

# Supratec

## Supratec Group

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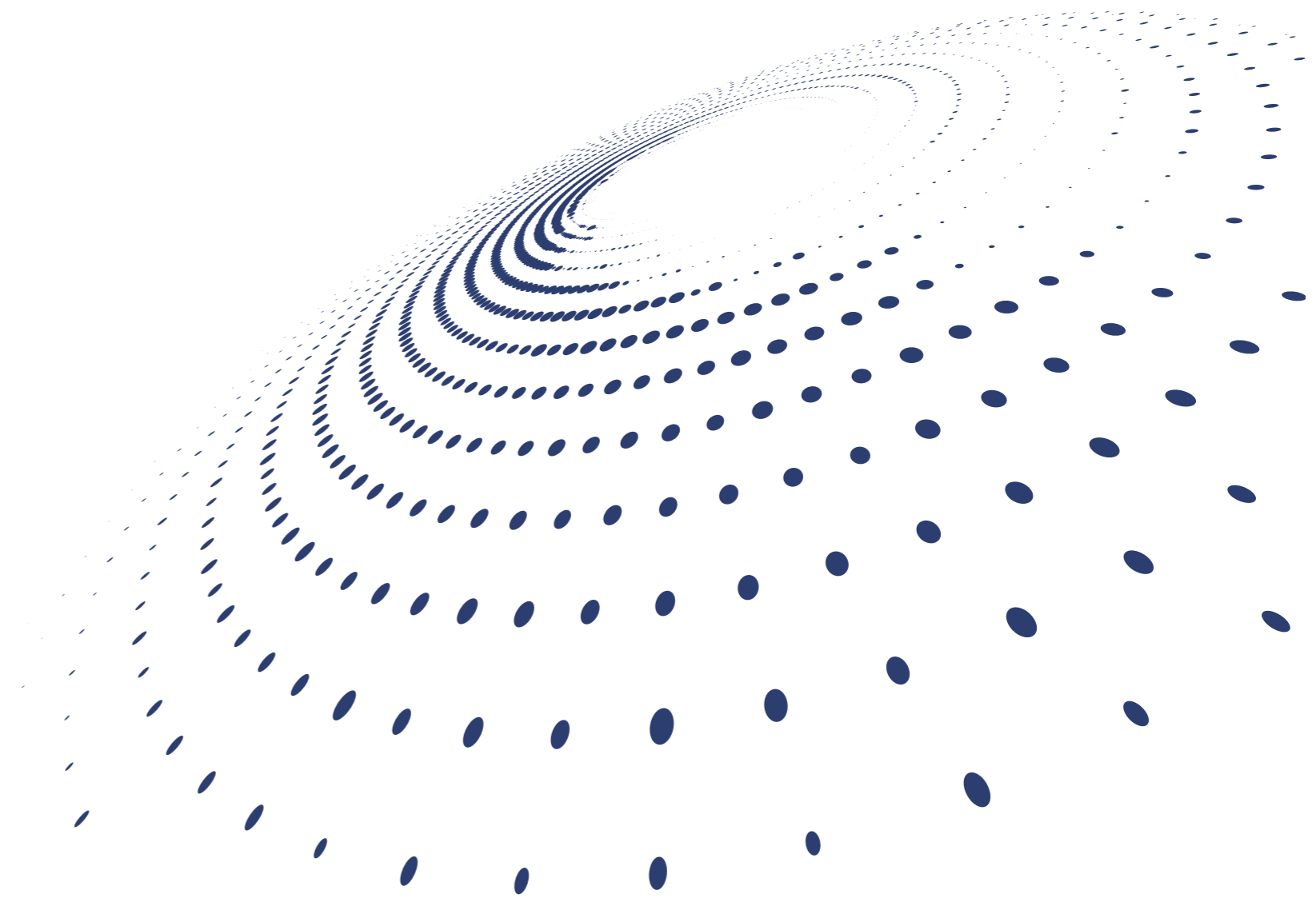
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An aerial photograph of a tropical island. The top half of the image shows a dense forest of green trees and palm trees. In the middle, there is a small hut with a thatched roof and a wooden boat on a narrow strip of water. The bottom half of the image shows a white sandy beach meeting clear, turquoise water. The word 'Supratec' is written vertically in a light blue font on the right side of the image.

