AQUABRANE

WATER TECHNOLOGIES PVT. LTD.

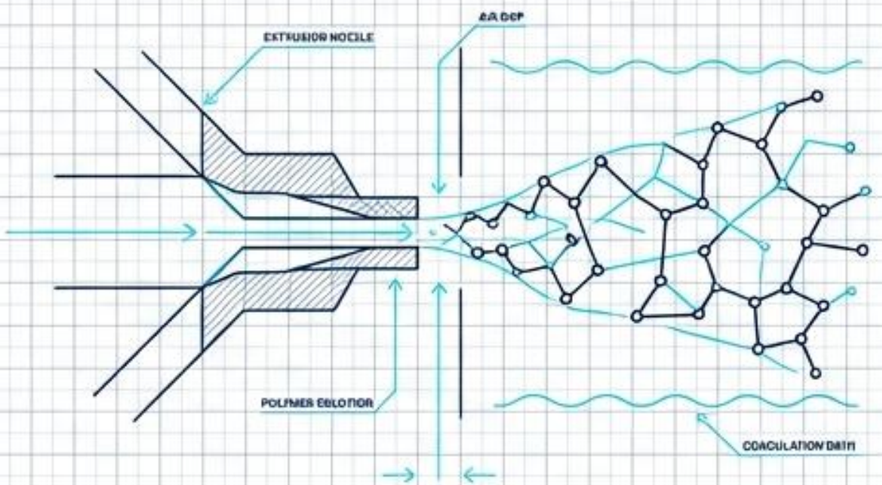
Redefining ultrafiltration

S-860 Series Hollow Fiber UF Membranes | Technical Specifications & Operational Blueprint

Precision Engineered from the Polymer Up

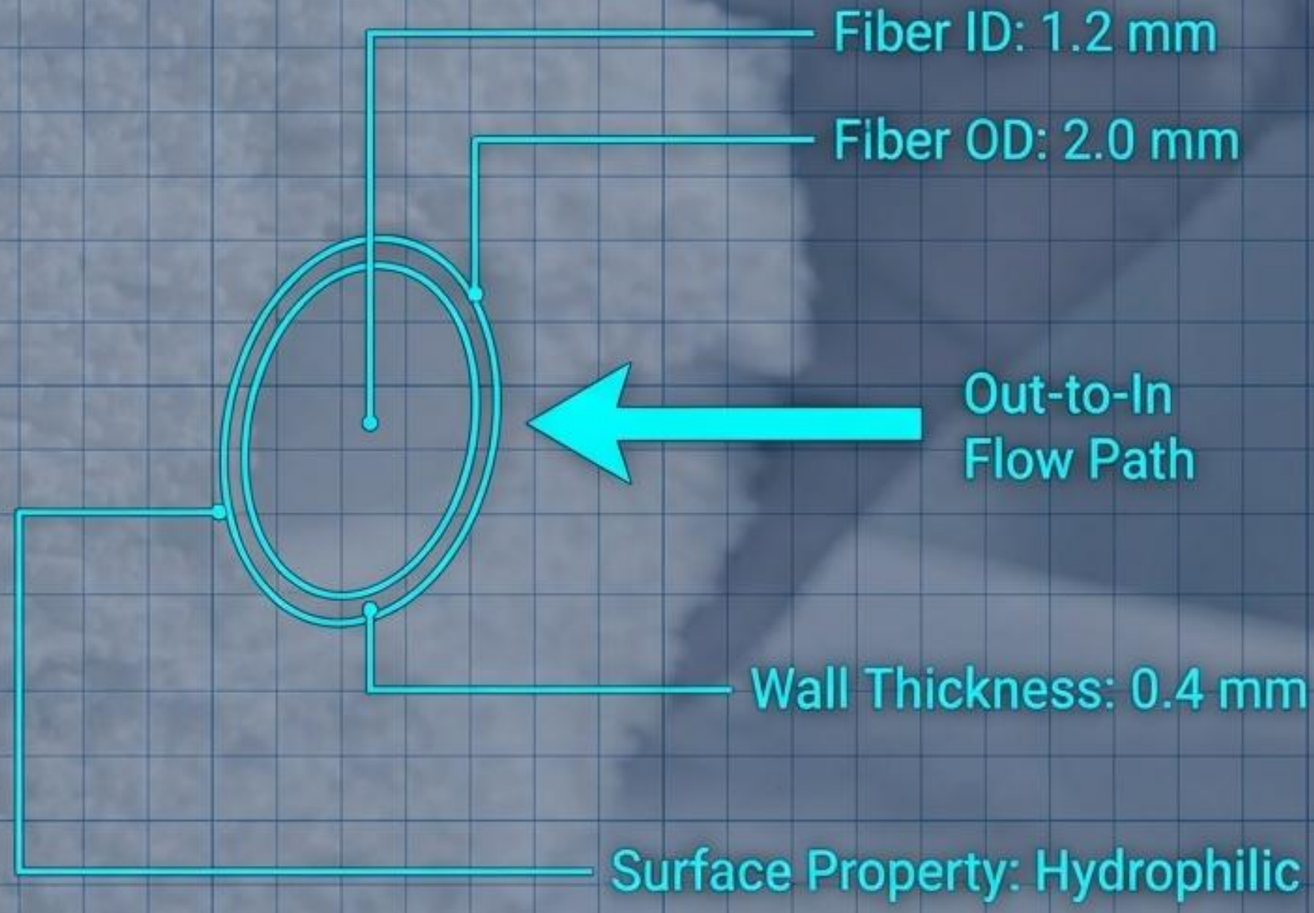
Manufactured using dry-jet wet spinning phase inversion technology.

