



SLOVENSKI STANDARD SIST EN 2414:2019

01-julij-2019

Aeronavtika - Podložke, gladke, z ugreznjeno izvrtino, iz kadmiranega legiranega jekla

Aerospace series - Washers, chamfered, with counterbore, in alloy steel, cadmium plated

Luft- und Raumfahrt - Stulpscheiben, aus legiertem Stahl, verkadmet

Série aérospatiale - Rondelles, fraisées, avec chambrage, en acier allié, cadmiées

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Ta slovenski standard je istoveten z: EN 2414:2019

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ICS:

21.060.30	Podložke, varovalni elementi	Washers, locking elements
49.030.50	Podložke in drugi blokirni elementi	Washers and other locking elements

SIST EN 2414:2019

en,fr,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 2414

May 2019

ICS 49.030.50

English Version

**Aerospace series - Washers, chamfered, with counterbore,
in alloy steel, cadmium plated**

Série aéronautique - Rondelles, chanfreinées, avec
chambrage, en acier allié, cadmiées

Luft- und Raumfahrt - Stulpscheiben, aus legiertem
Stahl, verkadmet

This European Standard was approved by CEN on 15 July 2018.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 2414:2019) 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 November 2019, and conflicting national standards shall be withdrawn at the latest by November 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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EN 2414:2019 (E)**1 Scope**

This European standard specifies the characteristics of chamfered washers, with counterbore, in alloy steel, cadmium plated, for maximum operating temperature 235 °C.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 2133, *Aerospace series — Cadmium plating of steels with specified tensile strength $\leq 1\,450$ MPa, copper, copper alloys and nickel alloys*

EN 2205, *Aerospace series — Steel FE-PL1502 (25CrMo4) — $900\text{ MPa} \leq R_m \leq 1\,100\text{ MPa}$ — Bars — $D_e \leq 40\text{ mm}$*

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

EN 2438, *Aerospace series — Steel FE-PL2102 (35NiCr6) — $900\text{ MPa} \leq R_m \leq 1\,100\text{ MPa}$ — Bars — $D_e \leq 40\text{ mm}$*

EN 3513, *Steel FE-PL711 — Hardened and tempered — $900\text{ MPa} \leq R_m \leq 1\,100\text{ MPa}$ — Bar and wire — $D_e \leq 45\text{ mm}$ ¹*

EN 9100, *Quality Management Systems — Requirements for Aviation, Space and Defence Organizations*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Required characteristics**4.1 Configuration — Dimensions — Masses**

See Figure 1 and Table 1. Dimensions and tolerances are expressed in millimetres. They apply after surface treatment.

4.2 Material

EN 2205, EN 2438 or EN 3513.

¹ Published as ASD-STAN-Prestandard at the date of publication of this European Standard (www.asd-stan.org).

4.3 Surface treatment

EN 2133, 7 μm to 10 μm on all surfaces which can be contacted by a 20 mm diameter ball. On all other surfaces, a continuous deposit shall be present, but no value is specified.

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$\sqrt[6,3]{\sqrt[3,2]{}}$ Values in micrometres apply prior to surface treatment.

Remove sharp edges 0,1 to 0,4

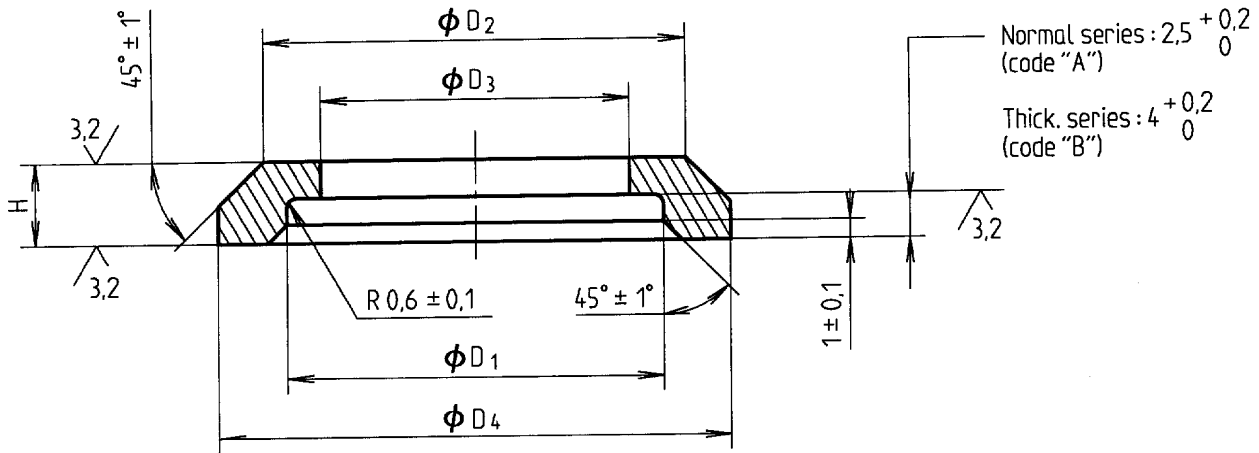


Figure 1

Table 1

Diameter code	D1	D2	D3	D4	H		Mass ^b	
	+0,3 0	+0,3 0	+0,3 0	0 -0,2	0 0,2	Code A ^a	Code B ^a	Code A ^a
080	8	10	6,2	13	4	5,5	2,9	4
100	10	13	8,2	16	4,5	6	4,8	6
120	12	15	10,2	18			5,5	7
150	15	18	12,2	22	5	6,5	9,3	12
170	17	20	14,2	24			10	13
200	20	23	16,5	28	5,5	7	14,7	18
220	22	25	18,5	30			16	20
250	25	28	20,5	34			22	28

^a Thickness code (see Figure 1)

^b Approximate values (kg/1 000 pieces), calculated on the basis of 7,85 kg/dm³, given for information purposes only.