Bearings-airframe rolling, single row, self aligning roller bearings in corrosion resisting steel, diameter series 3 and 4, dimensions and loads; Aerospace series; inactive for new design, see EN 3292

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 2020:2003 sisaldab Euroopa standardi EN 2020:1984 ingliskeelset teksti.	This Estonian standard EVS-EN 2020:2003 consists of the English text of the European standard EN 2020:1984.
Käesolev dokument on jõustatud 06.06.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.	This document is endorsed on 06.06.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 49.035

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Key words : Aircraft industry, airframe bearings, self aligning bearings, roller bearings, corrosion resisting steel, dimensions, static loads

English version

Bearings-airframe rolling single row self aligning roller bearings in corrosion resisting steel diameter series 3 and 4 Dimensions and loads Aerospace series

Roulements pour structures d'aéronefs roulements en acier résistant à la corrosion à rotule sur une rangée de rouleaux séries de diamètres 3 et 4 Dimensions et charges Série aérospatiale

Luft- und Raumfahrt Flugwerklager einreihige Tonnenlager aus Korrosionsbeständigem Stahl Durchmesserreihen 3 und 4 Masze und Belastungen

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CEN

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

Central Secretariat : Rue Bréderode 2, B–1000 Brussels

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.

CONTENTS

1 SCOPE

This standard specifies the characteristics, of rigid single row ball bearings of diameter series 3 and 4 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

EN2030, Steel FE-PL43 - Hardened and tempered, Bars, D ≤ 150 mm

EN2063, Bearings, airframe rolling - Technical Specification

4 DEFINITIONS

Self aligning roller bearings, full complement (without cage), single row.

5 SYMBOLS

Δ_{ds}	= the deviation of a single bore diameter
Δ_{Ds}	= 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	= bearing axial load = axial component of actual bearing load
$F_{a\ max.}$	= permissible static axial load
F_r	= static radial load
P_{or}	= static equivalent radial load
Y_s	= coefficient of axial load.

6 MATERIALS

Inner ring : Steel EN2030, ≥ 58 HRC.
Outer ring : Steel EN2030, ≥ 58 HRC.
Rollers : Steel EN2030, ≥ 58 HRC.
Shields : Corrosion resisting material
Seals : Polytetrafluoroethylene (PTFE);
or polytetrafluoroethylene (PTFE) - glass fibre reinforced plastic material.

1) See ISO 15.