- Ensures high precision and consistent membrane structure.
- Formulated with premium-quality polymers and chemicals.
- Designed for Out-to-In flow paths.



Extremely low Transmembrane Pressure (TMP) enabling efficient filtration with significantly reduced energy consumption.

Anatomy of a High-Performance Fiber



A Validated Framework for Quality Assurance

Independent Testing

Verified by leading government and private institutes for consistent performance, accurate specifications, and uniform pore size distribution.

Research Collaborations

Long-term partnerships with universities and research institutions driving continuous technological improvements in design and manufacturing.

Advanced Quality Audits

Periodic evaluation of Scanning Electron Microscope (SEM) images by external institutes to verify absolute structural integrity and quality consistency.

Structural Architecture of the S-860 Series

Membrane Area	**40 M²**
Weight	**35 kgs (Empty) / 40 kgs (Water Filled)**
End Cap Material	**Glass filled ABS**
Nozzle Size	**1.5" NPT**
Potting Material	**Aquabrane Proprietary Potting Compound**
Operating Mode	**Dead end** or **Cross flow**

Engineering the Right Variant

	Normal (Non-Coated)	HT (Non-Coated)	Normal (Coated)	HT (Coated)
Membrane Material	Modified PES	Modified PES	Modified PES + Graphene Coating	Modified PES + Graphene Coating
Housing Material	UPVC	CPVC	UPVC	CPVC
Max Temperature	5 to 45°C	5 to 65°C	5 to 45°C	5 to 65°C
Max Oil & Grease Tolerance	<1 ppm	25 ppm	25 ppm	25 ppm

Select High-Temperature (HT) variants for extreme thermal loads, and Coated variants for enhanced oil/grease tolerance.

Core Operating Parameters

Transmembrane Pressure

0.55 – 0.83 Bar (8 to 12 psi)

UF inlet pressure: 0.8 – 1 Bar (Max 1.5 Bar)

Clean Water Flux

125 - 150 LMH

Measured at 20°C

Continuous Operation

pH 3 to 9

Cleaning cycles tolerate pH 2 to 11

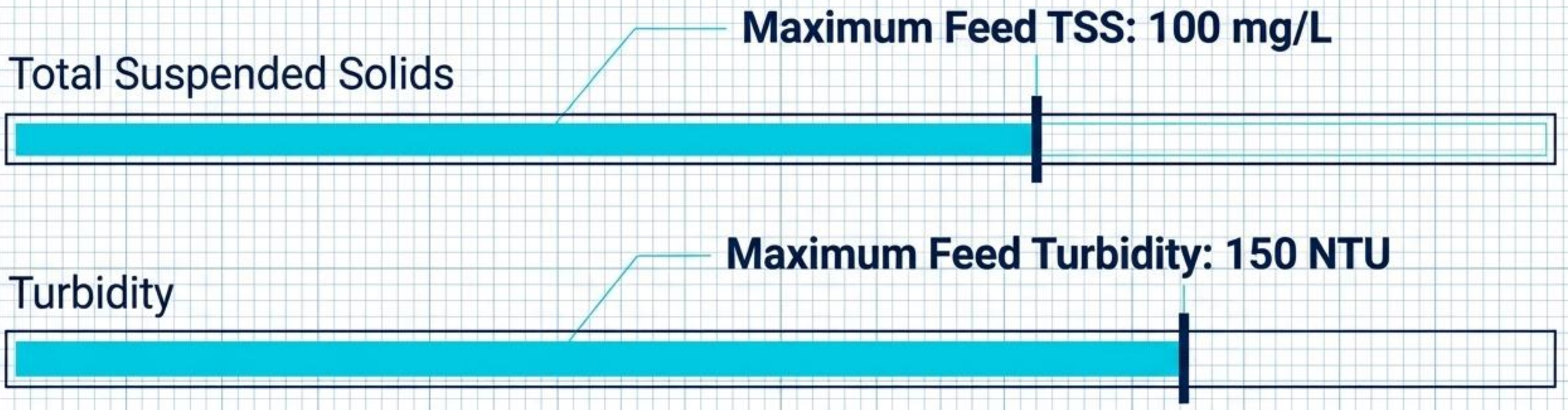
Maximum NaOCl

20 ppm

(continuous)

