

MEMSİS

ÇEVRE TEKNOLOJİLERİ ARAŞTIRMA VE GELİŞTİRME A.Ş.

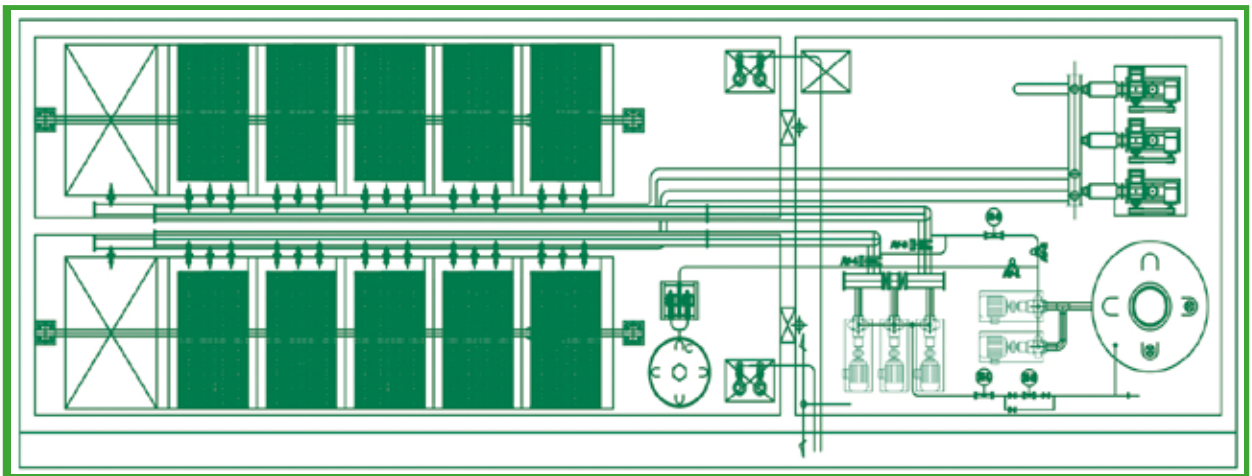
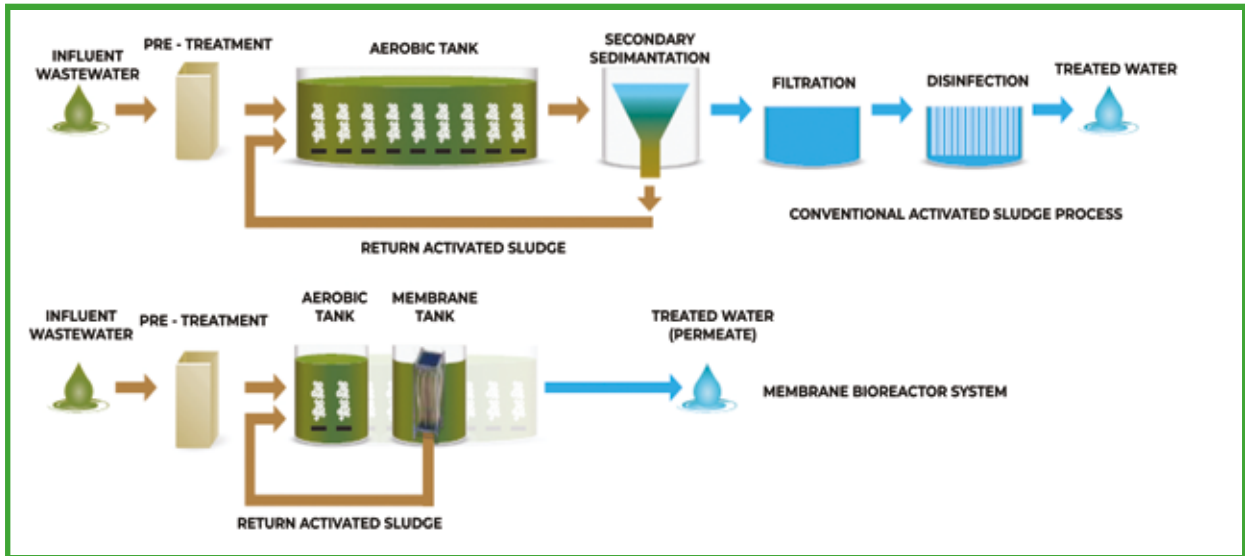


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WHAT IS MEMBRANE BIOREACTOR?

