Water is life

Confronting water scarcity

Hinada always care about our water and Environment

Getting to konw us

We invite you, working togehter

Devoting all our efforts to offer a suitable satisfying solution

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HINADA

HINADA WATER TREATMENT TECH CO.,LTD

Hinada Water Treatment Tech Co.,LTD

MBR /UF

Designing/ Operation/Technical Manual

Submerged MBR Membrane /Ultrafiltration Membrane

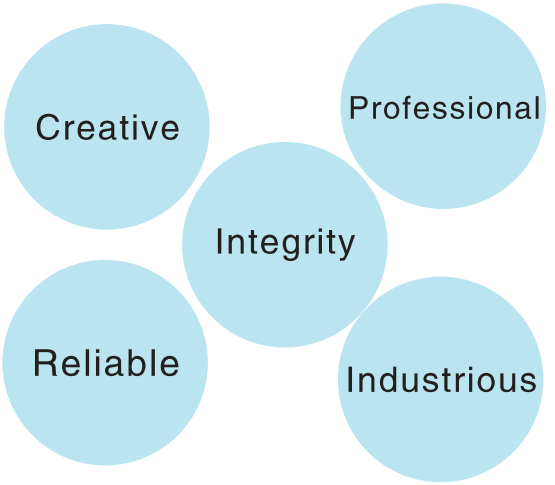
About US

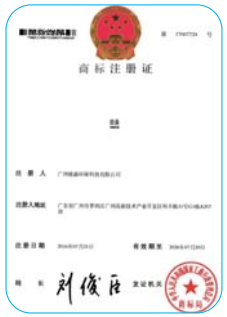
Hinada Water Treatment Tech Co., Ltd. is one of leading Submerged MBR membrane | UF membrane | Membrane Filtration System manufacturers in China, specializing in water treatment membrane and equipment in Guangzhou since founded in 2013.And we also provide the truly integrated solution to water and wastewater project, from designing, supplying, installation support and commissioning to training.

Water is life
Confronting water scarcity
Hinada always care about our water and Environment
Devoting all our efforts to offer a suitable satisfying solution / Products to our clients.

Hinada has more than 10 years of in water treatment industry experience and 8 years of water treatment membrane and equipment manufacturing experience.

International,professional and reliable manufacturer!





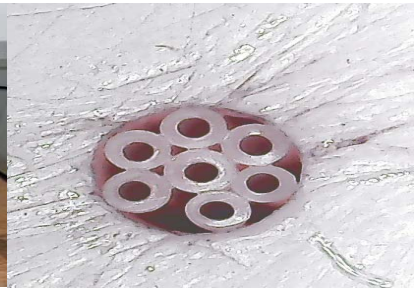
Dr. Long
Received PH.D in Wuhan University in 1999
Majored in Polymer material research
Engaged in ultrafiltration membrane industry over 15 years
Water Scarcity and Pollution
Its a Gloabl Challenge
We keep learning and find solution
And we strive for
Sustainable development
On water quality and quantity

Bubble Point Test

Flow Rate Test Machine

Peeling Strength Test Equipment

Spectrophotometer



Microscope of Hollow Fibers

PVDF Material Hollow Fibers

Material	PVDF hollow fiber
I/O diameter	1.0/2.2mm
Designed Water Permeability	10—25 L/m^2. h
Clean Water Test Flux	1500 L/m^2. h
Average tensile force at break	65216 cN
Average tensile strength at break	3.12 cN/dtex
Operating Temperature	5℃–45℃
PH	2–12
Operating pressure	<0.4MPa
Turbidity of output water	Less than 0.2 NTU
Organics	Removal 99.99%
Filtration Method	Suction
Pore Distribution	0.01—0.1μm (Avaerage 0.06μm)

Submerged MBR Membrane

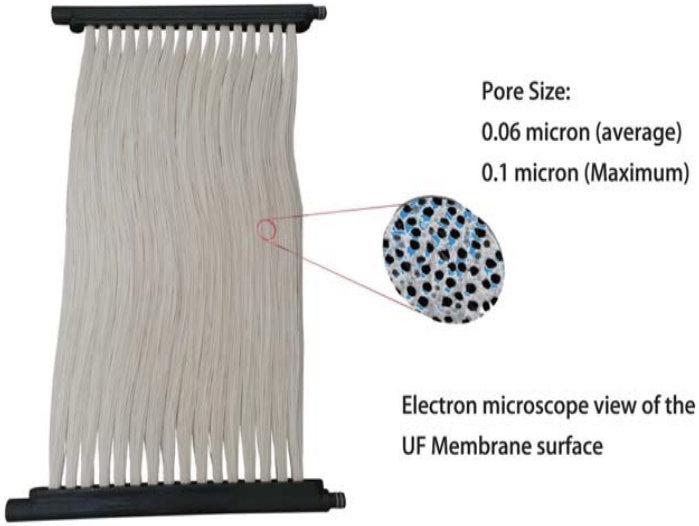
MBR(Membrane Bioreactor) is a Membrane separation technology that combines the activated sludge treatment, Mirco–organisms and Activated Sludge will be intercepted inside of MBR Tank and increase the MLSS to around 6000–––8000mg/L, improve the treatment efficiency and great reductions of the Contaminants.

