

## Backflush filter R3-7

Nominal pressure up to 16 bar

Connection sizes: DN 200 up to DN 500, welded version

### 1. Short description

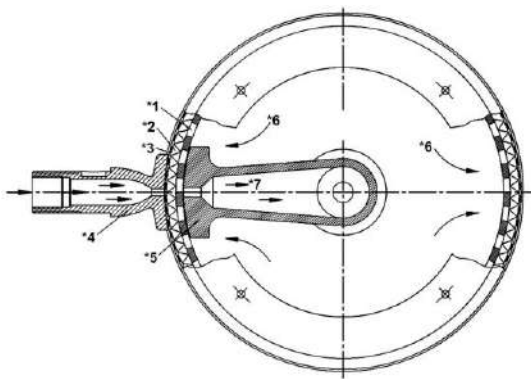
#### Powerful, fully automatic filtration

- Application in industries
- Mature technology and robust construction
- Low space requirement due to compact design
- Filter finenesses from 25 - 1000 µm absolute
- 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 fully automatic backwashing is triggered when a defined differential pressure or adjustable time interval is reached. The standard version of the backwash filter is backwashed with a foreign medium. For effective backwashing, an operating overpressure of at least 3 bar is required at the inlet of the external nozzle. The difference between the overpressure in the outer nozzle and the atmospheric pressure at the flushing line outlet is used for backwashing.
- When the backwash time is reached, controlled by the differential pressure or time interval, the backwash valve is opened and the geared motor rotates the filter element positioned between the nozzles.
- Through the vertical nozzle slot of the external nozzle, which is placed directly on the filter element, the external medium or already filtered own medium flows by means of pump pressure at high flow speed through the filter fabric into the internal nozzle and carries the accumulated impurities through the flushing line to the outside.



- \*1 Basic body
- \*2 Pleated fabric cylinders
- \*3 Support cylinder
- \*4 External nozzle
- \*5 Internal nozzle
- \*6 Flow direction (dirt side)
- \*7 Flush volume

## 3. Technical data

<b>Connection:</b>	DN 200 up to DN 500
<b>Flanges:</b>	DIN
<b>Materials:</b>	HI/1.0425
<b>Coating:</b>	Rilsan
<b>max. operating pressure:</b>	16 bar
<b>max. operating temperature:</b>	100 °C
<b>Filter element:</b>	Screen basket with fabric (smooth or pleated), slotted screen insert
<b>Filter fineness:</b>	25 – 1000 µm absolute other finenesses on request
<b>Motor data:</b>	
<b>Voltage:</b>	230/400 V
<b>Nominal current:</b>	0.18 – 0.69 A
<b>Motor power:</b>	0.18 kW
<b>Speed:</b>	6 U/min
<b>Protection class:</b>	IP55
<b>Torque:</b>	300 Nm

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## 5. Design and application

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

Options:

- **Heating**  
Performance and size are optimally matched to the filter sizes. Steam and electric versions available.
- **Magnetic elements**  
Can be equipped with strong permanent magnets.
- **Control**  
The control takes place via a switch box with programmable automation module. Parameterisation by means of keys and display possible in a simple way. Programming and simulation via PC possible.
- **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.  
Measurement tolerance: 0.3 %
- **Bypass Filter**  
Manual, semi-automatic, fully automatic with switching element
- The filter consists of a filter pot with lid and gear motor. The bowl contains a venting and draining 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 sufficient back flushing, a flushing pressure of at least 3 bar during the flushing process at the inlet of the external nozzle is required.
- After a specified time or after reaching the maximum differential pressure, the automatic backwashing starts. If the differential pressure rises above 3 bar, the filter must be taken out of operation or switched to bypass. Then dismantle the filter and clean the fabric cylinder (see section Cleaning).
- After a flushing process has been triggered, the geared motor is switched on and the flushing valve for the flushing medium inlet and outlet is opened. While the geared motor rotates the filter element, the flushing medium flows from the external nozzle through the filter element into the internal nozzle.
- 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 filter element the flushing valves close and the geared motor switches off.
- For cleaning, switch off the filter control, disassemble the geared motor, loosen the cover fixing screws and lift off the cover. The filter element can be lifted completely upwards out of the filter.
- For manual cleaning, the filter element must be sprayed from the outside to the inside with steam, compressed air or water. In the case of strongly adhering dirt, treatment with a suitable solvent is recommended. If necessary, remove the pleated fabric cylinder.

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

