



Drufi+ DFF



Drufi+ FF

Instructions of use

Drufi+ DFF / FF

Field of application

The SYR cartridge filters Drufi+ FF conforming with the European standard EN 13443, part 1 (with pressure reducing valve DFF also complying with EN 1567) are valves designed for potable water installations (DIN 1988).

The filters are also suitable for self-supply water systems!

Design

The FF type is a cartridge filter with nylon-mesh filter material.

All cartridge filters have a filter element made of nylon (lower mesh width 90µm, upper mesh width 125µm), a tundish, a flange seal, hexagon socket screws for the flange assembly, a mounting wrench for the filter cap and a service ring indicating when filter maintenance is due.

The DFF type also includes a pressure reducing valve with an adjustment range from 1.5 to 6 bar. The outlet pressure is factory set to 4 bar. It is equipped with an external adjustment knob for individual pressure setting and a 0-10 bar outlet pressure gauge.

All materials used are state-of-the-art. The synthetic and elastomeric parts in contact with potable water are approved by the German Public Health Office (KTW).

Installation

Observe the direction of flow when installing the device!

An arrow on the flange indicates the correct direction of flow. The product can be installed both in vertical and horizontal pipes. All filters should be mounted with the main axis in vertical position.

Pull the filters pressure-tight by means of the hexagon socket screws and make sure that the flange seal is in correct position.

However, the horizontal position is possible as well.

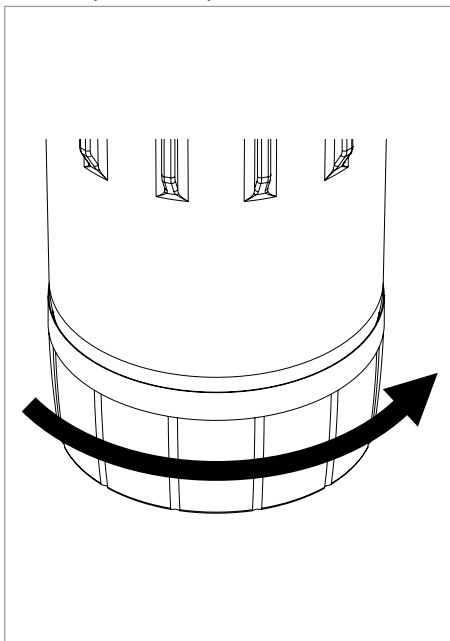
Caution: Pull the hexagon socket screws pressure-tight crosswise!

How to set the outlet pressure

The pressure reducer in the DRUFI+ DFF is factory set to 4 bar and can be adjusted in a range from 1.5 to 6 bar as follows:

Make sure that the inlet pressure is at least one bar higher than the desired outlet pressure.

Turn the handle clockwise up to the stop (direction „-“). Open and close a proximate draw-off point for depressurization.



Watch the manometer and turn the handle anticlockwise (direction „+“) until reaching the desired outlet pressure.

How to exchange the filter

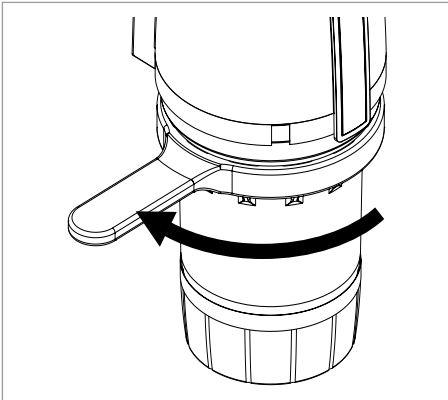
Cartridge filters have to be exchanged in the event of a reduced flow rate, but every six months at the latest (as set in DIN 1988, part 8), in order ensure perfect functionality.

A visual inspection should also be made every two months.

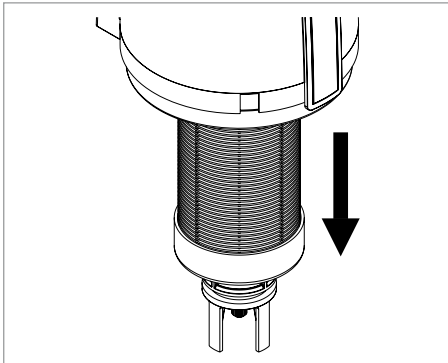
Close the stop valves upstream and downstream of the filter.

Open a draw-off point downstream of the filter for depressurization.

Unscrew the filter cap by means of the mounting wrench (order number: 2000.25.907).