MBR Advantages:

- >>> Low Energy costs
- >>> High quality effluent
- >>> High flow rate, infrequent cleaning
- * Lower footprint/space
- * Advanced MBR/UF Technology
- * Minimal prescreening, easy operation

HINADA

Submerged MBR Membrane



Ideal for: Smaller capacity plants (<200 m3/d) or Containerized package plants , the MBR Tank Height around 2m

Type	NM–RMBR–1010
Membrane area per element (m^2)	10 m^2
Nominal pore size (μ m)	0.06μm Micron (Average)
Material	PVDF, PET non–woven fabric and ABS resin
Membrane Element dimension	Height: 1100mm
	Wide: 571mm
	Thickness: 45mm
Filtration Method	Suction /Outside–in
Hollow fibers I /O diameter	1.0 / 2 2 mm
Design flow rate	10—25 L/m^2.H (Sewage design 15–––25 L/m^2.H) Industry wastewater： 10–––20 L/m^2.H Landfill leachate: 5–––8 L/m^2.H
Air diffuser	Fine bubble, tube type, EPDM rubber

Submerged MBR Membrane

Ideal for:

Medium and large capacity plants(> 200 m3/d)

Municipal & industrial wastewater plants,

the MBR Tank Height around 3.5m

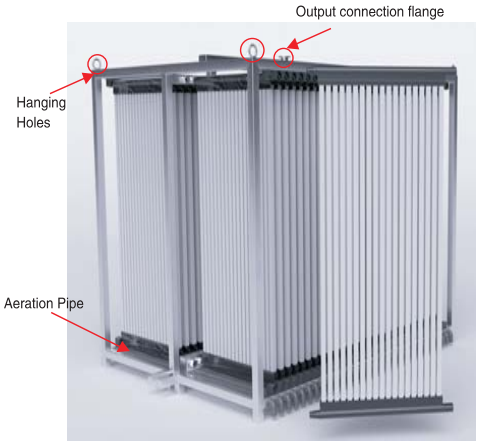
Type	NM–RMBR–1520
Membrane area per element (m^2)	20 m^2
Nominal pore size (μ m)	0.06μm Micron (Average)
Material	PVDF, PET non–woven fabric and ABS resin
Membrane Element dimension	Height: 1535mm
	Wide: 571mm
	Thickness: 45mm
Filtration Method	Suction /Outside–in
Hollow fibers I /O diameter	1.0 /2.2 mm
Design flow rate	10—25 L/m^2.H (Sewage design 15–––25 L/m^2.H) Industry wastewater：10–––20 L/m^2.H Landfill leachate: 5–––8 L/m^2.H
Air diffuser	Fine bubble, tube type, EPDM rubber

Membrane Element According to your project requirement

MBR Membrane input raw water conditions

Parameter	Unit	Operating condition
MLSS	mg/L	6000–––8000mg/L
DO	mg/L	1.0 or more
pH	–	5–9
Liquid temperature	℃	5–––– 45
Fibrous material		Must be removed at fine screen prior to MBR
Fat, oil and grease (FOG)	mg/L	< 2 (at the MBR Tank)
Mineral oil		Must be reduced to no more than trace levels
Hardness (CaCO3)	Mg/L	< 5, too high will harden the hollow fibers
Input SS (Solid Diameter)	mm	< 2mm
Interval working		7 minutes working 1 minute stop
Air Stirring Clean		0.15–––0.2m^3/m^2.H
Working Pressure	MPa	0.1–––0.3MPa

