SLOVENSKI STANDARD
SIST EN 3052:2009

01-oktober-2009

Nadomeġļa:
SIST EN 3052:2001

Aeronavtika - Sorniki, normalna šestroba glava, ozka toleranca, kratek navoj, iz toplotno in korozijsko odpornega jekla, pasivirani - Klasifikacija: 1100 MPa (pri temperaturi okolice)/425 °C

Aerospace series - Bolts, normal hexagonal head, close tolerance normal shank, short thread, in heat and corrosion resisting steel, passivated - Classification: 1100 MPa (at ambient temperature)/425 °C

Luft- und Raumfahrt - Sechskant-Paßschrauben, kurzes Gewinde, aus korrosionsbeständigem und hochwarmfestem Stahl, passiviert - Klasse: 1100 MPa (bei Raumtemperatur)/425 °C

Série aérospatiale - Vis à tête hexagonale normale, fût normal à tolérance serrée, filetage court, en acier résistant à chaud et à la corrosion, passivées - Classification: 1100 MPa (à température ambiante)/425 °C

Ta slovenski standard je istoveten z: **EN 3052:2009**

ICS:

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

SIST EN 3052:2009 **en,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 3052

July 2009

ICS 49.030.20

Supersedes EN 3052:1993

English Version

Aerospace series - Bolts, normal hexagonal head, close tolerance normal shank, short thread, in heat and corrosion resisting steel, passivated - Classification: 1 100 MPa (at ambient temperature) / 425 °C

Série aérospatiale - Vis à tête hexagonale normale, fût normal à tolérance serrée, filetage court, en acier résistant à chaud et à la corrosion, passivées - Classification: 1 100 MPa (à température ambiante) / 425 °C

Luft- und Raumfahrt - Sechskant-Paßschrauben, kurzes Gewinde, aus korrosionsbeständigem und hochwarmfestem Stahl, passiviert - Klasse: 1 100 MPa (bei Raumtemperatur) / 425 °C

This European Standard was approved by CEN on 13 June 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.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword

This document (EN 3052:2009) 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 January 2010, and conflicting national standards shall be withdrawn at the latest by January 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.

This document supersedes EN 3052:1993.

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.

1 Scope

This standard specifies the characteristics of bolts, normal hexagonal head, close tolerance normal shank, short thread, in heat and corrosion resisting steel, passivated.

Classification: 1 100 MPa [1] / 425 °C [2]

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.

ISO 3193, *Aerospace — Bolts, normal hexagonal head, 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 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 7913, *Aerospace — Bolts and screws, metric — Tolerances of form and position.*

ISO 8168, *Aerospace — Bolts, with MJ threads, made of heat and corrosion resisting steel, strength class 1 100 MPa — Procurement specification.*

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

EN 2516, *Aerospace series — Passivation of corrosion resisting steels and decontamination of nickel base alloys.*

EN 4016, *Aerospace series — Oversized bolts.* [3]

EN 9100, *Aerospace series — Quality management systems — Requirements (based on ISO 9001:2000) and Quality systems — Model for quality assurance in design, development, production, installation and servicing (based on ISO 9001:1994).*

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

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

3 Required characteristics

3.1 Configuration — Dimensions — Masses

See Figure 1 and Table 1.

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1) Minimum tensile strength of the material at ambient temperature.

2) Maximum temperature that the bolt can withstand without continuous change in its original characteristics, after return to ambient temperature. The maximum temperature is determined by the material.

3) Published as ASD Prestandard at the date of publication of this standard.

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

Dimensions and tolerances are: in conformity with ISO 3193, expressed in millimetres and apply after surface treatment.

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

3.2 Tolerances of form and position

ISO 7913

3.3 Materials

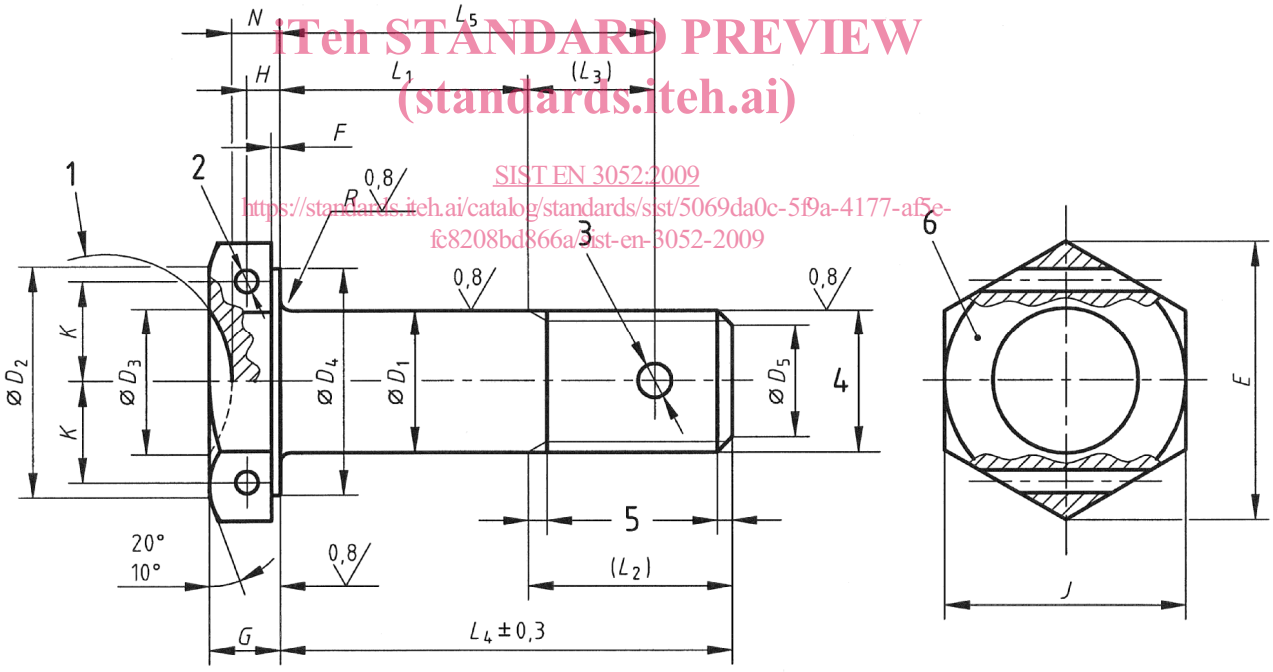
TR 3775 (heat and corrosion resisting steel, strength class 1 100 MPa)

