



GGE POWER PVT. LTD.

DOUBLE MEMBRANE GAS HOLDERS

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- Standalone Gas Holder
- Digester Mounted Dome Type gas holder
- Odour Control Covers



Application

SEWAGE TREATMENTS PLANT, MSW PLANTS, ETP, INDUSTRIAL WASTE PLANTS, FARM WASTE, LANDFILL SITES

Membrane type gas holders are becoming the preferred choice for the capture and storage of biogas throughout the World. Many municipalities, WWTPs, waste to energy plants are looking for sources of revenue and operating cost reductions. Membrane gas holders provide an opportunity for bio gas plants to capture gas in large quantities and allow for stable energy production.

The PVC coated membrane digester cover offers high gas storage capacity and hence provides greater flexibility to operators.

The construction and dimensions of the double membrane gas holder generally comply to all relevant standards.

The gas holder is resistant against wind and snow load and can be installed at most places world over. The temperature capability of the membrane of the gas holder is from -30°C to +70°C.



CUSTOM SOLUTIONS

The double membrane gas storage has been developed using the most advanced fabric and welding technology.



3/4 Sphere Type Gas Holder

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



OUR EXPERTISE

We have an experienced team of technicians to install the gas holders in new or existing concrete or steel tanks in a safe and timely manner. Our team is also able to assist in the repairs of existing double membrane gas holders.

Fabric strength of the membrane can be selected to suit the operating requirements.

KEY BENEFITS

- ✓ Longer life of the gas holder as it is made of PVC Fabric coated with special chemicals to withstand UV Rays and H2S.
- ✓ It has the advantage of a longer life as compared to conventional gas holders even when used to store gas which is high in H2S .
- ✓ The double membrane gas holder is easy to install, seal and repair.
- ✓ The gas holder is a superior design with inbuilt safety to take care of operational abnormalities of high gas pressure or vacuum.
- ✓ Different types and strength of fabrics are often used to suit the different gas constituents, locations, pressures and volumes. The mounting arrangement can also be changed to suit the client's requirement.
- ✓ GGE offers shorter delivery schedule, least amount of work at site, and easy, reliable and safe installation
- ✓ Gas holders offer the client the opportunity to capture and store gas which can be used as per client need.
- ✓ GGE double membrane gas holder has very low gas loss. The design ensures that gas permeability does not take place due to equalization of pressure between the inner and outer membrane.
- ✓ Gas quantity available in the holder is measured through a sensing unit and readings sent to the remote screen and also to the plant SCADA.
- ✓ The membranes are easy to repair at site in case of leakage or tear. Plant downtime is therefore kept at a minimum.

Capturing and Storing

Bio-gas for present and future Energy

WHAT IS GAS HOLDER:

A Gas Holder is used to store Biogas generated from an anaerobic digestion plant. The plant can be of biogas from Sewage, MSW, Distillery, Agricultural waste such as a Starch or Sugar Plant or even from a Landfill site.

The gas holder can be installed either as a cover on the digester or standalone on a foundation. GGE can supply both types of gas holders as required for the plant.

These membrane gasholders are available for installation in two configurations:

1. Tank Mounted
2. Slab Mounted

OPERATION

The Double Membrane gas holder is simple and safe to operate. The system consists of a continuously operating and a stand by blower that supplies air to the external membrane. The mechanical relief valves is adjusted to relieve pressure at the required operating pressure of the gas holder membrane. Thus, there is a pressure equilibrium between the air pressure and the gas pressure acting on opposite sides of the inner membrane.

GGE CAN PROVIDE CUSTOM CONFIGURATION FOR UNIQUE APPLICATIONS.

MATERIALS

Membranes fabric is a tear resistant, fire retardant, polyester fabric with a special PVC surface treatment that is also resistant to different biogas ingredients including H2S.

The special surface treatment of the inner membrane guarantees high resistance against permeability. The outer membrane is UV resistant and is normally of white colour to make it reflective to heat and sunlight.

BENEFITS OF A STANDALONE DOUBLE MEMBRANE GAS HOLDER

- ✓ It can be used for storage of clean gas or for raw bio gas
- ✓ Quick and easy installation, client needs to only make a foundation, minimal manpower is needed at site
- ✓ Bypass arrangement for the gas is possible to take care of the maintenance needs of the gas holder.
- ✓ If the client needs to add storage capacity by installing another gas holder, new gas holders can be added without shutting down the plant

BENEFITS OF A DIGESTER COVER TYPE GAS HOLDER (ALSO CALLED A GAS HOLDER DOME)

- ✓ Dual purpose Gas Holder serves as a roof to the digester and as a gas storage solution, thereby reducing project cost..
- ✓ It has the ability of withstand higher H2S content in the gas compared to other materials (Steel/Fiber Glass/Concrete)
- ✓ Custom design of the holder can be made to suit the digester shape, size and volume needed

