ISO/FDIS 7368~~:2025(en)~~

~~Date: 2025-03-06~~

ISO/TC 131/SC 5~~/WG 2~~

Secretariat: AFNOR

Date: 2025-xx

Hydraulic fluid power — Two-port slip-in cartridge valves — Cavities

Transmissions hydrauliques — Distributeurs à cartouche, à bride, à deux orifices — Logements

Style Definition ...

~~Copyright notice~~

~~This~~FDIS stage

Formatted: Font: 11 pt, Bold
Formatted: Font: 11 pt, Bold
Formatted: Font: Bold
Formatted: HeaderCentered
Formatted: Line spacing: single, Adjust space between Latin and Asian text, Adjust space between Asian text and numbers
Formatted: zzCopyright address, Line spacing: single, Adjust space between Latin and Asian text, Adjust space between Asian text and numbers
Formatted: French (France)
Formatted: French (France)
Formatted: French (France)
Formatted: zzCopyright address, Line spacing: single, Adjust space between Latin and Asian text, Adjust space between Asian text and numbers
Formatted: FooterPageRomanNumber

Formatted: Font: 11 pt, Bold

Formatted: Font: Bold

Formatted: HeaderCentered, Left

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

Contents

Formatted: Font: 10 pt

Formatted: Font: 10 pt

Formatted: Font: 10 pt

Formatted: FooterCentered, Left, Space Before: 0 pt, Tab stops: Not at 17.2 cm

Formatted: Font: 11 pt

Formatted: FooterPageRomanNumber, Left, Space After: 0 pt, Tab stops: Not at 17.2 cm

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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents.www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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.www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 5, *Control products and components*.

This third edition cancels and replaces the second edition (ISO 7368:2016), which has been technically revised.

The main changes are as follows:

— codification adapted to ISO 5783:2019 (clause, Clause 6 and all figure and table titles);;

— introduction of new reference B on the manifold surface and perpendicularity to diameter d_1 (all figures);

— the runout tolerance of diameter d_2 additionally refers primarily to datum B. This is to avoid measuring errors due to the short measuring distance of diameter d_1 for determining the datum axis;

— R_2 introduced at the face side (inner corner) of outside diameter d_2 for all sizes (all figures);

— the tolerance of depth Z in table 6Table 6 has been changed similar to Table 5Table 5 to +/- ±0,2 mm;

— "NOTE Size 15 and size 16 are not yet listed in ISO 5783" in Clause 4Clause 4 was deleted, because these sizes were included in ISO 5783-2019.

Formatted: Font: 11 pt, Bold
Formatted: Font: 11 pt, Bold
Formatted: Font: Bold
Formatted: HeaderCentered
Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers
Formatted: English (United Kingdom)
Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers, Tab stops: Not at 0.7 cm + 1.4 cm + 2.1 cm + 2.8 cm + 3.5 cm + 4.2 cm + 4.9 cm + 5.6 cm + 6.3 cm + 7 cm
Formatted: Font: Not Italic
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Commented [eXtyles1]: Not found, but similar references exist

ISO 5783, Hydraulic fluid power — Code for identification of valve mounting surfaces
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: FooterPageRomanNumber

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~~www.iso.org/members.html.

Formatted: Font: 11 pt, Bold
Formatted: Font: Bold
Formatted: HeaderCentered, Left
Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers
Commented [eXtyles2]: The URL https://www.iso.org/members.html has been redirected to http://www.iso.org/about/members. Please verify the URL.
Formatted: Font: 10 pt
Formatted: Font: 10 pt
Formatted: Font: 10 pt
Formatted: FooterCentered, Left, Space Before: 0 pt, Tab stops: Not at 17.2 cm
Formatted: Font: 11 pt
Formatted: FooterPageRomanNumber, Left, Space After: 0 pt, Tab stops: Not at 17.2 cm

Formatted: Font: 11 pt, Bold
Formatted: Font: 11 pt, Bold
Formatted: Font: Bold
Formatted: HeaderCentered

Introduction

In hydraulic fluid power systems, power is transmitted and controlled through a liquid under pressure within an enclosed circuit. Typical components found in such systems are hydraulic valves. These devices control flow direction, pressure or flow rate of liquids in the enclosed circuit.

Formatted: FooterPageRomanNumber

Hydraulic fluid power — Two-port slip-in cartridge valves — Cavities

1 Scope

This document specifies only geometrical data relating to cavities in which two-port hydraulic slip-in cartridge valves are mounted in order to ensure interchangeability.

NOTE For example, this document does not specify rated pressures.

It applies to cavities for two-port hydraulic slip-in cartridge valves which are generally applicable to industrial equipment.

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.

