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Hydraulik och pneumatik – Cylindrar – Identifieringskod för inbyggnadsmått och fästtyper (ISO 6099:2018, IDT)

Fluid power systems and components – Cylinders – Identification code for mounting dimensions and mounting types (ISO 6099:2018, IDT)

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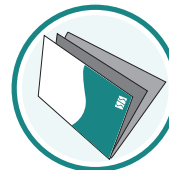
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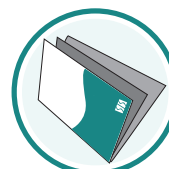
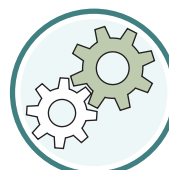
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Den internationella standarden ISO 6099:2018 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av ISO 6099:2018.

Denna standard ersätter SS-ISO 6099:2009, utgåva 2

The International Standard ISO 6099:2018 has the status of a Swedish Standard. This document contains the official English version of ISO 6099:2018.

This standard supersedes the SS-ISO 6099:2009, edition 2

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Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS, who can also provide general information about Swedish and foreign standards.

Denna standard är framtagen av kommittén för Hydraulik och pneumatik, SIS/TK 106.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

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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).

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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.

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

This fifth edition cancels and replaces the fourth edition (ISO 6099:2009), which has been technically revised.

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

- Amendments have been made to figures.

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.

Introduction

In fluid power systems, power is transmitted and controlled through a fluid (liquid or gas) under pressure within an enclosed circuit. Systems and their components are generally designed and marketed for a specific fluid pressure.

One such component is the fluid power cylinder. This is a device which 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.

Although this document provides a code and means of dimensioning for cylinder mounting, it is not intended that all dimensions be standardized. The code specified in this document is not to be considered as complete for the development of future interchangeability standards. It establishes uniform descriptions for dimensions and achieves conformity of language.

The code can be used for analogous dimensions when this involves neither confusion nor misunderstanding.

Fluid power systems and components — Cylinders — Identification code for mounting dimensions and mounting types

1 Scope

This document establishes a convention for the identification of mounting dimensions and types used in the mounting of fluid power cylinders. It specifies a code for identifying cylinder mounting, envelope, accessory and connector dimensions, and for cylinder mounting and accessory types.

This document does not represent a standard list of all fluid power cylinder mounting and accessory types.

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 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.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Identification code for rod end types

4.1 Reference points and letter codes

4.1.1 General

4.1.1.1 First point of reference

Axial dimensions are determined from a reference point that is the same for all cylinders, whatever their mounting method. This theoretical reference point (TRP) is the point of force transfer from the piston rod to the movable element. This point of reference (TRP) is named the first TRP.

4.1.1.2 Second point of reference

For double rod cylinders, the second TRP is defined by the letter code ZM directly attached to the first point of TRP (see [Figure 8](#)). This second TRP is used for accessories on the second rod side.

4.1.2 Plain rod end

For a plain rod end the reference point is located on the rod centreline at the end of the piston rod. See [Figure 1](#).

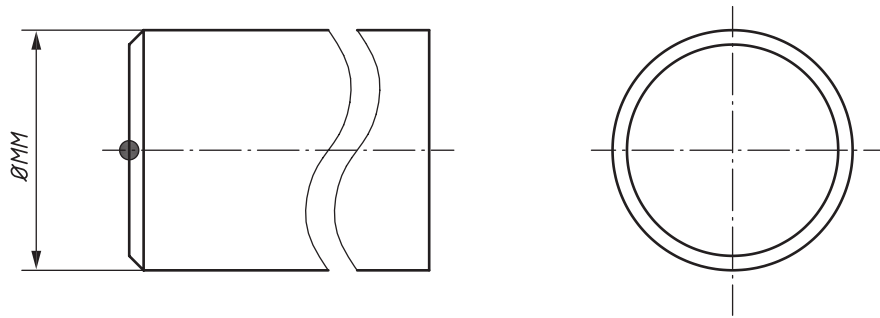


Figure 1 — RPE_x — Plain rod end

4.1.3 Pin rod end

For a pin rod end, the reference point is located at the intersection of the pin and piston rod centrelines. See [Figure 2](#).

