BSI Standards Publication

Hydraulic fluid power — Test methods for couplings actuated with or without tools

National foreword

This British Standard is the UK implementation of ISO 18869:2017. It supersedes BS ISO 7241-2:2000, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MCE/18/-/4, Connectors and associated components.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Foreword

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For an explanation on 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 the following URL: 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 first edition of ISO 18869 cancels and replaces ISO 7241-2:2000, which has been technically revised with the following changes:

— the title has been changed;

— the scope has been expanded.

Introduction

In hydraulic fluid power systems, power is transmitted and controlled through a liquid under pressure within an enclosed circuit. Couplings are used to join or quickly separate fluid conductors. Quick-action couplings, as defined in ISO 5598, can be connected and disconnected without the use of tools. Other types of couplings require the use of tools for connection and disconnection.

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1 Scope

This document specifies methods for testing and evaluating the performance of quick-action couplings for use in hydraulic fluid power applications. This document does not apply to the testing of tube connections, stud ends for ports and flange connections, which are covered by ISO 19879.

Test methods covered in this document are independent of each other and outline the method to follow for each test. See the respective connector standard for which tests to conduct and for performance requirements. It is not intended that all tests be carried out for every application; it is up to the user of this document to select the applicable tests.

For qualification of the coupling, the minimum number of samples specified in this document is to be tested, unless otherwise specified in the relevant coupling standard or as agreed upon by the manufacturer and the user.

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 48, *Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD)*

ISO 3448, *Industrial liquid lubricants — ISO viscosity classification*

ISO 3601-3, *Fluid power systems — O-rings — Part 3: Quality acceptance criteria*

ISO 4411, *Hydraulic fluid power — Valves — Determination of pressure differential/flow characteristics*

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

ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method*

ISO 6802, *Rubber and plastics hoses and hose assemblies with wire reinforcements — Hydraulic impulse test with flexing*

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

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

3 Terms and definitions

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