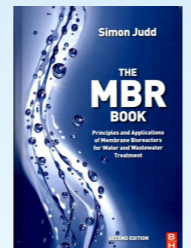





MegaVision[®]
MEMBRANE MANUFACTURER

* The specifications may be partially revised without prior notice in order to improve the exteriors and performance of products.
Actual products may be different from the images shown in the catalogue.



MegaVision membrane
Email: sales@megavision-membrane.com
www.megavision-membrane.com



Water treatment with Vision.

20
years
1999-2019



Flat Sheet production at MegaVision

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ABOUT MEGAVISION

MegaVision is an innovative water technology company, headquartered in Shanghai - China (Shanghai MegaVision Membrane Engineering & Technology Co., Ltd.).

MegaVision is dedicated to revolutionizing water treatment through the development of modern, cost-efficient and performant wastewater filtration & water purification membrane technologies.

Established by a group of international industry experts and researchers from China's leading chemical engineering universities, MegaVision has strong know-how and a proud history in the research & development of innovative membrane filtration technologies. This resulted in the development of advanced filtration polymers; the MegaVision patented HYPER™ PS (polysulfone) and HYPER™ PVDF (polyvinyl difluoride) using a proprietary chemical structure enabling our membranes to retain permanently high hydrophilic properties for many years.

A pioneer in ultrafiltration (UF), pervaporation (PV) and Membrane Bioreactor (MBR) technologies in China, MegaVision was founded in 1999. Our activities have since greatly expanded to include industrial scale production lines of hollow fibres capillaries membrane and one of China's largest automated flat sheet membrane production facility.

Our MBR and UF membranes have been applied for many different applications cases and industries. We are proud to cooperate with renowned and long-standing partners from all continents.

The preservation of our global environment is our concern and we make our priority to become a global leader in ultrafiltration and Membrane Bioreactor (MBR) technologies to support a "green revolution" for future generations.



80%

Over 80% of wastewater is released to the environment without adequate treatment.

Unesco, 2017 report

LETTER FROM OUR FOUNDER

Collectively, socially, and at enterprises level, we have increasing concerns about our Environment and particularly about the conservation of fresh and safe water.

Our fresh water must be carefully managed at every stage of the water cycle; from pre-treatment for domestic and industrial uses, up to the post-treatment of wastewater and its ultimate return to our environment.

Increase in population and global trades have pushed the quantity of wastewater production and overall pollution loads in our waters. At MegaVision, our goal is to make available advance filtration technologies to many more users globally.

To encourage membrane technologies adoption, we at MegaVision, trust that it is through to the development of innovative technologies delivering high performance while lowering costs (CAPEX and OPEX), that we can successfully empower our industry partners.

Opportunities from wastewater as a resource are considerable; modern wastewater treatment technologies are powering affordable and sustainable source of water and energy, and this trend will only grow with time.

MBR (membrane bioreactor) is a considerable step-forward to enhanced water management and recovery. Our efforts to develop MBR membrane technology since 2006, with R&D to enhance flux, and lower maintenance, is making us very proud of our achievement so far, and more development are yet to come.

Our extensive know-how in ultrafiltration technologies and applied in commercial applications for over two decades gives us strong confidence in our products quality and performances.

We give our best recognition to our partners in many markets promoting modern and efficient technologies and their dedication to environmental protection.

MegaVision develops and manufactures advanced filtration membranes in China with a permanent commitment to Quality, Value & Performance.

We look forward to future developments together.

Prof. Liu S.S.
Chairman

OUR OPERATIONS & SOLUTIONS DELIVERING ON 11/17 of the UN SGDs.

Our innovative solutions contribute to environmental sustainability, preservation of ecosystems, reuse of fresh water.



SUSTAINABLE DEVELOPMENT GOALS

OUR COMMITMENT TO FUTURE GENERATIONS



Membrane macro structure analysis



OUR COMMITMENT TO QUALITY

MegaVision membrane makes quality its priority. We enforce quality procedures at each step of our production process, and individual product testing to ensure excellent performance.

Each membrane product completing the integrity inspection test is certified with a unique serial code for traceability and warranty purposes.

MegaVision applies a Quality Management System (QMS) and is certified since 2002 by quality standard ISO 9001:2000, ISO 9001:2008 and ISO 9001:2015.

In the pursue of our commitment to Sustainable Development Goals (SDGs), our production process is also certified by Occupational Health & Safety Management System ISO 45001:2018, and Environmental Management System ISO 14001:2015.

MegaVision is dedicated to membrane R&D advancement, we supply our proprietary membranes to support many academic researches worldwide and we are a proud member of the American Membrane Technology Association.



HQ, PRODUCTION AND R&D IN SHANGHAI

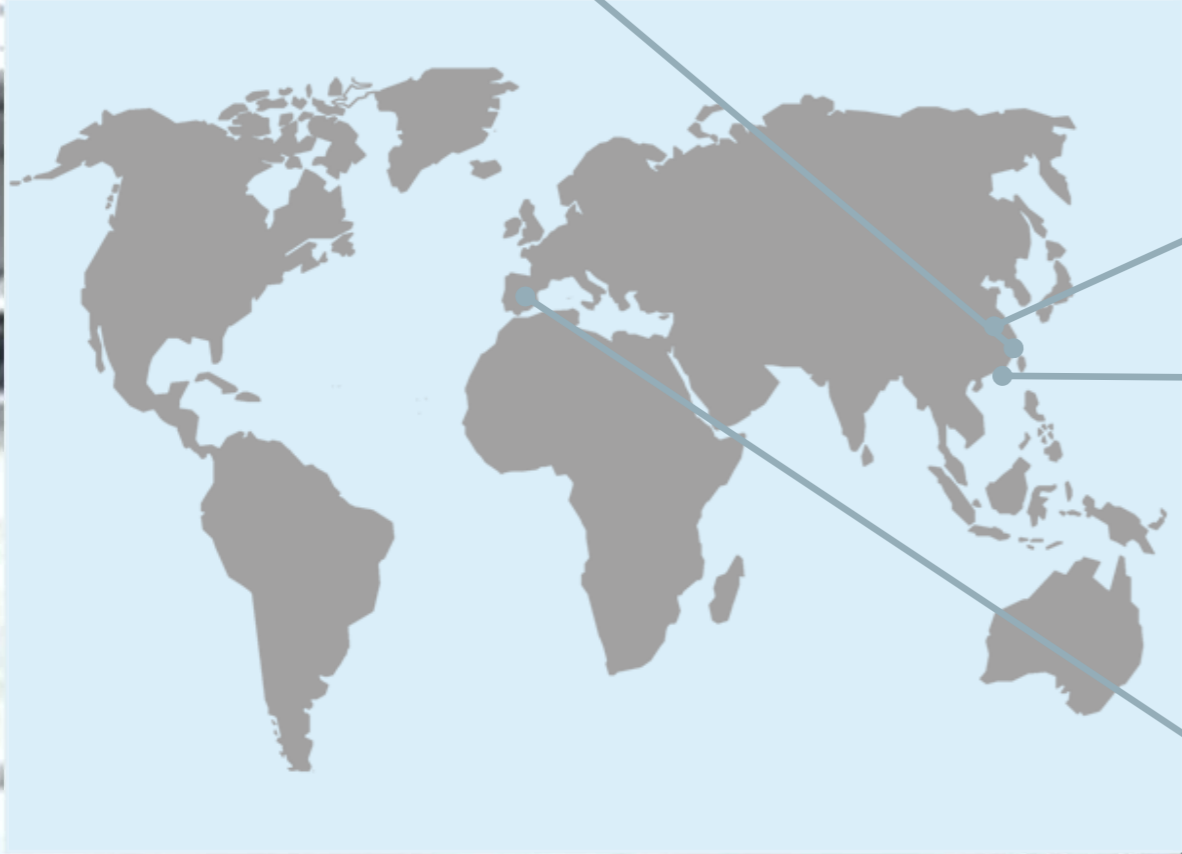
Shanghai MegaVision is the headquarter and R&D hub for new membranes applications.

FLAT SHEET PRODUCTION

Zibo MegaVision plant located in Shandong produces flat sheet membranes for MBR and UF applications. The factory is a state-of-the-art fully automated production facility with an advanced test laboratory.

BUSINESS DEVELOPMENT HUB

MegaVision International located in Hong Kong handles engineering consulting as well as business development and sales for international markets.



