



ECONWARD TECH

Who is ECONWARD?

ECONWARD

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We are a global technology company with offices, labs and R&D Department in **Madrid** and **California**.

- 13 years of expertise developing equipment and processes.
- Fully backed by a Family Owned Investment Group with a long term commitment to the business and the industry who have invested over €40M in the technology development for the last 4 years.
- We have an industrial plant set up in Madrid which receives and processes various waste streams provided by Municipalities and private companies.

We are certified



ISO 9001



ISO 14001



ISO 45001



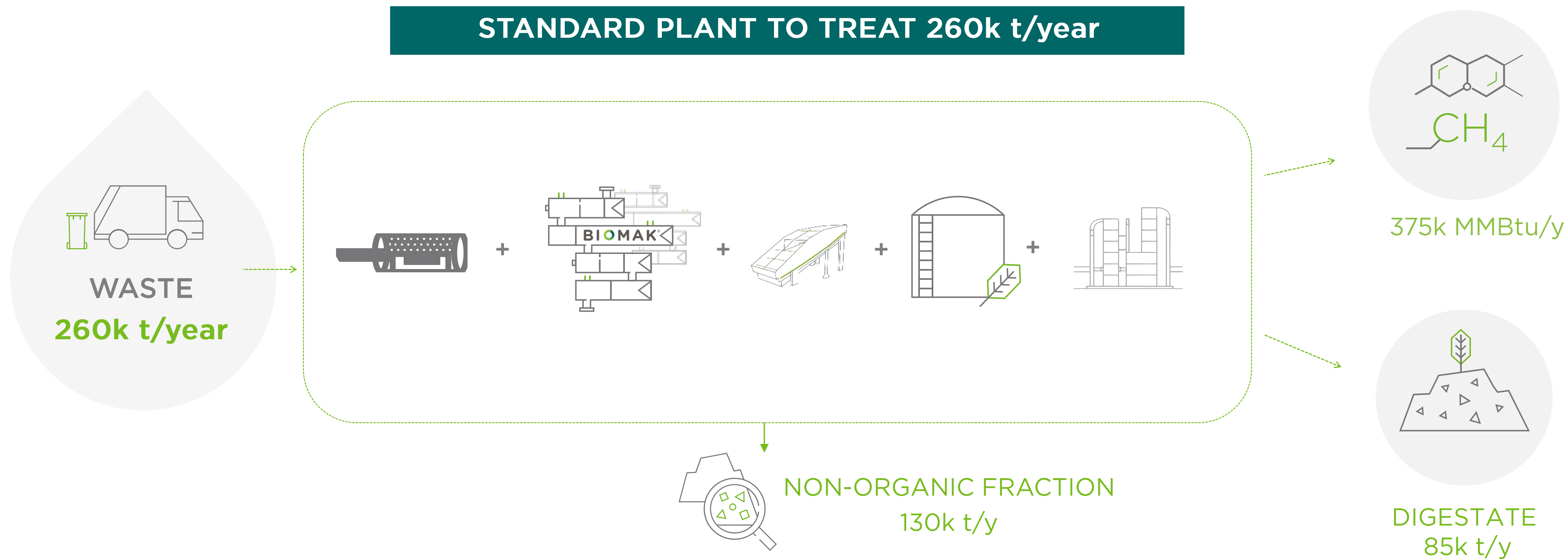
Members of



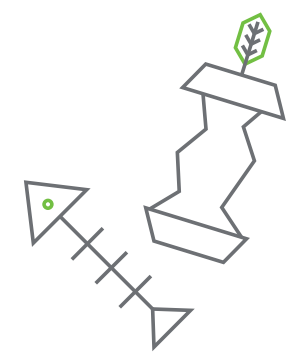
R&D Projects



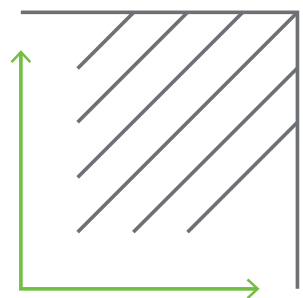
- Our technology adds innovative value to landfill projects creating a profitable business model building a sustainable bridge between the waste and energy sectors.



▼ By integrating a Biomak[®] in waste treatment plants, we contribute to achieving the objectives of reducing landfill disposal and emissions, increasing recycling rates and renewable energy production. In addition, we optimize the operation performance, providing a profitable business model.



