

HAWLE-*OPTIFIL*

AUTOMATIC BACKWASH FILTER



HAWLE. **MADE FOR GENERATIONS.**



HAWLE-OPTIFIL

AUTOMATIC BACKWASH FILTER

The patented HAWLE-OPTIFIL is a fully automatic filter system using the principle of surface-, depth- or cake-filtration. A stainless steel mesh or stainless steel fleece is used as filter material. The particular matter is either separated on the surface or inside the stainless steel mesh or fleece. After reaching a defined level of clogging or time, the automatic backwash process is engaged using only a small amount of the filtered liquid for filter cleaning.

Filtration continues without interruption during the unique backwash process. Depending on the type of the filter system (filter area, filter shape) and filtration method (surface-, depth- or cake-filtration) in relation to the kind of particle (size, agglomeration and shape) the filtration fineness of HAWLE-OPTIFIL starts from 1µm.

FILTRATION

The unfiltered liquid is transported into the inlet pipe by means of the inlet pressure or feed pump. Separation occurs when the unfiltered liquid passes the filter material. The filter material is installed on a perforated drum. Depending on the type of the filter system (filter area, filter shape) and the filtration method (surface-, depth- or cake-filtration) relative to the kind of particle (size, agglomeration and shape), the filtration fineness of HAWLE-OPTIFIL starts from 1µm. The backwash is triggered by the difference pressure between raw water and filtered water chamber.

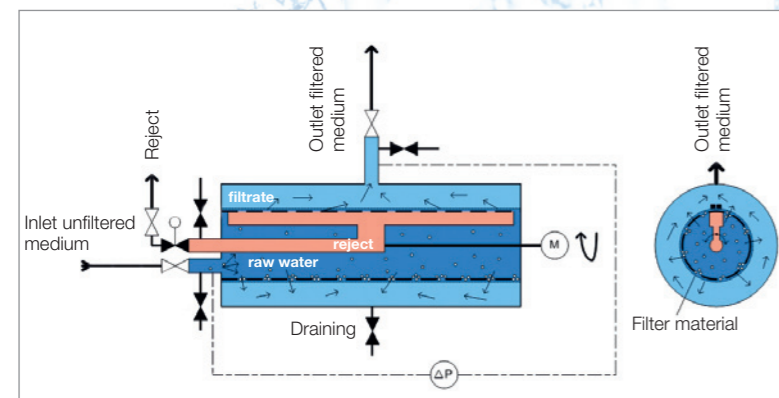
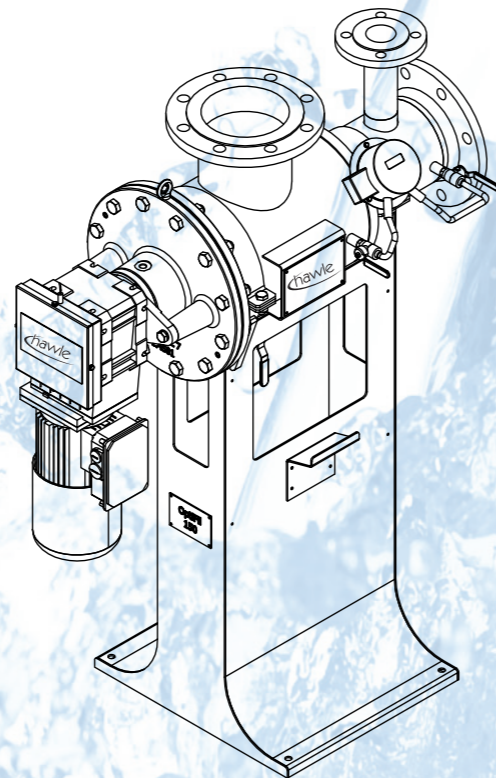


Figure 1: Filtration



APPLICATION AREAS

BACKWASH FLUSHING

The pressure sensor monitors the difference in pressure between inlet and outlet. After reaching a defined difference pressure level or time, the fully automatic backwash cleaning starts without interruption of the filtration process. The unique backwash device guarantees an efficient and clean backwash of the filter material by means of a low amount of backwash medium (for example water in drinking water applications).

