SLOVENSKI STANDARD
SIST EN 2648:2014

01-marec-2014

Nadomešča:
SIST EN 2648:2001

Aeronavtika - Podložke, vbočene (konkavne), iz legiranega jekla, kadmirane

Aerospace series - Washers, concave, in alloy steel, cadmium plated

Luft- und Raumfahrt - Scheiben, für Neigungsausgleich, aus legiertem Stahl, verkadmet

Série aérospatiale - Rondelles concaves, en acier allié, cadmiées

Ta slovenski standard je istoveten z: EN 2648:2013

ICS:

49.030.50	Podložke in drugi blokirni elementi	Washers and other locking elements

SIST EN 2648:2014 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 2648

December 2013

ICS 49.030.50

Supersedes EN 2648:1995

English Version

Aerospace series - Washers, concave, in alloy steel, cadmium plated

Série aérospatiale - Rondelles concaves, en acier allié, cadmiées

Luft- und Raumfahrt - Scheiben, für Neigungsausgleich, aus legiertem Stahl, verkadmet

This European Standard was approved by CEN on 28 September 2013.

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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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Foreword

This document (EN 2648:2013) 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of an identical text or by endorsement, at the latest by June 2014, and conflicting national standards shall be withdrawn at the latest by June 2014.

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This document supersedes EN 2648:1995.

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1 Scope

This standard specifies the characteristics of concave washers, in alloy steel, cadmium plated, maximum operating temperature 235 °C.

They are intended to be used with nuts to EN 2647.

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 2133, *Aerospace series — Cadmium plating of steels with specified tensile strength ≤ 1 450 MPa, copper, copper alloys and nickel alloys*

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

EN 2448, *Aerospace series — Steel FE-PL1503 (35CrMo4) — 900 MPa ≤ R_m ≤ 1 100 MPa — Bars — D_e ≤ 40 mm*

EN 2542, *Aerospace series — Steel FE-PL1502 (25CrMo4) — Annealed — Bar and wire — D_e ≤ 40 mm — for prevailing torque nuts*

EN 2647, *Aerospace series — Nuts, hexagonal, self-locking, ball seat, in alloy steel, cadmium plated, MoS_2 lubricated — Classification: 900 MPa (at ambient temperature) / 235 °C*

EN 3330, *Aerospace series — Steel FE-PL1503 (35CrMo4) — Annealed — Bar and wire — D_e ≤ 40 mm — for prevailing torque nuts*

3 Required characteristics

3.1 Configuration – Dimensions – Masses

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

3.2 Materials

Steel FE-PL1502 (25CrMo4), chemical composition in conformity with EN 2542, characteristics after manufacture: 1 250 MPa ≤ R_m ≤ 1 400 MPa, 40 ≤ HRC ≤ 43.

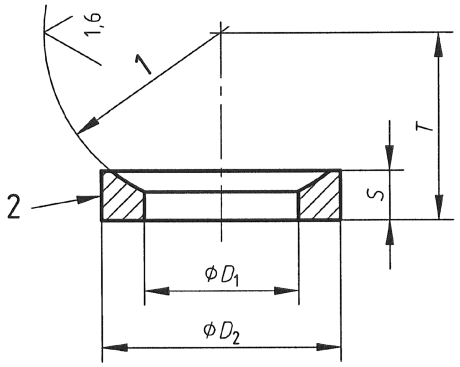
Or steel FE-PL1503 (35CrMo4), chemical composition in conformity with EN 3330 or EN 2448 or equivalent, characteristics after manufacture: 1 250 MPa ≤ R_m ≤ 1 400 MPa, 40 ≤ HRC ≤ 43.

3.3 Surface treatment

EN 2133, 8 µm to 14 µm.

6,3 (1,6) Values in micrometres apply prior to surface treatment.

Remove sharp edges 0,1 to 0,4.



Key

1 R spherical

2 Marking

Figure 1

Table 1

Diameter code [a]	D_1 $^{+0,2}_{0}$	D_2 ± 0,2	R $^{+0,5}_{0}$	S ± 0,1	T	**Mass** [b]
050	7	10,3	8	2	8,5	0,8
060	8,2	13	9	2,5	9,2	1,4
080	11	17	12,5	3,5	13,25	3,3
100	13,8	21	16	4	16,9	6,5
120	16,5	24	18	5	19,5	8,9

a Corresponds to the diameter code of the nut EN 2647.

b Approximate values (kg/1 000 pieces), calculated on the basis of 7,85 kg/dm^3, given for information purposes only.

4 Designation

EXAMPLE

Description block	Identity block
WASHER	EN2648-060

Number of this standard

Diameter code (see Table 1)

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

5 Marking

EN 2424, style F plus diameter code. See Figure 1.

6 Qualification

See EN 2647.