MBR Modular According to project requirement designed



Submerged MBR Membrane Application

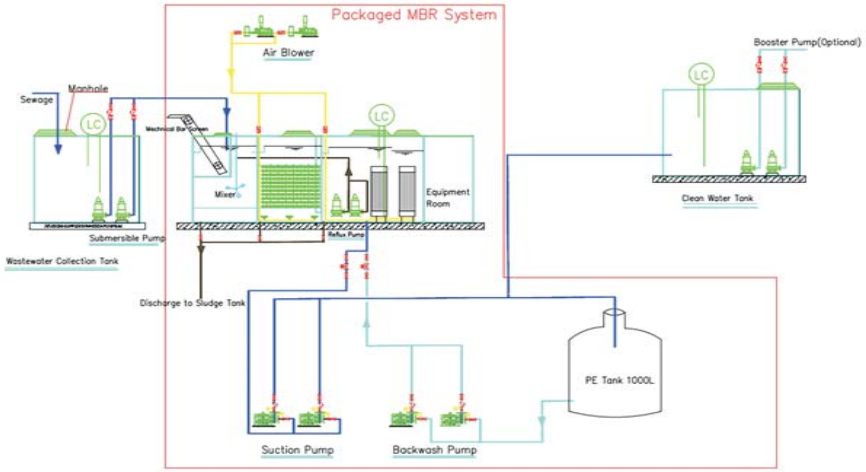
- Urban/Rural Sewage
- In-building Wastewater Recycling System
- City Water Filtration
- Industry Wastewater treatment

Installed photo as reference

Packaged Wastewater Treatment Plants

Our advanced MBR Technology, we design packaged MBR System in container, our sewage treatment package plants are fabricated by our engineers. We are designed for plug-and-play on-site operation for your specific sewage treatment requirements, and design for your small wastewater project, reduce your wastewater treatment project cost, it has the advantages of automatically controlling, easy operation, stable and qualified output water.

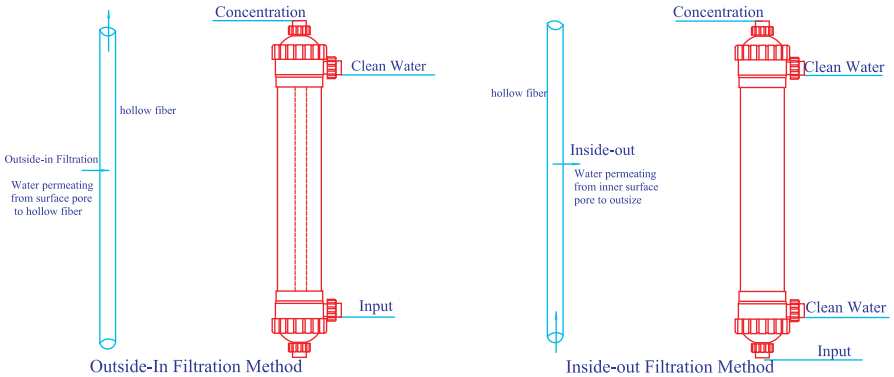
Input water quality: according to clients application offer different solution.Capacity will be less 200m3/Day more reasonableOutput Water quality: international standard for release on land not water body



Ultrafiltration Membrane

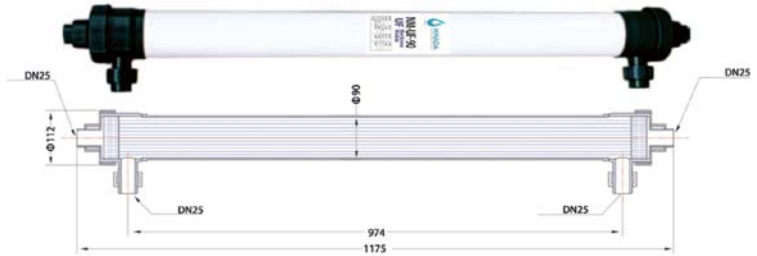
Hinada Series UF Elements could be used for filtration of various kind of Industrial Process Water,Borewell Water,Surface Water,Seawater and Treated wastewater of ETP and STP System With low to moderate total suspended solids(TSS)Content(<50mg/L)

Provide quality UF Membranes 10 years with variety industrial application experience, based on modification of Polyvinylidene Fluoride(PVDF)and polyvinyl chloride(PVC) Membrane technology.reliably enhancing product yield.Online integrity testing and validation enables secure filtration for any stream requiring clarification,concentration, and purification.Our vast experience and drive for excellence can be put to use in your facility–quickly and easy.



