



AQUABRANE
WATER TECHNOLOGIES PVT. LTD.



redefining ultrafiltration



About Aquabrane

- Group company of *Aquabrane Holdings Pte Ltd, Singapore.*
- Incorporated with an investment from private equity investor & an Indian partner with a vision to provide cutting edge *Ultrafiltration Technologies.*
- Leading Manufacturer of Hollow Fiber Ultrafiltration Membrane & Submerged Ceramic Membranes
- Technology from Singapore, Manufacturing & R&D Center in Maharashtra

Our Vision

- Be a globally renowned ultrafiltration membrane manufacturer, offering cutting edge ultra filtration technologies for water and waste water treatment applications.
- Be the most preferred supplier of ultrafiltration membranes in the water industry.
- Provide simple and viable ultra filtration solutions.
- Maximize the returns to investors & network of partners while being mindful of our overall responsibilities.

Our Mission

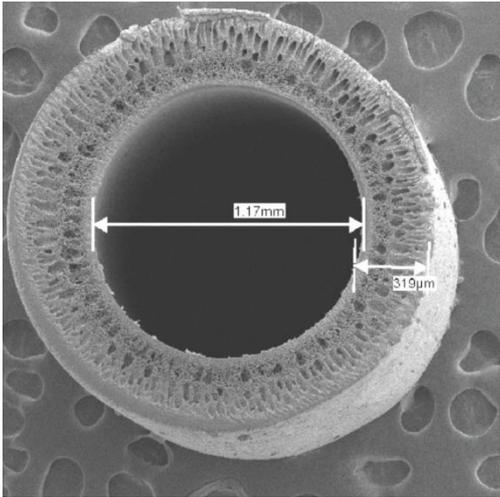
- We will accomplish our vision through complete customer satisfaction by providing quality products & services on time and every time to the budget.
- We will continuously invest in our human resources, research and development, and in our manufacturing capabilities while incorporating latest technologies.

Manufacturing and R&D Center

- Substantial Investment has been made in setting up Manufacturing and R&D Center in Maharashtra, India
- Dry jet wet spinning phase inversion technology is used for manufacturing.
- Manufactured using high quality polymers & chemicals under the supervision of well experienced scientific and technical team.
- Continuous R&D is carried out to further optimize and enhance the membrane performance.
- The unique serial number ensures complete traceability up to raw material stage



Membrane Development



- We have developed a high quality & high performance hollow fiber Ultrafiltration membranes with extremely low TMP.
- Unique combination of PES with Outside-In flow configuration
- Continuous testing of membranes by leading government and private institutes for its consistency, performance and pore size distribution.
- We have a long term membrane research partnership with some universities and private institutions.
- Quality check audit is done by sending the SEMs (Scanning Electron Microscope) images to these universities and institutes.

Aquabrane S Series Ultrafiltration Module

Quick Specification



- Pore Size - 0.03 μm
- MOC – Modified PES
- Flow Path – Outside In
- Area – S 430 (6m²), S 830 (20m²), S 860 (40m²)
- Fiber ID/OD – 1.2 mm/2 mm
- TMP – 8 – 12 psi
- Dead End or Cross Flow Operation
- UF Inlet Pressure – 1 bar, maximum 1.5 bar
- Backwash for S 860 – 1.5 x Feed Flow or 3m³/hr per module – Whichever is higher. Pressure 14 – 20 psi
- Air Scouring for S 860 – 7Nm³/hr per module @ 8 – 15 psi
- End Connections – 1.5" NPT

Aquabrane S Series Ultrafiltration Module

Salient Features



- Pore diameter of 0.03 μm effectively removes suspended solids, colloids, bacteria & viruses from various feed source & provides consistent treated water quality irrespective of changes in feed water quality.
- Modified PES Chemistry with permanent Hydrophilicity.
- Double side potting ensures robust & versatile performance.
- Simple, automated operation with flexibility of operation & maintenance due to multiple ports option.
- Can be operated in dead end & cross flow depending upon feed water quality & system design.
- Extremely low TMP (4–8psi) across the membrane wall which reduces feed pressure & operating cost.
- High Resistance to Fouling & Chemical Oxidants

Salient Features

- Due to low TMP, the TSS does not penetrate deep into the surface pores & hence can be easily removed by back washing.
- No aggressive Chemical Enhanced Backwash.
- Low CIP requirements hence low generation of chemical waste & low operating cost.
- Fiber repairing can be easily done by dismantling the end caps.
- Additional port on feed side helps to optimally design the operational sequence & duration while handling feed with high TSS.
- No complicated operating & cleaning procedures.
- Easy to follow storage guidelines.
- Best in class warranties & site support.
- Oil & Grease resistant membranes available on request.