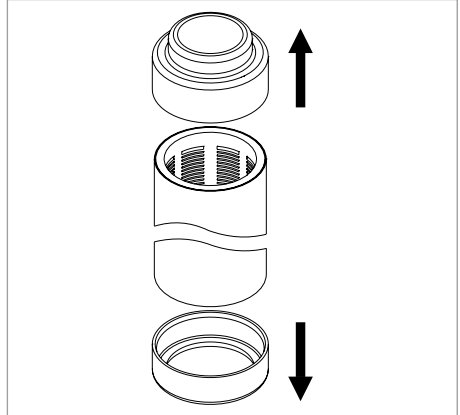


Take the filter insert (with the pressure reducer cartridge when using the Drufi DFF) out of the valve body by pulling downwards.

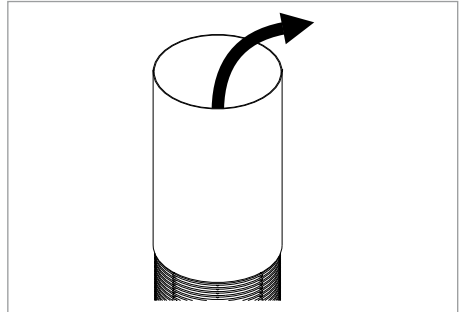


Caution: Use disposable gloves for hygienic reasons when exchanging the filter!

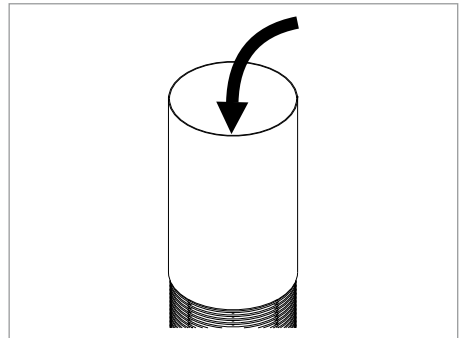
Remove both holders at the upper and lower end of the filter element.



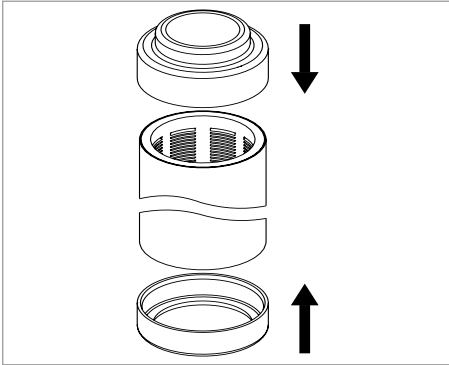
Remove the filter element.



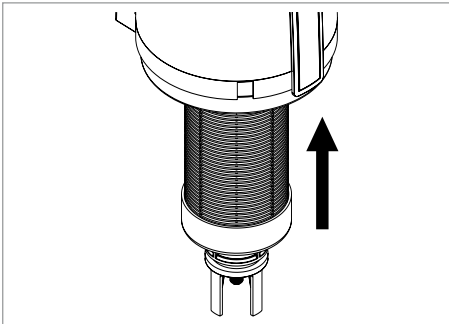
Put the new filter element over the cartridge and insert the upper and lower end into the cartridge.



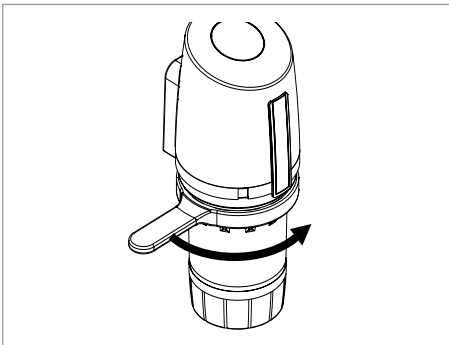
Re-fit both holders at the upper and lower end of the filter element.



Push the pressure reducer cartridge into the filter cartridge and insert the filter cartridge from below into the valve body.



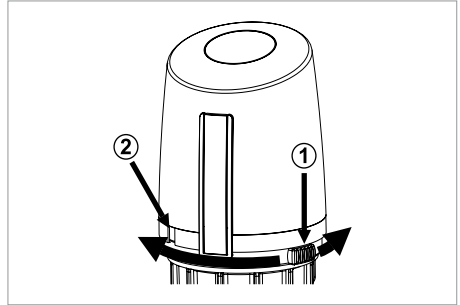
Re-fit the filter cap by means of the mounting wrench.



Open the stop valves upstream and downstream of the filter and re-fit the front cover.

After having exchanged the filter, set the maintenance indicator by means of the slide (1) to the month of the next service (2).

This setting can be read in the inspection window (2).