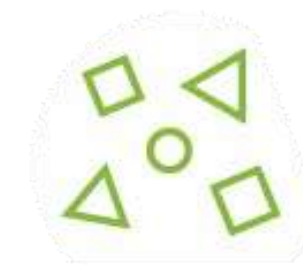
+ 90%
of Organic Matter Recovery



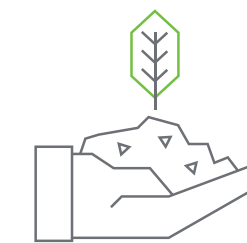
+ 30%
increased landfill capacity



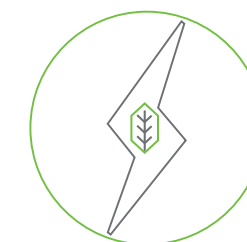
Increased biomethane revenue



Greater efficiency in organics separation Excellent quality substrate that favours the stability of complementary processes.



Excellent quality digestate
Free of pathogens. Class B compost.



Energy efficiency
Enough energy produced for internal consumption or grid injection.

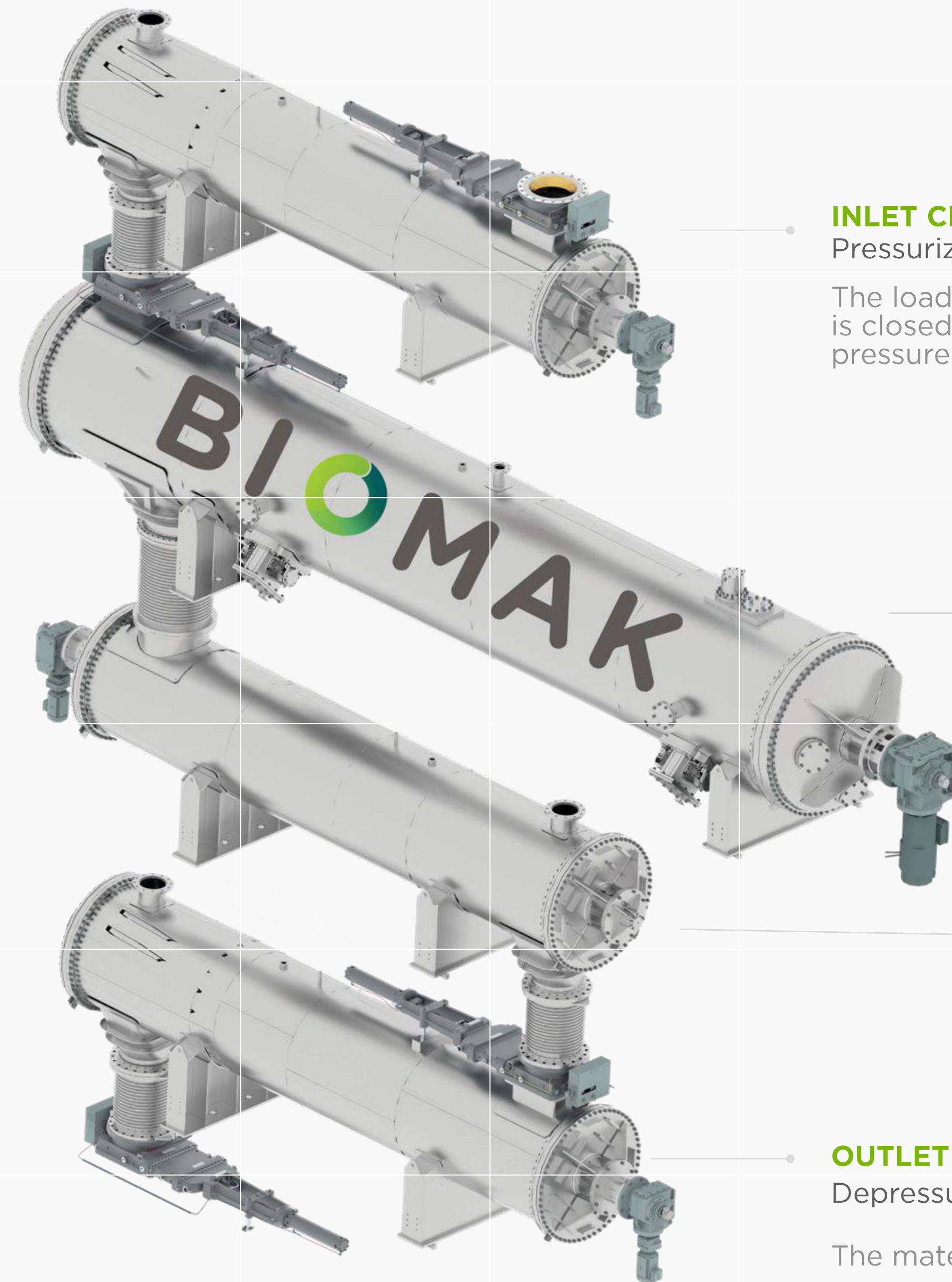


GHG emissions savings
Each Biomak[®] produces savings of 40,000 t/CO₂eq per year compared to a landfill with gas extraction.

