PRODUCT CATALOG 2023

PRODEVAL
RNG PROCESS TECHNOLOGIES

LET'S RECYCLE OUR WASTE FOR A GREENER PLANET

SUMMARY

PRODEVAL, IN A FEW WORDS

.

LEADER AND EXPERT IN BIOGAS SOLUTIONS

+350
Employees in 2023

Subsidiaries in Italy, Canada, USA, Czech Republic, Germany Spain

We are PRODEVAL, a French company which is a leader in the treatment and upgrading of Biogas from the Anaerobic Digestion of organic waste.

An independent and human-sized company, we have expanded our skills over the past thirty years, providing our clients with tailored solutions for Renewable Natural Gas production and distribution.

The company has been given further impetus by the energy transition and the fight against climate change. We are convinced of the importance of cutting greenhouse gas emissions through ever more innovative and responsible Biogas and BioCNG solutions, in line with environmental targets.

PRODEVAL has established a prominent position for itself in the development of the Biogas and bioCNG sector, both in Europe and worldwide.

« EXPERTISE IN 100% RENEWABLE ENERGY »

PRODEVAL GROUP HEADQUARTERS
Châteauneuf-sur-Isère, FRANCE

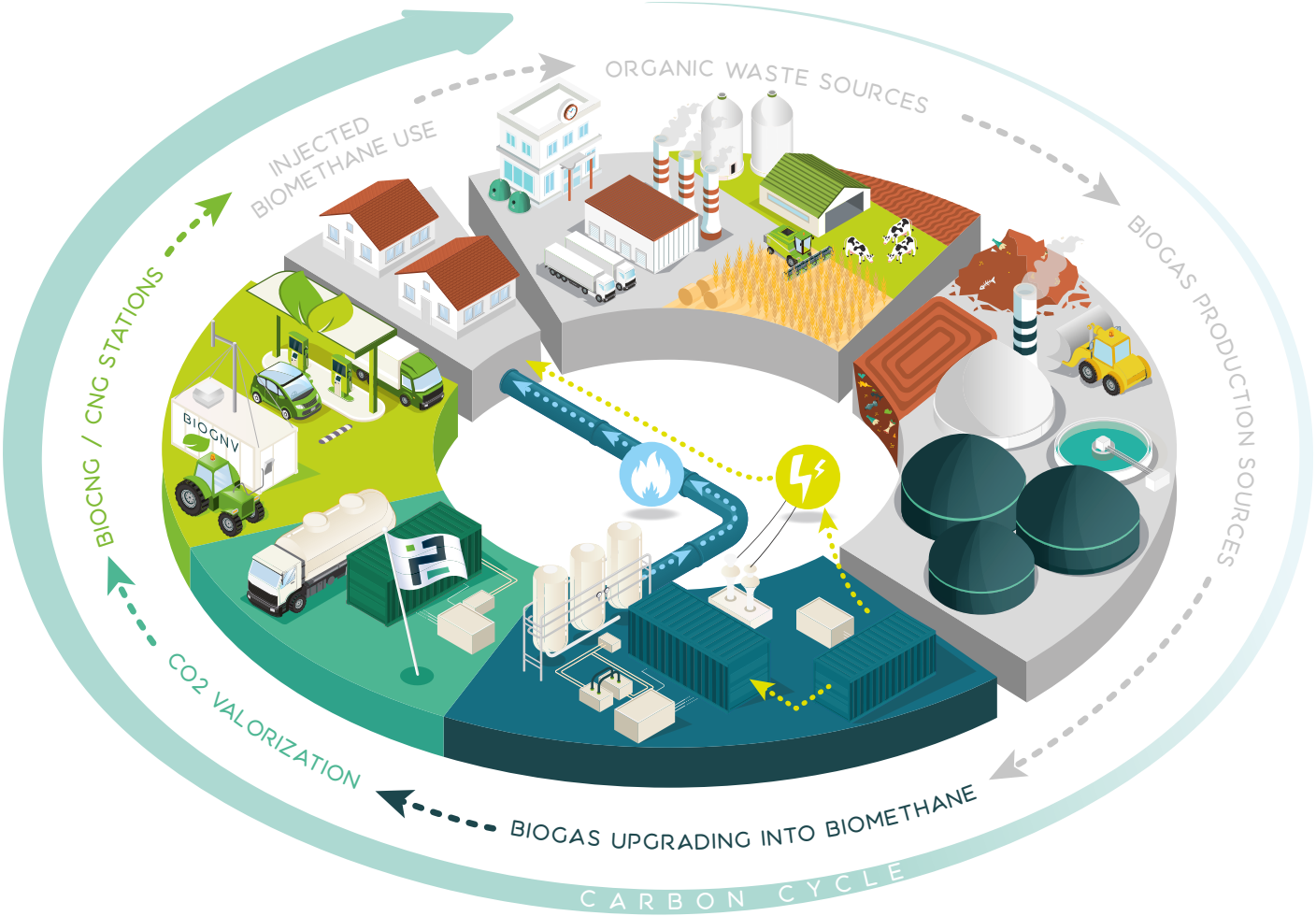
THE BIOGAS SECTOR

The challenges and process of an industry

The Biogas sector has been crucial to the energy and environmental transition for a number of years now.