EUROPE ENGINEERING HUB

MegaVision Europe is located in Barcelona (Spain), and with a representation office in Toulouse (France), handles RFP, engineering designs and commissioning for European wastewater treatment projects.

THE MEGAVISION GROUP



OUR STORY

1999

COMPANY SETUP

A forward-thinking entrepreneur and talented engineers took on a journey to bring water sustainability for China and the world.



2002

HYPERTM MEMBRANE

Development of proprietary PS & PVDF polymers, engineered with a permanently hydrophilic feature for enhanced filtration, low fouling and convenient maintenance.



2008

CHINA MBR GROWTH

Commission of one of China's largest industrial MBR plant (phase 1: 7200m²). Contract awarded to MegaVision vs. major international MBR players.



2008

UF & MBR EXPORT

A pioneer in membrane filtration exports from China. MegaVision supplies to international engineering companies and OEM/ODM partners.



2006

FLAT SHEET MBR

Commercialization of MegaVision's first generation of flat sheet MBR products.



2019

NEW PRODUCTION FACILITY

Successful commissioning of a new large-scale automated plant for flat sheet membrane production.



2003

ULTRAFILTRATION

Commercialization of MegaVision's first Hollow fibre MBR membranes systems.

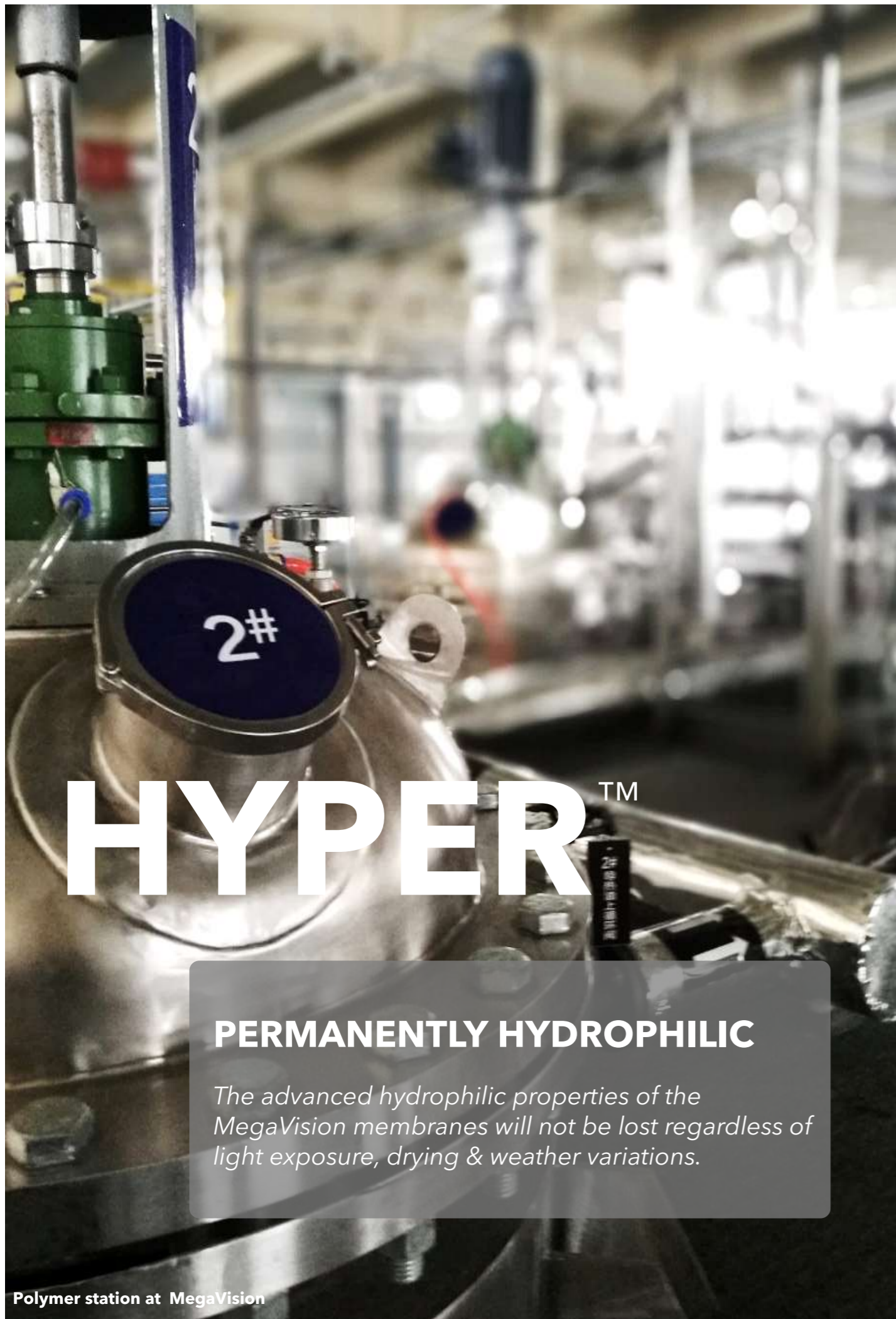


2017

HOLLOW FIBRE MBR

Commercialization of MegaVision's advanced reinforced hollow fibre MBR membranes.





HYPER™

PERMANENTLY HYDROPHILIC

The advanced hydrophilic properties of the MegaVision membranes will not be lost regardless of light exposure, drying & weather variations.

Polymer station at MegaVision



HYPER™ POLYMERS: PERMANENTLY HYDROPHILIC

MegaVision HYPER™ polymers are chemically engineered with a proprietary structure resulting in a permanently hydrophilic membrane with enhanced filtration quality:

- **Steady flux** - the hydrophilicity of UF membrane is very important for anti-fouling and stable flux properties.
- **Dry storage** - Hyper™ membranes have been heat tested at 100 °C for 48 hours; the membranes maintain high filtration efficiency even though some of the membrane had been dried out.
- **Ease of operation** - the permanent hydrophilic feature significantly reduces the use of pretreatment chemicals and offers much greater operating flexibility. Hyper™ membranes reduce the cost of transportation, operating and maintenance.

- **Higher resistance against fouling** - during filtration, materials like colloids, proteins, oil, etc., would “spherulites agglomeration” precipitate onto the surface of the Hyper™ membrane, unlike the phenomenon of “cake agglomeration and precipitation” observed on other comparable membranes. These “spherulites agglomeration” have lower impact to filtration efficiency: longer service time and longer intervals between cleaning.
- **High tensile strength** - Hyper™ membranes demonstrates excellent elongation fiber capabilities, Flexibility is highly required when air scouring is employed, producing high lateral movements of the membranes.

MegaVision membranes exhibit superior physical strength and enhanced chemical stability.

