
Aeronavtika - Sorniki, normalna šestroba glava, tanko steblo, dolg navoj, iz toplotnoodpornega jekla FE-PA92HT (A286), posrebreni - Klasifikacija: 1100 MPa/650 °C

Aerospace series - Bolts, normal hexagon head, relieved shank, long thread, in heat resisting steel FE-PA92HT (A286), silver plated - Classification: 1100 MPa/650°C

Luft- und Raumfahrt - Sechskantschrauben, Dünnschaft, langes Gewinde, aus hochwarmfesten Stahl FE-PA92HT (A286) versilbert - Klasse: 1100MPa/650°C

Série aérospatiale - Vis à tête hexagonale normale, fût dégagé filetage long, en acier résistant à chaud FE-PA92HT (A286), argentées - Classification: 1100 MPa/650°C

Ta slovenski standard je istoveten z: EN 3687:2010

ICS:

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

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EUROPEAN STANDARD
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EN 3687

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ICS 49.030.20

English Version

**Aerospace series - Bolts, normal hexagon head, relieved shank,
long thread, in heat resisting steel FE-PA92HT (A286), silver
plated - Classification: 1 100 MPa/650 °C**

Série aérospatiale - Vis à tête hexagonale normale, fût
dégagé filetage long, en acier résistant à chaud FE-
PA92HT (A286), argentées - Classification: 1 100 MPa/650
°C

Luft- und Raumfahrt - Sechskantschrauben, Dünnschaft,
langes Gewinde, aus hochwärmfesten Stahl FE-PA92HT
(A286) versilbert - Klasse: 1 100 MPa/650 °C

This European Standard was approved by CEN on 15 August 2010.

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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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Foreword

This document (EN 3687:2010) 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 June 2011, and conflicting national standards shall be withdrawn at the latest by June 2011.

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, Croatia, 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 3687:2010 (E)**1 Scope**

This standard specifies the characteristics of silver-plated Bolts normal Hexagon Head with relieved shank and long thread, in heat resisting steel FE-PA92HT (A286), tensile strength class 1 100 MPa at room temperature. The maximum test temperature of the material is 650 °C.

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 2424, *Aerospace series — Marking of aerospace products*

EN 2786, *Aerospace series — Electrolytic silver plating of fasteners*

EN 3685, *Aerospace series — Bolts in heat resisting steel FE-PA2601 (A286) — Classification: 1 100 MPa/650 °C — Technical specification*

EN 3761 ¹⁾, *Aerospace series — Heat resisting alloy FE-PA2601, softened and cold worked; bar for forged fasteners $D \leq 50$ mm, $1\ 100\ \text{MPa} \leq R_m \leq 1\ 300\ \text{MPa}$*

ISO 3353-1, *Aerospace — Lead and runout threads — Part 1: Rolled external threads*

ISO 5855-1, *Aerospace — MJ threads — Part 1: General requirements*

ISO 5855-2, *Aerospace — MJ threads — Part 2: Limit dimensions for bolts and nuts*

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

The configuration shall be in accordance with the figure. Dimensions and tolerances shall conform with the values shown in the figure and in Tables 1 and 2 after silver plating.

3.2 Surface roughness

See figure. The specified values are applicable before silver plating.

3.3 Material

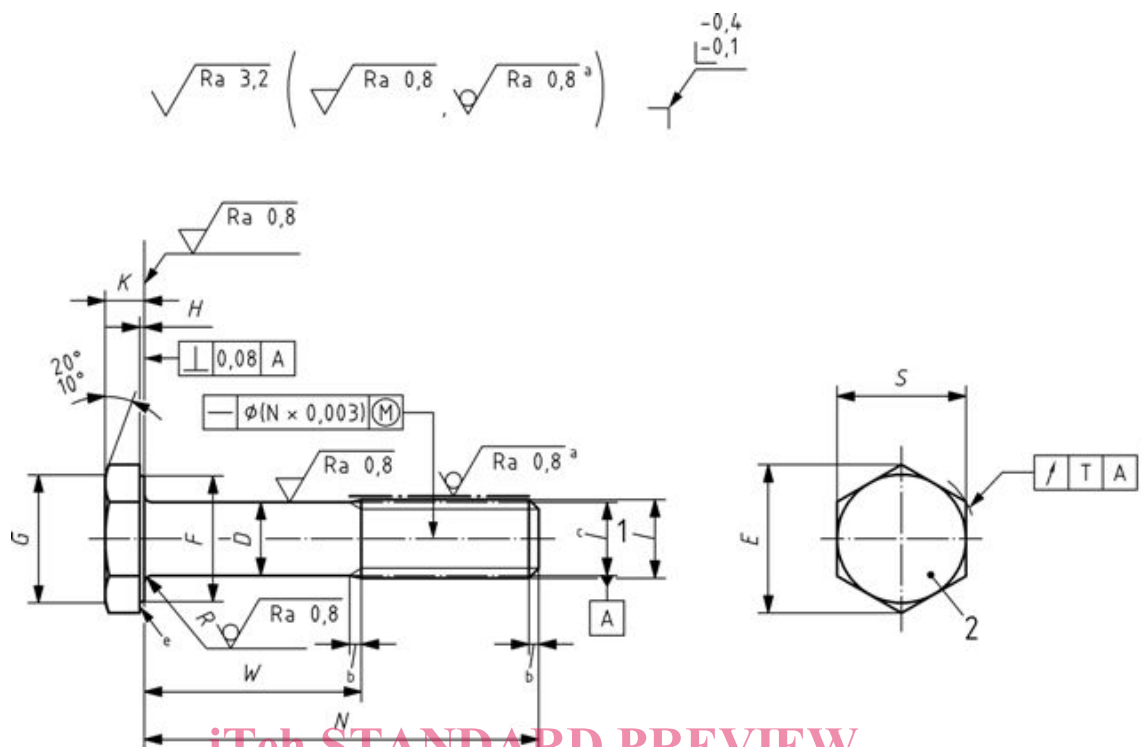
Heat resisting steel FE-PA92HT to EN 3761.

