

BIOMET™

Technology for the production
of biogas from biomass

Adding value to your resources



Making the difference

Maximized efficiency

Running 24/24h, 365 days/year, BIOMET™ is able to ensure the maximum efficiency for its whole production life.

Easiness of management

External heat exchangers and mixing devices make extremely fast and simple the use and maintenance of the installation.

Flexibility

The opportunity to feed the plant with all type of substrate, in different operative conditions, makes BIOMET™ extremely flexible and adaptable.

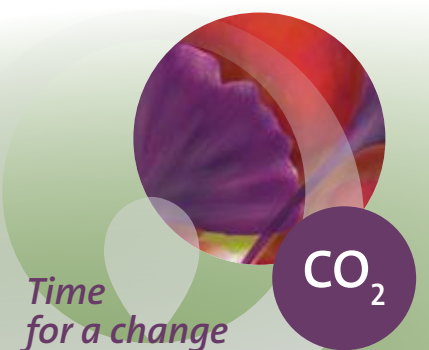
Reliability

The automation system includes a PLC supervising how the plant works and carrying out the record of the historical trends of parameters. A PC acts as an interface with the users by representing the plants operational parameters and equipment conditions.

Higher stability

The two-steps configuration, providing for the separation of the hydrolysis from the methanogenesis phase, allows an ideal control of the process, even with “hard” biomass.

The battle against the climate change is a priority for everyone. VWS Italia has a real commitment to reduce CO₂ emissions: we are working to make sure that our technological offering is ever more environmentally sustainable.



An industrial approach means designing plants with precise characteristics

Process plus

> Two-steps configuration

The isolation of the contamination risks is the most problematic aspect of a biogas production plant. The separation of the hydrolysis of the biomass from the anaerobic digestion phase allows to achieve a higher stability of the process and better performances.

> Environments and substrates

The plant works either in mesophilia or in thermophilia. The opportunity to work in both the conditions allows to optimize the process management.

The plant can be fed with different type and quantities of substrates.

Engineering plus

> External mixing device

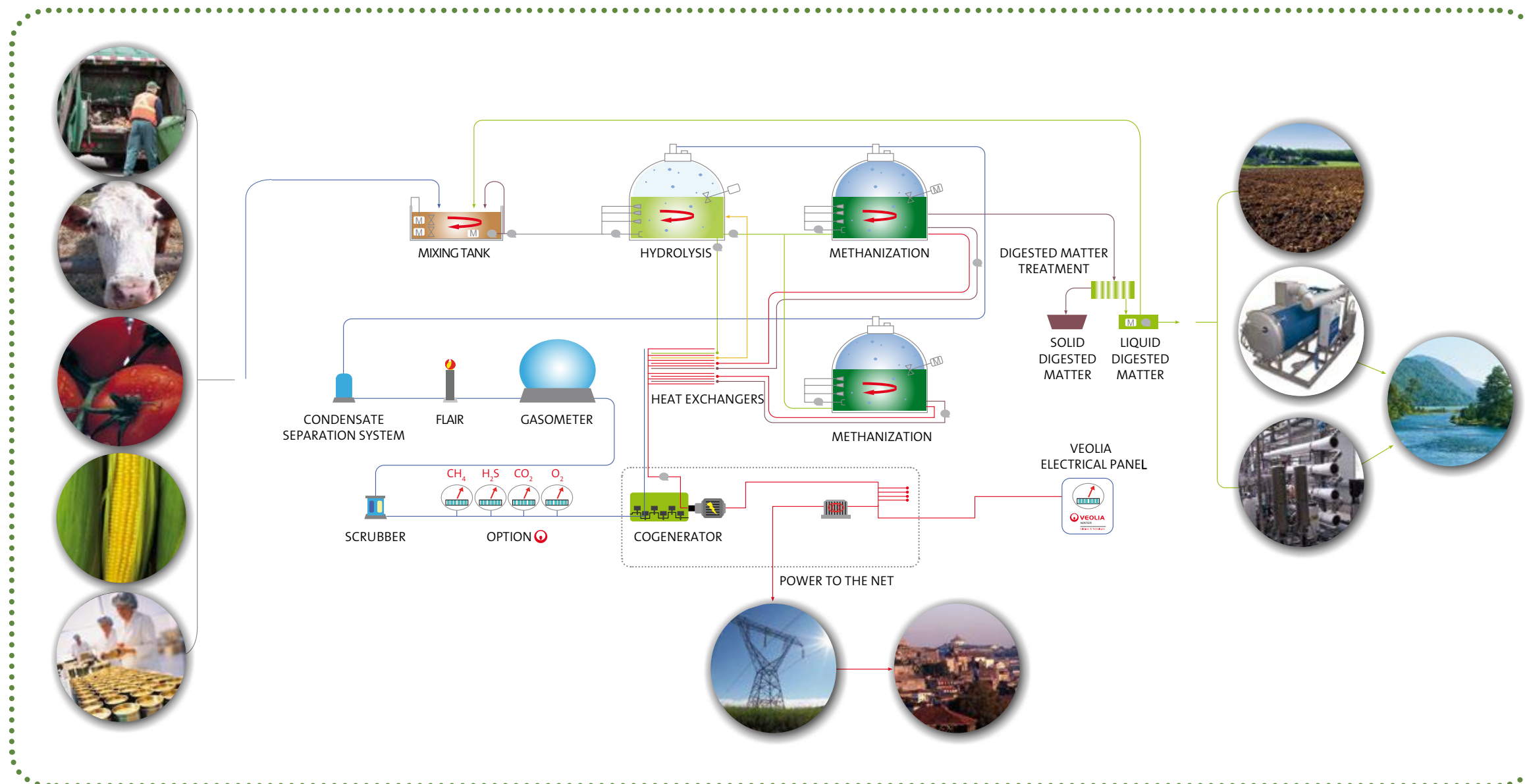
External chopping and mixing pumps for a better biomass disgregation and easier maintenance operations.

