

Bi'dry®

Dry Anaerobic Digestion System



Standard Solutions to Maximize the Value of Your Organic Waste



- Low Footprint
- High-Quality Industrial Manufacturing
- Plug & Play Installation
- Self-Sufficient with Remote Monitoring and Control
- Compliance with European Regulations and Standards

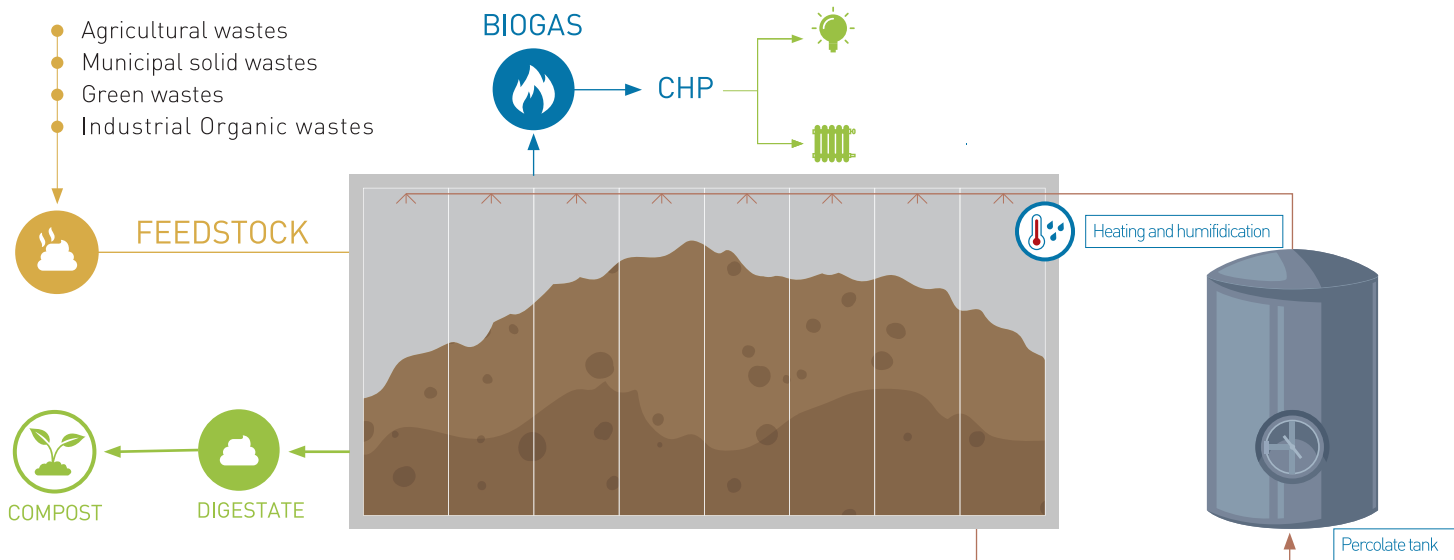
The Bi'dry® process

Bi'dry® is an innovative proven system, designed for the anaerobic digestion of solid organic waste with a high dry matter content (over 25%). This modular and compact system, is perfectly suited for the valorization of solid wastes, ensuring optimal biogas production while effectively resisting contaminants.

Operating principle of Bi'dry®

The Bi'Dry solution is based on the simultaneous operation of multiple digesters in parallel. Input materials are loaded and digestate is unloaded in a regular sequence using a compact loader. Fermentation occurs over a period of 4 to 6 weeks at a temperature appropriate for either the mesophilic (around 42°C) or thermophilic (around 55°C) digestion regime.

The feedstock is irrigated through percolate recirculation, which promotes the growth of essential bacteria, and maintain heating and agitation throughout the entire anaerobic digestion cycle, to ensure optimal conditions. As biogas is produced, it is gradually treated and stored in the gasholder. This biogas is then directed to a combined heat and power (CHP) unit, based on a MAN® engine block, to generate both electrical and thermal energy.

