

# Product Data Sheet

## Vent Filter Housings FWPV..

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### Field of application

Type FWPV vent filter housings are designed for venting tanks at atmospheric conditions (pressure equalisation), i.e. when filtered air must be feed or exhausted from tanks due to changing filling levels.

In most cases type FWPV vent filter housings are used in conjunction with EFSTP-STPL sterile filter elements.



**Type FWPV vent filters must not be used if the tank the filter is related to is not equipped with a suitable safety valve and burst plate for overpressure and vacuum protection.**

### Features

Type FWPV vent filter housings are made from stainless steel, manufactured in a deep drawing process with final assembling by welding processes. For surface finishing purposes the filter housings are electro polished inside and outside, additionally mechanically polishing is provided on the outer side.

Each type FWPV vent filter housing is designed for one filter element of type EFSTP to be inserted. In most cases filtration grade STPL for sterile filtration is used while other filtration grades can be equipped as well, depending on the application. Connection and sealing between filter element and filter housing is provided by a double O-ring bayonet coupling.

The housings are provided with a threaded connection (connection size depends on the model) while many other connection types are available on request. The connection links to the inside of the fitted filter element. The outside of the filter elements is directly connected to atmosphere.

A stainless steel bowl offered by the vent filter housing protects the fitted filter element, locked to the connection body and secured by means of a knurled screw.



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Specifications subject to change without notice

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### Basic data

Model	Nominal volume flow (VN) <sup>*1 *3</sup>	Nominal volume flow (VN) <sup>*2 *3</sup>	Max. operating pressure	Min./Max. operating temperature
FWPV70	6 m <sup>3</sup> /h	20 m <sup>3</sup> /h	≤ 0.5 bar	-10°C - +200°C
FWPV110	10 m <sup>3</sup> /h	30 m <sup>3</sup> /h		
FWPV120	12 m <sup>3</sup> /h	35 m <sup>3</sup> /h		
FWPV140	30 m <sup>3</sup> /h	100 m <sup>3</sup> /h		
FWPV180	55 m <sup>3</sup> /h	160 m <sup>3</sup> /h		
FWPV190	70 m <sup>3</sup> /h	200 m <sup>3</sup> /h		

\*1 - refers to 1 bar(a) and 20°C at 15 mbar differential pressure related to a EFSTP..STPL filter element

\*2 - refers to 1 bar(a) and 20°C at 50 mbar differential pressure related to a EFSTP..STPL filter element

\*3 - type FWPV vent filters must not be used if the tank the filter is related to is not equipped with a suitable safety valve and burst plate for overpressure and vacuum protection

### Volume flow conversion factors

#### «F1» - Pressure (in bar)

0
1.00

#### «F2» - Temperature (in °C)

-10	0	10	20	30	40	50	60	70	80	90	100	110	120
1.11	1.07	1.04	1.00	0.97	0.94	0.91	0.88	0.85	0.83	0.81	0.79	0.77	0.75

#### Calculation of the converted volume flow

<b>Converted volume flow VK</b>	<b>Nominal required volume flow VN<sub>min</sub></b>
$VK = VN \times F1 \times F2$	$VN_{min} = VK / F1 / F2$

VK : Converted volume flow calculated for the operating conditions

VN<sub>min</sub>: Nominal required volume flow calculated for the operating conditions, based on the volume flow at operating conditions

### Maintenance rules

All models	In the course of filter element replacement or cleaning: checking for serious corrosion
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### Materials

Component	
Filter housing	Stainless steel 1.4301 (AISI 304, V2A), option for 1.4541 (AISI 321)
Mounting parts, fittings	Stainless steel 1.4301 (AISI 304, V2A), option for 1.4541 (AISI 321)
Sealing materials	---
Surfaces	Surface finish inside : Ra < 0,8μ - electro polished Surface finish outside : electro polished / mechanically polished

### Connections, dimensions and weight

Model	Connection	Height	Width	Depth	Weight
FWPV70	G 1/2	166 mm	70 mm	70 mm	1.0 kg
FWPV110	G 1	221 mm	70 mm	70 mm	1.3 kg
FWPV120	G 1 1/2	221 mm	70 mm	70 mm	1.8 kg
FWPV140	G 2	406 mm	129 mm	129 mm	3.3 kg
FWPV180	G 2 1/2	654 mm	129 mm	129 mm	5.1 kg
FWPV190	G 3	901 mm	129 mm	129 mm	6.7 kg

### Classification according to Pressure Equipment Directive 2014/68/EU for group 2 fluids

Model	Volume	Category
All models	Vent filter housings are not part of the Pressure Equipment Directive 2014/68/EU (maximum operating pressure ≤ 0.5 bar)	

### Other directives

Model	
All models	---

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