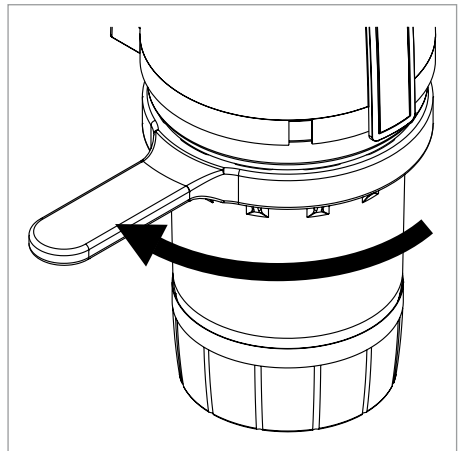


How to service the pressure reducing valve

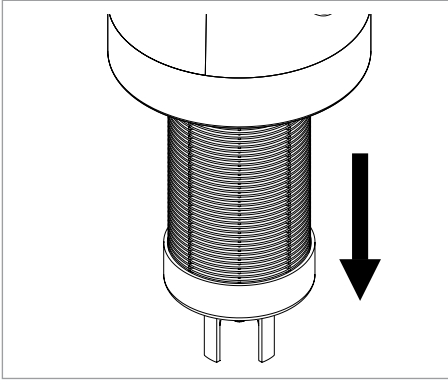
Verify the set outlet pressure of the DRUF1 plus DFF pressure reducer cartridge once per year (DIN 1988, part 8) and clean or replace the cartridge if required.

Close the stop valves upstream and downstream of the filter and depressurize the filter (see section „How to exchange the filter“, p. 3).

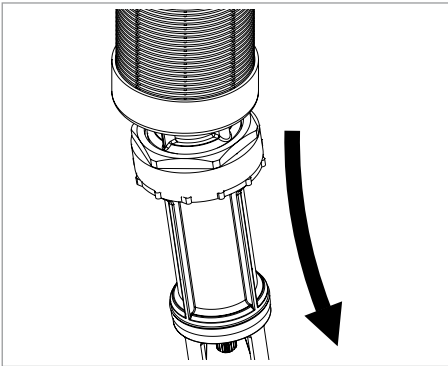
Unscrew the filter cap by means of the mounting wrench (order number: 2000.25.907).



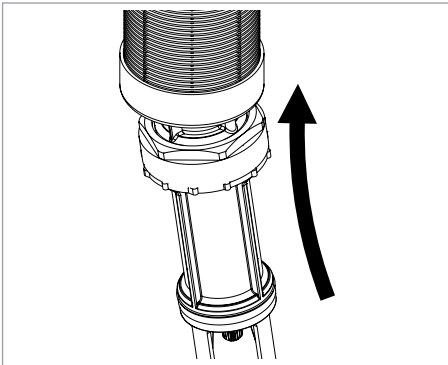
Remove the filter element together with the pressure reducer cartridge from the valve body (downwards).



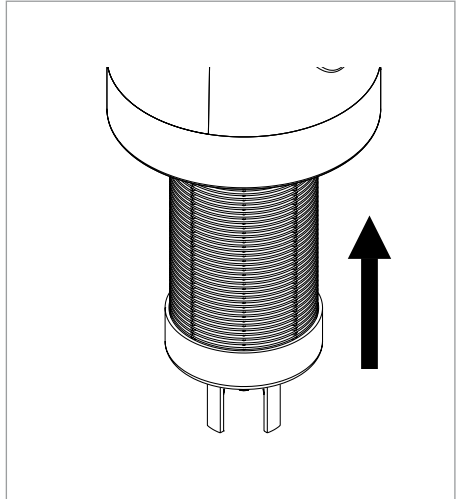
Pull the pressure reducer cartridge downwards to take it out of the filter element.



Clean the diaphragm of the cartridge under cold and clear water and push the pressure reducer cartridge from below back into the filter element.

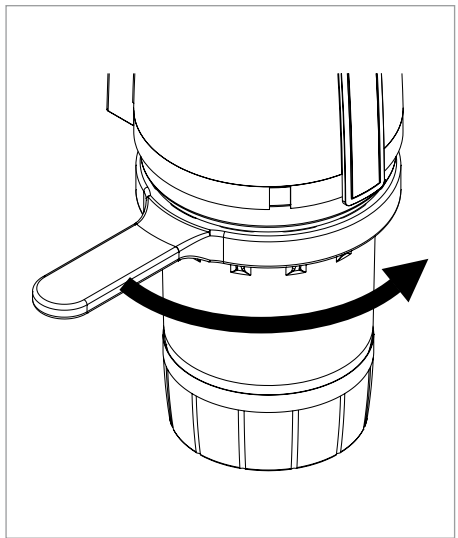


Push the filter element back into the valve body.



