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Hydraulic fluid power — Dimensions and requirements of quick-action couplings, flush-face type

Transmissions hydrauliques — Dimensions et exigences des raccords rapides de type à face plane

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.

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 4, *Connectors and similar products and components.*

This second edition cancels and replaces the first edition (ISO 16028:1999), which has been technically revised. It also incorporates the Amendment ISO 16028:1999/Amd.1:2006.

The main changes are as follows:

— the normative references (Clause 2) have been updated;

— size 31,5, size 38 and size 51 have been added to Table 1 and Table 2;

— Figure 1 has been updated;

— the performance requirements have been updated (5.2 to 5.6);

— a new Clause 6, Marking, has been added;

— the title of ISO 16028 has been deleted from the identification statement (Clause 7).

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 hydraulic fluid power systems, power is transmitted and controlled through a liquid under pressure within an enclosed circuit. Quick-action couplings are used to quickly join or separate fluid conductor lines, without the use of tools or special devices.

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Hydraulic fluid power — Dimensions and requirements of quick-action couplings, flush-face type

1 Scope

This document specifies the interface dimensions for interchangeability and specifies the performance requirements for hydraulic quick-action couplings, flush-face type, for use at pressures of 10 MPa (100 bar) to 31,5 MPa (315 bar), depending upon the coupling size.

Couplings in accordance with this document are not designed to connect or disconnect under pressure.

Couplings in accordance with this document provide for automatic sealing of the fluid pressure on the upstream side and on the downstream side when the coupling is disconnected.

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*

ISO 6803, *Rubber or plastics hoses and hose assemblies — Hydraulic-pressure impulse test without flexing*

ISO 18869, *Hydraulic fluid power — Test methods for couplings actuated with or without tools*

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 Dimensional requirements

Hydraulic flush-face quick-action couplings shall conform to the dimensions shown in Figure 1 and given in Table 1. The coupling size relates to the nominal inside diameter of the hose, in accordance with ISO 4397, that is recommended for use with the coupling.

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