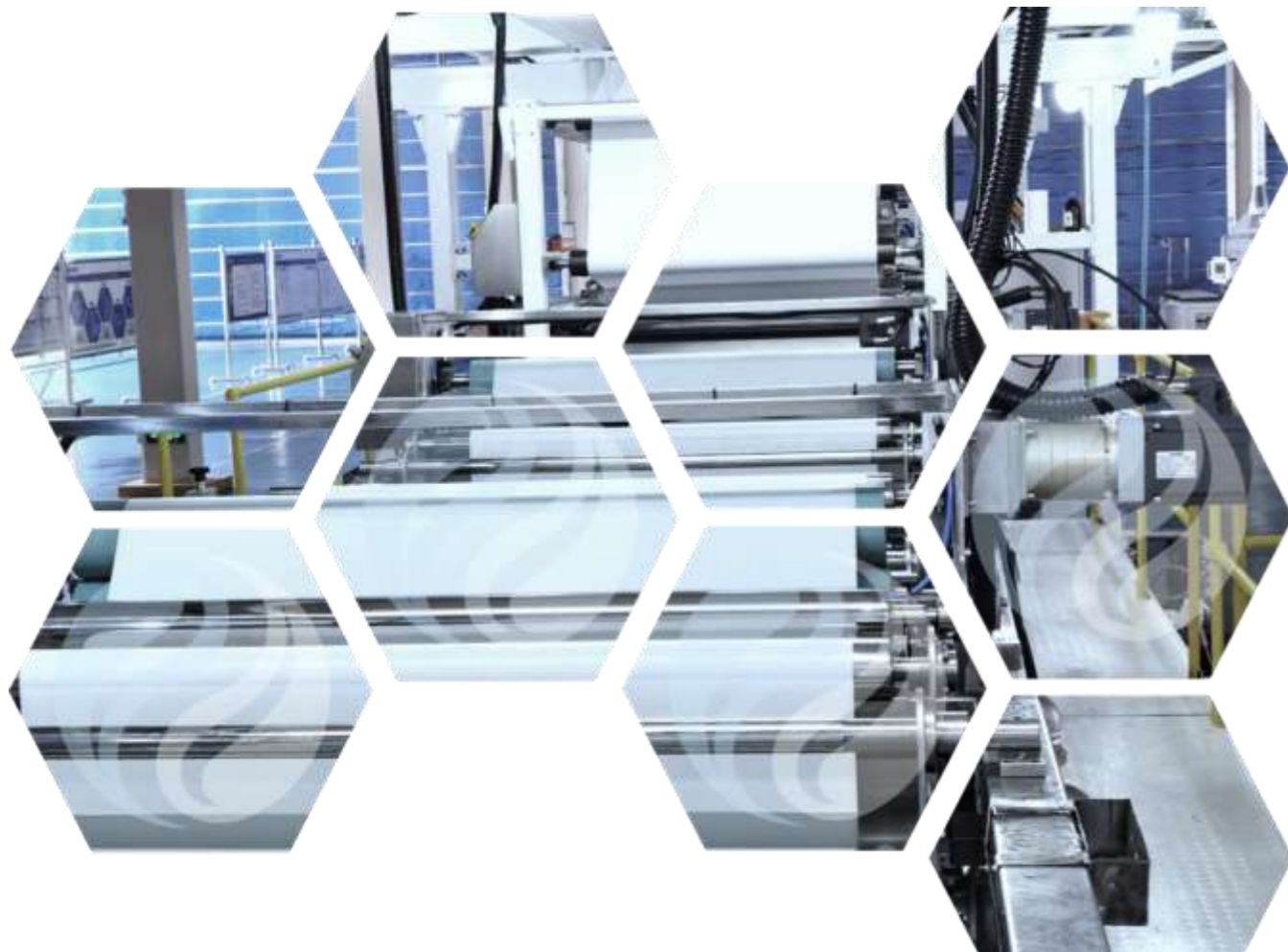
OUR MEMBRANE EXPERTISE

MegaVision membrane is a specialist industrial manufacturer of polymeric membranes; our expertise encompasses R&D of novel membranes in the field of MF, UF, MBR and PV applications. We are expert in pilot production up to industrial scale manufacturing. Our advanced processing plants enable us to produce up to 2.4 million square meters of flat sheet membranes and 5 million square meter of hollow fibers per year.

MegaVision state-of-the-art machineries are designed to produce flat sheet membranes of nominal width up to 1,016mm (40"). Hollow fiber membranes can be produced in either single-bore, multi-bore or with reinforced braided tube. The membranes are produced using non-solvent induced phase separation (NIPS) process, and with controlled membrane layer precision comprised in the precise range of 8~20 µm.

MegaVision sets itself apart from other membrane manufacturers by offering our customers the option to request specialty and customized products.

Whether our customers need a partner for the development of a new membrane product, require products with special construction, or want a trusted supplier for niche membrane applications, MegaVision is the partner of choice.



MEMBRANE SPECIFICATIONS

Membrane Chemistry	Backing	Pore Size / M.W.C.O	PH Range
Polyethersulfone (PES)	PET*	6, 50, 100 kDa	2.0 ~ 13.0
Polysulfone (PS)	PET*	10, 30, 50, 100 kDa	2.0 ~ 13.0
Polyvinylidene fluoride (PVDF)	PET*	0.03, 0.1, 0.2 µm	1.0 ~ 12.0
Polyacrylonitrile (PAN)	PET*	50, 100 kDa	1.0 ~ 12.0

* Polypropylene (PP) backing is available on request.

MegaVision flat sheet membrane is available in a sample size of 520 mm x 1,067 mm (20 in x 42 in) and in a nominal roll size of 250 m x 1,067 mm (820 ft x 42 in). Custom length is available on request.

MegaVision hollow fiber is available in various capillaries diameters (ID/OD); 0.7/1.3, 0.9/1.5, 1.2/2.0, 1.6/2.5, 2.0/2.5, 2.0/3.0.

For further third-party coating processing, our HYPER™ dry membranes can be supplied without the addition of glycerin coating for subsequent membrane layering.

SAFELY REUSED SAFELY DISCHARGED

MEMBRANE TECHNOLOGY TO BETTER CONTROL WATER AND SLUDGE SEPARATION.

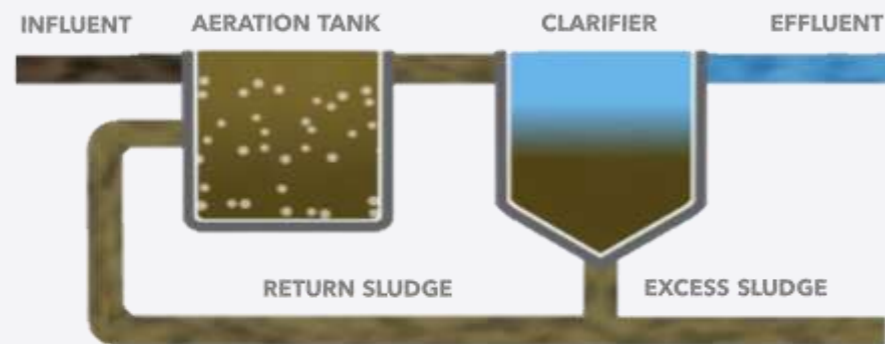
MBR water treatment is a proven technology set to become a standard for the management of municipal and industrial wastewater worldwide, to step towards United Nations - Sustainable Development Goals (SDG).

- **MBR protects the environment**, achieving effluent quality for discharge above international standards.
- **MBR protects our population** with ultrafiltration guarantying sanitation safety.
- **MBR protects our water resources** by reusing effluent for agricultural irrigation, toilet flushing and city watering.
- **MBR protects our land use** by considerably reducing the treatment plant footprint.

THE MBR PRINCIPLE

CONVENTIONAL ACTIVATED SLUDGE WASTEWATER TREATMENT

In the CAS method, sludge is separated into solids and liquid in a settling tank. This is called clarification



MEMBRANE BIOREACTOR SYSTEM

The innovative MBR Technology combines activated sludge treatment with solid-liquid separation by means of micro-porous membranes eliminating the need for secondary clarification tanks.



Water quality	CAS technology	MBR technology
COD (mg/L)	<100	<30
BOD (mg/L)	<30	<8
TSS (mg/L)	<30	<1
Turbidity (NTU)	<2~5	<2
Bacteria (MPN/L)	10 ³ ~ 10 ⁴	<100



MBR PRINCIPLES

Membrane Bioreactor (MBR) is a modern, cost-effective and most efficient wastewater treatment process, which combines a filtration membrane technology for solid-liquid separation together with traditional activated sludge process.

With an MBR system, microorganisms are completely trapped in the bioreactor, achieving complete separation between Hydraulic Retention Time (HRT) and Sludge Retention Time (SRT).

MBR systems allow much longer SRT (typically between 20 to 100 days), while reducing HRT; therefore reducing significantly the amount of sludge compared to CAS systems. MBR systems have no sludge bulking or sludge rising problems.

MBR technology delivers high stability and reduces maintenance; it accepts higher MLSS sludge concentration (4,000 ~ 18,000 mg/L), while remaining stable across a wide range of conditions and feed water's fluctuations.

Using semi-permeable filtration membranes with pore size of 0.1~0.4 μm, MBR produces highly purified effluent with excellent flux. It can be directly reused or discharged directly.

MBR systems successfully remove ammonia from feed waters, through a nitrification process.

By removing the need for a secondary clarifier and the possibility to feed much higher sludge concentration with MBR, bioreactor tank volumes can be only 1/2 to 1/4 of a Conventional Activated Sludge (CAS) plant.

