

# CAPTURING AND STORING BIOGAS FOR PRESENT AND FUTURE ENERGY DEMANDS

Flexible storage capacities

Storage availability indicator

Fast, easy installation & maintenance

Custom design to fit your specific needs

Improved three membrane design

Agropur WWTP, Luxemburg, WI  
One (1) 2M-1/2-SM-27

**Slab or tank  
mounted options  
available. Proudly  
manufactured  
in the USA**

# ULTRASTORE™ MEMBRANE GASHOLDERS



## APPLICATIONS

STABLE ENERGY PRODUCTION

**Miller Creek WWTP, WA**  
Two (2) 2MH-1/2-TM-50



THE ULTRASTORE MEMBRANE GASHOLDERS ARE AVAILABLE IN TWO MAIN DESIGNS (MODELS 2M AND 3M); TWO MEMBRANES AND THREE MEMBRANES. BOTH OF THESE DESIGNS CAN BE INSTALLED ON TOP OF DIGESTER OR INSTALLED ON CONCRETE SLABS.

Many U.S. Municipalities and WWTP operators are looking for sources of revenue and operating cost reductions. This is why membrane gasholders are becoming desirable throughout the US:

- They capture gas in large quantities and allow for stable energy production which helps to fuel their vehicle fleet and saves operating costs.
- The PVC coated membrane digester cover offers high gas storage capacities and hence provides greater flexibility to operators.
- They provide several hours of storage capacity allowing for maintenance to perform tasks such as filter checks, lubricant replacement and shutdown of power generation when demand is low.
- It reduces greenhouse gas emissions to the atmosphere and helps to achieve valuable energy recovery.

### TWO ULTRASTORE MEMBRANE GASHOLDERS

The two membrane (Model 2M) gasholders have a low pressure internal chamber for gas storage. These membrane gasholders are available for installation in two configurations:

1. Tank Mounted
2. Slab Mounted

- To provide even further flexibility, these two designs can be provided in any fractional sphere layout from  $\frac{1}{4}$  sphere to  $\frac{3}{4}$  sphere.
- In any configuration, the internal biogas membrane is independent of the external (air) membrane.
- The external (air) membrane act as an external cover which supports environmental loads (i.e.: snow, wind and U.V.) that the gasholder experiences throughout its operating life.
- The capacity of the internal biogas membrane varies according to the production and use of biogas by the digestion facility while operating at a constant pressure.

### THREE ULTRASTORE MEMBRANE GASHOLDERS



**Ithaca WWTP, NY**  
One (1) 2M-3/4-SM-39

The three membrane (Model 3M) gasholder offer several advantages over the conventional two membrane design.

- It provides higher operational safety, accurate pressure control, greater insulation and power savings.
- Compared to the two membrane design the three membrane model gas leakage flows naturally into the intermediate membrane avoiding a mixing of gas and air in the air chamber.

## OPERATION

MEMBRANE GASHOLDER OPERATION IS SIMPLE.



**Hometown Bio Energy (C/O Avant), Le Sueur, MN**  
Three (3) 2M-1/2-SM-107

- The membrane gasholder system consists of fans/blowers that supply air to the air chamber system, air relief valves, pressure transmitter, level control system and biogas relief valves.
- In the case of the Ultrastore™ two membrane design, the fans/blowers continuously pump air through the external chamber. The mechanical relief valves are adjusted to relieve pressure at the required operating pressure of the gasholder membrane.
- For the Ultrastore three membrane design, the use of the blower is only required during the initial filling of the membrane, for compensation and for maintaining a constant pressure when biogas is being withdrawn. Providing power savings compared to two membrane design.
- The patented electro-mechanical system at the top of the membrane accurately records the level in the internal biogas membrane's apex, so that the operators can gauge the volume of biogas stored in the membrane gasholder more precisely.
- The electro-mechanical system avoids the usual difficulties encountered by ultrasonic or laser detection instruments that give false readings due to target misalignment.



