

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

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

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| <p>Käesolev Eesti standard EVS-EN 2755:2009 sisaldab Euroopa standardi EN 2755:2009 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 30.09.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.07.2009.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p> | <p>This Estonian standard EVS-EN 2755:2009 consists of the English text of the European standard EN 2755:2009.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 30.09.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 15.07.2009.</p> <p>The standard is available from Estonian standardisation organisation.</p> |
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ICS 49.035

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ICS 49.035

English Version

Aerospace series - Bearings, spherical plain in corrosion  
resisting steel with self-lubricating liner - Elevated load at  
ambient temperature - Technical specification

Série aérospatiale - Rotules en acier résistant à la  
corrosion à garniture autolubrifiante - Série à charge élevée  
à température ambiante - Spécification technique

Luft- und Raumfahrt - Gelenklager, aus  
korrosionsbeständigem Stahl mit selbstschmierender  
Beschichtung - Reihe hohe Belastungen bei  
Raumtemperatur - Technische Lieferbedingungen

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## Foreword

This document (EN 2755:2009) 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 January 2010, and conflicting national standards shall be withdrawn at the latest by January 2010.

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## 1 Scope

This standard specifies the required characteristics, inspection and test methods, qualification and acceptance conditions for spherical plain bearings in corrosion resisting steel, with self-lubricating liner, for elevated loads at ambient temperature intended for use in fixed or moving parts of the aircraft structure and control mechanisms.

This standard applies whenever referenced.

## 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 2064, *Aerospace series — Bearings spherical plain in corrosion resisting steel with self-lubricating liner — Technical specification*

EN 2584, *Aerospace series — Bearings, spherical plain in corrosion resisting steel with self-lubricating liner — Narrow series — Elevated loads at ambient temperature — Dimensions and loads*

EN 2585, *Aerospace series — Bearings, spherical plain in corrosion resisting steel with self-lubricating liner — Wide series — Elevated load at ambient temperature — Dimensions and loads*

EN 3048, *Aerospace series — Bearings, spherical plain in corrosion resisting steel with self-lubricating liner — Light series — Elevated load at ambient temperature — Dimensions and loads*

EN 4037, *Aerospace series — Bearings, spherical plain in corrosion resisting steel with self-lubricating liner, reduced starting torque — Light series — Dimensions and loads*<sup>1</sup>

EN 4038, *Aerospace series — Bearings, spherical plain in corrosion resisting steel with self-lubricating liner reduced starting torque — Normal narrow series — Dimensions and loads*<sup>1</sup>

EN 4039, *Aerospace series — Bearings, spherical plain in corrosion resisting steel with self-lubricating liner reduced starting torque — Normal wide series — Dimensions and loads*<sup>1</sup>

EN 4040, *Aerospace series — Bearings, spherical plain in corrosion resisting steel with self-lubricating liner with wide inner ring — Elevated loads at ambient temperature — Dimensions and loads*

EN 4613, *Aerospace series — Spherical plain bearings in corrosion resisting steel with self-lubricating liner, narrow series — Dimensions and loads — Inch series*<sup>1</sup>

EN 4614, *Aerospace series — Spherical plain bearings in corrosion resisting steel with self-lubricating liner, wide series — Dimensions and loads — Inch series*<sup>1</sup>

EN 6096, *Aerospace series — Bearings, spherical plain, in corrosion resisting steel with self-lubricating liner, and extra wide inner ring — Dimensions and loads — Inch series*

EN 9100, *Aerospace series — Quality management systems — Requirements (based on ISO 9001:2000) and Quality systems — Model for quality assurance in design, development, production, installation and servicing (based on ISO 9001:1994)*

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<sup>1</sup> In preparation at the date of publication of this standard.

EN 9133, *Aerospace series — Quality management systems — Qualification procedure for aerospace standard parts*

EN 10204, *Metallic products — Types of inspection documents*

ISO 11078, *Aircraft — De-icing/anti-icing fluids, ISO type II, III and IV*

TR 4475, *Aerospace series — Bearings and mechanical transmissions for airframe applications — Vocabulary*<sup>2</sup>

### 3 Terms and definitions

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

#### 3.1

##### **spherical plain bearings with self-lubricating liner**

spherical plain bearing consisting of two concentric rings between which is interposed a self-lubricating liner which is bonded or moulded onto the spherical inner surface or the spherical outer surface

#### 3.2 Surface discontinuities

##### 3.2.1

##### **score, scratch**

open surface defect

##### 3.2.2

##### **lap**

surface defect where particles of metal or sharp edges are folded over and then rolled or forged into the surface

##### 3.2.3

##### **seam**

unwelded fold which appears as an open defect in the material

#### 3.3

##### **starting torque at without load**

torque required to start the rotation of the inner with the outer ring held stationary

#### 3.4 Permissible static loads

##### 3.4.1

##### **radial**

$C_s$   
static load corresponding to a permissible unit pressure multiplied by the effective projected area in the radial direction, the inner ring being able to take any position within the limits of the tilting angle indicated in the product standard

##### 3.4.2

##### **axial**

$C_a$   
static load corresponding to a permissible unit pressure multiplied by the effective projected area in the axial direction

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<sup>2</sup> Published as ASD Technical Report at the date of publication of this standard.