



Profluid and Gap-type tube filters
Automatic filters

Profluid and Gap-type tube filters – the efficient answer for multi-purpose applications

Identical technology – two different cleaning principles

Automatic filters such as Profluid or Gap-type tube filters are used to efficiently increase the service life of process liquids. They are suitable for the filtration of low and high viscosity media. Accordingly, they may be used in almost all industrial fields.

Gap-type tube filters can be cleaned during operation by means of mechanical scraping. The Profluid is an automatic self-cleaning filter system with a design based on gap-type technology. The combination of cleaning by backflushing together with mechanical scraping makes

it very efficient for filtration tasks where varying types and sizes of particle must be filtered out of a liquid. This working principle has proven to be extremely efficient for gap widths under 100 µm.



The advantages at a glance:

Profluid

- high performance regarding filter fineness and nominal flow rates
- gap widths from 30 μm
- effective dual cleaning mechanism
- automatic cleaning without interrupting production
- robust and reliable
- individual setting of back-flushing cycles
- reliable with all kinds of dirt particles
- economic

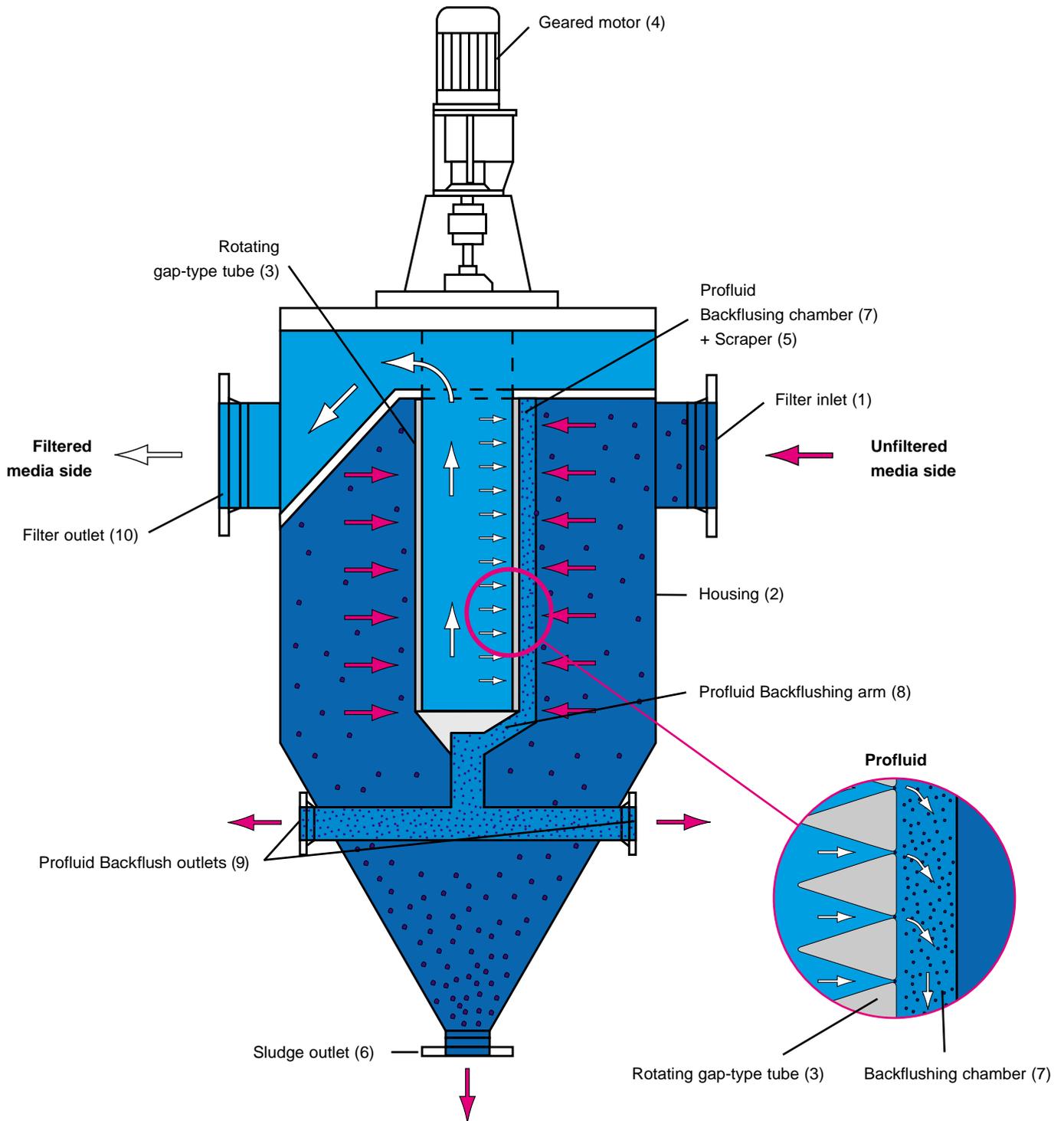


Gap-type tube filters

- easy to service
- gap widths from 50 μm
