INTERNATIONAL STANDARD

ISO 17165-1

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Hydraulic fluid power — Hose assemblies —

Part 1: Dimensions and requirements

Transmissions hydrauliques — Flexibles de raccordement —

Partie 1: Dimensions et exigences

Reference number
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 17165-1 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 4, *Connectors and similar products and components*.

ISO 17165 consists of the following parts, under the general title *Hydraulic fluid power — Hose assemblies*:

— *Part 1: Dimensions and requirements*

— *Part 2: Recommended practices for hydraulic hose assemblies*

Introduction

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

Components may be connected through their ports by piping (both connectors and conductors). Hose assemblies make up the flexible part of piping.

Hydraulic fluid power — Hose assemblies —

Part 1:
Dimensions and requirements

1 Scope

This part of ISO 17165 specifies requirements for hose assemblies that are manufactured from hoses that conform to ISO 3949 and to all parts of ISO 1436, ISO 3862, ISO 4079 and ISO 11237 and hose fittings with elastomeric seals that conform to ISO 12151-1, ISO 12151-2, ISO 12151-3 and ISO 12151-6.

This part of ISO 17165 contains information of the most important criteria for the selection of preferred types of hoses and hose fittings with elastomeric sealing for use in hydraulic fluid power applications.

Recommendations for installation, storage, life cycle and the necessary inspections to ensure the full functionality of hose assemblies are given in ISO/TR 17165-2.

2 Normative references

The following referenced documents are indispensable for the application 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 1436-1, *Rubber hoses and hose assemblies — Wire-braid-reinforced hydraulic types — Specification — Part 1: Oil-based fluid applications*

ISO 1436-2, *Rubber hoses and hose assemblies — Wire-braid-reinforced hydraulic types — Specification — Part 2: Water-based fluid applications*

ISO 3862-1, *Rubber hoses and hose assemblies — Rubber-covered spiral-wire-reinforced hydraulic types — Specification — Part 1: Oil-based fluid applications*

ISO 3862-2, *Rubber hoses and hose assemblies — Rubber-covered spiral-wire-reinforced hydraulic types — Specification — Part 2: Water-based fluid applications*

ISO 3949, *Plastics hoses and hose assemblies — Textile-reinforced types for hydraulic applications — Specification*

ISO 4079-1, *Rubber hoses and hose assemblies — Textile-reinforced hydraulic types — Specification — Part 1: Oil-based fluid applications*

ISO 4079-2, *Rubber hoses and hose assemblies — Textile-reinforced hydraulic types — Specification — Part 2: Water-based fluid applications*

ISO 5598[1)], *Fluid power systems and components — Vocabulary*

ISO 6743-4, *Lubricants, industrial oils and related products (class L) — Classification — Part 4: Family H (Hydraulic systems)*

ISO 8330, *Rubber and plastics hoses and hose assemblies — Vocabulary*

ISO 8434-1:2007, *Metallic tube connections for fluid power and general use — Part 1: 24° cone connections*

ISO 11237-1, *Rubber hoses and hose assemblies — Wire-braid-reinforced compact types for hydraulic applications — Specification — Part 1: Oil-based fluid applications*

ISO 11237-2, *Rubber hoses and hose assemblies — Wire-braid-reinforced compact types for hydraulic applications — Specification — Part 2: Water-based fluid applications*

ISO 12151-1, *Connections for hydraulic fluid power and general use — Hose fittings — Part 1: Hose fittings with ISO 8434-3 O-ring face seal ends*

ISO 12151-2, *Connections for hydraulic fluid power and general use — Hose fittings — Part 2: Hose fittings with ISO 8434-1 and ISO 8434-4 24° cone connector ends with O-rings*

ISO 12151-3[2)], *Connections for hydraulic fluid power and general use — Hose fittings — Part 3: Hose fittings with ISO 6162-1 or ISO 6162-2 flange ends*

ISO 12151-6[3)], *Connections for hydraulic fluid power and general use — Hose fittings — Part 6: Hose fittings with ISO 8434-6 60° cone ends*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5598 and ISO 8330 and the following apply.

3.1
manufacturing date of the hose assembly
date that a hose and hose fittings were assembled into a hose assembly

1) To be published. (Revision of ISO 5598:1985)

2) Under development. (Revision of ISO 12151-3:1999)

3) Under development.