

Type **TVR2**

Stainless Steel Check Valve



General

DESCRIPTION



Features

- Stainless steel 1.4305 (AISI 303)
- Extremely leak tight
- Seals are protected from the media flow
- Wear and corrosion resistant
- Low-noise opening and closing
- Low cracking pressure – starting from 0.01 bar
- Max. operating pressure – up to 1000 bar

High performance check valves for use with liquid and gaseous media

The seals are protected from the media flow thus minimizing the effect of dirt particles on the sealing components within the unit. The WEH check valves are constructed from high-grade materials achieving a very durable unit. The check valves are silent in use even under high flow requirements and offer minimum opening pressures from 0.01 bar onwards with high sealing integrity. The high performance sealing system ensures that the TVR2 is suitable for applications with gaseous media. WEH not only offer check valves with threaded connections but also with ferrule fittings, flanges, hose nozzles, nipples or custom designed cartridge valves, even for small quantities.

Application

TVR2 check valves are for use with liquid and gaseous media.

The WEH check valves can be used for a large range of applications in mechanical engineering and construction, chemical / pharmaceutical and food industry, materials-handling and medical technology etc.

OVERVIEW TYPES

WEH offer various types of TVR2 check valves:



TVR2 | Stainless steel check valves
with **double ferrule fitting**
on both sides



TVR2 | Stainless steel check valves
with **external thread on both sides**



TVR2 | Stainless steel check valves
with **internal thread on both sides**



TVR2 | Special solutions for
stainless steel check valves, e.g.
with **external thread and internal thread**

General

TECHNICAL DATA

| Characteristic | Basic version | Options |
|----------------------------------|---|--|
| Port A (outlet) / Port B (inlet) | Double ferrule fitting: tube Ø 6 - tube Ø 16 mm Internal thread: G1/8" - G2" External thread: G1/8" - G1" | Double ferrule fitting: up to max. tube Ø 50 mm on request Internal thread: up to max. G3" on request External thread: up to max. G3" on request |
| Nominal bore DN | Acc. to design | On request |
| Operating pressure PS | Double ferrule fitting: max. 350 bar Internal thread: max. 400 bar (up to G3/4") max. 250 bar (from G1" onwards) External thread: max. 400 bar | Higher pressures on request |
| Cracking pressure PC | Approx. 0.1 bar / 0.5 bar / 1.0 bar, acc. to design | Approx. 0.01 bar / 0.1 bar / 0.2 / 0.5 / 1.0 bar Other cracking pressures on request. |
| Temperature range | -20 °C up to max. +120 °C | Depending on version and application temperature from -45 °C up to max. +300 °C. Other temperature ranges on request |
| Medium | Liquid or gaseous | On request |
| Material | Stainless steel 1.4305 (AISI 303) Up to DN 8 mm, some inner parts brass. | Stainless steel 1.4571 (AISI 316Ti) Other materials on request |
| Spring material | Stainless steel 1.4310 (AISI 301) | Stainless steel 1.4571 (AISI 316Ti) Other materials on request |
| Sealing material | FKM | FFKM, EPDM, Silicone, Urethane, PTFE, PEEK, NBR Other sealing materials on request. |
| Valve seat | Up to DN 6 mm ball sealing, larger dimensions cone sealing | On request |
| Approval | PED97/23/EC For automotive applications other approvals are available. Please contact us! | |

Flow values

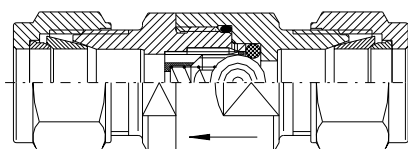
Please find in the table below flow rates for various nominal bores of the TVR2 stainless steel check valves.

| Nominal bore DN | Kv (Cv) Value | Nominal bore DN | Kv (Cv) Value |
|-----------------|---------------|-----------------|---------------|
| 4 mm | 0.2 [0.2] | 20 mm | 10.7 [12.4] |
| 5 mm | 0.4 [0.5] | 25 mm | 14.7 [17.1] |
| 6 mm | 0.6 [0.7] | 32 mm | 27.8 [32.2] |
| 10 mm | 2.9 [3.4] | 40 mm | 38.1 |
| 14 mm | 7.4 [8.6] | 50 mm | 57.4 |
| 16 mm | 8.1 [9.4] | | |

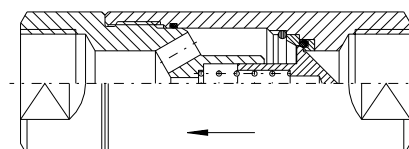
The flow curves were determined on the basis of the standards DIN/EN 60534-2 with water and refer to a cavitation free flow. The curves relate to unrestricted inlet and outlet.

