

**Lennunduse ja kosmonautika seeria.
Reguleeritavad isemääriva kattega ja
keermestatud varreosaga iseseaduvate siledate
laagritega hoovaotsad. Mõõtmed ja koormused**

Aerospace series - Rod ends, adjustable self-aligning plain bearing with self-lubricating liner and threaded shank - Dimensions and loads

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 2498:2000 sisaldab Euroopa standardi EN 2498:1990 ingliskeelset teksti.

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 2498

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Key words : Aircraft industry, flight control, rod ends, swivel-end pieces, linings, self-lubricating parts, threaded ends, dimensions, static loads.

English version

Aerospace series
Rod ends, adjustable self-aligning
plain bearing with self-lubricating liner
and threaded shank
Dimensions and loads

Série aéronautique
Embouts réglables
à rotule à garniture auto-lubrifiante
et à tige filetée
Dimensions et charges

Luft- und Raumfahrt
Einstellbare Ösenköpfe mit Gelenklager
mit selbstschmierender Beschichtung
und Gewindeschacht
Maße und Belastungen

This European Standard was accepted by CEN on 1990-01-10. CEN members are bound to comply with the requirements of CEN 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 CEN 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 CEN Central Secretariat has the same status as the official versions.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat : Rue Bréderode 2, B-1000 Bruxelles

Brief history

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries and votes carried out in accordance with the rules of this Association, this Standard has successively received the approval of the National Associations and the Official Services of the member countries of AECMA, prior to its presentation to CEN.

According to the Common CEN/CENELEC Rules, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

1 Scope and field of application

This standard specifies the characteristics of adjustable rod ends consisting of :

- a self-aligning ball bearing with self-lubricating liner EN 2501 ;
- a rod end body with threaded shank consisting of :
 - a circumferential groove to identify location ;
 - an optional longitudinal groove for locking purposes.

These rod ends are intended for use with flight control rods or rods for aerospace structures.
They are provided to be used within the temperature range : $- 55\text{ }^{\circ}\text{C}$ to $+ 150\text{ }^{\circ}\text{C}$.

2 References

ISO 1132-1980	Rolling bearings - Tolerances - Definitions
ISO 3353	Aerospace construction - Rolled threads - Runout and lead threads
ISO 5855/1	Aerospace - MJ Threads - Part 1 : General requirements
ISO 5855/2	Aerospace - MJ Threads - Part 2 : Limit dimensions for bolts and nuts
EN 2064	Bearings, spherical plain in corrosion resisting steel with self-lubricating liners - Technical specification - Aerospace series ¹⁾
EN 2068	Aerospace series - Rod ends with self-lubricating, self-aligning bearings - Technical specification ²⁾
EN 2133	Cadmium plating of steels with maximum specified tensile strength equal to or less than 1450 MPa, and copper and copper alloys - Aerospace series ¹⁾
EN 2137	Steel FE-PL75 - $1100\text{ MPa} \leq R_m \leq 1250\text{ MPa}$ - Bars $D_e \leq 100\text{ mm}$ - Aerospace series ¹⁾
EN 2475	Steel FE-PL74 - $1100\text{ MPa} \leq R_m \leq 1300\text{ MPa}$ - Bars $D_e \leq 100\text{ mm}$ - Aerospace series ¹⁾
EN 2476	Steel FE-PL74 - $1100\text{ MPa} \leq R_m \leq 1300\text{ MPa}$ - Forgings $D_e \leq 100\text{ mm}$ - Aerospace series ¹⁾
EN 2501	Aerospace series - Bearings, spherical plain in corrosion resisting steel with self-lubricating liners and wide inner ring - Dimensions and loads
EN 2790	Aerospace series - Rod ends, adjustable self-aligning plain bearing with self-lubricating liner and threaded shank - Dimensions and loads ⁴⁾

3 Symbols

Δ_{ds}	=	deviation of a single bore diameter ³⁾
Δ_{dmp}	=	single plane mean bore diameter deviation ³⁾
α	=	maximum displacement angle which can be formed by the outer ring with the inner ring, with the spherical track of the outer ring fully in contact with the inner ring
C_{25}	=	permissible dynamic radial load by 25000 cycles (for definition see EN 2064).

4 Required characteristics

4.1 Dimensions - Tolerances

Configuration : See figure.

Dimensions and tolerances : See figure and tables 1 and 2, values after cadmium plating.

1) Published as AECMA standard.

2) In preparation.

3) For definition of tolerances see ISO 1132.

4) Published as AECMA pre-standard.