



GOSHU KOHSAN (VIETNAM) CO.,LTD  
Clean Water, Beautiful Earth  
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# ULTRAFILTRATION

## Superior Ultrafiltration

**Ultrafiltration (UF):** is used to treat surface water, ground water, seawater and wastewater as either primary treatment or as pretreatment to Reverse Osmosis (RO) and Nano Filtration (NF). Compared to conventional pretreatment, UF allows for higher fluxes for RO and NF systems while maintaining longer intervals between cleanings. In some cases, it replaces conventional pretreatment for portable applications, ground water recharging and water recycling.

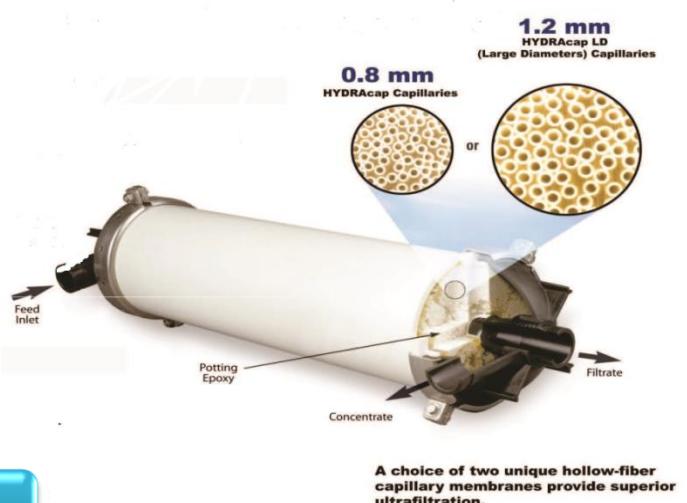
## Membrane Operation

**Filtration Mode:** Feed water flows inside fiber and filtrate is collected in the central core tube. This is known as inside/ out filtration.

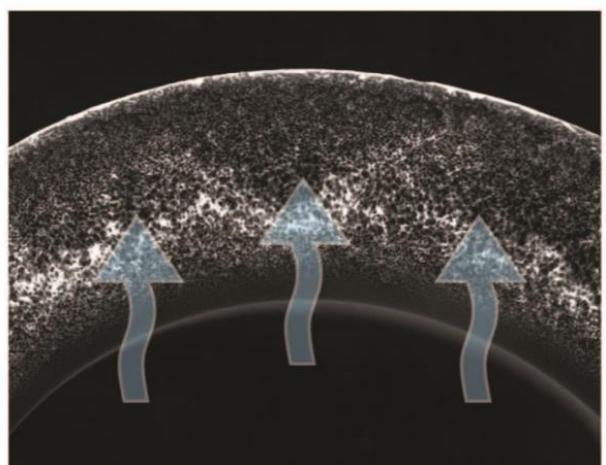
**Backwash Mode:** Filtrate is pressurized and flow is reversed such that accumulated solids are purged from the fibers.

## Ultrafiltration

- Low fouling hydrophilic polyethersulfone membrane
- Tolerant to chlorine, peroxide and other oxidants.  
Resistant to PH extremes
- Exhibits 5 log (99,999%) removal for bacteria, giardia, cryptosporidium and 4 log removal for viruses, and reduces turbidity to < 0.06 NTU
- Operating flexibility, direct or cross-flow filtration
- DHS (CA), DEP(MA), NSF/EPA, ACS (France), DWI (U.K.) certifications for materials of construction, operation and pathogen removal efficiency



A choice of two unique hollow-fiber capillary membranes provide superior ultrafiltration.



*Uniform structure with inside/out flow configuration*

## Capillary Technology vs. Conventional Pretreatment

- Significantly better filtrate quality when compared to conventional pretreatment, exhibiting 100% removal of colloidal material
- Product quality is stable even during feed water variations
- Single-step treatment reduces operating costs and increases efficiency
- Can significantly reduce use of pretreatment chemicals
- Backwash disposal is less problematic
- Increased efficiency of RO membrane system design and operation, contributing to reduced capital and operational cost
- Maximizes RO performance by allowing elements to operate longer with less cleaning
- Low pressure operation

## Typical Process Conditions

<b>Operating Transmembrane Pressure (TMP):</b>	2-20 psig (0.14-1.4 bar)
<b>Max Backwash Pressure :</b>	20 psig (140 kPa) or 1.4 bar
<b>Backwash Flux:</b>	100-150 GFP (170-255 lmh)
<b>Backwash Frequency:</b>	Once every 15-60 minutes
<b>Backwash Duration:</b>	25-60 seconds
<b>Chemically Enhanced:</b>	Maximum : same as backwash
<b>Backwash Frequency</b>	Minimum: 1-2 times per day
<b>Chemically Enhanced Backwash Duration:</b>	1-30 minute soak
<b>Disinfection Chemicals Or H<sub>2</sub>O<sub>2</sub> (hydrogen peroxide)</b>	NaOCl (sodium hypochlorite)
<b>Cleaning Frequency:</b>	Once every 1-6 months
<b>Cleaning Chemicals:</b>	NaOCl + NaOH, Citric Acid

*For further information, please contact:*

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