



SYMBIOMA Technology piloting infrastructure

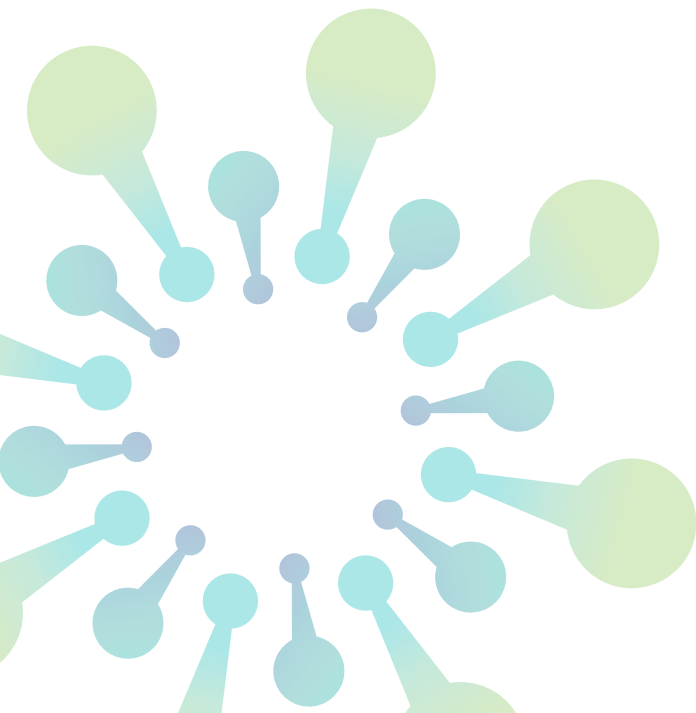


Chemplant at Kokkola, Finland

- 80 dm³ and 200 dm³ batch leaching reactors (4-150 °C, max. 5 bar pressure)
- Gas scrubber
- Distillation unit
- Pressure filter
- Decanter centrifuge (up to 100 l/h)

Other: jaw crusher, ball mill and sieving, drying ovens

[Watch a video!](#)



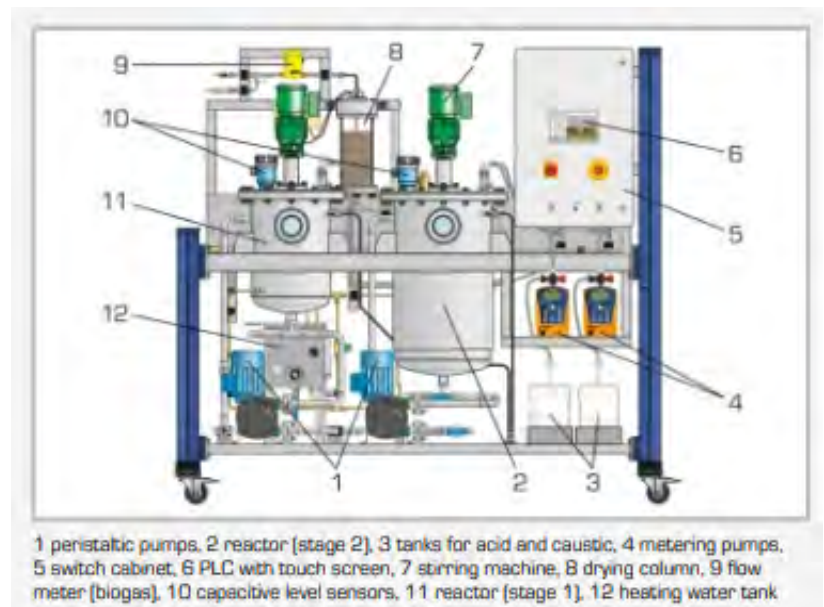


Anaerobic digestion pilot at Sligo/Ireland

CE 642 biogasanlage biogas plant

- Two-stage biogas plant (continuous or discontinuous operation possible)
- 2 stirred tank reactors made of stainless steel with capacitive level sensors
- Separate supply unit with substrate tank and feed pump
- Control of temperature and pH value in the reactors
- 2 metering pumps for acid and caustic
- Biogas is dried with silica gel
- Biogas analysis: low rate, methane content, carbon dioxide content, humidity and temperature

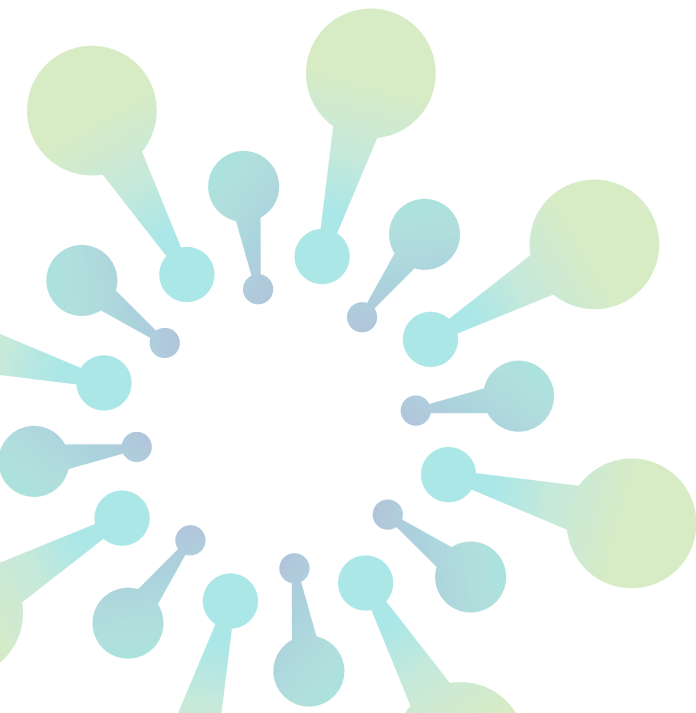
Specifications sheet



Anaerobic digestion pilot at Sligo/Ireland

Pilot plant digester unit (10 L)

- Two custom built stainless steel 10 litre digesters.
- A 50 cm long hose is connected to a gas nipple outlet.
- A manually controlled circulation pump with a thermostat allows hot water to circulate through the digester wall and back to the heating system in a loop system.



Biochemical Process Pilot at Luleå, Sweden

Biomass pre-treatment and fractionations units:

- Size Reduction: cutting, milling
- Steam Explosion
- Autoclaves for sterilization
- Hydrothermal Pretreatment
- Organosolv Pretreatment and Hydrolysis: batch reactor with 6x2,5 l vessels
- Enzymatic Pretreatment Reactors and liquefaction
- 14 bioreactors (0.1–14 L), photobioreactors and incubation chambers
- Pilot batch reactor of 50 l
- High-performance industrial rotary evaporator

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