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Sales Director



Introduction
Landia[®]



95

EMPLOYEES
Denmark

40

EMPLOYEES
administration

45

EMPLOYEES
production

01

PRODUCTION
facility

05

SUBSIDIARIES
worldwide





Made in Denmark

EVERYTHING is manufactured by Landia.
Our factory is in Lem – an area known for its machine
production and a stable and conscientious workforce.





- › Established in 1933 as "Lem Pumpefabrik A/S"
- › 1946 name change to "Landia A/S"
- › Family owned company
- › Healthy economy

STATED OBJECTIVES

- › Landia headquarter must remain in Lem, DK
- › Landia must be a good place to work
- › Customer satisfaction must remain a top priority





Business Sectors

- Agriculture
- Wastewater - municipal
- Wastewater - industrial
- Biogas
- Waste-to-energy
- Fish





Global Biogas References

- Farm Based Biogas Plants
- Wastewater AD
- Industrial AD
- Food Waste AD
- Waste-to-Energy



Visions

CLIMATE CHANGE

- Reduce power consumption
- Life cycle cost

CARBON EMISSIONS

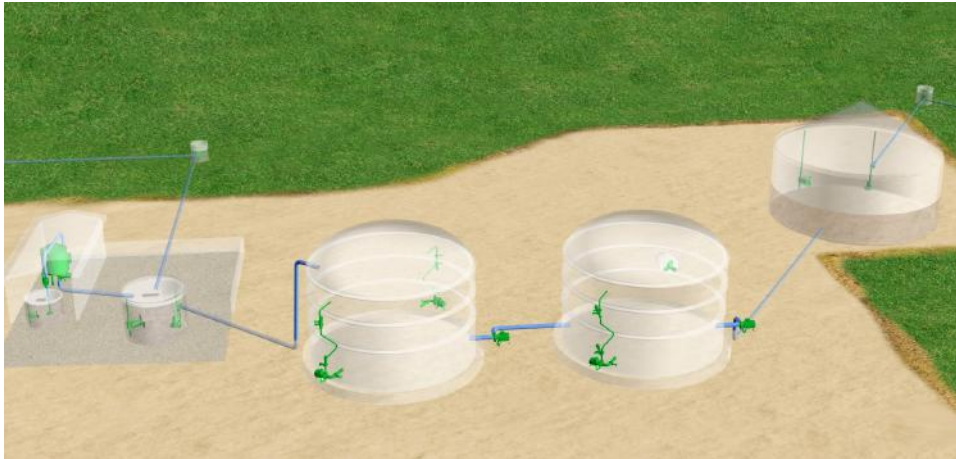
- Produce more energy i.e. **Landia GasMix**