- automatic cleaning without interrupting production
- the classic filter - proven time and time again
- economic

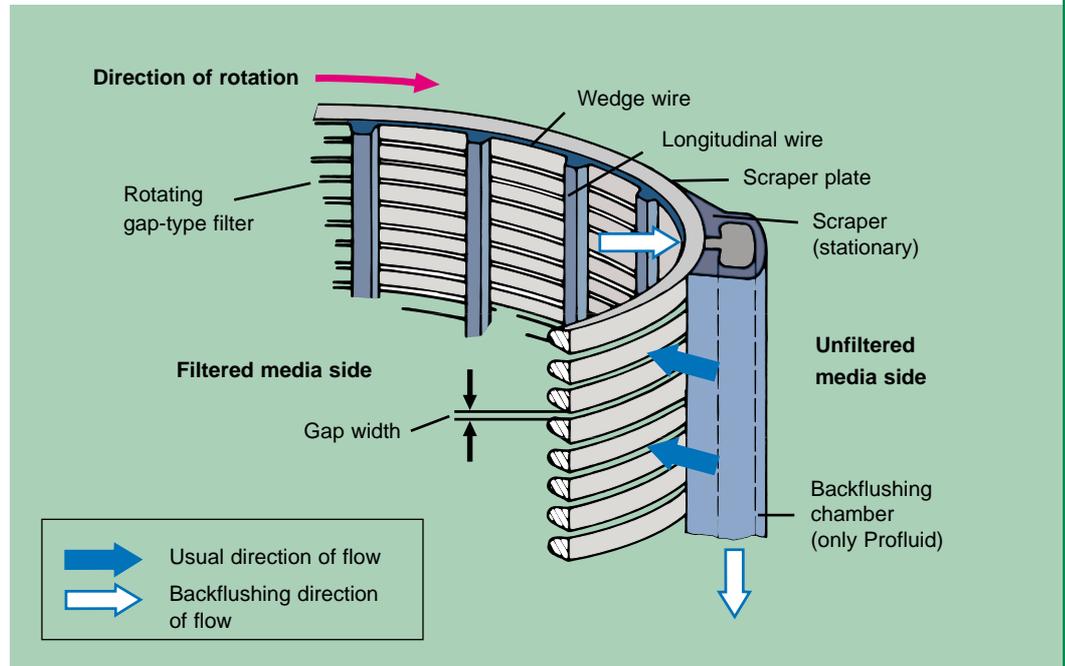


The working principle



The working principle

The difference between Gap-type tube filters and the Profluid lies in the cleaning system. Gap-type tube filters are mechanically cleaned by dirt scrapers. The cleaning principle of the Profluid combines backflushing with dirt scraping.



Filtration

The medium to be cleaned flows into the housing (2) via the filter inlet (1) and passes through the gap-type tube (3) from the outside to the inside. All impurities in the medium which are larger than the gap width are retained on the surface of the tube. The coarse dirt particles either sink to the lower part of the housing or form a filter cake on the exterior surface of the tube.

Dirt scraping

Driven by a geared motor (4), the gap-type tube rotates along a stationary scraper plate (5) that removes the filter cake. It then sinks to the bottom of the housing and is discharged when necessary via the sludge outlet (6). To simplify the disposal of the solid particles filtered out, a drying valve can be installed.

Backflushing with Profluid

Particles from a certain size up cannot be removed by the scraper. On conventional gap-type tube filters, they deposit in the gaps and – under certain operation conditions – quickly clog the filter.