Endless reuse and recovery create a virtuous circle which will slow down climate change. This energy, agricultural and economic resource is vital to our ecosystem, turning organic waste into a type of 100% renewable gas - Biomethane - which can either be injected back into the natural gas network or used as BioCNG (Compressed Natural Gas).

PRODEVAL brings its **engineering** expertise to bear across the full range of its services, processing and upgrading this biogas so that it can be distributed as green energy in gas networks, or as fuel through its various stations.



ACHIEVEMENTS

135
Millions of euros
of revenue in 2022

+400
projects PRODEVAL
in the world in 2023

150
units
Delivery capacity per year

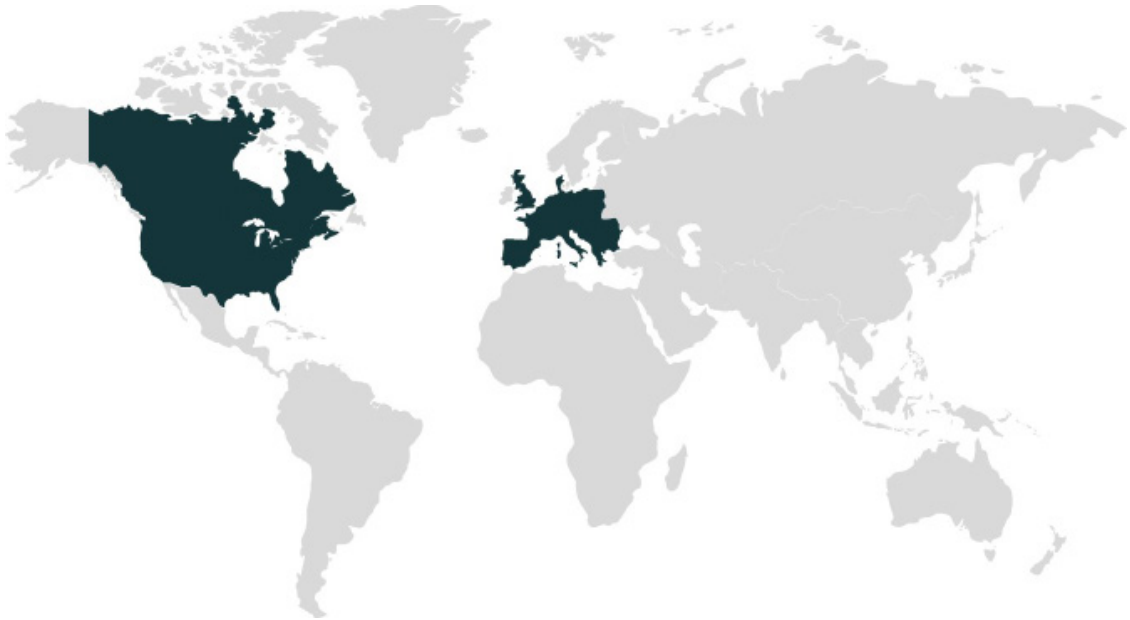
113
Millions of euros
of revenue in 2021

662
Thousand
Tons of CO_2 emissions
avoided per year

40 000
Nm^3/h
of Biomethane injected into
the gas grid

PRODEVAL IN THE WORLD

France - Italy - Spain - United Kingdom - Belgium - Switzerland
Germany - Czech Republic - United States - Canada - Portugal - Poland - Greece



OUR VALUES

History

Headed by Sébastien Paolozzi since 2009, Prodeval has a dynamic and innovative approach. Positioned as a key player in the energy transition and the fight against global warming, the company's expertise is underpinned by its 5 values:
Integrity, Commitment, Service spirit, Open-mindedness and Innovation.

