

CHECK VALVES FOR SIMPLE APPLICATIONS

TVR61 of brass

for hydraulic and pneumatic applications



General



Features & benefits

- ▶ Brass
- ▶ Full flow, large flow capacity
- ▶ Minimum pressure loss
- ▶ Compact dimensions
- ▶ Average leak tightness
- ▶ Low-noise opening and closing

Description

The TVR61 check valves are particularly quiet in operation and are characterized by a high flow rate. The valves can be installed in any position. Only the direction of flow must be observed.

TVR61 check valves are equipped with a FKM seal as standard. Other sealing materials are available on request. It is the customer's responsibility to clarify the media compatibility.

Intended use

The TVR61 check valves were only developed for reliable return flow prevention. They are not designed to be used as filling or safety valves. The separation or shut off between different media or a medium and vacuum also does not represent a fundamental intended use.

If you have such an application or a similar application, please contact us!

The TVR61 check valves are suitable for hydraulic (oils of fluid group 2 as defined in the Pressure Equipment Directive 2014/64/EU) and pneumatic applications in plant engineering as well as for air conditioning, heating installations and systems with submersible pumps and pressure vessels.

General

Flow values

In the table below you will find the flow rates of the various nominal bores of our TVR61 Brass check valves.

| Nominal bore (DN) | Kv (Cv) value | Nominal bore (DN) | Kv (Cv) value | Nominal bore (DN) | Kv (Cv) value |
|-------------------|---------------|-------------------|---------------|-------------------|---------------|
| 8 mm | 6.9 (8.0) | 20 mm | 11.4 (13.3) | 40 mm | 48.8 (56.9) |
| 10 mm | 6.9 (8.0) | 25 mm | 14.5 (16.9) | 50 mm | 68.9 (80.3) |
| 15 mm | 8.8 (10.3) | 32 mm | 27.4 (31.9) | | |

The flow curves were determined on the basis of the DIN/EN 60534-2 standard and refer to a cavitation-free flow (water). System-sided constrictions at the inlet and outlet can reduce the flow rate.

Overview product series

| Product series | Pressure range | Housing material | Connection types | Page |
|----------------|----------------|------------------|------------------|------|
| TVR61-S1 | 0 - 40 bar | Brass | Female thread | 4 |

Overview product series & connection configurations

| Product series | Media inlet B1 | Media outlet B2 | Page |
|----------------|----------------|-----------------|------|
| TVR61-S1-A02 | Female thread | Female thread | 5 |

Technical data

Technical data | TVR61-S1

The following illustrations are examples of check valves of the TVR61 product family.



| Characteristics | Preferred variant space | Extended variant space |
|--|---|---|
| Product series | TVR61-S1 | TVR61-S1 |
| Connection configuration | A02 | A02 |
| Connection sizes for media inlet B1 / media outlet B2 | G1/4", G3/8", G1/2", G3/4", G1", G1 1/4", G1 1/2", G2" | On request |
| Nominal bore (DN) | Acc. to design | Acc. to design |
| Max. allowable operating pressure PS | 20 to 40 bar, acc. to design | Other pressure on request |
| Cracking pressure PC | 0.025 bar | 0.025 bar |
| Temperature range | -20 °C up to +100 °C, acc. to application | Depending on sealing material |
| Housing material | Brass | Brass |
| Spring material | Stainless steel | Stainless steel |
| Sealing material DW | FKM | <ul style="list-style-type: none"> • FKM • NBR on request |
| Sealing concept | Cone sealing | Cone sealing |
| Flow direction | B1 → B2 | B1 → B2 |

Designs with other connection sizes, other operating pressures or NBR sealing material on request

Possible connection configurations

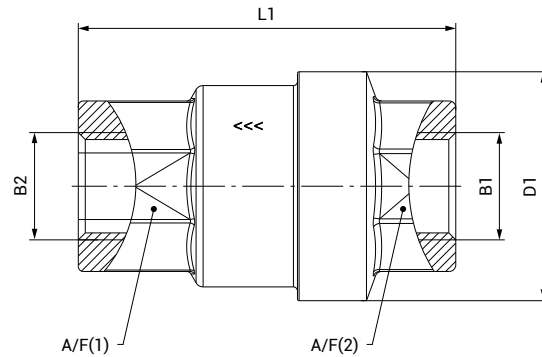
In addition to the table of technical characteristics (see above), the following possible connection configurations of check valves of the TVR61 product family are listed. The connection configuration is part of the product series.

