Quantor® M

BIOGAS SYSTEM




1. **Description of the system Quantor®M**, is a container-based and scalable biogas plant 2-6 tons of waste per day. He modular biogas plant is a compact solution, built in type HQ 40 'containers. The plant will be ready for quick assembly and commissioning, and only requires a completed concrete slab placing the unit on. Gas boiler and other equipment is electrics to different places or to meet ATEX requirements for minimized any risk of a gas explosion.

Design features as follows:
Capacity 2000-6000 kg / day (food waste OR 40%) and water 3000-9000 kg / day

Biogas production ~ 300-900 m3 / day 110-328 MW / year
Pyrolysis removable gas boiler ~ 2100-6300 KWh / day 766-2300 MW / year

Optional (with no gas to gas boiler):
CHP Electrical outlet ~ 400-1300 kWh / day 146-475 MW / year
Pyrolysis CHP sockets ~ 1000-3000 kWh / day 365-1095 MW / year

The following commercial and sanitized products provide the facility:

Solid fertilizers 1400-4200 L / day at TS 30-35%
Liquid fertilizer 3000-9000 L / day at TS 2-3%

Carbon dioxide exhaust gases, at the option CHP solution, for improved growth in greenhouses. The exhaust fumes are so clean that it does not cause any harm to humans working in the greenhouses, according to studies at Chalmers University in Gothenburg.

ECSAB
Ekoxegatan 8
749 44 Enköping
Sverige
Org.nr: 556698-5874

Besöksadress:
Härkeberga Ekeby 21
745 96 Enköping
Tel: 0171-41 41 85
Fax: 0171-41 41 90

Kontaktperson:
Mats Tuvesson
+46 (0)703-84 84 00

E-mail adress:
mats.tuvesson@ecsab.com

The food waste is fed into feeding hopper (12m3) and then added water to the necessary ratio is achieved which then pass to the slurry tank through a mill that grinds down the waste between hopper and slurry tank. Furthermore, there is further a mill that runs when necessary circle trail from the slurry tank and forth until the correct particle size reached, and stirring as needed. Furthermore, from the slurry tank with the finished slurry is fed into the biogas reactors for further degradation and gas production, a total of 2-6 biogas reactors each of 60 m3 useful volume. The biogas reactors mixed slurry submersible mixers (2 pieces per reactor).

It digested waste enters a tank and heated to min 70 C for 1 hour for hygienization. Its heat content will be recirculated through the heating coils to the slurry tank for recovering heat before pumping to the screw press. The liquid from the screw press is an excellent use as liquid fertilizer and the remaining as solid fertilizers or part of the soil production.

This plant have a capacity of 4 ton / day (vegetable and fruit etc)

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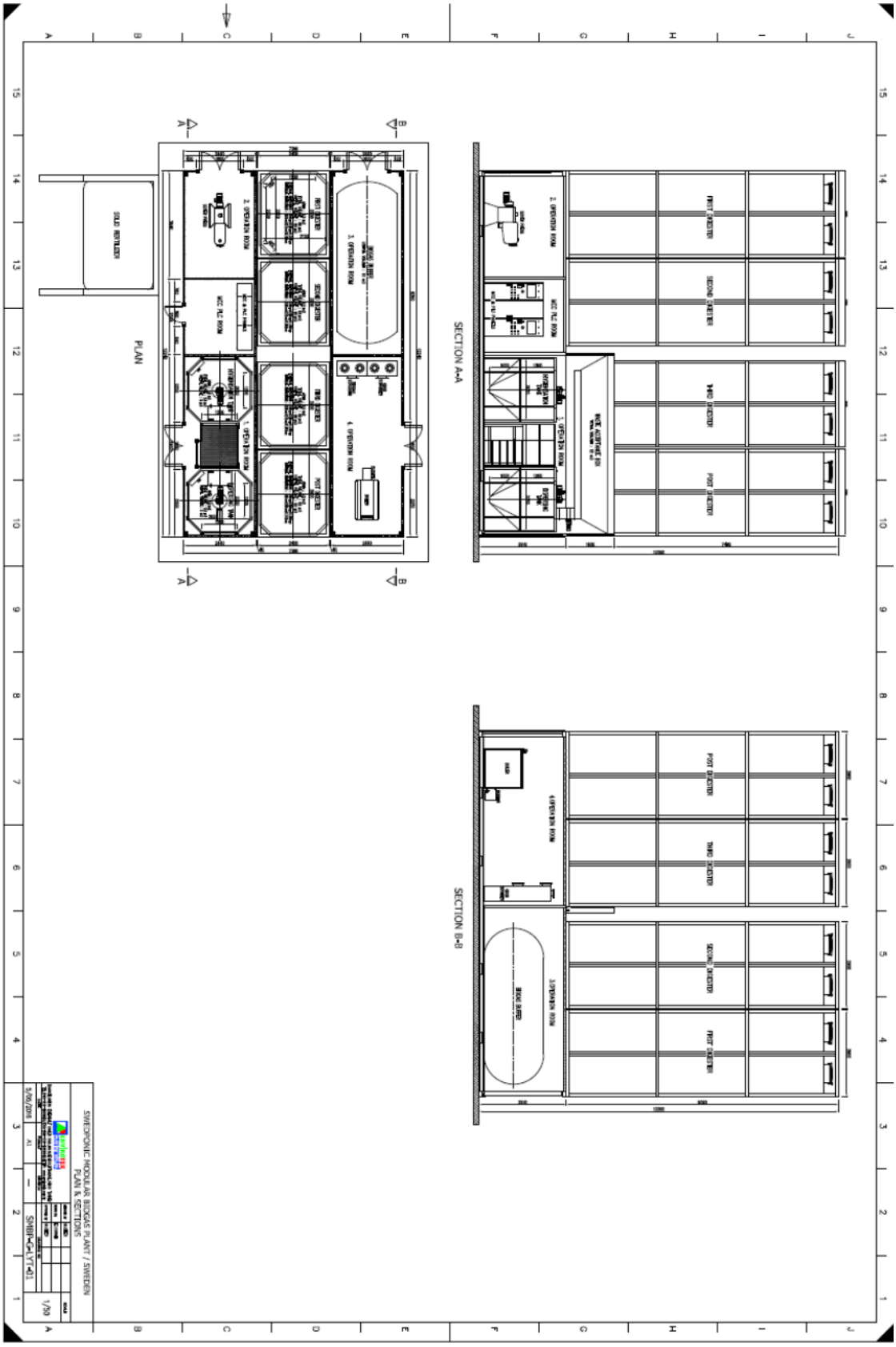