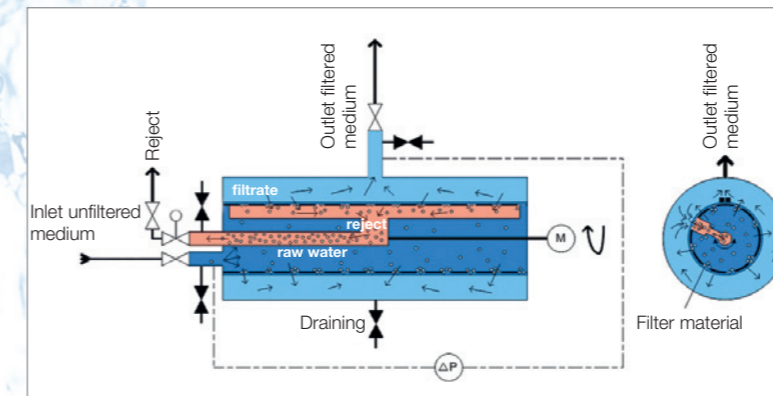
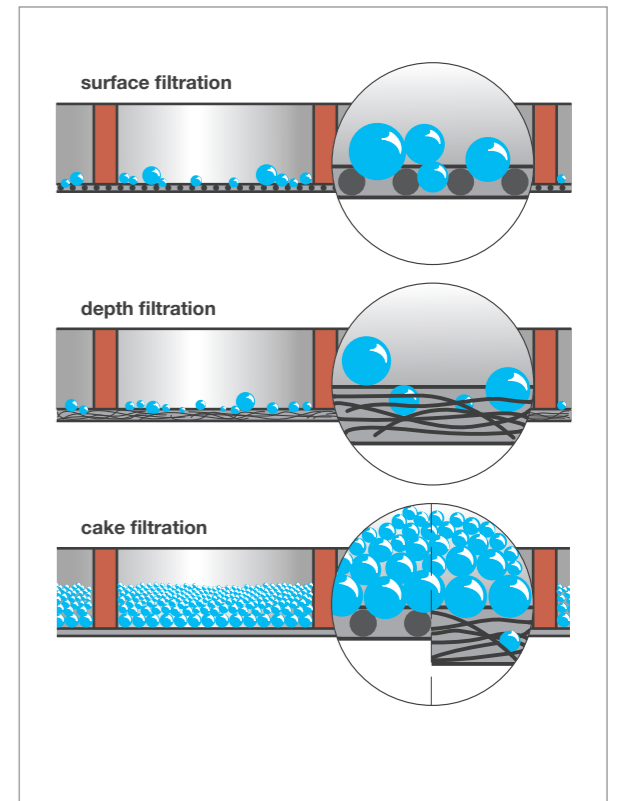