INTEGRITY

Honesty, respect and integrity are our core values, guiding our professional conduct. We are committed to being as transparent as possible in order to build trust with our clients, our partners and our staff.

ENGAGEMENT

Our values are deeply rooted in our identity, and we strive every day to adhere to them and improve ourselves. Not only do we develop turnkey solutions for the production of green energy but respecting our environment and our human commitments is central to everything we do.

COMMITMENT TO SERVICE

Our clients are our number one concern. Our primary objective is to be there for clients, delivering maximum satisfaction by providing advice and support throughout their projects and training when it comes to running their site. At PRODEVAL, the client always comes first.

OPEN-MINDELESS

For the past three decades, we have identified innovative, tailored solutions to meet the needs of our clients and to tackle problems linked to Biogas, showing kindness, respect and humility. We know where we've come from and what still lies ahead of us.

INNOVATION

We are constantly on the look-out for new solutions and new products as we seek to serve our clients and play our part in the energy transition, forcing us to innovate every day. Our employees are always one step ahead, with ambitious projects to meet the needs of our clients.

These values guide us on a daily basis to offer our customers high-performance solutions, high-quality service and an active contribution to the energy transition.

THE PRODEVAL UNIVERSE

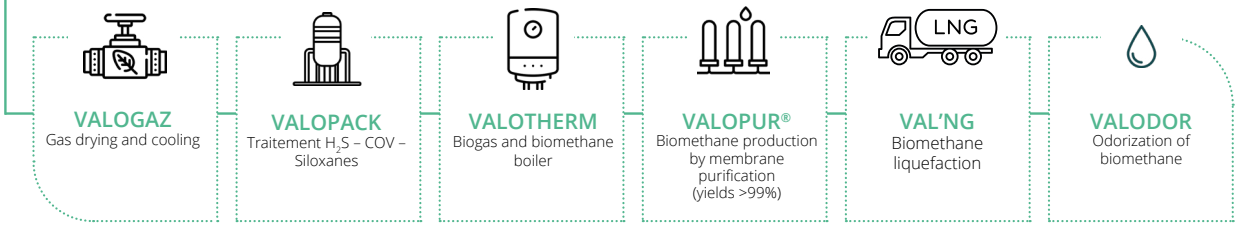
PRODEVAL has developed a set of solutions to meet the needs of Biogas treatment, such as drying, filtration and purification. Prodeval also offers solutions for the use of biomethane as biofuel (CNG), as well as innovative CO_2 recovery solutions.

From Biomethane production to CNG distribution

Our business is to valorize biogas in different forms and using different processes.
The «PRODEVAL World» is composed of a set of products that interact with each other mechanically and/or electronic way. The each have a specific function for the production and distribution of biomethane.

Each operation and each site being different, we customize your project by proposing an efficient solution to best meet your needs.

BIOGAS SOLUTIONS



VALOGAZ
Gas drying and cooling

VALOPACK
Traitement H_2S – COV – Siloxanes

VALOTHERM
Biogas and biomethane boiler

VALOPUR®
Biomethane production by membrane purification (yields >99%)

VAL'NG
Biomethane liquefaction

VALODOR
Odorization of biomethane

MOBILITY SOLUTIONS

AGRIGNV
Production, compression and distribution of BioGNV from biogas

CN'GREEN®
BioNGV compression and distribution stations

PRO-MS
BioGNV distribution terminals

OPTIMIZATION SOLUTIONS

V'COOL®
CO_2 recovery (Liquefaction)

ELECTRICAL SELF-CONSUMPTION
Cogeneration engine for biogas applications

QUALITY AND SERVICE

By your side to accompany you in your project

PRODEVAL provides quality facilities, local customer service and expert project management that place the company among the market leaders in Europe.