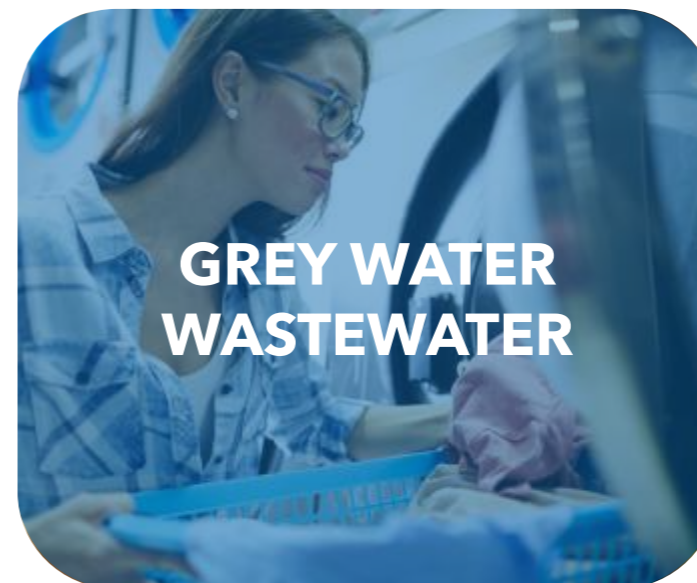
Performance

- Less sludge
- High stability
- High effluent quality
- Reduced maintenance
- Ammonia removal
- Smaller footprint

MBR APPLICATIONS

Membrane BioReactor can be applied for a wide variety of biochemical treatment applications.

MBR delivers great effectiveness in treating organic domestic and industrial sewage of any size range and realizing wastewater recycling.





WASTEWATER TREATMENT SOLUTIONS

MBR installation by MegaVision

FLAT SHEET MBR



HIGH FLUX &
EASIER MAINTENANCE

FLAT SHEET MBR

MEGAVISION FMBR Series, is a high-flux Flat Sheet MBR membrane delivering excellent permeability, fouling resistance, stability and elimination effectiveness. It is designed with a robust thin ABS or a PVC plate.

MegaVision FMBR membranes have a microporous structure with nominal pore size of 0.2µm for optimal filtration, and is structured with Hyper™ PVDF (permanently hydrophilic Polyvinylidene fluoride) for enhanced flux and maintenance.

MegaVision FMBR is assembled as a complete filtration module. It consists of a stainless-steel cage or skid made up of several elements including flat sheet membranes MEGAVISION FMBR Series.

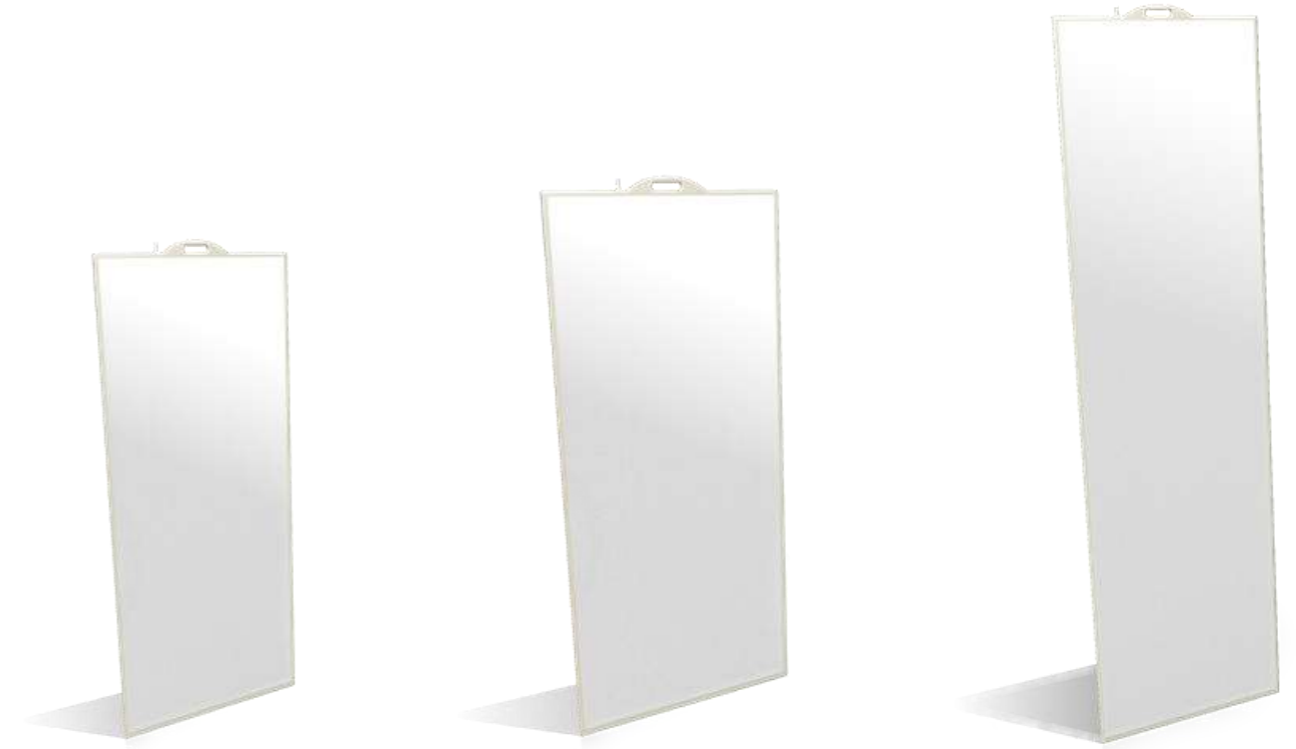
An aeration case made of coarse bubble diffusers is used to provide air scouring to the membrane panels cleaning and optimum operation.



Advantages

- Dry storage
- High MLSS concentration
- High flux & stability
- No backwash required

FMBR Series



PRODUCT SPECIFICATIONS

		FMBR-A80	FMBR-A100	FMBR-A150
Membrane Area	m ²	0.8	1.0	1.5
Dimensions (wxhxd)	mm	490x1000x7	518x1,160x7	490x1750x7
Nominal pore size	µm	0.2	0.2	0.2
Membrane material*		Hyper™ PVDF	Hyper™ PVDF	Hyper™ PVDF
Support frame		ABS	ABS	ABS

* HYPER™ PES ultrafiltration FMBR Series is also available. MWCO: 150KD (0.03 µm)

PRODUCT PERFORMANCE

Storage		Dry storage
Design flux rate	L/m ² .h	15~30
MLSS	mg/L	4,000~18,000



Flat Sheet production at MegaVision

HOLLOW FIBRE MBR



HIGH PACKING DENSITY

HOLLOW FIBRE MBR

MEGAVISION HMBR PVDF Series, is a high-packing reinforced Hollow Fibre MBR membrane optimized for small to large flux wastewater treatment plants.

MegaVision HMBR membranes have a microporous structure with nominal pore size of 0.2µm for optimal filtration, and is structured with Hyper™ PVDF (permanently hydrophilic Polyvinylidene fluoride) for enhanced flux and maintenance.

MegaVision HMBR is assembled as a complete filtration module. It consists of a stainless-steel cage or skid made up of several elements including hollow fibre membranes MEGAVISION HMBR Series.

An aeration case made of coarse bubble diffusers is used to provide air scouring to the membrane panels for cleaning and optimum operation.



Advantages

- Dry storage
- Reinforced membrane
- High packing density
- Backwashable

HMBR Series



PRODUCT SPECIFICATIONS

		HMBR-MA10	HMBR-MB15	HMBR-MB25
Membrane Area	m ²	10	15	25
Dimensions (wxhxd)	mm	610x1200x45	1250x1500x30	1250x2000x30
Nominal pore size	µm	0.2	0.2	0.2
Membrane material*		PET + Hyper™ PVDF	PET + Hyper™ PVDF	PET + Hyper™ PVDF
Support frame		ABS	ABS	ABS

* HYPER™ PES ultrafiltration HMBR Series is also available. MWCO: 150KD (0.03 µm)

PRODUCT PERFORMANCE

Storage		Dry storage
Design flux rate	L/m ² .h	10~20
MLSS	mg/L	4,000~15,000



Hollow MBR assembly at MegaVision

MegaVision® REFERENCES - MBR



CHINA - SHIPYARD WASTEWATER
1500m³/d - Flat Sheet MBR



CHINA - MUNICIPAL WASTEWATER
1000m³/d - Flat Sheet MBR



TURKEY - INDUSTRIAL WASTEWATER
400m³/d - Flat Sheet MBR



INDIA - FOOD WASTEWATER
150m³/d - Flat Sheet MBR



CHINA - MUNICIPAL WASTEWATER
3000m³/d - Hollow Fibre MBR



CHINA - DOMESTIC WASTEWATER
800m³/d - Hollow Fibre MBR



CHINA - DOMESTIC WASTEWATER
15,000m³/d - New generation FMBR-A150



SPAIN - INDUSTRIAL WASTEWATER
800m³/d - Hollow Fibre MBR

CASE STUDY – Hysin Pharmaceutical

A complete wastewater treatment plant for a multinational pharmaceutical plant in Taizhou, Zhejiang Province, China was completed in December 2012. The plant was designed by the Portuguese consulting firm Valorsabio in collaboration with Shanghai MegaVision Membrane Engineering & Technology Co. Ltd.