Re-fit the filter cap.

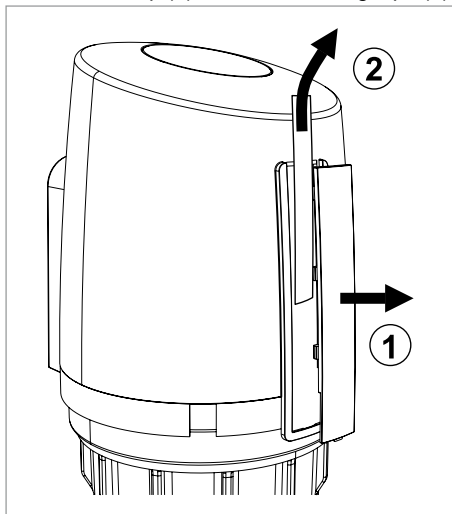
Ensure that the O-ring is in correct position (has to lie loosely on the upper convolution - **do not slip it over the thread!**)



How to measure the water hardness

A testing tape designed to determine the water hardness is located at the rear side of the clip at the filter's front side.

Remove the clip (1) to take the testing tape (2).



Follow the enclosed instructions to determine the water hardness.

Technical specifications

Lower mesh width:	90µm
Upper mesh width:	125µm
Min. service pressure:	2 bar
Max. service pressure:	16 bar
Max. service temperature:	30°C
Medium:	Potable water (DIN 1988)

Flow rate DRUFI DFF:

	DN 20	DN 25	DN 32
Δp 1.1 bar	2.3 m³/h	3.6 m³/h	5.8 m³/h

Flow rate DRUFI FF:

	DN 20	DN 25	DN 32
Δp 0.2 bar	3.0 m³/h	3.8 m³/h	3.9 m³/h
Δp 0.5 bar	4.9 m³/h	6.1 m³/h	6.3 m³/h

Troubleshooting

What to do when the outlet pressure rises?

The pressure increase is probably due to an unvented water heater located downstream and has not been hold off by the check valve upstream of the water heater.

With the water heating system being disconnected, this problem should not occur anymore once hot water has been drawn off.

If this effect does not occur again, the check valve in the water heater's safety group has to be serviced or replaced.

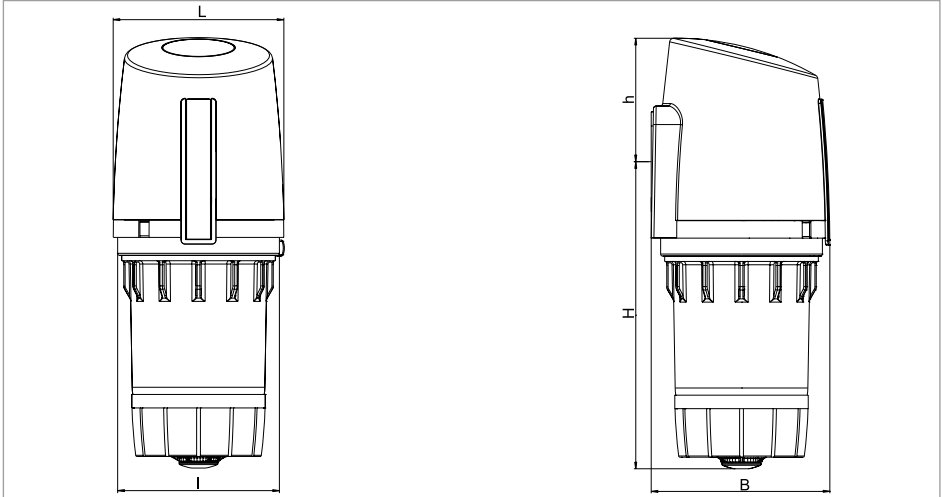
Should this effect still occur with the water heating system being disconnected, the problem is due to wear of the pressure reducer cartridge.

In this case, replace the cartridge as described in the section "How to service the pressure reducing valve" on page 5.

