

**SLOVENSKI STANDARD
SIST EN 2886:2023****01-april-2023**

Aeronavtika - Vijaki, valjasta glava, križna zareza, ozka toleranca, kratek navoj, iz legiranega jekla, kadmirani - Klasifikacija: 900 MPa (pri okoljski temperaturi)/235 °C

Aerospace series - Screw, pan head, offset cruciform recess, close tolerance normal shank, short thread, in alloy steel, cadmium plated - Classification: 900 MPa (at ambient temperature)/235 °C

iTeh STANDARD PREVIEW

Luft- und Raumfahrt - Flachkopf-Passschraube mit Flügelkreuzschlitz, kurzes Gewinde, aus legiertem Stahl, verkadmet - Klasse: 900 MPa (bei Raumtemperatur)/235 °C

Série aérospatiale - Vis à tête cylindrique, à empreinte cruciforme déportée, tige normale à tolérance serrée, filetage court, en acier allié, cadmiées - Classification : 900 MPa (à température ambiante)/235 °C

Ta slovenski standard je istoveten z: EN 2886:2023

ICS:

49.025.10	Jekla	Steels
49.030.20	Sorniki, vijaki, stebelni vijaki	Bolts, screws, studs

SIST EN 2886:2023**en,fr,de**

**EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM**

EN 2886

February 2023

ICS 49.030.20

Supersedes EN 2886:1996

English Version

**Aerospace series - Screw, pan head, offset cruciform
recess, close tolerance normal shank, short thread, in alloy
steel, cadmium plated - Classification: 900 MPa (at
ambient temperature)/235 °C**

Série aérospatiale - Vis à tête cylindrique, à empreinte
cruciforme déportée, tige normale à tolérance serrée,
filetage court, en acier allié, cadmierées - Classification :
900 MPa (à température ambiante)/235 °C

Luft- und Raumfahrt - Flachkopf-Passschraube mit
Flügelkreuzschlitz, kurzes Gewinde, aus legiertem
Stahl, vercadmet - Klasse: 900 MPa (bei
Raumtemperatur)/235 °C

This European Standard was approved by CEN on 7 July 2019.

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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.

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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 (EN 2886:2023) 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 document 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 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 August 2023, and conflicting national standards shall be withdrawn at the latest by August 2023.

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 2886:1996.

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.

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, Türkiye and the United Kingdom.

<https://standards.iteh.ai/catalog/standards/sist/24c7acd5-abaa-4243-b97a-271850ddd90f/sist-en-2886-2023>

1 Scope

This document specifies the characteristics of screws, pan head, offset cruciform recess, close tolerance normal shank, short thread, in alloy steel, cadmium plated.

Classification: 900 MPa¹/ 235 °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 2133, *Aerospace series — Cadmium plating of steels with specified tensile strength ≤ 1 450 MPa, copper, copper alloys and nickel alloys*

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

EN 4016, *Aerospace series — Oversized bolts*³

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

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*

<https://standards.iteh.ai/catalog/standards/sist/24c7acd5-abaa-4243-b97a->

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

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

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

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 Standard at the date of publication of this European 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 European 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 <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

4 Required characteristics

4.1 Configuration – Dimensions – Masses

According to Figure 1 and Table 1.

Dimensions and tolerances are expressed in millimetres and apply after surface treatment.

4.2 Tolerances of form and position

According to ISO 7913.

4.3 Materials

According to TR 3775 (alloy steel, strength class 900 MPa).

