

Plain bearings: metric series —

Part 8: Specification for dimensions, tolerances and methods of checking of thin-walled flanged half bearings

[ISO title: Plain bearings — Thin-walled flanged half bearings — Dimensions, tolerances and methods of checking]

UDC 621.822.5

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The preparation of this British Standard was entrusted by the Mechanical Engineering Standards Committee (MEE/-) to Technical Committee MEE/119 upon which the following bodies were represented:

- Association of Bronze and Brass Founders
- British Internal Combustion Engine Manufacturers' Association
- British Metal Sinterings Association
- British Plastics Federation
- Copper Development Association
- Department of Trade and Industry (National Engineering Laboratory)
- Institution of Mechanical Engineers
- International Tin Research Institute
- London Metal Exchange
- Motor Cycle Association of Great Britain
- Plastics and Rubber Institute
- Society of Motor Manufacturers and Traders Limited

This British Standard, having been prepared under the direction of the Mechanical Engineering Standards Committee, was published under the authority of the Board of BSI and comes into effect on 28 September 1984

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The following BSI references relate to the work on this standard:
Committee reference MEE/119
Draft for comment 82/74097 DC

ISBN 0 580 14002 4

Amendments issued since publication

Amd. No.	Date of issue	Comments

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National foreword

This Part of this British Standard which has been prepared under the direction of the Mechanical Engineering Standards Committee, is identical with ISO 6864:1984 “*Plain bearings — Thin-walled flanged half bearings — Dimensions, tolerances and methods of checking*”, published by the International Organization for Standardization (ISO).

The standards in this metric series are as follows:

- *Part 1: Sintered bronze bushes;*
- *Part 2: Solid plastics bushes;*
- *Part 3: Dimensions and tolerances of solid copper alloy bushes;*
- *Part 4: Dimensions, tolerances and methods of checking wrapped bushes;*
- *Part 5: Dimensions, tolerances and methods of checking thin-walled half bearings;*
- *Part 6: Specification for dimensions and tolerances of ring type thrust washers made from strip;*
- *Part 7: Specification for dimensions and tolerances of pressed bimetallic half thrust washers;*
- *Part 8: Specification for dimensions, tolerances and methods of checking of thin-walled flanged half bearings.*

Further Parts will be published as the corresponding International Standards become available, subject to approval by the United Kingdom.

Terminology and conventions. The text of the International Standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

The comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Wherever the words, “International Standard” appear, referring to this standard, they should be read as “British Standard”.

With the exception of footnote 3 to Table 3, wherever the word “should” appears it should be read as “shall”.

Cross-references

International Standards	Corresponding British Standards
ISO 497:1973	BS 2045:1965 <i>Preferred numbers</i> (Technically equivalent)
ISO 3548:1978	BS 4480 <i>Plain bearings: metric series</i> Part 5:1979 <i>Dimensions, tolerances and methods of checking thin-walled half bearings</i> (Identical)
ISO 6526:1983	Part 7:1984 <i>Dimensions and tolerances of pressed bimetallic half thrust washers</i> (Identical)

The Technical Committee has reviewed the provisions of ISO 4383, ISO 4384 and ISO 6282 to which reference is made in the text, and has decided that they are acceptable for use in conjunction with this standard.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 16, 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 and field of application

This International Standard lays down the main dimensions and tolerances for thin-walled flanged half bearings used in reciprocating machinery. It is not expected that all flanged half bearings with the main dimensions listed will be available from stock but adoption of standard sizes should lead to economies in tooling costs.

The main dimensions and tolerances are fixed for a series of thin-walled flanged half bearings suitable for housings having inside diameters from 40 to 250 mm. Flanged half bearings for larger or smaller inside diameters are only rarely used.

This International Standard also lays down dimensions and tolerances for characteristics features of thin-walled flanged half bearings. The introduction of such features into a particular design is a decision that shall be made by the user in the light of his knowledge of the application.

