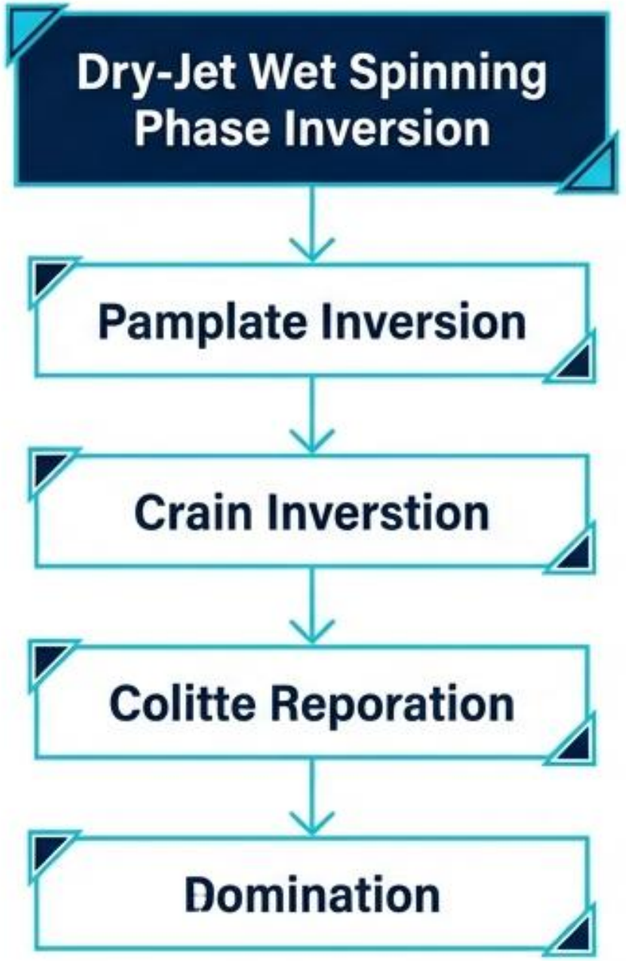
AQUABRANE

WATER TECHNOLOGIES PVT. LTD.

Redefining Ultrafiltration

Technical Specifications & Operational Architecture: SP 1040 Series

Process: Dry-Jet Wet Spinning Phase Inversion | Material: Premium PVDF | Revision: SP-1040-A



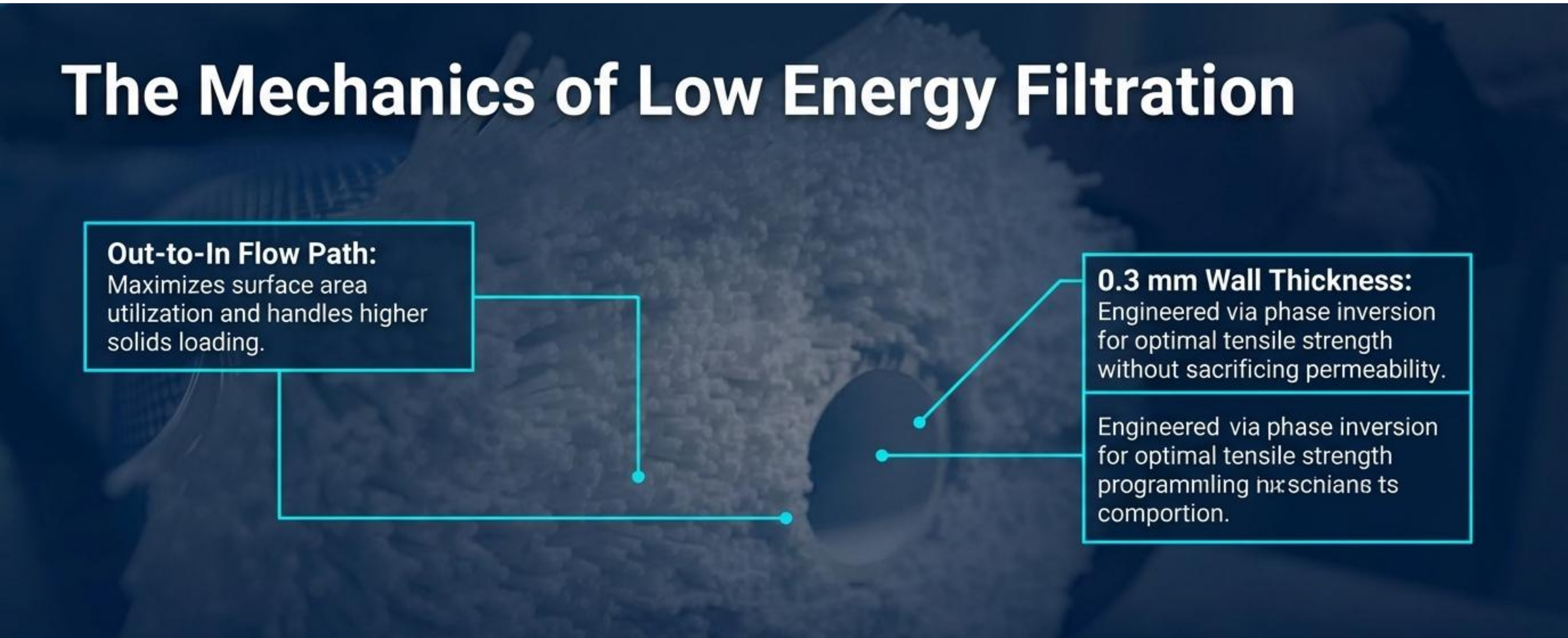
Precision at the Molecular Level.

