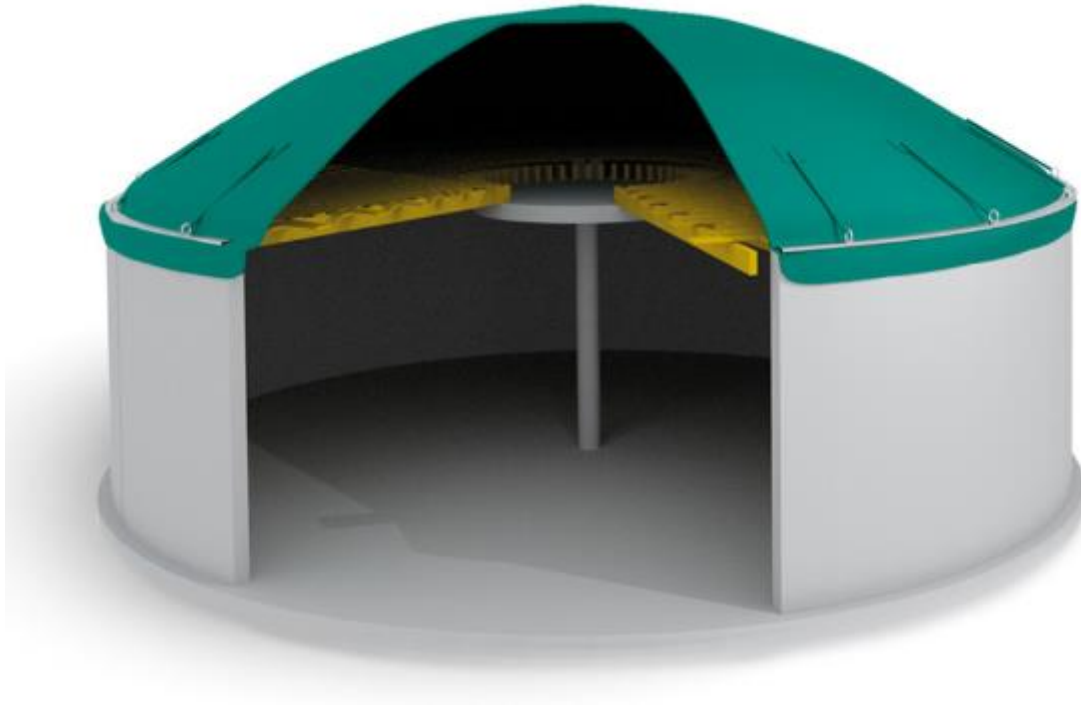




M1 Spring



- ▶ CUPOLA M1 SPRING are used primarily in agricultural facilities, in particular are suitable as digester cover on multiple interconnected tanks for replacement of the existing single rubber covers on top of wooden digester roofs.

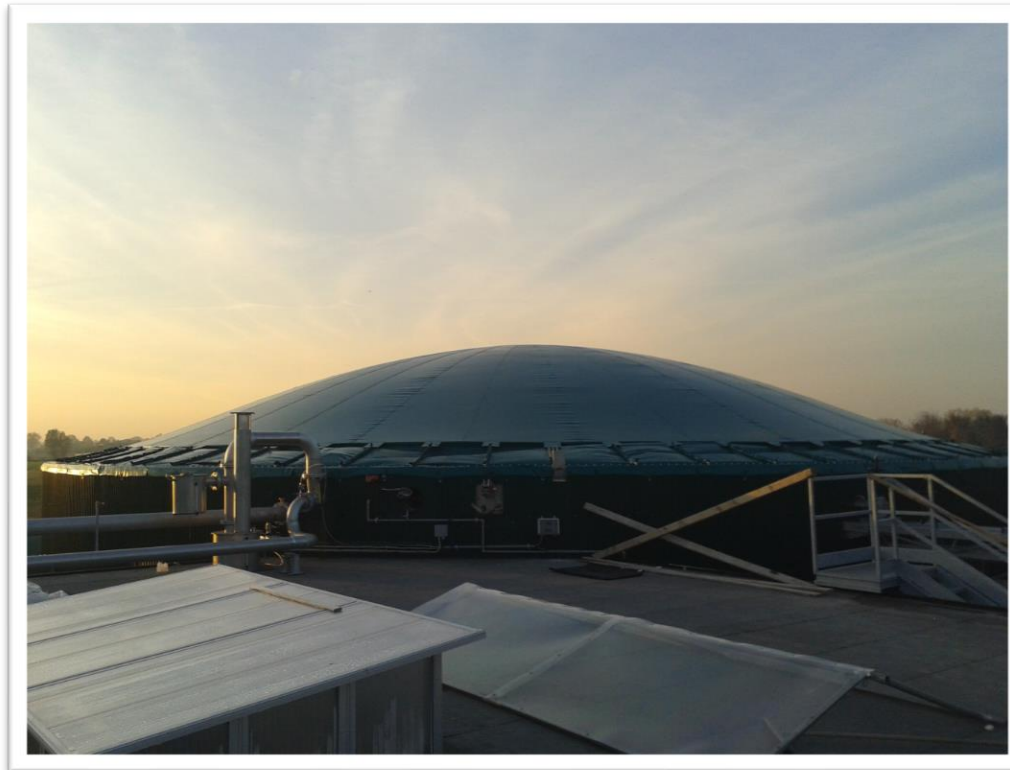
- ▶ The CUPOLA M1 SPRING domes are used in industrial and agricultural plants. They install quickly and can be manufactured with different quality of materials and shapes to suit the needs of the customers. They can cover round tanks from 10 m to 40 m diameter.
- ▶ The CUPOLA M1 SPRING covers are designed to work over rigidly supported roof made with wooden support or with standard net support system.



