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BSI Standards Publication

Aerospace series — Bearing, spherical plain, in corrosion resisting steel with self-lubricating liner, low starting torque and low friction coefficient, elevated duty cycles under low oscillations at different operating conditions, wide series

Part 2: Dimensions and loads

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National foreword

This British Standard is the UK implementation of EN 4854-2:2019.

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This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Aerospace series - Bearing, spherical plain, in corrosion resisting steel with self-lubricating liner, low starting torque and low friction coefficient, elevated duty cycles under low oscillations at different operating conditions, wide series - Part 2: Dimensions and loads

Série aérospatiale - Rotules lisses en acier résistant à la corrosion à garniture autolubrifiante, faible couple de démarrage et faible coefficient de frottement, cycles d'endurance élevés sous faibles oscillations à différentes conditions de fonctionnement, série large - Partie 2 : Dimensions et charges

Luft- und Raumfahrt - Gelenklager aus korrosionsbeständigem Stahl mit selbstschmierender Beschichtung, geringem Losbrechmoment und niedrigem Reibungskoeffizient, hohe Anzahl an gering oszillierenden Belastungszyklen bei unterschiedlichen Einsatzbedingungen, breite Reihe - Teil 2: Maße und Belastungen

This European Standard was approved by CEN on 12 November 2018.

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

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European foreword

This document (EN 4854-2:2019) 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of an identical text or by endorsement, at the latest by April 2020, and conflicting national standards shall be withdrawn at the latest by April 2020.

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.

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1 Scope

This European Standard specifies the characteristics of spherical plain bearings in corrosion resisting steel with self-lubricating liner, low starting torque and low friction coefficient, elevated duty cycles under low oscillations at different operating conditions, wide series for aerospace applications.

These self-lubricating spherical plain bearings are intended for use in fixed or moving parts of the aircraft structure especially for control mechanism and operating systems. The bearings are designed to be subjected under low dynamic radial loads and slow rotations in the temperature range of −55°C to 120 °C (−67 °F to 248 °F).

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 ≤ 1 450 MPa, copper, copper alloys and nickel alloys*

EN 2424, *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, $R_m \geq 930$ MPa*

EN 4826, *Aerospace series — Zinc-Nickel (12 % to 16 % Ni) plating of steels with specified tensile strength ≤ 1 450 MPa, copper alloys, nickel alloys and aluminium alloys for parts and fasteners*

EN 4854-3, *Aerospace series — Bearing, spherical plain, in corrosion resisting steel with self-lubricating liner, low starting torque and low friction coefficient, elevated duty cycles under low oscillations at different operating conditions — Part 3: Technical specification*

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

ISO 2768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

ISO 6811:1998, *Spherical plain bearings — Vocabulary*

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

ISO 12240-1:1998, *Spherical plain bearings — Part 1: Radical spherical plain bearings*

TR 4475, *Bearings and mechanical transmissions for airframe applications — Vocabulary*[1]

AMS 2417, *Plating, Zinc-Nickel Alloy*

1 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).