SLOVENSKI STANDARD
oSIST prEN 6024:2021

01-september-2021

Aeronavtika - Vijaki, 100° ugrezna glava, križna zareza, polno steblo, ozka toleranca, kratek navoj, iz titanove zlitine, anodizirane, mazane z MoS2 - Klasifikacija: 1100 MPa (pri temperaturi okolice)/315 °C - Palčne mere

Aerospace series - Screws, 100° countersunk reduced head offset cruciform recess close tolerance shank, short thread in titanium alloy, anodized MoS2 lubricated - Classification: 1 100 MPa (at ambient temperature)/315 °C - Inch series

Luft- und Raumfahrt - 100° Senk-Passschrauben mit reduziertem Kopf, Flügelkreuzschlitz, enge Toleranz, kurzes Gewinde, aus Titanlegierung, anodisiert, MoS2 -geschmiert - Klasse: 1 100 MPa (bei Raumtemperatur)/315 °C - Zoll-Reihe

Série aérospatiale - Vis à tête fraisée 100° réduite à empreinte cruciforme déportée avec fût à tolérance serrée, filetage court en allagie de titane, anodisées, lubrifiées MoS2 - Classification: 1 100 MPa (à température ambiante)/315 °C - Série en inches

Ta slovenski standard je istoveten z: **prEN 6024**

ICS:

49.030.20	Sorniki, vijaki, stebelni vijaki	Bolts, screws, studs

oSIST prEN 6024:2021 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 6024

July 2021

ICS 49.030.20

English Version

Aerospace series - Screws, 100° countersunk reduced head offset cruciform recess close tolerance shank, short thread in titanium alloy, anodized MoS2 lubricated - Classification: 1 100 MPa (at ambient temperature)/315 °C - Inch series

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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee ASD-STAN.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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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

Ref. No. prEN 6024:2021 E

Contents

Page

European foreword

This document (prEN 6024:2021) 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-STAN, prior to its presentation to CEN.

This document is currently submitted to the CEN Enquiry.

1 Scope

This document specifies the characteristics for screws, 100° countersunk reduced head, offset cruciform recess, close tolerance shank, short thread, in titanium alloy, anodized, MoS_2 lubricated, classification 1 100 MPa[1]/315 °C[2], inch series, for aerospace applications.

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 2491, *Aerospace series — Molybdenum disulphide dry lubricants — Coating methods*

EN 2532, *Titanium alloy Ti-P68 — 1 100 ≤ R_m ≤ 1 280 MPa — Bar — D_e ≤ 25 mm*[3]

ISO 3161, *Aerospace — UNJ threads — General requirements and limit dimensions*

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

TR 3775, *Bolts and pins —Materials*[4]

MIL-B-87114, *Bolts, Recess Drive, General Specification for*[5]

MS 33781, *Recess, offset cruciform, dimensions of recess, gage and driver for*[6]

NAS527, *Inspection procedure for flush fasteners*[6]

NAS621, *Fasteners, titanium alloy procurement specification*[7]

ATA iSpec 2200, *Information Standards for Aviation Maintenance*[7]

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/

1 Minimum tensile strength of the material at ambient temperature.
2 Maximum temperature that the bolt can withstand without continuous change in its original characteristics, after return to ambient temperature. The maximum temperature is determined by the material.
3 Published as ASD-STAN Standard at the date of publication of this standard.
4 Published as ASD-STAN Technical Report at the date of publication of this standard.
5 Published by Department of Defense (DoD), available at: https://assist.dla.mil/
6 Published by Aerospace Industries Association (AIA), available at: https://www.aia-aerospace.org/
7 Published by Air Transport Association of America, Inc. (ATA), available at: https://publications.airlines.org/

