

### Semi-mobile small Biogas plant



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The purpose of this Biogas plant is the use as test and demonstration plant in mobile applications for treatment of odd quantities of organically high loaded sewage water and sludge.

The fermentor is completely made from stainless-steel and has at its overall dimension:

Diameter: 3,0 m, including insulation and cover, overall height 4,5 m, including feeding device, roof insulation and reeling. Thus allows it to transport the fermentor with a normal truck on streets. So that the fermentor can be transported in a lying position on one side the tank has stabile supports and diagonally arranged crane eyes. For loading on truck the fermentor will be simply overturned. All the internal design for substratum supply and bacteria immobilization is similar to our normal large fermentors.

#### Technical data

Intended substratum input, suitable for:  
Organically high loaded waste water and/or  
sludge like distiller's wash, diary sludge etc.,  
but also for liquid manure 1 – 3 m<sup>3</sup>/d

Maximum Load 600.000 mgBOD/l  
or < 6 % DM

Fermentor volume: 26 m<sup>3</sup>

Biogas yield: up to 50 m<sup>3</sup>/d

The necessary peripheral parts, means two substratum buffer-tanks, a small warm-water tank, a small Biogas storage bubble, one biofilter for purify the Hydrolysis-gas and one buffer-tank for digested substratum is assembled on a stabile frame with 3,0 m x 6,0 m.

All tanks are rigid tubed, the connection to the fermentor is made by flexible tubes. All pumps, Blower and the control box are also assembled on the frame, all signal and power cables are connected.

The test plant could be assembled and dismantled within one day and can be driven on a truck with trailer to the respective place of work.

Of course the complete arrangement is convenient for outdoor work.



Methane content in Biogas 65 up to 85 % CH<sub>4</sub>  
Hydrogen sulfide (H<sub>2</sub>S): < 600 ppm

On most applications the utilization of the Biogas is not the first target but rather the anaerobic decomposition of the organic compounds of a waste water or sludge and the study of its behavior. The generated Biogas mostly is simply burned.

But on the other hand with the maximum Biogas quantity there could be driven a small CHP with 5 kW<sub>electr.</sub>



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