

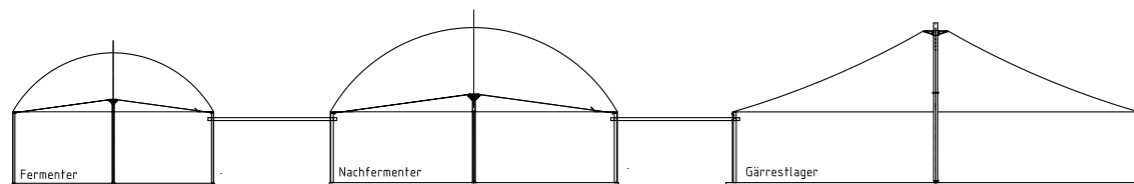
CENO BGD

Biogas roof

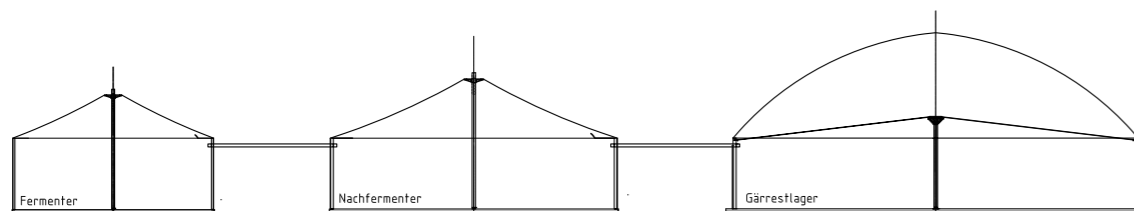
Made of flexible PVC-coated textiles, these storage systems distinguish themselves through highly flexible materials. The double-membrane CENO biogas roofs have been tested and proven on top of fermenters, in hundreds of gasholder plants. The inner membrane in which the biogas is stored, is surrounded by an outer protective membrane. Clamped to the outer wall of the gasholder, it seals the tank gastight. For the permanent disposal of degassed substrates, CENO offers single-membrane roofs without the inner membrane, which are also gastight.

Ideal plant concepts

The proper combination of single-membrane biogas roofs and SATTLER/CENO double membrane gasholders enables us to develop cost-efficient solutions for any plant concept.

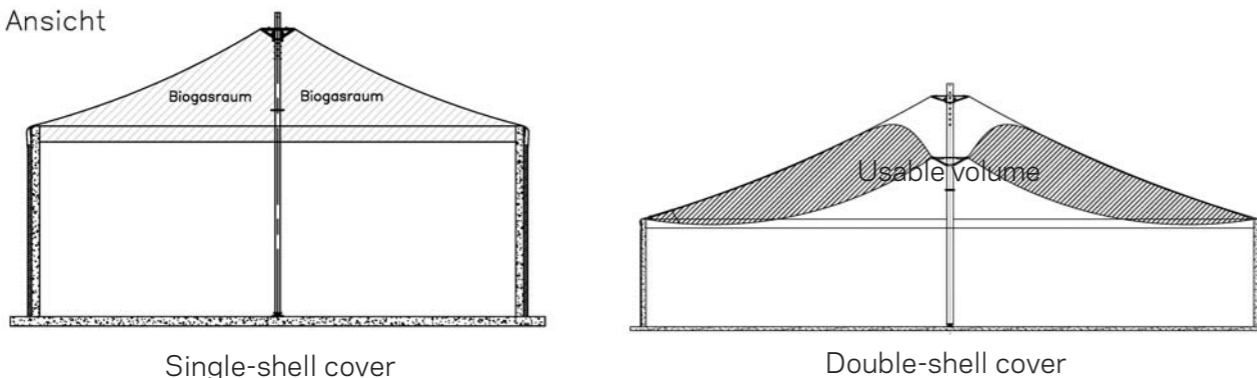


EXISTING PROJECT (above)
CENO PROPOSAL (below)



