







WaterflowControl

WFC-FS-AVA-25-PRV

Manual Backwash Filter + PRV



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Scope of Supply

WFC Avanti HWS, consisting of:

1	Top in brass with non-return valve
2	Connection joint with test screw and/or connection possibility for supply pressure gauge
3	Transparent cylinder with filter element
4	Hose connection for flushing water
5	Rotary button for backwashing element
6	Back-pressure gauge
7	Spring hood
8	Indicator for back-pressure setpoint
9	Locking screw
10	Rotary button for pressure reducing valve

Purpose

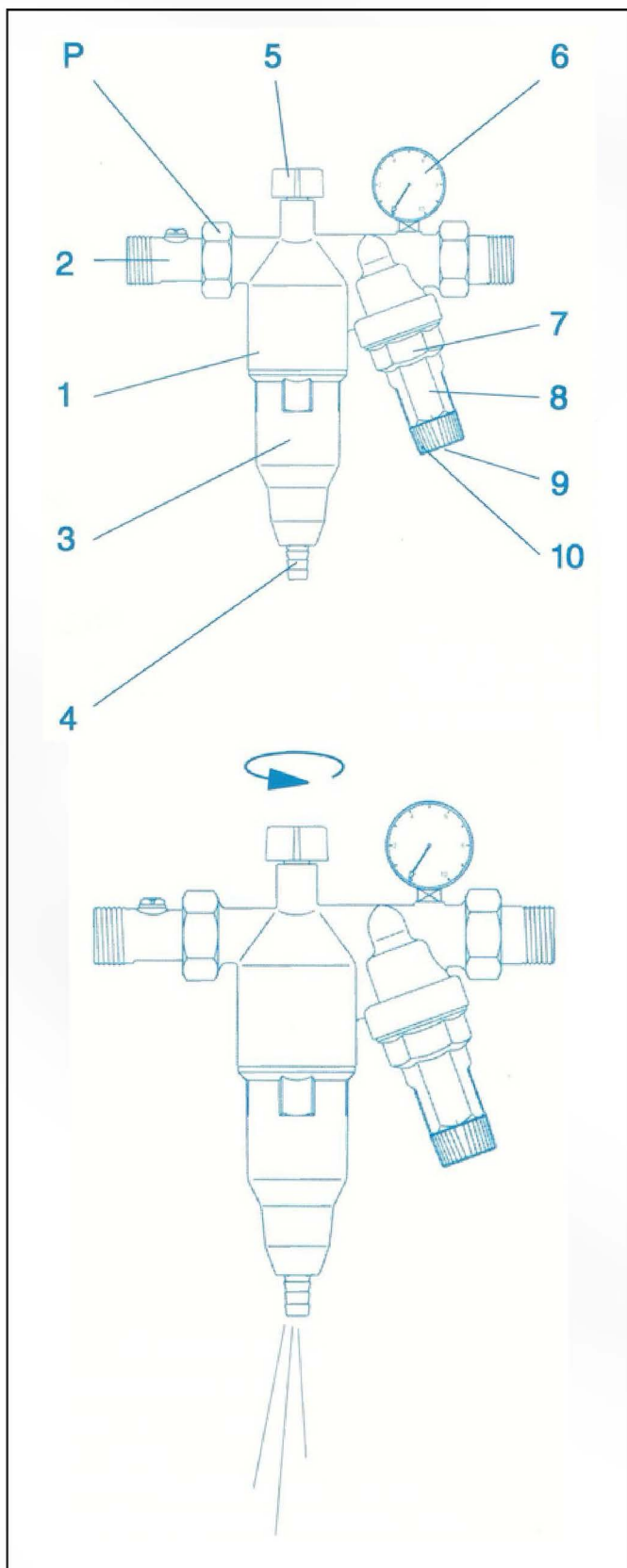
The domestic water station BWT Avanti HWS is a combination of valves and installations containing in series (according to DIN 1988) a non-return valve, backwashing filter and pressure reducing valve. The non-return valve prevents water from being sucked back out of the domestic water installation into the piping network.

The filter is intended for the filtration of drinking and service water. It protects the water lines and the water carrying system parts connected to them from functional disturbances and corrosion damage caused by impurities particles such as rust particles, chippings, sand, hemp, etc.