MAIN FEATURES

▶ Increased Security Against the Atmospheric Agents:

Compared to the other single membrane pressurized roofs since they are maintained in constant tension thanks to the aid of special springs positioned around the perimeter that pre-tension the cover. This solution achieves a better gas tightness, wind resistance and durability, thanks to the PVC coated membrane and the stainless steel anchoring system.



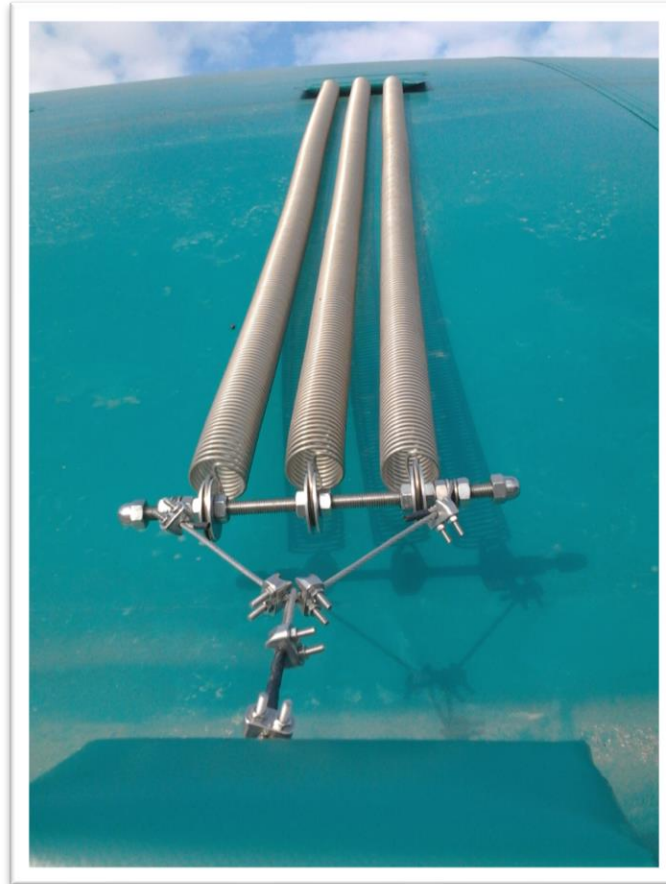
► **Low Investment and Energy Maintenance Costs:**

The absence of the need of an air blower and also the simplicity of the system allows a reduction of the CAPEX costs specially in the consideration of the use in multiple interconnected tanks.



► **Measure of the Filling Level with 4-20 mA Signal:**

CUPOLA M1 SPRING can benefit of an adapted version the same high functional patented Ecomembrane filling level sensor that can give to the client an analogic output 4-20 mA signal of the volume filling status of the cover.