<std>ISO 2768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*</std>

<std>ISO 3601-2, *Fluid power systems — O-rings — Part 2: Housing dimensions for general applications*</std>

<std>ISO 5598, *Fluid power systems and components — Vocabulary*</std>

ISO 3601-2, *Fluid power systems — O-rings — Part 2: Housing dimensions for general applications*

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

ISO 21920-1, *Geometrical product specifications (GPS) — Surface texture: Profile — Part 1: Indication of surface texture*

3 Terms and definitions

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

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

— ISO Online browsing platform: available at https://www.iso.org/obphttps://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/https://www.electropedia.org/

4 Symbols

a) a) A, B, *X*, *Y*, Z_1 and Z_2 identify ports the operational usage of which, in some cases, may be different from that given in the following examples:

1) 1) A: inlet, service, return corresponding to the placing in the hydraulic circuit;

Formatted: Centered

Formatted: Main Title 1, Space Before: 0 pt, After: 0 pt, Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers, Tab stops: Not at 0.7 cm + 1.4 cm + 2.1 cm + 2.8 cm + 3.5 cm + 4.2 cm + 4.9 cm + 5.6 cm + 6.3 cm + 7 cm

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

Formatted: Default Paragraph Font

Formatted: Default Paragraph Font

Formatted: Default Paragraph Font

Formatted: Default Paragraph Font, Font: Italic

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers, Tab stops: Not at 0.7 cm + 1.4 cm + 2.1 cm + 2.8 cm + 3.5 cm + 4.2 cm + 4.9 cm + 5.6 cm + 6.3 cm + 7 cm

Commented [eXtyles3]: eXtyles Inline Standards Citation Match reports that the normative reference "ISO 2768-1" is not cited in the text.

Commented [eXtyles4]: ISO 3601-2: current stage is 40.20

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

Formatted: Default Paragraph Font

Formatted: Default Paragraph Font

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers, Tab stops: Not at 1 cm

Commented [eXtyles5]: The URL https://www.iso.org/obp has been redirected to https://www.iso.org/obp/ui. Please verify the URL.

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers, Tab stops: Not at 0.7 cm + 1.4 cm + 2.1 cm + 2.8 cm + 3.5 cm + 4.2 cm + 4.9 cm + 5.6 cm + 6.3 cm + 7 cm

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

Formatted ...

Formatted: Footer, Space After: 0 pt, Tab stops: Not at 17.2 cm

2) 2) B: inlet, service, return corresponding to the placing in the hydraulic circuit;

3) 3) *X*: pilot, inlet;

4) 4) *Y*: pilot, return;

5) 5) Z_1: supplementary pilot, inlet;

6) 6) Z_2: supplementary pilot, return;

b) b) F_1 … F_{12} identify threaded holes for fixing screws;

c) c) G, G_1 and G_2 identify the location of pin holes;

d) d) D identifies the fixing screw diameter;

e) e) r_{max} identifies the mounting surface edge radius;

f) f) R_1 indicates the maximum radius at the bottom of d_1.

g) g) R_2 indicates the maximum radius at the bottom of d_2.

The code system used in this document is defined in ISO 5783.

5 Tolerances

The following requirements shall be applied to the sealing and chamfer surfaces, i.e. that area within the chain lines:

— surface roughness, *Rz*, as indicated on the figures according to in accordance with ISO 21920-1;

— all non-specified surface finishes: *Rz* 63;

— surface roughness values are given in micrometres (µm);

— surface flatness: 0,01 mm over a distance of 100 mm as specified in ISO 3601–2.

The following tolerances shall be complied with along the X, Y and Z axes with respect to the origin:

— pin holes: ±0,2 mm;

— screw holes: ±0,2 mm;

— port holes: ±0,2 mm;

— general tolerances according to in accordance with ISO 2768–1, ISO 2768-m for linear and angular dimensions without tolerances.

As for other dimensions, see Figure 1 to Figure 16.Figure 1 to Figure 16.

Formatted: Font: 11 pt, Bold
Formatted: Font: 11 pt, Bold
Formatted: Font: Bold
Formatted: HeaderCentered
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: Indent: Left: 0 cm, First line: 0 cm, Adjust space between Latin and Asian text, Adjust space between Asian text and numbers, Tab stops: Not at 0.7 cm + 1.4 cm + 2.1 cm + 2.8 cm + 3.5 cm + 4.2 cm + 4.9 cm + 5.6 cm + 6.3 cm + 7 cm
Commented [eXtyles6]: ISO 3601-2: current stage is 40.20
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers
Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers, Tab stops: Not at 0.7 cm + 1.4 cm + 2.1 cm + 2.8 cm + 3.5 cm + 4.2 cm + 4.9 cm + 5.6 cm + 6.3 cm + 7 cm
Commented [eXtyles7]: The reference is to a withdrawn standard which has been replaced