4inch UF membrance cell

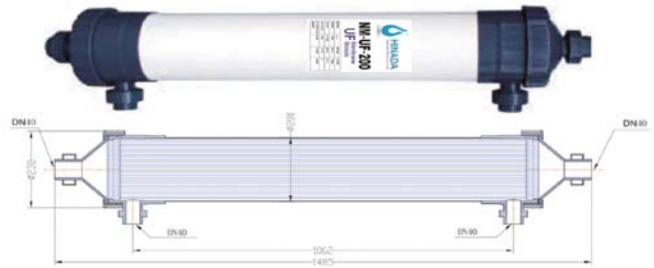
Ideal for:Small capacity equipment less than 5m3/Hour,or lab test



Model	NM–UF–90(Material: PVC allay)	NM–UF–90 (Material: PVDF)
Diameter of Hollow fibers	1.0/1.96mm	0.6/1.2mm
Filtration Method	Inside–out	Outside–in
Effective Membrane Area	4.8m²	8.0m²
Design Flow rate	60–––160L/m².H	60–––160L/m².H
Potting Material	Epoxy resine	Epoxy resine
Housing Material	U–PVC	U–PVC
Molecular Cut off(Dal)	100,000 Dalton	100,000 Dalton
Dimensions(mm)	ϕ 90*1175mm	ϕ 90*1175mm
Gross Weight	7.0kgs	7.0kgs
Feature	Price more reasonable, for clean water filtration that the input turbidty better less than 15NTU.	High anti–pollution and better flow rate, the input burbidty better less than 50NTU.

8inch UF membrance cell

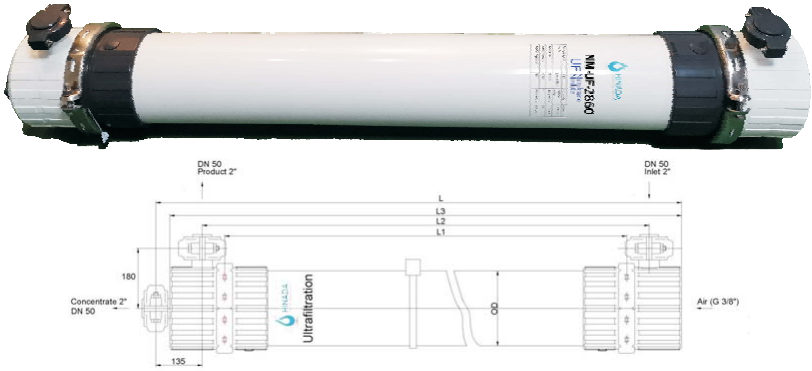
Ideal for:Medium capacity project,around 5–––40m3/Hour UF Plant



Model	NM–UF–200(Material: PVC allay)	NM–UF–200 (Material: PVDF)
Diameter of Hollow fibers	1.0/1.96mm	0.6/1.2mm
Filtration Method	Inside–out	Outside–in
Effective Membrane Area	28m²	38m²
Design Flow rate	60–––160L/m².H	60–––160L/m².H
Potting Material	Epoxy resine	Epoxy resine
Housing Material	U–PVC	U–PVC
Molecular Cut off(Dal)	100,000 Dalton	100,000 Dalton
Dimensions(mm)	ϕ 200*1485mm	ϕ 200*1425mm
Gross Weight	30kgs	30kgs
Feature	Price more reasonable, for clean water filtration that the input turbidty better less than 15NTU.	High anti–pollution and better flow rate, the input burbidty better less than 50NTU.

9inch UF membrance cell

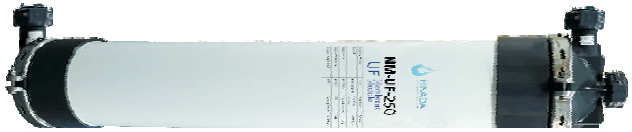
Ideal for:Medium and big capacity project,above 40m3/Hour UF Plant reasonable

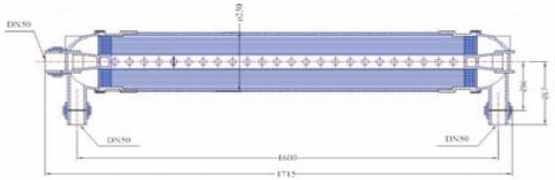


Model	NM–UF–2860 (Material: PVDF)
Diameter of Hollow fibers	0.6/1.2mm
Filtration Method	Outside–in
Effective Membrane Area	52m²
Design Flow rate	60–––160L/m².H
Potting Material	Epoxy resine
Housing Material	U–PVC
Molecular Cut off(Dal)	100,000 Dalton
Dimensions(mm)	ϕ 225*1860mm
Gross Weight	50.0kgs
Feature	High anti–pollution and better flow rate, the input burbidty better less than 50NTU.

