



Themis
Biotechnology & Life Science



Innovative system for the drastic reduction and valorization of waste

Transforming **digestate** into a resource

The biogas sector is a crucial asset in the energy transition but faces significant challenges in managing its byproducts. The **accumulation of digestate**, composed of liquid and solid waste, poses a critical disposal issue. This is compounded by environmental impacts, such as **persistent odors** and **high waste volumes**, making management complex and costly.

THE SOLUTION: FROM WASTE TO RESOURCE

Revolutionizing biogas byproduct management

Themis WRT transforms biogas byproducts from mere waste into valuable resources. Using highly innovative processes, this **technology drastically reduces the volumes of liquid and solid digestate**, recovers reusable water, and produces dry fractions ready for new applications. It also eliminates unpleasant odors, minimizing environmental impact and enhancing process sustainability.

"Less Waste, More Value"

With **Themis WRT technology**, digestate is responsibly managed, reducing environmental impact and converting it into useful resources. Every step of the process—from the treatment of solid and liquid digestate to water recovery—is designed to optimize the sustainability of the production cycle, promoting a cleaner environment and more efficient resource management.

*"It's not just recycling:
it's value transformation!"*

Themis WRT technology transforms solid digestate fractions into **natural biostimulants** by introducing **specialized microorganism mixtures** during the process. This approach adds value to biogas byproducts, creating high-value-added resources for agriculture.



*Dry Matter

Advantages of WRT Technology

WRT technology is an effective and versatile innovation in biogas byproduct treatment:

- ✓ **Volume and odor reduction:** minimizes the amount of waste to dispose of and associated management issues
- ✓ **Dehydration and valorization:** optimizes solid digestate, transforming it into high-value-added resources
- ✓ **Water recovery:** a sustainable approach that enables water recovery and reuse
- ✓ **Tailor-made solutions:** custom-designed for each client, optimizing costs and benefits

Why Choose WRT Technology?

Choosing **Themis WRT** means investing in a sustainable future for the biogas sector, minimizing waste, unpleasant odors, and waste volumes. **Themis WRT** transforms byproduct management into a circular economy model, maximizing resource value and creating new opportunities for eco-sustainable products.



How does the WRT system work?

- 1 **Anaerobic digesters**
- 2 **Screw-press** for recovery of liquid and solid digestate
- 3 **Themis WRT 'Waste Recovery Technology'** for dehydration and biotechnological additive mixing to transform waste into high-value-added products
- 4 **Cogenerator** for energy recovery
- 5 **Distilled water** for nutrient recovery, reusable in agricultural applications
- 6 **Dehydrated granulate** for nutrient recovery (NPK), reusable as a biostimulant
- 7 **Drastic reduction of waste to dispose of**

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