
Aeronavtika - Vijaki, valjasta glava, križna zareza, široka toleranca, srednja navojna dolžina, iz legiranega jekla, kadmirani - Klasifikacija: 1100 MPa (pri temperaturi okolice)/235 °C

Aerospace series - Screws, pan head, offset cruciform recess, coarse tolerance normal shank, medium length thread, in alloy steel, cadmium plated - Classification: 1100 MPa (at ambient temperature)/235 °C

Luft- und Raumfahrt - Flachkopfschrauben, mit Flügelkreuzschlitz, mittlere Gewindelänge, aus legiertem Stahl, verkadmert - Klasse 1100 MPa (bei Raumtemperatur)/235 °C

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Série aérospatiale - Vis à tête cylindrique, à empreinte cruciforme déportée, tige normale à tolérance large, filetage moyen, en acier allié, cadmiées - Classification: 1100 MPa (à température ambiante)/235 °C

Ta slovenski standard je istoveten z: EN 4138:2009

ICS:

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

SIST EN 4138:2010

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 4138

November 2009

ICS 49.030.20

English Version

Aerospace series - Screws, pan head, offset cruciform recess, coarse tolerance normal shank, medium length thread, in alloy steel, cadmium plated - Classification : 1 100 MPa (at ambient temperature) / 235 °C

Série aérospatiale - Vis à tête cylindrique, à empreinte cruciforme déportée, tige normale à tolérance large, filetage moyen, en acier allié, cadmiées - Classification : 1 100 MPa (à température ambiante) / 235 °C

Luft- und Raumfahrt - Flachkopfschrauben, mit Flügelkreuzschlitz, mittlere Gewindelänge, aus legiertem Stahl, verkadmet - Klasse : 1 100 MPa (bei Raumtemperatur) / 235 °C

This European Standard was approved by CEN on 15 September 2009.

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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 Management Centre has the same status as the official versions.

[SIST EN 4138:2010](https://standards.iteh.ai/catalog/standards/sist/483f0805-39fb-425a-8180-098681981981)

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 4138:2009) 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, 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 May 2010, and conflicting national standards shall be withdrawn at the latest by May 2010.

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.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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EN 4138:2009 (E)**1 Scope**

This European Standard specifies the characteristics of screws, pan head, offset cruciform recess, coarse tolerance normal shank, medium length thread, in alloy steel, cadmium plated.

Classification: 1 100 MPa¹⁾ / 235 °C²⁾.

2 Normative references

The following referenced documents are indispensable for the application 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 2000, *Aerospace series — Quality assurance — EN aerospace products — Approval of the quality system of manufacturers*

EN 2133, *Aerospace series — Cadmium plating of steels with specified tensile strength $\leq 1\,450$ MPa, copper, copper alloys and nickel alloys*

EN 2137, *Aerospace series — Steel FE-PL75 — $1\,100\text{ MPa} \leq R_m \leq 1\,250\text{ MPa}$ — Bars — $D_e \leq 100\text{ mm}$ ³⁾*

EN 2424, *Aerospace series — Marking of aerospace products³⁾*

EN 2442, *Aerospace series — Steel FE-PL711 — $1\,100\text{ MPa} \leq R_m \leq 1\,300\text{ MPa}$ — Bars and wires — $D_e \leq 25\text{ mm}$ ³⁾*

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

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TR 3775, *Aerospace series — Bolts and pins — Materials⁴⁾*

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*

ISO 7994, *Aerospace — Internal drive, offset cruciform recess (Torq-Set®) for rotary fastening devices — Metric series*

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 Pre-Standard at the date of publication of this standard.

4) Published as ASD-STAN Technical Report at the date of publication of this standard.

3 Required characteristics

3.1 Configuration – Dimensions – Masses

See Figure 1 and Table 1.

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

3.2 Tolerances of form and position

ISO 7913.

3.3 Materials

EN 2137, EN 2442

or

TR 3775 (alloy steel, classification 1 100 MPa).

3.4 Surface treatment

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.

