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

*Transmissions hydrauliques et pneumatiques — Vérins — Série de
base de courses de piston*

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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).

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).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 second edition ~~replaces~~ ^{ISO 4393:2015} the first edition (ISO 4393:1978), which has been technically revised.

Introduction

In fluid power systems, power is transmitted and controlled through a fluid (liquid or gas) under pressure within a circuit. One component of such systems is the fluid power cylinder. This is a device which converts fluid power into linear mechanical force and linear motion. It consists of a movable element, i.e. a piston and piston rod, operating within a cylindrical bore.

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Fluid power systems and components — Cylinders — Basic series of piston strokes

1 Scope

This International Standard specifies the preferred series of piston strokes for application to single-acting and double-acting fluid power cylinders. These strokes are mainly used for pneumatic cylinders but may also be used for hydraulic cylinders.

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 5598, *Fluid power systems and components — Vocabulary*

3 Terms and definitions

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

4 Dimensions

Refer to [Figure 1](#) for the identification of piston strokes. <https://www.iso.org/standard/799e2c-734c-42f4-8339-aea32d8f96db/iso-4393-2015>

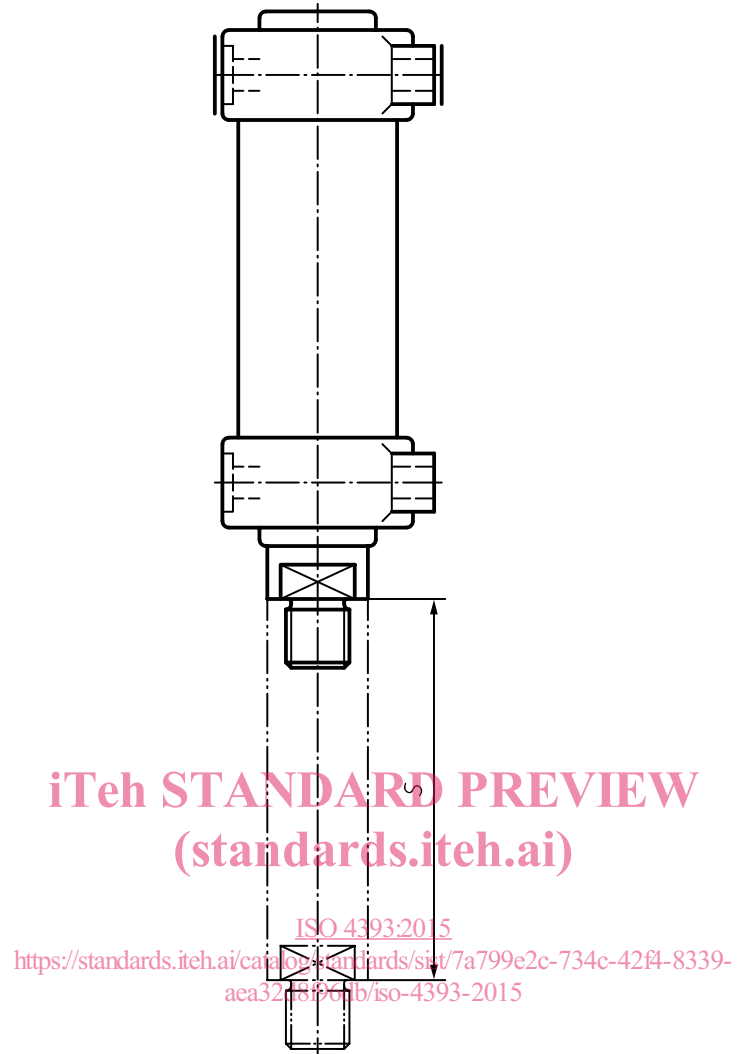


Figure 1 — Identification of piston strokes

Select the preferred series of piston strokes from the dimensions in [Table 1](#).

Table 1 — Piston strokes

Dimensions in millimetres

S	5	10	25	50	80	100	125	160	200	250	320	400	500
NOTE If an extension of the series shown above is required, use the rounded-off R 10 series of values as shown in ISO 497.													

5 Identification statement (reference to this International Standard)

It is recommended that manufacturers use the following statement in test reports, catalogues and sales literature when electing to comply with this International Standard:

“Preferred series of piston strokes selected in accordance with ISO 4393, *Fluid power systems — Cylinders — Basic series of piston strokes.*”

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