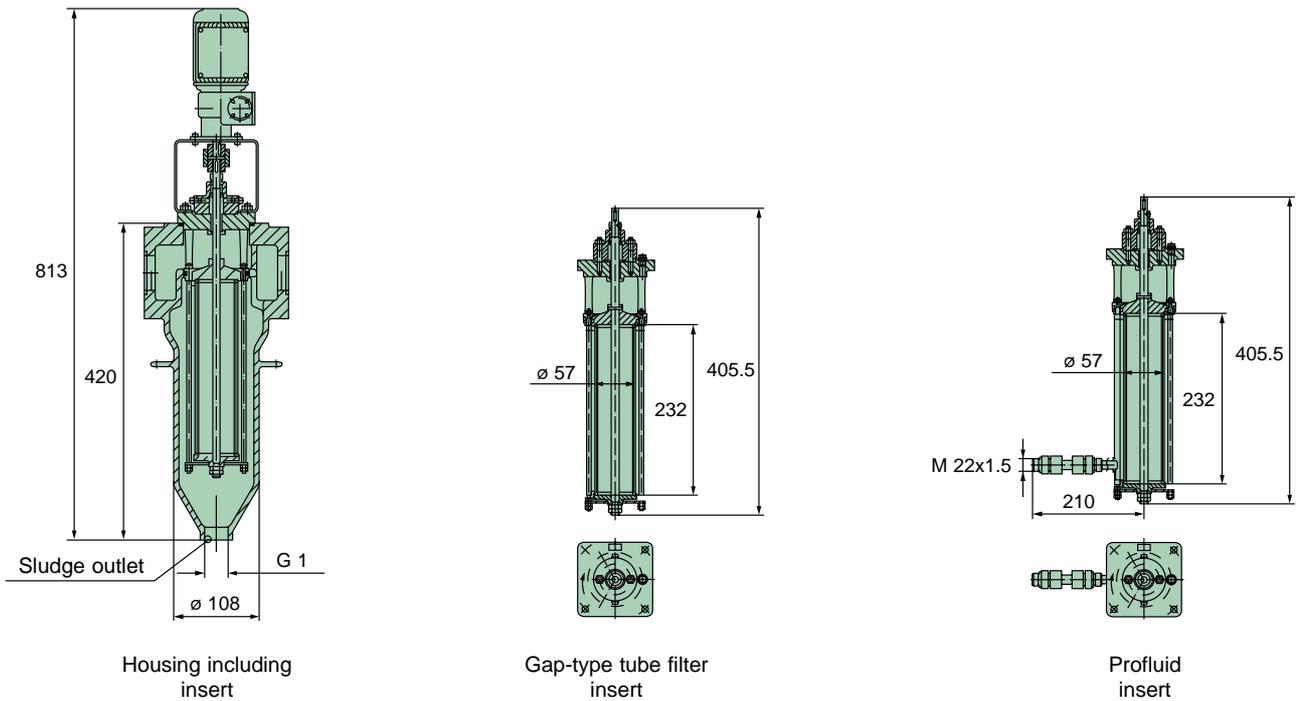
Near size particles can be eliminated from the gap-type tube through the use of a backflushing chamber (7). The whole length of the tube is flushed: When the backflushing line is opened, the medium flows into the unpressurized backflushing chamber in opposite direction to normal, and is drained

towards the outside. The backflushing procedure is submitted to specific parameters, such as operation hours, time pulse and increase of the differential pressure.

Operating pressure and set backflush volume influence decisively the efficiency of backflushing.

Profluid's combined action of dirt scraping and backflushing, a patented procedure, ensure quality cleaning without interrupting the production.

