SLOVENSKI STANDARD
SIST EN 4539-003:2011

01-maj-2011

Aeronavtika - Kroglasti drsni ležaji iz korozijsko odpornega jekla s samomazalno oblogo in z zvišano obremenitvijo pod nizkimi nihanji - Široki tip - Mere in nosilnosti - 003. del: Colski tip z nizkim koeficientom trenja

Aerospace series - Bearings, spherical plain, in corrosion resisting steel with self-lubricating liner elevated load under low oscillations - Wide series - Dimensions and loads - Part 003: Inch series with low friction coefficient

Luft- und Raumfahrt - Gelenklager, aus korrosionsbeständigem Stahl mit selbstschmierender Beschichtung Hohe Belastung, gering Oszillierend - Breite Reihe - Maße und Belastungen - Teil 003: Inch Reihe mit niedrigen Reibungskoeffizienten

Série Aérospatiale - Rotules, en acier résistant à la corrosion à garniture autolubrifiante à charge élevée sous faibles oscillations - Série large - Dimensions et charges - Partie 003 : Série en inches avec coefficient bas de friction

Ta slovenski standard je istoveten z: **EN 4539-003:2010**

ICS:

49.035	Sestavni deli za letalsko in vesoljsko gradnjo	Components for aerospace construction

SIST EN 4539-003:2011 **en,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 4539-003

November 2010

ICS 49.035

English Version

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This European Standard was approved by CEN on 7 August 2010.

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

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Foreword

This document (EN 4539-003:2010) 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of an identical text or by endorsement, at the latest by May 2011, and conflicting national standards shall be withdrawn at the latest by May 2011.

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1 Scope

This standard specifies the characteristics of bearings, spherical plain in corrosion resisting steel with self-lubricating liner, elevated load under low oscillations, with low friction coefficient, wide series, inch series.

They shall be used in the temperature range – 54 °C to 120 °C.

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 2030, *Steel FE-PM43 — Hardened and tempered — Bars D ≤ 150 mm — Aerospace series* 1)

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

EN 2424:2008, *Aerospace series — Marking of aerospace products*

EN 3161, *Aerospace series — Steel FE-PM3801 (X5CrNiCu17-4) — Air melted — Solution treated and precipitation treated — Bar — a or D ≤ 200 mm — R_m ≥ 930 MPa*

EN 4540, *Aerospace series — Bearings, spherical plain, in corrosion resisting steel with self-lubricating liner — Elevated load under low oscillations — Technical specification* 2)

ISO 1132-1:2000, *Rolling bearings — Tolerances — Part 1: Terms and definitions*

TR 4475, *Aerospace series — Bearings and mechanical transmissions for airframe applications — Vocabulary* 3)

AMS-QQ-C-320, *Chromium Plating (Electrodeposited)* 4)

3 Symbols and definitions

For the purposes of this document, the symbols and definitions given in ISO 1132-1:2000 and the following apply.

α = Maximum angle of tilt of the outer ring with respect to the inner ring, with the spherical surface of the outer ring being completely in contact with the inner ring.

C_a = Permissible static axial load.

C_s = Permissible static radial load.

1) Published as ASD-STAN Standard at the date of publication of this standard by Aerospace and Defence Industries Association of Europe-Standardization (ASD-STAN) (www.asd-stan.org).

2) Published as ASD-STAN Prestandard at the date of publication of this standard by Aerospace and Defence Industries Association of Europe-Standardization (ASD-STAN) (www.asd-stan.org).

3) Published as ASD-STAN Technical Report at the date of publication of this standard by Aerospace and Defence Industries Association of Europe-Standardization (ASD-STAN) (www.asd-stan.org).

4) Published by: Society of Automotive Engineers (SAE) (www.sae.org).

C_{250} = Permissible dynamic radial load by 250 000 cycles.

Δ_{dmp} = Single plane mean bore diameter deviation.