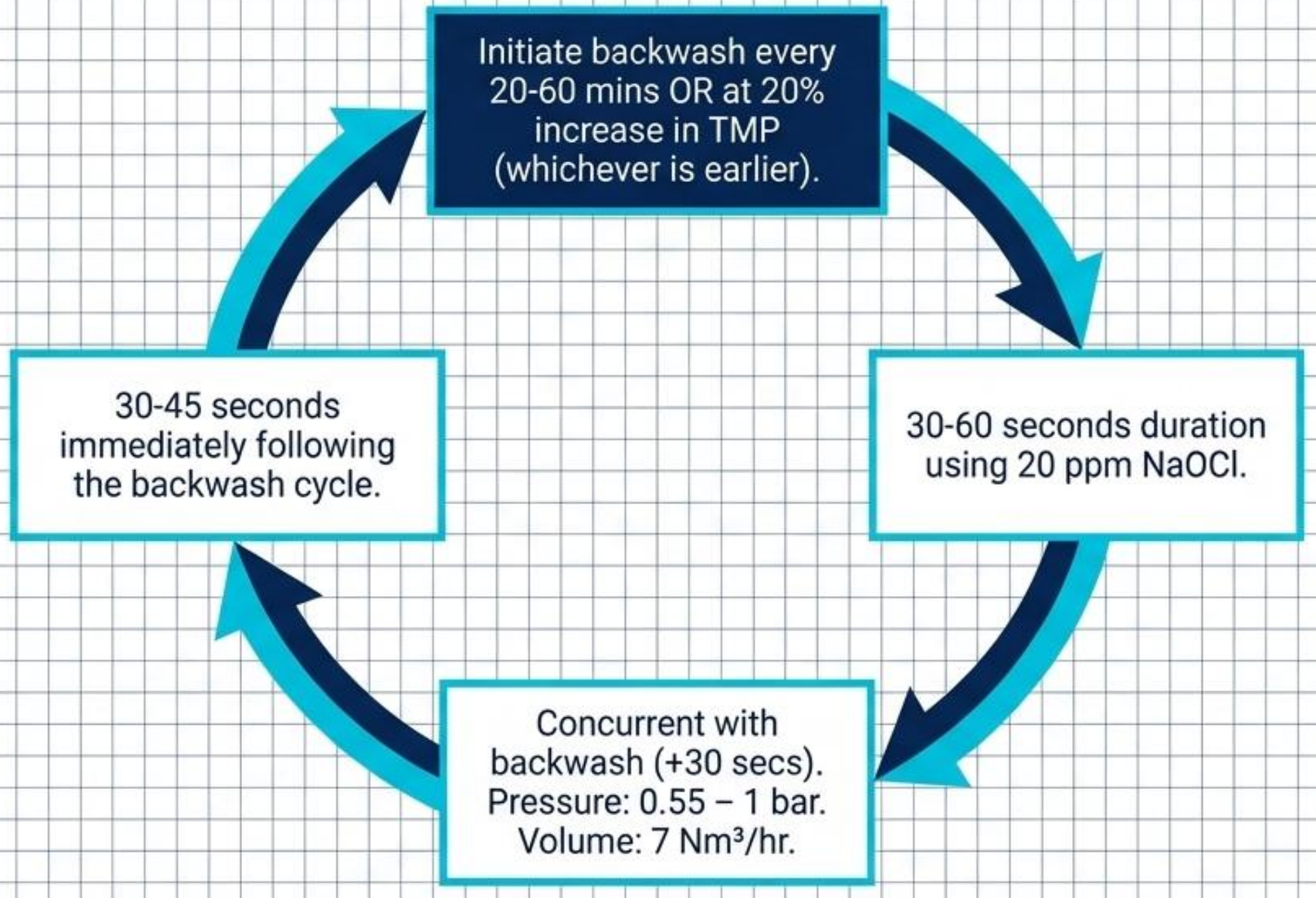
Total Chlorine Tolerance: 100,000 ppm hrs

Feed Water Quality Thresholds



Backwash Flux Range must be the greater of 1.5 times constant Flux OR 3 M^3/hr, operating at 1-1.4 Bar (14-20 psi).

Standard Maintenance Cycle



Note: Forward flush of 60s also recommended once every 6-12 hours independent of backwash.

Daily Enhanced Operations

Mandatory Daily Action: 1 Enhanced Backwash (EBW)

Must be carried out once a day using 200 ppm NaOCl.

Maximum NaOCl allowed during heavy cleaning is 1000 ppm (100 ppm of free Cl2).

Backwashing with HCl & NaOH may be required dynamically depending upon specific feed water quality.