Specifications and order numbers DN 50

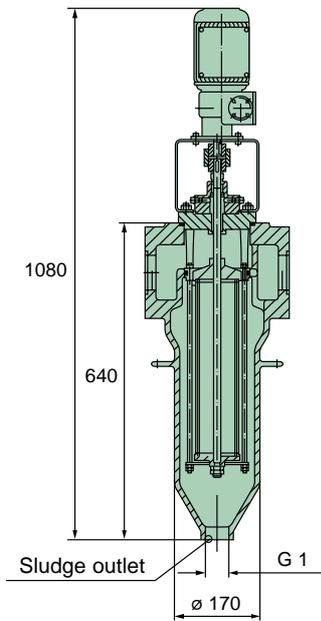


Complete filter including drive	Order numbers	Material *
Profluid	54 524 8x 264	Aluminium
Gap-type tube filters	54 524 8x 274	Aluminium

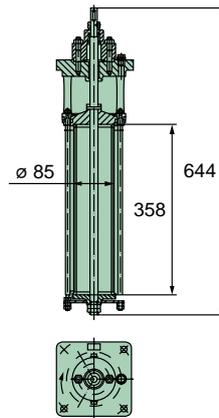
* Other materials and product sizes on request.

Gap widths	30 µm (only Profluid), 50 µm, 75 µm, 100 µm, 150 µm (other gap widths on request)
Nominal flow rate (e.g.: water, 25 °C)	10 m³/h with 0.15 bar initial differential pressure, gap width 50 µm 15 m³/h with 0.3 bar initial differential pressure, gap width 50 µm
Connections	DN 50 PN 40 (unfiltered and filtered media side), G 1 (sludge outlet) M 22x1.5 (backflushing, only Profluid)
Backflushing	Integrated (backflushing, only Profluid)
Sludge outlet	Integrated
Permissible operating pressure	40 bar
Differential pressure supervision	Available
Pressure on the unfiltered media side	P1 = 1.5 – 40 bar
Permissible operating temperature	100 °C (higher temperatures on request)
Materials	Aluminium, aluminium chemically nickered, other materials on request
Mains connection	230 V AC, 50/60 Hz
Control	Available
Sludge outlet valves and backflushing	Available
Backflushing medium	Own medium (only Profluid)
Cleaning	Time or differential pressure dependent as option
Version for explosive atmospheres	Optional
Filter configuration	For your filter system enquiry please use the filter configuration questionnaire on page 50.