Implementation of the new process technology followed the successful completion of several months on-site testing for system optimization, this being demanded by the complex and challenging nature of the industrial effluent being treated. The wastewater average daily flow was 400m³/day and an average COD load of 18,000 mg/L.

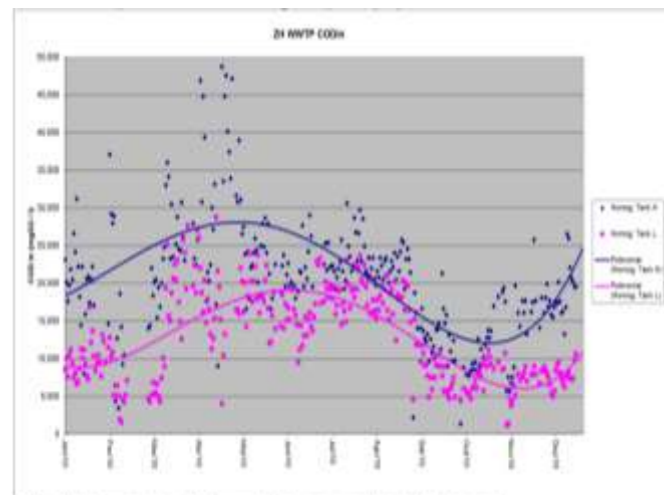


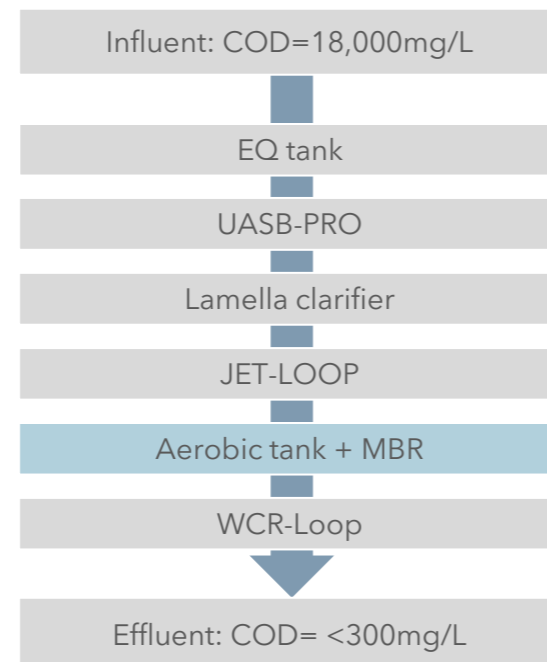
Fig.1. Hysin WW COD concentrations during 2010. Represented High COD equalization tank and Low COD equalization tank.

The retrofit solution made use of the existing concrete tanks together with anaerobic pre-treatment with a UASB-PRO, and aerobic treatment based on Jet-Loop System©. The membrane separation is based on MegaVision FMBR-1.0-100 FS membrane panels.

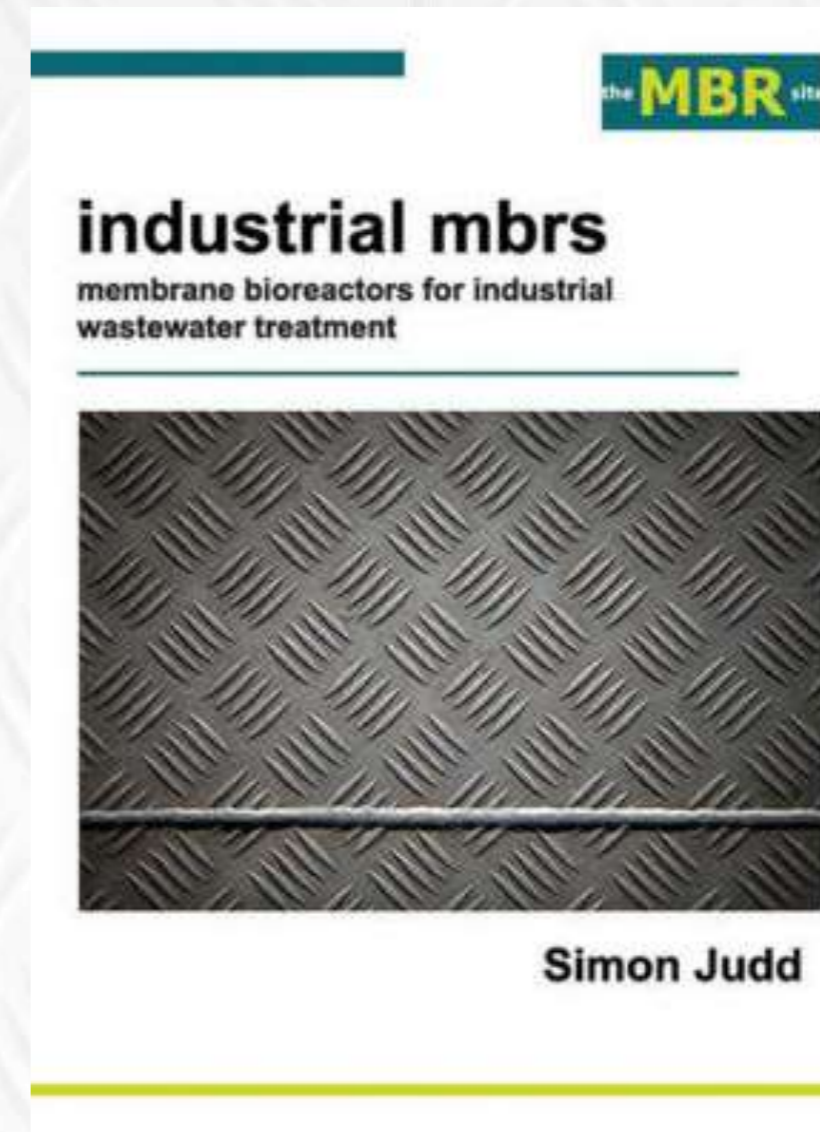
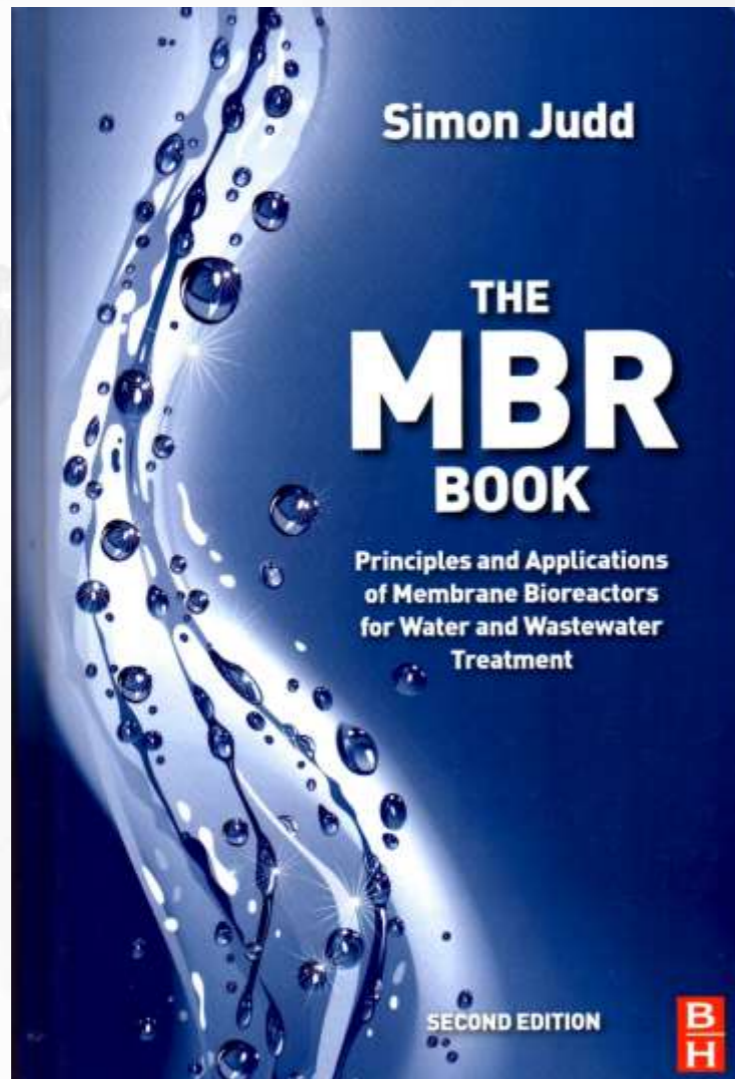
These are arranged in 12 modules containing 100 x 1m² panels divided between 2 tanks. Further clarification by chemical coagulation/flocculation has been installed to remove non-biodegradable substances.