4.4 Surface treatment (standards.iteh.ai)

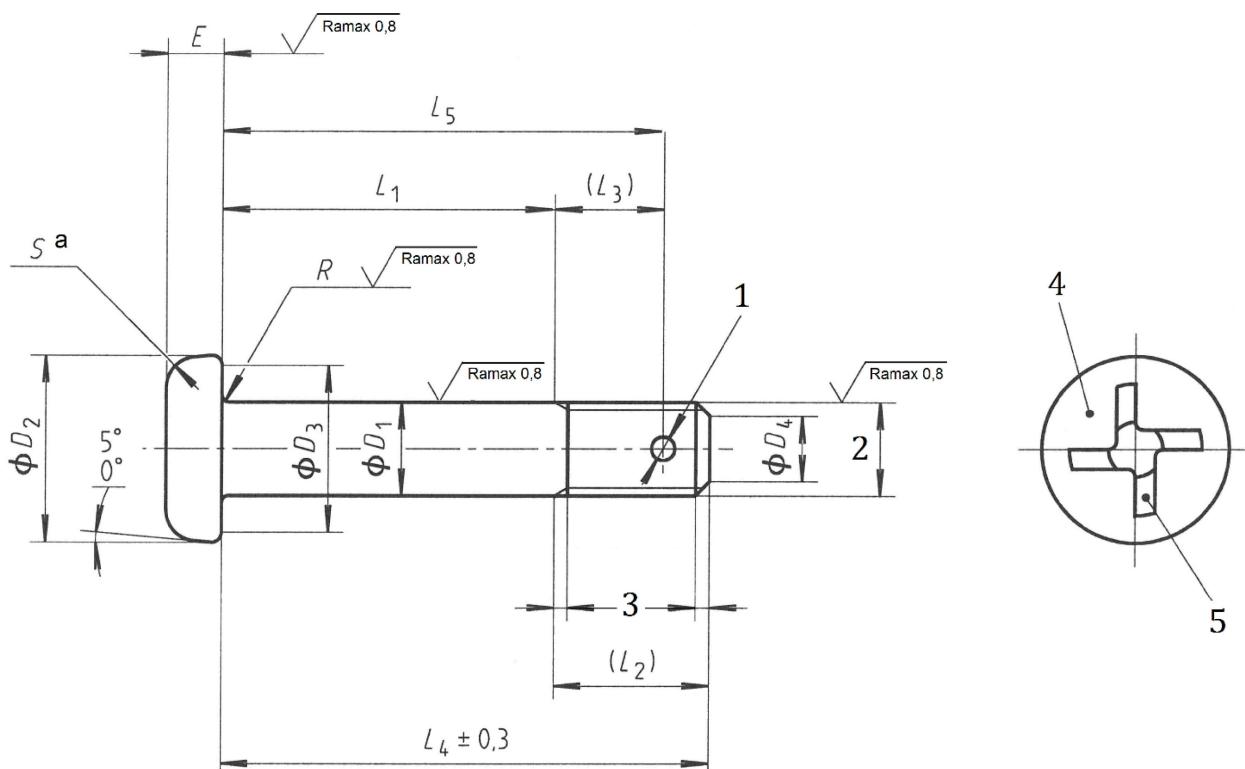
According to EN 2133, 8 µm to 14 µm, on all surfaces which can be contacted by a 20 mm diameter ball. On all other surfaces, a continuous deposit shall be present, but no value is specified.

Black colour option: code B. [iteh.ai/catalog/standards/sist/24c7acd5-abaa-4243-b97a-271850ddd90f/sist-en-2886-2023](https://standards.iteh.ai/catalog/standards/sist/24c7acd5-abaa-4243-b97a-271850ddd90f/sist-en-2886-2023)

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

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

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Key

1 1 hole ϕD_5 (optional)

2 Thread

3 Conform to ISO 3353-1

4 Marking

5 Drive: see Table 3. <https://standards.iteh.ai/catalog/standards/sist/24c7acd5-abaa-4243-b97a-271850ddd90f/sist-en-2886-2023>^a Shape optional.

