
Aeronavtika - Vijak, 100° ugrezna glava, križna zareza, polno steblo, ozka toleranca, kratek navoj, iz titanove zlitine, anodiziran, z aluminijem pigmentiranim premazom - Klasifikacija: 1100 MPa (pri temperaturi okolice)/315 °C

Aerospace series - Screw, 100° countersunk normal head, offset cruciform recess, close tolerance normal shank, short thread, in titanium alloy, anodized, with aluminium pigmented coating - Classification: 1 100 MPa (at ambient temperature)/315 °C

Luft- und Raumfahrt - 100° Senk-Passschrauben mit Flügelkreuzschlitz, enge Schaffttoleranz, kurzes Gewinde, aus Titanlegierung, anodisiert, mit aluminiumpigmentierter Beschichtung - Klasse: 1 100 MPa (bei Raumtemperatur)/315 °C

Série aérospatiale - Vis à tête fraisée 100° normale à empreinte cruciforme déportée, tige normale à tolérance serrée, filetage court, en alliage de titane, anodisées, avec revêtement aluminio-organique - Classification: 1 100 MPa (à température ambiante)/315 °C

Ta slovenski standard je istoveten z: prEN 4496

ICS:

49.025.20	Aluminij	Aluminium
49.025.30	Titan	Titanium
49.030.20	Sorniki, vijaki, stebelni vijaki	Bolts, screws, studs

oSIST prEN 4496:2020**en,fr,de**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[oSIST prEN 4496:2020](#)

<https://standards.iteh.ai/catalog/standards/sist/9a7b7477-decb-439a-925f-7ccfaf6dab85/osist-pren-4496-2020>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 4496

June 2020

ICS 49.030.20

Will supersede EN 4496:2005

English Version

Aerospace series - Screw, 100° countersunk normal head, offset cruciform recess, close tolerance normal shank, short thread, in titanium alloy, anodized, with aluminium pigmented coating - Classification: 1 100 MPa (at ambient temperature)/315 °C

Série aérospatiale - Vis à tête fraisée 100° normale, à empreinte cruciforme déportée, fût normal à tolérance serrée, filetage court, en alliage de titane, anodisées, avec revêtement aluminé-organique - Classification: 1 100 MPa (à température ambiante)/315 °C

Luft- und Raumfahrt - 100° Senk-Passschrauben mit Flügelkreuzschlitz, enge Schafttoleranz, kurzes Gewinde, aus Titanlegierung, anodisiert, mit Aluminiumpigmentierter Beschichtung - Klasse: 1 100 MPa (bei Raumtemperatur)/315 °C

iTeh STANDARD PREVIEW
(standards.iteh.ai)

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.

<https://standards.iteh.ai/catalog/standards/sist/9a7b7477-decb-439a-925f>

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.

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.

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.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

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

Contents

Page

European foreword.....	3
1 Scope.....	4
2 Normative references.....	4
3 Terms and definitions	5
4 Requirements.....	5
4.1 Configuration — Dimensions — Masses.....	5
4.2 Tolerances of form and position.....	5
4.3 Materials.....	5
4.4 Surface treatments	5
5 Designation.....	8
6 Marking.....	8
7 Technical specification.....	9
7.1 General.....	9
7.2 Approval of manufacturers.....	9
7.3 Qualification of bolts.....	9
7.4 Requirement deleted.....	9
8 Oversized bolts.....	9
Annex A (informative) Standard evolution form.....	10
Bibliography.....	11

European foreword

This document (prEN 4496:2020) 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.

This document will supersede EN 4496:2005.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[oSIST prEN 4496:2020](https://standards.iteh.ai/catalog/standards/sist/9a7b7477-decb-439a-925f-7ccfa6dab85/osist-pren-4496-2020)

<https://standards.iteh.ai/catalog/standards/sist/9a7b7477-decb-439a-925f-7ccfa6dab85/osist-pren-4496-2020>

prEN 4496:2020 (E)**1 Scope**

This document specifies the characteristics of screws, 100° countersunk normal head, offset cruciform recess, close tolerance normal shank, short thread, in titanium alloy, anodized, with aluminium pigmented coating, for aerospace applications.

Classification: 1 100 MPa¹/315 °C².

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 4016³, *Aerospace series — Oversized bolts*

EN 4473, *Aerospace series — Aluminium pigmented coatings for fasteners — Technical specification*

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 5856, *Aerospace — Screws, 100° normal countersunk head, internal offset cruciform ribbed or unribbed drive, normal shank, short or medium length MJ threads, metallic material, coated or uncoated, strength classes less than or equal to 1 100 MPa — Dimensions*

ISO 7913, *Aerospace — Bolts and screws, metric — Tolerances of form and position*
<https://standards.iteh.ai/catalog/standards/sist/9a7b7477-decb-439a-925f-7cc6f6dab85/osist-pr-en-4496-2020>

ISO 9152, *Aerospace — Bolts, with MJ threads, in titanium alloys, strength class 1 100 MPa — Procurement specification*

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

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

TR 3775⁴, *Aerospace series — Bolts and pins — Materials*

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 coating.

