International Standard

ISO 15524

Pneumatic fluid power — Cylinders — Single-rod short-stroke cylinders, 1 000 kPa (10 bar) series, bores from 20 mm to 100 mm

Transmissions pneumatiques — Vérins — Vérins course courte à simple tige, série à 1 000 kPa (10 bar), diamètres de 20 mm à 100 mm

Second edition
2026-10

Reference number
ISO 15524:2026(en)

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Published in Switzerland

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Foreword

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This document was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 3, *Cylinders*.

This second edition cancels and replaces the first edition (ISO 15524:2011), which has been technically revised.

The main changes are as follows:

— Addition of Annex A to reflect the state of the art: in the current market, many cylinders of an external threaded rod end are available other than cylinders of an internal threaded rod end. Also, their standards are standardized in some countries. Therefore, the dimensions of an external threaded rod end were added to Annex A as reference.

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.

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Introduction

In pneumatic fluid power systems, power is transmitted and controlled through a gas under pressure within a circuit.

One component of such systems is the pneumatic 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.

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Pneumatic fluid power — Cylinders — Single-rod short-stroke cylinders, 1 000 kPa (10 bar) series, bores from 20 mm to 100 mm

1 Scope

This document establishes a metric series of single-rod pneumatic short-stroke cylinders with bores from 20 mm to 100 mm (inclusive) for use at a maximum working pressure of 1 000 kPa [10 bar[1)]] with and without magnetic function. They are not equipped with adjustable cushioning, so their application is restricted to those systems where adjustable cushioning is not required.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3320, *Fluid power systems and components — Cylinder bores and piston rod diameters and area ratios — Metric series*

ISO 4393, *Fluid power systems and components — Cylinders — Basic series of piston strokes*

ISO 5598, *Fluid power systems and components — Vocabulary*

ISO 6099, *Fluid power systems and components — Cylinders — Identification code for mounting dimensions and mounting types*

ISO 16030, *Pneumatic fluid power — Connections — Ports and stud ends*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5598 apply.

ISO and IEC maintain terminology 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/

4 Bore sizes

Cylinders with the following bore sizes, *AL*, expressed in millimetres, included in this series, shall be in accordance with ISO 3320:

20 – 25 – 32 – 40 – 50 – 63 – 80 – 100

1) 1 bar = 100 kPa = 10^5 Pa; 1 Pa = 1 N/m^2.

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