



PENTAIR X-FLOW®

Membrane Filtration



The challenge

Quality requirements for potable water are becoming increasingly stringent throughout the world. Not only the allowable levels for turbidity an microbiology are being lowered, but also new limits are being established for viruses and chlorine resistant organisms, such as cryptosporidium oocysts and Giardia cysts.

Conventional treatment systems are either unable to meet these quality standards or multiple barriers are required which need a large footprint and investment.

The solution

X-Flow's hollow fibre UF membrane will screen all turbidity, bacteria as well as most viruses. The X-Flow UF membrane will provide a simple solution that will produce water that meets the highest standards for turbidity and microbiology.

X-Flow's hollow fibre membrane is available in two (2) configurations:

- XIGA™ Multiple membranes (up to 4) installed in horizontal membrane housings.
- Aquaflex[™] Single membrane installed vertically and connected directly to feed and filtrate headers.



The X-Flow XIGA™ and Aquaflex membrane modules are being produced in an ISO 9000 certified factory and are certified according to the following international drinking standards:

- The United States (NSF)
- France (Drinking water)
- The United Kingdom (DWI)
- Germany (KTW/DVGW)
- Japan (AMST)
- The Netherlands (KIWA-ATA)







Features and benefits

Tight UF Membrane	Maximum pore size = 0,025 micron 6 log removal of bacteria 4 log removal of viruses Turbidity << 0,1 NTU
Dead end filtration	Low energy consumption Simple layout
Chemically enhanced backwash	Low operating pressure Fully automated Use of low cost chemicals
Automatic integrity test	Confirmation of LRV credits
Fully automatic operation	Logging of operating parameters
Pressurised system	No operator exposure to fumes or aerosols Small footprint



Clay Lane (UK) Installation

Examples

X-Flow has provided membranes for dozens of potable water membrane plants all over the world. Capacity ranges from less than 10 $\,\mathrm{m^3/hr}$ (44gpm) to more than 11,000 $\,\mathrm{m^3/hr}$ (48,600 gpm).

Minneapolis – USA

Capacity: 294 MID (78 MGD)

Year of start: 2005

Technology: X-Flow XIGA™

Clay Lane – United Kingdom

Capacity: 162 MLD (48,2 MGD)

Year of start: 2001

Technology: X-Flow XIGA™

Resourcing the world