Aquabrane manufactures advanced hollow fiber ultrafiltration membranes using dry-jet wet spinning phase inversion technology. Under the close

supervision of an experienced scientific team, premium-quality polymers are engineered to ensure high precision and absolute structural consistency.

Continuous R&D focused on three vectors: Performance, Durability, and Operational Efficiency.

The Mechanics of Low Energy Filtration



The integration of Out-to-In flow dynamics with dry-jet wet spinning enables efficient filtration at extremely low Transmembrane Pressures (TMP), dramatically reducing overall facility energy consumption.

Tripartite Validation & Quality Assurance

Independent Testing

Conducted by leading government and private institutes.

- Guarantees accurate specifications, consistent performance, and uniform pore size distribution.

Advanced Quality Audits

Periodic evaluation by external institutes.

- Utilizing Scanning Electron Microscope (SEM) imaging to verify structural integrity and manufacturing consistency.

Research Collaborations

Long-term partnerships with universities and research institutions.

- Driving continuous technological improvements in membrane design.

SP 1040 Series PVDF Membrane

Non-Coated High-Performance Module

52 m² Total Membrane Area

Glass-filled
ABS End Caps

UPVC
Housing Material

2″ NPT Nozzle Size

Aquabrane Proprietary
Potting Compound

Structural Architecture Matrix

Membrane Internal Specifications	
Material	PVDF
Surface Properties	Hydrophilic
Fiber Inner Diameter (ID)	1.0 mm
Fiber Outer Diameter (OD)	1.6 mm
Wall Thickness	0.3 mm

Module External Characteristics	
Weight (Empty)	35 kgs
Weight (Water Filled)	67 kgs
Housing	UPVC
Potting	Aquabrane Proprietary Compound
Flow Path	Outside to In

Operational Thresholds & Tolerances

Pressure & Flux Dynamics

Clean Water Flux (at 20°C): **30 - 120 LMH**

Max UF Inlet Pressure: **5 Bar**

Transmembrane Pressure: **2 Bar**

Feed Water Limits

Max Feed TSS: **200 mg/L**

Max Feed Turbidity: **300 NTU**

Max Total Oil & Grease: **< 1 ppm**

Environmental Range

Temperature Window: **5°C to 45°C**

pH Range (Continuous): **4 to 9**

Operating Modes

Supported Configurations: **Dead End** or **Cross Flow**

Maintenance Protocols & Chemical Resilience

Routine Cleaning

Mode: Forward Flush

Frequency: Maintenance Cleaning recommended once every 24 hours.

Note: Backwash flux/pressure/frequency are explicitly Not Applicable for this architecture.

Air Scouring Parameters

Volume Requirement: 8 Nm^3/hr

Duration Cycle: 120 - 240 seconds

Chemical Tolerance

Maximum Chlorine Tolerance: 750,000 ppm hrs

Max NaOCl (Continuous): 750,000 ppm hrs

Max NaOCl (During Cleaning): 5000 ppm

Engineered for maximum uptime and chemical resilience in demanding filtration environments.