



HIGH PERFORMANCE MEMBRANE FILTRATION MODULES PROFESSIONAL SERVICE PROVIDER





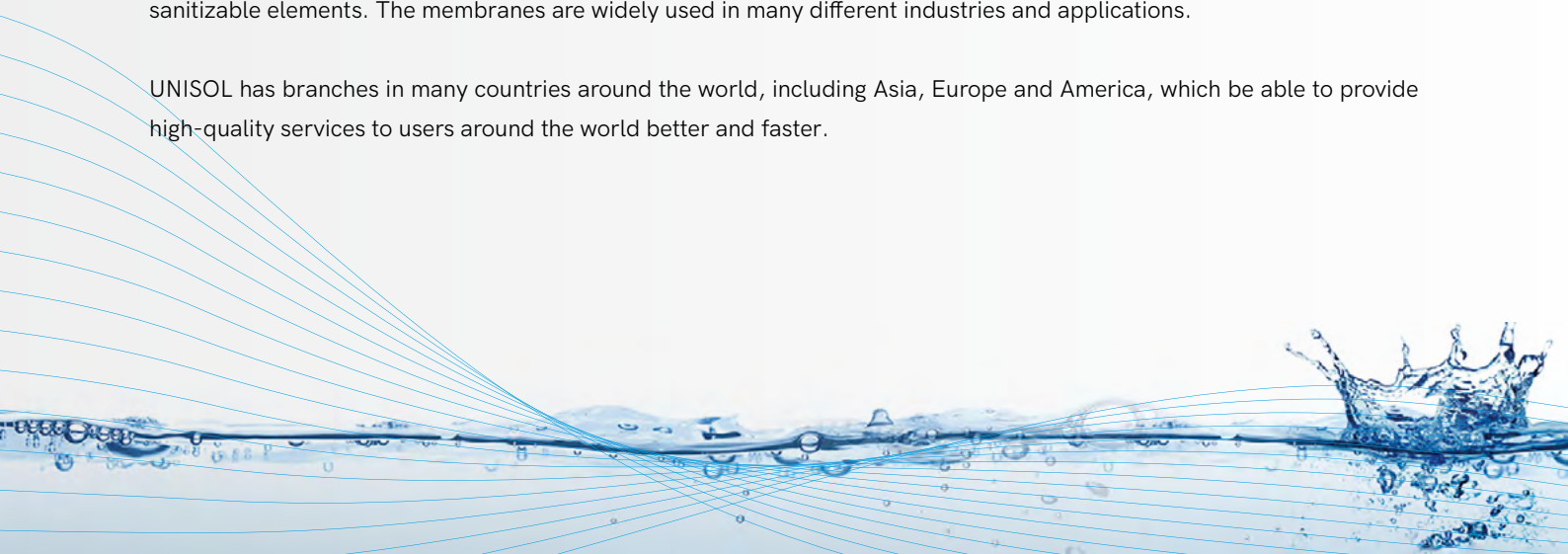
COMPANY PROFILE

UNISOL MEMBRANE TECHNOLOGY

UNISOL Membrane Technology is the specialty membrane manufacturer of reverse osmosis, nanofiltration, ultrafiltration and microfiltration products. With a diverse product range and unmatched flexibility, we take pride in our ability to customize our products and service offering to address customers' unique requirements.

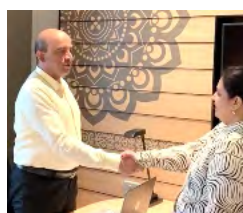
In addition to offering standard spiral wound replacement products, UNISOL offers a wide range of specialty elements for process and sanitary applications, high and low pH, high temperature or high-pressure operations along with heat sanitizable elements. The membranes are widely used in many different industries and applications.

UNISOL has branches in many countries around the world, including Asia, Europe and America, which be able to provide high-quality services to users around the world better and faster.



As a global enterprise, UNISOL recruits top membrane tech talents worldwide. Its team, made up of senior global separation tech experts, has worked at advanced membrane firms in Europe, America, and Asia. They focus on product and tech R&D, know diverse customer needs and application tech traits, and have rich field experience.