The filter cannot be used for chemically treated circulating water, process water and cooling water for continuous cooling systems.

For water with coarse dirt particles a coarse dirt separator is to be arranged upstream. The filter is not suitable for oils, greases, solvents, soaps and other lubricating fluids. It is not suitable either for separating substances soluble in water.

The pressure reducing valve is used for pressure reduction and setting of the desired back pressure in the domestic water supply unit.



Caution: The installation of the unit must be carried out by the public water-supply company in accordance with the installation and operating instructions according to AVB Wasser V, Art. 12.2 or by an installation company included in the approved list of plumbing companies of a public water-supply company.

Function

The raw water flows through the raw water inlet into the domestic water station. The non-return valve opens when water is taken off only in flow direction. It is tightly closed in rest position or with counter-pressure.

The raw water flows into the filter and there from the inside to the outside through the filter element to the clear water outlet. At the same time impurities larger than 90/125 µm are held back on the inside of the filter fabric. The filter element can be cleaned by backwashing at regular intervals. The backwashing is carried out manually. At the same time, after opening of the backwashing lever, first the coarse dirt particles are washed out and then by turning the backwashing element the particles adhering to the filter fabric are sucked off and washed out.

The pressure reducing valve keeps the adjusted back pressure almost constant, even if the supply pressure fluctuates. A uniform and not excessively high pressure is less harmful to the valves and equipment of the entire domestic water installation.

Installation Requirements

Observe local installation regulations, general guidelines, general hygiene conditions and the technical specifications. A connection to the sewage system (drain) with min. DN 40 should be available.

Fit the domestic water station in cold water lines before the objects to be protected (see installation diagram). Always provide shut-off valves. The shut-off valve after the pressure reducing valve must be equipped with a drain valve.

Caution: The place of installation must be free from frost and avoid disturbing influences (e.g. solvent vapours, fuel oil, lyes, chemicals of all kinds, UV radiation and heat sources above 40 °C).

The transparent plastic part must be replaced after hard shocks and impacts (e.g. with an unsuitable tool, or after falling onto a stone floor, etc.) even if there is no visible damage (danger of bursting).

Caution: Keep the plastic part free from oil and grease. Avoid extreme pressure surges by installing a solenoid valve downstream, etc.

Pressure-sensitive equipment arranged downstream must be secured with safety valves.

Installation

Fit domestic water station in flow direction into the horizontal cold water pipe (see installation diagram).

Fit pressure gauge, providing a seal.

Route the flushing water connection with hose to the sewage system or provide a collecting basin (approx. 10 litres).

Please note: According to DIN 1988 the flushing water hose must be fastened at a distance of at least 20 mm from the highest possible wastewater level (free discharge).