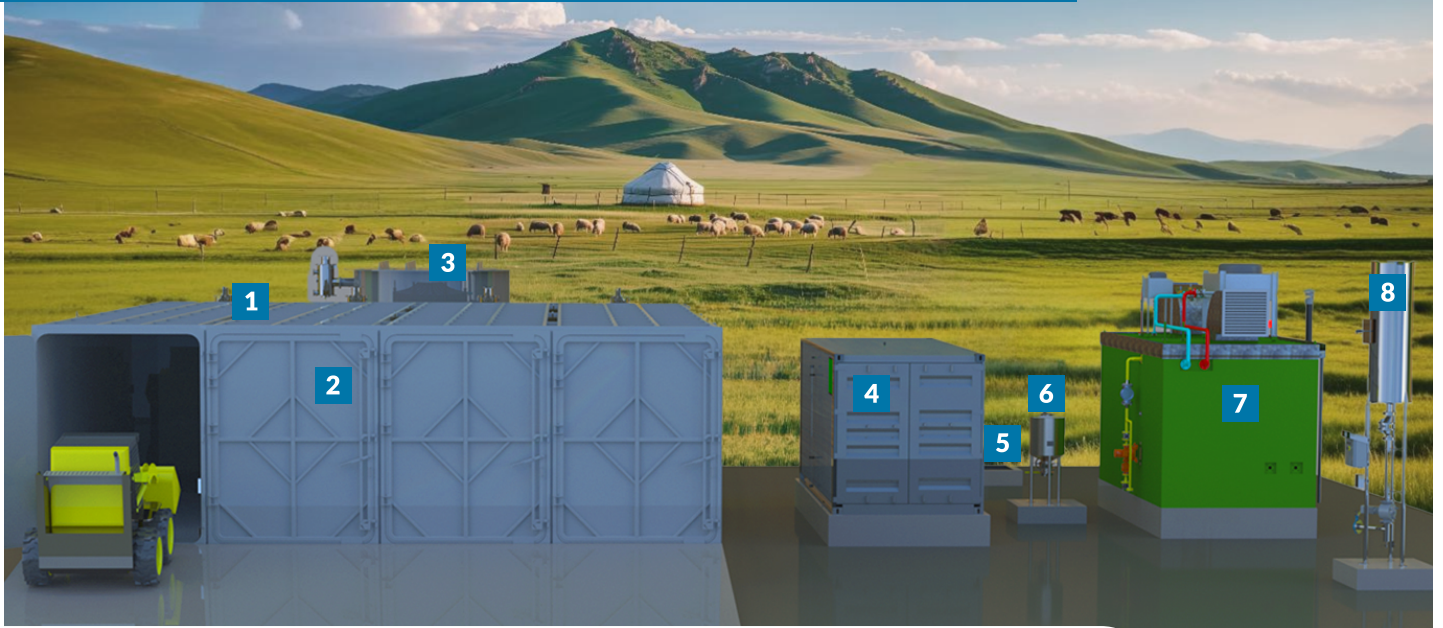


Bi'nergy® offers various standard configurations for Bi'dry®, ranging from 2 to 15 digesters, with power outputs varying from 18 to 300 kWe (other power options are available upon request).

Range	Electrical Power (kWe)	Feedstock Quantity (t/y)	Number of digesters	Range	Electrical Power (kWe)	Feedstock Quantity (t/y)	Number of digesters
Bi'dry 18	18	700 - 1300	2	Bi'dry 100	100	3200 - 3700	6
Bi'dry 40	42	1300 - 1700	3	Bi'dry 125	125	3700 - 4400	7
Bi'dry 50	50	1700 - 1900	3	Bi'dry 160	160	4400 - 5500	9
Bi'dry 64	64	1900 - 2300	4	Bi'dry 180	180	5500 - 6300	10
Bi'dry 75	76	2300 - 2800	5	Bi'dry 200	200	6300 - 7000	11
Bi'dry 90	90	2800 - 3200	5	Bi'dry 300	308	7000 - 9900	15

Bi'dry® Standard Solution:

A modular system with a minimum of two (02) digesters and one (01) technical container