Δ_{Dmp} = Single plane mean outside diameter deviation.

Δ_{ds} = Deviation of a single bore diameter.

Δ_{Ds} = Deviation of a single outside diameter.

The definition and vocabulary, see TR 4475.

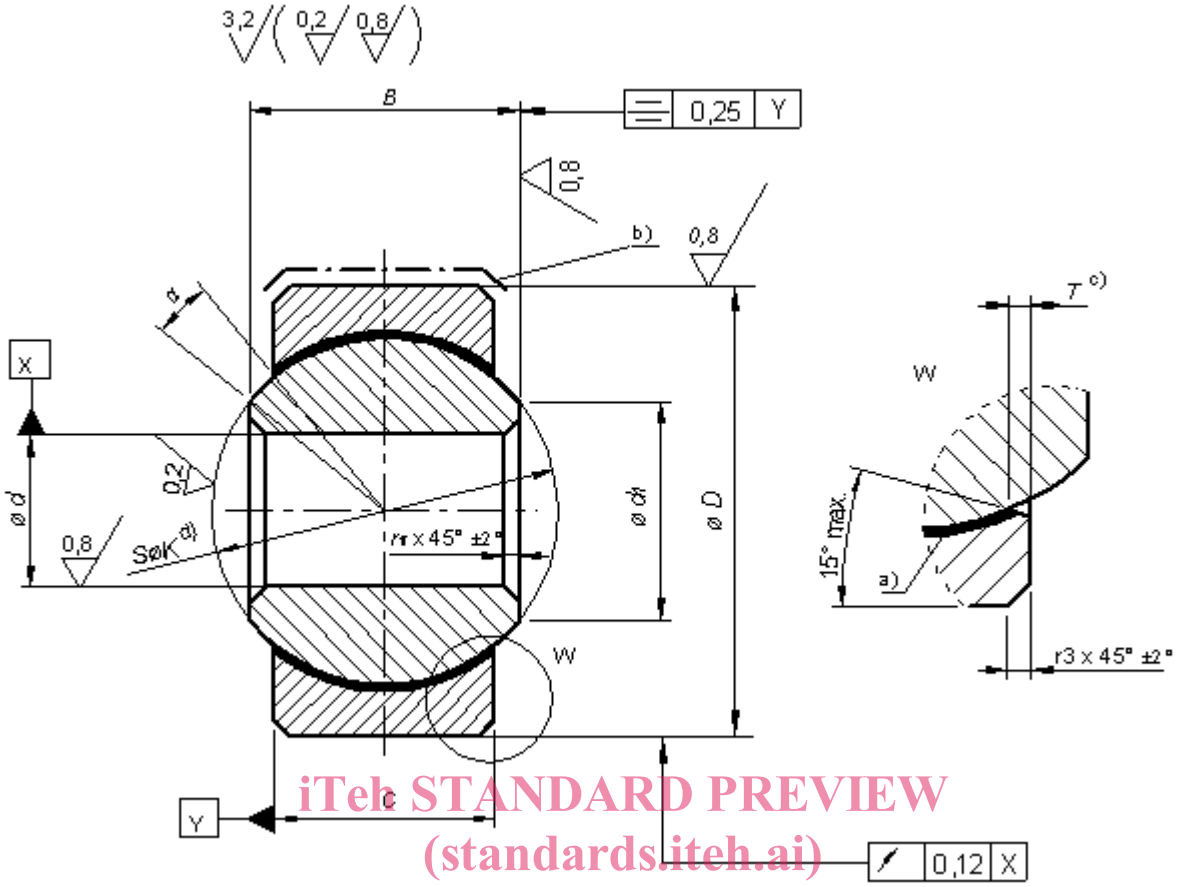
4 Required characteristics

4.1 Configuration, dimensions, tolerances and mass

See Figures 1 and 2 and Table 1. The dimensions are expressed in millimetres and apply after surface treatment.