**A leading membrane**  
for the future

Supratec

## About Supratec

Supratec Group is a worldwide leading manufacturer of ultrafiltration membrane, diffuser system and other water & wastewater treatment products, mainly based in Simmern/Hunsrück, Germany, as well as some assembly plants located strategically in Hungary and China. In last decades, Supratec is continuously focusing on advanced membrane material and application technology in its different R&D centers distributed in Germany, Canada, Hungary and China. Supratec is committed to reliably solving global water and climate challenge innovatively with advanced membrane filtration technology.

# Supratec

## Membrane Business



Research & Development



Manufacture



Sales



After-sales Service

Supratec Group is a leading company focusing on research, development and manufacturing of advanced technologies and equipment for water and wastewater treatment with particular focus on membrane process technologies. Supratec has brought together many of the world's top membrane technology experts to continuously developing innovative products. The technical support and service team has more than 30 years of experience in water and waste water treatment technology research, development and application, who has designed and built a number of highly influential membrane water treatment project.

In the field of water & wastewater treatment, Supratec is well-known for its innovative, reliable and energy-saving products for around 50 years in Germany, as well as more than 6,000 references around the world.

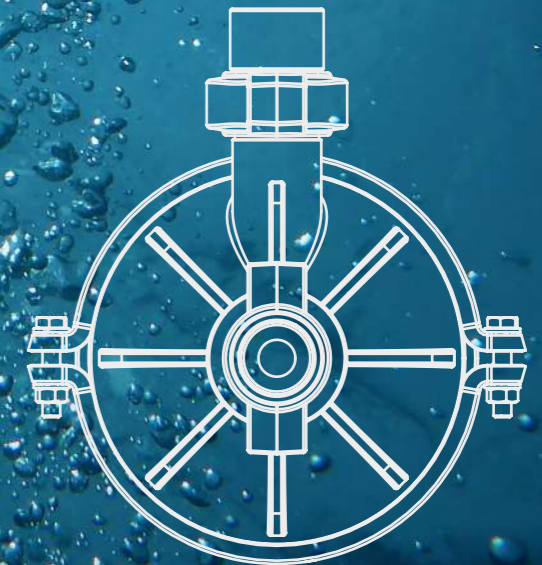
Supratec membrane segment in Germany, is proudly based on one of the worldwide most advanced automatic membrane production lines in German Industrial 4.0 mode, also as one of the largest membrane manufacturing sites in Europe.