Startup

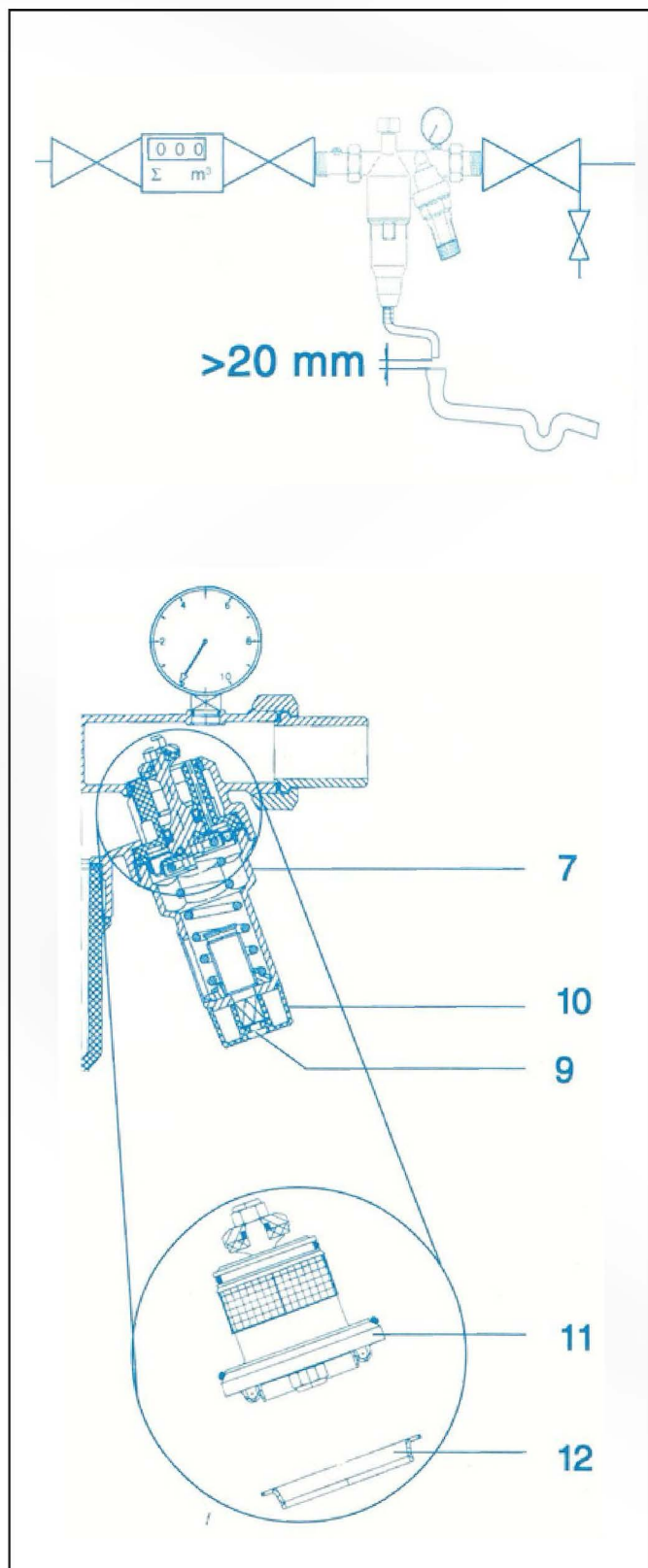
Check the domestic water station and the flushing water line for correct and proper installation.

The shut-off valves must not be opened yet. Check the transparent cylinder (3) to ensure correct fit and close rotary button for backwashing element (5) clockwise.

Slowly open the shut-off valves before and after the domestic water station and deaerate the piping at the next tapping point after the domestic water station.

Open the rotary button (5) anticlockwise and after removing approx. 5 litres close it again. Check the domestic water station for leaks.

The pressure reducing valve is factory set to a back pressure of 4 bar. In order to change the back pressure, loosen the locking screw (9) and turn the rotary button for pressure reducing valve (10). The back pressure can be changed by turning the rotary button (10) (control range 1.5 -6 bar).



Turning in a clockwise direction = higher back pressure.
Turning in anticlockwise direction = lower back pressure.

The indicator for the back pressure setpoint (8) is a standard value. The pressure gauge (6) shows the pressure precisely. During setting, a draw-off tap after the pressure reducing valve must be opened briefly several times and closed again. When water is drawn off, the back pressure drops temporarily.

The back pressure must not exceed 80% of the initial pressure of the hot water safety valve (DIN 1988).

Operation

Change the back pressure, see Startup.

Backwashing must be carried out once per month in order to prevent the settling of impurities on the filter fabric (in case of severe pollution possibly more often).

Before backwashing, provide a collecting basin, if the flushing water connection is not connected to the sewage system.

Backwashing

Turn rotary button (5) anticlockwise, until water flows audibly and then close again. Check the filter for leaks.

The plastic parts may be cleaned only with a soft, clamp cloth. Solvents or detergents must not be used.

Replacing the Valve Insert

Close shut-off valves before and after the domestic water station and relieve the pressure at both sides. Loosen the locking screw (9) and turn the rotary button (10) in an anticlockwise direction up to the stop. Screw off the spring hood (7) with a ring spanner. Remove the valve insert (11) and the sliding ring (12).

Coat the O-rings of the new valve insert with silicone grease and insert the valve insert in the body, at the same time ensuring the correct installation of the O-rings. Insert the sliding ring and screw on the locking screw. Adjust the pressure reducing valve, as described under Startup.