ISO 2768-1, General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications

ISO 22081, Geometrical product specifications (GPS) — Geometrical tolerancing — General geometrical specifications and general size specifications
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: Font: Not Italic
Formatted: Line spacing: single, Adjust space between Latin and Asian text, Adjust space between Asian text and numbers
Formatted: FooterPageNumber

6 Dimensions

6.1 ~~6.1~~ Cavity dimensions for hydraulic slip-in cartridge valves with two main ports shall be selected from ~~Figure 1~~Figure 1 to ~~Figure 16~~Figure 16 and ~~Table 1~~Table 1 to ~~Table 16~~Table 16 as specified in ~~6.2~~6.2 to ~~6.17.~~6.17.

6.2 ~~6.2~~ Cavity dimensions for all types of valves, except main system pressure-relief valves, with main ports of 16 mm nominal diameter (size 06) (code: 7368 - 06 - 01 - 1 - XX) are specified in ~~Table 1~~Table 1 and shown in ~~Figure 1.~~Figure 1.

6.3 ~~6.3~~ Cavity dimensions for main system pressure-relief valves with main ports of 16 mm nominal diameter (size 06) (code: 7368 - 06 - 02 - 1 - XX) are specified in ~~Table 2~~Table 2 and shown in ~~Figure 2.~~Figure 2.

6.4 ~~6.4~~ Cavity dimensions for all types of valves, except main system pressure-relief valves, with main ports of 25 mm nominal diameter (size 08) (code: 7368 - 08 - 03 - 1 - XX) are specified in ~~Table 3~~Table 3 and shown in ~~Figure 3.~~Figure 3.

6.5 ~~6.5~~ Cavity dimensions for main system pressure-relief valves with main ports of 25 mm nominal diameter (size 08) (code: 7368 - 08 - 04 - 1 - XX) are specified in ~~Table 4~~Table 4 and shown in ~~Figure 4.~~Figure 4.

6.6 ~~6.6~~ Cavity dimensions for all types of valves, except main system pressure-relief valves, with main ports of 32 mm nominal diameter (size 09) (code: 7368 - 09 - 05 - 1 - XX) are specified in ~~Table 5~~Table 5 and shown in ~~Figure 5.~~Figure 5.

6.7 ~~6.7~~ Cavity dimensions for main system pressure-relief valves with main ports of 32 mm nominal diameter (size 09) (code: 7368 - 09 - 06 - 1 - XX) are specified in ~~Table 6~~Table 6 and shown in ~~Figure 6.~~Figure 6.

6.8 ~~6.8~~ Cavity dimensions for all types of valves, except main system pressure-relief valves, with main ports of 40 mm nominal diameter (size 10) (code: 7368 - 10 - 07 - 1 - XX) are specified in ~~Table 7~~Table 7 and shown in ~~Figure 7.~~Figure 7.

6.9 ~~6.9~~ Cavity dimensions for main system pressure-relief valves with main ports of 40 mm nominal diameter (size 10) (code: 7368 - 10 - 08 - 1 - XX) are specified in ~~Table 8~~Table 8 and shown in ~~Figure 8.~~Figure 8.

6.10 ~~6.10~~ Cavity dimensions for all types of valves, except main system pressure-relief valves, with main ports of 50 mm nominal diameter (size 11) (code: 7368 - 11 - 09 - 1 - XX) are specified in ~~Table 9~~Table 9 and shown in ~~Figure 9.~~Figure 9.

6.11 ~~6.11~~ Cavity dimensions for main system pressure-relief valves with main ports of 50 mm nominal diameter (size 11) (code: 7368 - 11 - 10 - 1 - XX) are specified in ~~Table 10 and shown in Figure 10.~~Table 10 and shown in Figure 10.

6.12 ~~6.12~~ Cavity dimensions for all types of valves, except main system pressure-relief valves, with main ports of 63 mm nominal diameter (size 12) (code: 7368 - 12 - 11 - 1 - XX) are specified in ~~Table 11 and shown in Figure 11.~~Table 11 and shown in Figure 11.

6.13 ~~6.13~~ Cavity dimensions for main system pressure-relief valves with main ports of 63 mm nominal diameter (size 12) (code: 7368 - 12 - 12 - 1 - XX) are specified in ~~Table 12 and shown in Figure 12.~~Table 12 and shown in Figure 12.

6.14 ~~6.14~~ Cavity dimensions for all types of valves, except main system pressure-relief valves, with main ports of 80 mm nominal diameter (size 13) (code: 7368 - 13 - 13 - 1 - XX) are specified in ~~Table 13 and shown in Figure 13.~~Table 13 and shown in Figure 13.

