Irish Standard
I.S. EN 4035:2021

Aerospace series - Rod end, adjustable, with self-aligning double row ball bearing, in corrosion resisting steel, reduced internal radial clearance and threaded shank in titanium alloy - Dimensions and loads

I.S. EN 4035:2021

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National Foreword

I.S. EN 4035:2021 is the adopted Irish version of the European Document EN 4035:2021, Aerospace series - Rod end, adjustable, with self-aligning double row ball bearing, in corrosion resisting steel, reduced internal radial clearance and threaded shank in titanium alloy - Dimensions and loads

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 4035

March 2021

ICS 49.035

Supersedes EN 4035:2006

English Version

Aerospace series - Rod end, adjustable, with self-aligning double row ball bearing, in corrosion resisting steel, reduced internal radial clearance and threaded shank in titanium alloy - Dimensions and loads

Série aérospatiale - Embout réglable à rotule sur deux rangées de billes en acier résistant à la corrosion, jeu radial réduit et à tige filetée en alliage de titane - Dimensions et charges

Luft- und Raumfahrt - Einstellbarer Ösenkopf mit zweireihigem Pendelkugellager aus korrosionsbeständigem Stahl, reduzierte radiale Lagerluft und Gewindeschaft aus Titanlegierung - Maße und Belastungen

This European Standard was approved by CEN on 13 February 2021.

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

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European foreword

This document (EN 4035:2021) 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 document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2021, and conflicting national standards shall be withdrawn at the latest by September 2021.

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.

This document supersedes EN 4035:2006.

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1 Scope

This document specifies the characteristics of adjustable rod ends with self-aligning double row ball bearing in corrosion resisting steel with reduced internal radial clearance and threaded shank in titanium alloy, designed to withstand only slow rotations and oscillations under load.

They consist of:

— a rod end comprising:

— circumferential groove to confirm that the assembled rod-end is “in safety” emphasized with the application of red paint;

— either seals or shields;

— an optional longitudinal groove for locking purpose;

— an inner ring with balls.

These rod ends are intended for use with flight control rods or rods for aerospace structures.

They are intended to be used in the temperature range: −54 °C to 150 °C.

However, being lubricated with the following greases:

— very high pressure grease, ester type (code A), operational range −73 °C to 121 °C; or

— very high pressure grease, synthetic hydrocarbons, general purpose (code B), operational range −54 °C to 177 °C (see EN 2067);

their field of application when lubricated with code A grease is limited to 121 °C.

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 2067, *Aerospace series — Rod ends with self-aligning ball bearings — Technical specification*

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

EN 2808, *Aerospace series — Anodizing of titanium and titanium alloys*

EN 3315, *Aerospace series — Titanium alloy TI-P64001 — Solution treated and aged — Forgings — De ≤ 75 mm*

EN 3813, *Aerospace series — Titanium alloy TI-P64001 (Ti-6Al-4V) — Annealed — Bar and wire for forged fasteners — De ≤ 50 mm*

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

ISO 3353-1, *Aerospace — Lead and runout threads — Part 1: Rolled external threads*

ISO 5855-2, *Aerospace — MJ threads — Part 2: Limit dimensions for bolts and nuts*

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