4 Requirements

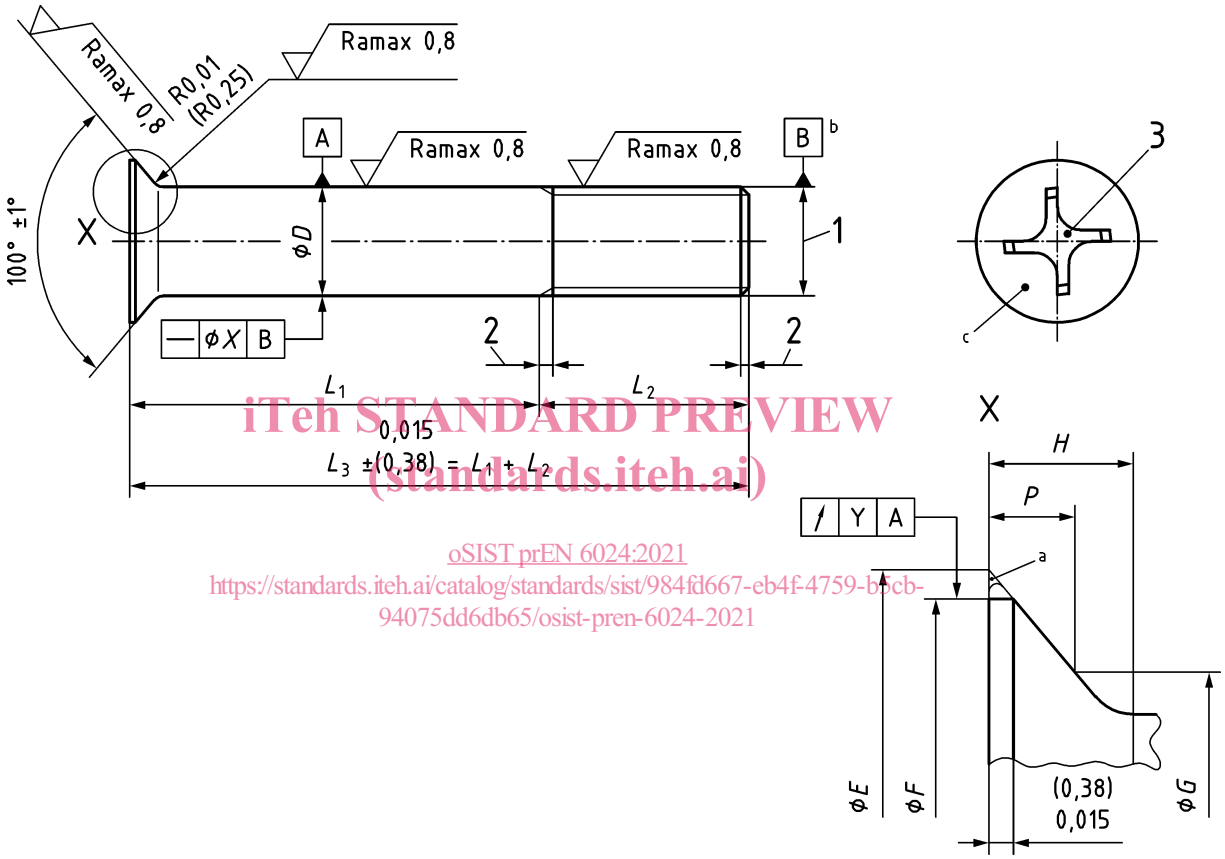
4.1 Configuration — Dimensions — Mass

Shall be according to Figure 1, Table 1 and Table 2.

Dimensions and tolerances are expressed in inches (millimetres). They apply after anodizing but prior to lubrication. Details of form, not stated, are left to the manufacturer's discretion.

Values are expressed in micrometres and apply prior to surface treatment.

Break sharp edges 0,004 inch to 0,016 inch (0,10 mm to 0,40 mm).



Key

1 Thread according to ISO 3161
2 Thread runout according to ISO 3353-1
3 Offset cruciform recess according to MS 33781
a Blended convex form permissible
b Pitch diameter
c Marking

Figure 1 — Configuration

Table 1 — Dimensions

Diameter code	Thread[a,b]	*D* max inch (mm)	*D* min inch (mm)	(*E*) inch (mm)	*F* min. inch (mm)	*G* max. inch (mm)	*G* min. inch (mm)	(*H*) max. inch (mm)	(L_2) inch (mm)	*P*[c] max. inch (mm)	*P*[c] min. inch (mm)	inch (mm)	inch (mm)	Torque values min. Nm	Tensile load min. Code "–" N	Tensile load min. Code K N	Recess number according to MS 33781
3	0,1900-32UNJF-3A	0,189 5 (4,813)	0,189 0 (4,801)	0,304 7 (7,739)	0,257 8 (6,548)	0,244 1 (6,200)	0,243 9 (6,195)	0,049 (1,05)	0,363 (9,22)	0,025 0 (0,635)	0,021 0 (0,533)	0,004 (0,10)	0,005 (0,13)	4,26	9 072	7 120	8
4	0,2500-28UNJF-3A	0,249 5 (6,337)	0,249 0 (6,325)	0,398 8 (10,129)	0,350 4 (8,900)	0,331 5 (8,420)	0,331 3 (8,415)	0,063 (1,60)	0,403 (10,2)	0,027 8 (0,706)	0,023 2 (0,589)	0,003 0 (0,075)	0,006 (0,15)	5,76	16 783	14 243	10

[a] According to ISO 3161

[b] The thread major diameter *"d"* shall be:
d_{max}: D_{min} – 0,001 (0,025);
d_{min}: see ISO 3161.

[c] Dimensions for "*P*" gage protrusion shall be inspected per NAS527.

Table 2 — Mass

Diameter code		3	4
Length L_1[a]		Mass[b]	
Code	±0,010 (±0,25) inch (mm)	kg/1 000 pieces	
02	0,125 (3,18)	1,17	2,02
03	0,187 (4,75)	1,30	2,22
04	0,250 (6,35)	1,43	2,42
05	0,312 (7,92)	1,56	2,62
06	0,375 (9,53)	1,69	2,82
07	0,438 (11,13)	1,82	3,02
08	0,500 (12,7)	1,95	3,22
09	0,562 (14,27)	2,08	3,42
10	0,625 (15,87)	2,21	3,62
11	0,688 (17,47)	2,34	3,82
12	0,750 (19,05)	2,47	4,02
13	0,812 (20,62)	2,60	4,22
14	0,875 (22,22)	2,73	4,42
15	0,938 (23,83)	2,86	4,62

Diameter code		3	4
Length L_1[a]		Mass[b]	
Code	±0,010 (±0,25) inch (mm)	kg/1 000 pieces	
16	1,000 (25,40)	2,99	4,82
17	1,062 (26,97)	3,12	5,02
18	1,125 (28,58)	3,25	5,22
19	1,188 (30,18)	3,38	5,42
20	1,250 (31,75)	3,51	5,62
21	1,312 (33,32)	3,64	5,62
22	1,375 (34,93)	3,77	6,02
23	1,438 (36,53)	3,90	6,22
24	1,500 (38,10)	4,03	6,42
25	1,562 (39,67)	4,16	6,62
26	1,625 (41,28)	4,29	6,82
27	1,688 (42,88)	4,42	7,02
28	1,750 (44,45)	4,55	7,22

[a] If greater lengths are necessary, they shall be chosen in steps of 1/16 inch (1,6 mm). The length code corresponds to length L_1 in 1/16th of an inch, completed by a zero to the left, where necessary, to obtain a 2 digit code.

[b] Approximate values, calculated on the basis of 4,5 kg/dm^3, given for information only.