10inch UF membrance cell

Ideal for:Medium and big capacity project,arove 40m3/Hour Plant reasonable



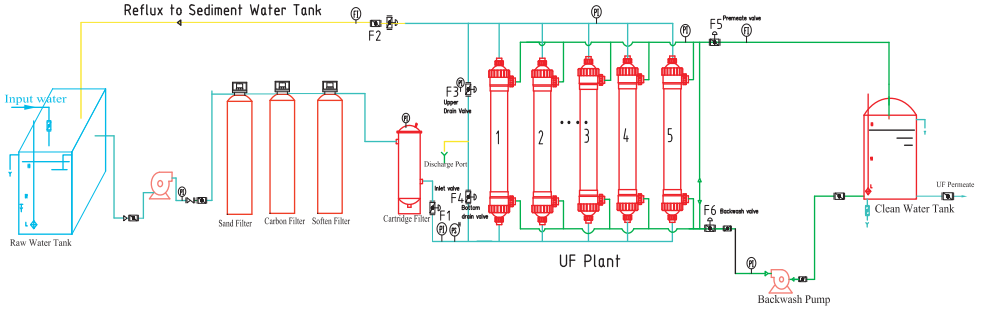


Model	NM–UF–250(Material: PVC allay)	NM–UF–250 (Material: PVDF)
Diameter of Hollow fibers	1.0/1.96mm	0.6/1.2mm
Filtration Method	Inside–out	Outside–in
Effective Membrane Area	48m²	78m²
Design Flow rate	60–––160L/m².H	60–––160L/m².H
Potting Material	Epoxy resine	Epoxy resine
Housing Material	U–PVC	U–PVC
Molecular Cut off(Dal)	100,000 Dalton	100,000 Dalton
Dimensions(mm)	ϕ 250*1715mm	ϕ 250*1715mm
Gross Weight	60.0kgs	60.0kgs
Feature	Price more reasonable, for clean water filtration that the input turbidty better less than 15NTU.	High anti–pollution and better flow rate, the input burbidty better less than 50NTU.

UF System Filtration Procedure

Ultrafiltration plant are build with,which hollow fiber outside–in or inside–out membranes, UF membrane pore size is 0.01um,to purify surface or groundwater from suspended solids, colloids and all king of micro–organisms such as bacteria,virus,protozoa,germs and larvae. we can manufacture UF plant according to any your requirements.

* Good output water quality
* UF membrane pore size:0.01um
* Energy saving,backwashable
* Low investment



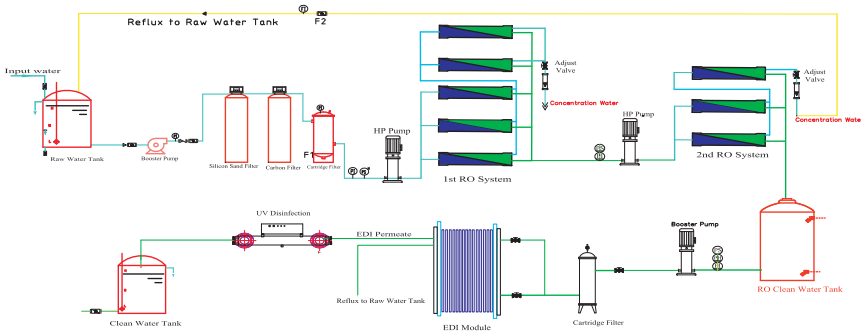
Process / Equipment	Flush	Filtration	Backwash 1	Backwash 2	Chemical Clean
Booster Pump	Open	Open			
Backwash Pump			Open	Open	
Chemical Clean Pump					Open
Inlet Valve	Open	Open			
Upper Drain Valve			Open		
Bottomn Drain Valve				Open	
Permeate Valve		Open			
Backwash Valve			Open	Open	
Chemical Clean Valve					Open

Industrial Reverse Osmosis Systems offer one of the best ways of producing clean water for your drinking water plant.RO systems are very efficient,being capable of removing up to 95–99% of the contaminants floating in the drinking water. And Industrial Reverse Osmosis System desinend to convert high TDS saline content water (Underground Well Water,Seawater,city water,or Industry Brackish water),to drinking water or industry application purpose.

Containerized Industrial RO System

Industry and Seawater Desalination System

High Purity Water Systems–Electrodeionization System (EDI System)Treatment Process



Some of Our Equipments and Project

Operation Training for the Nano–Filtration System and RO Plant

20m3/h Pure Water EDI System

50m3/hour Softener Filtration System