RECYCLING

- Take care of biproducts, biowaste etc. with **Landia BioChop** System

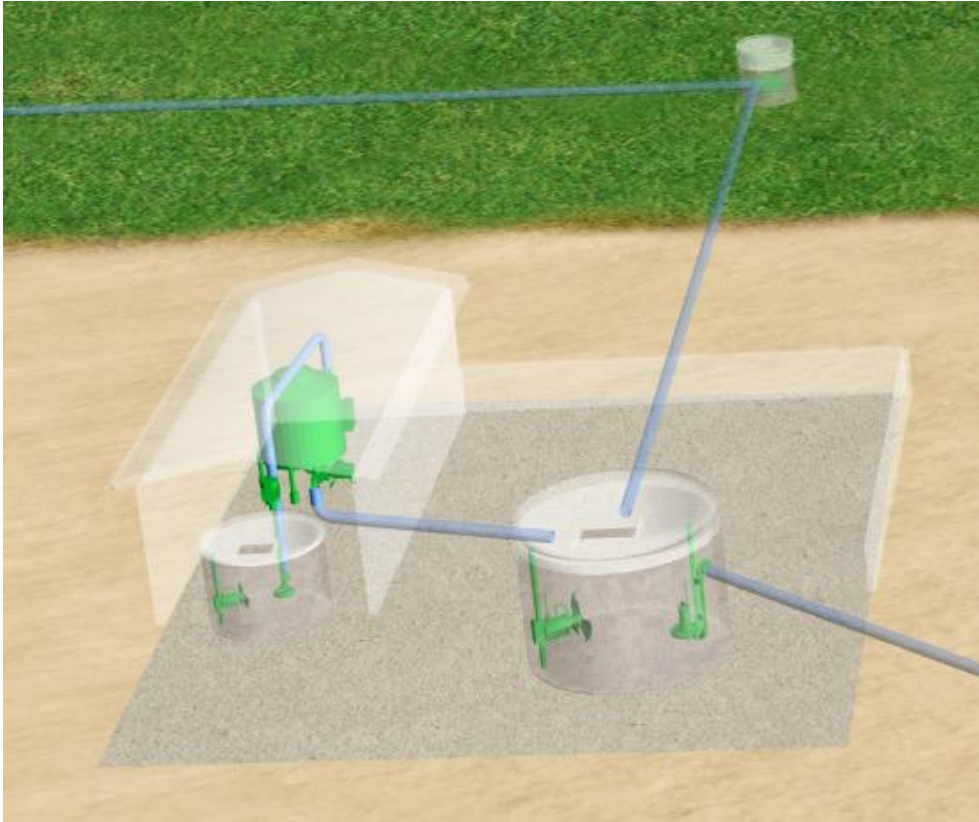


Biogas solutions



- Mixers & pumps for reception tanks
- Chopper pumps for liquid biomass
- Digester mixing systems
- Secondary digester mixing systems
- Storage tank mixing systems
- Long distance pumping – to and from the biogas plant
- Pre-treatment of liquid biomass – including food and kitchen waste
- Hygienization systems

Reception



Landia mixing systems

It is important that the different types of feedstock are mixed efficiently and quickly. You avoid problems with crust in the receiving tank and obtain a higher biogas production.

Landia's chopper pumps can be used anywhere in the biogas plant.

The pump is simple, robust and easy to service. There are no fine tolerances that require adjustment after changing the impeller. This makes the pump much less sensitive to dry matter and sand, and it keeps the cost of operation and maintenance down.