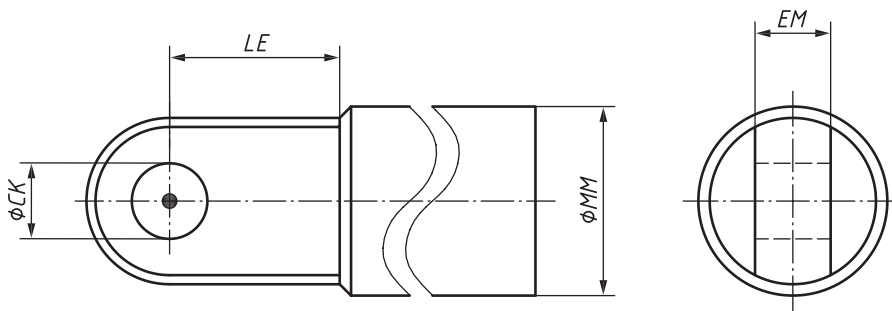


Figure 2 — RPR_x — Pin rod end

4.1.4 Female threaded rod end

For a female threaded rod end, the reference point is located on the rod centreline at the end of the piston rod. See [Figure 3](#).

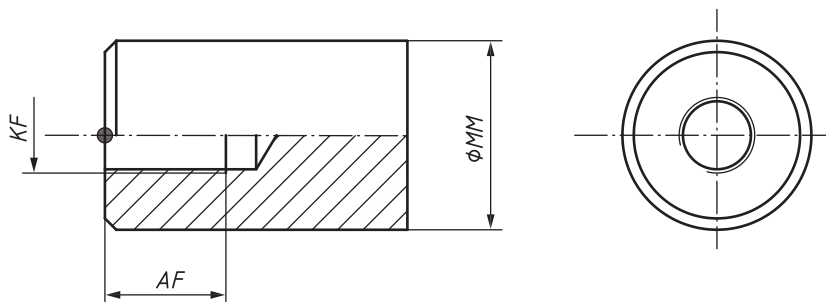


Figure 3 — RTF_x — Female threaded rod end

4.1.5 Male threaded rod end

For a male threaded rod end, the reference point is located on the rod centreline, at the shoulder level. See [Figure 4](#).