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Figure 1 - Screw, pan head, offset cruciform recess,

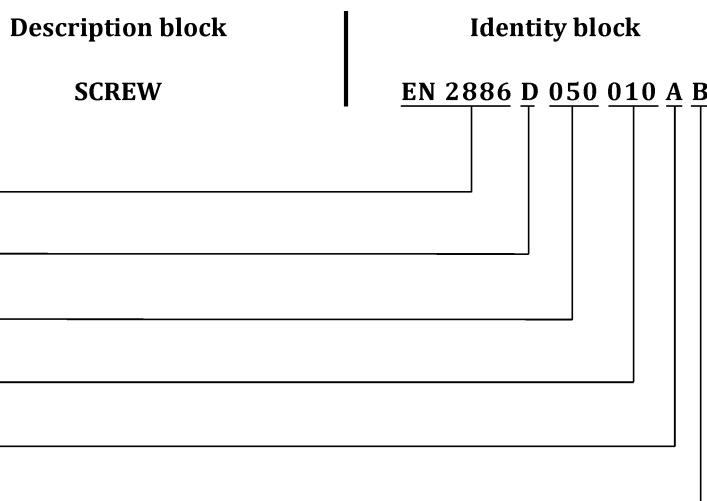
Table 1 – Dimensions and masses

Diameter code	Thread ^a		ϕD_1 nom.	ϕD_1 tol. 0 $-0,3$	ϕD_2 min.	ϕD_3 nom.	ϕD_4 tol.	ϕD_5 H13	E nom.	E tol.
030	MJ3×0,5 – 4h6h	3	–0,006 –0,031	6	4,7	2,3	0	—	1,8	0 –0,2
040	MJ4×0,7 – 4h6h	4		8	6,7	3	–0,5	1,1	2,4	
050	MJ5×0,8 – 4h6h	5	–0,010 –0,035	10	8,7	3,4		1,5	3	
060	MJ6×1 – 4h6h	6		12	10,7	4,2			3,6	
070	MJ7×1 – 4h6h	7		14	12,7	5,2			4,2	
080	MJ8×1 – 4h6h	8	–0,013 –0,038	16	14,7	6,2	±0,5	1,9	4,8	0 –0,3
100	MJ10×1,25 – 4h6h	10		20	18,7	7,9			6	
120	MJ12×1,25 – 4h6h	12	–0,016 –0,041	24	22,7	9,8		2,4	7,2	

Diameter code	Code	$L_1 \pm 0,2^{b,c}$ nom.	L_2	L_3	nom.	R tol.	S max. min.	Mass ^d e f		
030	002 to 030	2 to 30	6	—	0,4	0 -0,2	1,2	0,3		
040	002 to 040	2 to 40	7,5	5			1,6	0,4		
050	003 to 050	3 to 50	9	6			2	0,5		
060	003 to 060	3 to 60	10	7			2,4	0,6		
070	004 to 070	4 to 70	11				2,8	0,7		
080	004 to 080	4 to 80	11,5	7,5	0,7		3,2	0,8		
100	005 to 100	5 to 100	14,5	9			4	1		
120	006 to 120	6 to 120	16	10	0,9	0 -0,3	4,8	1,2		
<p>^a In accordance with ISO 5855-2, except the thread major diameter "d max." which shall be equal to $\emptyset D_1$ min. - 0,025.</p> <p>^b Increments:</p> <ul style="list-style-type: none"> 1 for $L_1 \leq 30$; 2 for $30 > L_1 \leq 100$; 4 for $L_1 < 100$. <p>^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.</p> <p>^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.</p> <p>^e Value for head and first L_4.</p> <p>^f Increase for each additional millimetre of L_4.</p>										

5 Designation

EXAMPLE



NOTE If necessary, the code I9005 shall be placed between the description block and the identity block.

Table 2 – Hole codes

Hole	Code
with	D
without	— (hyphen)

Table 3 – Drive codes

Drive	Code
ISO 14275 ribbed	R
ISO 14276 unribbed	A

6 Marking

According to Table 4 and Figure 1, indented.

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

7 Technical specification

7.1 General

According to ISO 7689, with the following modifications:

7.2 Approval of manufacturers

The manufacturer's operations shall be an approved production organisation for aerospace products and shall demonstrate that it has implemented and is able to maintain a quality management system (e.g. according to EN 9100 or an equivalent aerospace accepted and established quality management system).

7.3 Other modified requirements

- Hardness at the end of the thread, apply:
 - in Brinell: 269/321 HBS;
 - in Vickers: 284/340 HV 30.
- Classification of defects: replace AQL 0,065 % by 1 %.