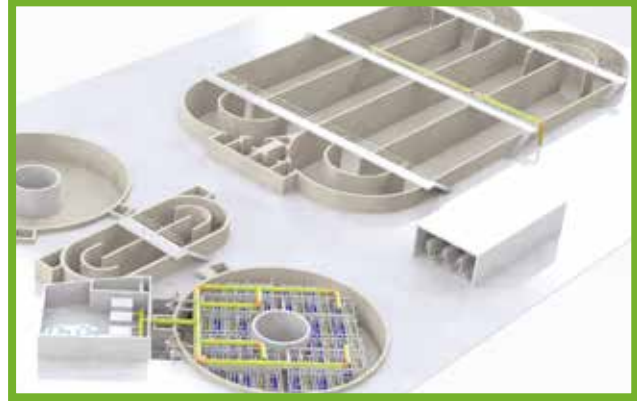
The membrane bioreactor (MBR) process is a treatment process that combines biological treatment and membrane filtration, which is preferred for the treatment and recovery of domestic or industrial wastewater. While separation of sludge from water is achieved by gravity in conventional treatment systems, membrane modules fulfill this task in the MBR process. The biomass formed in the biological treatment process is passed through a membrane filter and purified water is obtained.

In MBR plants operated at higher MLSS concentrations than conventional biological treatment systems, carbon removal occurs more efficiently and the space requirement is 3 times lower than conventional systems. The higher quality of the effluent ensures that the process can be used in wastewater recovery applications. At the same time, conversion of existing treatment plants to the MBR system is one of the most frequently applied methods in order to increase their capacity without additional construction.



WHAT IS GENMBR® ?

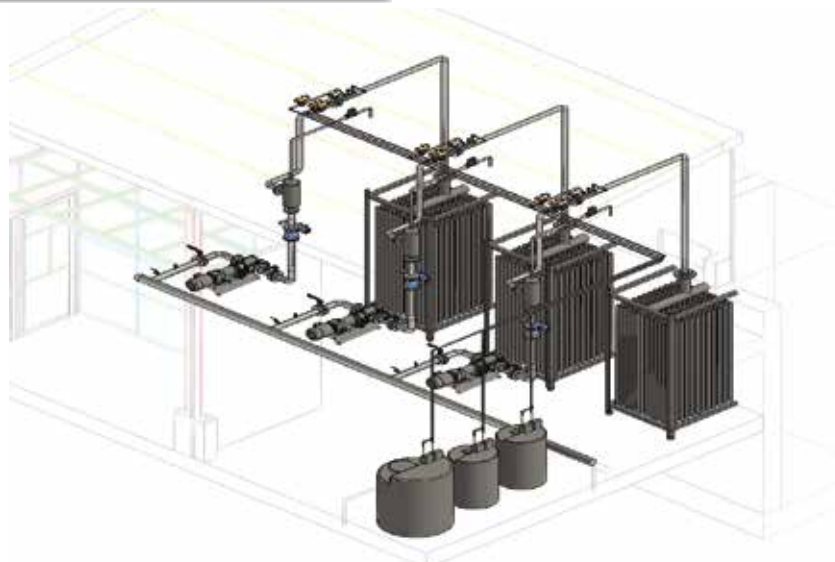
GENMBR® are membrane modules used in the “membrane bioreactor” process applied for the treatment of domestic and industrial wastewater.

