SLOVENSKI STANDARD
SIST EN 2884:2001

01-januar-2001

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

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Luft- und Raumfahrt - Flachkopfschrauben mit Flügelkreuzschlitz, kurzes Gewinde, aus Titanlegierung, anodisiert, MoS2-geschmiert - Klasse: 1 100 MPa (bei Raumtemperatur)/315 °C

Série aérospatiale - Vis a tete cylindrique, a empreinte cruciforme déportée, tige normale a tolérance large, filetage court, en alliage de titane, anodisées, lubrifiées MoS2 - Classification: 1 100 MPa (a température ambiante)/315 °C

Ta slovenski standard je istoveten z: **EN 2884:1996**

ICS:

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

SIST EN 2884:2001 **en**

EUROPEAN STANDARD **EN 2884**

NORME EUROPÉENNE

EUROPÄISCHE NORM January 1996

ICS 49.040.20

Descriptors: aircraft industry, cheese head screw, cross recessed screw, titanium alloy, classification, dimension, dimensional tolerance, surface treatment, designation, marking

English version

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart,36 B-1050 Brussels

Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries and votes carried out in accordance with the rules of this Association, this Standard has successively received the approval of the National Associations and the Official Services of the member countries of AECMA, 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of an identical text or by endorsement, at the latest by July 1996, and conflicting national standards shall be withdrawn at the latest by July 1996.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

1 Scope

This standard specifies the characteristics of screws, pan head, offset cruciform recess, coarse tolerance normal shank, short thread, in titanium alloy, anodized, MoS_2 lubricated.

Classification : 1 100 MPa [1] / 315 °C [2]

2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

ISO 3353	Aerospace - Rolled threads for bolts - Lead and runout requirements
ISO 5855-2	Aerospace - MJ threads - Part 2 : Limit dimensions for bolts and nuts
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
ISO 9152	Aerospace - Titanium alloy bolts, strength class 1 100 MPa, MJ threads - Procurement specification [3]
EN 2000	Aerospace series - Quality assurance - EN aerospace products - Approval of the quality system of manufacturers
EN 2424	Aerospace series - Marking of aerospace products
EN 2491	Aerospace series - Molybdenum disulphide dry lubricants - Coating methods [3]
EN 3042	Aerospace series - Quality assurance - EN aerospace products - Qualification procedure
TR 3775	Aerospace series - Bolts and pins - National materials [4]
TR 4070	Aerospace series - Molybdenum disulphide dry lubricants - List of commercial products [3]

3 Required characteristics

3.1 Configuration - Dimensions - Masses

See figure 1 and table 1.

Dimensions and tolerances are expressed in millimetres and apply after anodizing but before lubricating.

3.2 Tolerances of form and position

ISO 7913

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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) In preparation at the date of publication of this standard
4) Published as AECMA Technical Report at the date of publication of this standard

3.3 Materials

TR 3775 (titanium alloy, strength class 1 100 MPa)