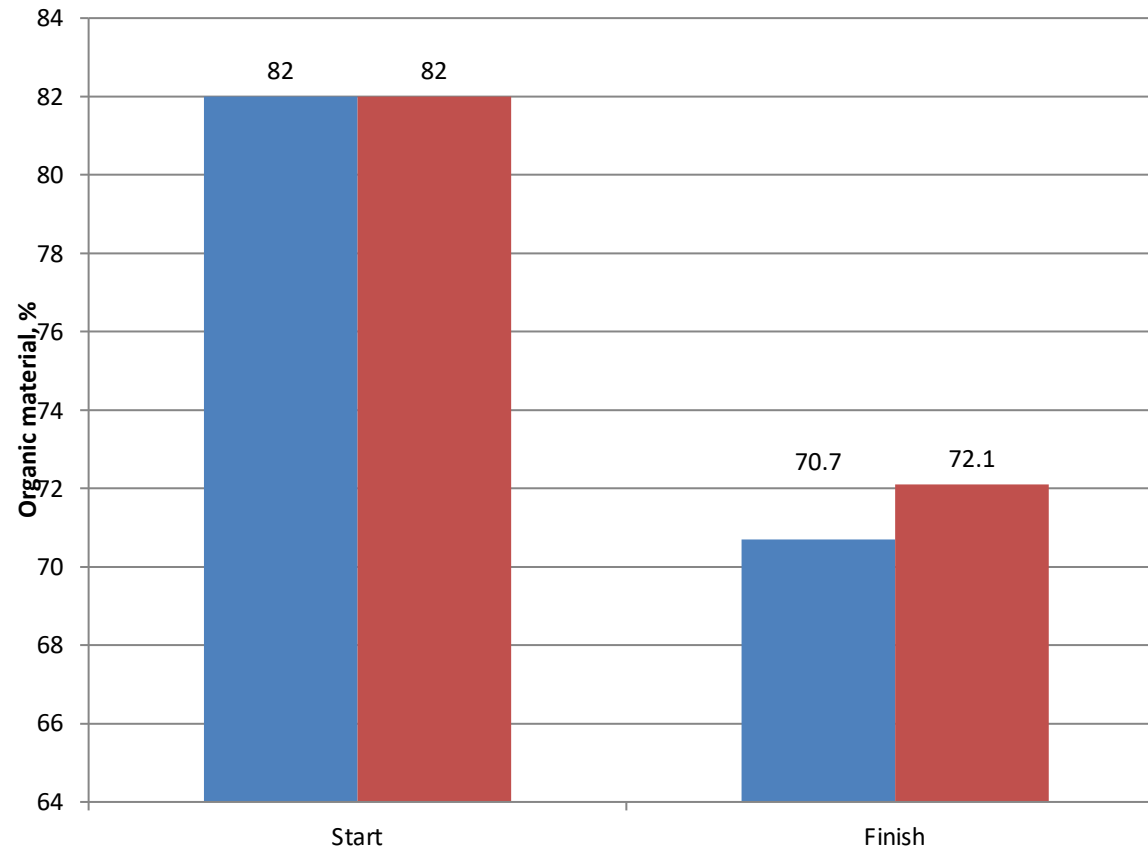


An example of feedstock for biogas plants: dry manure



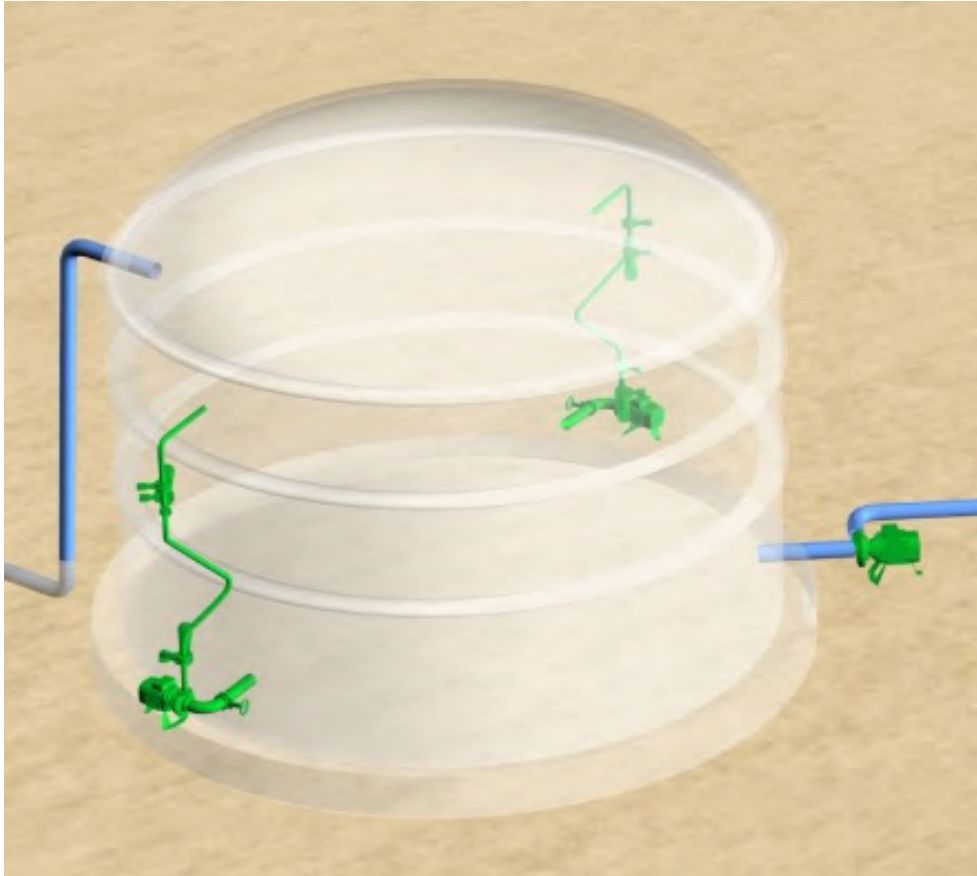
Difference in pre-treatment

Organic material reduction