Flanged half bearings are generally used in connection with half bearings without flange according to ISO 3548.

Alternatively to serve as a flanged half bearing, it is admittedly possible to use a prefitted assembly of a half bearing without flange with two half thrust washers, the specifications of which should be agreed between user and manufacturer, taking account of ISO 3548 and ISO 6526.

NOTE All the dimensions and tolerances are expressed in millimetres unless otherwise indicated.

2 References

ISO 497, *Guide to the choice of series to the use of preferred numbers and of series containing more rounded values of preferred numbers.*

ISO 3548, *Plain bearings — Thin-walled half bearings — Dimensions, tolerances and methods of checking.*

ISO 4383, *Plain bearings — Metallic multilayer materials for thin-walled plain bearings.*

ISO 4384, *Plain bearings — Hardness testing of bearing materials.*

ISO 6282, *Thin-walled Plain bearings — Determination of $\delta_{0,01}$ * limit.*

ISO 6526, *Plain bearings — Pressed bimetallic half thrust washers — Features and tolerances.*

3 Definition

For the purpose of this International Standard, the following definition is applicable:

flanged bearing

a combination of a radial bearing (cylindrical radial part) with an axial bearing (flanges at the ends) (see Figure 1)

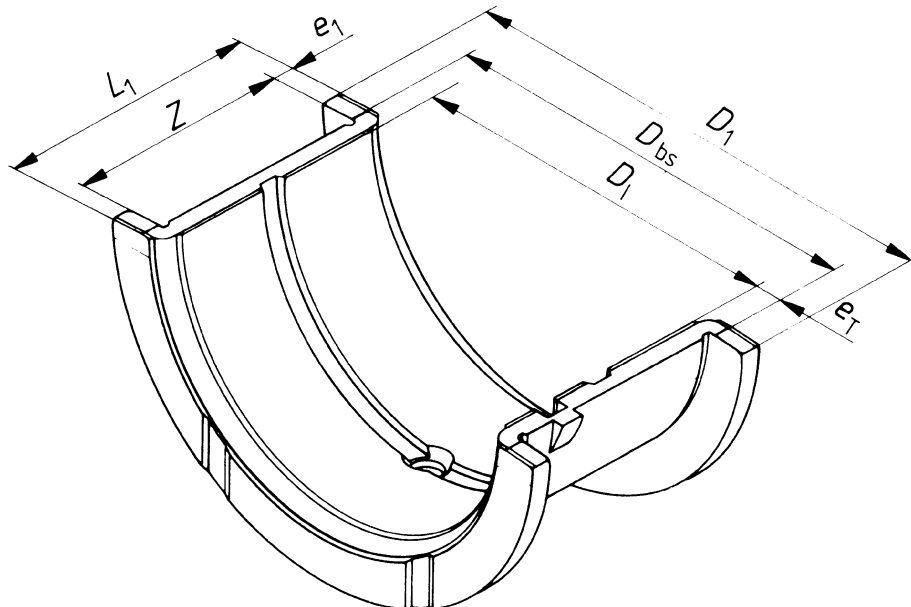


Figure 1 — Flanged half bearing

4 Symbols

D_L	=	housing diameter
D_I	=	inside diameter of the bearing
D_{bs}	=	outside diameter of the bearing
D_1	=	outside diameter of flange
D_{cb}	=	diameter of the checking block bore
e_T	=	bearing wall thickness
e_1	=	flange thickness
Z	=	distance between flanges
L_L	=	housing width
L_1	=	overall bearing width
S_N or $S_{N1} + S_{N2}$	=	nip
F	=	$F_1 = F_2$ = checking load, in newtons
E_x	=	eccentricity
A	=	locating nick width
B	=	locating nick length
N_D	=	locating nick height
H	=	distance between nick and flange
h	=	height and width at transition between radial part and flange
J	=	distance between nick and groove
E	=	notch recess width
N_Z	=	notch recess length
G	=	notch recess height
H_D	=	height of the joint face bore relief