50

YEARS

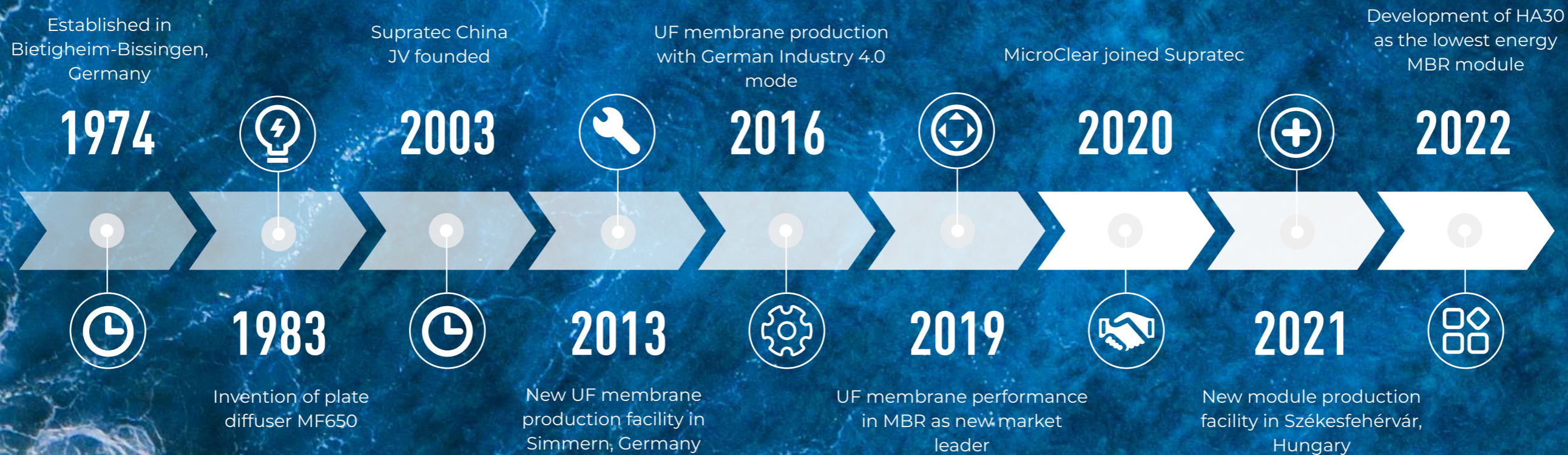
6000+

APPLICATION CASES



Supratec integrates global technical resources serves the global customers to valued water!

# Supratec





## Supratec in Global

Supratec Group integrates global technical resources, updates the advanced international water & wastewater treatment technology and serves the global customers professionally.



### Certifications

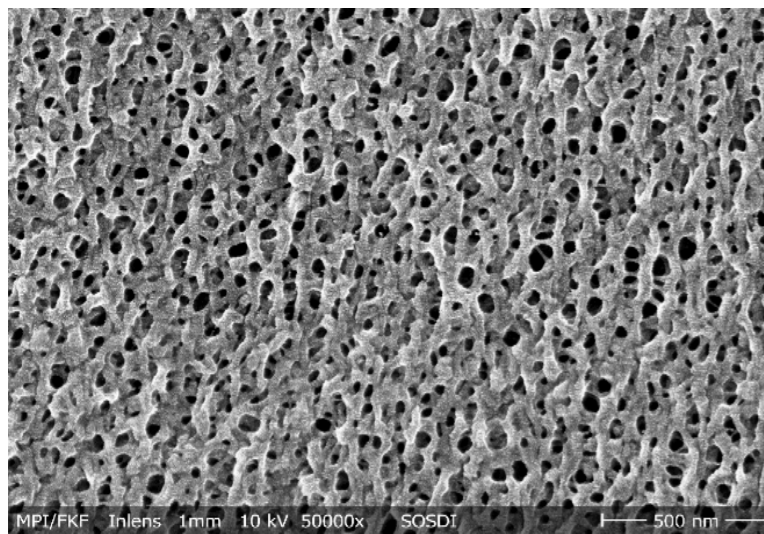
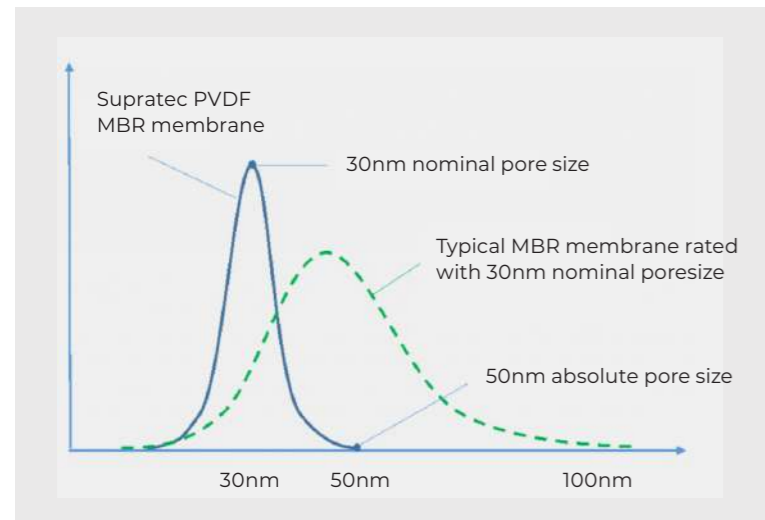


**ISO 9001** Quality Management System Certification  
**ISO 14001** Environmental Management System Certification  
**OHSAS 18001** Occupational Health and Safety Management System Certification



## Features

- ⊕ Pore Size: 0.03  $\mu\text{m}$
- ⚙️ Fiber Unbreakable
- 📄 3000LMH/bar (20°C) Pure Water Flux



SEM of Supratec UF membrane



## Ultrafiltration membrane

The Supratec Ultrafiltration hollow fiber membrane is designed with state-of-the-art PET support. Supratec membrane manufacturing site is located in Simmern/Hunsrück, Germany.