Sealing types

Up to DN 6 mm ball sealing, larger dimensions cone sealing.



Ball seal construction

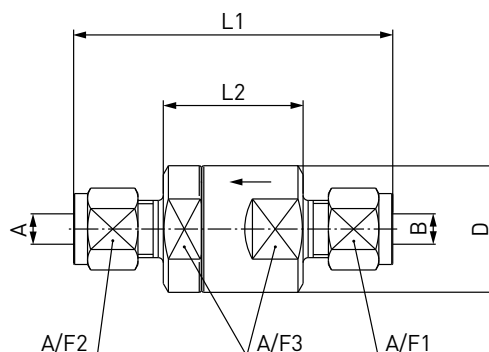


Cone seal construction

Ordering

ORDERING | TVR2 with double ferrule fitting on both sides

approx. dimensions (mm)



Type ball sealing



| Part No. | DN | A / B | PS (bar) | PC (bar) | D | L1 | L2 | A/F1 A/F2 | A/F3 |
|---------------|----|-----------|-------------|-------------|----|------|------|-------------|------|
| C20010 | 5 | Tube Ø 6 | 350 | 0.1 | 25 | 63 | 27.6 | 14 | 22 |
| C20011 | 6 | Tube Ø 8 | 350 | 0.1 | 25 | 65.6 | 24.5 | 16 | 22 |
| C20012 | 6 | Tube Ø 10 | 350 | 0.1 | 25 | 65 | 24.6 | 19 | 22 |
| C20013 | 6 | Tube Ø 12 | 350 | 0.1 | 25 | 69 | 24.5 | 22 | 22 |

Type cone sealing

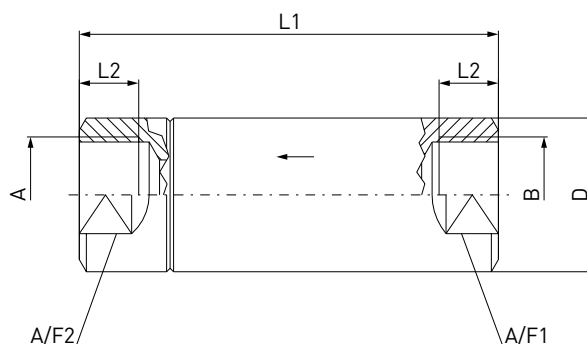


| Part No. | DN | A / B | PS (bar) | PC (bar) | D | L1 | L2 | A/F1 A/F2 | A/F3 |
|---------------|----|-----------|-------------|-------------|----|-----|------|-------------|------|
| C20014 | 10 | Tube Ø 12 | 350 | 0.5 | 35 | 110 | 65.5 | 22 | 30 |
| C20015 | 14 | Tube Ø 16 | 350 | 0.5 | 35 | 110 | 65.5 | 25 | 30 |

Ordering

ORDERING | TVR2 with internal thread on both sides (DIN ISO 228-1)

approx. dimensions (mm)



Type ball sealing



| Part No. | DN | A / B | PS (bar) | PC (bar) | D | L1 | L2 | A/F1 / A/F2 |
|---------------|----|-----------------------|-------------|-------------|----|----|------|-------------|
| C20000 | 6 | G1/8" internal thread | 400 | 0.1 | 25 | 52 | 10 | 22 |
| C20001 | 6 | G1/4" internal thread | 400 | 0.1 | 25 | 52 | 10.5 | 22 |

Type cone sealing



| Part No. | DN | A / B | PS (bar) | PC (bar) | D | L1 | L2 | A/F1 / A/F2 |
|---------------|----|-------------------------|-------------|-------------|----|-----|------|-------------|
| C20002 | 14 | G3/8" internal thread | 400 | 0.1 | 35 | 95 | 17 | 30 |
| C20003 | 14 | G1/2" internal thread | 400 | 0.5 | 35 | 95 | 17 | 30 |
| C20004 | 16 | G3/4" internal thread | 400 | 0.5 | 39 | 110 | 17 | 34 |
| C20005 | 20 | G1" internal thread | 250 | 1.0 | 48 | 120 | 18 | 41 |
| C20006 | 25 | G1 1/4" internal thread | 250 | 1.0 | 60 | 125 | 21.5 | 50 |
| C20007 | 32 | G1 1/2" internal thread | 250 | 1.0 | 65 | 130 | 22 | 55 |
| C20008 | 40 | G1 1/2" internal thread | 250 | 1.0 | 69 | 145 | 22 | 60 |
| C20009 | 50 | G2" internal thread | 250 | 1.0 | 88 | 152 | 24 | 75 |