The anaerobic treatment reduces the COD loads by up to more than 85%, generating biogas which offsets the operating cost by its use for water heating.

The aerobic process operates at an HRT of less than 25% of the previously installed conventional activated sludge process. The COD is reduced from 1,300-1,400 to 600-800 mg/L. The new design achieves an effluent with COD concentration of 300mg/L.



Hysin Pharmaceutical WWTP



4.2.11. Shanghai MegaVision

Shanghai MegaVision Membrane Engineering & Technology Co., Ltd is a small membrane manufacturing company which commercialized its FS membrane product in 2006. The company provides a 1-m² FS membrane product based on both PVDF and PES and with pore sizes of 0.1 and 0.3 μm. The panels, which are based on a PVC frame, are 930 mm high × 610 mm wide × 16 mm thick (including the panel separation) with a single permeate extraction port. The single-deck modules (Fig. 4.16a) are available as 100 and 150 panel units, and the recommended aeration value is 0.75 Nm³/(m² h).

4.1.14 MegaVision

Shanghai MegaVision Membrane Engineering & Technology Co., Ltd offers both HF and FS membranes, first introducing its PVDF membrane FS panel (Table 4-14) for MBR duties in 2006. The product is based on a conventional rigid panel and has been employed for various regional industrial effluent treatment applications. The latter have included a number of pharmaceutical effluent treatment plants located in Zhejiang province, in conjunction with the *Jet-Loop System*[®] (of Valorsabio, Portugal) for enhanced oxygen transfer technology. As of May 2014 the total installed capacity provided by all MegaVision FS membranes (the *FMBR* and *RMBR* ranges) was around 255 MLD, 4% of this relating to industrial installations.

MegaVision

Shanghai MegaVision Membrane Engineering & Technology Co. Ltd.

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Membranes Produced:

MF: no UF: yes
NF: no RO: no

Sizes:

4": yes 8": yes 16": no

Other products: no

Solutions/EPC: no
Produces in China: yes
Market Entry: 2001
Certifications:

Desalination Clients
Industrial: yes
Municipal: yes
References: Hyflux RO (UF Pre-Treatment)
Ownership: private local

MegaVision is a Shanghai-based hollow fibre membrane maker with application in the MBR sector for sewerage treatment. Also produces pervaporation membranes (PV) for ethanol processing. The company has a research partnership for the development of membrane technology with Tsinghua University in Beijing and Sichuan University.

They export to Latin America, Singapore, Indonesia. Their production facility has a capacity of 1Mm². Revenues for UF sales are RMB10m. Nadir once tried to buy them out but the owner refused to lose management control. Instead they plan to make JV with the German company. Megavision expects 200% annual growth in sales. They supply Hyflux with UF membranes for their desalination projects but do not want to get involved in RO which they find too difficult. Like everyone else, they import membrane raw materials from the US, Japan and Germany.

ULTRA FILTRATION

MegaVision Membrane develops high quality water purification membranes using the best polymers delivering high filtration precision and long durability.

The patented proprietary HYPER™ polysulfone (PS) and polyvinyl difluoride (PVDF) offer best results and flexibility to handle a large range of applications.

ULTRAFILTRATION

Ultrafiltration is a physical separation process using membrane pore size comprised between 0.01 to 0.1µm.

For steady flux and effective removal of particles, bacteria and virus.



ULTRAFILTRATION PRINCIPLE

Ultrafiltration (UF) is a low-pressure filtration membrane process for water treatment that allows for the physical separation and retention of particles. It is designed to remove turbidity causing particles including those comprised of suspended solids, bacteria, colloidal matter and proteins.

Ultrafiltration membranes have a pore size range of 0.01-0.1µm, and a molecular weight cut-off range of 5k-200k Da. Regarding solute rejection, UF can be measured by passing molecules with a known molecular weight through the membrane (i.e. using markers such as polyethylene glycol or dextran).

Ultrafiltration can be operated either in direct (dead-end) or cross-flow filtration.

DIRECT FILTRATION

When direct filtration is applied, it pushes the feed liquid through the membrane surface, resulting in the rapid build-up of particle matters

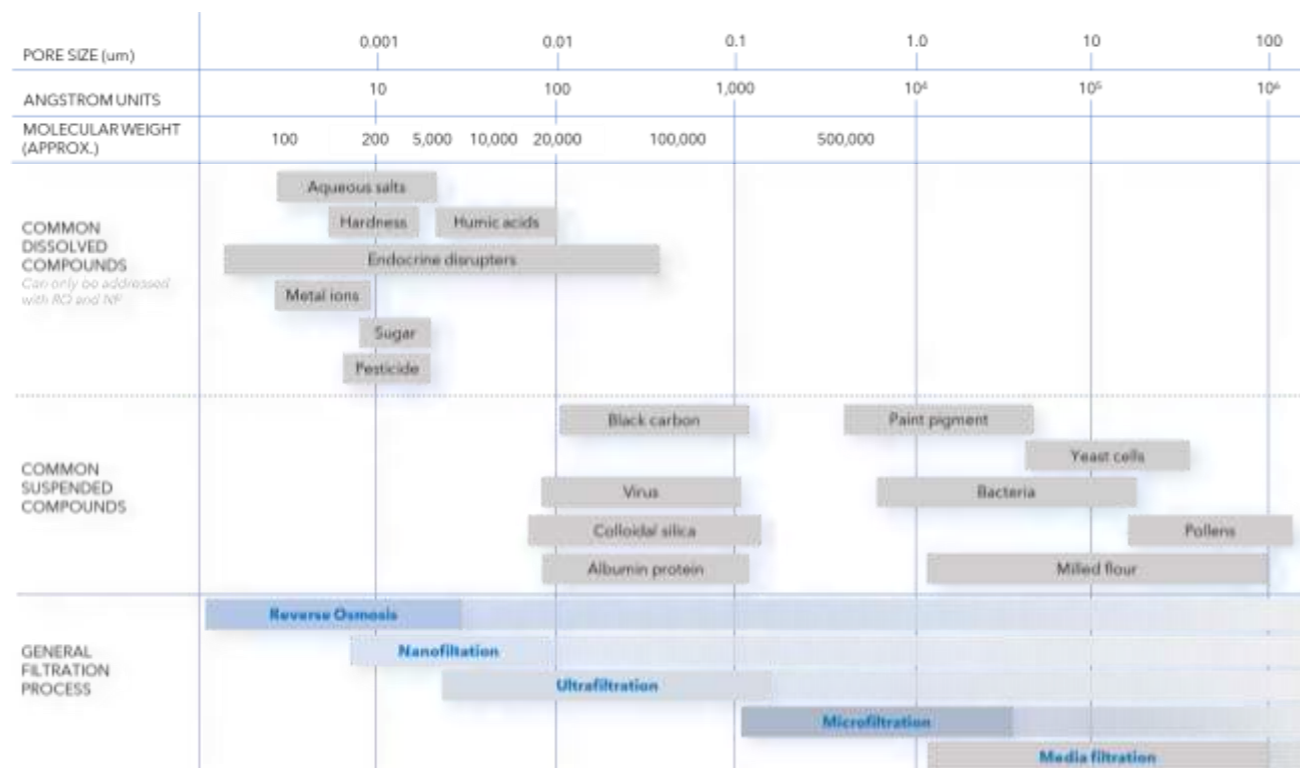
on the membrane's surface referred as cake layer formation. After some time, the flux will decrease to such an extent, that it cleaning operation.

Direct principle is applied because the energy loss is less when compared to cross-flow filtration.