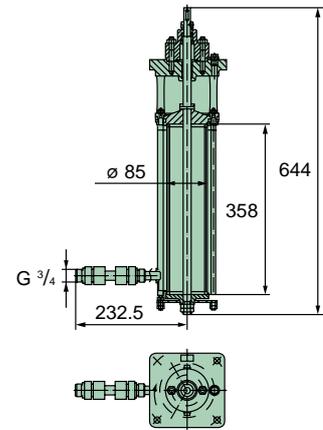
Specifications and order numbers DN 65



Housing including insert



Gap-type tube filter insert



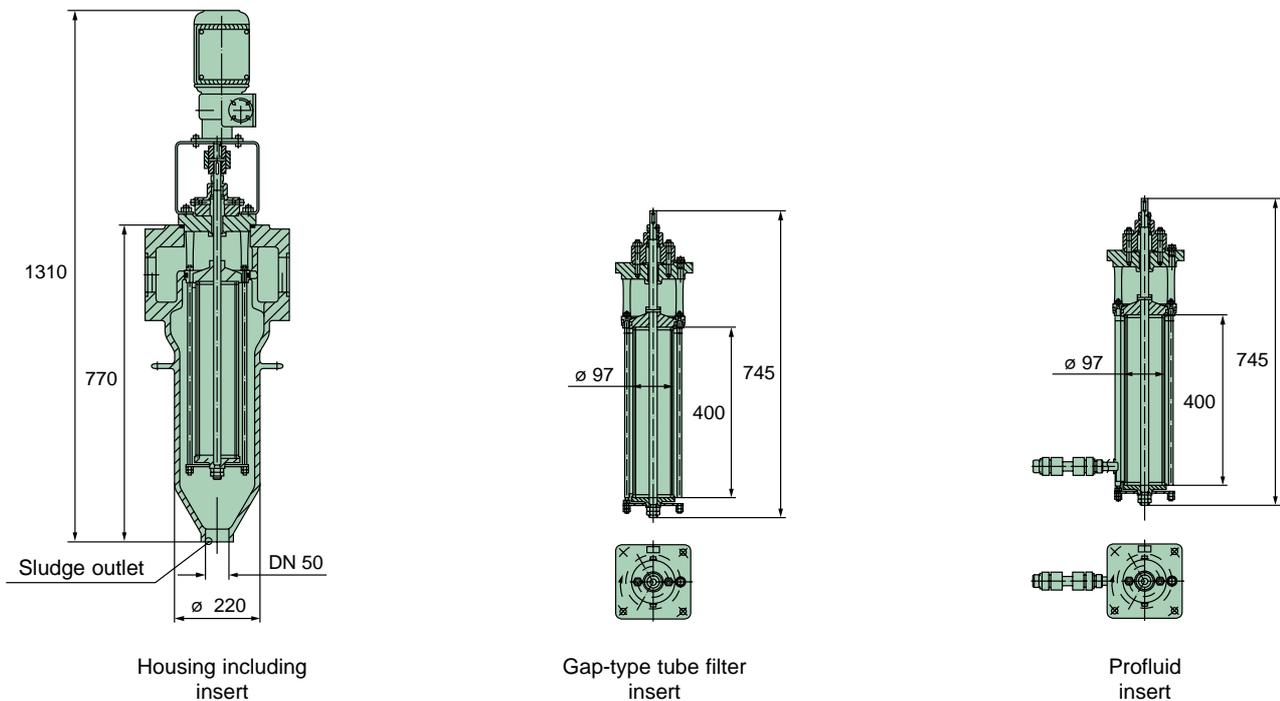
Profluid insert

Complete filter including drive	Order numbers	Material *
Profluid	54 636 8x 114	Aluminium
Gap-type tube filters	54 636 8x 104	Aluminium

* Other materials and product sizes on request.

Gap widths	30 µm (nur Profluid), 50 µm, 75 µm, 100 µm, 150 µm, 200 µm, 500 µm (other gap widths on request)
Nominal flow rate (e.g.: water, 25 °C)	30 m³/h with 0.1 bar initial differential pressure, gap width 50 µm 50 m³/h with 0.5 bar initial differential pressure, gap width 50 µm
Connections	DN 65 PN 16 (unfiltered and filtered media side), G 1½ (sludge outlet) G ¾ (backflushing, only Profluid)
Backflushing	Integrated (backflushing, only Profluid)
Sludge outlet	Integrated
Permissible operating pressure	12 bar
Differential pressure supervision	Available
Pressure on the unfiltered media side	P1 = 1.5 – 12 bar
Permissible operating temperature	100 °C (higher temperatures on request)
Materials	Aluminium, aluminium chemically nickered, other materials on request
Mains connection	230 V AC, 50/60 Hz
Control	Available
Sludge outlet valves and backflushing	Available
Backflushing medium	Own medium (only Profluid)
Cleaning	Time or differential pressure dependent as option
Version for explosive atmospheres	Optional
Filter configuration	For your filter system enquiry please use the filter configuration questionnaire on page 50.

