



SLOVENSKI STANDARD

SIST EN 3725:2005

01-junij-2005

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SIST EN 3725:2004

Aerospace series - Screws, pan head, six lobe recess, normal shank, long thread, in titanium alloy TI-P64001, anodized, MoS2 coated - Strength class: 1 100 MPa (at ambient temperature)

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Luft- und Raumfahrt - Zylinderschrauben, Sechsbogenzahn, langes Gewinde, aus Titanlegierung TI-P64001, anodisiert, MoS2-beschichtet - Festigkeitsklasse: 1 100 MPa (bei Raumtemperatur)

Série aérospatiale - Vis a tete cylindrique, a empreinte six lobes, fut normal, filetage long, en alliage de titane TI-P64001, anodisées, revetues MoS2 - Classe de résistance : 1 100 MPa (a température ambiante)

Ta slovenski standard je istoveten z: EN 3725:2004

ICS:

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

SIST EN 3725:2005

en

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EUROPEAN STANDARD
 NORME EUROPÉENNE
 EUROPÄISCHE NORM

EN 3725

November 2004

ICS 49.030.20

Supersedes EN 3725:2003

English version

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Série aérospatiale - Vis à tête cylindrique, à empreinte six lobes, fût normal, filetage long, en alliage de titane TI-P64001, anodisées, revêtues MoS2 - Classe de résistance : 1 100 MPa (à température ambiante)

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This European Standard was approved by CEN on 11 September 2003.

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. 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.

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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
 COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 3725:2004) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-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 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 May 2005, and conflicting national standards shall be withdrawn at the latest by May 2005.

This document supersedes EN 3725:2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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EN 3725:2004 (E)

1 Scope

This standard specifies the characteristics of pan head screws with six lobe recess, threaded to head, in TI-P64001, anodized, MoS₂ coated, for aerospace applications.

Strength class: 1 100 MPa ¹⁾

NOTE Taking account of the recess geometry, the strength class to be used for the seating torque calculation shall not be greater than 900 MPa.

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 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*

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

EN 2491, *Aerospace series – Molybdenum disulphide dry lubricants – Coating methods*

EN 3813, *Aerospace series – Titanium alloy TI-P64001 – Annealed – Bar and wire for forged fasteners – $D_e \leq 25 \text{ mm}^2$*

EN 3818, *Aerospace series – Bolts, MJ threads, in titanium alloy TI-P64001 – Strength class: 1 100 MPa (at ambient temperature) – Technical specification*

EN 3905, *Aerospace series – Six lobe recesses for bolts – Technical specification* ²⁾

EN 3911, *Aerospace series – Six lobe recess – Geometrical definition*

3 Required characteristics**3.1 Configuration – Dimensions – Tolerances – Masses**

See Figure 1 and Tables 1 and 2.

Dimensions and tolerances are in millimetres. They apply after anodizing but before MoS₂ coating.