UNISOL follows a customer - centered innovation idea, masters key tech like advanced membrane material synthesis, precise structure design, and efficient manufacturing. With over 60 membrane - related patents, it offers quality products, customized solutions, and services, winning wide customer support globally.



Target Industries / Applications

Industries

- Industrial Wastewater
- Industrial Process Water
- Power Utility
- Pulp Paper
- Chemical Industry
- Metal Finishing
- Automotive
- Ink / Dye Production
- Textile
- Plating / Coating

Process Streams

- Food Processing
- Dairy
- Pharmaceutical Process Separations

Light Industries

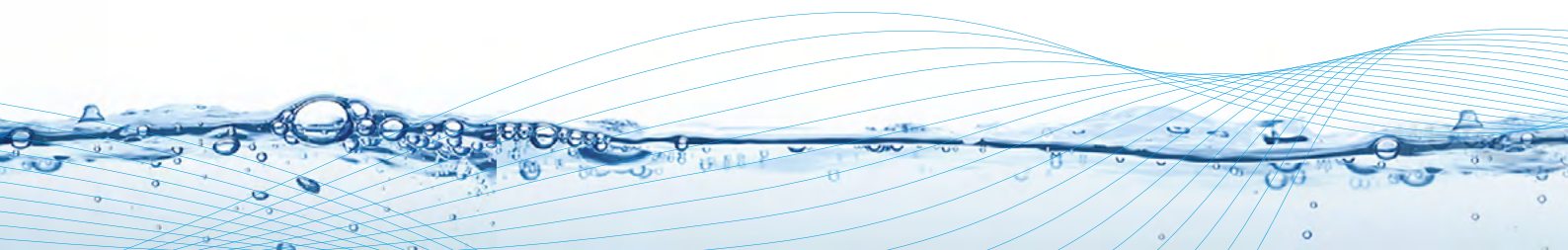
- Bottled Water Plants
- Beverage Industry
- Laundry Wastewater Reuse
- Water Park Pool
- Agricultural Use
- Greenhouse

High Purity Water

- Dialysis
- Laboratory
- Pharmaceutical Water (WFI)

Municipal

- Municipal Drinking Water
- Municipal Wastewater / Water Reuse



PRODUCTION BASE

UNISOL provides a complete production and development base. The facilities, covering operations, administration and research extend over an area of 5,600 m².

The production lines are highly automated in order to achieve high quality standards and the future intelligent production of membrane modules.



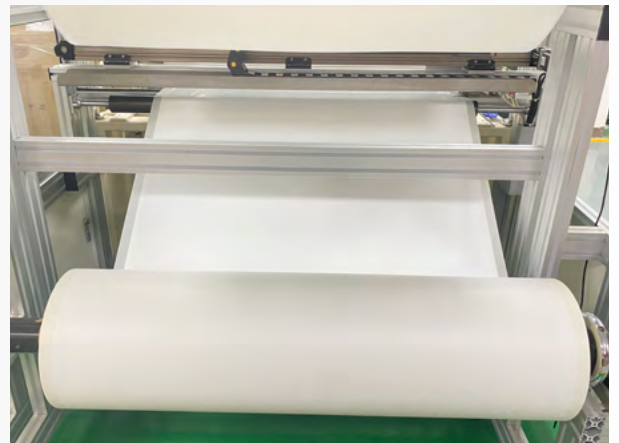
Smart Production

Implementing robots into the processes of cutting, welding, assembling and testing allows for the improvement of efficiency, reliability and stability of our products.



Big Data Management

The real-time data collection on all links of the production line allows for the traceability of the production process. Big data management then assures the control of the product quality at highest possible level.



PRODUCTS

Our product portfolio extends from standardized filtration modules to customized filtration modules, they cover microfiltration, ultrafiltration, nanofiltration and reverse osmosis.

Our offering includes flat sheet, spiral wound modules, tubular modules, DTRO modules and a hybrid MBR.





