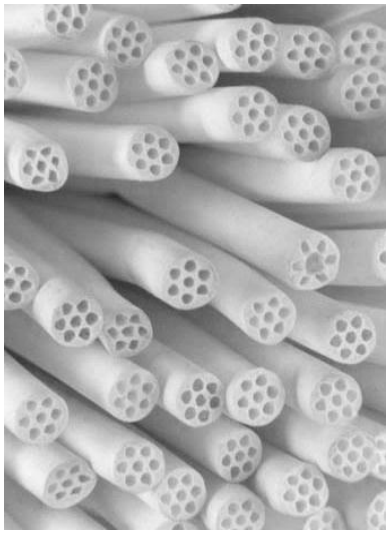
PB International
Clean and safe water

Ultrafiltration

Background information



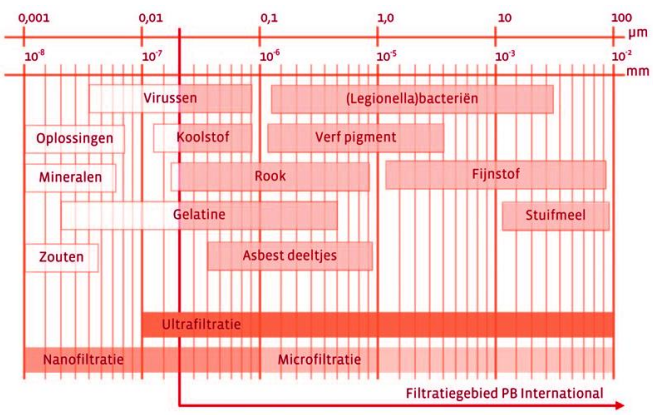
Process of ultrafiltration

Ultrafiltration is a technology that is used to filter out all small undissolved particles such as bacteria and viruses from water. Ultrafiltration is a membrane-based technique. The inside of the membrane acts as a very fine sieve, with a pore size of 0.015 to 0.03 µm. The water must be pushed through these pores with a pressure of about 29 psi. The reduction of legionella bacteria by this technique is 99.9999% (Log 6).

PB International membranes have an open foam structure. This results in a very low resistance with a higher flux and a better reduction result. In addition, the membrane has a high chemical and biological resistance and a very high mechanical stability.

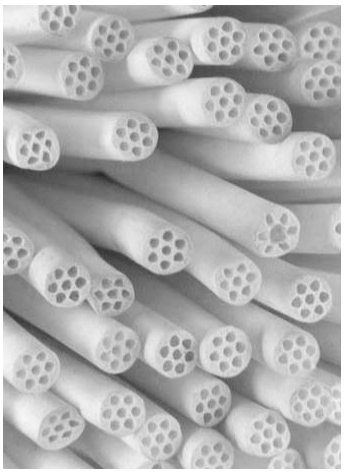
This stability is due to a revolutionary membrane technology, in which a membrane has been developed with 7 capillaries in each fiber. This is much stronger than the usual 'singlebore' membranes. The 'sevenbore' can also support the fluctuations of high-water pressures more easily than conventional membranes.

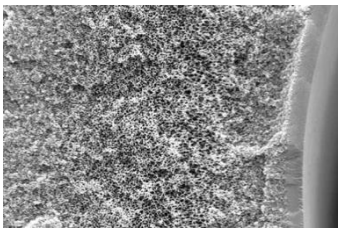
Specifications	
Quality water (supply)	Potable water
Efficiency for reduction of bacteria	99.9999% (Log 6)
Efficiency for reduction of viruses	99.99% (Log 4)
Material of membrane	Polyethersulfone
Pore size of membrane	0.02 micron
Type of membrane	Multibore© ultrafiltratie
Maximum water pressure	6 Bar (87 psi)
Diameter fiber OD	4,2mm/ 0.165''
Diameter bores ID	0,9mm/ 0.035''
Number of membrane channels	7

