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## Hydraulic fluid power — Cylinders — Acceptance tests

*Transmissions hydrauliques — Vérins — Essais de réception*

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ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

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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 131, *Fluid power systems*, Subcommittee SC 3, *Cylinders*.

This third edition cancels and replaces the second edition (ISO 10100:2001), which has been technically revised. It also incorporates ISO 10100:2001/Amd1:2012.

The main changes compared to the previous edition are as follows:

- Normative references have been updated ([Clause 2](#));
- A new clause “Symbols and units” ([Clause 4](#)) has been added;
- Test fluids have been updated ([6.1](#));
- New figures showing the identification of a double ([Figure 1](#)) and a single rod cylinder ([Figure 2](#)) have been added;
- Contamination levels have been updated ([6.2.2](#));
- Fluid temperature requirements have been changed ([6.2.3](#));
- An optional piston seal leakage test ([Clause 9](#)) and an optional friction force test ([Clause 10](#)) have been added.

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

One component of such a system is the hydraulic fluid power cylinder. This is a device that converts fluid 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.

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