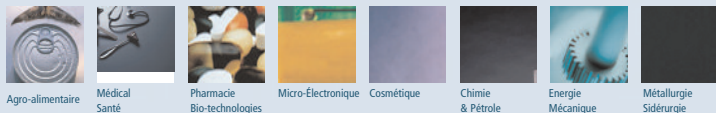


Filtration

PERMO standards



04[#] FILTRATION TECHNIQUES



Filtration units to meet all your requirements

Filtration is a physical phenomenon enabling the partial or total elimination of suspended matter for tap water, bore hole water, surface running water or waste water. The technique can also be used for the neutralization of aggressive water, for dechlorination and the retention of organic matter.



ACTIVE CARBON

Active carbon is available in powder or granular form, by special treatment of natural carbon (anthracite, peat) or of artificial carbon (coconut shell).

QUARTZ SAND

The most commonly used.
The filtering mass is formed from the superposition of several layers of calibrated grains.

OTHER FILTRATION FILLING MATERIAL

Magno, Neutralite and Hydro anthracite.

Basic principle of filtration

Filtration consists in allowing water to flow through a porous medium or filter to hold back particles whose dimensions are greater than pore dimensions. As the solid matter accumulates on the media, the orifices available to accept the flow of water are fewer, the filter's head loss increases. This is known as "fouling". When the maximum head loss is reached, the «defouling» filter must then be washed.

Another form of filtration more commonly known as neutralization consists of redissolving the mineral elements (carbonates and bicarbonates) during the flow of water through the filter to reach the equilibrium pH.

The third type of filtration called dechlorination or active carbon adsorption aims at removing the chlorine from the water in all its forms or to cut the percentage of organic matter (organic matter of high molecular weight, pesticides, traces of heavy metals...).

PERMO 2000 FILTER

5 TO 15 M³/HR

The PERMO 2000 range of filters allows:

- clarification (Silex, anthracite)
- neutralization (Neutralite or Magno)
- dechlorination (active carbon)
for the production of treated water at the rate of 5 to 15 m³/hr.

Permo 2000 filters are made up of a dipped galvanized steel shell or a mineral fibre reinforced polyester shell.

They are fitted with multiple manual or controlled valves to perform the counter washing phases, the automatic operation is managed by the PERMO A4X control box.

CHARACTERISTICS

Construction	Designation	Shell Ø mm	Ø I/O	Charges
STEEL	2165 40	650	40	Silex, Neutralite or Magno
	2180 40	800	40	
	2195 40	950	40	
	2195 50	950	50	
	2225 50	1250	50	
	2225 65	1250	65	
POLYESTER	2053 40	530	40	Double layer or active carbon
	2061 40	610	40	
	2076 40	760	40	
	2076 50	760	50	
	2091 40	910	40	
	2091 50	910	50	



PERMO 2500 FILTER

5 TO 15 M³/HR

The PERMO 2500 range of filters allows:

- clarification (Silex, anthracite)
- dechlorination (active carbon) for production of treated water at the rate of 5 to 15 m³/h.

Permo 2500 filters are made up of a mineral fibre reinforced polyester shell.

They are fitted with a controlled multi-channel valve to perform the counter washing phases, the automatic operation being managed by the PERMO A4X control box.

CHARACTERISTICS

Construction	Designation	Shell Ø mm	Charges
POLYESTER	610	610	Silex or active carbon
	770	770	
	927	927	
	1074	1074	



Mounted at the head of a shell in composite materials, the cast iron valve ensures a service pressure resistance of up to 7 bars and is leak-free using a unique bolted flange method of sealing with the shell.