> External heat exchangers

Larger diameter pipes for easier cleaning and descaling operations.

> Reactors with increased height/diameter ratio

Better mixing degree, minimum thermal energy loss and reduction of foam and deposit formation.



Our Clients

- > Waste collectors
- > Agro-food industries
- > Animal breedings
- > Farms
- > Waste and wastewater treatment platforms

Some important references

Site: Ferrara, Italy 2010
Type: Agro-food industry
Power: 1000 kW

Site: Parma, Italy 2008
Type: Big farm
Power: 1000 kW

Site: Viadana, Italy 2010
Type: Food & Beverage industry
Power: 300 kW



Research & Development. Always at the first place.

VWS Italia anaerobic plants are the result of a careful research which involved the most important and authoritative technical-scientific centres at an international level, in addition to the technical team of the Veolia Environnement Group. This joint of efforts allowed to acquire the necessary know-how and experience to provide our clients with the best turn-key solutions for the production of biogas from biomass.

Veolia Environnement Research & Innovation (VERI)

Politecnico di Milano

IFAS - Hamburg

University of Trieste

University of Milan

University of Verona

Pre-treatments

Recovery of expired food products for BIOMET™ anaerobic plant feeding.

ECRUSOR I

- > **Depackaging** of different types of food waste: dairy, meat, beverage, pasta, bakery, etc.
- > Chopping and **separation** of the solid waste organic fraction



Post-treatments

Reduction of volumes and polluting substances of the digested matter liquid fraction. Different solutions for different needs, applicable as single unit or in combination with other water treatment systems.

Evaporation



Reverse osmosis

Biological processes



Stripping

Desulfurization



Service

The VWS Italia after-sales service ensures to his clients to make the most of the solutions they invested in, through the time.

Service package: maintenance, spare and consumable parts, green-oriented chemical products.

Biological process supervision: samples analysis, process stability supervision, chemical and agronomic consultancy, definition of the best recipe for the plant feed.

Maintenance: planned, extraordinary (both predictable and unexpected) with contract option.

Remote control management
Digestate management
(transport, spreading, etc.)

BIO-SENTINEL

Customized analysis to optimize biogas plant performance. Preventive/corrective activity to enhance the biological management of the plant.





SVR

Service - is what we provide our customers

Value - is what we create for our customers

Responsibility - is the keystone for all our business activities

Veolia Water Technologies Italia SpA

Via Lampedusa 13

20141 Milano

info.italia@veolia.com

www.veoliawatertechnologies.it