Difference in biogas production: 13%

Anaerobic Digestion

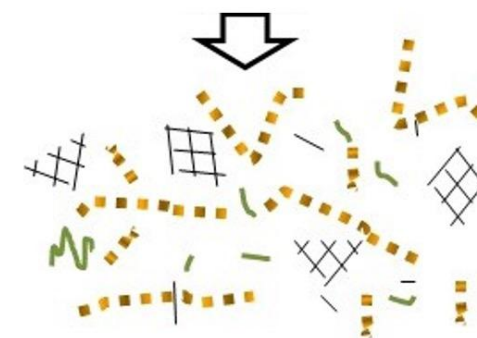
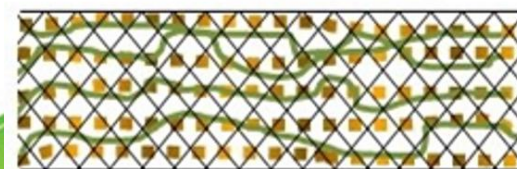
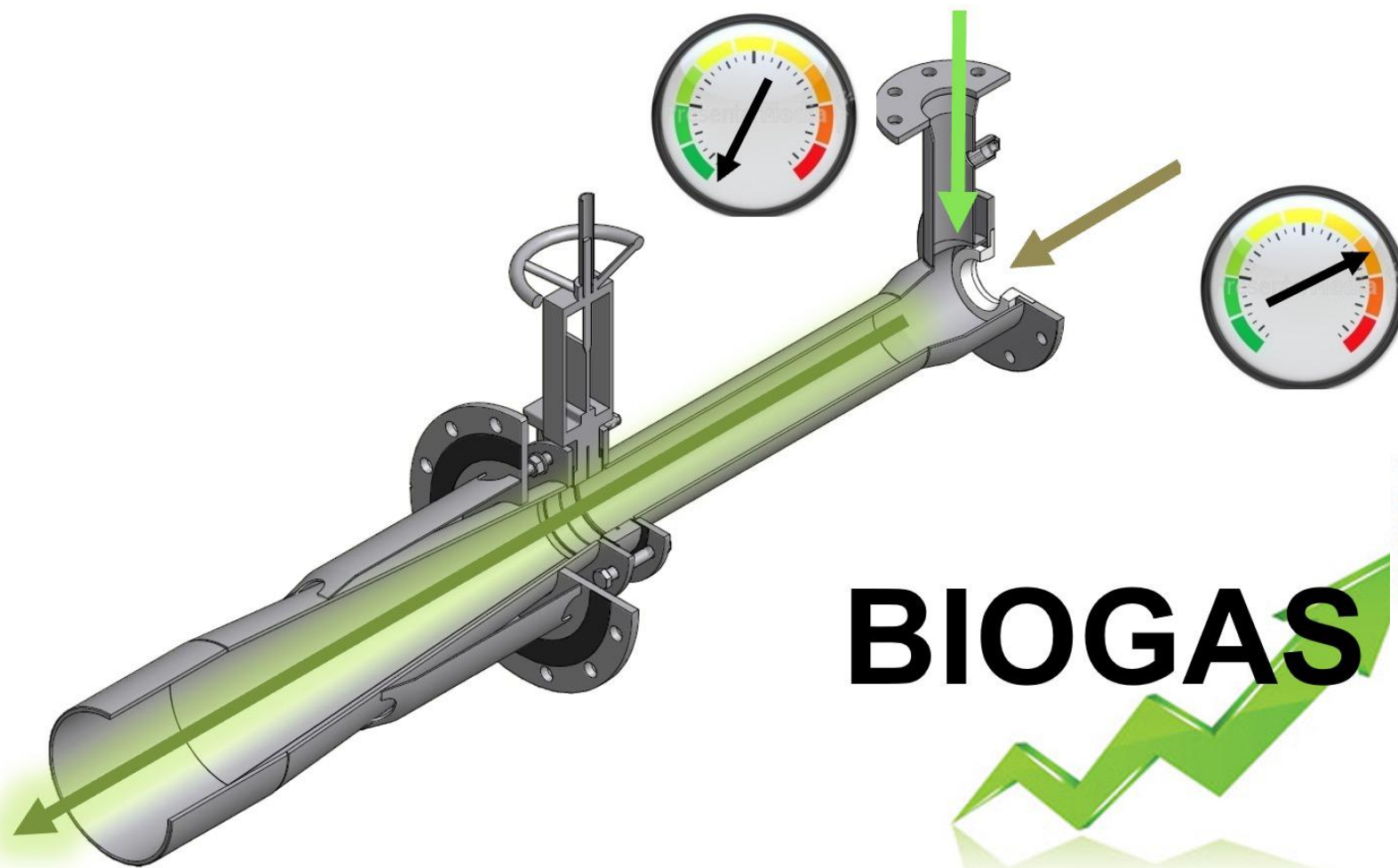