Supratec membranes sophisticated production system in Germany are tailor made by our own innovative team with highest precision and full automation in German Industry 4.0 mode. Supratec Membrane GmbH is the designer and membrane manufacturer with more than 30 years of experience team in the field of membrane R&D and manufacturing. Supratec UF membranes with PVDF material are produced based on a nominal pore size of 0.03  $\mu\text{m}$ , with narrow pore size distribution, extremely high porosity, unbreakable strength (>600N). As a perfect barrier to filtrate biomass and bacteria without fouling issue, Supratec UF membranes has nearly no flux decline within more than 10 years lifetime as a trouble free MBR membrane, which is clearly distinguished from conventional MF membrane. Supratec UF membrane, not only greatly guarantees the effluent water quality, but also remove most of bacteria and virus from the effluent.

# Supratec

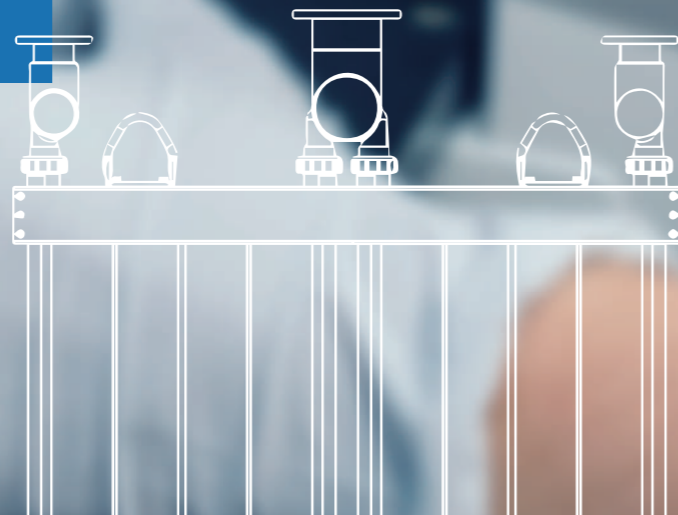
## Innovative Product

MBR  
Series

The Supratec H series cassette marks the most sophisticated of supported hollow fiber UF membranes internationally, due to its incredible energy saving (SADp<3:1) and highest net flux (>30 l/mh in MBR). The main application of H series is in municipal and industrial MBR systems, providing high effluent quality to meet the standards of water reuse, which effectively saves water resources. H series submerged Ultrafiltration cassette are also widely used in big drinking plants or industrial clarifiers.

A trouble free MBR system with more than 10 years of lifetime will be easily achieved by Supratec H series. This is due to the extremely high membrane porosity and uniform pore size distribution, as well as unbreakable hollow fiber membrane.

H series MBR stable operating flux is greater than 30 l/mh in municipal wastewater, around 200% of the market average value.



Supratec is a market leader in German wastewater aeration field for 50 years. With this synergy, a patented siphon aerator for energy-saving purpose was developed for this H series by Supratec. Thanks to the combination solution of high flux membrane and patented siphon aerator in H series, MBR air scouring of 0.05 kWh/m<sup>3</sup>, or SADp < 3:1 will be easily achieved.

### Application



#### Municipal Wastewater

New sewage plant, water reuse, advanced retrofit and capacity expansion for conventional process.



#### Municipal Drinking Water

New drinking plant, water quality improvement, advanced retrofit and capacity expansion for conventional process.



#### Industrial Wastewater

Diverse and variable influent quality is always a topic for industrial wastewater, so more robust membrane like H series is a good opportunity to keep your plant optimal.



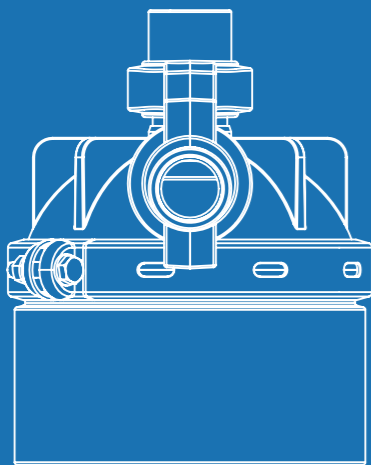
#### Landfill Leachate/Pharmaceutical

Landfill and pharma industrial wastewater is well-known for its biodegradable difficulty and harsh environment. H series membrane can still serve this application in a smooth way.