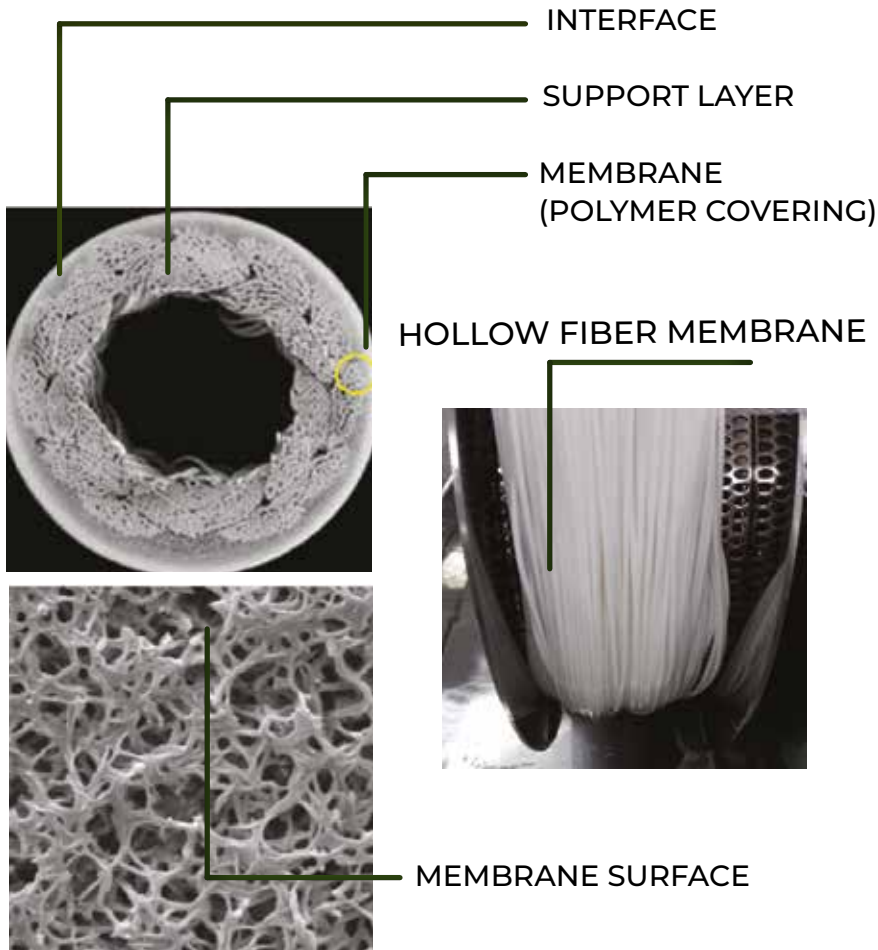


ADVANTAGES OF GENMBR® SYSTEMS OVER THE CONVENTIONAL ACTIVATED SLUDGE SYSTEM

- ✓ The wastewater treated in GENMBR® systems, which provides 90-95% COD removal, 99% BOD removal and 99% TSS removal, depending on the dissolved inert COD fraction of the wastewater, is of high quality. It also plays an important role in recycling wastewater as irrigation, fire hydrant, washing or process water.
- ✓ Higher quality effluent can be obtained in GENMBR® systems compared to conventional activated sludge systems. This water is suitable for recovery for different purposes.

- ✓ The ability to work at high MLSS concentrations allows the aeration tank to have a small volume.
- ✓ Due to the recycling of wastewater, the sustainability of natural resources is ensured.
- ✓ Sludge formation is less and sedimentation tank is not needed.
- ✓ GENMBR® systems require less space than activated sludge systems.





The membranes used in the GENMBR® module are produced as reinforced hollow fiber membranes. All of the production technology belongs to our company. All of the production, characterization and modularization processes of membrane filters are carried out by our company. The design and production of membrane production machines belongs to us. For this reason, capacity increases in membrane production can be realized quickly and independently.

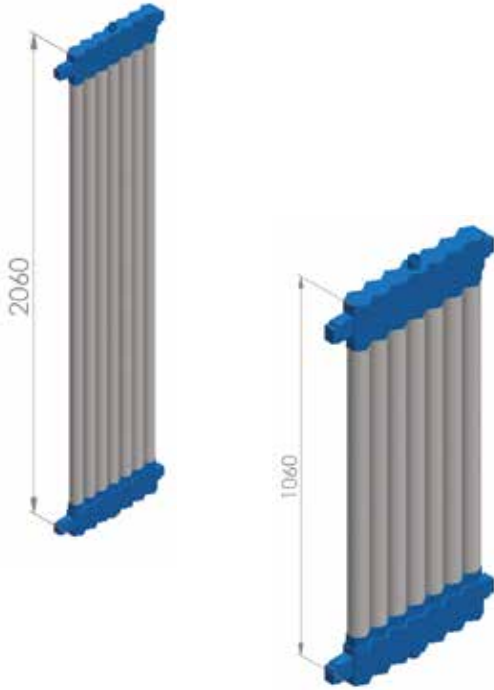
Reinforced fiber membranes, which started to be produced after the R&D process for many years, have a non-breaking feature. Thanks to the mechanical strength of the fibers, they can be used in treatment plants for many years. There are pores with an average diameter of 0.04 microns on the surface of the fiber membranes produced by coating PVDF polymer with a thickness of approximately 100 microns on the textile layer. Membranes with ultrafiltration level offer high efficiency filtration quality.