Increased biogas production with Landia GasMix

Effective mixing in the digester is essential for the economy of your biogas plant. As the only supplier on the market, Landia can offer you the unique GasMix digester mixing system.

GasMix utilizes biogas and biomass recycling to mix the contents of the reactor tank. The fact that all components of the GasMix system are located outside the reactor, offers several obvious advantages.

All service on the system can be performed at the base of the tank. If the system fail unexpectedly, the biogas process continues, and it is never necessary to open or empty the tank – unlike most other types of mixers in reactor tanks.



Venturi – Cavitation = increased biogas production



Bonus? All external installation

Hygienization

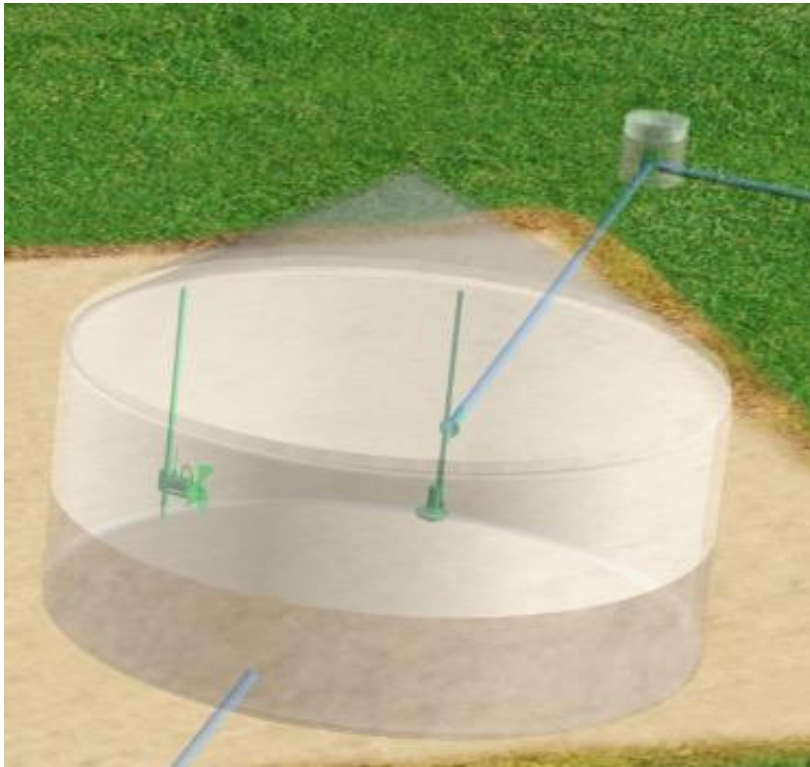


BioChop ensures you the full benefit of your biogas plant

It is possible to use by-products such as abattoir waste and other types of waste from the food industry if it is hygienized for one hour at 70°C.

Landia BioChop is a high-quality hygienisation system built with simple and reliable components, which ensures the correct treatment of the by-products.

Secondary Digester



**Fully automatic mixing of your storage tank
– easy and convenient**

A biogas plant typically has several different storage tanks – biogas is produced in some and in others not. Landia has a solution for all types of storage tanks – and there is no need to turn, raise or anything else. The system is fully automatic.

Challenges with crust



New waste types – new challenges

In Denmark there is an increase in challenges created by the use of deep litter with high straw content.

Prevent instead of solve!

Keep in mind



- Always ask for references
- “Test” the supplier – how experienced are they
- Focus on efficiency – not the lowest price
- Never undersize pumps and mixers
- Run less – last longer
- Simplicity and service friendliness
- Will there still be a supplier in 5 years
- What about spare parts and service



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