



Additional charge for differential pressure gauge

### Characteristics

Type	FV 33	FM 33	FA 33
Port	G 1/2		
Type of construction	Pre-filter 0.3 µm	Micro-filter 0.01 µm	Activated carbon filter
Mounting position	Vertical, drain plug at bottom		
Input pressure p <sub>1</sub>	Min. 0.5 bar Min. 1.5 bar with fully automatic drain Max. 20 bar Max. 20 bar with fully automatic drain		
Dust separation	>0.3 µm / 99.999%	>0.01 µm / 99.999%	
Residual oil content		0.01 mg/m <sup>3</sup>	0.005 mg/m <sup>3</sup>
Temperature Ambient / medium	Max. 60 °C (other temperature ranges on request)		
Nominal flow Q <sub>n</sub>	500 l/min	720 l/min	1500 l/min
Δp*	0.02 bar	0.09 bar	0.2 bar
Bowl capacity	Max. 25 cm <sup>3</sup>		
Condensate drain	Semi-automatic Fully-automatic on request		
Mounting type	Two through holes, bracket		
Weight [g]	0.800		

\*See overleaf for flow rate equation

### Materials

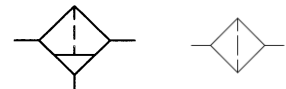
Designation	Material
Head piece	Zinc – Z 410
Cover	Zinc – Z 410
O-ring 50 x 2	NBR
O-ring 29.87 x 1.78	NBR
Pre-filter element	Paper – POM
Micro-filter element	Borosilicate – POM
Activated carbon element	Activated carbon – POM
Condensate bowl	Polycarbonate
Oil bowl	Polycarbonate

### Fine filters

Size 3

### FV 33 / FM 33 / FA 33

Pre-filter 0.3 µm  
Micro-filter 0.01 µm



### Ordering information

Options	
K(-HA)	Plastic bowl
S	Bowl guard
M	Metal bowl with sight glass
A	Automatic drain valve

