

Bearings-airframe rolling, rigid, single row ball bearings in steel, diameter series 0 and 2, dimensions and loads; Aerospace series; inactive for new design, see EN 3284

EESTI STANDARDI EESSÖNA

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EUROPEAN STANDARD
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English version

Bearings-airframe rolling
rigid, single row ball bearings in steel
diameter series 0 and 2
Dimensions and loads
Aerospace series

Roulements pour structures d'aéronefs
roulements en acier, rigides à une rangée de billes
séries de diamètres 0 et 2
Dimensions et charges
Série aérospatiale

Luft- und Raumfahrt
Flugwerk Lager
einreihige Rillenkugellager aus Stahl
Durchmesserreihen 0 und 2
Masze und Belastungen

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European Committee for Standardization
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Europäisches Komitee für Normung

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BRIEF HISTORY

This European Standard has been prepared by the European Association of Aerospace Constructors (AECMA). This Standard has been accepted by the European Committee for Standardization (CEN) after inquiries and votes carried out in accordance with the rules of this Committee.

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1 SCOPE

This standard specifies the characteristics of rigid single row ball bearings of diameter series 0 and 2 1) designed to withstand only slow rotations and oscillations under load. They are intended for use between fixed and moving parts of the aircraft structure and their control mechanisms.

2 FIELDS OF APPLICATION

The airframe roller bearings defined in the present standard shall be used from - 54 to + 150 °C.

However, being lubricated with the following greases :

- very high pressure grease, ester type (code A), operational range - 73 to + 121 °C or
- very high pressure grease, synthetic hydrocarbons, general purpose (code B), operational range - 54 to + 177 °C (refer to EN2063),

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

3 REFERENCES

ISO 15 - 1981, Rolling bearings - Radial bearings - Boundary dimensions - General plan

EN2031, Steel FE-PL31, Hardened and tempered, Bars.

EN2063, Bearings, airframe rolling - Technical Specification.

4 DEFINITIONS

Rigid bearings, full complement (without cage), single row, with filling slot.

5 SYMBOLS

- Δds = the deviation of a single bore diameter
- ΔDs = the deviation of a single outside diameter
- Δ_{dmp} = single plane mean bore diameter deviation
- Δ_{Dmp} = single plane mean outside diameter deviation
- C_s = permissible static radial load
- $F_{a\ max.}$ = permissible static axial load
- γ_s = coefficient of axial load.

6 MATERIALS

Inner ring : Steel EN2031, 59 2) to 64 HRC.

Outer ring : Steel EN2031, 59 2) to 64 HRC.

Balls : Steel EN2031, 59 2) to 64 HRC.

Shields : Corrosion resisting material

Seals : Polytetrafluoroethylene (PTFE) :

or polytetrafluoroethylene (PTFE) - glass fibre reinforced plastic material.

1) See ISO 15.

2) For new designs, bearings in corrosion resisting steel should be used for preference, see EN2014.