Maintenance

All technical equipment requires regular maintenance. In accordance with DIN 1988 this must always be carried out by specialist personnel who also replace the parts subject to wear and tear. Maintenance must be carried out once a year, in the case of communal units twice a year.

Warranty

In the event of a failure during the warranty period, please contact our after-sales service department, stating the appliance type and the production number (see Specifications and/or rating plate of the appliance).

Work performed under warranty may only be carried out by the after-sales service department.

Work performed under warranty by a specialist company require the express consent by our aftersales service management.

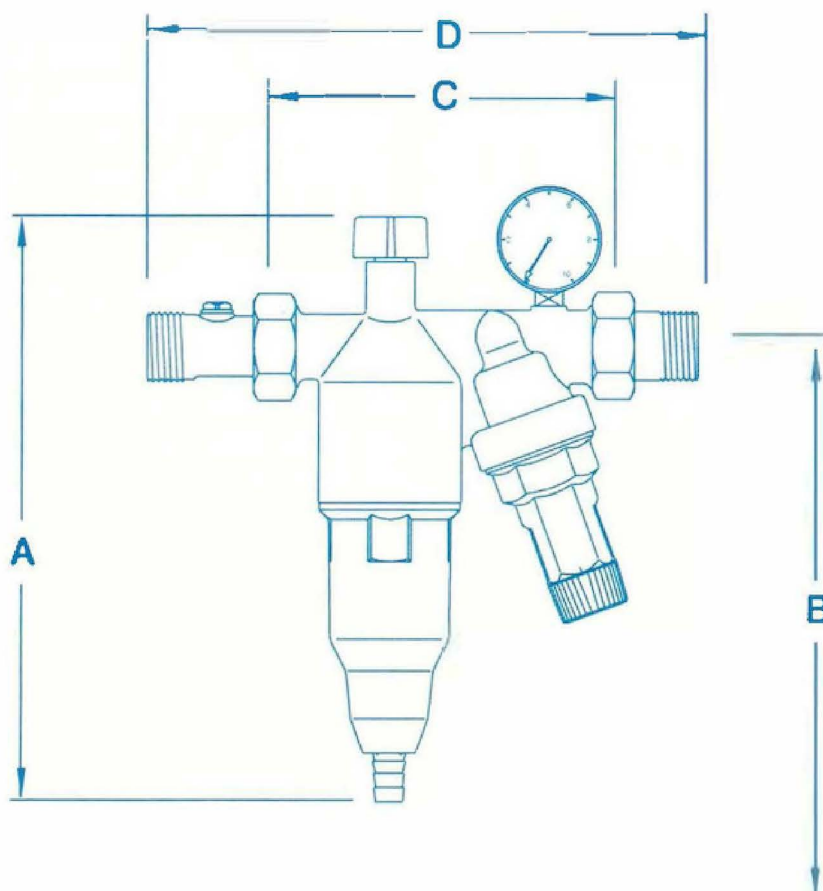
Troubleshooting

Fault	Cause	Action
Water pressure in system has dropped considerably; Water pressure drops considerably when water is bled (by more than 35% of the static pressure)	Dirty filter element	Carry out backwash
Flushing water outlet cannot be closed	Backwash element does not reach final position due to coarse particles of dirt	Fully open and close turning knob; repeat backwash several times
Water pressure rises above the setpoint	Settling and/or wear of the sealing elements	Re-adjust back pressure (see Startup) If the pressure continues to rise the valve insert (11) must be replaced

If the fault cannot be rectified using these notes, please contact a specialist firm or our Customer Service.

Technical Data





WFC-FS-AVA-25-PRV	Type	1"
Nominal Connection Width	DN	25
Flow rate	m ³ /h	3.5
Output pressure after pressure reducing valve	bar	1.5 - 6
Admission width lower/upper	µm	90/110
Nominal pressure (PN)	bar	10
Service pressure, min./max.	bar	1.5/16
Water temperature	°C	5 - 30
Ambient temperature	°C	5 - 40
Overall height A	mm	300
Minimum fitting dimensions, pipe centreline to floor B	mm	350
Fitting length without screw connections C	mm	170
Fitting length with screw connections D	mm	273
PNO = Production number	WFC-FS-AVA-25-PRV	





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