3.2 Materials

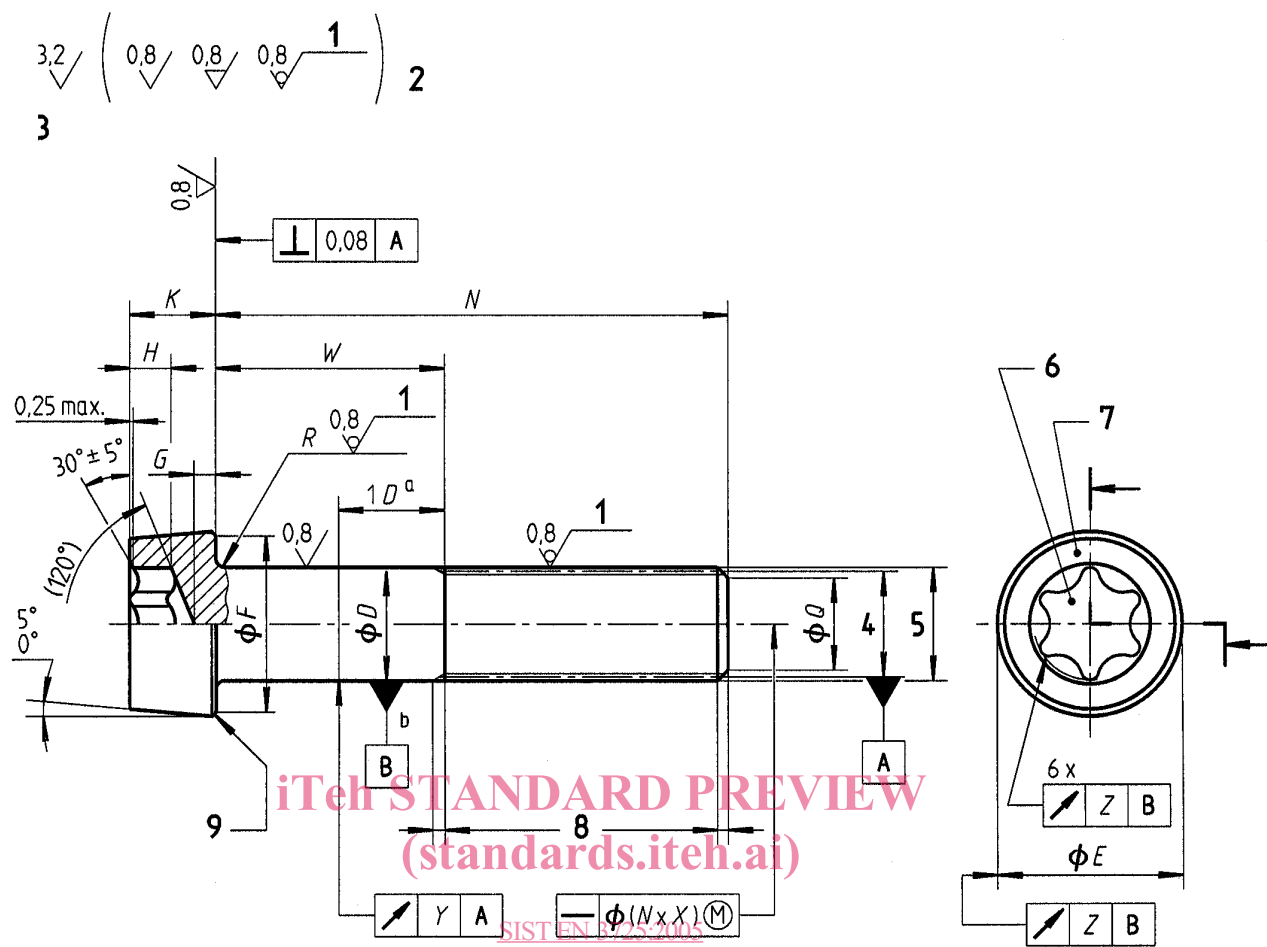
EN 3813

3.3 Surface treatment

EN 2491

1) Minimum tensile strength of the material at ambient temperature

2) Published as AECMA Prestandard at the date of publication of this standard

**Key**

- | | | | |
|---|--|---|---|
| 1 | rolled | 5 | thread |
| 2 | values apply before MoS ₂ coating | 6 | six lobe recess to EN 3911 |
| 3 | remove sharp edges 0,1 to 0,4 | 7 | marking |
| 4 | pitch diameter | 8 | conforms to ISO 3353-1 |
| | | 9 | shape in this area at manufacturer's option |

^a When the length of the shank is less than one times the nominal value of the shank diameter D , the run-out is measured at a distance equal to half the actual shank length.

^b For bolts having a shank length less than one times the nominal value of the shank diameter D , and for those threaded to head, the pitch diameter axis shall be used as the datum.

Figure 1

Table 1

Thread ^a		<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>	<i>K</i>	<i>Q</i>	<i>R</i>		<i>X</i>	<i>Y</i>	<i>Z</i>	Recess
Code	Designation	h12	max.	min.	min.	+0,2 0	h15	± 0,5	max.	min.				
030	MJ3×0,5-4h6h	3	5,5	5,1	0,3	1,15	2,2	2,3	0,4	0,2	0,003	0,12	0,11	EN3911-10
040	MJ4×0,7-4h6h	4	7	6,6	0,7	1,3	3	3,1					0,14	EN3911-25
050	MJ5×0,8-4h6h	5	8,5	8,1		1,8	4	3,5	0,5	0,3			0,18	EN3911-27
060	MJ6×1-4h6h	6	10	9,5	1	2,25	4,7	4,2	0,7	0,5		0,21	EN3911-30	
070	MJ7×1-4h6h	7	12	11,4		2,5	5,4	5,2				0,25	EN3911-40	
080	MJ8×1-4h6h	8	13	12,4		1,5	2,7	6	6,2	0,15		0,28	EN3911-45	