THERMAL HYDROLISIS

▶ **Our patented technology**

Autoclave system for solid waste treatment using a **thermal hydrolysis process** in continuous operation



INLET CHAMBER

Pressurization.

The load enters through a feed hopper, the hydraulic valve is closed and saturated steam is injected until the desired pressure and temperature conditions are reached.

REACTOR

Pressure-temperature stability.

After reaching the preset parameters, the organic matter changes its morphology and properties.

TRANSIT CHAMBER

The material keeps flowing.

An effective and efficient thermal hydrolysis is guaranteed.

OUTLET CHAMBER

Depressurization.

The material is unloaded at atmospheric pressure.

The system is synchronized to reuse the steam from the depressurization for a new inlet chamber pressurization process.

Our patented technology transforms organic waste into a high-quality BIOMASS



▼ We help avoid landfill disposal of organics

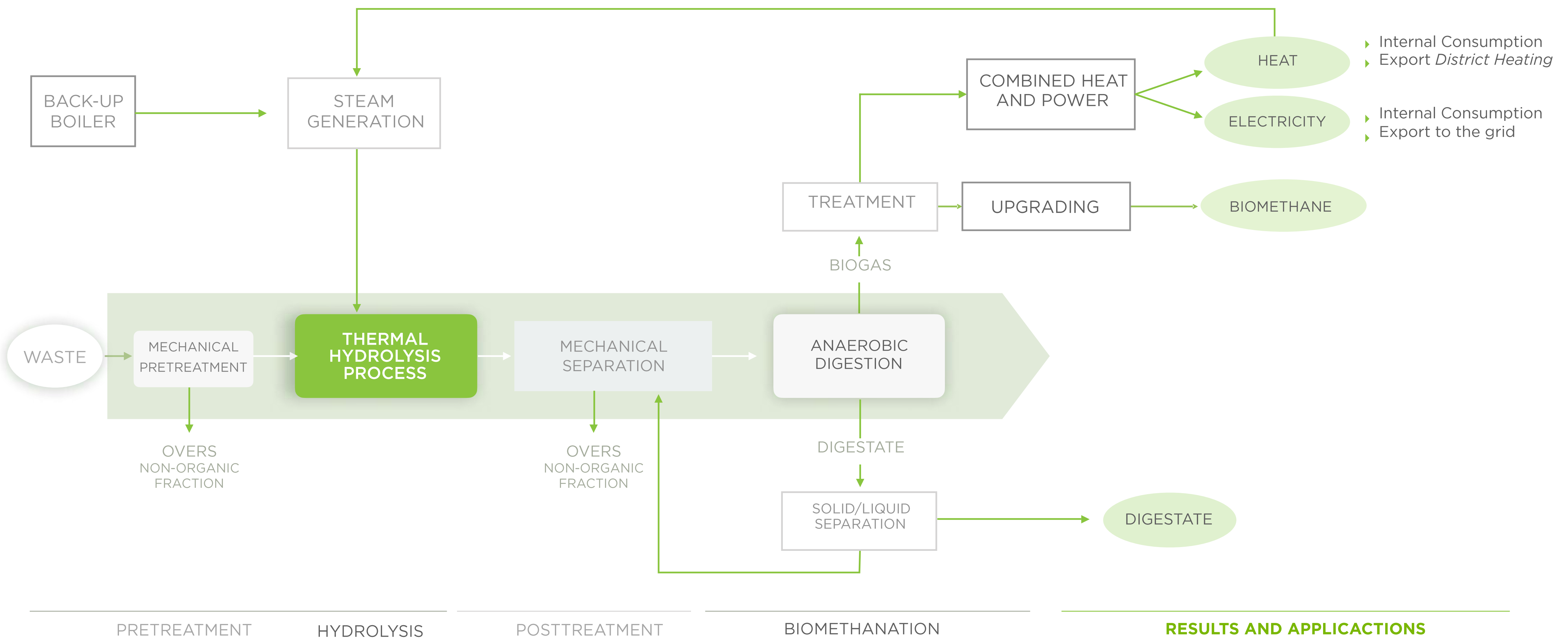
▼ We innovate to decarbonize the waste sector

▼ We produce a high-quality biomass

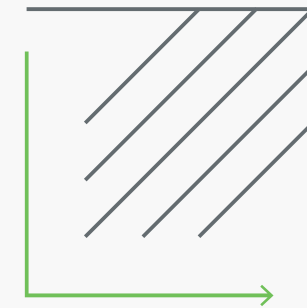
We provide a homogeneous, degraded and pathogen-free biomass
IDEAL FOR ANAEROBIC DIGESTION PROCESSES