6.15 ~~6.15~~ Cavity dimensions for all types of valves, except main system pressure-relief valves, with main ports of 100 mm nominal diameter (size 14) (code: 7368 - 14 - 14 - 1 - XX) are specified in ~~Table 14 and shown in Figure 14.~~Table 14 and shown in Figure 14.

6.16 ~~6.16~~ Cavity dimensions for all types of valves, except main system pressure-relief valves, with main ports of 125 mm nominal diameter (size 15) (code: 7368 - 15 - 15 - 1 - XX) are specified in ~~Table 15 and shown in Figure 15.~~Table 15 and shown in Figure 15.

6.17 ~~6.17~~ Cavity dimensions for all types of valves, except main system pressure-relief valves, with main ports of 160 mm nominal diameter (size 16) (code: 7368 - 16 - 16 - 1 - XX) are specified in ~~Table 16 and shown in Figure 16.~~Table 16 and shown in Figure 16.

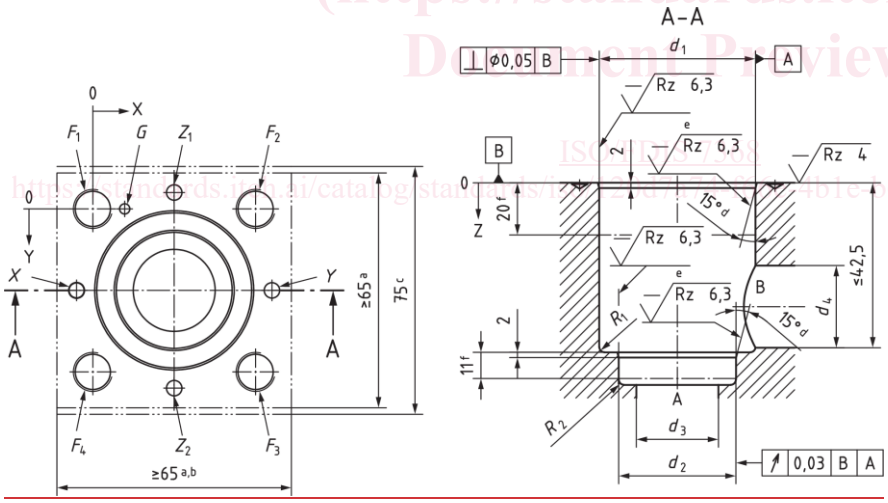
7 Identification statement (reference of this document)

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

"Cavity dimensions conform to ISO 7368, *Hydraulic fluid power — Two-port slip-in cartridge valves — Cavities.*"

Dimensions and geometrical tolerances in millimetres

~~7368_ed3fig1.EPS~~



[a] The dimension specifying the area within the chain lines is the minimum dimension for mounting the cartridge valve cover. The corners of the square may be rounded to a maximum radius, r_{max}, equal to the thread diameter of the fixing screws. Along each axis, the fixing holes are at equal distances to the valve cover mounting surface edges.

[b] Pilot valves and adjustment devices may exceed this dimension.

Formatted: Font: 11 pt, Bold
Formatted: Font: 11 pt, Bold
Formatted: Font: Bold
Formatted: HeaderCentered
Formatted: Font: 11 pt, Not Bold
Formatted: Font: Not Bold
Formatted: Font: 11 pt, Not Bold
Formatted: Font: Not Bold
Formatted: Font: 11 pt, Not Bold
Formatted: Font: Not Bold
Formatted: Font: 11 pt, Not Bold
Formatted: Font: Not Bold
Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers
Commented [eXtyles8]: ISO 7368: current stage is 50.00
Formatted: Default Paragraph Font
Formatted: Default Paragraph Font
Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers, Tab stops: Not at 0.7 cm + 1.4 cm + 2.1 cm + 2.8 cm + 3.5 cm + 4.2 cm + 4.9 cm + 5.6 cm + 6.3 cm + 7 cm
Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers, Tab stops: Not at 0.7 cm + 1.4 cm + 2.1 cm + 2.8 cm + 3.5 cm + 4.2 cm + 4.9 cm + 5.6 cm + 6.3 cm + 7 cm
Formatted: Not Superscript/ Subscript
Formatted Table
Formatted: Font: Not Italic
Formatted: Not Superscript/ Subscript
Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers, Tab stops: Not at 0.71 cm + 1.4 cm + 2.1 cm + 2.8 cm + 3.5 cm + 4.2 cm + 4.9 cm + 5.6 cm + 6.3 cm + 7 cm
Formatted: FooterPageNumber