

Biogasplants

Get in contact with us,
we would like to discuss this issue with you personally.

We offer you the chance to plan with you the financial basis for an
ARCHEA biogas plant under your individual conditions.



Archea Biogastechnologie GmbH -
A 100% subsidiary of ARCHEA Biogas N.V., Eindhoven (NL)



horizontal fermenter technology



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Biogas technology - efficient energy from renewable raw materials and waste



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The ARCHEA Standard Biogas Technology Plant

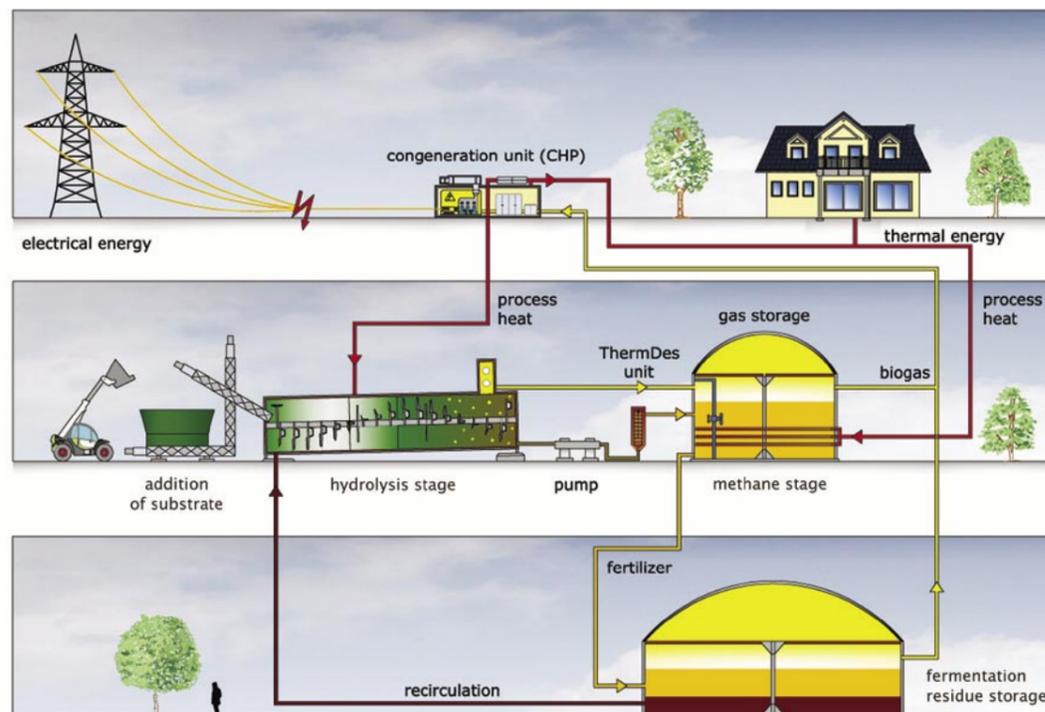
Archea biogas plants are constructed with one or more hydrolysis stages, which are working at mesophilic temperatures of 40 °C for anaerobic digestion. After the hydrolysis stage a heating disinfection and desintegration step (ThermDes) unit is integrated, before the residues of the hydrolysis stage are transported into the vertical methane stage. The methane stage is used for the thermophilic phase of the posttreatment of methane gas production.

> two step biogas production

Investigations have shown that with this cascading multistep production system a significant higher biogas yield could be possible. The two step system makes the system more efficient. If one fermenter has a problem, the second one can be used for a continuous production.

> electronic supported production and controlling

With the computer modem the largely automated Archea biogas plants can be remotely controlled and processed. ARCHEA biogas plants are constructed as modules. Depending on the conditions you can use one or more hydrolysis stages and an adapted methane stage.



The Hydrolysis Stage

Our horizontal tube hydrolysis stage constructed of high quality stainless steel also has a horizontal mixing system and an integrated sand and sink layers unit. With the compact construction of the ARCHEA biogas plants a very short construction time is possible and also a fast changing of the production place can be used.

Advantages of this construction system are:

- > with our construction system the use of biogas substrate of high dry matter content is easily possible with less problems
- > the continuous mixing system protects you against swimming layers
- > integrated export of sand and sink layers
- > less tendency towards wrong streaming lines for more and better anaerobic digestion and higher methane amount
- > heating system in the wall of the digester protects you against heating water in your digester and minor mechanical damages

Thermic Desintegration

After the digestion in the hydrolysis stage the warm, homogenous substrate will be heated from 70 °C to 90 °C with the heat of the CHP. By using the ARCHEA ThermDes-unit the biogas production could be increased by 25%. ARCHEA developed and filed an application for patent for the disintegration of biogas systems.



biogas plant Hessisch Oldendorf of E.ON Westfalen/industrial management by Archea Service GmbH

Methane Stage

From the ThermDes-unit the 70 °C substrate is pumped to the methane stage, where a second digestion takes place.

The advantages of this system are:

- > higher degradation of the substrate with postfermentation in combination with the ThermDes-unit
- > faster digestion time of the substrate and higher gas amount with the thermophilic process at 55 °C. Also a stable process with carefully mixing in the hydrolysis stage
- > better and easier process with the modular construction system
- > lower investment- and processing costs