APPLICATION

NOWON WASTE-TO-VALUE SYSTEM

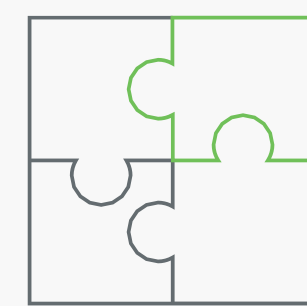


Key features



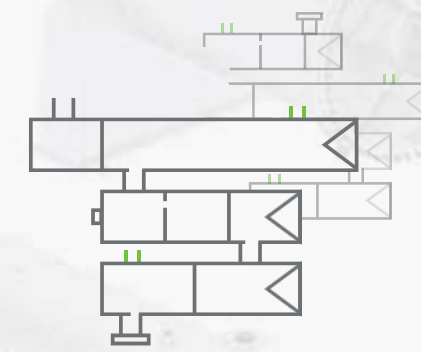
High treatment capacity

260,000 t/year



Optimized and compatible

With existing technologies



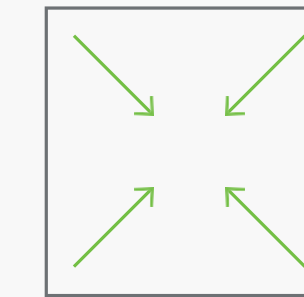
Scalable and modular

Adaptable, easy integration



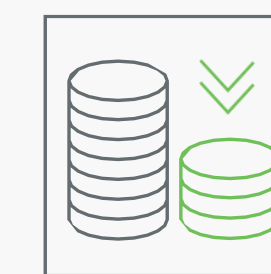
Fully automated

In-house software development



Small footprint

4 acres of area required



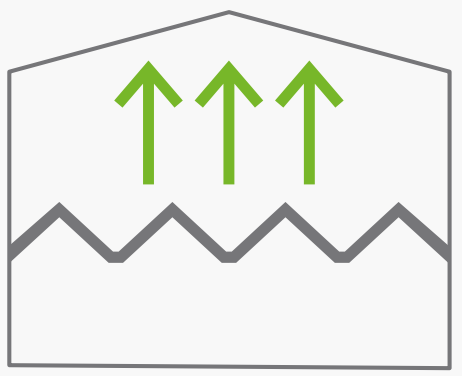
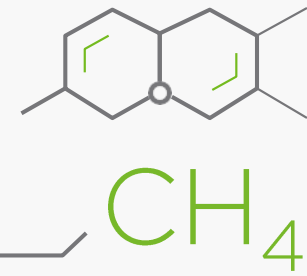
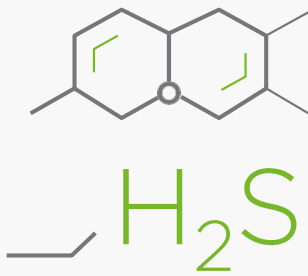


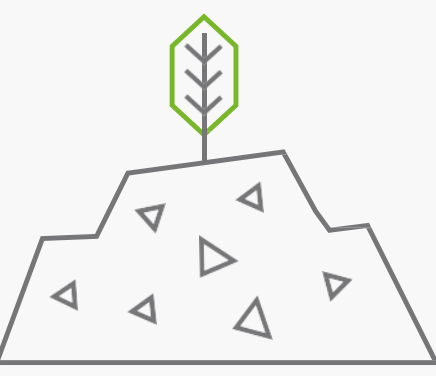

Low operating costs

Rapid Return on Investment

▼ Porcess stability produces an increase in quality and quantity of the biogas obtained. This is translated into a reduction in operating costs and greater mechanical simplicity of the plant.

BIOGAS PROPERTIES

We produce 98 Nm³ methane per tonne of organic waste received in pit

						
<p>147 Nm³ Biogas</p>	<p>67%</p>	<p>200-1500 ppm</p>	<p>15 days</p>	<p>5-7 kg COD/m³ per day</p>	<p>86-91% COD 87-91% TS</p>	<p>Absence of inhibitory or toxic compounds</p>
<p>PER TONNE OF ORGANIC WASTE RECEIVED IN PIT</p>	<p>METHANE</p>	<p>HYDROGEN SULPHIDE</p>	<p>HYDRAULIC RETENTION TIME</p>	<p>ORGANIC LOADING RATE</p>	<p>BIODEGRADABILITY</p>	<p>MATERIAL CLEANING</p>

Let's lead the change!

www.econward.com

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**WINNER OF NATIONAL
ENERGY AWARD
SPAIN, 2022**