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**Aeronavtika - Zglobni drsni ležaj s samomazalno oblogo, z zelo velikim notranjim obročem iz korozijsko odpornega jekla - Mere in obremenitve - Palčne mere**

Aerospace series - Bearing, spherical plain with self-lubricating liner, extra wide inner ring in corrosion resisting steel - Dimensions and loads - Inch series

Luft- und Raumfahrt - Gelenklager mit selbst schmierender Beschichtung, extra breitem Innenring aus korrosionsbeständigem Stahl - Maße und Belastungen - Inch Reihe

Série aérospatiale - Rotule à garniture autolubrifiante avec bague intérieure extra large en acier résistant à la corrosion - Dimensions et charges - Série en inches

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**Ta slovenski standard je istoveten z: EN 6096:2019**

**ICS:**

21.100.10	Drsni ležaji	Plain bearings
49.035	Sestavni deli za letalsko in vesoljsko gradnjo	Components for aerospace construction

**SIST EN 6096:2019****en,fr,de**

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EUROPEAN STANDARD

EN 6096

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2019

ICS 49.035

English Version

## Aerospace series - Bearing, spherical plain with self-lubricating liner, extra wide inner ring in corrosion resisting steel - Dimensions and loads - Inch series

Série aérospatiale - Rotule lisse, à garniture autolubrifiante, bague intérieure extra large en acier résistant à la corrosion - Dimensions et charges - Série en inches

Luft- und Raumfahrt - Gelenklager mit selbstschmierender Beschichtung, extra breitem Innenring aus korrosionsbeständigem Stahl - Maße und Belastungen - Inch-Reihe

This European Standard was approved by CEN on 5 November 2018.

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

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## European foreword

This document (EN 6096:2019) 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 6096:2019 (E)****Introduction**

This document is published at edition P2. Former P1 and drafts may exist of Airbus development only but without any ASD-STAN official publication. In consequence configuration management discrepancies with these unofficial documents are under Airbus responsibility.

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## 1 Scope

This European standard specifies general characteristics of spherical plain bearings in corrosion resisting steel with self-lubricating liner, extra wide inner ring, inch series.

They are intended for use in fixed or moving parts of the aircraft structure and control mechanisms.

## 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 2030, *Aerospace series — Steel X105CrMo17 (1.3544) — Hardened and tempered — Bars —  $D_e \leq 150$  mm*

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

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

EN 2755, *Aerospace series — Bearing, spherical plain in corrosion resisting steel with self-lubricating liner — Elevated load at ambient temperature — Technical specification*

EN 3161, *Aerospace series — Steel FE PM3801 (X5CrNiCu17-4) — Air melted, solution treated and precipitation treated, bar a or D  $\leq 200$  mm,  $R_m \geq 930$  MPa*

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

ISO 8075, *Aerospace — Surface treatment of hardenable stainless steel parts*

TR 4475, *Aerospace series — Bearings and mechanical transmissions for airframe applications — Vocabulary*<sup>1</sup>

## 3 Terms, definitions and symbols

For the purposes of this document, the terms and definitions given in TR 4475 apply.

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/>

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<sup>1</sup> Published as ASD-STAN Technical Report at the date of publication of this European standard by AeroSpace and Defence industries Association of Europe – Standardization (ASD-STAN) (see [www.asd-stan.org](http://www.asd-stan.org)).

**EN 6096:2019 (E)**

Symbols of limit deviations are in accordance with definitions of ISO 1132-1.

- $\alpha$  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;
- $C_{25}$  permissible dynamic radial load by 25 000 cycles;
- $\Delta_{dmp}$  single plane mean bore diameter deviation;
- $\Delta_{Dmp}$  single plane mean outside diameter deviation;
- $\Delta_{ds}$  deviation of a single bore diameter;
- $\Delta_{Ds}$  deviation of a single outside diameter.

**4 Requirements****4.1 Configuration, dimensions, tolerances and mass**

Configuration, dimensions, tolerances and mass shall be according to Figure 1, Figure 2 and Table 1.

Table 1: dimensions and tolerances are expressed in millimetres (inches).

Figure 1: dimensions and tolerances for Ra max. are expressed in  $\mu\text{m}$  ( $\mu\text{in}$ ).

