MEMFILL
Hollow Fibers. Smarter

MEMFILL's H$_2$ollow-Fiber® Aruvi® MBR

- Indigenous H$_2$ollow-Fibers®
- Improved Productivity
- Smaller Footprint
- Energy Saving
- Assured Reliability

- High Nitrogen Removal
- Low Sludge Production
- Effective Effluent Disinfection
- Excellent BOD, COD & Suspended Solids Removal

MEMBRANE BIOREACTOR

MEMFILL Transforms Sewage & Effluent Into Reuse Quality Water

Make In India

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MEMFILL's Aruvi® MBR Module

MEMFILL's HighFlux® MBR contains hybrid hollow fiber membranes which is made up of non-oven fabric with hybrid-PVDF (h-PVDF) coated on it. The hollow fiber membrane module performs solid-liquid separation in the biochemical pool, replacing the secondary and ternary filters which reduce the foot-print. The high-efficiency retention effect of the membrane allows the nitrifying bacteria to be completely retained in the bioreactor, which results in:

a) high nitrogen removal

b) efficient effluent disinfectants

c) efficient removal from effluent including COD, BOD and suspended solids

d) low sludge production

Salient Features & Advantages

Durability
Our proprietary reinforced h-PVDF hollow fiber membranes employ unique support layer membrane technology that makes their mechanical properties notably higher than conventional ones

Chemical Stability
h-PVDF membranes show good chemical stability owing to acid/alkali, corrosion, bacterial, and oxidation resistance

Better Performance
Smooth surface with high electron affinity and stable pores make h-PVDF suitable for better anti-pollution performance

Good Retention
h-PVDF membrane's special inner and outer dense double-skin structure exhibits excellent retention performance

Small Footprint
HighFlux® MBR is compactly designed wastewater treatment system, which can be modularized with small footprint

Low Energy Consumption
In case of highly polluted wastewaters, the aerators effectively reduce the power consumption for the supply of oxygen to the biomass

Reliability
The outlet quality remains constantly high – the ideal condition for further treatment or water recycling regardless of various loads for various industries

Sustainability
The modular upgradability, the volume and load adjustable control allow flexible adaption to the wastewater treatment circumstances

Technical Specifications: Aruvi®-MBR-F10

MBR Module Dimension

Module Length	mm	1000
Module Width	mm	655
Module Thickness	mm	50
Module Outlet Type		Dn25
Module Air Inlet Type		Dn25
Module Weight	Kg	~10
Module Fitting Material		ABS/ UPVC
Potting Material		PU/ Epoxy

Hollow Fiber Data

Membrane Material		Reinforced-PVDF
Hollow Fiber Pore Size	um	0.05
Hollow Fiber Inner Dia	mm	1.0
Hollow Fiber Outer Dia	mm	2.4
Membrane Area	m^2	10

Process Data

Water Turbidity	NTU	< 1
Total Suspended Solids	mg/L	< 1
Fiber Lifespan (may vary on feed water quality)	Years	~ 3-5
Temperature	deg C	~10 – 45
pH		~ 2– 13
Permeate Water Flow	m^3/d	~ 3.5 – 5.0
Max. Trans Membrane	MPa	– 0.08
Outlet Way	Negative Suction Pressure	
Running Way	10 – 12 min (incl. 2 – 3 min Stop)	
Chemical Sterilization	Sodium Hypochlorite	
Chemical Cleaning Cycle	6 – 12 months (may vary in actual)	
Chemical Cleaning	Citric Acid/ Sodium Hypochlorite	

Notes:

- The technical parameters provided are as per production standard and for reference purpose
- Depending on the client's requirements and the wastewater characteristics, special system design shall be considered
- The permeate water flow refers to the design with reference to the flux for sewage treatment

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