



**International  
Standard**

**ISO 4378-1**

**Plain bearings — Terms, definitions,  
classification and symbols —**

**Part 1:  
Design, bearing materials and their  
properties**

*Paliers lisses — Termes, définitions, classification et symboles —  
Partie 1: Conception, matériaux pour paliers et leurs propriétés*

**Fifth edition  
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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee TC 123, *Plain bearings*, Subcommittee SC 6, *Terms and common items*.

This fifth edition cancels and replaces the fourth edition (ISO 4378-1:2017), which has been technically revised.

The main changes are as follows:

- addition of several new terms, key references and an alphabetical index.

A list of all parts in the ISO 4378 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

As there is a large number of multiple designations in the domain of plain bearings, there is a considerable risk of error in the interpretation of standards and technical literature.

This document is an attempt to establish a uniform basic system of designations of design, bearing materials and their properties.

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# Plain bearings — Terms, definitions, classification and symbols —

## Part 1: Design, bearing materials and their properties

### 1 Scope

This document specifies the most commonly used terms relating to design, bearing materials and their properties of plain bearings with their definitions and classification.

For some terms and word combinations, their short forms are given, which can be used where they are unambiguous.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

#### 3.1 General terms

##### 3.1.1

##### **bearing**

mechanical component by means of which a part in relative motion is supported and/or guided with respect to other parts of a mechanism

##### 3.1.2

##### **plain bearing**

##### **sliding bearing**

*bearing* (3.1.1) in which the type of relative motion is sliding

##### 3.1.3

##### **plain bearing unit**

mechanical component of a tribological system including a *plain bearing* (3.1.2), its supporting part (e.g. a housing), a shaft and a lubricating system

#### 3.2 Terms related to types of plain bearings and classification

##### 3.2.1 Classification according to the type of load

##### 3.2.1.1

##### **statically loaded plain bearing**

*plain bearing* (3.1.2) operating under a load constant in magnitude and direction