Specifications and order numbers DN 80

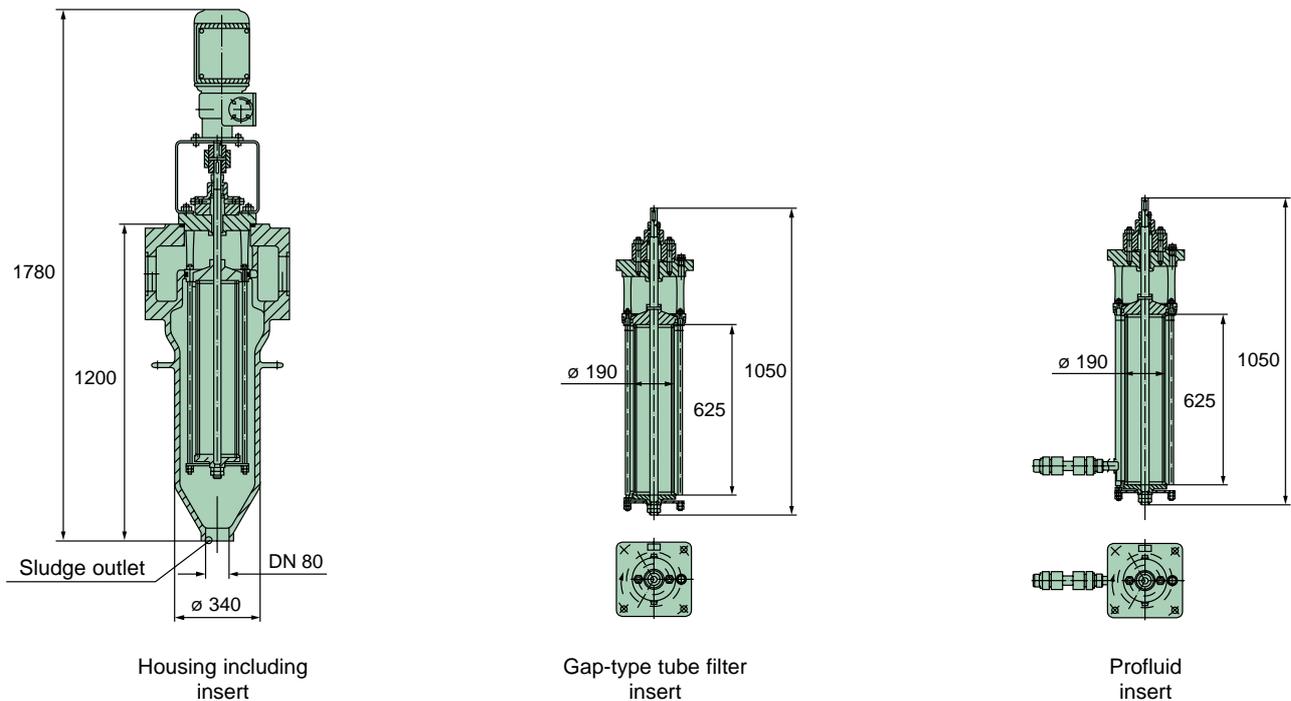


Complete filter including drive	Order numbers	Material *
Profluid	54 740 8x 164	Aluminium
Gap-type tube filters	54 740 8x 184	Aluminium

* Other materials and product sizes on request.

Gap widths	30 µm (nur Profluid), 50 µm, 75 µm, 100 µm, 150 µm, 500 µm (other gap widths on request)
Nominal flow rate (e.g.: water, 25 °C)	50 m ³ /h with 0.3 bar initial differential pressure, gap width 50 µm 80 m ³ /h with 0.6 bar initial differential pressure, gap width 50 µm
Connections	DN 80 PN 16 (unfiltered and filtered media side), DN 50 PN 16 (sludge outlet) G1/DN 25 PN 16 (backflushing, only Profluid)
Backflushing	Integrated (backflushing, only Profluid)
Sludge outlet	Integrated
Permissible operating pressure	12 bar
Differential pressure supervision	Available
Pressure on the unfiltered media side	P1 = 1.5 – 12 bar
Permissible operating temperature	100 °C (higher temperatures on request)
Materials	Aluminium, aluminium chemically nickered, other materials on request
Mains connection	230 V AC, 50/60 Hz
Control	Available
Sludge outlet valves and backflushing	Available
Backflushing medium	Own medium (only Profluid)
Cleaning	Time or differential pressure dependent as option
Version for explosive atmospheres	Optional
Filter configuration	For your filter system enquiry please use the filter configuration questionnaire on page 50.

Specifications and order numbers DN 100



Complete filter including drive	Order numbers	Material *
Profluid	54 964 8x 384	Aluminium
Gap-type tube filters	54 964 8x 394	Aluminium

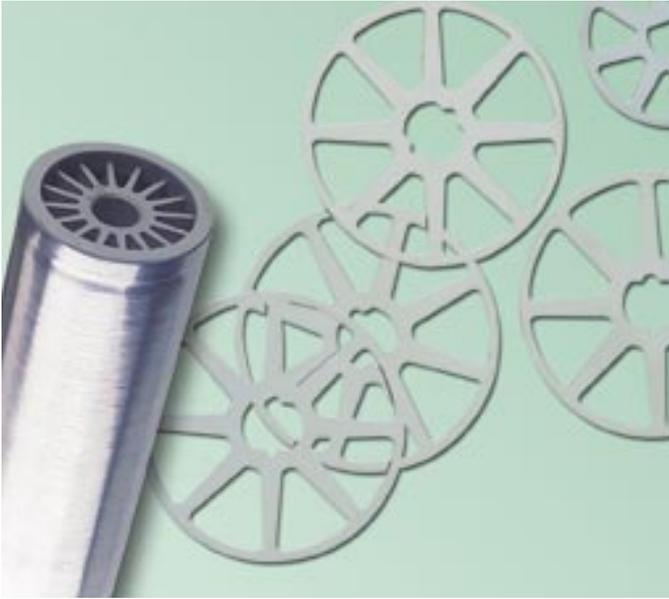
* Other materials and product sizes on request.

