



# SLOVENSKI STANDARD

## SIST EN 6129:2016

01-november-2016

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### Aeronavtika - Slepa kovica, štrleča glava, zelo trdna, povlečni tip

Aerospace series - Blind bolt, protruding head, high strength, pulltype

Luft- und Raumfahrt - Blindniet, Universalkopf, hochfest (Zugtyp)

Série aérospatiale - Boulon aveugle, tête protubérante, haute résistance, installation en tirant

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**Ta slovenski standard je istoveten z: EN 6129:2016**

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#### **ICS:**

49.030.20	Sorniki, vijaki, stebelni vijaki	Bolts, screws, studs
49.030.60	Kovice	Rivets

**SIST EN 6129:2016**

**en,fr,de**

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EUROPEAN STANDARD

EN 6129

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2016

ICS 49.030.20; 49.030.60

English Version

## Aerospace series - Blind bolt, protruding head, high strength, pulltype

Série aéronautique - Boulon aveugle, tête protubérante,  
haute résistance, installation en tirant

Luft- und Raumfahrt - Blindniet, Universalkopf,  
hochfest (Zugtyp)

This European Standard was approved by CEN on 11 March 2016.

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## European foreword

This document (EN 6129:2016) 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of an identical text or by endorsement, at the latest by March 2017, and conflicting national standards shall be withdrawn at the latest by March 2017.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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**EN 6129:2016 (E)****1 Scope**

This standard specifies the configuration, dimension, tolerances and mass of a stainless steel blind bolt with protruding head, for aerospace application.

**2 Normative references**

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 4473, *Aerospace series — Aluminium pigmented coatings for fasteners — Technical specification*<sup>1)</sup>

AS 5272, *Lubricant, Solid Film, Heat Cured, Corrosion Inhibiting Procurement Specification*<sup>2)</sup>

SAE AMS 5687, *Nickel Alloy, Corrosion and Heat-Resistant, Wire 74Ni — 15,5Cr — 8,0Fe — Annealed*<sup>2)</sup>

SAE AMS 5737, *Steel, corrosion and heat-resistant, bars, wire, forgings and tubing 15Cr — 25.5Ni — 1.2Mo — 2.1Ti — 0.006B — 0.30V, consumable electrode melted, 1650 °F (899 °C), solution and precipitation heat treated*<sup>2)</sup>

AMS-QQ-P-35, *Passivation treatments for Corrosion-Resistant Steel*<sup>2)</sup>

MIL-PRF-46010F, *Lubricant, Solid Film, Heat cured, Corrosion Inhibiting NATO Code-S-1738*<sup>3)</sup>

SAE AS 87132, *Lubricant, Cetyl Alcohol, 1- Hexadecanol, Application to fasteners*<sup>3)</sup>

DOD-L-85645, *Lubricant, Dry Thin Film, Molecular Bonded*<sup>3)</sup>

NASM 8975, *Fasteners, Blind, High Strength, Installation Formed, Corrosion Resistant Steel, Heat Resistant Steel and Titanium, General Specification for*<sup>4)</sup>

**3 Requirements****3.1 Configuration, dimensions and tolerances**

The configuration, dimensions, tolerances, static and dynamic values shall conform to Figures 1 and 2 and Tables 1 and 2.

**3.2 Grip range and weight**

See Tables 3 and 4.

<sup>1)</sup> Published as AECMA Prestandard at the date of publication of this standard.