| Connection configuration | Media inlet B1 | Media outlet B2 |
|--------------------------|----------------|-----------------|
| A02 | Female thread | Female thread |

Ordering

Ordering | TVR61-S1-A02 - female thread on both sides

Inlet B1: female thread / outlet B2: female thread



approx. dimensions (mm)

B1 / B2: Whitworth tube thread acc. to DIN EN ISO 228-1

Connection size: media inlet B1 = media outlet B2

Check valves of the preferred variant space:

| Part No. | B1 | B2 | DN | PS (bar) | PC (bar) | DW | L1 | D1 | A/F(1) / A/F(2) | AVL* |
|----------|---------|---------|----|----------|----------|-----|------|------|-----------------|------|
| C1-89289 | G1/4" | G1/4" | 10 | 40 | 0.025 | FKM | 46.5 | 28 | 21 | RM |
| C1-89290 | G3/8" | G3/8" | 10 | 40 | 0.025 | FKM | 46.5 | 28 | 21 | RM |
| C1-89292 | G1/2" | G1/2" | 15 | 40 | 0.025 | FKM | 48 | 34 | 26 | RM |
| C1-89293 | G3/4" | G3/4" | 20 | 30 | 0.025 | FKM | 59 | 41.5 | 32 | RM |
| C1-89294 | G1" | G1" | 25 | 30 | 0.025 | FKM | 67 | 50 | 39 | RM |
| C1-89295 | G1 1/4" | G1 1/4" | 32 | 25 | 0.025 | FKM | 76 | 60.5 | 49 | RM |
| C1-89296 | G1 1/2" | G1 1/2" | 40 | 25 | 0.025 | FKM | 90 | 73.5 | 56 | RM |
| C1-89297 | G2" | G2" | 50 | 20 | 0.025 | FKM | 101 | 89 | 69 | RM |

* AVL: availability see page 12 in catalog no. 45

Further products

You will find more products in our current catalog no. 45.

Technical explanations

TECHNICAL EXPLANATIONS

Abbreviations/Definitions

For explanation of abbreviations and definitions of terms see technical appendix of the corresponding catalog or www.weh.com

Illustrations

The illustrations and/or images used in these data sheet are particularly provided for illustrative purposes only and may differ in some details from the actual product. For binding information, please refer to your individual orders.

Safe product selection

Our WEH® Products are designed to be operated by qualified professional users (insofar as WEH® Products are also designed to be operated by other users in individual cases, this is explicitly stated in the corresponding operating instructions). Please note that WEH does not know your system and therefore - also due to the large number of different potential applications of WEH® Products - cannot perform tests on all potential types of application. You alone are responsible for the selection, configuration and suitability of WEH® Products, especially according to the requirements of your system. Before purchasing WEH® Products, please particularly ensure that our products are compatible with your intended use, your performance data, your material and fluids, your system concept and your system limits according to our product specifications. Please also consider your technical and legal requirements for operation, handling and maintenance. The quality and safety of WEH® Products is our highest priority. For this reason, WEH® Products may not be used outside the specifications in the relevant data sheets and product descriptions. If you are not sure whether the WEH® Product is suitable for your system and intended use, please contact us in advance. We also strongly recommend that you refrain from using third-party spare parts or a combination of WEH® Products with unsuitable third-party products. You alone are responsible for reviewing the suitability of third-party products. WEH® Products and WEH® Spare parts comply with our quality and safety standards.

Service life

WEH® Products are generally products which may be subject to wear and fatigue during operation and depending on your individual application/use. For details - in particular regarding the corresponding minimum inspection and maintenance intervals – please refer to the respective operating instructions for the WEH® Product.

Explanation on the Pressure Equipment Directive

These WEH® Products are generally classified as pressure accessories in accordance with Article 2 (5) of the Pressure Equipment Directive 2014/68/EU and are considered to be similar to piping. These WEH® Products may not be used as safety accessories. Furthermore, it is pointed out, that these WEH® Products are designed and placed on the market in accordance with the requirements of Article 4 (3) of the Pressure Equipment Directive 2014/68/EU. The assessment with regard to a different classification can, however, be made on request.

External change management

WEH reserves the right to update, optimise and adjust its products continuously. This may result in corresponding changes of the product. Customers will be informed proactively or unsolicited by WEH only in individual cases about product updates, product optimisations and/or product adaptations that have been carried out. You are free to contact WEH at any time to request information about any product updates, product optimisations and/or product adjustments.

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» Contact

More questions? – Great! Don't hesitate to contact our experts.

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