

WINERY WASTEWATER



BioBarrier HSMBR
HIGH STRENGTH MEMBRANE BIOREACTOR

Meets the most stringent
state regulatory requirements



Treats high strength winery process waste



Ideal for water reuse applications



**AWARD-WINNING
INTEGRATED WATER
TECHNOLOGY**

**WINERY WASTEWATER TREATMENT SYSTEMS
RECLAIM • REUSE • CONSERVE**

BETTER WATER. BETTER WORLD.®

BIO MICROBICS

www.biomicrobics.com



BioBarrier[®] HSMBR[®]

HIGH STRENGTH MEMBRANE BIOREACTOR

Low Cost, Long Lasting Solution

The BioBarrier[®] HSMBR[®] Wastewater Treatment System designed to treat your winery process wastewater exclusively or in combination with sanitary wastewater from your tasting rooms and hospitality facilities, including kitchens, sinks, and toilets. BioBarrier[®] provides a sustainable, water-recycling, winery wastewater treatment system based on the FITT[®]-for-Purpose Approach with effluent exceeding typical local regulatory requirements!

Install BioBarrier[®] HSMBR[®] locally-sourced tanks. The above ground blower can be installed up to 40 ft [12.2 m] away!

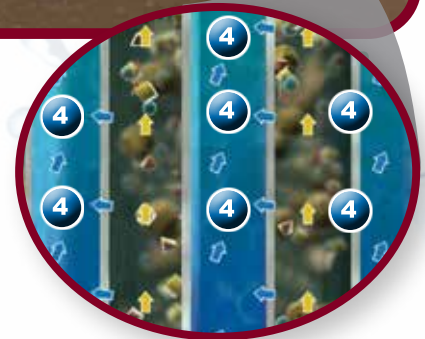
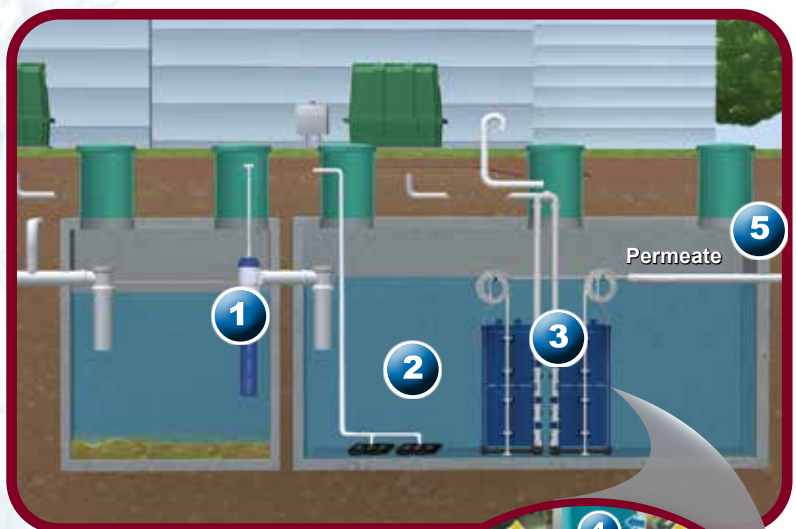


The BioBarrier[®] HSMBR[®] (High Strength Membrane BioReactor) System utilizes industry-leading, immersed membrane technology for the treatment of winery wastewater. The resulting highly treated effluent can be used for vineyard irrigation, landscape area, water features/fountains, dust control, and a variety of other water reuse applications to:

- help conserve natural resources
- protect ground/surface water
- overcome land constraints

HOW IT WORKS!

- 1 Pretreatment:** Wastewater enters a setting tank where solids are separated and screened in the tank via the SaniTEE[®] screening device.
- 2 Robust aeration:** The bioreactor uses an activated sludge process with the BioRobic[®] aeration system, specifically sized for the high BOD concentrations of the winery wastewater. The system provides ample oxygen transfer and mixing necessary for the dense population of microorganisms in the reactor.
- 3 Advanced treatment:** Immersed in the aeration tank, the submerged Membrane Bioreactor units filter the biologically oxidized winery wastewater through flat sheet, ultrafiltration membranes with vigorous air scouring to maintain filtration performance..
- 4** The ultrafiltration membrane retains all biomass and particles greater than 0.03 micron in the aeration tank.
- 5** The filtrate pump extracts clear, odorless, treated water, ready for standard dispersal or various innovative water reuse applications.





BioBarrier HSMBR Specifications

MODEL SIZES	MAXIMUM TREATMENT CAPACITY Volume Per System**	#MODULES	SUPPLEMENTAL AERATION*	BOD Concentration mg/L	BOD Load ppd	BOD Load kg/d
HSMBR® 1.5	1500 GPD (5675 LPD)	2	BioRobic® System 1.5*	7700	96	44
HSMBR® 3.0	3000 GPD (11350 LPD)	4	BioRobic® System 3.0*	7700	193	87
HSMBR® 4.5	4500 GPD (17034 LPD)	6	BioRobic® System 4.5*	7700	289	131
HSMBR® 6.0	6000 GPD (22712 LPD)	8	BioRobic® System 6.0*	7700	385	175
HSMBR® 9.0	9000 GPD (34069 LPD)	12	BioRobic® System 9.0*	7700	578	262

Please see product drawings for further details.
 *Consult factory for sizing and additional information regarding supplemental aeration.



2019 Top Project
of the Year Award

WINERY SYSTEM INCLUDES:

- **Durable, BioBarrier® Membrane BioReactor modules** with ultrafiltration, flat sheet membranes.
- **BioRobic® System** specifically designed for your winery wastewater package. System includes diffusers, blowers, blower vents and control panel for optimal aeration performance of your BioBarrier® HSMBR® Winery Wastewater System.
- **SaniTEE® Effluent Screening Device(s)** for installation into your settling tank.
- **Filtrate Pump** to extract your ultra-filtered, treated wastewater from the membrane modules.
- **Filtration and High Level Alarm floats** to operate the filtration process automatically.
- **Control Panel** with customizable settings for the proper operation and monitoring of your BioBarrier® HSMBR® Winery Wastewater System.
- **Installation Kit** including necessary connectors and structural parts.





All Winery Wastewater Treatment in One System

How to properly treat and dispose of wastewater is an issue for any production facility. The type of wastewater treatment used by a winery will depend on the quality required for the treated water, which itself will depend on whether it is discharged into the public sewer network, into a natural waterway or soil whether it is to be reused in the process or to irrigate the vineyard.

- **Produces unmatched, high quality effluent** creating new opportunities for water reuse.
- **Strong and durable components** provide long lasting performance of your winery wastewater system.
- **Advanced features, pre-engineered, and modular design** all work together to bring superior technology at an affordable price.
- **Immersed membrane technology** utilized in the BioBarrier® HSMBR® System allows for installation into a smaller footprint with both above or below ground tank options.
- **Best in class performance** from an industry leader. The BioBarrier® MBR is the first system ever to receive NSF/ANSI Standard 350 certification for water reuse!

“Wastewater management associated with wine processing is a critical subject due to potential contamination of soil, groundwater or surface water. Regulations for environmental discharges and for recycling or reuse schemes are also becoming increasingly stringent.”
 ~ Australian Grape & Wine Authority

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