

Backflush filter AF 8

Nominal pressure up to 10 bar

Connection sizes: DN 100 up to DN 400, cast version

1. Short description

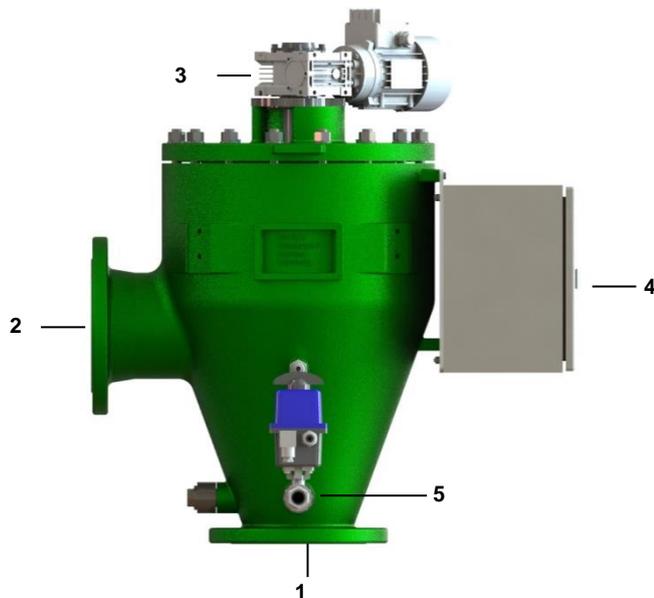
Powerful, fully automatic filtration

- Application in water treatment
- Mature technology and robust construction
- Low space requirement due to compact design
- Filter finenesses from 25 - 1000 µm absolute
- Variable positioning of the base unit
- Optional with pipe bend and feet, four different flange positions possible
- Low TCO
- Minimal need for spare parts, thus protecting the environment and resources
- Optimal synthesis between ecology and economy
- Support of the rational flow of production processes through continuous filtration
- Efficient filtration due to low backwash volumes at optimal cleaning of the filter element
- Consumption-free
- High cleaning efficiency due to direct placement of the backwash nozzle on the filter element
- Service-friendly and simple handling
- Worldwide sales and service network



2. Operating principle

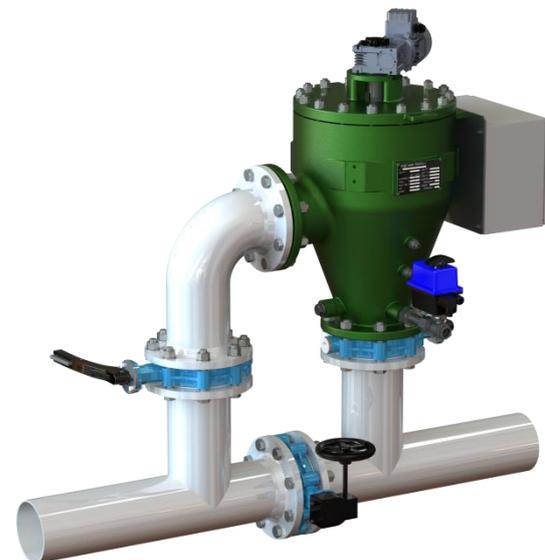
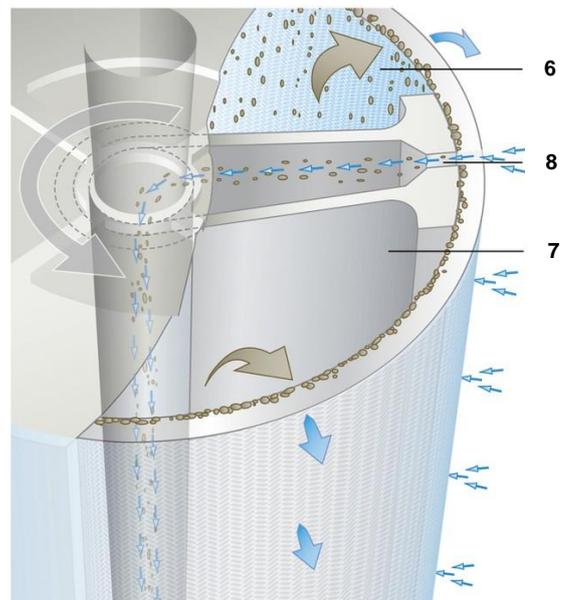
- The medium to be filtered flows through the inlet connection (1) into the filter housing and into the filter element (6) open at the bottom. The medium flows through the filter element from the inside to the outside, collecting the dirt particles on the inside of the filter fabric.
- When the set time or the maximum differential pressure is reached, the automatic cleaning starts. The cleaning nozzle (7) is rotated by the gear motor (3).
- The pressureless flushing line is opened by the flushing valve (5) and the gear motor (3) sets in motion the cleaning nozzle (7) positioned in the filter element, which leads past the entire filter surface of the filter element (6).
- Through the vertical nozzle slot (8), which is directly located at the filter element, a small quantity of already filtered medium flows in the reverse direction at high flow velocity through the filter fabric and carries the accumulated solids out of the system through the flushing line.
- After turning the cleaning nozzle (7) by approx. 400°, the flushing valve (5) is closed and the cleaning process is completed after a few seconds.
- By rotating the cleaning nozzle, only the covered part of the filter element is cleaned and the remaining part is still available for filtration. The filtration operation will not be interrupted.