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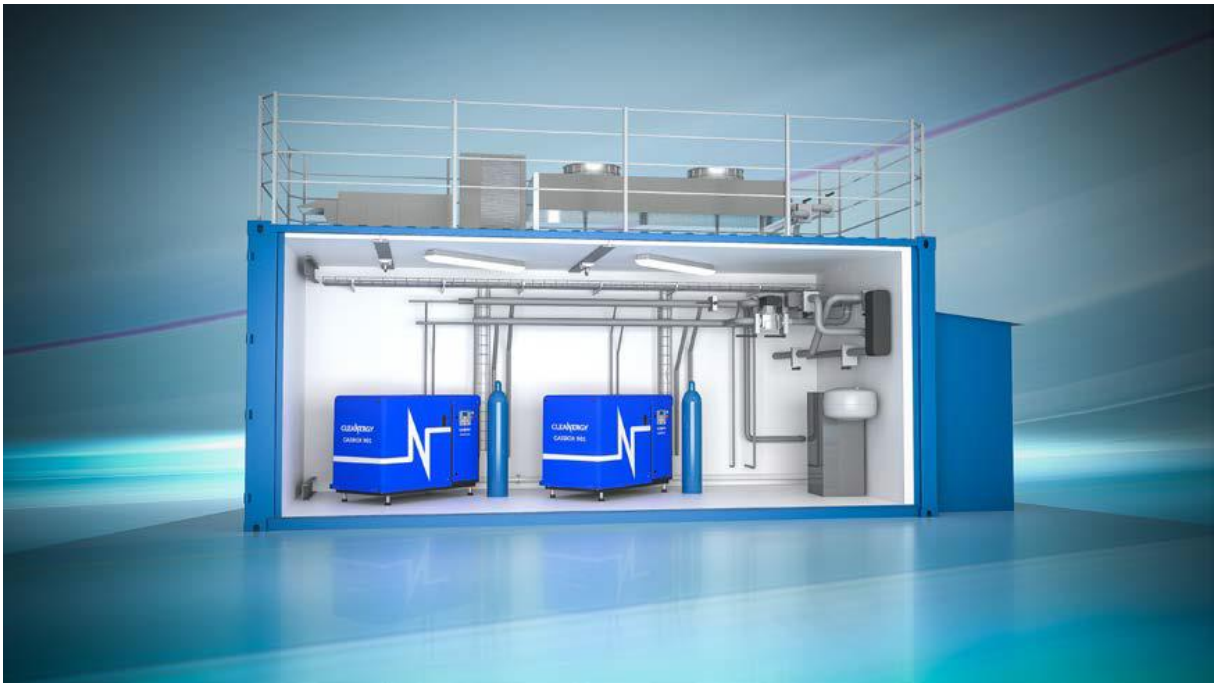
Our biogas storage can be connected to Cleanergy Gasbox, for the production of electricity and hot water as well as radiant heat and useful exhaust heat.



GasBox easily integrated in our Quantor®M biogas systems, gas box an independent and flexible Stirling engine powered by a gas burner and generates electricity, hot water, radiant heat through from air ventilation and with a bonus of carbon dioxide emissions (also hot) that can be used to advantage for greenhouses optimal growth of organic farming.

For more information about GasBox. www.cleanergy.com





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