3.4 Surface treatment

Silver coat all over to EN 2786 Category A, coating thickness 3 µm to 6 µm on the thread flanks measured at the pitch diameter.

1) In preparation.

Dimensions in millimetres

**Key**

- 1 thread
- 2 marking
- ^a rolled
- ^b in accordance with ISO 3353
- ^c pitch diameter
- ^d six times
- ^e shape in this area at manufacturer's option

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Figure 1

Table 1

Dimensions in millimetres

Diameter code	Thread ¹⁾	D		E	F	G	H		K		R		S			T
		max.	min.	min.	min.	min.	max.	min.	max.	min.	max.	min.	max.	min.	tol.	
050	MJ5 X 0,8 – 4H6H	4,61	4,35	8,7	7,4	7,4	0,5	0,2	3	2,7	0,5	0,3	9	7,35	h12	0,25
060	MJ6 X 1 – 4H6H	5,48	5,22	10,9	9,3	9,4			3,5	3,2	0,7	0,5	10	9,78	h13	0,3
070	MJ7 X 1 – 4H6H	6,48	6,22	12	10,2	10,3			4	3,7			11	10,73		0,35
080	MJ8 X 1 – 4H6H	7,48	7,22	14,3	12,2	12,3	0,6	0,3	4,5	4,2	0,8	0,6	13	12,73		0,4
100	MJ10 X 1,25 - 4H6H	9,32	9,06	18,9	16	16,3			5	4,7			17	16,73	0,5	
120	MJ12 X 1,25 – 4H6H	11,32	11,06	21,1	18	18,3			6	5,7	0,9	19	18,67	0,6		

¹⁾ In conformity with ISO 5855-1 and -2

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Table 2

Dimensions in millimetres
Masses: kg/1 000 pieces

Diameter code		050			060			070			080			100			120					
Length code	N	W		Mass	W		Mass	W		Mass	W		Mass	W		Mass	W		Mass			
		max.	min.		max.	min.		max.	min.		max.	min.		max.	min.		max.	min.				
008	8	2,1	1,7	2,66	2,7	2,2	2,7	2,2	7,96	2,7	2,2	11,41	3,3	2,7	20,06	3,4	2,8	18,97	17,88			
010	10			2,91																4,68	6,45	9,4
012	12			3,16																5,03	6,95	10,07
014	14			3,41																5,39	7,45	10,74
016	16			3,66																5,75	7,96	11,41
018	18			3,91																6,1	8,46	12,09
020	20			4																6,46	8,96	12,76
022	22	6	4,5	4,41	4	2,5	9,46	13,43	22,23													
024	24	8	6,5	4,66	6	4,5	7,17	9,96	23,32													
026	26	10	8,5	4,91	8	6,5	7,53	10,46	4	2,5	14,77	24,41										
028	28	12	10,5	5,16	10	8,5	7,88	10,97	6	4,5	15,45	25,5										
030	30	14	12,5	5,41	12	10,5	8,24	11,47	8	6,5	16,12	4	2,7	26,59								
032	32	16	14,5	5,66	14	12,5	8,6	11,97	10	8,5	16,76	6	4,5	27,68								
034	34	18	16,5	5,91	16	14,5	8,95	12,47	12	10,5	17,46	8	6,5	28,76	4	2,8						
036	36	20	18,5	6,16	18	16,5	9,31	12,97	14	12,5	18,13	10	8,5	29,85	6	4,5						
038	38	22	20,5	6,41	20	18,5	9,66	13,47	16	14,5	18,81	12	10,5	30,94	8	6,5						
040	40	24	22,5	6,66	22	20,5	10,02	13,98	18	16,5	19,48	14	12,5	32,03	10	8,5						
042	42	26	24,5	6,91	24	22,5	10,38	14,48	20	18,5	20,15	16	14,5	33,12	12	10,5						