3.4 Surface treatment

EN 2516

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

Break sharp edges 0,1 to 0,4



Key

1 Continuous surface
2 Two holes diameter D_6 (optional)
3 One hole diameter D_7 (optional)
4 Thread
5 Conform to ISO 3353-1
6 Marking

Figure 1

Table 1

Diameter code	Thread [a]	D_1 f7	D_2 min.	D_3 0 / − 0,5	D_4 [b] min.	D_5 nom.	D_5 Tol.	D_6 H13	D_7 H13	E min.	F max.	F min.	G 0 / − 0,3
030	MJ3×0,5 – 4h6h	3	5,5	—	5,4	2,3	0 / − 0,5	—	—	6,5	0,4	0,2	2
040	MJ4×0,7 – 4h6h	4	6,4	—	6,4	3		—	1,1	7,6	0,5		2,5
050	MJ5×0,8 – 4h6h	5	7,4	5,25	7,4	3,4	± 0,5	1	1,5	8,7			3
060	MJ6×1 – 4h6h	6	9,4	6,25	9,3	4,2		1,4		10,9			3,5
070	MJ7×1 – 4h6h	7	10,3	7,25	10,2	5,2			1,9	12			4
080	MJ8×1 – 4h6h	8	12,3	8,25	12,2	6,2				14,3			4,5
100	MJ10×1,25 – 4h6h	10	16,3	10,25	16	7,9		1,6	2,4	18,9	0,6	0,3	5
120	MJ12×1,25 – 4h6h	12	18,3	12,25	18	9,8				21,1			6
140	MJ14×1,5 – 4h6h	14	21,3	14,25	21	11,5			3	24,5			7
160	MJ16×1,5 – 4h6h	16	23,3	16,25	23	13,5				26,8			8
180	MJ18×1,5 – 4h6h	18	26,3	18,25	26	15,5			3,8	30,2			9
200	MJ20×1,5 – 4h6h	20	29,3	20,25	29	17,5				33,6			10

Diameter code	H	J Nom.	J Tol.	K	$L_1 \pm 0,2$ [c, d] Length code	$L_1 \pm 0,2$ [c, d] Nom.	L_2	L_3	N 0 / − 0,3	R Nom.	R Tol.	Mass [e] f	Mass [e] g
030	—	6	h12	—	002 to 030	2 to 30	6	—	—	0,4	0 / − 0,2	0,87	0,06
040	—	7		—	002 to 040	2 to 40	7,5	5	—			1,66	0,10
050	1,35	8		3,25	003 to 050	3 to 50	9	6	2	0,5		2,91	0,15
060	1,6	10	h13	4,1	003 to 060	3 to 60	10	7	2,3			5,44	0,22
070	1,85	11		4,5	004 to 070	4 to 70	11		2,7	0,7		7,45	0,30
080	2,1	13		5,35	004 to 080	4 to 80	11,5	7,5	3			11,22	0,39
100	2,35	17		7,1	005 to 100	5 to 100	14,5	9	3,4	0,8		21,78	0,62
120	2,85	19		7,9	006 to 120	6 to 120	16	10	4	0,9	0 / − 0,3	34,82	0,89
140	3,35	22		9,2	007 to 140	7 to 140	19	12	4,7	1,1		53,61	1,21
160	3,85	24		10,05	008 to 160	8 to 160	20.5	12,5	5,4			78,40	1,58
180	4,35	27		11,3	009 to 180	9 to 180	22,5	14,5	6	1,3		110,48	2,00
200	4,85	30		12,6	010 to 200	10 to 200	24,5	15	6,7			151,14	2,47

[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] D_4 max. shall be less than J.

[c] Increments:
1 for $L_1 \leq 30$
2 for $30 < L_1 \leq 100$
4 for $L_1 > 100$.

[d] If greater lengths are required, they shall be chosen using the above increments. The length code corresponds to length L_1, completed by one or two zeros to the left, where necessary, to obtain a three digit code.

[e] Approximate values (kg/1 000 pieces), calculated on the basis of 7,85 kg/dm^3, for information purposes only. They apply to bolts without holes.

[f] Value for head and first L_4.

[g] Increase for each additional millimetre of L_4.