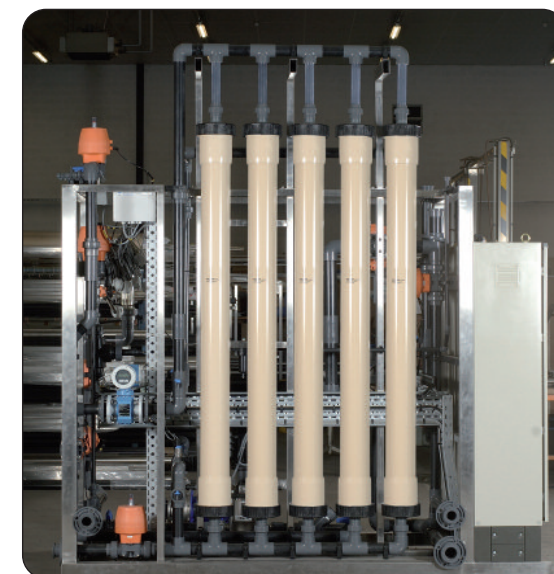
PERMO ULTRAFILTRATION

1 TO 30 M³/HR

Designed for bore hole water, surface-running water, sea water and waste water, ultrafiltration totally eliminates particles and micro-organisms present in water of a size in excess of 0.1 microns. Ultrafiltration is widely used for potabilisation, for reverse osmosis pre-treatments and for the treatment of water recycling systems loaded with particles and microorganisms. Made up of PVDF membranes, they offer great mechanical and chemical resistance and can be air or water counter cleaned.

CHARACTERISTICS

Designation	Nombre de modules	Flow m ³ /h	Ø raccordement
UF 250	1	2,5	DN40
UF 500	2	5	DN40
UF 750	3	7,5	DN50
UF 1000	4	10	DN50
UF 1250	5	12,5	DN50
UF 1500	6	15	DN80
UF 2000	8	20	DN80
UF 2500	10	25	DN80
UF 3000	12	30	DN100



ULTRAFILTRATION UNIT

SELF-CLEANING PERMO FILTER

5 TO 320 M³/HR

The wound AMF filter cartridges hold back suspended matter. Particles accumulating on and in the microfibrils constitute a filtration cake and set up a differential pressure. For a pre-determined value or following a given lapse of time, the control unit trips a washing cycle.

CHARACTERISTICS

Designation	Operating range in m ³ /h	Filter surface in m ²	Dimensions ml
Type 31 K	5 - 25	3,15	2,5 x 0,48 x 1
Type 93 K	15 - 80	9,25	4,48 x 0,72 x 1,57
Type 370 K	60 - 320	37	4,38 x 1 x 1,91

The main fields of application are:

- Protection of reverse osmosis membranes for fresh or sea water (desalinisation).
- Potabilisation of water
- Tertiary treatment of waste water.



Cut-off threshold: 20 - 10 - 7 - 3 - 2 en µm

PERMO FV FILTER

4 TO 100 M³/HR

The PERMO FV range of filters allows:

- clarification (Silex, anthracite)
- neutralization (Neutralite or Magno)
- dechlorination (active carbon)

Permo FV filters are made of a powder-coated steel shell (epoxy inside) or a shell in stainless steel.

They are equipped with manual or controlled multi-valves to perform the counter washing phases, the automatic operation being managed by a programmable automaton.

CHARACTERISTICS

Construction	Designation	Débit unitaire m ³ /h	Charges
STAINLESS STEEL	FV1000 DN 50	4 à 12	Silex, Neutralite or Magno, Double layer or active carbon
	FV1200 DN 65	6 à 17	
	FV1400 DN 65	8 à 23	
	FV1600 DN 80	10 à 30	
	FV1800 DN 80	13 à 38	
	FV2000 DN 100	16 à 47	
	FV2200 DN 100	19 à 57	
	FV2400 DN 125	23 à 68	
	FV2600 DN 125	27 à 80	
	FV2800 DN 150	31 à 92	
	FV3000 DN 150	35 à 100	

PERMO UPFLOW FILTER

10 TO 400 M³/HR

Filtration is performed in a filter under pressure containing four layers of bottom-to-top decreasing size grading of silex and a layer of silex (filtering mass) of fine size grading at the top.

The coarsest particles are held back in the lower layers while the top layer is used for finalization and safety.

Due its technological design, the process holds back both the suspended matter and colloidal matter previously coagulated in the core of the filter.

The configuration of the filtering layers indeed favours flocculation.

The process is mainly used for the treatment of surface water highly loaded in suspended solids (20mg/l to 150 mg/l) with the presence of colloidal matter.





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0,15 euros TTC/mn

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