AMS MEMBRANE

AMS membrane is a special membrane series of UNISOL. It supports thermal and chemical stability, can withstand high temperature and pressure in strong acids, alkalis and solvents media. This membrane can selectively penetrate acids, bases and solvents to achieve the goal of purifying acids, bases and solvents.

Acid-stable, Alkali-stable, Solvent-stable

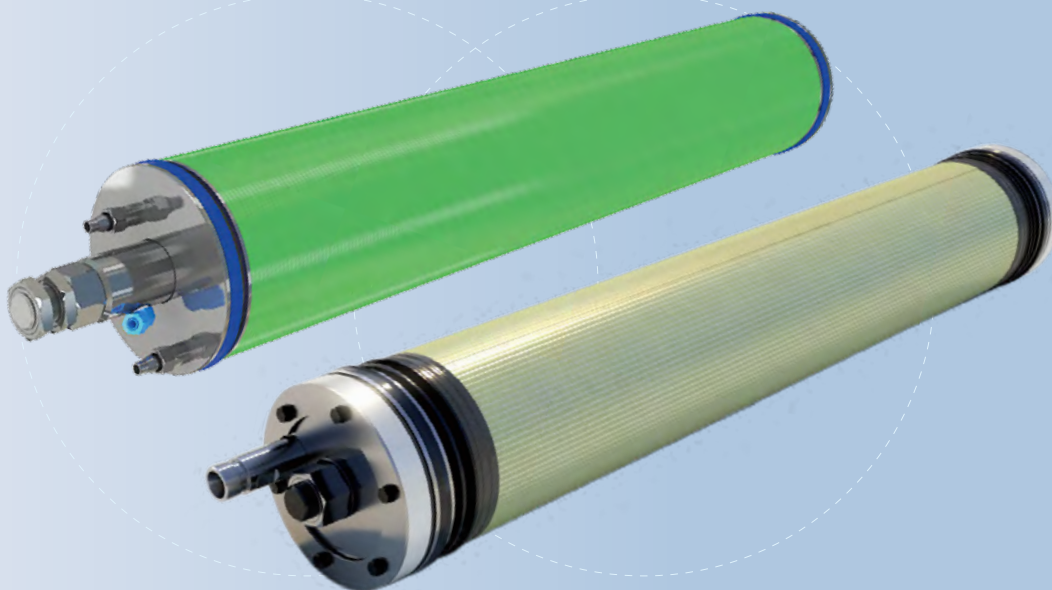
- Application media: Acid, Alkali, Solvent
- Filter level: UF, NF
- Standard size: 1812, 2540, 4040, 8040

Advantages

- Resistant to strong acid, alkali & solvent
- Acid/alkali/solvent separation & purification
- Diverse specifications
- Able to handle viscous liquids

Applications

Mining. Metal industry. Pulp & Paper. Artificial silk industry. Food & Beverage.
Chemical industry. Pharmaceutical. Electrophoretic coating.



DT/ST MODULES

The DT/ST modules of UNISOL are cost effective solutions for the desalination or purifications of liquids. Our DT/ST module design can handle feed streams at high TDS and certainly can provide various separation characteristics.

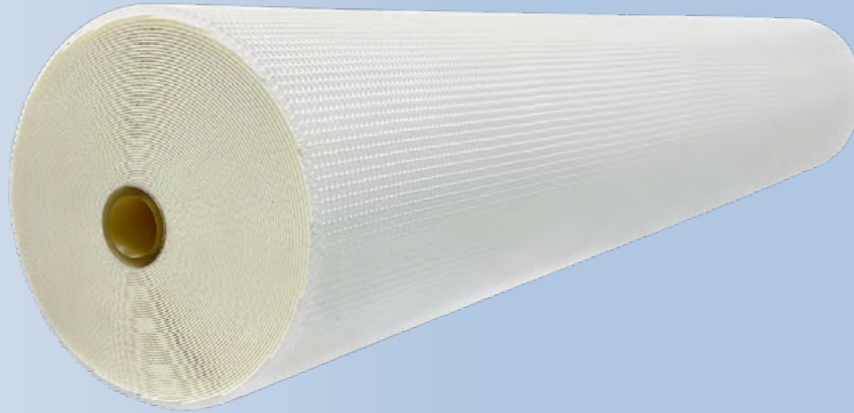
A new enhanced generation of DT/ST modules