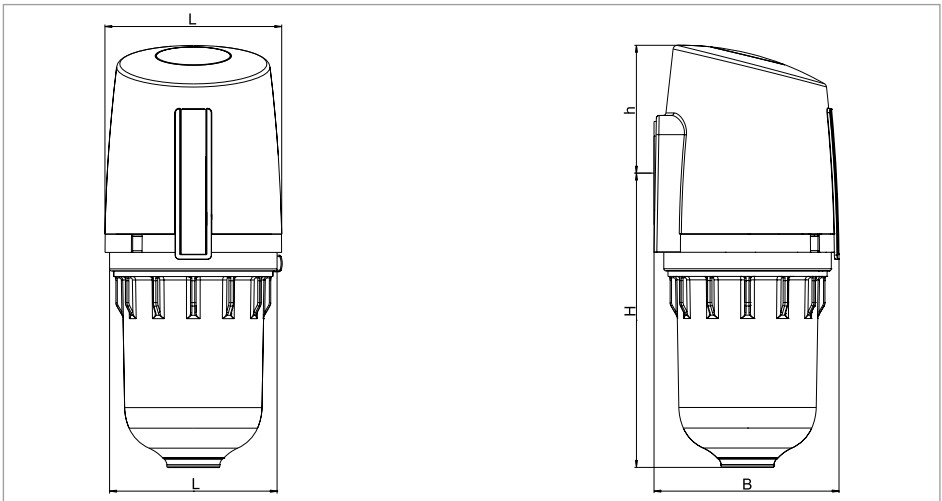
Only qualified installers are authorised to install and service the device. Observe the maintenance instructions! Do not clean synthetic parts with solvent-based detergents. Do not install filters in areas, which are exposed to UV-radiation (sunlight) or solvent vapours. Protect the filter against frost. When submitted to hard shocks, the synthetic part concerned shall be exchanged (even when no damage is visible). Avoid strong water hammers, caused for instance by downstream solenoid valves (danger of burst).

The packaging serves as protection during transport. Should it be severely damaged, do not install the device!

Dimensions



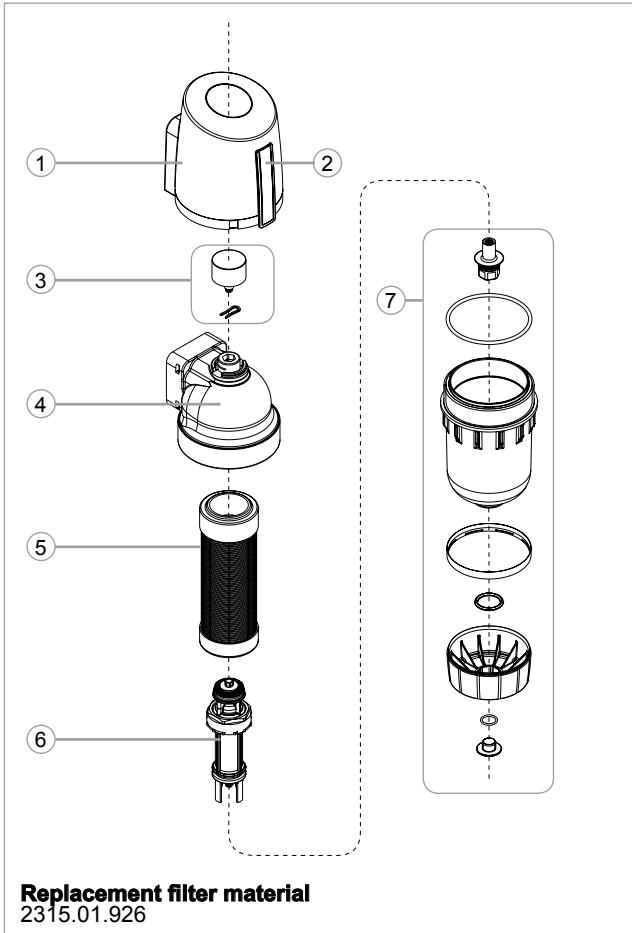
DFF model



FF model

Type		Druft+ DFF	Druft+ FF
Nominal size		R ¼" - 1¼"	R ¼" - 1¼"
Dimensions	H	228 (mm)	211 (mm)
	h	92 (mm)	92 (mm)
	L	127 (mm)	127 (mm)
	I	120 (mm)	120 (mm)
	B	135 (mm)	133 (mm)

Spare parts



- ①
Cover
2315.01.919
 - ②
Clip
2315.01.912 (DFF)
2315.01.913 (FF)
 - ③
Manometer (DFF)
2315.01.920
 - ④
Valve body
2315.01.918 (DFF)
2315.00.929 (FF)
 - ⑤
Filter element (5 units)
2315.01.926
 - ⑥
Pressure reducer cartridge
(DFF)
2315.01.925
 - ⑦
Filter cap
2315.01.916 (DFF)
2315.01.917 (FF)
- No picture
Mounting wrench for filter
cap
2000.25.907