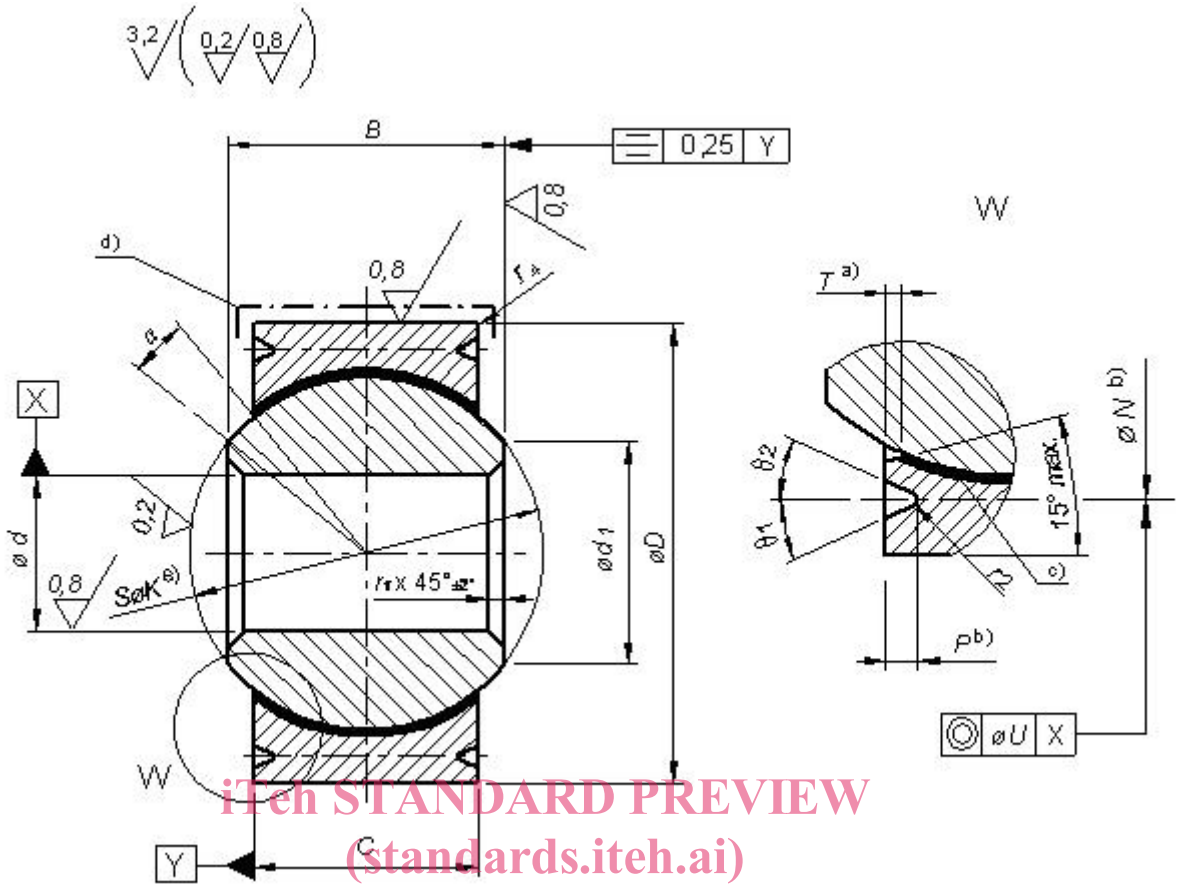
4.2 Surface roughness

See Figures 1 and 2. The values are expressed in micrometres and apply before surface treatment.



a TFE liner
b Cadmium plated
c Set back
d Spherical diameter

Figure 1 — Bearing without swaging grooves, code “S”



a Set back
b Swaging groove
c TFE liner
d Cadmium plated
e Spherical diameter

Figure 2 — Bearing with swaging grooves, code “R”