**Order example:**  
FV 33 K-HA  
→ Pre-filter with plastic bowl and semi-automatic condensate drain valve

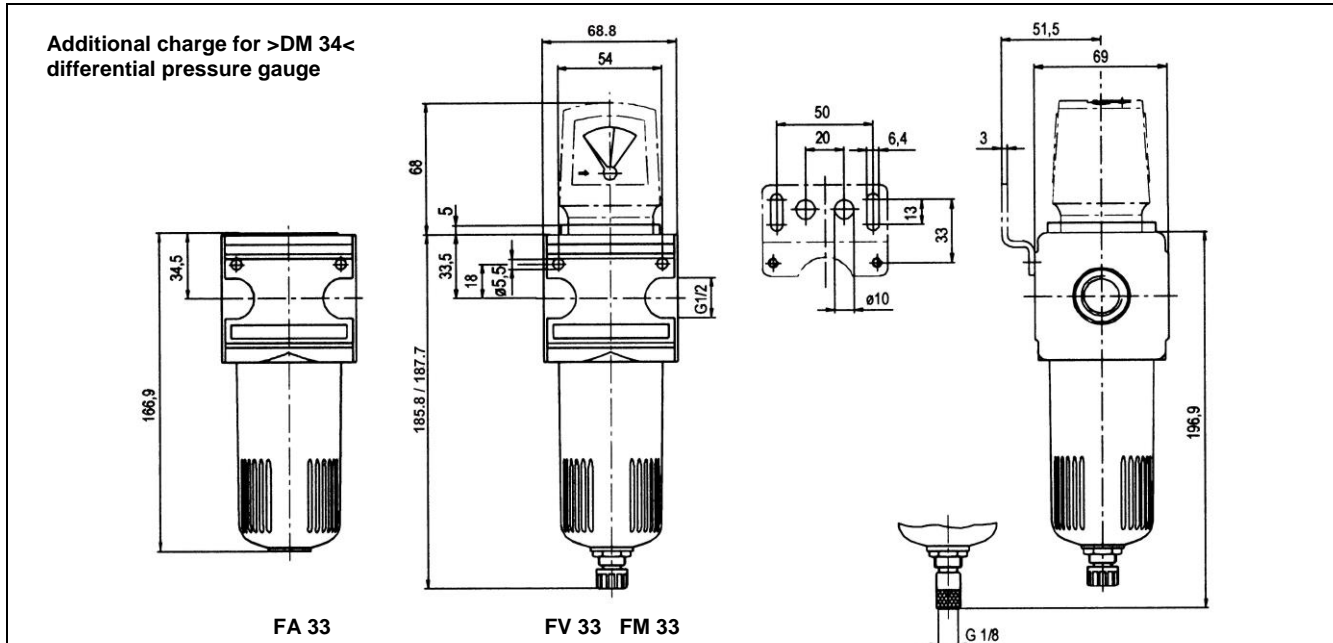
### Description

- Block design
- Simple block mounting of several devices with conical clamps (**no tools required**)
- Joiner sets (**KP 05**) are required for block mounting with other devices
- Flow direction indicated by arrows
- **Entry in direction of arrow**
- Bowl guard can be mounted without tools

### Filter elements

Designation	Part No.
Pre-filter element	V 38/60
Micro-filter element	M 38/60
Activated carbon element	A 38/90

Dimensions [mm]



Typical applications

Pre-filter FV 33

For compliance with **strict** compressed air purity requirements. Fine particles larger than 0.3 µm, which are able to pass through the sintered filter elements unhindered, are separated in the **FV 33** filter.

- Typical applications** include:
- Chemical industry
  - Paint spraying plants
  - Food processing industry
  - Pharmaceutical industry
  - Precision instruments

Micro-filter FM 33

For compliance with **very strict** compressed air purity requirements. Very fine particles larger than 0.01 µm and oil mist are separated in the **FM 33** filter.

- Typical applications** include:
- Paint spraying plants
  - Food processing industry
  - Pharmaceutical industry
  - Precision instruments

Activ. carbon filter FA 33

For **filtering odours** out of compressed air. The activated carbon absorbs the oil vapour molecules contained in the air. A separate filter route prevents activated carbon particles from entering the air flow.

- Typical applications** include:
- Food processing industry
  - Medical equipment
  - Pharmaceutical industry

Flow rates

Required flow  $Q = \text{nominal flow } Q_n \times \text{correction factor } f$  →  $Q = Q_n \times f$

p [bar]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
f	0.46	0.6	0.68	0.77	0.85	0.93	1	1.07	1.11	1.17	1.23	1.28	1.32	1.36	1.4	1.46

Accessories

<b>Designation</b>	<b>Part No.</b>	<b>Designation</b>	<b>Part No.</b>
Bracket kit	ZW 33	Polycarbonate bowl with semi-automatic drain valve ( <b>FV / FM</b> )	KS 33 F-HA
Joiner set for block mounting with other devices	KP 33	Polycarbonate bowl ( <b>FA</b> )	KS 33 N
Joiner set for narrow manifolds	KP 33 Z	Metal bowl with sight glass ( <b>FV / FM</b> )	MS 33 FS
Automatic drain valve	655.6.900	Metal bowl with sight glass ( <b>FA</b> )	MS 33 NS
		Differential pressure gauge	DM 34

Art. No.	Ident No.
FV 33 K-HA	100528
FV 33 S	100530
FV 33 M	100532
FV 33 K-A	121295
FV 33 S-A	121297
FV 33 M-A	121296
FM 33 K-HA	100534
FM 33 S	100536
FM 33 M	100538
FM 33 K-A	121078
FM 33 S-A	121080
FM 33 M-A	121079
FA 33 K	100540
FA 33 S	100542
FA 33 M	100544

Art. No.	Ident No.
V 38/60	100545
M 38/60	100546
A 38/90	100550
ZW 33	100441
KP 33	100442
KP 33 Z	100443
655.6.900	100362
KS 33 F-HA	100504
KS 33 N	100548
MS 33 FS	100502
MS 33 NS	100549
DM 34	100172