



# SLOVENSKI STANDARD

## SIST EN 2913:2001

01-januar-2001

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**Aerospace series - Washers, flat, large diameter, in steel, cadmium plated**

Aerospace series - Washers, flat, large diameter, in steel, cadmium plated

Luft- und Raumfahrt - Scheiben, flach, großer Außendurchmesser, aus Stahl, verkadmet

Série aérospatiale - Rondelles plates larges, en acier, cadmiées

**Ta slovenski standard je istoveten z: EN 2913:1999**

[SIST EN 2913:2001](https://standards.iteh.ai/catalog/standards/sist/cf1fda8b-3852-49cb-bf16-bf753ae7c0ad/sist-en-2913-2001)

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**ICS:**

|           |                                     |                                    |
|-----------|-------------------------------------|------------------------------------|
| 49.030.50 | Podložke in drugi blokirni elementi | Washers and other locking elements |
|-----------|-------------------------------------|------------------------------------|

**SIST EN 2913:2001**

**en**

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EUROPEAN STANDARD

EN 2913

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 1999

ICS 49.030.50

Supersedes EN 2913:1996 + AC:1998

English version

## Aerospace series - Washers, flat, large diameter, in steel, cadmium plated

Série aérospatiale - Rondelles plates larges, en acier,  
cadmiées

Luft- und Raumfahrt - Scheiben, flach, großer  
Außendurchmesser, aus Stahl, verkadmet

This European Standard was approved by CEN on 30 September 1999.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels



## 1 Scope

This standard specifies the characteristics of flat washers, large diameter, in steel, cadmium plated, for maximum operating temperature 235 °C.

## 2 Normative references

This European Standard incorporates by-dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- EN 2000 Aerospace series - Quality assurance - EN aerospace products - Approval of the quality system of manufacturers
- EN 2133 Aerospace series - Cadmium plating of steels with specified tensile strength  $\leq 1\,450$  MPa, copper, copper alloys and nickel alloys
- EN 2209 Steel FE-PL43S -  $900 \text{ MPa} \leq R_m \leq 1\,100 \text{ MPa}$  - Sheets, strips and plates  $0,5 \text{ mm} \leq a \leq 20 \text{ mm}$  - Aerospace series 1)
- EN 2424 Aerospace series - Marking of aerospace products
- EN 2438 Steel FE-PL62 -  $900 \text{ MPa} \leq R_m \leq 1\,100 \text{ MPa}$  - Bars  $D_e \leq 40 \text{ mm}$  - Aerospace series 1)

## 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

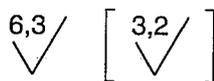
EN 2209 or EN 2438

### 3.3 Surface treatment

EN 2133, 8  $\mu\text{m}$  to 14  $\mu\text{m}$

Black colour option: code F (EN 2133, except for corrosion resistance requirement)

1) Published as AECMA Standard at the date of publication of this standard


 Values in micrometres apply prior to surface treatment.

Remove sharp edges 0,1 to 0,2.

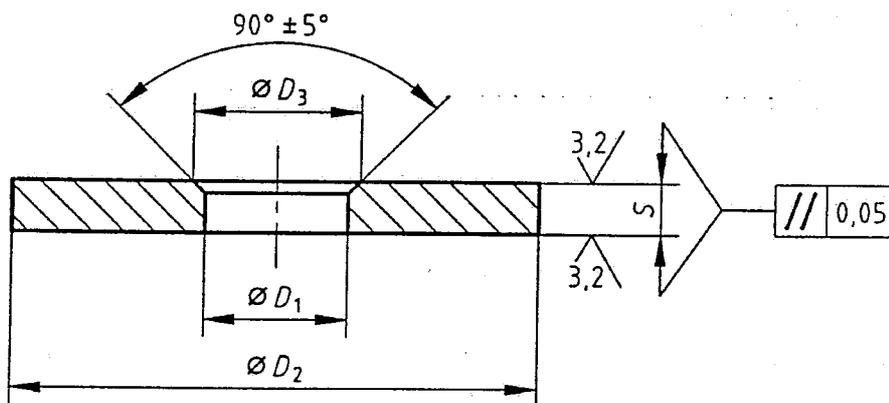


Figure 1

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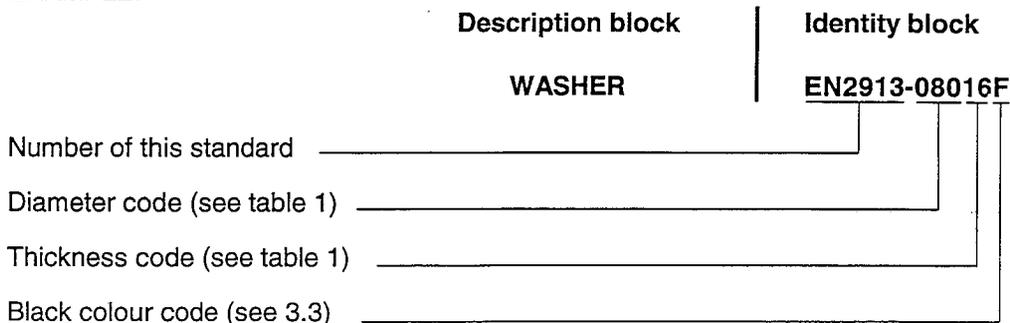
| Diameter code | $D_1$<br>H13 | $D_2$<br>h14 | $D_3$<br>SIST EN 2913:2001 |            | Thickness code | $S$<br>$\pm 10\% ^a$ | Mass <sup>b</sup> |
|---------------|--------------|--------------|----------------------------|------------|----------------|----------------------|-------------------|
|               |              |              | nom.                       | Tol.       |                |                      |                   |
| 030           | 3,2          | 9            | 3,8                        | + 0,1<br>0 | 06             | 0,6                  | 0,26              |
| 040           | 4,2          | 12           | 4,8                        |            | 10             | 1                    | 0,44              |
| 050           | 5,2          | 15           | 6                          |            | 06             | 0,6                  | 0,47              |
| 060           | 6,2          | 18           | 7,4                        | + 0,2<br>0 | 10             | 1                    | 0,78              |
| 070           | 7,2          | 21           | 8,4                        |            | 10             | 1                    | 1,22              |
| 080           | 8,2          | 24           | 9,4                        |            | 16             | 1,6                  | 1,95              |
| 100           | 10,2         | 30           | 11,6                       |            | 12             | 1,2                  | 2,11              |
| 120           | 12,2         | 36           | 13,8                       |            | 16             | 1,6                  | 2,81              |
|               |              |              |                            | + 0,3<br>0 | 12             | 1,2                  | 2,78              |
|               |              |              |                            |            | 16             | 1,6                  | 3,71              |
|               |              |              |                            |            | 16             | 1,6                  | 5,02              |
|               |              |              |                            | + 0,3<br>0 | 25             | 2,5                  | 7,85              |
|               |              |              |                            |            | 20             | 2                    | 9,81              |
|               |              |              |                            | + 0,3<br>0 | 25             | 2,5                  | 12,3              |
|               |              |              |                            |            | 20             | 2                    | 14,1              |
|               |              |              |                            | + 0,3<br>0 | 25             | 2,5                  | 17,7              |
|               |              |              |                            |            | 20             | 2                    | 14,1              |

<sup>a</sup> Includes also the flatness tolerance.

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

## 4 Designation

EXAMPLE:



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

## 5 Marking

EN 2424, style G

## 6 Quality assurance

EN 2000

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