# Supratec

## Innovative Product

**Pressurized**  
UF Series



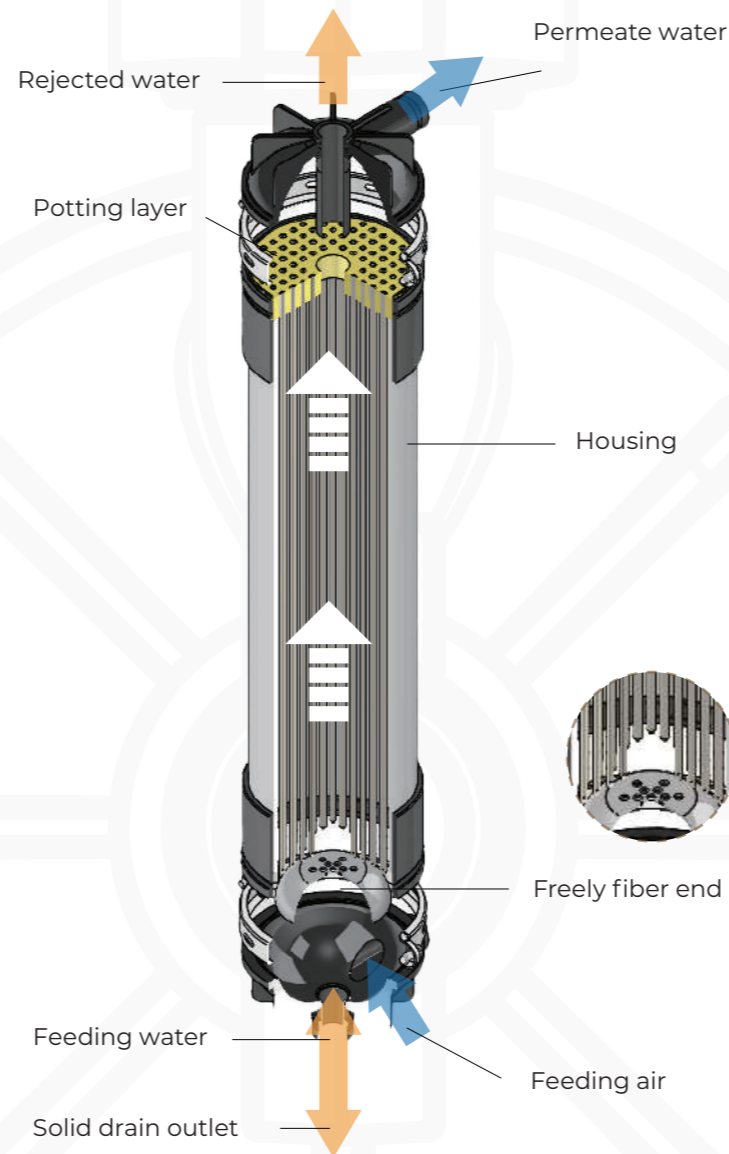
Feed SS  
up to

**1000 mg/l**



Water discharge  
reduced to

**50%**



Compared with conventional pressurized module at 30 mg/l SS feeding limitation, Supratec HP series can be used up to 1000mg/L SS feeding water or waste water application without any fiber broken issue. Further, HP series will reduce around 50% concentrated liquid discharge volume, which will greatly benefit for higher water recovery rate and much lower post processing cost. At the same time, this large-scale membrane module and integrated design are easy to install and footprint saving. It can be widely used in municipal sewage, industrial wastewater, water reuse, seawater desalination, drinking water treatment and other fields.

Distinguished from most of other pressurized module players using non-supported fibers which is easy to be broken from fluctuated feeding quality. Supratec HP series for pressurized UF, innovatively utilizes supported PVDF hollow fiber membrane. This supported UF hollow fiber is produced in German 4.0 industry mode, with higher strength, higher flux, longer lifetime, easier to be clean features. The HP series modules are assembled by Supratec manufacturing base in Hungary. This unique single side potting structure, dramatically improves the air cleaning efficiency, higher recovery rate, operation at high solids loading with reduced cleaning frequency, solids deeply drained by gravity. Based on double-layer sealing structure, a European standard centrifugal potting process of HP series module ensures a stable and reliable quality.