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Dimensions in millimetres

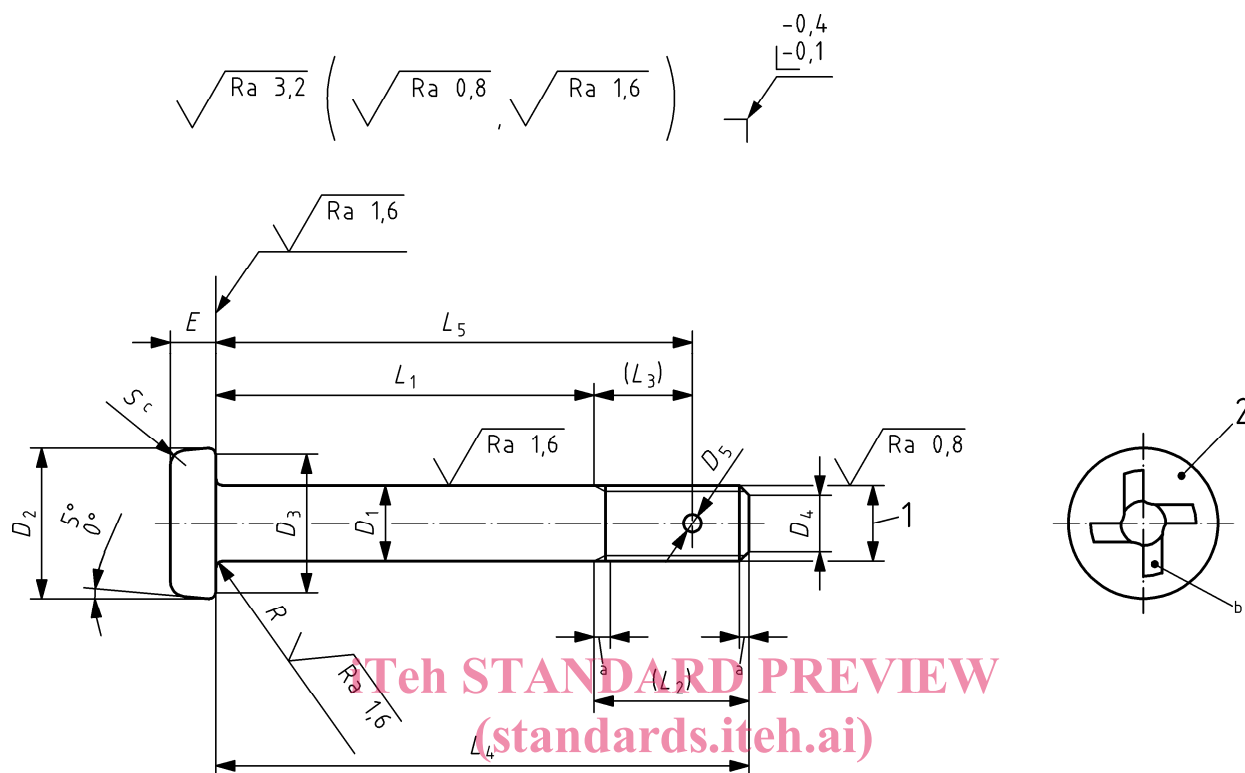


Figure 1 4138:2010

<https://standards.iteh.ai/catalog/standards/sist/d83f0805-39fb-425a-8180-00bede93828a/sist-en-4138-2010>

Key

- 1 Thread
- 2 Marking
- a Conforms to ISO 3353-1
- b Drive
- c Shape optional

Table 1

Diameter code	Threads ¹⁾	D ₁ h12	D ₂ 0 - 0,3	D ₃		D ₄ Tol.	D ₅ H13	E	
				min.	nom.			nom.	Tol.
030	MJ3x0,5 – 4h6h	3	6	4,7	2,3	0	—	1,8	0 - 0,2
040	MJ4x0,7 – 4h6h	4	8	6,7	3	- 0,5	1,1	2,4	
050	MJ5x0,8 – 4h6h	5	10	8,7	3,4	± 0,5	1,5	3	0 - 0,3
060	MJ6x1 – 4h6h	6	12	10,7	4,2			3,6	
070	MJ7x1 – 4h6h	7	14	12,7	5,2		1,9	4,2	
080	MJ8x1 – 4h6h	8	16	14,7	6,2			4,8	
100	MJ10x1,25 – 4h6h	10	20	18,7	7,9		2,4	6	
120	MJ12x1,25 – 4h6h	12	24	22,7	9,8			7,2	

Diameter code	L ₁ ± 0,2 ^{2) 3)}		L ₂	L ₃	R		S		Mass ⁴⁾	
	Length code	nom.			nom.	Tol.	max.	min.	⁵⁾	⁶⁾
030	002 to 030	2 to 30	7,5	0,4	0,4	1,2	0,3	0,792	0,055	
040	002 to 040	2 to 40	10	6	0,4	1,6	0,4	1,922	0,099	
050	003 to 050	3 to 50	12	7,5	0,5	2	0,5	3,835	0,153	
060	003 to 060	3 to 60	14	8,5	- 0,2	2,4	0,6	6,620	0,222	
070	004 to 070	4 to 70	15	9,5	0,7	2,8	0,7	10,959	0,302	
080	004 to 080	4 to 80	16,5	10,5		3,2	0,8	15,214	0,395	
100	005 to 100	5 to 100	20,5	13	0,8	4	1	30,092	0,616	
120	006 to 120	6 to 120	22,5	14,5	0,9 - 0,3	4,8	1,2	52,957	0,887	

1) In accordance with ISO 5855-2.

2) Increments:

- 1 for $L_1 \leq 30$;
- 2 for $30 < L_1 \leq 100$;
- 4 for $L_1 > 100$.

3) 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.

4) Approximate values (kg/1 000pieces), calculated on the basis of 7,85 kg/dm³, given for information purposes only. They apply to screws without holes.

5) Value for head and first L_4 .

6) Increase for each additional millimetre of L_4 .