Gap widths	30 µm (nur Profluid), 50 µm, 75 µm, 100 µm, 150 µm, 200 µm, 500 µm (other gap widths on request)
Nominal flow rate (e.g.: water, 25 °C)	80 m³/h with 0.2 bar initial differential pressure, gap width 50 µm 100 m³/h with 0.4 bar initial differential pressure, gap width 50 µm
Connections	DN 100 PN 16 (unfiltered and filtered media side), DN 80 PN 16 (sludge outlet) DN 50 PN 16 (backflushing, only Profluid)
Backflushing	Integrated (backflushing, only Profluid)
Sludge outlet	Integrated
Permissible operating pressure	12 bar
Differential pressure supervision	Available
Pressure on the unfiltered media side	P1 = 1.5 – 12 bar
Permissible operating temperature	100 °C
Materials	Aluminium, aluminium chemically nickered, other materials on request
Mains connection	230 V AC, 50/60 Hz
Control	Available
Sludge outlet valves and backflushing	Available
Backflushing medium	Own medium (only Profluid)
Cleaning	Time or differential pressure dependent as option
Version for explosive atmospheres	Optional
Filter configuration	For your filter system enquiry please use the filter configuration questionnaire on page 50.



Wire and Plate gap-type filters

Wire and Plate gap-type filters



Proven a thousand times over and a real classic

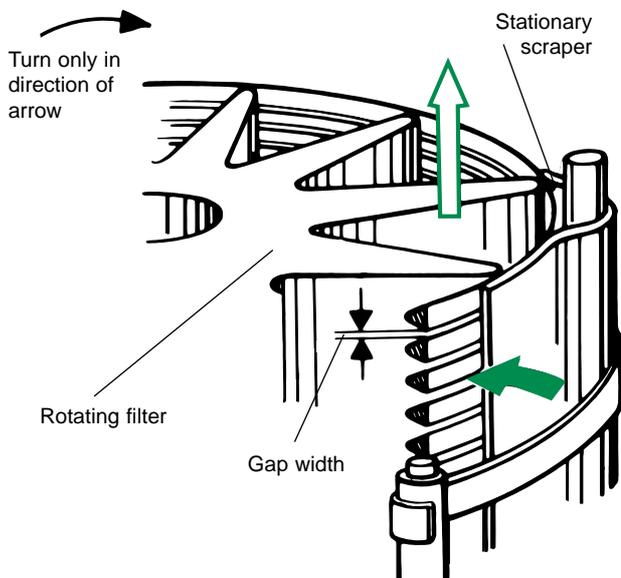
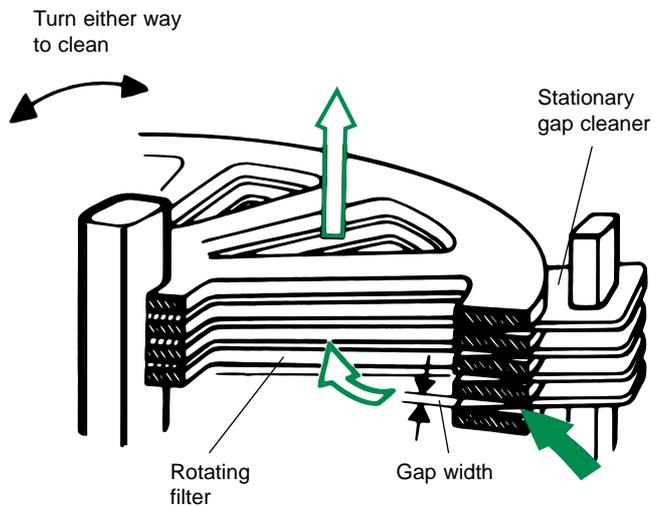
Wire and Plate gap-type filters are suitable for the filtration of heavily dirtied low and high viscosity media in almost all industrial fields.