CROSS-FLOW FILTRATION

When cross-flow filtration is applied, the feed liquid is recycled. All the feed liquid is pushed tangentially across the membrane, allowing a large quantity of feed liquid produced as permeate, the remaining feed liquid will leave the module and be recirculated.

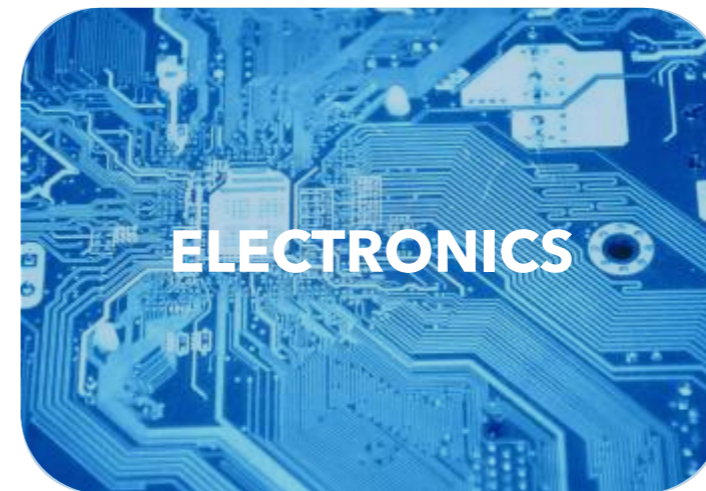
Cross-flow principle is applied because it creates turbulence on the surface of the membrane, therefore controlling cake formation, while allowing a more constant flow and ultimately limiting the need extensive chemical cleaning.



ULTRAFILTRATION APPLICATIONS

UF Hollow Fibre Series modules can be used for a wide variety of applications such as feed liquid purification & clarification, as well as solid concentration.

Hollow Fibre membranes deliver high packing efficiency, durability & best value.



ULTRA FILTRATION SOLUTIONS

IN-OUT HOLLOW FIBRE MEMBRANE



HIGH PRECISION &
RESISTANT TO PH EXTREMES

IN-OUT HOLLOW FIBRE MEMBRANE

The In-Out ultrafiltration (UF) membranes are optimized for purification, separation & concentration of feed liquids with relatively low turbidity.

The UFH-PS Series, structured with Hyper™ PS (permanently hydrophilic polysulfone) is designed to deliver high molecular weight cut-off precision from 6k up to 300k Dalton, for most effective bacterial and virus removal.

Hyper™ PS membranes are also extremely resistant to pH extremes (max. pH: 1~13) and can effectively handle highly acidic feed liquids.

The UFH-PS pore structure ensures consistently high permeability and strong anti-fouling ability for minimal clogging.

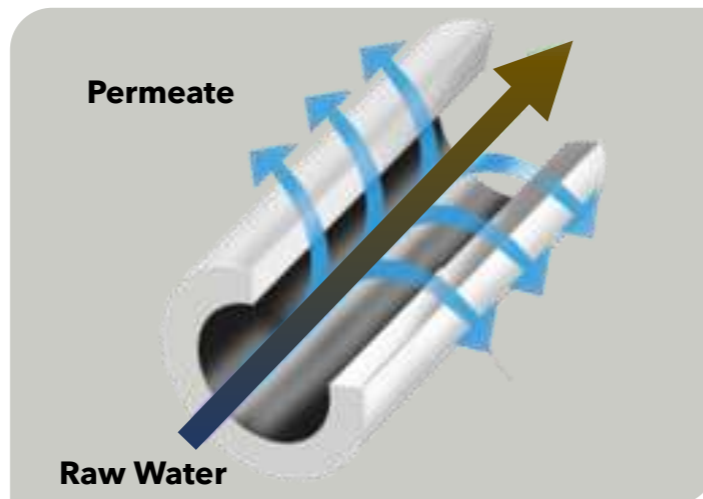
IN-OUT FILTRATION

In-Out filtration mode refers to the process of having the feed water passing through the cavity of membrane fibers and the filtrate (permeate water) pushed out on the outside of the fibers. For purifying feed water with relatively low turbidity, UFH-PS In-Out modules exhibit excellent water distribution capabilities.

Easy backflush process will remove the contaminants within the cavities effectively, and no air scouring is needed during backflush cycles, saving energy costs.

Advantages

- High precision & purity
- Excellent water distribution
- Resistant to pH extremes
- Low fouling
- Backwashable



UFH-PSP Series



PRODUCT SPECIFICATIONS

		UFH-PSP4
Membrane Area	m ²	7.5
Dimensions (wxhxd)	mm	φ108×1170
MWCO	Dalton	6k, 30k, 50k
Fiber ID/OD	mm	0.9/1.5
Membrane material		Hyper™ PES, PAN
Shell material		ABS / PSU / SS316

PRODUCT PERFORMANCE

Temperature		<60°C
Permeate turbidity	NTU	<0.06
SDI ₁₅		<2
Bacteria removal		Log 6 *
Virus removal		Log 5 *
Design flux rate	L/m ² .h	60~120

* Data based on MWCO 50K Da membrane

UFH-PST Series



PRODUCT SPECIFICATIONS

		UFH-PST1060	UFH-PST8040	UFH-PST4040
Membrane Area	m ²	45	14	4
Dimensions (wxhxd)	mm	φ250×1720	φ200×1466	φ90×1150
MWCO	Dalton	6k, 30k, 100k, 200k, 300k		
Fiber ID/OD	mm	1.2/2.0 (0.9/1.5, 1.6/2.5, 2.0/3.0)		
Membrane material		Hyper™ PS, PES, PAN, PVDF		
Shell material		ABS / UPVC		

PRODUCT PERFORMANCE

Storage		Dry storage
Permeate turbidity	NTU	<0.06
SDI ₁₅		<2
Bacteria removal		Log 6 *
Virus removal		Log 5 *
Design flux rate	L/m ² .h	60~120

* Data based on MWCO 50K Da membrane



UFH-PSS Series



PRODUCT SPECIFICATIONS

		UFH-PSS1060	UFH-PSS8040	UFH-PSS4040
Membrane Area	m ²	45	14	4
Dimensions (wxhxd)	mm	φ250×1720	φ200×1466	φ90×1150
MWCO	Dalton		50k*	
Fiber ID/OD	mm		1.2/2.0	
Membrane material			Hyper™ PS*	
Shell material			ABS / UPVC	