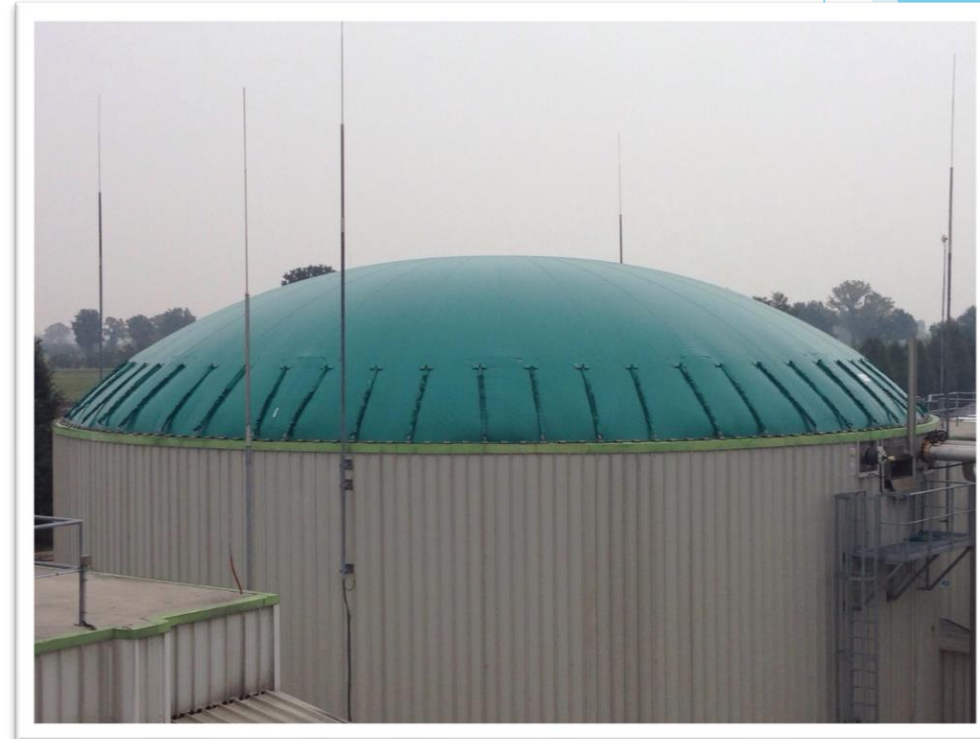


MAIN COMPONENTS

▶ Membrane Cover:

The CUPOLA M1 SPRING are manufactured with UV and biogas resistant polyester reinforced PVC membranes seam welded by high frequency electronic machines.

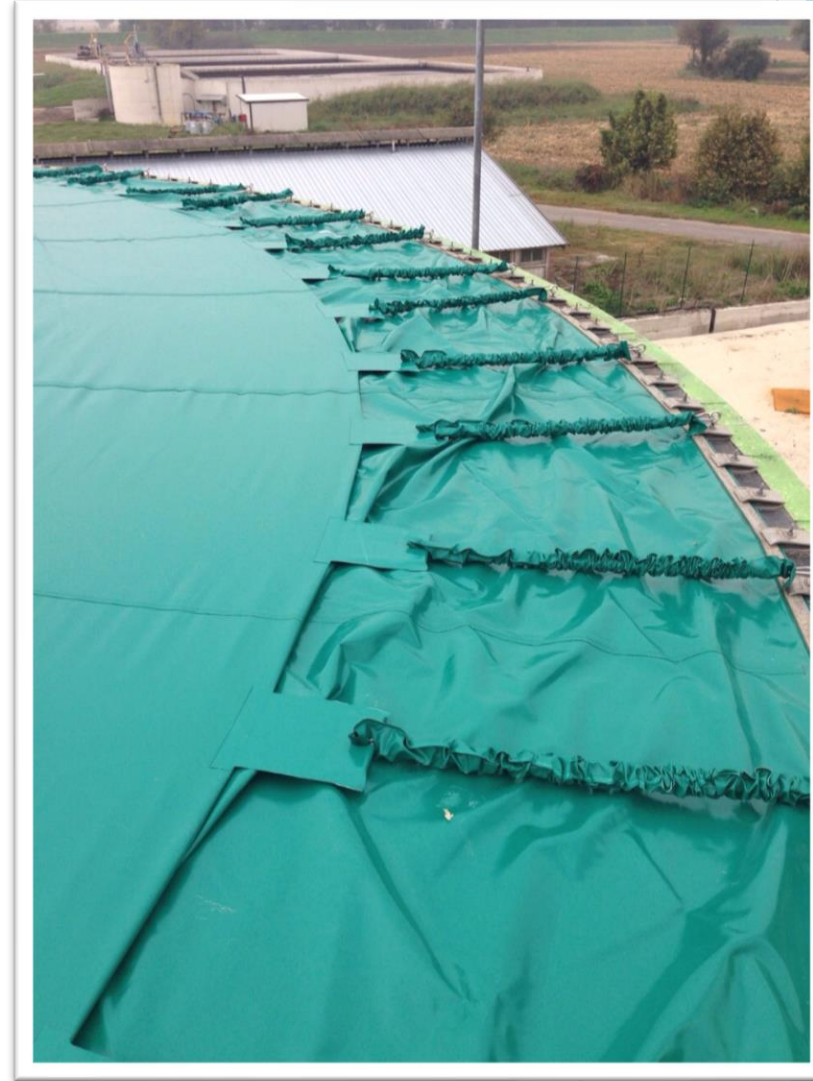
Single membrane constant-pressure domes are designed to store biogas coming directly from anaerobic digestion of organic waste and sludge. They are manufactured with biogas resistant polyester reinforced PVC membranes seam welded by high frequency electronic machines. The welding of the internal membrane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



▶ **Spring System:**

A series of steel springs are connected between the anchoring profile of the membrane and a special welded pocket on the membrane. The Springs elongates once the membrane is inflated by the gas volume. During the elongation of the springs they exert a traction force of up to 150 kg to the membrane increasing the tension even when the membrane is not fully filled with gas.

The sole force done from the action of the spring array gives a working pressure of 1 to 2 mbar to the membrane cover.



► **Anchorage System:**

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

