

# FAUDI

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Fully automatic

Backflush Filter Type RSF 30

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Self-cleaning, maintenance-free filter for the filtration of liquid

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## Description of operation

The fully automatic Backflush Filter RSF 30 is divided into a lower dirt chamber and an upper clean chamber by a perforated flange-like inner plate (6). Inside this inner plate several cartridge filter elements (7) are arranged. The amount of filter elements that are built in depends on the area of application.

The medium to be filtered enters the entrance nozzle (N1), passes through the slotted filter elements (7) from the inside to the outside and exits the discharge nozzle (N2) as a filtered medium. Air and gas transported with the liquid are expelled through the automatic air vent valve (N3) while dirt particles are retained inside the filter element.

The impurities are deposited on the smooth inner surface of the filter element, where they form a cake. The accumulation of dirt particles causes a continuous increase of

pressure drop between the in- and outside of the filter. The pressure drop initiates the self-cleaning process of backflushing through a built-in contact pressure gauge (11) and control unit (12).

A rotating backflush arm (9), driven by an electric motor (8), cleans each cartridge filter element (7), one after another. During the cleaning process, clean filtration medium or a special cleaning solution, flows through one filter element in the opposite direction of filtration and releases the impurities which are removed through the discharge outlet (10). The limitation of the loss of backflush medium can be effected by a stop valve (13).

While one filter element is cleaned the other filter elements remain in the state of filtration.

**The result is an automatic cleaning process without interruption of the filtration process.**

## Advantages

### Continuous and versatile operation

- Self-cleaning process without interruption of the filtration process
- Backflushing through intrinsic medium
- Backflushing activated by differential pressure and/or time-interval setting

### Durable construction

- Slot type filter elements with triangular profile for wear-resistant operation
- Adapted for extreme operating conditions
- Ensuring long service life with minimal maintenance

### Flexible design with optimal flow characteristics

- Adaptability to existing pipeline configurations
- Minimal pressure loss at the highest possible flow rates

### Optimal backflush process

- Slotted type filter elements and smooth filter surface enable additional jet-effect
- Optimal backflush process due to time-controlled backflushing and surge cleaning
- Even the smallest particles with adhesive properties are detached from the filter elements

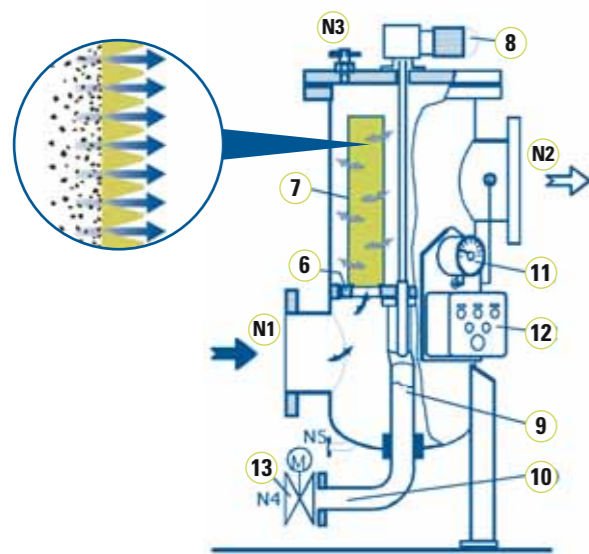
## Special features

- The filter is available as a variable welded construction which can easily be adapted to meet a variety of different construction requirements. The design of the filter housing has been optimized by lining the interior with enamel, plastic or rubber material ensuring minimum pressure loss at high low rates.
- Parts exposed to the product, including the filter elements, the filter element plates and the backflush arm are made out of stainless steel or other high-quality materials such as Monel, Hastelloy, etc. On customer demand we gladly apply other materials.
- The filter contains no moveable parts other than the backflushing arm. The arm is equipped with chambered teflon bearings which ensure minimal wear and tear over successive years of service.
- Suitable electric cabinets for the control of the Backflush Filter are laid-out, built and delivered by FAUDI. On demand according to the explosion protection regulations.
- Easy operation as well as easy maintenance without special tool requirements are guaranteed.

| Technical Specifications | from                      | to                       |
|--------------------------|---------------------------|--------------------------|
| Flow rate                | 1 m <sup>3</sup> /h       | 10,000 m <sup>3</sup> /h |
| Filter surface area      | 0.06 m <sup>2</sup>       | 18 m <sup>2</sup>        |
| Degree of filtration     | 25 μm                     | 1,000 μm                 |
| Operating pressure       | 1.5 bar                   | 25 bar                   |
| Operating temperature    | 20 °C                     | 200 °C                   |
| Power supply             | 400/230 V, 3-phase, 50 Hz |                          |

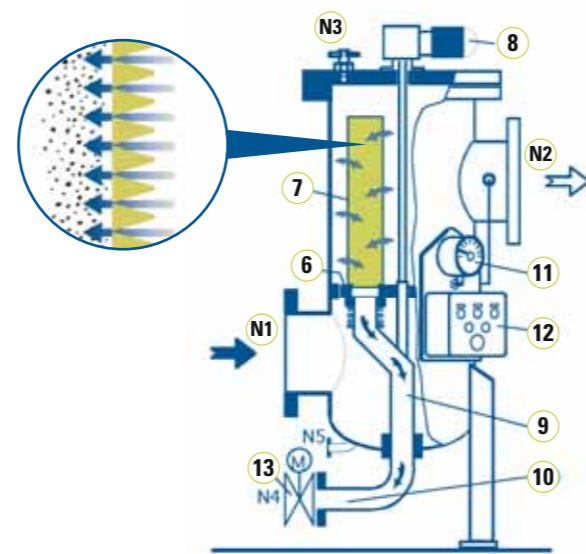
### Filtration

The medium to be filtered flows through the filter elements from the inside to the outside. Waste is deposited on the inner, smooth surface, while the sharp edges and precision of the triangular profiles minimize the blockage.



### Backflushing

The filtered product flows through the filter elements from the outside to the inside. The jet-action generated by the V-shaped profile washes back colloidal waste from the smooth filter surface.



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