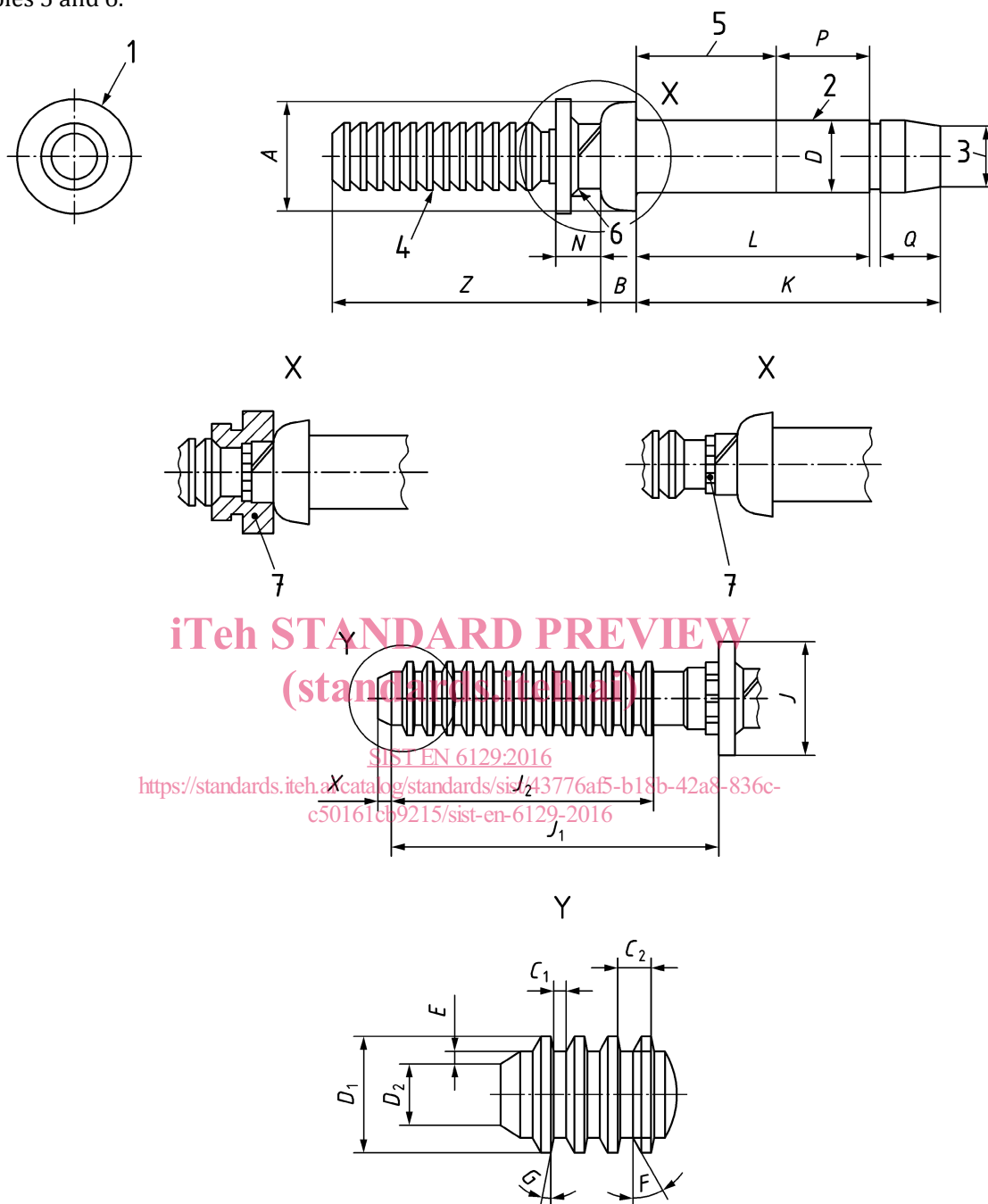
<sup>2)</sup> Published by: Society of Automotive Engineers (SAE), 400 Commonwealth drive, Warrendale, PA 15096-0001, USA.

<sup>3)</sup> Published by: Department of Defense (DoD), the Pentagon, Washington, D.C. 20301, USA.

<sup>4)</sup> Published by: Aerospace Industries Association of America, Inc. (AIA), 1250 Eye Street, N.W., Washington, D.C. 20005-3924, USA.