Starting from 500 t/y
Digester capacity

11,2 x 2,3 x 3,2 m
Dimensions of
the Standard Digester

Starting from 600 m²
Required space for
the smallest installation

4 – 6 Weeks
Retention Time

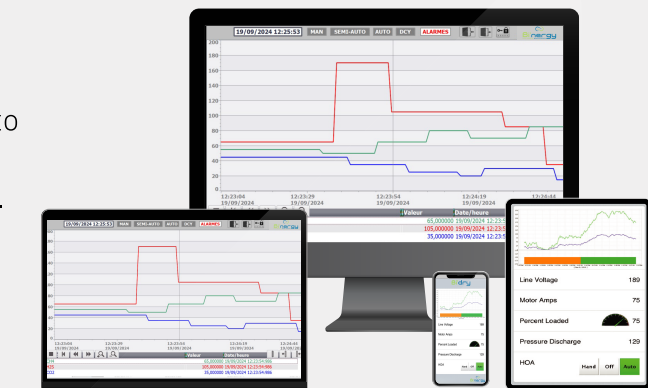
- | | | |
|----------------------------|-----------------------------------|----------------------------------|
| 1 Digesters | 4 Biogas storage Container | 7 Biogas flare |
| 2 Airtight Door | 5 Technical container | 8 Activated Carbon filter |
| 3 Technical Gallery | 6 Condensate Pot | |

Bi'dry® High-Performance Process and Technology

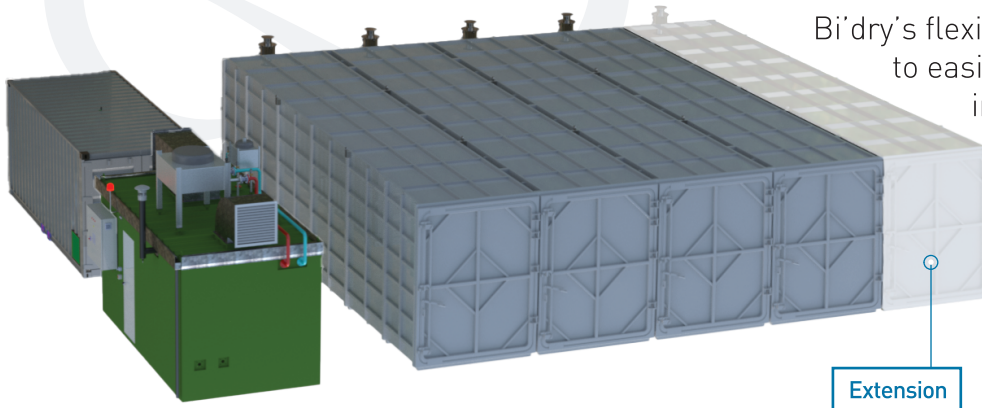
- ✓ **High Quality:** Carefully selected materials ensure a durable and efficient construction.
- ✓ **Thermal Insulation:** Integrated throughout all components for maximum efficiency.
- ✓ **Practical Design:** Digesters engineered to simplify operator tasks.
- ✓ **Compact Configuration:** Minimized piping networks for a more efficient layout.
- ✓ **Advanced Instrumentation:** Continuous process monitoring ensures a safe and reliable operation.
- ✓ **Complete Documentation:** Comprehensive tracking of operational and maintenance activities.

Automation and Control

Bi'dry® is equipped with a **Siemens** PLC-based control and automation system to ensure automated operation of the AD unit, providing both local and remote supervision. This setup enables real-time management, remote diagnostics, and performance optimization, through a PC, tablet, or smartphone.



Bi'dry®: A modular solution



Bi'dry's flexible and modular design enables you to easily increase treatment capacity by incorporating additional digesters as needed. Its "Plug and Play" approach makes adding these digesters both simple and fast.

Plug & Play

Designed for easy transport and quick on-site installation.

Automated

A PLC system provides automatic control and remote monitoring, optimizing performance and reducing manual interventions.



Standardized

Designed and manufactured on an industrial scale by Bi'nergy®.

High-Performance

Designed to minimize interventions and maintenance, thereby significantly reducing operating costs.

Why Bi'dry®

- **Reduced Investment :** Standard high-quality solutions at competitive prices.
- **Lower Operating Costs :** Remote assistance requiring minimal interventions.
- **Start-up:** A dedicated team of experts ensures a swift start-up and flawless commissioning of the system.
- **Optimized Maintenance Service:** Remote assistance and a readily available stock of standard parts to ensure top-quality support.



FESTO

SIEMENS



CONTACT US

Bi'nergy

9A, boulevard de Strasbourg
83000 Toulon, France

Contact

Téléphone : +33(0)4 83 73 49 46
contact@binergy-europe.com



www.binergy-europe.com