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**Plain bearings — Hydrodynamic plain  
tilting pad thrust bearings under  
steady-state conditions —**

**Part 3:  
Guide values for the calculation of  
tilting pad thrust bearings**

*Paliers lisses — Butées hydrodynamiques à patins oscillants  
fonctionnant en régime stationnaire —*

*Partie 3: Paramètres opérationnels admissibles pour le calcul des  
butées à patins oscillants*

ISO 12130-3:2020

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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 documents 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)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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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 ISO/TC 123, *Plain bearings*, Subcommittee SC 8, *Calculation methods for plain bearings and their applications*.

This second edition cancels and replaces the first edition (ISO 12130-3:2001), of which it constitutes a minor revision. The changes compared to the previous edition are as follows:

- adjustment to ISO/IEC Directives, Part 2:2018;
- correction of typographical errors.

A list of all parts in the ISO 12130 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

In order for tilting pad thrust bearings calculated in accordance with ISO 12130-1 to be sufficiently reliable in operation, it is necessary that the calculated operational parameters  $h_{\min}$ ,  $T_B$  or  $T_2$  and  $\bar{p}$  do not fall below or exceed the guide values  $h_{\lim}$ ,  $T_{\lim}$  and  $\bar{p}_{\lim}$ .

For limiting cases at high specific loads and/or high rotational frequencies, more accurate calculations are necessary taking into consideration thermal, elastic, hydrodynamic and/or turbulence effects.

The guide values represent limiting values in the tribological system plain bearing unit which are dependent on geometry and technology. These are empirical values which give still sufficient reliability in operation even when subjected to slight disturbing influence as shown in ISO 12130-1:2001, Clause 4.

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