

SCREW-IN VALVES FOR GENERAL APPLICATIONS

TVR400 of stainless steel

for hydraulic and pneumatic applications

Features & benefits

- ▶ Soft-sealing → high leak tightness, low leakage
- ▶ Compact and space-saving
- ▶ Flow in screwing direction
- ▶ Use at high temperatures and pressure peaks up to 250 bar
- ▶ High flow rate
- ▶ Easy installation



» Product family TVR400

Description

The WEH® TVR400 Screw-in valves are mechanical shut-off valves which allow free media flow in the screwing direction of screw rotation and which shut off the media flow in the other direction.

Their compact design means that they have a small footprint and are therefore very economical. Unlike valve concepts with metallic sealing, the TVR400 screw-in valves are soft-sealing. Sealing is provided by a spring-loaded sealing cone with o-ring. Therefore, the WEH® Valves are characterized by a high leak tightness, combined with a high flow rate.

The WEH® Screw-in valves can be easily screwed into internally threaded bores using an Allen key. TVR400 valves are made of high quality stainless steel and are therefore very durable and wear-resistant. They are especially low-noise in operation.

WEH® TVR400 Screw-in 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.

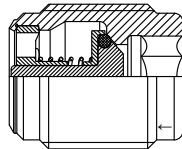
Intended use

The WEH® TVR400 Screw-in valves were only developed for reliable return flow prevention in a gaseous or liquid media flow. 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 WEH® TVR400 Check valves are suitable for hydraulic and pneumatic applications in mechanical and plant engineering, conveyor technology and medical technology as well as in the chemical and pharmaceutical industry.

Sealing concept



Cone seal construction

Flow values

In the table below you will find the flow rates of the various nominal bores of our WEH® TVR400 Stainless steel screw-in valves.

Nominal bore (DN)	Kv (Cv) value	Nominal bore (DN)	Kv (Cv) value	Nominal bore (DN)	Kv (Cv) value
3.6 mm	0.286 (0.331)	6 mm	0.640 (0.743)	7 mm	1.203 (1.395)

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.

» Product family TVR400

Overview product series

Product series	Pressure range	Housing material	Connection types	Page
TVR400-S1	0 - 250 bar	Stainless steel	Male thread	54

Overview product series & connection configurations

Product series	Media inlet B1	Page
TVR400-S1-A20	Male thread	55

» Product series TVR400-S1 | 0 up to 250 bar

Technical data

The following illustrations are examples of WEH® Check valves of the TVR400 product family.



Characteristics	Preferred variant space	Extended variant space
Product series	TVR400-S1	TVR400-S1
Connection configuration	A20	A20
Connection sizes for media inlet B1	<ul style="list-style-type: none"> • G1/8", G1/4", G3/8" • M10x1.0 M14x1.5 M18x1.5 	<ul style="list-style-type: none"> • G1/8", G1/4", G3/8" • M10x1.0 M14x1.5 M18x1.5
Nominal bore (DN)	Acc. to design	Acc. to design
Max. allowable operating pressure PS	250 bar	250 bar
Cracking pressure PC	0.5 ± 0.2 bar	Other cracking pressures on request
Temperature range	-20 °C up to +200 °C	Depending on sealing material
Leak rate	1 x 10 ⁻³ mbar x l/s	1 x 10 ⁻³ mbar x l/s
Housing material	Stainless steel	Stainless steel
Spring material	Stainless steel	Stainless steel
Sealing material DW	FKM	<ul style="list-style-type: none"> • FKM • EPDM
Sealing concept	Cone sealing (with internal o-ring)	Cone sealing (with internal o-ring)
Flow direction	In screwing direction	In screwing direction

Other designs on request

Possible connection configurations

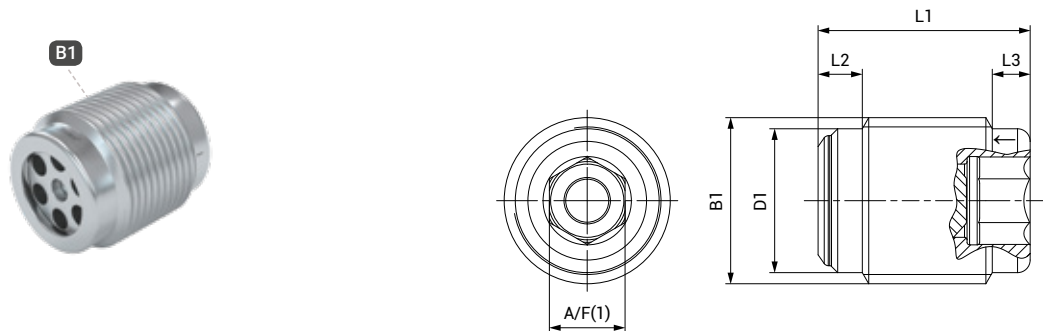
In addition to the table of technical characteristics (see above), the following possible connection configurations of WEH® Check valves of the TVR400 product family are listed. The connection configuration is part of the product series.

Connection configuration	Media inlet B1
A20	Male thread

» Product series TVR400-S1 | 0 up to 250 bar

Ordering | TVR400-S1-A20 - male thread

Inlet B1: male thread



approx. dimensions (mm)

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

Check valves of the preferred variant space:

Part No.	B1	DN	PC (bar)	DW	L1	L2	L3	D1	A/F(1)	AVL*
C1-109260	G1/8"	3.6	0.5 ± 0.2	FKM	15.5	3	2	8.5	5	RM
C1-136902	G1/4"	6	0.5 ± 0.2	FKM	17	3.5	3	11.5	6	RM
C1-109268	G3/8"	7	0.5 ± 0.2	FKM	20	3.5	3	14.5	8	RM

* AVL: availability see page 12

B1: Metric ISO thread acc. to DIN 13

Check valves of the preferred variant space:

Part No.	B1	DN	PC (bar)	DW	L1	L2	L3	D1	A/F(1)	AVL*
C1-109280	M10x1.0	3.6	0.5 ± 0.2	FKM	15.5	3	2	8.5	5	RM
C1-109284	M14x1.5	6	0.5 ± 0.2	FKM	17	3.5	3	11.5	6	RM
C1-109288	M18x1.5	7	0.5 ± 0.2	FKM	20	3.5	3	14.5	8	RM

* AVL: availability see page 12

Configurable check valves of the extended variant space:

Below you will find possible examples of TVR400 check valves in the extended variant space. This offers further configuration options (connection configuration, connection size, cracking pressure, sealing material) beyond the preferred variant space.

Part No.	B1	DN	PC (bar)	DW	L1	L2	L3	D1	A/F(1)	AVL*
On request	G1/8"	3.6	0.5 ± 0.2	EPDM	On request					AH
On request	G3/8"	7	0.2	EPDM	On request					AH
On request	M14x1.5	6	0.1	FKM	On request					AH

* AVL: availability see page 12

Further designs that do not correspond to the extended variant space can be requested individually. Please refer to *chapter 1.9 Information on your request*. Please note that the availability for individual, customer-specific check valves may vary.