threaded to head, in heat and corrosion resisting steel, passivated - Classification : 1 100 MPa (at ambient temperature) / 425 °C

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 4846:2022 sisaldab Euroopa standardi EN 4846:2022 ingliskeelset teksti.	This Estonian standard EVS-EN 4846:2022 consists of the English text of the European standard EN 4846:2022.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 23.03.2022.	Date of Availability of the European standard is 23.03.2022.
Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

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ICS 49.030.20

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 4846

March 2022

ICS 49.030.20

English Version

Aerospace series - Screws, pan head, Spiral Drive Recess, threaded to head, in heat and corrosion resisting steel, passivated - Classification : 1 100 MPa (at ambient temperature) / 425 °C

Série aérospatiale - Vis à tête cylindrique, empreinte en spirale, filetée jusqu'à proximité de la tête, en acier résistant à chaud et à la corrosion, passivée - Classification : 1 100 MPa (à température ambiante)/425 °C

Luft- und Raumfahrt - Flachkopfschraube mit Spiral-Antrieb, Gewinde annähernd bis Kopf, aus korrosionsbeständigem und hochwarmfestem Stahl, passiviert - Klasse: 1 100 MPa (bei Raumtemperatur)/425 °C

This European Standard was approved by CEN on 10 January 2022.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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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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Contents

Page

European foreword **3**
Introduction **4**
1 Scope **5**
2 Normative references **5**
3 Terms and definitions **5**
4 Requirements **5**
4.1 Configuration — Dimensions — Masses **5**
4.2 Tolerances of form and position **8**
4.3 Materials **8**
4.4 Surface treatment **8**
5 Designation **8**
6 Marking **8**
7 Technical specification **9**
Bibliography **10**

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European foreword

This document (EN 4846:2022) 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 2022, and conflicting national standards shall be withdrawn at the latest by September 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

Aerospace and Defence Standardisation (ASD-STAN) draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent “Spiral Drive System for Threaded Fasteners” EP1025370B1.

ASD-STAN takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured ASD-STAN that he/she is willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with ASD-STAN. Information may be obtained from:

Phillips Screw Company

301 Edgewater Drive, Suite 320

Wakefield, Massachusetts 01880

USA

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights other than those identified above. ASD-STAN shall not be held responsible for identifying any or all such patent rights.

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1 Scope

This document specifies the characteristics of externally threaded fasteners, pan head, Spiral Drive Recess, threaded to head, in heat and corrosion resisting steel, passivated, for aerospace applications.

Classification: 1 100 MPa[1]/425 °C[2].

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 2516, *Aerospace series — Passivation of corrosion resisting steels and decontamination of nickel base alloys*

EN 3761, *Aerospace series — Heat resisting alloy FE-PA2601 — Softened and cold worked — Bar for forged fasteners — $D \leq 50$ mm — 1 100 MPa $\leq R_m \leq$ 1 300 MPa*

EN 4609, *Aerospace series — Spiral drive recesses for threaded fasteners — Geometrical definition and technical requirements*

ISO 3353-1, *Aerospace — Lead and runout threads — Part 1: Rolled external threads*

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

ISO 7913, *Aerospace — Bolts and screws, metric — Tolerances of form and position*

ISO 8168, *Aerospace — Bolts, with MJ threads, made of heat and corrosion resisting steel, strength class 1 100 MPa — Procurement specification*

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 Requirements

4.1 Configuration — Dimensions — Masses

See Figure 1 and Table 1.

Dimensions and tolerances are expressed in millimetres and apply after surface treatment.

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1 Minimum tensile strength of the material at ambient temperature.

2 Maximum temperature that the externally threaded fastener can withstand without continuous change in its original characteristics, after return to ambient temperature. The maximum temperature is determined by the material.

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