## MANUFACTURING & INSTALLATION

WHOLLY FABRICATED IN THE U.S.A.

The Ultrastore equipment is wholly fabricated in the U.S. All major components of the Ultrastore membranes are supplied from the U.S. This provides for ready access to components and also repair or replacement of membranes in a timely fashion. The fans/blowers and instrumentation are all items that are readily accessible and replaceable. All membranes are subjected to rigorous testing prior to shipping.

Installation of an Ultrastore membrane can be performed by Ovivo contractors under the supervision of Ovivo and certified by our partner Ecomembrane. All installations are certified by Ecomembrane™.

Ovivo can provide custom configurations for unique applications.



# THE OVIVO DIFFERENCE

200+ YEARS OF HERITAGE • 100% FOCUSED ON WATER

## OUR EXPERTISE

Our facilities in Little Rock, AR and an experienced team give us an edge in delivering and installing membranes in a timely manner. Our teams can also provide assistance in maintenance and repairs for a quick turnaround.

## ANCILLARY EQUIPMENT

Ovivo can supply all plant required equipment, including but not limited to:

- Membrane Gasholder Installation
- Control Panel
- Fan Enclosures
- Cable Maintenance System
- LM™ Mixer
- Eimix® Mechanical Sludge Mixer
- Ovivo® Anaerobic Digester Steel Cover
- Sonolyzer™ Ultrasound Sludge Disintegrator

## ovivo®connect<sup>SM</sup>

Ovivo® Connect<sup>SM</sup> portal is an innovative and intuitive application that allows our customers to use 'SmartTags' installed on our equipment (or a web URL) to access a personalized customer zone. Access your equipment documentation, find contract references, track service logs, manage spare parts, and plan your next maintenance to get the most out of your equipment.

- NEED **ACCESS** TO YOUR **O&M MANUAL**?
- NEED **SPARE PARTS**?
- WANT THE **LATEST TIPS AND NEWS** ON YOUR ASSET?



**GET CONNECTED!**  
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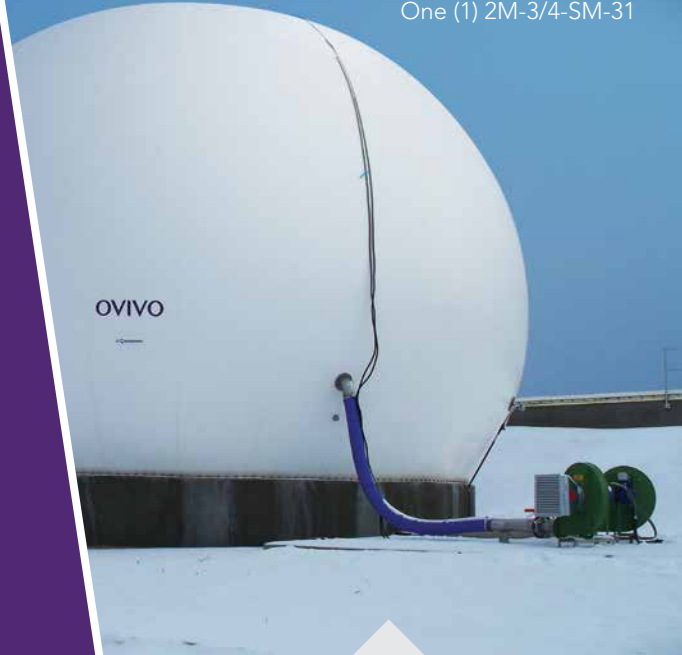
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ovivowater.com

**Bush Brothers & Co., Augusta, WI**  
One (1) 2M-3/4-SM-31



The  $\frac{3}{4}$  sphere can increase capacity for gas storage with minimal impact on footprint size. Usually designed for slab mounted options, the  $\frac{3}{4}$  sphere can be installed on a tank if the layout permits it.

**Estherville WWTP, IA**  
Two (2) 2M-1/2-TM-65