Advantages

- High quality membrane: stable performance at high flux and rejection.
- A new generation of deflector: improved robustness, higher operating pressure and turbulence leading to higher yields and flux.
- Long membrane life: reduced cost of operation.
- High packing density: the spiral wound design allows for a maximum membrane area in the module.

Applications

- Landfill leachate treatment
- Concentration
- Chemical wastewater
- Zero liquid discharge / Reduction of industrial wastewater
- Wastewater desulfurization
- High solids applications
- Offshore seawater desalination



SPIRAL WOUND MODULES

For the different applications of spiral wound modules, UNISOL provides a portfolio of spiral wound modules that stretches from standard modules to products that are designed precisely to the customer needs. The complete spectrum of UF, MF, NF and RO membranes is available within our spiral wound products, which are provided at high quality.

All designs available

Standard classification:

1. Sanitary Design: 3838, 6338, 8038, 8338
2. Industrial Design: 2540, 4040, 8040
3. Temperature, Caustic and Acid, Solvent Resistant

Advantages

- High packing density
- Sharp cut-offs
- Great mechanical strength

Applications

- Industrial component separation
- Seawater desalination
- Whey Protein Concentration, Fermentation broth concentration, Sweeteners, Clarification
- E-Coat, Hemicellulose separation, Desalination





FLAT SHEET MEMBRANE

UNISOL flat sheet membranes cover the whole range from MF(microfiltration), UF(ultrafiltration), NF(nanofiltration) and RO(reverse osmosis), and are available in a broad range of polymers that include PES, PS, PAN and PVDF at various MWCOs.

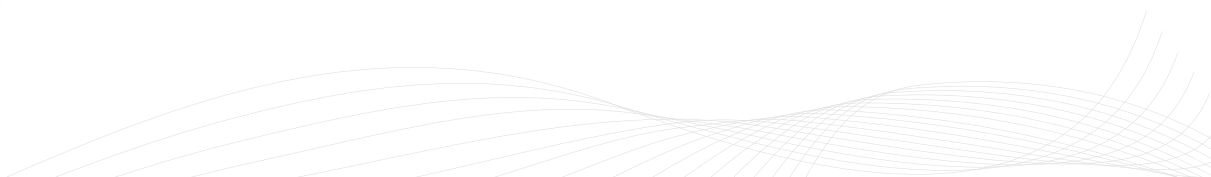
Customized chemistry

Advantages

- High flux
 - High selectivity
 - Chemically enhanced membrane properties
 - Low fouling & cleaning efforts
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Applications

- WPC Gelatin
 - Decolorisation
 - Color removal
 - E-Coat
 - Caustic brine regeneration
 - Produced water
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MBR

Within the application of MBR the membrane serves as a physical barrier to separate the liquid phase from the biomass. A clarifier is no more required to achieve the intended effluent quality. In that way MBR allows to operate at a higher MLSS and increases the efficiency of the biological treatment, decreases the required foot print and improves the stability of the waste water treatment process.

High packing density & Reliable performance

Advantages

- High effluent quality
- Improved process stability
- Smart design (Reduced braiding and sludge deposition)
- Modular design (Size can be adapted to the existing space)
- High packing density
- Optimized oxygen transfer (Fine bubble aeration)
- Lower pretreatment requirements

Applications

Municipal wastewater·Industrial wastewater·Water treatment leisure industry



TUBULAR MEMBRANE

MEMOS tubular ultrafiltration membranes have superior performance and are widely used in various wastewater treatment processes, food and pharmaceutical.