We are proud to serve our clients with our expert staff in our company, which adopts quality and high performance as a principle in production.

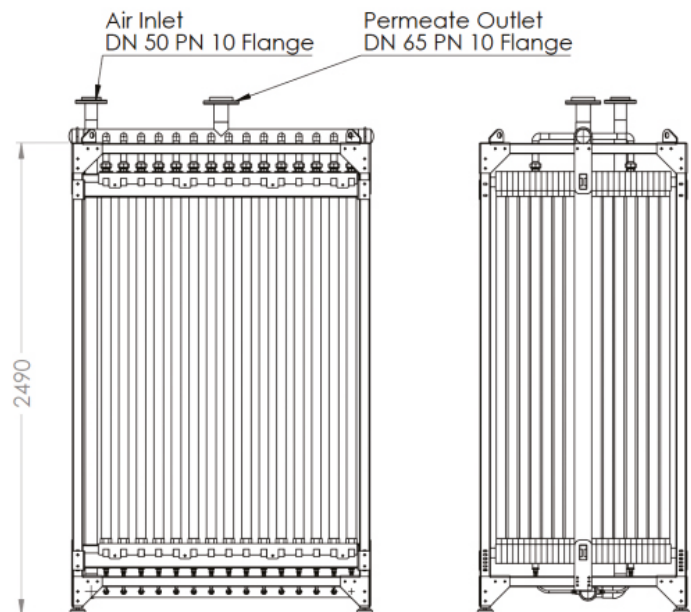
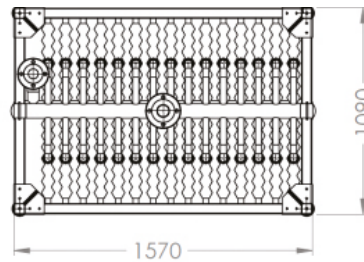
TECHNICAL SPECIFICATIONS

MODEL	GENMBR® 50	GENMBR® 150	GENMBR® 275	GENMBR® 555	GENMBR® 1110	GENMBR® 2220
Membrane Material	PVDF					
Average Pore Size	0,04 µm					
Fiber Size	Outer Diameter: 2.1 mm					
Flow Direction	Outside to Inside					
Module Area	50 m ²	150 m ²	275 m ²	555 m ²	1110 m ²	2220 m ²

**“YOUR SOLUTION PARTNER FOR
WASTEWATER TREATMENT AND
RECYCLING WITH GENMBR® MEMBRANE
BIOREACTOR MODULES”**



- ✓ Membranes, which offer high performance and long life guarantee, must be made into modules in order to be used in treatment plants.
- ✓ With our modules that we produce in different sizes, we offer flexibility in application projects and produce suitable solutions for each project.
- ✓ When necessary, we offer our special membrane modules to our customers on a project-based basis, apart from standard sizes.
- ✓ Within the scope of our 100% customer satisfaction policy, we provide full and unconditional technical support to our customers in project preparation, module design and production, application, commissioning and equipment selection.
- ✓ Our modules provide high resistance to wastewater with our module covers that are extremely resistant to flexing and breaking, and SS 304L - SS 316 stainless steel frame.



