



2MASTER Gasholder on Platform



- ▶ Two membrane constant-pressure gasholders are designed to store biogas made from anaerobic digestion of organic waste and sludge.
- ▶ They are manufactured with biogas resistant polyester reinforced PVC membranes seam welded by high frequency electronic machines. The welding of the internal membrane is made adding an Eco-Safe layer of pure PVC that stops every porosity of the fibres to the biogas.

- ▶ The 2MASTER system on Platform is made with a single upper membrane, pressurized by an air fan 24 hours a day to give a pneumatic push on the inner biogas chamber, keeping the biogas chamber at a prefixed and constant positive pressure.
- ▶ This system has a cylindrical shape and it is completely made, tested and assembled in our factory, ready to be delivered.



MAIN FEATURES

- ▶ The 2MASTER system on Platform is suggested for a storage volume no greater than 250m³, giving the possibility to move it where necessary.
- ▶ It's easy to transport and to install on site without any extra testing.
- ▶ It can be placed on every kind of surface.



MAIN COMPONENTS

► Platform:

Movable steel platform, 12m x 2,5m, equipped with beams with feet and bands.



MAIN COMPONENTS

► Anchorage System:

Our anchorage system is made in house with specially designed stainless steel anchoring plates that together with the action of the anchoring bolts manufactured by Hilti keep the membrane fixed on the platform.

This well proven system with hundreds of installations done is able to keep the stresses acting from the membrane in any weather and pressure scenario.

To achieve the perfect gas sealing there are special butyl made gaskets and silicon sealant that secure the gas tightness on the perimeter of the gasholder.



► **Centrifugal Air Fans:**

Our air fans are carefully selected only from the best suppliers and only in EX class execution.

The air flow is chosen to secure the perfect gas pressurization while also keeping washed the air volume between the gas and the outer membrane to reduce the risk of minimal gas mixtures.

They are furnished always with stainless steel made check valve that secures the maintenance of the pressure for enough time even during temporary power shut off.

It's possible to arrange only one blower functioning 24h, or two blowers (one duty-one stand by) with electrical panel useful to switch from one to another.



► Air Valve:

Our air valves have been designed and utilized by Ecomembrane since 20 years to be able to achieve the best performances available for our specific work on the membrane gasholders.

In fact they present the following features and relative advantages compared with the standard weighted clapet-style valves used by our competitors.

They are directly attached to the external air membrane avoiding the use of any flexible pipe that could cause pressure drops and even break after some time.

The valve is totally covered by a aluminum box that protects the air flux from the action of wind, snow and icing that in the other models can change the working pressure of the gasholders.

The system use an Ecomembrane designed unique mechanism that with the use of leverages ensures the increment of the sensibility of the air valve to the pressure changes letting an enhanced control of the flows with the possibility to regulate the working pressure from 3 to 50 mbar without changing the valve.

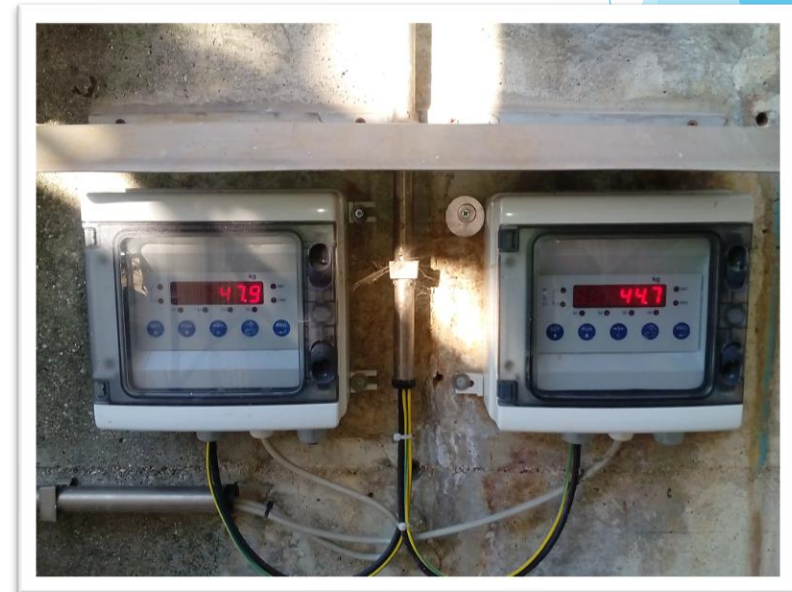


► **Level Sensor 4-20 mA:**

Our patented level sensor system is the only one that ensures the following two main goals:

- 1) achieving a constant and reliable level signal independently from the shape variabilities of the gas membrane during the filling-emptying cycles.
- 2) controlling the shape of the gas membrane to secure the complete usage of the geometrical volume of gas storage.

Our system control and diminish the weight of the top center part of the gas membrane letting it drive the direction of filling. In other terms with the aid of the special Ecomembrane level sensor the center top of the gas membrane will be the first part to rise up during filling time and the last one to go down during depleting time. In this way all the volume stored inside the gas membrane will be usable for the clients. In all the competitor's products the volume usage can reach no more than the 80% of the stored volume due to different level sensors.



► **Hydraulic Safety Valves:**

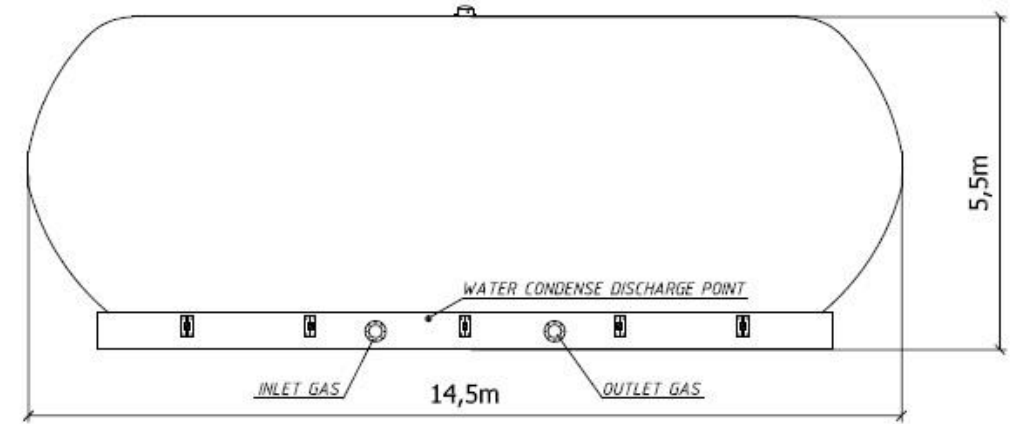
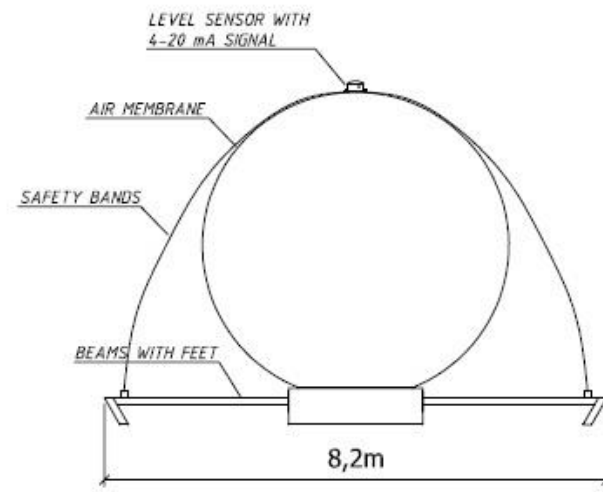
Ecomembrane produces his own stainless steel hydraulic safety valve.

For the gasholder on platform Ecomembrane proposes stainless steel hydraulic gas safety valve with stainless steel venting pipe with grid acting as flame arrestor and automatic water refill system constructed with a stainless steel water tank and floating control valve.



- ▶ **Goose neck for water condense discharge point**





2MASTER
cylindrical shape
on platform
250 m³