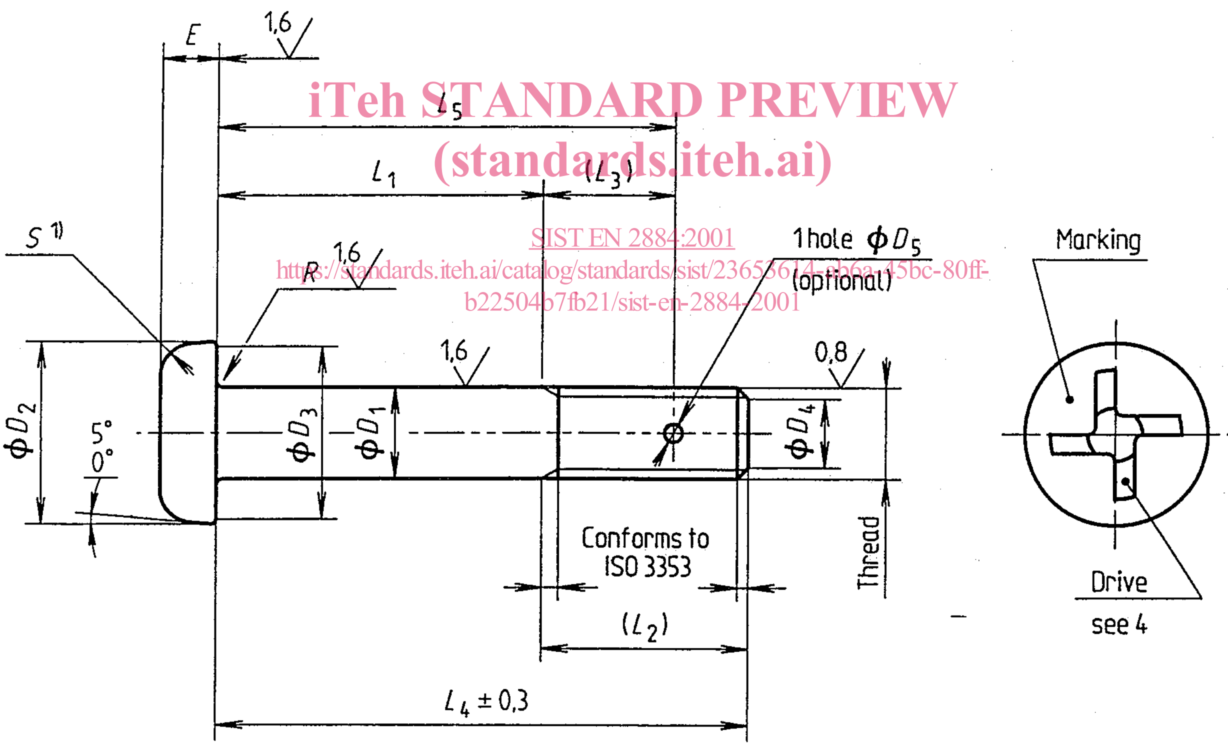
3.4 Surface treatment

Lubrication :

- lubricant : see 4 ;
- application : EN 2491 : 5 μm to 10 μm.

3,2 √ [0,8 √ 1,6 √] Values in micrometres apply prior to surface treatment.

Break sharp edges 0,1 to 0,4



1) Shape optional

Figure 1

Table 1

Diameter code	Thread 1)	D_1 h12	D_2 0 / − 0,3	D_3 min.	D_4 nom.	D_4 Tol.	D_5 H13	E nom.	E Tol.
030	MJ3x0,5 - 4h6h	3	6	4,7	2,3	0 / − 0,5	—	1,8	0 / − 0,2
040	MJ4x0,7 - 4h6h	4	8	6,7	3		1,1	2,4	
050	MJ5x0,8 - 4h6h	5	10	8,7	3,4	± 0,5	1,5	3	
060	MJ6x1 - 4h6h	6	12	10,7	4,2			3,6	0 / − 0,3
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	

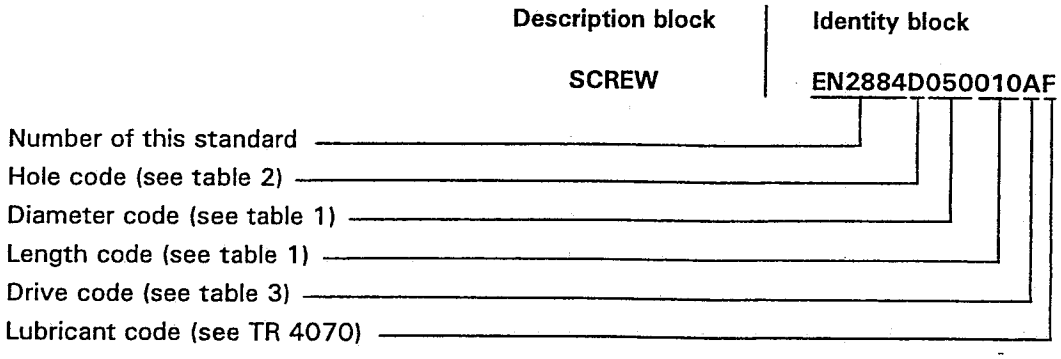
(concluded)

Diameter code	L_1 ± 0,2 2) 3) Code	L_1 nom.	L_2	L_3	R nom.	R Tol.	S max.	S min.	Mass 4) 5)	Mass 4) 6)
030	002 to 030	2 to 30	6	—	0,4	0 / − 0,2	1,2	0,3	0,38	0,03
040	002 to 040	2 to 40	7,5	5			1,6	0,4	0,92	0,06
050	003 to 050	3 to 50	9	6	0,5		2	0,5	1,88	0,09
060	003 to 060	3 to 60	10	7			2,4	0,6	3,10	0,13
070	004 to 070	4 to 70	11		0,7		2,8	0,7	5,31	0,17
080	004 to 080	4 to 80	11,5	7,5			3,2	0,8	7,23	0,23
100	005 to 100	5 to 100	14,5	9	0,8		4	1	14,24	0,35
120	006 to 120	6 to 120	16	10	0,9	0 / − 0,3	4,8	1,2	25,17	0,50

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/1 000 pieces), calculated on the basis of 4,45 kg/dm^3, given for information purposes only. They apply to screws without hole.
5) Value for head and first L_4
6) Increase for each additional millimetre of L_4.

4 Designation

EXAMPLE :



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

Table 2

Hole	Code
with	D
without	— (hyphen)

Table 3

Drive	Code
ISO 7994	R
ISO 7994 unribbed	A

5 Marking

See table 4 and figure 1, indented.

Table 4

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

6 Technical specification

ISO 9152, with the following modifications :

6.1 Approval of manufacturers

EN 2000

6.2 Qualification of screws

EN 3042

6.3 Requirements deleted

- Double shear strength ;
- Recess removal torque resistance in acceptance.