³ Published as ASD-STAN-Prestandard at the date of publication of this standard by AeroSpace and Defence Industries Association of Europe – Standardization (ASD-STAN) (www.asd-stan.org).

⁴ Published as ASD-STAN Technical Report at the date of publication of this standard by AeroSpace and Defence Industries Association of Europe – Standardization (ASD-STAN) (www.asd-stan.org).

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 <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Requirements

4.1 Configuration — Dimensions — Masses

See Figure 1 and Table 1.

Dimensions and tolerances shall be in accordance with ISO 5856, are expressed in millimetres and apply after coating (tolerance on shank diameter before coating is also specified).

Details of form not stated are left to the manufacturer's discretion.

4.2 Tolerances of form and position

Tolerances of form and position shall be in accordance with ISO 7913.

4.3 Materials

Materials shall be in accordance with TR 3775 (titanium alloy, strength class 1 100 MPa).

4.4 Surface treatments

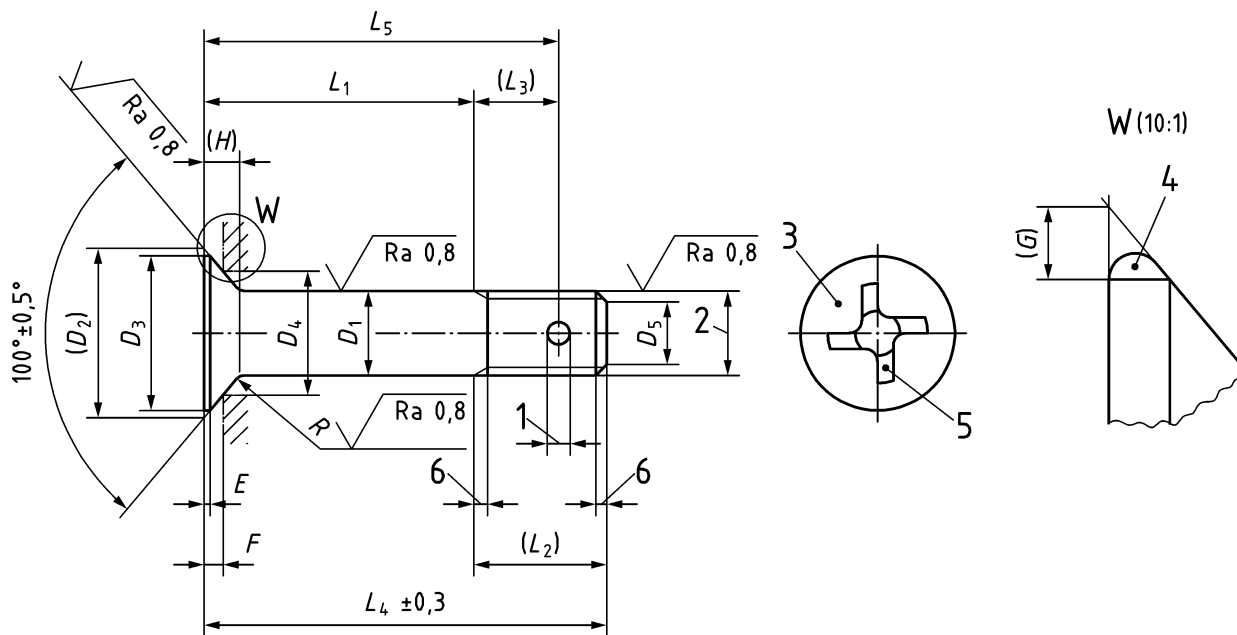
Surface treatments shall be in accordance with EN 4473, type II.

$\sqrt{Ra\ 3,2} \left(\sqrt{Ra\ 0,8} \right)$ Values in micrometres apply prior to surface treatment.

Break sharp edges 0,1 to 0,4.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

oSIST prEN 4496:2020
<https://standards.iteh.ai/catalog/standards/sist/9a767477-decb-439a-925f-7ccfa6dab85/osist-pren-4496-2020>



Key

- 1 One hole diameter D_6 (optional)
- 2 Thread
- 3 Marking
- 4 Blended convex form permitted
- 5 Drive: see Table 3.
- 6 According to ISO 3353-1

iTeh STANDARD PREVIEW
(standards.iteh.ai)

oSIST prEN 4496:2020
<https://standards.iteh.ai/catalog/standards/sist/9a7b7477-decb-439a-925f-7ccfa6dab85/osist-pren-4496-2020>

