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

Aerospace series - Screws, 100° countersunk normal head, offset cruciform recess, close tolerance normal shank, short thread, in titanium alloy, anodized, MOS2 lubricated - Classification: 1 100 MPa (at ambient temperature) / 315 °C

Luft- und Raumfahrt - 100° Senk-Paßschraube mit Flügelkreuzschlitz, kurzes Gewinde, aus Titan, anodisiert, MOS2-geschmiert - Klasse: 1 100 MPa (bei Raumtemperatur) / 315 °C

<https://standards.itech.ai/catalog/standards/sist/af84d70c-0787-440c-87f2-3d57571253/osist-pr-en-3381-2023>

Série aérospatiale - Vis à tête fraisée 100° normale, à empreinte cruciforme déportée, tige normale à tolérance serrée, filetage court, en alliage de titane, anodisée, lubrifiée au MoS2 - Classification : 1 100 MPa (à température ambiante)/315 °C

Ta slovenski standard je istoveten z: prEN 3381

ICS:

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

oSIST prEN 3381:2023

en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 3381

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ICS 49.030.20

Will supersede EN 3381:1996

English Version

**Aerospace series - Screws, 100° countersunk normal head,
offset cruciform recess, close tolerance normal shank,
short thread, in titanium alloy, anodized, MOS2 lubricated
- Classification: 1 100 MPa (at ambient temperature) / 315
°C**

Série aéronautique - Vis à tête fraisée 100° normale, à
empreinte cruciforme déportée, tige normale à
tolérance serrée, filetage court, en titane, anodisées,
lubrifiées MoS₂ - Classification: 1 100 MPa (à
température ambiante) / 315 °C

Luft- und Raumfahrt - 100° Senk-Paßschraube mit
Flügelkreuzschlitz, kurzes Gewinde, aus Titan,
anodisiert, MOS₂-geschmiert - Klasse: 1 100 MPa (bei
Raumtemperatur) / 315 °C

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.

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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

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European foreword

This document (prEN 3381:2023) has been prepared by the Aerospace and Defence Industries Association of Europe — Standardization (ASD-STAN).

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 3381:1996.

The main changes compared to the previous edition are as follows:

- a) normative references updated;
- b) Clause 3 “Terms and definitions” added;
- c) Table 3 “Drive codes” updated;
- d) Clause 7 “Technical specification” modified;
- e) Bibliography added;
- f) document editorially revised.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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prEN 3381:2023 (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, anodized, MOS₂ lubricated.

Classification: 1 100 MPa¹/315 °C².

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 4016, *Aerospace series — Oversized bolts*³

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 degrees 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*

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 3775,⁴ *Aerospace series — Bolts and pins — Materials*

TR 4070,⁴ *Aerospace series — Molybdenum disulphide coatings — List of commercial products*

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 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 terminology 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 Required characteristics

4.1 Configuration – Dimensions – Masses

The configuration, including dimensions and masses shall be according to Figure 1 and Table 1.

Dimensions and tolerances are: in conformity with ISO 5856, expressed in millimetres and apply after anodizing but before lubricating.

4.2 Tolerances of form and position

Tolerances of form and positions shall be according to ISO 7913.

4.3 Materials

Materials shall be according to TR 3775 (titanium, strength class 1 100 MPa).

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prEN 3381:2023 (E)

