BS ISO 8133:2014

BSI Standards Publication

Hydraulic fluid power — Mounting dimensions for accessories for single rod cylinders, 16 MPa (160 bar) compact series

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National foreword

This British Standard is the UK implementation of ISO 8133:2014. It supersedes BS ISO 8133:2006 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MCE/18/-/3, Cylinders.

A list of organizations represented on this committee 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.

ISBN 978 0 580 81179 1

ICS 23.100.20

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

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2014.

Amendments issued since publication

Date	Text affected

BS ISO 8133:2014

INTERNATIONAL STANDARD

ISO 8133

Third edition
2014-11-15

Hydraulic fluid power — Mounting dimensions for accessories for single rod cylinders, 16 MPa (160 bar) compact series

Transmissions hydrauliques — Dimensions d'interchangeabilité des accessoires pour vérins, 16 MPa (160 bar) à simple tige, série compacte

Reference number
ISO 8133:2014(E)

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Published in Switzerland

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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).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 131, *Fluid power systems*, Subcommittee SC 3, *Cylinders*.

This third edition cancels and replaces the second edition (ISO 8133:2006), which has been technically revised.

Introduction

In hydraulic fluid systems, power is transmitted and controlled through a liquid under pressure within an enclosed circuit.

One component of such systems is the fluid power cylinder. This is a device that converts power into linear mechanical force and motion. It consists of a movable element, i.e. a piston and piston rod, operating within a cylindrical bore.

Hydraulic fluid power — Mounting dimensions for accessories for single rod cylinders, 16 MPa (160 bar) compact series

1 Scope

This International Standard specifies the mounting dimensions required for interchangeability of accessories for 16 MPa [160 bar)] compact cylinders conforming to ISO 6020-2. The accessories have been designed specifically for use with cylinders manufactured in accordance with ISO 6020-2, but this does not limit their application.

Note 1 bar = 0,1 MPa = 10^5 Pa; 1 MPa = 1 N/mm^2.

This International Standard covers the following accessories, identified in accordance with ISO 6099:

— AP6 — rod eye spherical, female thread (see Figure 1 and Table 1);

— AB5 — clevis bracket, spherical eye, in angle (see Figure 2 and Table 2);

— AA6-L — pivot pin, spherical bearing, locking plate (see Figure 3 and Table 3);

— AL6 — locking plate for pivot pin (see Figure 4 and Table 4);

— AP2 — rod clevis, female thread (see Figure 5 and Table 5);

— AP4 — rod eye plain, female thread (see Figure 6 and Table 6);

— AB2 — eye bracket (see Figure 7 and Table 7);

— AB4 — clevis bracket, straight (see Figure 8 and Table 8);

— AA4-S — pivot pin, plain (split pins) (see Figure 9 and Table 9);

— AA4-R — pivot pin, plain (rings) (see Figure 10 and Table 10);

— AT4 — trunnion bracket (see Figure 11 and Table 11).

These accessories are used on hydraulic cylinders for mechanically transmitting the cylinder force. The design of these accessories is based on the maximum forces resulting from the specified internal diameters of the cylinders and pressures according to ISO 3320 and ISO 3322.

This International Standard only applies to the dimensional criteria of products manufactured in conformity with this International Standard; it does not apply to their functional characteristics.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 286-2, *Geometrical product specifications (GPS) — ISO code system for tolerances on linear sizes — Part 2: Tables of standard tolerance classes and limit deviations for holes and shafts*

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