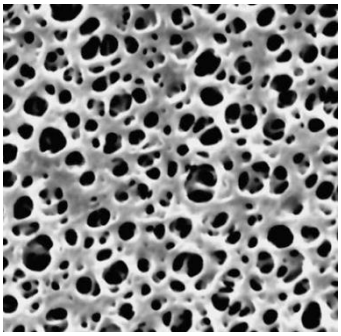


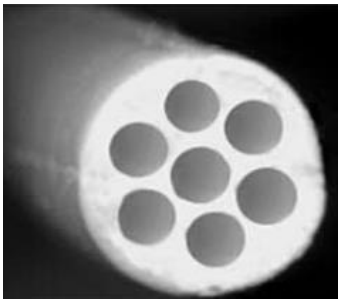
PB International
Clean and safe water

Filtration process



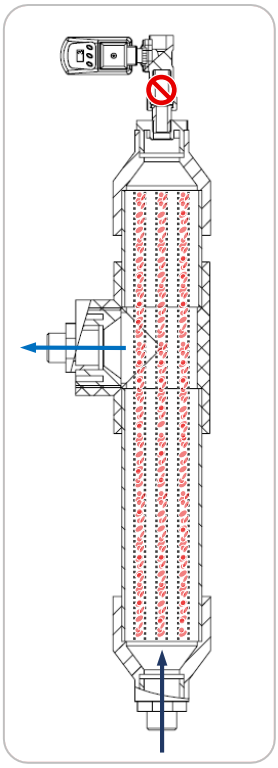




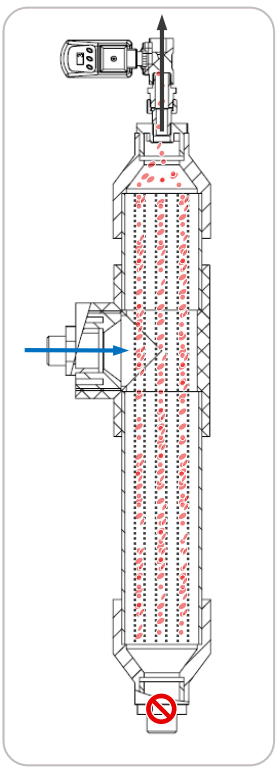


Ultrafiltration membranes filter out all small particles from water. These particles remain in the membrane. PB International's filter systems are always equipped with automatic flushing functionality. As a result, the membranes are flushed clean. In the figures below the flushing principles and the filtering action are shown schematically.

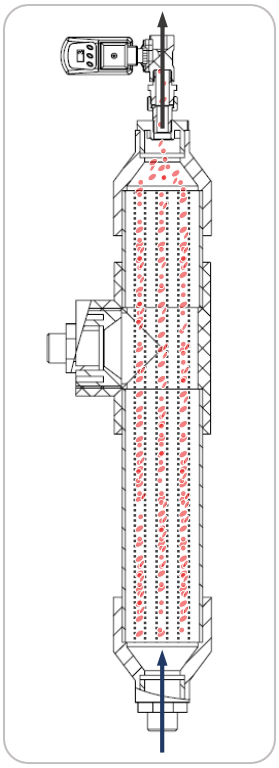
Filtratie proces

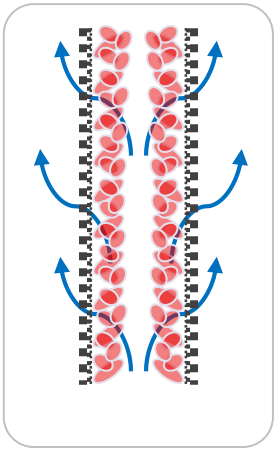


Backward flush

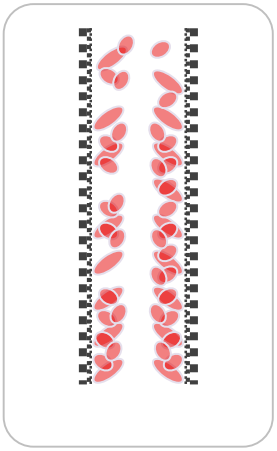


Forward flush

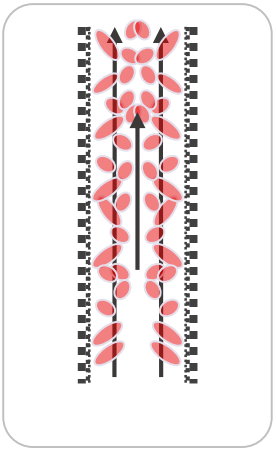




Detail filtratie proces



Detail backward flush



Detail forward flush