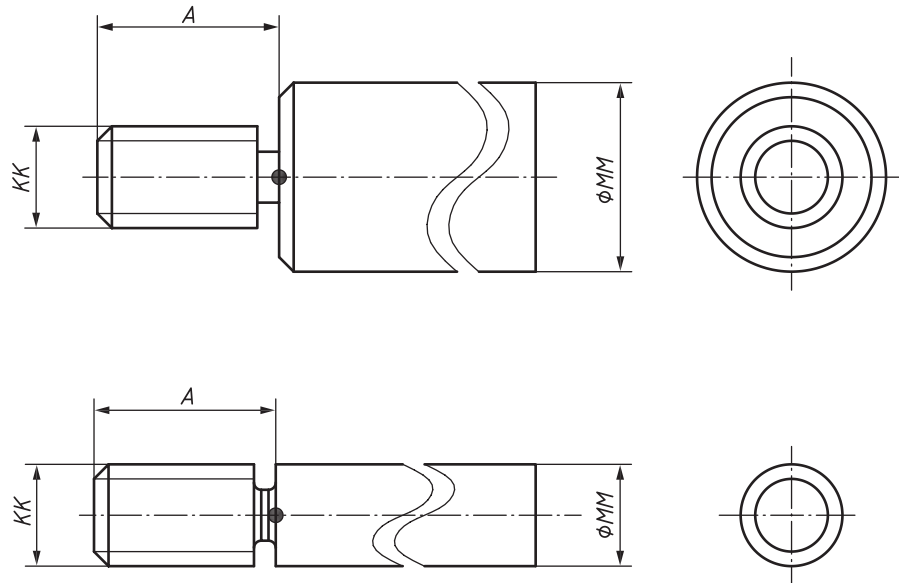
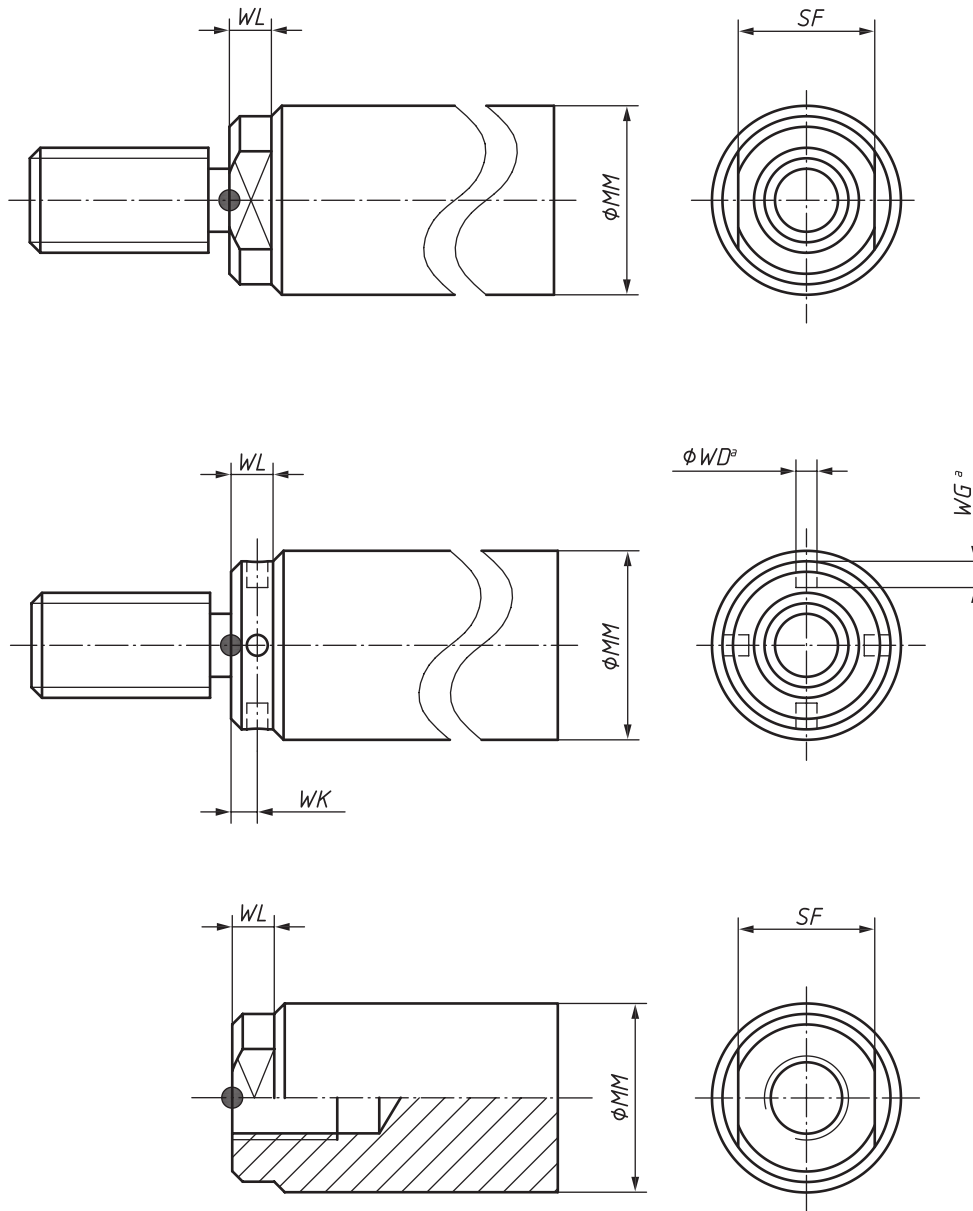


Figure 4 — RTM_x — Male threaded rod end

4.1.6 Wrench flat piston rod end or hook wrench holes

For a wrench flat piston rod end or hook wrench holes piston rod end, the reference point is located on the rod centreline at the shoulder level. See [Figure 5](#).