Figure 2: Backwash flushing

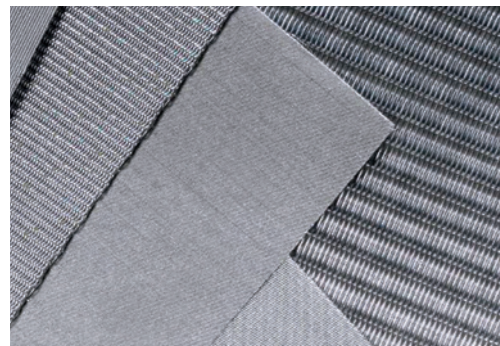
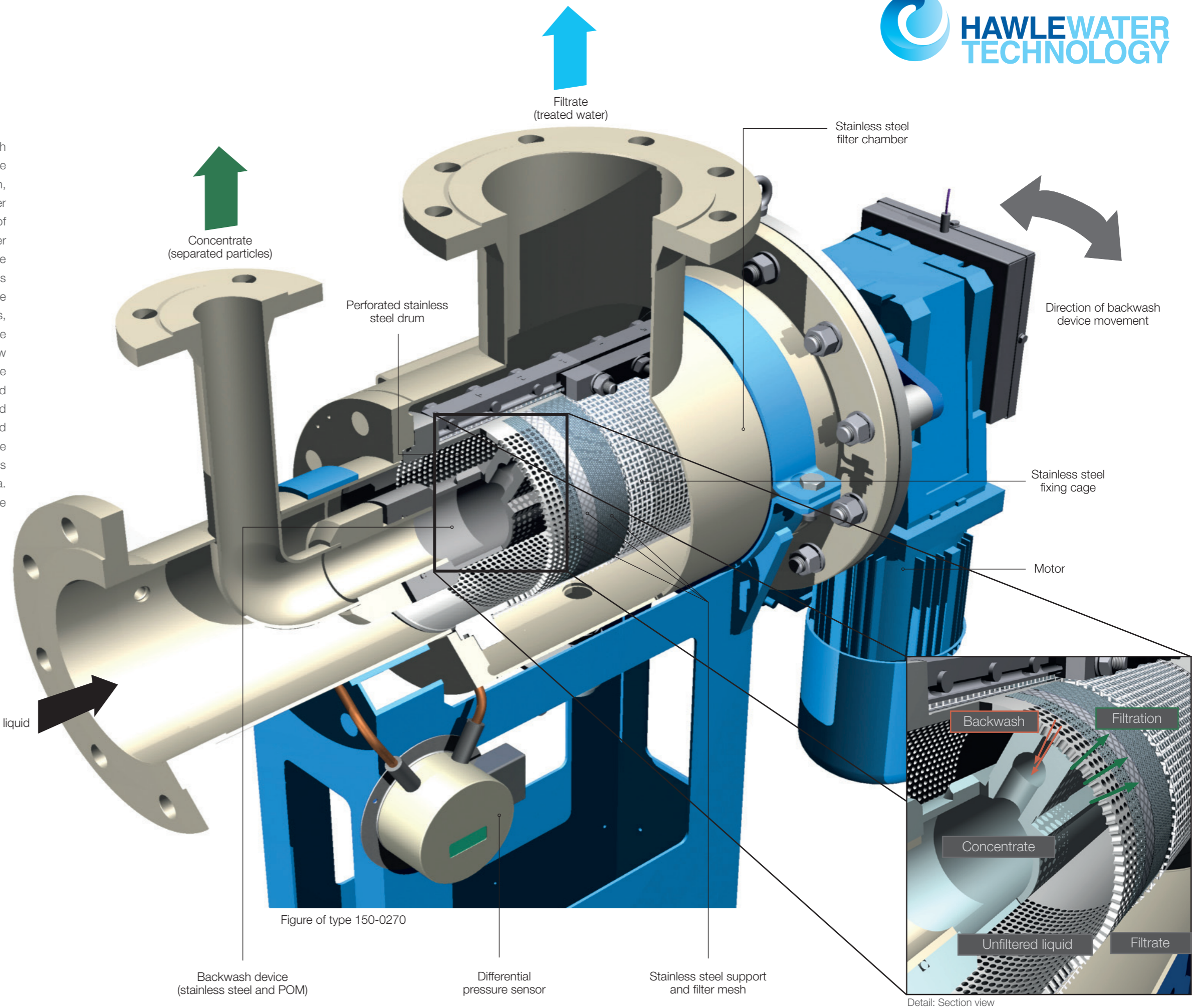


The HAWLE-OPTIFIL can be specified with the above displayed filter methods depending on project specifications.



CONSTRUCTION AND OPERATION

The HAWLE-**OPTIFIL** filter consists of a chamber with flanges for the unfiltered liquid inlet, the filtrate outlet and the concentrate outlet. A perforated drum, the support screen, the filter material and the fixing cage is located inside the filter chamber. The filter chamber, drum and fixing cage is made of top quality stainless steel. Depending on application, either a stainless steel mesh or fleece filter material is fixed to the perforated drum in the fixing cage. The backwash device is situated inside the filter chamber, pushing tightly against the inside of the perforated drum. During the backwash process, only filtered liquid from filtrated chamber enters the reject pipe with the concentrated backwash material. The backwash flow is constricted due to the construction of the backwash device and the drilling holes of the perforated drum. The separated particles on the filter material will be effectively backwashed and discharged from the reject pipe. Water loss is avoided due to the tight connection between the backwash device and the perforated filter drum device. The backwash device is operated by the external motor covering the whole filter area. The backwash device returns to stand-by position when the filter is cleaned.