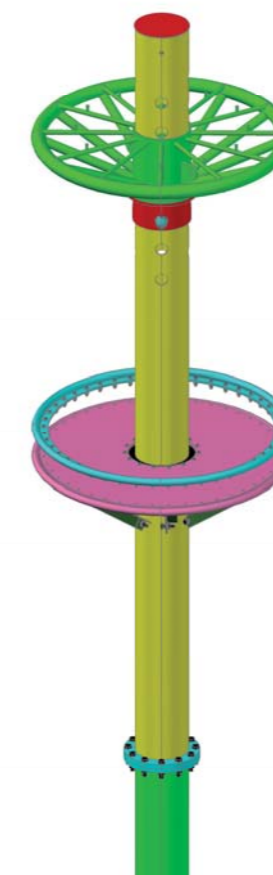
All membranes are made of highly tear-proof polyester fabric with plastic coating on both sides. Due to this special coating, CENO membranes allow only minimal gas diffusion far below the permissible limit. Thus bad odours are largely avoided and leakage is reduced to a minimum. CENO roofs are made to the best possible technical standard. In addition, the roof membranes are resistant to UV-rays as well as to microbes and mycoses.

Ansicht



Pole

The pole system of the CENO biogas roof consists of a bearing plate, a basic support, a telescope support, and a top wheel. The galvanized steel parts are coated with a layer of epoxy resin 320µm to 380µm thick.



Characteristics of CENO biogas quality roofs:

- High stability due to a static construction and bi-axial roof tension
- Cover permission issued by construction and safety authorities
- Anti-corrosion and anti-rot materials
- Emission of odours avoided due to the special coating of the membrane
- Possibility of desulphurization
- Service openings
- Maximum blow-off pressure 2mbar

Single-shell biogas roof

- * Special shapes possible in combination with SATTLER/CENO DMGS TM up to a blow-off pressure of 8mbar

Manhole in double-shell BGD



The outer membrane of the double-shell CENO biogas roof, i.e. a roof with an integrated gasholder, has a manhole in order to ensure easy inspection of the inter-membrane space and the filling level.

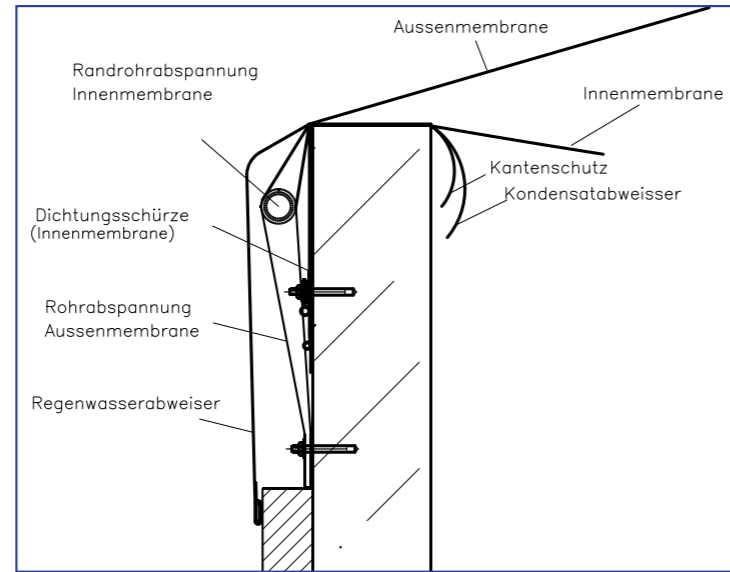


Additional option: rainwater trap

A rainwater trap directly welded to the outer membrane guides the surface water safely across the clamping and the insulation, if any, of the gasholder. The PE profile incorporated in a hollow seam at the free end enables the attachment of the rainwater trap using self-tapping screws directly to the trapezoidal sheet of the gasholder insulation. The rainwater trap thus prevents water from permeating the membrane.

Anchoring on the gasholder:

- Statically dimensioned roof-edge mounting, tested and proven in CENO products for over 20 years
- Firmly installed edge/abrasion protection below the roof membrane near the gasholder crown
- Steam trap below the roof membrane to keep the wall of the gasholder free of condensation
- Sealed clamping of the roof membrane on the edge of the gasholder (outside)



Measuring in double-shell biogas roofs:

Measuring is done using a liquid column gauge which measures the hydrostatic pressure of a liquid column that changes in accordance with the amplitude of the membrane storage tank. Due to its construction, this device is free from wear.

In case level metering is necessary for plant control, a greater number of measuring points enable an even more precise data output. The analogue outputs with 4...20mA can then also be used for plant control.



Measuring at the outer membrane



Pressure sensor



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CENO BGD

Technical documentation