^a In accordance with ISO 5855-2

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Table 2

Length code	N ± 0,3	Thread code																	
		030			040			050			060			070			080		
		max. W	min.	Mass ^a	max. W	min.	Mass ^a	max. W	min.	Mass ^a	max. W	min.	Mass ^a	max. W	min.	Mass ^a	max. W	min.	Mass ^a
004	4			0,40			0,80	–	–	–	–	–	–	–	–	–	–	–	–
006	6			0,45			0,88	–	–	–	–	–	–	–	–	–	–	–	–
008	8			0,50			0,98												
010	10	1,4	1,15	0,55	1,8	1,45	1,06			1,59									
012	12			0,60			1,15			1,73									6,16
014	14			0,65			1,24			1,87									6,54
016	16	4	2,5	0,70			1,33			2,01	2,7	2,2							6,92
018	18	6	4,5	0,75	4	2,5	1,42			2,15									7,29
020	20	8	6,5	0,80	6	4,5	1,51	4	2,5	2,29									7,67
022	22	10	8,5	0,85	8	6,5	1,60	6	4,5	2,43									8,05
024	24	12	10,5	0,90	10	8,5	1,69	8	6,5	2,57	4	2,5	4,13						8,43
026	26	14	12,5	0,95	12	10,5	1,78	10	8,5	2,71	6	4,5	4,33	4	2,5	6,61			8,81
028	28	16	14,5	1,00	14	12,5	1,87	12	10,5	2,85	8	6,5	4,53	6	4,5	6,90	4	2,5	9,19
030	30	18	16,5	1,05	16	14,5	1,96	14	12,5	2,99	10	8,5	4,73	8	6,5	7,18	6	4,5	9,57
032	32	20	18,5	1,10	18	16,5	2,05	16	14,5	3,13	12	10,5	4,93	10	8,5	7,46	8	6,5	9,94
034	34	22	20,5	1,15	20	18,5	2,14	18	16,5	3,27	14	12,5	5,13	12	10,5	7,75	10	8,5	10,32
036	36	24	22,5	1,20	22	20,5	2,23	20	18,5	3,42	16	14,5	5,33	14	12,5	8,03	12	10,5	10,70
038	38	26	24,5	1,25	24	22,5	2,32	22	20,5	3,56	18	16,5	5,53	16	14,5	8,31	14	12,5	11,08
040	40	28	26,5	1,30	26	24,5	2,41	24	22,5	3,70	20	18,5	5,73	18	16,5	8,59	16	14,5	11,46
042	42	30	28,5	1,35	28	26,5	2,50	26	24,5	3,84	22	20,5	5,93	20	18,5	8,88	18	16,5	11,83
044	44	–	–	–	30	28,5	2,59	28	26,5	3,98	24	22,5	6,13	22	20,5	9,16	20	18,5	12,21
046	46	–	–	–	32	30,5	2,68	30	28,5	4,12	26	24,5	6,33	24	22,5	9,44	22	20,5	12,59
048	48	–	–	–	34	32,5	2,77	32	30,5	4,26	28	26,5	6,53	26	24,5	9,73	24	22,5	12,97
050	50	–	–	–	36	34,5	2,86	34	32,5	4,40	30	28,5	6,73	28	26,5	10,01	26	24,5	13,35
052	52	–	–	–	38	36,5	2,95	36	34,5	4,54	32	30,5	6,94	30	28,5	10,29	28	26,5	13,72
054	54	–	–	–	40	38,5	3,04	38	36,5	4,68	34	32,5	7,14	32	30,5	10,58	30	28,5	14,10
056	56	–	–	–	42	40,5	3,13	40	38,5	4,82	36	34,5	7,34	34	32,5	10,86	32	30,5	14,48
058	58	–	–	–	–	–	–	42	40,5	4,96	38	36,5	7,54	36	34,5	11,14	34	32,5	14,86
060	60	–	–	–	–	–	–	44	42,5	5,10	40	38,5	7,74	38	36,5	11,42	36	34,5	15,24
062	62	–	–	–	–	–	–	46	44,5	5,24	42	40,5	7,94	40	38,5	11,71	38	36,5	15,61
064	64	–	–	–	–	–	–	48	46,5	5,38	44	42,5	8,14	42	40,5	11,99	40	38,5	15,99
066	66	–	–	–	–	–	–	50	48,5	5,52	46	44,5	8,34	44	42,5	12,27	42	40,5	16,38
068	68	–	–	–	–	–	–	52	50,5	5,66	48	46,5	8,54	46	44,5	12,56	44	42,5	16,75
068	68	–	–	–	–	–	–	52	50,5	5,80	50	48,5	8,74	48	46,5	12,84	46	44,5	17,13

continued