INTERNATIONAL STANDARD

ISO 1179-3

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Connections for general use and fluid power — Ports and stud ends with ISO 228-1 threads with elastomeric or metal-to-metal sealing —

Part 3: Light-duty (L series) stud ends with sealing by O-ring with retaining ring (types G and H)

Raccordements pour applications générales et transmissions hydrauliques et pneumatiques — Orifices et éléments mâles à filetage ISO 228-1 et joint en élastomère ou étanchéité métal sur métal —

Partie 3: Éléments mâles série légère (série L) avec étanchéité par joint torique et bague de retenue (types G et H)

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Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **2**
4 Dimensions **2**
5 Requirements **2**
6 Sealing **2**
7 Test methods **3**
8 Designation of stud ends **4**
9 Identification statement (reference to this part of ISO 1179) **5**
Annex A (normative) **Test data form for ISO 1179-1 port and ISO 1179-3 stud ends** **12**
Bibliography **13**

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 1179-3 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 1179-3, together with ISO 1179-1, ISO 1179-2 and ISO 1179-4, cancels and replaces ISO 1179:1981 which has been technically revised.

ISO 1179 consists of the following parts, under the general title *Connections for general use and fluid power — Ports and stud ends with ISO 228-1 threads with elastomeric or metal-to-metal sealing*:

— *Part 1: Threaded ports*

— *Part 2: Heavy-duty (S series) and light-duty (L series) stud ends with elastomeric sealing (type E)*

— *Part 3: Light-duty (L series) stud ends with sealing by O-ring with retaining ring (types G and H)*

— *Part 4: Stud ends for general use only with metal-to-metal sealing (type B)*

Introduction

In fluid power systems, power is transmitted and controlled through a fluid (liquid or gas) under pressure within a circuit. In general applications, a fluid may be conveyed under pressure. Components are connected through their threaded ports by fluid conductor connectors to tubes and pipes or to hose fittings and hoses.

For threaded ports and stud ends specified in new designs in hydraulic fluid power applications, ISO/TC 131/SC 4 recommends that the ISO 6149 series be used because these International Standards specify ports and stud ends with metric threads and O-ring sealing and because the sub-committee would like to help users by recommending one preferred system. ISO/TC 131/SC 4 further recommends that threaded ports and stud ends in accordance with the ISO 1179 series, ISO 9974 series and ISO 11926 series not be used for new designs in hydraulic fluid power applications; these International Standards will be maintained because they specify ports and stud ends that are currently used in hydraulic systems worldwide.

For threaded ports and stud ends specified in new designs in pneumatic fluid power applications, ISO/TC 131/SC 4 recommends that ISO 16030 be used, except where products are to interface with ISO 7-1 threads, because the sub-committee would like to help users by recommending one preferred system. ISO/TC 131/SC 4 further recommends that threaded ports and stud ends in accordance with the ISO 1179 series not be used for new designs in pneumatic fluid power applications; these International Standards will be maintained because they specify ports and stud ends that are currently used in pneumatic systems worldwide.

Significant testing over more than 30 years of use has confirmed the performance requirements of connection ends made from carbon steel. The stud end connections specified in ISO 1179 parts 2, 3 and 4 apply to connectors detailed in ISO 8434 parts 1, 2 and 4.

Connections for general use and fluid power — Ports and stud ends with ISO 228-1 threads with elastomeric or metal-to-metal sealing —

Part 3: Light-duty (L series) stud ends with sealing by O-ring with retaining ring (types G and H)

1 Scope

This part of ISO 1179 specifies dimensions, performance requirements and test procedures for non-adjustable and adjustable light-duty (L series) stud ends with ISO 228-1 threads with sealing by O-ring with retaining ring (types G and H, respectively).

Light-duty (L series) stud ends in accordance with this part of ISO 1179 may be used at working pressures up to 31,5 MPa (315 bar) for non-adjustable stud ends (type G) and up to 20 MPa (200 bar) for adjustable stud ends (type H). The permissible working pressure depends upon size, materials, design, working conditions, application, etc.

Conformance to the dimensional information in this part of ISO 1179 does not guarantee rated performance. Each manufacturer shall perform testing according to the specification contained in this part of ISO 1179 to assure that components made to this part of ISO 1179 comply with the performance ratings.

NOTE 1 This part of ISO 1179 applies to connectors detailed in ISO 8434-2.

NOTE 2 The introduction of this part of ISO 1179 gives recommendations for ports and stud ends to be used for new designs in hydraulic and pneumatic fluid power applications.

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 228-1, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation*

ISO 3601-3:2005, *Fluid power systems — O-rings — Part 3: Quality acceptance criteria*

ISO 4759-1:2000, *Tolerances for fasteners — Part 1: Bolts, screws, studs and nuts — Product grades A, B and C*

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

ISO 19879, *Metallic tube connections for fluid power and general use — Test methods for hydraulic fluid power connections*