* MEGA VISION recommended standard for best steady flux/membrane density

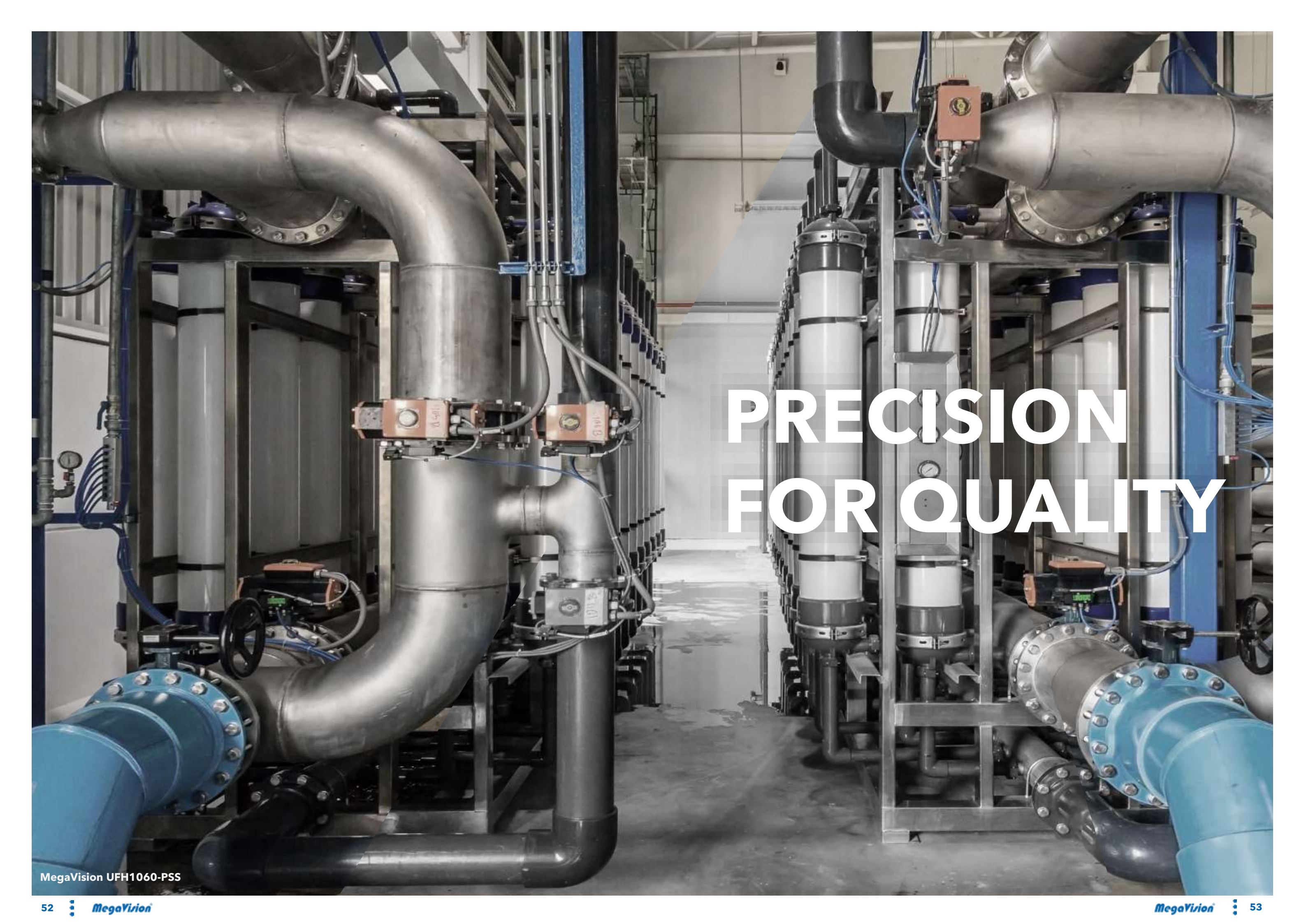
PRODUCT PERFORMANCE

Storage		Dry storage
Permeate turbidity	NTU	<0.06
SDI ₁₅		<2
Bacteria removal		Log 6 *
Virus removal		Log 5 *
Design flux rate	L/m ² .h	60~120

* Data based on MWCO 50K Da membrane



MegaVision UFH1060-PST



PRECISION FOR QUALITY



OUT-IN HOLLOW FIBRE MEMBRANE



HIGH FLUX
WITH AIRLIFT

OUT-IN HOLLOW FIBRE MEMBRANE

The Out-In hollow fibre membranes are a pressurized Ultrafiltration (UF) module built with robust PVDF fibre technology. It is optimized for handling capacities greater than 50 m³/hr, and with relatively high turbidity.

The UFP-PVDF Series, structured with Hyper™ PVDF (permanently hydrophilic Polyvinylidene fluoride) with high tensile strength designed to effectively handle air and liquid flow vibrations

Hyper™ PVDF membranes are highly tolerant to chlorine (max. 2,000 PPM), for enhanced chemical cleaning.

The UFP-PVDF Series uses an airlift system for air scouring along the membrane, reducing cake formation and ultimately reducing chemical cleaning frequency.

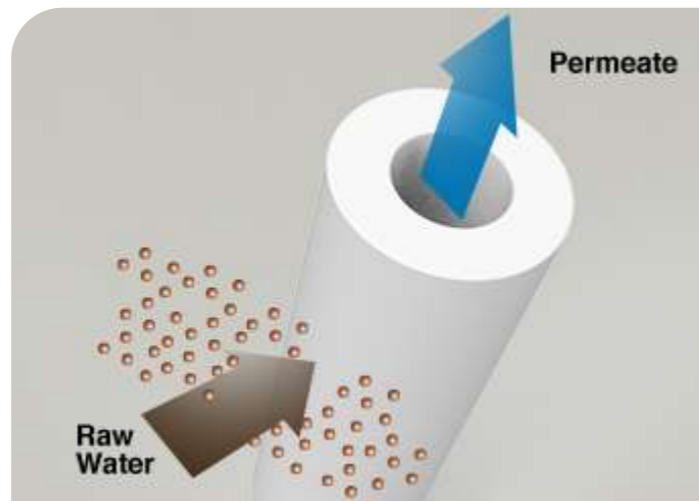
OUT-IN FILTRATION

Out-In filtration mode refers to the process of having feed water being pressurized through from the outer surface area to the cavities of the hollow fibres. Filtrate (permeate water) is collected from inside the fibres cavities, leaving water concentrate and contaminants outside of the fibres.

Out-In filtration mode can effectively handle feed liquids having higher turbidity.

Advantages

- High flux & stability
- High tensile strength
- Air scouring
- High chlorine resistance
- Low chemical demand



UFP-PVDF Series



PRODUCT SPECIFICATIONS

		UFP-2880	UFP-2860
Membrane Area	m ²	77	51
Dimensions (wxhxd)	mm	φ225×2130	φ225×1630
Pore size	μm	0.03	
Fiber ID/OD	mm	0.7/1.3	
Membrane material	Hyper™ PVDF		
Shell material	ABS / UPVC		

PRODUCT PERFORMANCE

Storage	Dry storage	
Permeate turbidity	NTU	<0.1
SDI ₁₅	<2.5	
Design flux rate	L/m ² .h	30~120



MegaVision® REFERENCES - UF



BRAZIL - COLLOIDAL SILICA CONCENTRATION
1440m³/d - UFH-PSS1060



CHINA - BOILER FEEDWATER
3420m³/d - UFH-PSS1060



CHINA - PAM CONCENTRATION
1500m³/d - UFH-PSS4040



RUSSIA - AUTOMOTIVE FLUID PRODUCTION
860m³/d - UFH-PSS1060



CHINA - LAKE WATER PURIFICATION
7000m³/d - UFP-2880



TAIWAN - SEMICONDUCTOR RO PRETREAT
2016m³/d - UFH-PSS1060



GERMANY - WINE CLARIFICATION
2015m³/d - UFH-PST8060



CHINA - RO PRETREAT
940m³/d - UFH-PSS1060

THE LIST

新兴工程

Awarded Projects (by province)

Guangzhou Paper Mill 2 Awarded
Dongguan (Guangdong)
100,000m³/d
Process: RO Feed: Brackish Client Type: Industrial (Paper Mill)
Signature: 2005 Operational: 2007 Developer/EPC: Xidoumen
Membranes: Tianwei

Huludao RO Awarded
Huludao (Liaoning)
50,000m³/d
Process: RO Feed: Seawater Client Type: Industrial & Municipal (Undecided/
Signature: 2004 Operational: 2007 Liaoning Zhengye Group Real Estate Develop-
Membranes: Hyflux (RO) **Megavision (UF)** ment Co Ltd.)
CAPEX: CNY 452,000,000 m
Developer/EPC: Hyflux

Zhuanghe Power Plant RO Awarded
(Liaoning)
28,000m³/d
Process: RO Feed: Seawater Client Type: Industrial (Beijing Lucency Enviro-
Signature: 2006 Operational: 2007 Tech Co., Ltd.,)
Membranes: Koch

Lubei Chemical Group RO Awarded
Mashanzi Town, Wuli County (Shandong)
20,000m³/d
Process: RO Feed: Seawater Client Type: Industrial (Shandong Lubei Chemi-
4 Unit x 5,000m³/d cal Group)
Known equipment: Spiral Wound Membrane CAPEX: CNY 120,000,000 m
Signature: 2006 Operational: 2007 Developer/EPC: Xidoumen
Membranes: Beidouxing ERD: ERI HPP: Grundfos PV: ROPV

Dagang RO Awarded
Tianjin (Tianjin)
150,000m³/d (incl. 2nd phase 50,000m³/d)
Process: RO Feed: Seawater Client Type: Industrial & Municipal (Dagang
Signature: 2004 Operational: 2007 District)
Membranes: Hyflux (RO) **Megavision (UF)** CAPEX: CNY 720,000,000 m
Developer/EPC: Hyflux
ERD: Calder



Hollow UFH production at MegaVision

QUALITY VALUE PERFORMANCE

MegaVision Membrane is a globally recognized provider of filtration membrane technologies.

Our long-standing research & development in advanced membrane polymers and applied filtration technologies enabled us to become a leader in the industry.

We are a pioneer in membrane bioreactor and membrane ultrafiltration systems since 1999. Our products are engineered to sustain complex applications and deliver high performance with best value.



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