

# The New AD and composting solution

## Robust. Reliable. Flexible

That's the philosophy of the Aikan® Technology which has a unique approach to Dry AD and composting of solid waste.

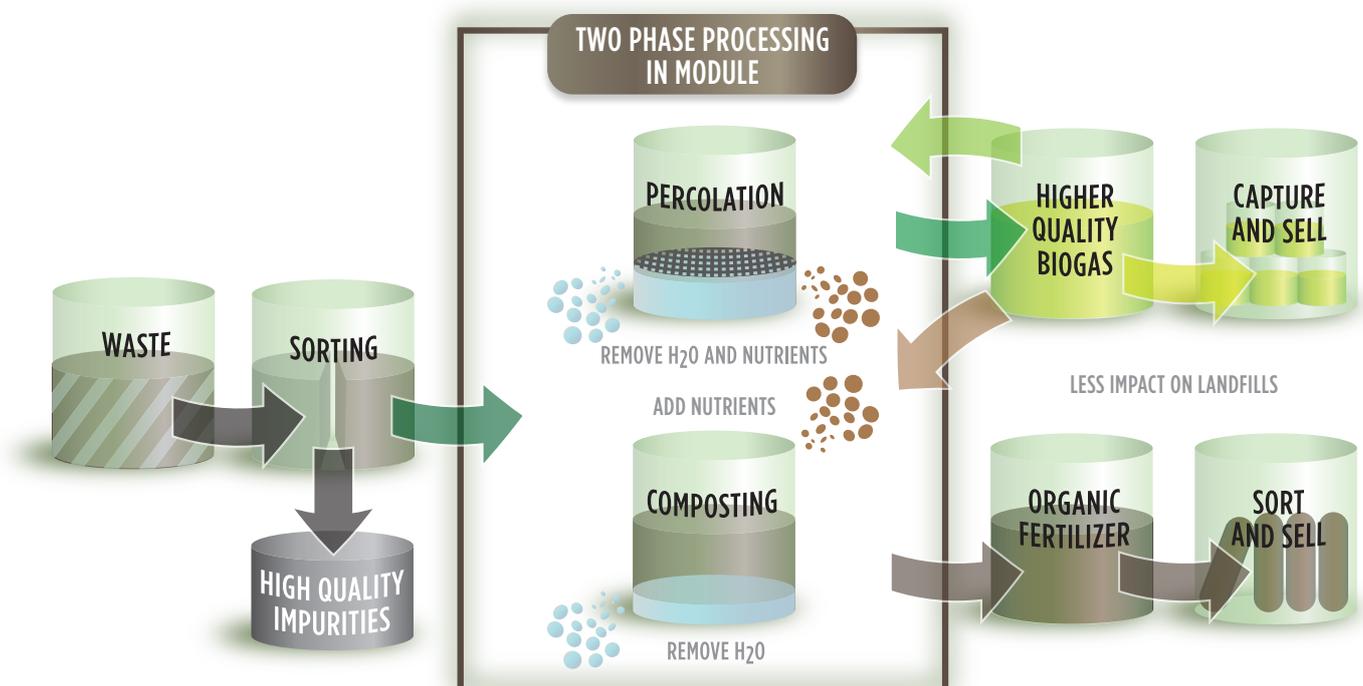
The 2 step 2 phase approach of the Aikan® Technology offers:

- Batch processing with use of the same modules for both AD and composting. During the AD phase, percolate is transported from the modules to separate reactor tanks for continuous biogas production. During the composting phase, the solid parts of the waste remain inside the modules which stay closed throughout the whole process.
- Above average methane percentage – in most cases an Aikan® plant delivers 70+ percent methane.
- All-in-all-out feedstock treatment logistics. With the Aikan® approach there is no need to mix already digested waste into fresh waste. This means full traceability of processed waste.
- Simple and cost-effective percolation/composting modules without need for heating equipment. Heating equipment is located only in the biogas reactors where it is needed.
- Easy and inexpensive modular options for scaling up capacity as production increases. The Aikan® Technology accelerates a simple natural process through the use of state-of-the-art technology.

Through wise and precise use of readily available technology, an Aikan® plant speeds up and optimizes what naturally happens when you leave waste to itself. What's different is that the Aikan® technology makes it easy and economically attractive to capture the valuable products.

### Further benefits of the Aikan® approach include:

- No moving of leaking, odorous, partly processed waste for further processing in other facilities.
- Minimal movement of waste ensures very low handling costs.
- Leachate from the biogas reactor tank is brought back to the compost in the composting phase. This means that nutrients that have been “borrowed” for biogas production are returned to the compost, increasing its nutrient value.



# The Aikan® Technology gives you ultimate flexibility

The 2 phase 2 step process, which is a unique feature of the Aikan® Technology, gives you extremely high processing flexibility. As the reactor modules are used for both percolation and composting, each of these treatment paradigms can, if feasible, also be run independently.

Skipping the biogas phase can make sense if:

- A given waste batch has very little gas potential.
- You have seasonal peaks and need a higher throughput at certain times of the year.
- There is an increased demand for organic fertilizer.
- You have complementary waste streams of fermented sewage sludge that need sanitization.
- Operating economy is mostly driven by gate fees and sales of recyclables.

A further flexible option is to use the integrated ventilation system of the reactor modules to dry for example plastics, providing a cleaner resource for recycling or, if incinerated, a higher calorific value.

## Capacity of an Aikan® System

To achieve profitable operation, a plant should in most cases have a minimum of 10 percolation modules and 1 biogas reactor. With this number of modules, you have enough capacity to run continuous production of biogas and optimal use of the required machinery.

Each reactor module is 600 cubic metres and contains when loaded an average of 220 tonnes of food waste and 100 tonnes of structural material (green waste, coarse wood chips, etc.).

Typically, a module runs 3 weeks of AD and 4 weeks of composting, thus handling 1500 tonnes of household waste a year. Skipping the AD phase you will need 5 weeks for the composting phase, increasing capacity to 2200 tonnes a year per module.

## Start Today

Waste treatment systems need to be robust, reliable and flexible and so simple that they operate free of trouble even under high loads and difficult circumstances. That is what the Aikan® approach is all about. We train your personnel to make sure you have success, and we are further able to assist Aikan® plant managers through remote access to the plant's monitoring and management system. Support and supervision is just a click away.

## Think differently about waste handling today. Think Aikan®

- Robust and reliable, low-cost processing.
- Capture high-energy biogas.
- Produce clean organic fertilizer.
- State-of-the-art odour control.
- Ultimate flexibility.
- Low energy requirements, limited material handling.
- Repeated, consistent, proven results with no operational downtime.
- Sanitization of the biomasses.

## Partner With A Trusted Expert

Solum Gruppen - creators of the Aikan® Technology - have more than a quarter century of experience and are Denmark's largest supplier of growth media and turf care products.

The company's pioneering approach to waste processing, and its outstanding business operations, have been rewarded. In 2009, Solum Gruppen was awarded the Danish Liberal Party Climate and Environment Award which was presented by the Danish Prime Minister. The award was given for Solum Gruppen's ability to successfully combine environmentally friendly waste management with a smarter business model.

With financial strength of nearly \$4 million in venture capital funding for international expansion, Solum is bringing Aikan® to new markets.

## New AD and composting solutions

A "normal" Aikan project involves:

- Plant design and lay-out.
- Engineering.
- Control and operation system.
- Commissioning.

**Contact Aikan A/S + 45 43 99 50 20  
or go to [www.aikan.eu](http://www.aikan.eu)  
Unlock the potential**