^a Optional.

Figure 5 — Wrench flat piston rod end or hook wrench holes

4.1.7 Grooved piston rod end — Alternative reference points

For a grooved piston rod end, the reference point is either located on the rod centreline at the end of the piston rod (see [Figure 6](#)) or on the rod centreline at the shoulder level (see [Figure 7](#)).

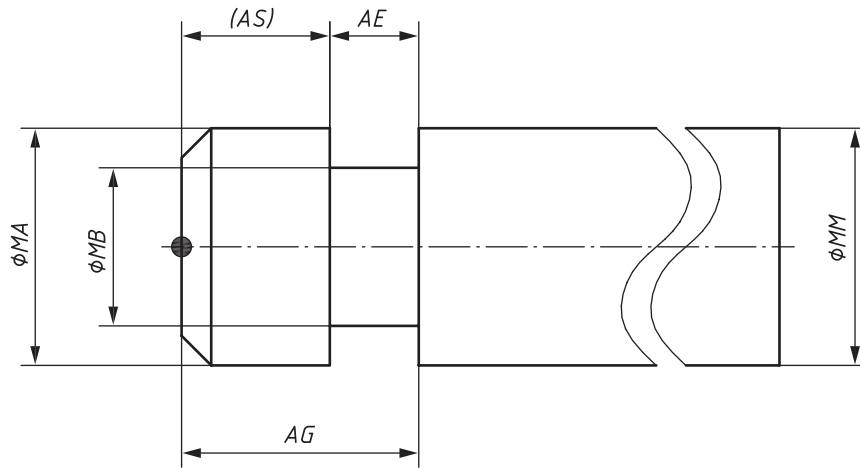


Figure 6 — RFE_x — Grooved piston rod end with TRP at the end of the piston rod

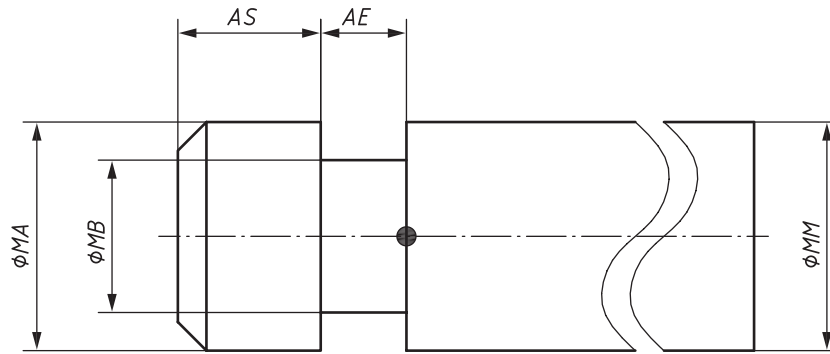


Figure 7 — RFS_x — Grooved piston rod end with TRP at the shoulder level

4.2 Identification code

Table 1 shows the identification code for the rod end types.

Table 1 — Identification code

Identification code	Description
RTM _x	Male threaded rod end
RTF _x	Female threaded rod end
RPE _x	Plain rod end
RPR _x	Pin rod end
RFE _x	Grooved piston rod end with TRP at the end of the piston rod
RFS _x	Grooved piston rod end with TRP at the shoulder level
x	Is designated for the wrench flats or hook wrench: 0 = none 1 = wrench flats 2 = hook wrench