

Structural bearings —

Part 5: Pot bearings

The European Standard EN 1337-5:2005 has the status of a British Standard

ICS 91.010.30

National foreword

This British Standard was published by BSI. It is the UK implementation of EN 1337-5:2005. It partially supersedes BS 5400-9-1:1983 and BS 5400-9-2:1983 which will remain current until the remaining parts of the BS EN 1337 series have been published, the last part being Part 8.

The UK participation in its preparation was entrusted to Technical Committee B/522, Structural bearings.

A list of organizations represented on B/522 can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

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This European Standard was approved by CEN on 4 June 2004.

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Foreword

This document (EN 1337-5:2005) has been prepared by Technical Committee CEN/TC 167 “Structural bearings”, the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by December 2006, and conflicting national standards shall be withdrawn at the latest by December 2006.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive (s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

The European Standard EN 1337 consists of the following 11 parts:

- | | |
|---------|---|
| Part 1 | General design rules |
| Part 2 | Sliding elements |
| Part 3 | Elastomeric bearings |
| Part 4 | Roller bearings |
| Part 5 | Pot bearings |
| Part 6 | Rocker bearings |
| Part 7 | Spherical and cylindrical PTFE bearings |
| Part 8 | Guide bearings and restrain bearings |
| Part 9 | Protection |
| Part 10 | Inspection and maintenance |
| Part 11 | Transport, storage and installation |

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This part of EN 1337 specifies the requirements for the design and manufacture of pot bearings which will be used for operating temperatures between – 40 °C and 50 °C.

This part of EN 1337 does not apply to pot bearings made with other materials than those specified in clause 5.

Bearings which are subjected to rotation α_d greater than 0,030 rad (see Figure 2) under the characteristic combination of actions or which incorporate elastomeric pads larger than 1500 mm in diameter are beyond the scope of this document.

Depending on the climatic region where the construction work is located the bearings can be designed to one of the following classes related to minimum operating temperatures (the minimum shade air temperatures): – 25 °C or – 40 °C.

When required to accommodate translational movements, pot bearings may be combined with sliding elements in accordance with EN 1337-2.

NOTE The minimum shade air temperature for a location should be obtained from meteorological data appropriate to a 120 year return period. Consideration should be given to adjustment of this temperature for height and local divergence such as frost pockets and sheltered low-lying areas if the data obtained applies to a general area rather than to a specific location.

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 1337-1:2000, *Structural bearings — Part 1: General design rules*.

EN 1337-2:2004, *Structural bearings — Part 2: Sliding elements*.

EN 1337-9:1997, *Structural bearings — Part 9: Protection*.

EN 1337-10, *Structural bearings — Part 10: Inspection and maintenance*.

EN 1990, *Eurocode - Basis of structural design*.

EN 10025-1, *Hot rolled products of structural steels - Part 1: General technical delivery conditions*.

EN 10025-2, *Hot rolled products of structural steels - Part 2: Technical delivery conditions for non-alloy structural steels*

EN 10083-3, *Quenched and tempered steels — Part 3: Technical delivery conditions for boron steels*.

EN 10088-2, *Stainless steels — Part 2: Technical delivery conditions for sheet/plate and strip for general purposes*.

EN 10113-1, *Hot-rolled products in weldable fine grain structural steels — Part 1: General delivery conditions*.

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

EN 12163, *Copper and copper alloys — Rod for general purposes.*

EN 12164, *Copper and copper alloys — Rod for free machining purposes.*

EN ISO 527-1, *Plastics - Determination of tensile properties - Part 1: General principles (ISO 527-1:1993 including Corr 1:1994).*

EN ISO 527-2, *Plastics - Determination of tensile properties - Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2:1993 including Corr 1:1994).*

EN ISO 1133, *Plastics - Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics (ISO 1133:1997).*

EN ISO 2039-1, *Plastics - Determination of hardness - Part 1: Ball indentation method (ISO 2039-1:2001).*

EN ISO 4288, *Geometrical product specifications (GPS) - Surface texture: Profile method - Rules and procedures for the assessment of surface texture (ISO 4288:1996).*

EN ISO 7500-1, *Metallic materials - Verification of static uniaxial testing machines - Part 1: Tension/compression testing machines - Verification and calibration of the force-measuring system (ISO 7500-1:2004)*

ISO 1083, *Spheroidal graphite cast irons — Classification.*

ISO 1183, *Plastics — Methods for determining the density of non-cellular plastics.*

ISO 3755, *Cast carbon steels for general engineering purposes.*

ISO 6446, *Rubber products — Bridge bearings — Specification for rubber materials.*

3 Terms, definitions, symbols and abbreviations

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply (see Figure 1).