

Pedestal plain bearings —

Part 1: Specification for pillow blocks

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee MCE/12, Plain bearings, upon which the following bodies were represented:

- Association of Bronze and Brass Founders
- British Plastics Federation
- Copper Development Association
- Institution of Diesel and Gas Turbine Engineers
- Institution of Mechanical Engineers
- Society of Motor Manufacturers and Traders Ltd.

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National foreword

This British Standard has been prepared by Technical Committee MCE/12. It is identical with ISO 11687-1:1995 *Plain bearings — Pedestal plain bearings — Part 1: Pillow blocks*, published by the International Organization for Standardization (ISO).

Cross-references

International Standard	Corresponding British Standard
ISO 1302:1992	BS 308 <i>Engineering drawing practice</i> Part 2:1972 <i>Recommendations for dimensioning</i> (Technically equivalent)
ISO 8602:1994	BS 6615:1985 <i>Specification for dimensional tolerances for metal and metal alloy castings</i> (Identical)

The Technical Committee has reviewed the provisions of ISO 185:1988, ISO 426-1:1983, ISO 426-2:1983, ISO 630:1980, ISO 683-11:1987, ISO 2768-1:1989, ISO 2768-2:1989, ISO 3755:1991, ISO 4381:1991, ISO 12129-1 and ISO 12129-2 to which normative reference is made in the text, and has decided that they are acceptable for use in conjunction with this standard.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This part of ISO 11687 specifies design characteristics for pillow blocks for size ranges 9 to 28 and 35 to 71, as well as design characteristics for shafts.

It is applicable to pillow blocks used mainly in electrical and turbo engineering industries.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 11687. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 11687 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 185:1988, *Grey cast iron — Classification*.

ISO 426-1:1983, *Wrought copper-zinc alloys — Chemical composition and forms of wrought products — Part 1: Non-leaded and special copper-zinc alloys*.

ISO 426-2:1983, *Wrought copper-zinc alloys — Chemical composition and forms of wrought products — Part 2: Leaded copper-zinc alloys*.

ISO 630:1980, *Structural steels*.

ISO 683-11:1987, *Heat-treatable steels, alloy steels and free-cutting steels — Part 11: Wrought case-hardening steels*.

ISO 1302:1992, *Technical drawings — Method of indicating surface texture*.

ISO 2768-1:1989, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*.

ISO 2768-2:1989, *General tolerances — Part 2: Geometrical tolerances for features without individual tolerance indications*.

ISO 3755:1991, *Cast carbon steels for general engineering purposes*.

ISO 4381:1991, *Plain bearings — Lead and tin casting alloys for multilayer plain bearings*.

ISO 8062:1994, *Castings — System of dimensional tolerances and machining allowances*.

ISO 12129-1:—, *Plain bearings — Part 1: Fits¹⁾*.

ISO 12129-2:—, *Plain bearings — Part 2: Tolerances on form and position and surface roughness for shafts, flanges and thrust collars¹⁾*.

¹⁾ To be published.

3 Types of pillow block

According to their design, pillow blocks can be devised as follows, each characteristic being designated by a letter symbol.

Housing:

- G Pillow block, without cooling fins
- R Pillow block, with cooling fins

Heat dissipation:

- N Natural cooling
- W Water cooling in oil sump
- U Circulation pump and natural cooling
- T Circulation pump and water cooling in oil sump
- Z Recirculating oil lubrication with external cooling of oil

Shape of bore for journal bearing and type of lubrication:

- C Circular cylindrical bore without oil ring
- L Circular cylindrical bore with split oil ring not fixed on a rotating shaft
- Y Lobed bearing with two sliding surfaces without oil ring
- V Lobed bearing with four sliding surfaces without oil ring

Thrust bearing:

- Q Without sliding surfaces [non-locating (free) bearing]
 - B Plain sliding surfaces with oil grooves (guide bearing)
 - K Wedge surfaces
 - A Tilting pads
- (design and dimensions at the manufacturer's discretion)

Seal:

Type and dimensions subject to agreement

Figure 1 and Figure 2 show examples of pillow blocks. These represent pillow blocks, which are ready to be installed, in the size ranges 9 to 28 and 35 to 71, respectively.

The symbols above Figure 1 and Figure 2 explain only the type illustrated; the complete type required shall be specified in the above-mentioned sequence when ordering.