ORDERING | TVR2 mini check valve with internal thread on both sides (DIN ISO 228-1)

approx. dimensions (mm)



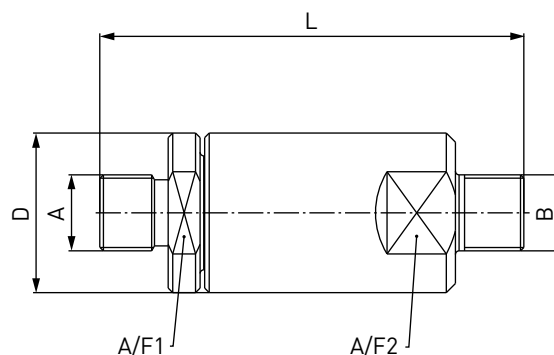
| Part No. | DN | A / B | PS (bar) | PC (bar) | D | L1 | L2 | A/F1 / A/F2 |
|------------------|----|-----------------------|-------------|-------------|----|----|------|-------------|
| C1-52584 | 3 | G1/8" internal thread | 100 | 0.2 | 15 | 45 | 10.5 | 13 |
| C1-98954* | 4 | G1/4" internal thread | 100 | 0.1 | 18 | 45 | 11 | 16 |

* C1-95705 for applications with ozone

Ordering

ORDERING | TVR2 with external thread on both sides (DIN ISO 228-1)

approx. dimensions (mm)



Type ball sealing



| Part No. | DN | A / B | PS (bar) | PC (bar) | D | L | A/F1 / A/F2 |
|---------------|----|--------------------------|-------------|-------------|----|----|-------------|
| C20201 | 3 | G1/8" external thread | 400 | 0.1 | 25 | 52 | 22 |
| C20202 | 5 | G1/4" external thread | 400 | 0.1 | 25 | 52 | 22 |

Type cone sealing



| Part No. | DN | A / B | PS (bar) | PC (bar) | D | L | A/F1 / A/F2 |
|---------------|----|--------------------------|-------------|-------------|----|-----|-------------|
| C20203 | 10 | G3/8" external thread | 400 | 0.1 | 35 | 93 | 30 |
| C20204 | 14 | G1/2" external thread | 400 | 0.5 | 35 | 95 | 30 |
| C20205 | 16 | G3/4" external thread | 400 | 0.5 | 39 | 110 | 34 |
| C20206 | 20 | G1" external thread | 250 | 1.0 | 48 | 120 | 41 |

Ordering

ORDERING | TVR2 with external thread and internal thread (DIN ISO 228-1)

approx. dimensions (mm)



| Part No. | DN | Outlet A | Inlet B | PS (bar) | PC (bar) | D | L | A/F1 / A/F2 |
|-----------------|----|-----------------------|-----------------------|----------|----------|----|----|-------------|
| C1-95696 | 14 | G1/2" internal thread | G1/2" external thread | 400 | 0.1 | 35 | 95 | 30 |

ORDERING | TVR2 with double ferrule fitting and internal thread

approx. dimensions (mm)



| Part No. | DN | Outlet A | Inlet B | PS (bar) | PC (bar) | D | L | A/F1 / A/F2 |
|-----------------|----|-------------------------------|-----------|----------|----------|----|------|-------------|
| C1-91624 | 6 | UNEF 9/16"-24 internal thread | Tube Ø 10 | 350 | 1.0 | 25 | 73.5 | 22 |

ORDERING | TVR2 with double ferrule fitting and external thread

approx. dimensions (mm)



| Part No. | DN | Outlet A | Inlet B | PS (bar) | PC (bar) | D | L | A/F1 / A/F2 |
|-----------------|----|-----------------------|----------|----------|----------|----|------|-------------|
| C1-81108 | 6 | G1/4" external thread | Tube Ø 8 | 350 | 0.05 | 25 | 58.6 | 22 |

Other connector sizes are available on request.

The following combinations are also possible:

- internal thread / external thread
- internal thread / double ferrule fitting
- external thread / double ferrule fitting

Other products

OTHER PRODUCTS

Our check valve catalogue contains further steel or stainless steel check valves.



Further information on our homepage
www.weh.com

Contacting

For queries and further information, please do not hesitate to contact us.

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