### 3.3 Material, finish, lubrication

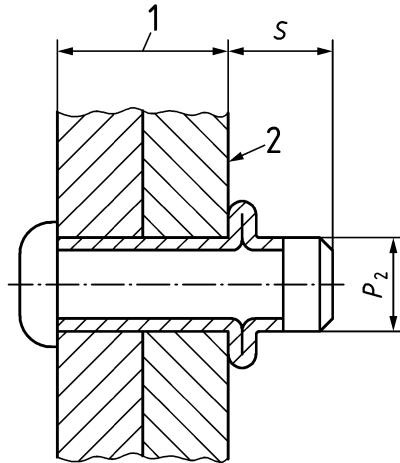
See Tables 5 and 6.



#### Key

- |   |   |   |   |
|---|---|---|---|
| 1 | Marking, see clause 5.  | 5 | Grip  |
| 2 | Sleeve shall not rotating.  | 6 | Locking collar  |
| 3 | Diameter of serrated pin head shall not exceed $\varnothing D$ max. | 7 | Shifting anvil: Fasteners are supplied with shifting anvil of manufacturer's option. The shifting anvil is not part of the installed fastener |
| 4 | Serrated pin  |   |   |

Figure 1 — Configuration - Dimensions



## Key

- 1 Grip
- 2 Blind side head may be installed on 7° max. slope

Figure 2 — Typical installation

Table 1 — Dimensions and tolerances

Dimensions in mm (inch)

Diameter code	ø A Theor.		B Ref.		Ø D	Ø J	N	Q	Ø D <sub>1</sub>	Ø D <sub>2</sub>	P <sup>a</sup>	Ø P <sub>2</sub>
	min.	max.	min.	max.	±0,03 (±.001)	±0,13 (±.005)	±0,25 (±.010)	±0,13 (±.005)	max.	max.	max.	min.
05	7,52 (.296)	8,33 (.328)	1,70 (.067)	1,96 (.077)	4,14 (.163)	9,53 (.375)	3,99 (.157)	1,70 (.067)	3,05 (.120)	2,16 (.085)	7,62 (.300)	5,49 (.216)
06	9,04 (.356)	10,01 (.394)	2,03 (.080)	2,29 (.090)	5,03 (.198)	9,53 (.375)	4,45 (.175)	2,21 (.087)	3,81 (.150)	2,79 (.110)	8,13 (.320)	6,86 (.27)
08	12,07 (.475)	13,34 (.525)	2,72 (.107)	2,97 (.117)	6,58 (.259)	9,53 (.375)	4,62 (.182)	2,79 (.110)	4,83 (.190)	3,66 (.144)	9,40 (.370)	8,89 (.35)

Diameter code	R	S Ref.	Z	J <sub>1</sub>	J <sub>2</sub>	X	E	C <sub>1</sub> Ref.	C <sub>2</sub>	F	G	Hole limits	
	max.		min.	±0,76 (±.030)	±0,76 (±.030)	max.	min.		±0,05 (±.002)	±5°	±5°	min.	max.
05	0,25 (.010)	5,84 (.232)	21,44 (.844)	15,14 (.596)	14,91 (.587)	2,54 (.100)	0,13 (.005)	3,30 (.130)	0,80 (.032)	45°	30°	4,17 (.164)	4,24 (.167)
06	0,38 (.015)	7,42 (.292)	22,23 (.875)	15,62 (.615)	15,37 (.605)	3,30 (.130)	0,13 (.005)	3,30 (.130)	0,80 (.032)	45°	30°	5,06 (.199)	5,13 (.202)
08	0,51 (.020)	9,17 (.361)	25,40 (1.000)	18,42 (.725)	16,97 (.668)	3,81 (.150)	0,13 (.005)	3,30 (.130)	0,80 (.032)	45°	30°	6,60 (.260)	6,68 (.263)

<sup>a</sup> In the length P of Ø D may be 0,05 mm (.002) undersize.



