
5 YfcbUj h_U!`GHVY`b]j j`U_]n`h]hUbcj Y`n`h]bY`HHD* (\$\$%žbUa UnUb]n`AcG&žn
bUncV Ub]a `nU`Ydb]a `cVfc Ya `n`_cfcn]g_c`cXdcfbY[U`Y`U!`HfXbcgfb]fUnfYX.
%\$\$`ADUf]f]hYa dYfUhi f]c_c`JWL

Aerospace series - Studs, in titanium alloy TI-P64001, MoS2 coated, with serrated locking ring in corrosion resisting steel - Strength class: 1 100 MPa (at ambient temperature)

Luft- und Raumfahrt - Stiftschrauben, aus Titanlegierung TI-P64001, MoS2 beschichtet, mit Ringsicherung aus korrosionsbeständigem Stahl - Festigkeitsklasse: 1 100 MPa (bei Raumtemperatur)

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<https://standards.iteh.ai/catalog/standards/sist/2f9bec1c-f161-4430-a022-41a30c21a04c/en-4421-09>

Série aérospatiale - Goujons, en alliage de titane TI-P64001, revêtus MoS2, avec bague de verrouillage dentelée, en acier résistant à la corrosion - Classe de résistance: 1 100 MPa (à température ambiante)

Ta slovenski standard je istoveten z: EN 4421:2007

ICS:

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

SIST EN 4421:2009

en,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 4421

June 2007

ICS 49.030.20

English Version

**Aerospace series - Studs, in titanium alloy TI-P64001, MoS₂
coated, with serrated locking ring in corrosion resisting steel -
Strength class: 1 100 MPa (at ambient temperature)**

Série aéronautique - Goujons, en alliage de titane TI-P64001, revêtus MoS₂, avec bague de verrouillage dentelée, en acier résistant à la corrosion - Classe de résistance: 1 100 MPa (à température ambiante)

Luft- und Raumfahrt - Stiftschrauben, aus Titanlegierung TI-P64001, MoS₂ beschichtet, mit Ringsicherung aus korrosionsbeständigem Stahl - Festigkeitsklasse: 1 100 MPa (bei Raumtemperatur)

This European Standard was approved by CEN on 26 October 2005.

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 CEN Management Centre 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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



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

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Foreword

This document (EN 4421:2007) 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 December 2007, and conflicting national standards shall be withdrawn at the latest by December 2007.

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, 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 4421:2007 (E)**1 Scope**

This standard specifies the characteristics of studs in TI-P64001, MoS₂ coated, with serrated locking ring in corrosion resisting steel for aerospace applications.

Strength class: 1 100 MPa¹⁾

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 3311, *Aerospace series — Titanium alloy TI-P64001 — Annealed — Bar for machining — $D \leq 150$ mm*²⁾

EN 4458, *Aerospace series — Studs, MJ threads, in titanium alloy TI-P64001, MoS₂ coated, with serrated locking ring in corrosion resisting steel — Strength class: 1 100 MPa (at ambient temperature) — Technical specification*

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*

AMS 5604R, *Steel, corrosion resistant, bars, wire, and forgings 18 Cr – 9.0 Ni free machining*³⁾

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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 before MoS₂ coating.

