
**Fluid power systems and
components — Connectors and
associated components — Nominal
pressures**

*Transmissions hydrauliques et pneumatiques — Raccords et
composants associés — Pressions nominales*

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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).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 third edition cancels and replaces the second edition (ISO 4399:1995), which has been technically revised. The main changes compared to the previous edition are as follows:

- The complete document was reformatted and [Table 1](#) was updated with the most commonly used pressures for connectors.

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 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 connections (fittings) and conduits. Tubes are rigid conduits.

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Fluid power systems and components — Connectors and associated components — Nominal pressures

1 Scope

This document specifies a selection of nominal pressures for hydraulic and pneumatic fluid power connectors and associated components.

NOTE There can be a need to provide a selection of nominal pressures for connectors and associated components used in applications where the external pressure on the components is greater than the internal pressure, for example vacuum service. A document that deals with this subject will be established in due course.

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 2944, *Fluid power systems and components — Nominal pressures*

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 and the following apply.

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

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

3.1

nominal pressure

pressure value assigned to a component, piping or a system for the purpose of convenient designation and indicating its belonging to a series

[SOURCE: ISO 2944:2000, 3.1]

4 Units

4.1 When used in a sentence, the nominal pressure shall be expressed in megapascals (MPa), with the equivalent value in bar¹⁾ shown in parentheses.

4.2 The nominal pressure shall be assumed to be gauge pressure, i.e. the pressure above atmospheric pressure, when no modifier is given.

4.3 Nominal pressures other than those specified here shall be selected from ISO 2944.

1) 1 bar = 100 kPa = 0,1 MPa

5 Nominal pressures

Nominal pressures for connectors and associated components shall be selected from [Table 1](#).

Table 1 — Nominal pressures (gauge)^a

| | |
|-----------|-----------|
| 1 MPa | 10 bar |
| 1,6 MPa | 16 bar |
| 2,5 MPa | 25 bar |
| 3,5 MPa | 35 bar |
| [5 MPa] | [50 bar] |
| [6,3 MPa] | [63 bar] |
| 7 MPa | 70 bar |
| [8 MPa] | [80 bar] |
| 10 MPa | 100 bar |
| 14 MPa | 140 bar |
| 16 MPa | 160 bar |
| [20 MPa] | [200 bar] |
| 21 MPa | 210 bar |
| 25 MPa | 250 bar |
| 28 MPa | 280 bar |
| 31,5 MPa | 315 bar |
| 35 MPa | 350 bar |
| [40 MPa] | [400 bar] |
| 42 MPa | 420 bar |
| 50 MPa | 500 bar |
| 56 MPa | 560 bar |
| 63 MPa | 630 bar |
| 70 MPa | 700 bar |
| 80 MPa | 800 bar |

^a Non-preferred values are shown in square brackets and shall not be used for new design.

6 Identification statement (Reference to this document)

Use the following statement in test reports, catalogues and sales literature when electing to comply with this document:

"Nominal pressures for connectors and associated components are selected from ISO 4399, *Fluid power systems and components — Connectors and associated components — Nominal pressures*"