- 1 Inlet
- 2 Outlet
- 3 Gear motor
- 4 Control cabinet
- 5 Flush valve
- 6 Filter element
- 7 Cleaning nozzle
- 8 Nozzle slot

3. Technical data

Connection:	DN 100 up to DN 400
Flanges:	DIN
Materials:	GGG-40
Coating:	Rilsan
max. operating pressure:	10 bar
max. operating temperature:	100 °C
Filter element:	Screen basket with pleated fabric covering
Filter fineness:	25 – 1000 µm absolute
Motor data:	
Voltage:	230/400 V
Nominal current:	0.67 – 1.20 A
Motor power:	0.18/0.21 kW
Speed:	9.3 – 17 U/min
Protection class:	IP55
Torque:	60 Nm



Piping example

5. Design and application

The design of the back flush filters is based on the respective customer requirements. Material, design, filter area and fineness are optimally designed for the respective filtration task depending on the medium and the performance

The back flush filter options can be freely varied and lead to the optimization of the respective filtration task.

Options:

- **Control**
The control takes place via a switch box with programmable automation module.
- **Pressure transmitter**
The differential pressure is controlled by pressure transmitters. This allows a precise differential pressure control via the control module in the control box.
- **Figure 1**
In the standard version, the filter housing is flanged directly onto the pipeline so that the filter can be integrated into an existing pipeline system to save space. The low space requirement and good accessibility are supplemented by an optional bypass
- **Figure 2**
Optional filter design with four support legs and a 90° pipe bend. The position of the pipe bend can be rotated in 90° steps around the vertical axis.



Fig. 1

The use of back flush filters is simple, uncomplicated and ensures uninterrupted filtration operation. Please take the individual steps from the following description:

- The bowl contains a venting and drain connection as well as a filter element.
- Before commissioning, the filter must be filled and vented. It must not be driven into the empty filter with full pump capacity.
- Switch on the filter control and trigger a flushing process manually. In the case of media whose viscosity is strongly temperature-dependent, the filter control must not be switched on until the operating temperature has been reached.
- If the system is not in operation, the filter control must be switched off.
- For efficient backflushing, a sufficient flushing pressure of 3 bar is required during the flushing process at the outlet of the filter.
- Automatic backflushing starts after a specified time or after reaching the maximum differential pressure.
- After a flushing process has been triggered, the gear motor is switched on and the flushing valve for the flushing medium outlet is opened. While the gear motor rotates the flushing nozzle, the flushing medium flows from the clean side through the filter element into the inner nozzle to the flushing medium outlet.
- The rinsing medium flows through the filter fabric at high speed, thereby the dirt particles retained in the fabric are detached and discharged via the rinsing medium outlet and the connected rinsing line.
- The control is set so that after approx. 1¼ revolutions of the flushing nozzle the flushing valve closes and the gear motor switches off.



Fig. 2