Table 2 — Static values

Dimensions in kN (lbs)

Diameter code	Installed strength			
	Single shear	Tensile strength	Tensile preload	Spindle retention
	min.	min.	min.	min.
05	8,811 (1980)	5,117 (1150)	0,512 (115)	2,558 (575)
06	13,016 (2925)	7,520 (1690)	0,752 (169)	3,760 (845)
08	22,250 (5000)	12,905 (2900)	1,29 (290)	6,408 (1440)

Table 3 — Grip range (1 von 2)

Dimensions in mm (inch)

Grip length code	Under lap		Grip range		Over lap 05 to 08 dia.	Diameter code					
	only 05 dia. min.	only 06 to 08 dia. min.	min.	max.		05		06		08	
						L Ref.	K max.	L Ref.	K max.	L Ref.	K max.
01	-	-	0,79 (.031)	2,44 (.096)	2,82 <sup>a</sup> (.111) <sup>a</sup>	7,19 (.283)	11,35 (.447)	-	-	-	-
02	2,13 (.084)	1,99 (.078)	2,39 (.094)	3,99 (.157)	4,39 (.173)	8,79 (.346)	12,95 (.51)	9,47 (.373)	14,48 (.57)	10,49 (.413)	16,76 (.66)
03	3,71 (.146)	3,56 (.14)	3,96 (.156)	5,59 (.220)	5,99 (.236)	10,37 (.408)	14,53 (.572)	11,05 (.435)	16,05 (.632)	12,07 (.475)	18,34 (.722)
04	5,31 (.209)	5,16 (.203)	5,56 (.219)	7,16 (.282)	7,57 (.298)	11,97 (.471)	16,13 (.635)	12,65 (.498)	17,65 (.695)	13,67 (.538)	19,94 (.785)
05	6,88 (.271)	6,73 (.265)	7,14 (.281)	8,76 (.345)	9,17 (.361)	13,54 (.533)	17,70 (.697)	14,22 (.560)	19,23 (.757)	15,24 (.6)	21,51 (.847)
06	8,48 (.334)	8,33 (.328)	8,74 (.344)	10,34 (.407)	10,74 (.423)	15,14 (.596)	19,30 (.76)	15,82 (.623)	20,83 (.82)	16,84 (.663)	23,11 (.91)
07	10,06 (.396)	9,91 (.39)	10,31 (.406)	11,94 (.470)	12,34 (.486)	16,71 (.658)	20,88 (.822)	17,40 (.685)	22,40 (.882)	18,42 (.725)	24,69 (.972)
08	11,66 (.459)	11,51 (.453)	11,91 (.469)	13,51 (.532)	13,92 (.548)	18,29 (.72)	22,45 (.884)	19,00 (.748)	24,00 (.945)	20,02 (.788)	26,29 (1.035)
09	13,23 (.521)	13,08 (.515)	13,49 (.531)	15,11 (.595)	15,52 (.611)	19,86 (.782)	24,03 (.946)	20,57 (.81)	25,58 (1.007)	21,59 (.85)	27,86 (1.097)
10	14,83 (.584)	14,68 (.578)	15,09 (.594)	16,69 (.657)	17,09 (.673)	21,46 (.845)	25,63 (1.009)	22,17 (.873)	27,18 (1.07)	23,19 (.913)	29,46 (1.16)
11	16,41 (.646)	16,26 (.64)	16,66 (.656)	18,29 (.720)	18,69 (.736)	23,06 (.908)	27,23 (1.072)	23,77 (.936)	28,78 (1.133)	24,79 (.976)	31,06 (1.223)
12	18,01 (.709)	17,86 (.703)	18,26 (.719)	19,86 (.782)	20,27 (.798)	24,64 (.970)	28,80 (1.134)	25,35 (.998)	30,35 (1.195)	26,37 (1.038)	32,64 (1.285)
13	19,58 (.771)	19,43 (.765)	19,84 (.781)	21,46 (.845)	21,87 (.861)	26,24 (1.033)	30,40 (1.197)	26,95 (1.061)	31,95 (1.258)	27,97 (1.101)	34,24 (1.348)