TYPICAL APPLICATIONS

Drinking water

Surface & well water purification

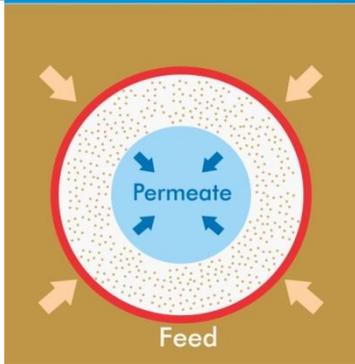
Pretreatment to RO/NF & SWRO Plants

Industrial process water treatment

Tertiary treatment in sewage treatment plants

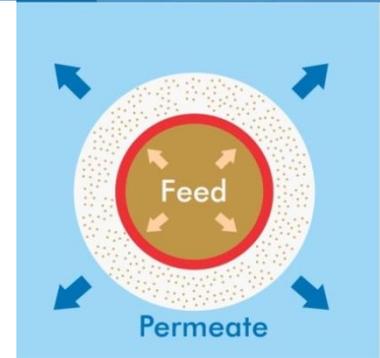
Industrial & municipal waste water recycling

Outside-In V/S Inside-Out



Outside-In

- Solids remain outside of lumen.
- Easy to clean.
- Allows uniform flow distribution & higher solids loading
- High acceptance of particulate fouling.
- Foulant removal is more effective during backwash with air scouring & CIPs.
- Prevents irreversible choking of membrane fibers during alteration in feed water quality.



Inside-Out

- Fine prescreening is required to prevent solids from entering the lumen.
- Cleaning is aggressive & more frequent.
- Can get easily choked.
- Low particulate fouling tolerance.
- Aggressive CEBs & CIPs may be needed while backwashing.
- Inside-Out membranes may inevitably foul.

Advantages of Aquabrane Modules



- Unique combination of PES with Outside In Flow Configuration.
- Modified PES offers higher permeability and better hydrophilicity with uniform pore size distribution.
- Controlled proprietary post treatment ensures that Hydrophilicity does not get lost even after aggressive acid wash.
- Higher fluxes and low operating cost due to low TMP
- Lower capital as well as project life cycle cost.
- Flexibility in mode of operation since both Dead End and Cross Flow can be designed

Quality Policy

- Aquabrane is committed to serve it's customers and meet their needs and expectations in design, manufacture, inspection, supply and support of hollow fiber membranes for water and waste water treatment applications.
- We strive for Total customer satisfaction by providing innovative high shelf life UF membrane products and services.



✓ Certification from FQC and DAkkS, Germany which helps organization achieve international quality of products and services- A globally accepted entity.

Quality Assurance

- Manufacturing UF membrane modules at such a high quality with out a through-out quality assurance process is unimaginable.
- There are series of quality checks of fibers prior to module assembly.
- Each module is wet tested for its flow and permeate quality prior to dispatch.
- Each module has a unique reference serial number for the complete traceability up to the raw material stage.

TYPICAL TREATED WATER QUALITY

Turbidity	< 0.1 NTU, 90% of the time
SDI	< 3, 90% of the time
TSS	< 1 ppm
Bacteria, Giardia & Cryptosporidium	> 5 log removal
Viruses	> 3 log removal

✓ We guarantee that Aquabrane's UF membranes have proven to improve water quality by reducing the Turbidity, SDI and TSS levels.

The Aquabrane Advantage

Focus on Quality

- Precise testing for quality.
- Batch Test Certificates Available. Complete traceability
- Consistent product Quality guarantee

Technical Support & Proven Capabilities

- Design & Troubleshooting Support. Skilled Engineers Available
- Process Calculations & Trouble shooting Support Available Locally
- Consistent operation at higher fluxes (50 LMH) for challenging waste waters like Steel Effluent, Textile Waste Water, STPs, Pond Water thus reducing the treatment cost per m³ of treated water.

Localization

- Competitive prices due to complete local manufacturing.
- Flexibility to manufacture custom build products like inside-out, PVDF, Hot Water Sanitizable, Hollow Fiber NF, O&G Resistant, High Temp, etc for specialized application.
- Service Oriented - Faster Turnaround & Quick Decision
- Uninterrupted Supply

Lab facilities

- Sufficient investments in R&D facilities
- Continuous research to improve product efficiency
- Physiochemical and biological tests
- Feasibility tests



Piloting Capabilities

Additional Expertise

- Feasibility studies and Piloting Support
- Designing Expertise
- High level of Manufacturing knowledge & skill
- Extremely professional and talented team of experts

Thank You

Aquabrane Water Technologies Pvt. Ltd.

89, Gautam Complex, Sector 11,
CBD Belapur, Navi Mumbai-400614, India.

T : +91 (22) 4061 9000

Email : sales@aquabrane.com