Stainless steel mesh for surface- or cake-filtration



Stainless steel fleece for depth-filtration

THE PERFECT SOLUTION

FLUIDS

Water:

- drinking water
- process water
- sea water
- surface water
- waste water

Food and beverage:

- juice
- wine

APPLICATION AREAS

- drinking water distribution
- water treatment
- irrigation systems
- fruits and vegetables washing plant
- snow making machines
- pre-filtration for UV treatment
- pre-filtration for ultra- and nano-filtration
- and much more

TECHNICAL DATA

TYPE	050-0200	100-0270	150-0270	150-0720	250-0720	350-1080
max. OPERATION PRESSURE [bar]	16	16	10	10	10	10
INLET AND OUTLET DN [mm/inch]	50/2"	80/3"	150/6"	150/6"	250/10"	350/14"
CONCENTRATE - OUTLET DN [mm/inch]	25/1"	50/2"	50/2"	80/3"	80/3"	100/4"
L [mm]	488	512	967	1400	1500	1870
W [mm]	410	644	490	490	530	630
H [mm]	1394	1451	733	733	820	820
WEIGHT [kg]	80	150	207	243	317	461
FILTER AREA [dm ²]	1,4	4,6	5,7	14,9	25	48
max. FLOW RATE [m ³ /h]	20	30	100	140	380	600

FILTER TYPES



DN 50



DN 100

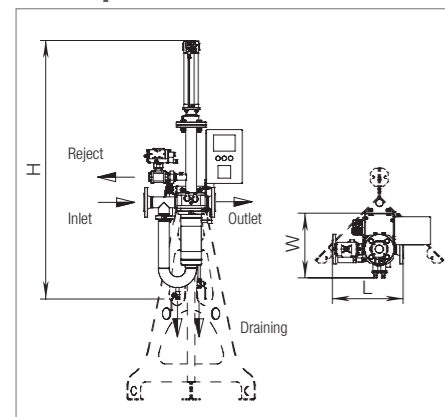


DN 150

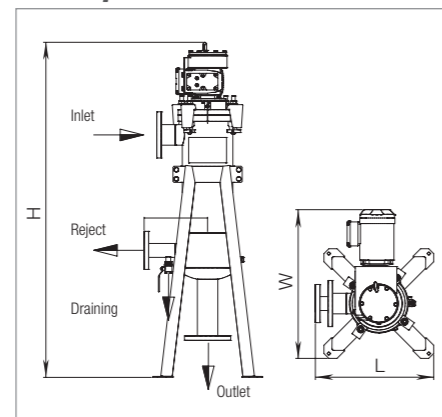


DN 250 / DN 350

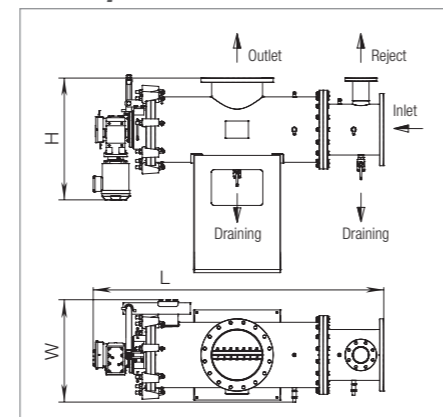
Hawle-**Optifil** 50



Hawle-**Optifil** 100



Hawle-**Optifil** 150 to 350



APPLICATION EXAMPLES



PROS OF HAWLE-OPTIFIL

- + Filter pore size from 1 μm
- + Backwash without interruption of filtration
- + Minimum amount of backwash medium needed
- + Filtration in highly turbid water possible
- + Low water loss by patented backwash device
- + Filter mesh of stainless steel
- + All materials suitable for use with water and food
- + Resistance against chemical and physical influence
- + Fully closed filter system
- + Filter types for different flow rates
- + Perfect backwash process
- + Quick installation, no start-up time
- + Space saving construction
- + Minimum operation and maintenance costs