3.2 Materials

Stud: EN 3311

Ring: AMS 5640

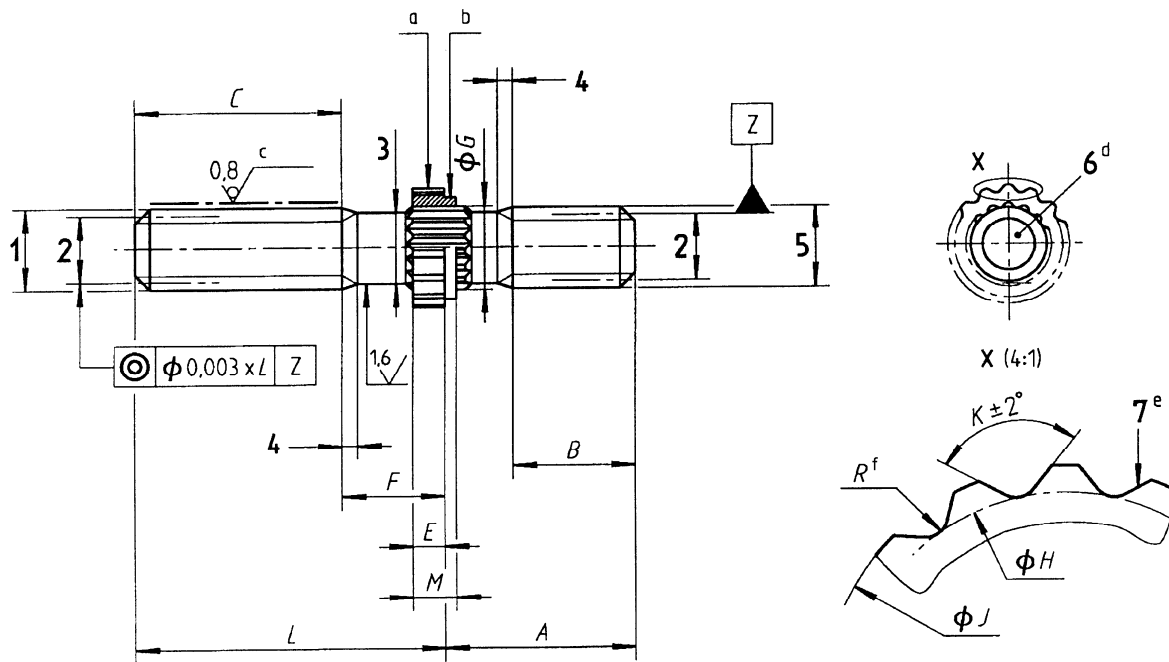
3.3 Surface treatment

EN 2491

1) Minimum tensile strength of the material at ambient temperature

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

3) Published by: Society of Automotive Engineers, Inc. (SAE), 400 Commonwealth Drive, Warrendale, PA 15096-0001, USA



Remove sharp edges 0,1 to 0,4

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Ring outer serration

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Key

- 1 Nut end threads
 - 2 Pitch diameter
 - 3 Diameter D before rolling
 - 4 Two pitches maximum, runout threads
 - 5 Installation on threads
 - 6 Marking
 - 7 N : theoretical number of teeth
- a Locking ring seating against the nut end thread
 - b Optional locking ring guide
 - c Rolled
 - d Used to identify the nut end thread when locking ring guide has been removed
 - e Deletion of a tooth for optional metric identification of stud
 - f Blending radius 0,1 to 0,2

Figure 1

Table 1

Thread ^a		A	B	D	E	G	H		J		K	M	N	R	
Code	Designation	± 0,5	min.		min.	max.	max.	min.	max.	min.	± 2°	max.		max.	min.
050	MJ5 × 0,8 — 4h6h	11	7,50	4,50	1,65	5,16	6,85	6,65	7,85	7,70	100°	2,50	15	0,45	0,35
060	MJ6 × 1 — 4h6h	13,50	9	5,30	2,35	6,19	7,85	7,65	8,85	8,70		3,20		0,50	0,40

^a In accordance with ISO 5855-2.

Table 2

Length code	L ± 0,4	Thread code					
		050			060		
		C min.	F max.	Mass ^a	C min.	F max.	Mass ^a
010	10	7	3	2,05	—	—	—
012	12	9		2,20	8	4	3,44
014	14	11		2,34	10		3,66
016	16	11,5	4,25	2,49	12		3,87
018	18	13,5		2,63	12,5	5,3	4,07
020	20	14	6,25	2,78	14,5		4,28
022	22		8,25	2,92	15	7,3	4,48
025	25		11,25	3,13		10,3	4,77
028	28		14,25	3,34		13,3	5,08
030	30		16,25	3,48		15,3	5,26
035	35		21,25	3,84		20,3	5,76
040	40		26,25	4,19		25,3	6,25

^a Mass ≈ quoted in kg/1 000 parts.

4 Designation

EXAMPLE

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Description block

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STUD

Identity block

EN4421—050 025

Number of this standard

Thread code (see Table 1)

Length code (see Table 2)

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

5 Marking

EN 2424, style A, as indicated on Figure 1.

6 Technical specification

EN 4458, plus ring rotational integrity test.