

<b>STN</b>	<b>Letectvo a kozmonautika</b> <b>Skrutky s nízkou hlavou, šest'cípovou oblou drážkou, neopracovaným driekom, strednou dĺžkou závitú zo zliatiny titánu, anodizované, mazané MoS2</b> <b>Trieda: 1 100 MPa (pri teplote okolia)/315 °C</b>	<b>STN</b> <b>EN 4178</b>  31 3149
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Aerospace series - Screws, pan head, six lobe recess, coarse tolerance normal shank, medium length thread, in titanium alloy, anodized, MoS2 lubricated - Classification: 1 100 MPa (at ambient temperature) / 315 C

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 06/17

Obsahuje: EN 4178:2017

Oznámením tejto normy sa ruší  
STN EN 4178 (31 3149) z mája 2010

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Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2017  
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

EUROPEAN STANDARD

**EN 4178**

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2017

ICS 49.030.10

Supersedes EN 4178:2009

English Version

**Aerospace series - Screws, pan head, six lobe recess, coarse tolerance normal shank, medium length thread, in titanium alloy, anodized, MoS2 lubricated - Classification: 1 100 MPa (at ambient temperature) / 315 °C**

Série aérospatiale - Vis à tête cylindrique, à empreinte six lobes, tige normale à tolérance large, filetage moyen, en alliage de titane, anodisées, lubrifiées MoS2 - Classification: 1 100 MPa (à température ambiante) / 315 °C

Luft- und Raumfahrt - Flachkopfschrauben mit Sechsbogenzahn, mit mittlerer Gewindelänge, aus Titanlegierung, anodisiert, MoS2-geschmiert - Klasse: 1 100 MPa (bei Raumtemperatur) / 315 °C

This European Standard was approved by CEN on 4 March 2016.

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, 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 United Kingdom.



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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## European foreword

This document (EN 4178:2017) 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 European 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 July 2017, and conflicting national standards shall be withdrawn at the latest by July 2017.

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.

This document supersedes EN 4178:2009.

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.

## 1 Scope

This European Standard specifies the characteristics of screws, pan head, six lobe recess, coarse tolerance normal shank, medium length thread, in titanium alloy, anodized, MoS<sub>2</sub> lubricated.

Classification: 1 100 MPa <sup>1)</sup> / 315 °C <sup>2)</sup>.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 2491, *Aerospace series — Molybdenum disulphide dry lubricants — Coating methods*

EN 3911, *Aerospace series — Six lobe recess — Geometrical definition*

EN 9100, *Quality Management Systems — Requirements for Aviation, Space and Defense Organizations*

EN 9133, *Aerospace series - Quality management systems - Qualification procedure for aerospace standard parts*

ISO 3353-1, *Aerospace — Lead and runout threads — Part 1: Rolled external threads* <sup>3)</sup>

ISO 5855-2, *Aerospace — MJ threads — Part 2: Limit dimensions for bolts and nuts* <sup>3)</sup>

ISO 7913, *Aerospace — Bolts and screws, metric — Tolerances of form and position* <sup>3)</sup>

ISO 9152, *Aerospace — Bolts, with MJ threads, in titanium alloys, strength class 1 100 MPa — Procurement specification* <sup>3)</sup>

TR 3775, *Aerospace series — Bolts and pins — Materials* <sup>4)</sup>

TR 4070, *Aerospace series — Molybdenum disulphide coatings — List of commercial products* <sup>4)</sup>

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**

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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 by: ISO International Organization for Standardization (<http://www.iso.ch/>)

4) 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))