Innovative replaceable membrane module design

Advantages

- Made in Germany, reliable quality, more than 1000 references
 - Good anti-fouling performance, easy to clean
 - A variety of sizes and specifications are available, the membrane core can be replaced
 - Long membrane life (5-8 years)
 - High throughput, 50-100L / m² · h
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Applications

- Landfill leachate and industrial wastewater treatment (external TUF / MBR)
 - Fruit juice, beverage clarification and separation
 - Wastewater softening and hardening
 - Treatment of oily wastewater and oily emulsions
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MARKET APPLICATIONS

Food & Beverage, Dairy

- Whey & protein concentration
- Whey desalting
- Whey fat removal
- Juice & wine clarification and filtration
- Gelatin
- Caustic soda recovery and recycling

Chemical Industry

- Viscose Fiber
- Chemical fiber textile wastewater
- Process Water Preparation
- Dye Desalination
- Organic Solvent Nanofibers (OSN)
- End product concentration
- Acid/ alkali/ solvent recovery

Pharma & Biotech

- End products clarification & concentration
- Ultrapure water production
- Water purification and sterilization
- Solvent recovery



Metal, Mining

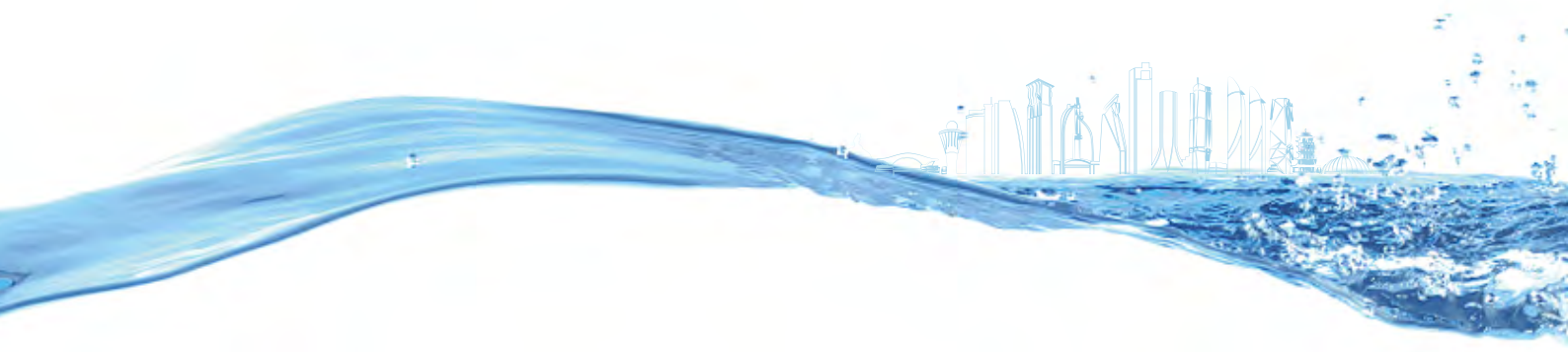
Hydrometallurgy
Mining wastewater filtration
Acid recovery
Heavy metal separation from wastewater

Water & Wastewater

Landfill leachate
Zero Liquid Discharge
Coal chemical industry wastewater
Dyeing & printing wastewater
Industrial wastewater concentration
Municipal sewage
Desulfurization wastewater

Automotive

E-coat filtration
Paint recycling
Lifetime extension for degreasing baths
Solvent recovery



REFERENCES



Singapore
Industrial Wastewater
150t/d



Guangdong
Desulfurization Wastewater
48t/h



Sichuan
Pesticide Wastewater
7500t/d



Mexico
E-coat Application



China
E-coat Application



China
Sugar Concentration



USA
Municipal Wastewater
Treatment



Turkey
Waster Water Treatment

COMPANY MISSION

Applying membrane technology into cutting edge applications, shifting industries towards low carbon emission, environment friendly and resource recycling.



WE SUPPORT YOU - WORLDWIDE!



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UNISOL MEMBRANE TECHNOLOGY reserves the right to change specifications without prior notification.
For the latest version, please refer to the internet. info@unisol-global.com
www.unisol-global.com | www.wta-unisol.com