### Application



#### Sewage Reuse

Much higher recoveries can be achieved. HP Module can handle clarifier upsets and tolerate high coagulant doses.



#### Seawater Desalination

It can realize ultra-short process and less space, which can reduce the investment cost, operation & maintenance costs, and reduce energy consumption.



#### Drinking water

It is suitable for turbid surface water source, handle high coagulant doses and ensure that there is no risk of external pollution in the whole process of the drinking water plant.



# Supratec

## Innovative Product



An innovative water treatment service provider based on advanced water treatment technology, diversified products and professional services

### SMC Series for Integrated Membrane Equipment

Based on German core technology and experience, all membrane functional process is innovatively integrated in one SMC container.

#### Three main applications for SMC

- Conventional sewage plant capacity can be increased up to 200% in a short period at low OPEX.
- SMC can be as a ready-to-use drinking plant.
- SMC can be as a submerged UF clarifier to upgrade effluent quality.

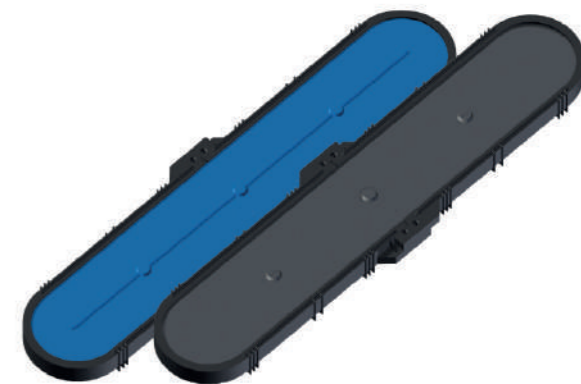


### MicroClear Flat Sheet Series

With more than 1,000 application cases all over the world in last 20 years, MicroClear flat sheet modules own a customer satisfied reputation for its German top-quality membrane. Each MicroClear module is welded via patented solution between polypropylene (PP) support plate and UF membrane. Unique support body design and welding form have good mechanical strength and stability. The innovative design allows the membrane modules to be assembled by stacking each other to adapt to various tank designs, and many different cassette types can be provided for selection.

### Supratec Energy-saving Diffuser

Supratec is also a diffuser market leader in both Germany and China for many years. The combination of many decades of experience with state-of-the-art manufacturing processes and materials allows us to fulfill the ever-increasing requirements of an energy-efficient high-quality aeration system. Supratec aeration systems are used worldwide for the energy-efficient oxygen supply of biological processes in the waste water treatment sector. Around 50 years of experience in waste water aeration with a proud history of more than 5,000 waste water treatment plants where our systems have been installed. With Supratec well known plate Diffuser MF650 & MF1100, average energy and cost savings of 30% are achieved. The investment for procurement and retrofitting will have paid for itself after a short time.

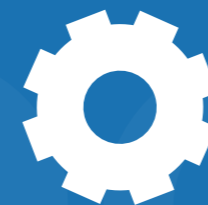


# Supratec Service



We have around 50 years of experience in wastewater and water process engineering. Therefore, we are able to continuously optimize our range of high-quality products and services. Our highly motivated employees are working in close cooperation with our customers and will always strive to find optimum solutions for your specific requirements. Technical consulting, project guideline, system design, installation and full scale after-sales service are based on Supratec global professional team to provide flexible technical services for different customers' needs.

The main objective is always to keep the customers' plant operating in a smooth and energy saving way. We keep this in mind whenever customers approach us in order to support them with their requests, as well as making them aware of potential savings.



## Consulting Service

We are the consulting partner for process optimization, commissioning installation, troubleshooting etc.



## Pilot System Offering

We can provide professional pilot system testing service, including water analysis, and emulation with different operating conditions and/or optimized operating condition testing.



## After-sales Service

After sales service of training, installation, commissioning, data-collecting, risk management, process & modules evaluation, troubleshooting, cleaning, etc.