They can be cleaned during operation, are easy to maintain and are characterised by a long service life.

Plate gap-type filters for gap width $\geq 100 \mu\text{m}$

The Plate gap-type filter insert consists of steel discs which are piled up on a central pin. The gap width between the discs is determined by spacers between the discs. A stationary gap cleaner runs through every gap. As the fluid flows between the

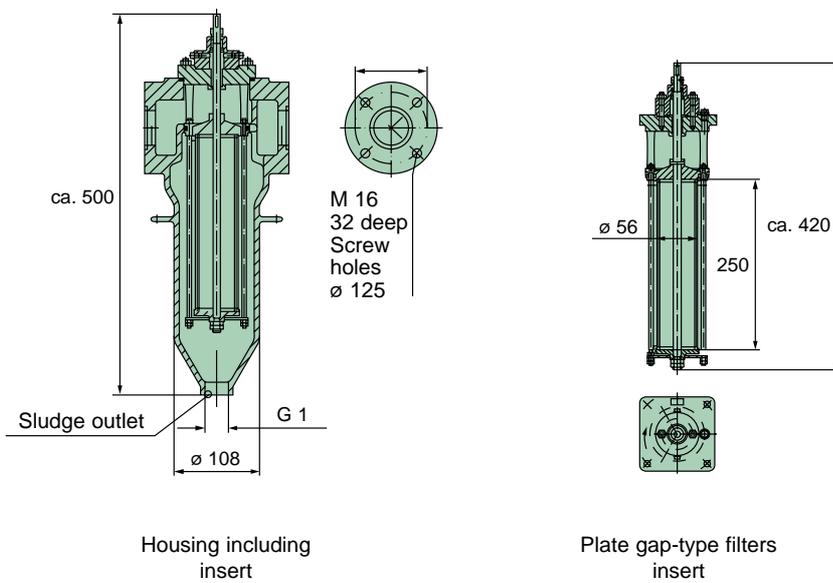
discs, the dirt particles are deposited on the surface and in the gaps. By turning the insert with the handle, the dirt gathers on the row of gap cleaners and falls into the sludge collection chamber where it is discharged by opening a ball valve.



Wire gap-type filters for gap width $\geq 30 \mu\text{m}$

The Wire gap-type insert consists of a non-rusting, high tensile steel wire wound in a spiral around an aluminium frame. The exact position of the steel wire on the frame provides for equal gaps. As the liquid to be filtered flows through the insert the dirt

particles are deposited in the gaps. By turning the insert with the handle, the dirt is removed by a stationary scraper and then falls down into the sludge collection chamber where it is discharged by opening a ball valve.



Specifications and order numbers for Plate and Wire gap-type filters

Standard versions for complete filter DN 50, 100 µm	Order numbers	Material *
Plate gap-type filters	51 525 7x 784	Aluminium
Wire gap-type filters	53 524 7x 191	Aluminium

* Other materials and product sizes on request.

Gap widths Plate gap-type filters	100 µm, 200 µm, 400 µm, 800 µm (other gap widths on request)
Nominal flow rate (e.g.: water, 25 °C)	12 m ³ /h with 0.3 bar initial differential pressure, gap width 100 µm
Gap widths Wire gap-type filters	30 µm, 50 µm, 100 µm, 150 µm, 200 µm, 500 µm (other gap widths on request)
Nominal flow rate (e.g.: water, 25 °C)	10 m ³ /h with 0.15 bar initial differential pressure, gap width 50 µm 15 m ³ /h with 0.30 bar initial differential pressure, gap width 50 µm
Connections	Metric threads, pipe threads and flange
Sludge outlet	Integrated
Permissible operating pressure	40 bar (4 MPa)
Differential pressure supervision	Integrated, adjustable
Pressure on the unfiltered media side	P1 = 1.5 - 40 bar
Permissible operating temperature	100 °C
Materials	Housing: AL, GG 1.4581 Insert: AL, GG 1.4301
Mains connection for drive	230/110 V AC, 50/60 Hz
Control and supervision	Optional
Control for dirt outlet	Time or differential pressure dependent as option
Version for explosive atmospheres	Optional
Filter configuration	For your filter system enquiry please use the filter configuration questionnaire on page 50.