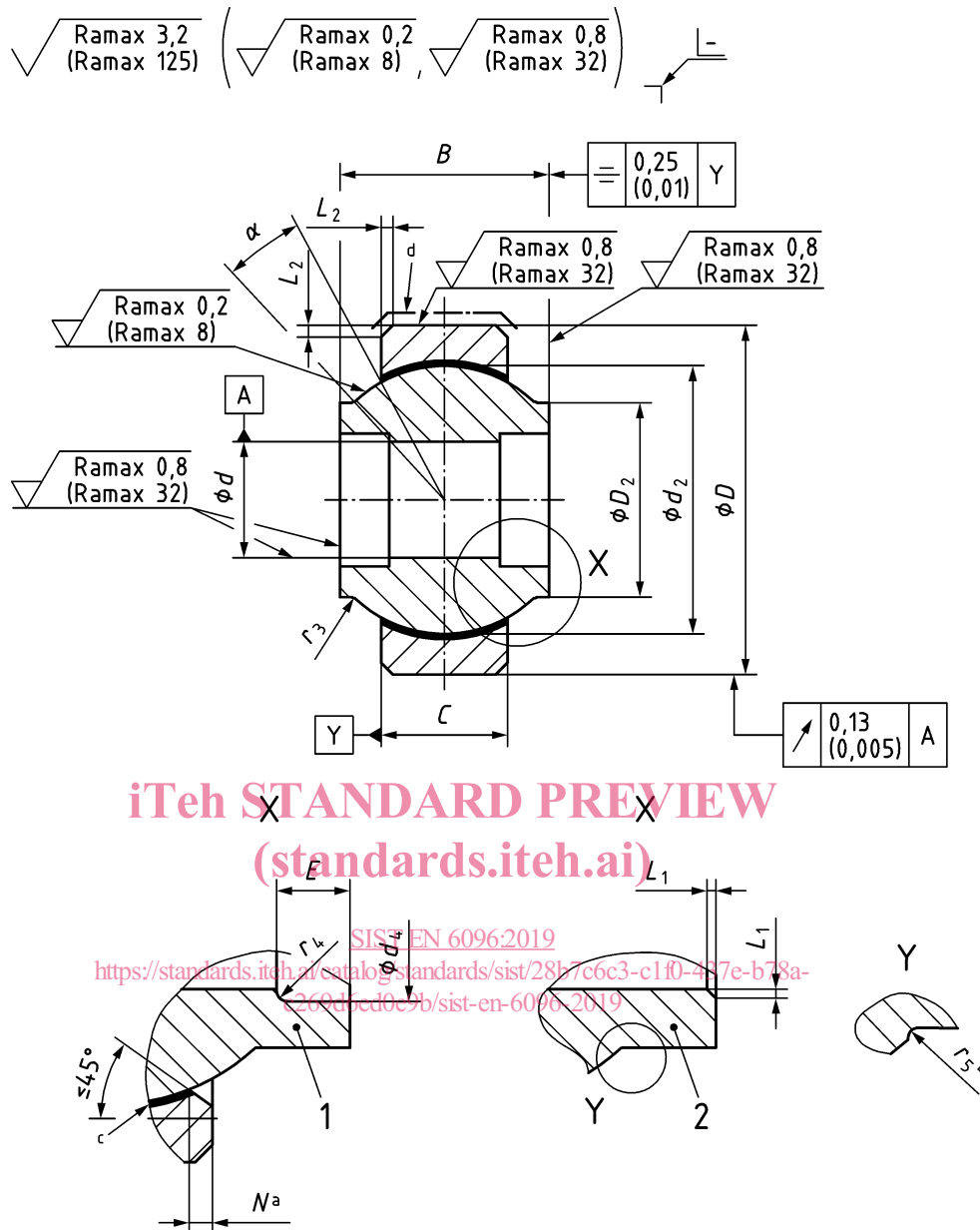
Values apply after surface treatment.

**4.2 Surface roughness**

Surface roughness shall be according to Figure 1 and Figure 2.

Values in micrometer (micro inches), apply prior to surface treatment.



**Key**

- 1 type code D
- 2 type code E
- a set-back
- b optional form to permit grinding undercut
- c TFE liner
- d cadmium plated

**Figure 1 — Code S — without swaging groove**