

This is a preview of "BS EN 4161:2019". [Click here to purchase the full version from the ANSI store.](#)



**BSI Standards Publication**

**Aerospace series — Screws, pan head,  
offset cruciform recess, coarse tolerance  
normal shank, long thread, in alloy steel,  
cadmium plated — Classification: 1 100 PMA  
(at ambient temperature)/235 °C**

---

This is a preview of "BS EN 4161:2019". [Click here to purchase the full version from the ANSI store.](#)

## National foreword

This British Standard is the UK implementation of EN 4161:2019. It supersedes BS EN 4161:2009, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ACE/12, Aerospace fasteners and fastening systems.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2019  
Published by BSI Standards Limited 2019

ISBN 978 0 539 03181 2

ICS 49.030.20

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 October 2019.

### Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

---

This is a preview of "BS EN 4161:2019". [Click here to purchase the full version from the ANSI store.](#)

## EUROPÄISCHE NORM

October 2019

ICS 49.030.20

Supersedes EN 4161:2009

English Version

**Aerospace series - Screws, pan head, offset cruciform  
recess, coarse tolerance normal shank, long thread, in alloy  
steel, cadmium plated - Classification: 1 100 PMa (at  
ambient temperature)/235 °C**

Série aérospatiale - Vis à tête cylindrique, à empreinte  
cruciforme déportée, tige normale à tolérance large,  
filetage long, en acier allié, cadmiées - Classification : 1  
100 MPa (à température ambiante)/235 °C

Luft- und Raumfahrt - Flachkopfschrauben, mit  
Flügelkreuzschlitz, grobe Schafttoleranz, langes  
Gewinde, aus legiertem Stahl, verkadmet - Klasse: 1  
100 MPa (bei Raumtemperatur)/235 °C

This European Standard was approved by CEN on 1 March 2019.

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.

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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

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

This is a preview of "BS EN 4161:2019". [Click here to purchase the full version from the ANSI store.](#)

## Contents

	Page
<b>European foreword</b> .....	<b>3</b>
<b>1 Scope</b> .....	<b>4</b>
<b>2 Normative references</b> .....	<b>4</b>
<b>3 Terms and definitions</b> .....	<b>5</b>
<b>4 Required characteristics</b> .....	<b>5</b>
<b>5 Designation</b> .....	<b>8</b>
<b>6 Marking</b> .....	<b>8</b>
<b>7 Technical specification</b> .....	<b>8</b>
<b>Bibliography</b> .....	<b>9</b>

This is a preview of "BS EN 4161:2019". [Click here to purchase the full version from the ANSI store.](#)

## European foreword

This document (EN 4161:2019) 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 April 2020, and conflicting national standards shall be withdrawn at the latest by April 2020.

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.

This document supersedes EN 4161:2009, EN 4161/AC:2010.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

This is a preview of "BS EN 4161:2019". [Click here to purchase the full version from the ANSI store.](#)

## 1 Scope

This European standard specifies the characteristics of screws, pan head, offset cruciform recess, coarse tolerance normal shank, long thread, in alloy steel, cadmium plated, for aerospace applications.

Classification: 1 100 MPa<sup>1</sup>/235 °C<sup>2</sup>.

## 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 2133, *Aerospace series — Cadmium plating of steels with specified tensile strength  $\leq 1\,450$  MPa, copper, copper alloys and nickel alloys*

EN 2137, *Aerospace series — Steel FE-PL75 —  $1\,100\text{ MPa} \leq R_m \leq 1\,250\text{ MPa}$  — Bars —  $D_e \leq 100\text{ mm}$*

EN 2424, *Aerospace series — Marking of aerospace products*

EN 2442, *Steel FE-PL711 —  $1\,100\text{ MPa} \leq R_m \leq 1\,300\text{ MPa}$  — Bars and wires —  $D_e \leq 25\text{ mm}$*

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 7689, *Aerospace — Bolts, with MJ threads, made of alloy steel, strength class 1 100 MPa — Procurement specification*

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

ISO 14275, *Aerospace — Drives, internal, offset cruciform, ribbed — Metric series*

ISO 14276, *Aerospace — Drives, internal, offset cruciform — Metric series*

ASD-STAN/TR 3775, *Aerospace series — Bolts and pins — Materials<sup>3</sup>*

---

1 Minimum tensile strength of the material at ambient temperature.

2 Maximum temperature that the screw can withstand without continuous change in its original characteristics, after return to ambient temperature. The maximum temperature is determined by the surface treatment.

3 Published as ASD-STAN Technical Report at the date of publication of this European standard by AeroSpace and Defence Industries Association of Europe – Standardization (ASD-STAN) ([www.asd-stan.org](http://www.asd-stan.org)).