Figure 1 — 100° countersunk normal head screw

Table 1 — Dimensions and masses

Diameter code	Thread ^a	nom.	D ₁		D ₂	D ₃	D ₄	D ₅		D ₆	E	F	G	H	L ₁ ± 0,2 ^{b,c}		L ₂	L ₃	R		Mass ^d	
			before coating	after coating				max.	min.						nom.	Tol.			H13	min.	0 -0,08	Code
030	MJ3 × 0,5-4h6h	3	-0,026 -0,041	-0,006 -0,031	6	5,4	4,5	2,3	0	—	0,06	0,63	0,3	1,27	003 to 030	3 to 30	6	—	0,4		0,31	0,03
040	MJ4 × 0,7-4h6h	4	-0,030 -0,045	-0,010 -0,035	8	7,2	5,78	3,0	-0,5	1,1	0,08	0,93	0,4	1,69	003 to 040	3 to 40	7,5	5,0	0		0,64	0,06
050	MJ5 × 0,8-4h6h	5			10	9,0	7,71	3,4		1,5	0,96	0,5	2,12	0,96	0,5	2,12	004 to 050	4 to 50		9,0	6,0	0,5
060	MJ6 × 1-4h6h	6	-0,033 -0,048	-0,013 -0,038	12	10,8	9,00	4,2	-0,2	1,26		2,54		2,54	005 to 060	5 to 60	10,0	7,0	0,7		2,12	0,13
070	MJ7 × 1-4h6h	7			14	12,8	10,28	5,2		1,9	1,57		2,96	2,96		2,96	006 to 070			6 to 70	11,0	
080	MJ8 × 1-4h6h	8	-0,033 -0,048	-0,013 -0,038	16	14,8	12,21	6,2	-0,3	1,6		3,39		3,39	006 to 080	6 to 80	11,5	7,5	0		4,39	0,23
100	MJ10 × 1,25-4h6h	10			20	18,8	15,43	7,9		2,4	1,93		4,23	4,23		4,23	008 to 100	8 to 100		14,5	9,0	0,8
120	MJ12 × 1,25-4h6h	12	-0,036 -0,051	-0,016 -0,041	24	22,8	18,00	9,8	-0,3	±0,5	0,10	2,53	0,6	5,08	010 to 120	10 to 120	16,0	10,0	0,9		15,68	0,51
140	MJ14 × 1,5-4h6h	14			28	26,8	20,57	11,5		3	3,14		5,93	5,93		5,93	010 to 140	10 to 140	19,0	12,0	1,1	
160	MJ16 × 1,5-4h6h	16	-0,036 -0,051	-0,016 -0,041	32	30,8	24,43	13,5	-0,3	3,2		6,77		6,77	010 to 160	10 to 160	20,5	12,5	0		33,63	0,91
180	MJ18 × 1,5-4h6h	18			36	34,8	25,71	15,5		3,8	4,35		7,62	7,62		7,62	011 to 180	11 to 180		22,5	14,5	1,3
200	MJ20 × 1,5-4h6h	20	-0,040 -0,055	-0,020 -0,045	40	38,8	28,92	17,5		4,68				8,47	012 to 200	12 to 200	24,5	15,0			64,41	1,40

^a In accordance with ISO 5855-2, except the thread major diameter "d max." which shall be equal to D₁ min. -0,025.

^b Increments:
1 for L₁ ≤ 30;
2 for 30 < L₁ ≤ 100;
4 for L₁ > 100.

^c If greater lengths are required, they shall be chosen using the above increments. The length code corresponds to length L₁, completed by one or two zeros to the left, where necessary, to obtain a three digit code.

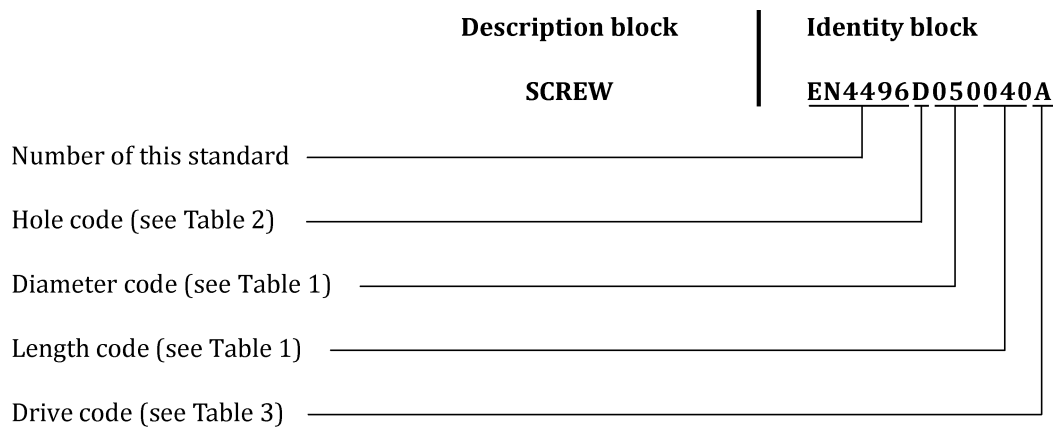
^d Approximate values (kg/1 000 pieces), calculated on the basis of 4,45 kg/dm³, for information purposes only. They apply to screws without holes.

^e Value for first L₄.

^f Increase for each additional millimetre of L₄.

5 Designation

EXAMPLE



If necessary, the code I9005 shall be placed between the description block and the identity block.
See Table 3 for hole code and Table 3 for drive code.

Table 2 — Hole code

Holes	Code
With	D
Without	- (hyphen)

Table 3 — Drive code

Drive	Code
ISO 14275	R
ISO 14276 unribbed	A

6 Marking

See Table 4 and Figure 1, indented.

Table 4 — Marking

Diameter code	EN 2424 style
030 and 040	N
050 to 120	C + MJ