**“PROJECT BASED FLEXIBLE MODULE PRODUCTION OPTIONS
FAST SUPPLY AND TECHNICAL SUPPORT”**

GENMBR® APPLICATION AREAS



**MIXED INDUSTRIAL
WASTEWATER
(ORGANIZED INDUSTRIAL ZONE)**



DOMESTIC WASTEWATER



**TEXTILE INDUSTRY
WASTEWATER**



**FOOD INDUSTRY
WASTEWATER**



**PULP & PAPER INDUSTRY
WASTEWATER**



**METAL INDUSTRY
WASTEWATER**



LEACHATE WASTEWATER



HOSPITAL WASTEWATER

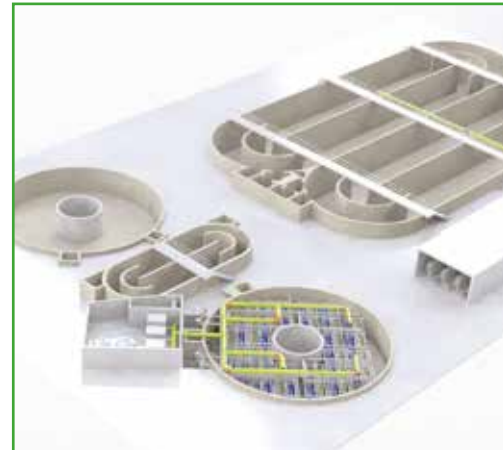
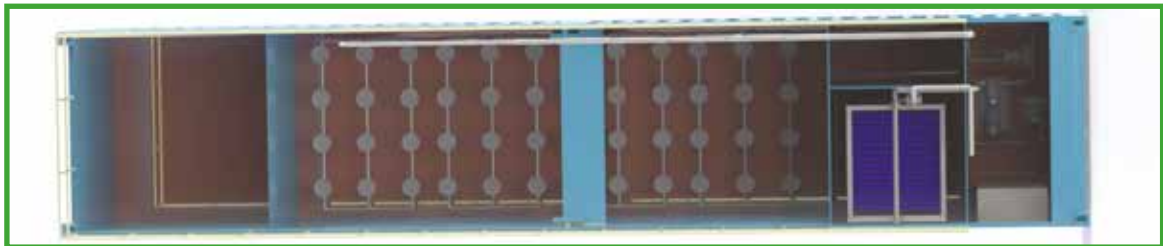
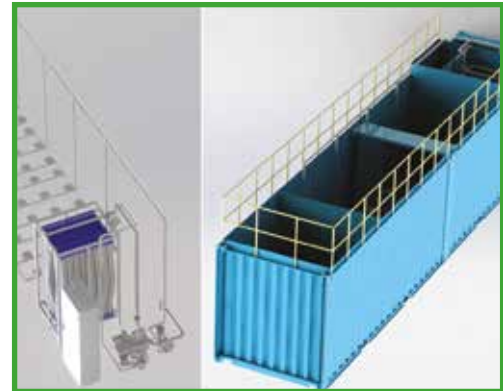


GRAY WATER REUSE



GENPACK® PACKAGE WASTEWATER TREATMENT SYSTEMS

Model	Population	Capacity
GENPACK® 100	100	20 m ³ /day
GENPACK® 150	150	30 m ³ /day
GENPACK® 200	200	40 m ³ /day
GENPACK® 250	250	50 m ³ /day
GENPACK® 300	300	60 m ³ /day
GENPACK® 350	350	70 m ³ /day
GENPACK® 400	400	80 m ³ /day
GENPACK® 500	500	100 m ³ /day
GENPACK® 750	750	150 m ³ /day
GENPACK® 1000	1000	200 m ³ /day
GENPACK® 1500	1500	300 m ³ /day
GENPACK® 2000	2000	400 m ³ /day





WHY GENMBR®?

High Quality

5 Times More Durable with PET Backing Layer

Anti-Fouling Structure

High Chemical Resistance PVDF Material

Suitable for Backwashing and Fully Automatic

High Removal Efficiency Providing Wastewater Recovery

Cost Effective

Best Price From Direct Manufacturer

Minimum Energy Requirement with Low Pressure

Maximum Aeration Efficiency with 3-Point Air Scouring

20% Lower Air Requirement Compared to Similar Membrane Systems

3 Times Higher Treatment Capacity with Existing Tanks

Minimum Cost in Sludge Management Processes

Instant Technical Support

Easy Access, Quick Solution

24/7 Technical Service and Instant Response

Technical Support in the Design Process from Our Experts

Up to 5 Years Membrane Warranty



Center Office:

Reşitpaşa District. Katar St. İTÜ Arı Teknokent 3, No:4/
B111 Maslak/İSTANBUL



Factory:

Şekerpinar St. Tepeören. No:18/28
Çayirova/KOCAELİ



Mobile: 0216 519 5161- +90505 554 54 52 - +90507 002 16 24



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info@memsis.com.tr



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