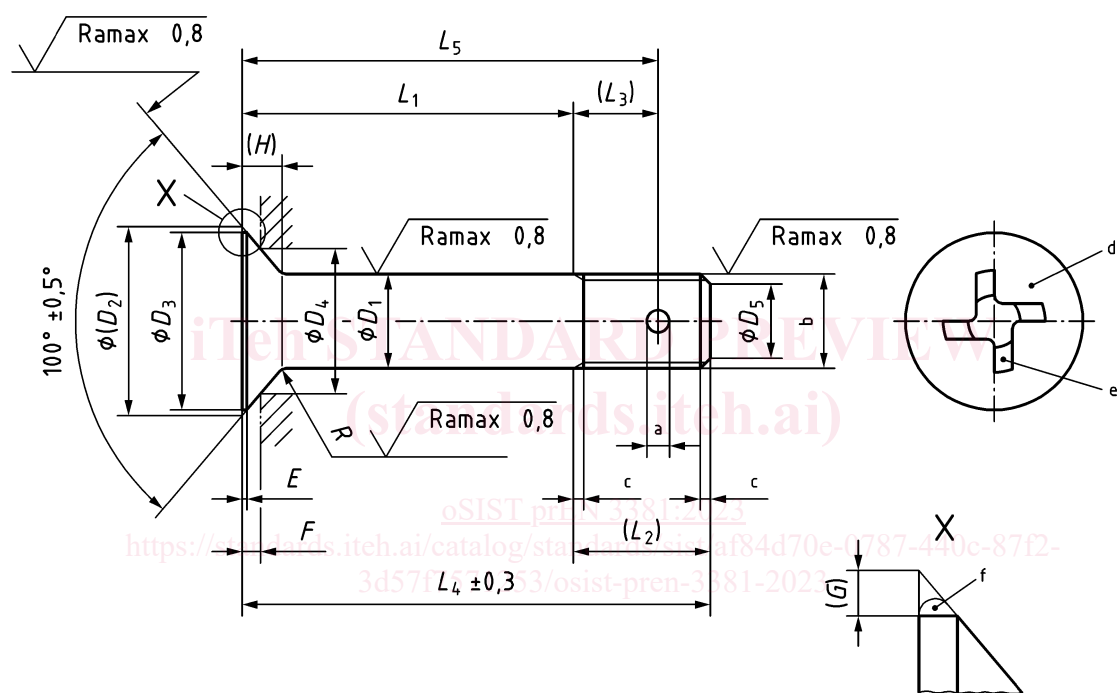
4.4 Surface treatment

Lubrication:

- lubricant: according to TR 4070;
- application: according to EN 2491, 5 μm to 10 μm .

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

Break sharp edges 0,1 mm to 0,4 mm.



Detail W

Key

- a 1 hole $\varnothing D_6$ (optional)
- b Thread
- c Conform to ISO 3353-1
- d Marking
- e Drive: see Table 3
- f Blended convex form permitted

Figure 1 — Configuration

Table 1 — Dimensions and masses (1 of 2)

Dia- meter code	Thread ^a	$\varnothing D_1$	$\varnothing D_2$	$\varnothing D_3$	$\varnothing D_4$	$\varnothing D_5$		$\varnothing D_6$	E	F	
		f7	max.	min.		Nom.	Tol.	H13	min.	0 -0,08	
030	MJ3 × 0,5 - 4h6h	3	6	5,4	4,5	2,3	0	—	0,06	0,63	
040	MJ4 × 0,7 - 4h6h	4	8	7,2	5,78	3	-0,5	1,1	0,08	0,93	
050	MJ5 × 0,8 - 4h6h	5	10	9	7,71	3,4		1,5		0,96	
060	MJ6 × 1 - 4h6h	6	12	10,8	9	4,2				1,26	
070	MJ7 × 1 - 4h6h	7	14	12,8	10,28	5,2		1,9		1,57	
080	MJ8 × 1 - 4h6h	8	16	14,8	12,21	6,2				1,6	
100	MJ10 × 1,25 - 4h6h	10	20	18,8	15,43	7,9		±0,5	2,4	0,1	1,93
120	MJ12 × 1,25 - 4h6h	12	24	22,8	18	9,8					
140	MJ14 × 1,5 - 4h6h	14	28	26,8	20,57	11,5		3		3,14	
160	MJ16 × 1,5 - 4h6h	16	32	30,8	24,43	13,5				3,2	
180	MJ18 × 1,5 - 4h6h	18	36	34,8	25,71	15,5		3,8		4,35	
200	MJ20 × 1,5 - 4h6h	20	40	38,8	28,92	17,5				4,68	

Table 1 — Dimensions and masses (2 of 2)

Diameter code	G	H	$L_1 \pm 0,2^{b,c}$		L_2	L_3	R		Mass ^d	
			Code	Nom.			Nom.	Tol.	e	f
030	0,3	1,27	003 to 030	3 to 30	6	—	0,4	0 -0,2	0,31	0,032
040	0,4	1,69	003 to 040	3 to 40	7,5	5			0,65	0,056
050	0,5	2,12	004 to 050	4 to 50	9	6	0,5		1,17	0,088
060	0,6	2,54	005 to 060	5 to 60	10	7	0,7		2,13	0,127
070		2,96	006 to 070	6 to 70	11				3,34	0,173
080		3,39	006 to 080	6 to 80	11,5	7,5	4,42		0,228	
100		4,23	008 to 100	8 to 100	14,5	9	0,8		9,29	0,353
120		5,08	010 to 120	10 to 120	16	10	0,9		15,8	0,509
140		5,93	010 to 140	10 to 140	19	12	1,1		0 -0,3	23,4
160	6,77	010 to 160	10 to 160	20,5	12,5	33,8				0,908
180	7,62	011 to 180	11 to 180	22,5	14,5	1,3	47,6	1,144		
200	8,47	012 to 200	12 to 200	24,5	15		64,8	1,411		

^a In accordance with ISO 5855-2, except the thread major diameter "d max." which shall be equal to D_1 min. – 0,025.

^b Increments:
 1 for $L_1 \leq 30$;
 2 for $30 < L_1 \leq 100$;
 4 for $L_1 > 100$.

^c If greater lengths are required, they shall be chosen using the above increments. The length code corresponds to the length L_1 , 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 7,85 kg/dm³, given for information purposes only. They apply to screws without hole.

^e Value for head and first L_4 .

^f Increase for each additional millimetre of L_4 .