Our engineers draw, think and design the facilities. Our project managers accompany you to meet your needs. Turnkey solutions, all PRODEVAL products are prepared in the workshops of our local subcontractors and delivered in a single batch to the site.

Constant support during the operation :

PRODEVAL now has over 300 sites in operation worldwide. Thanks to this experience, we are able to offer a high-quality, responsive and flexible customer service.

We support each project throughout its entire lifecycle. Our operation and maintenance services are highly automated, thanks to 24/7 remote supervision and control via our hotline in all territories. PRODEVAL also boasts a training center dedicated to training our customers and all those involved in the biogas industry.

- **7/7 remote diagnostics :** with our Hypervision technology, we have a global view of your installations from a distance. The operating data collected in real time enables us to secure, control and optimize your plant's performance.
- **+100 PRODEVAL technicians** are located all over France, less than 2 hours from each installation, to ensure a rapid response. 17 of them are dedicated to remote after-sales service, ensuring rapid response and solutions for rapid troubleshooting, diagnostics and, if necessary, emergency dispatch.
- **Stock of spare parts worth €4 million (50% critical parts)**. A critical part is a part that stops the injection process. Even a heat exchanger that has very few breakdowns is a critical part, and is therefore stored on our premises. We created this stock so as not to be dependent on our suppliers' lead times, and to guarantee our customers the fastest possible restart.
- **PRODEVAL FORMATION**, a **QUALIOPI**-certified training center to support and train you in your operations requiring new skills.

PRODEVAL FORMATION Qualiopi processus certifié RÉPUBLIQUE FRANÇAISE

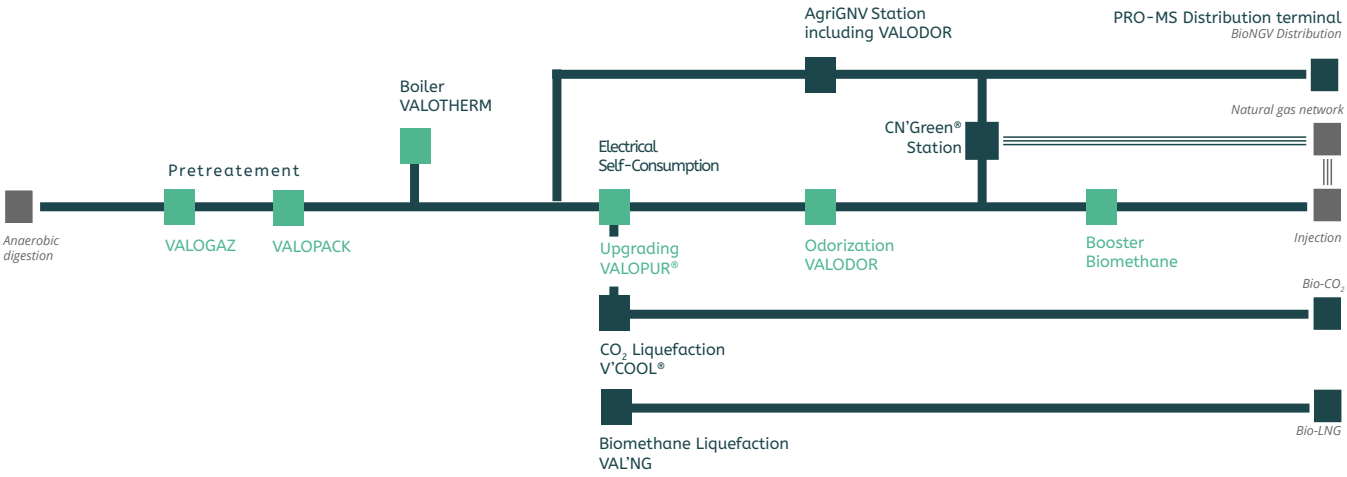
Certifications ISO 9001, 14001, 45001

PRODEVAL's quality management system meets all stringent requirements and applies to modular gas systems for CNG distribution.

ISO 9001 ISO 14001 ISO 45001 Opave TÜVRheinland

« Your satisfaction is our reward ! »

BIOGAS SOLUTIONS



VALOGAZ

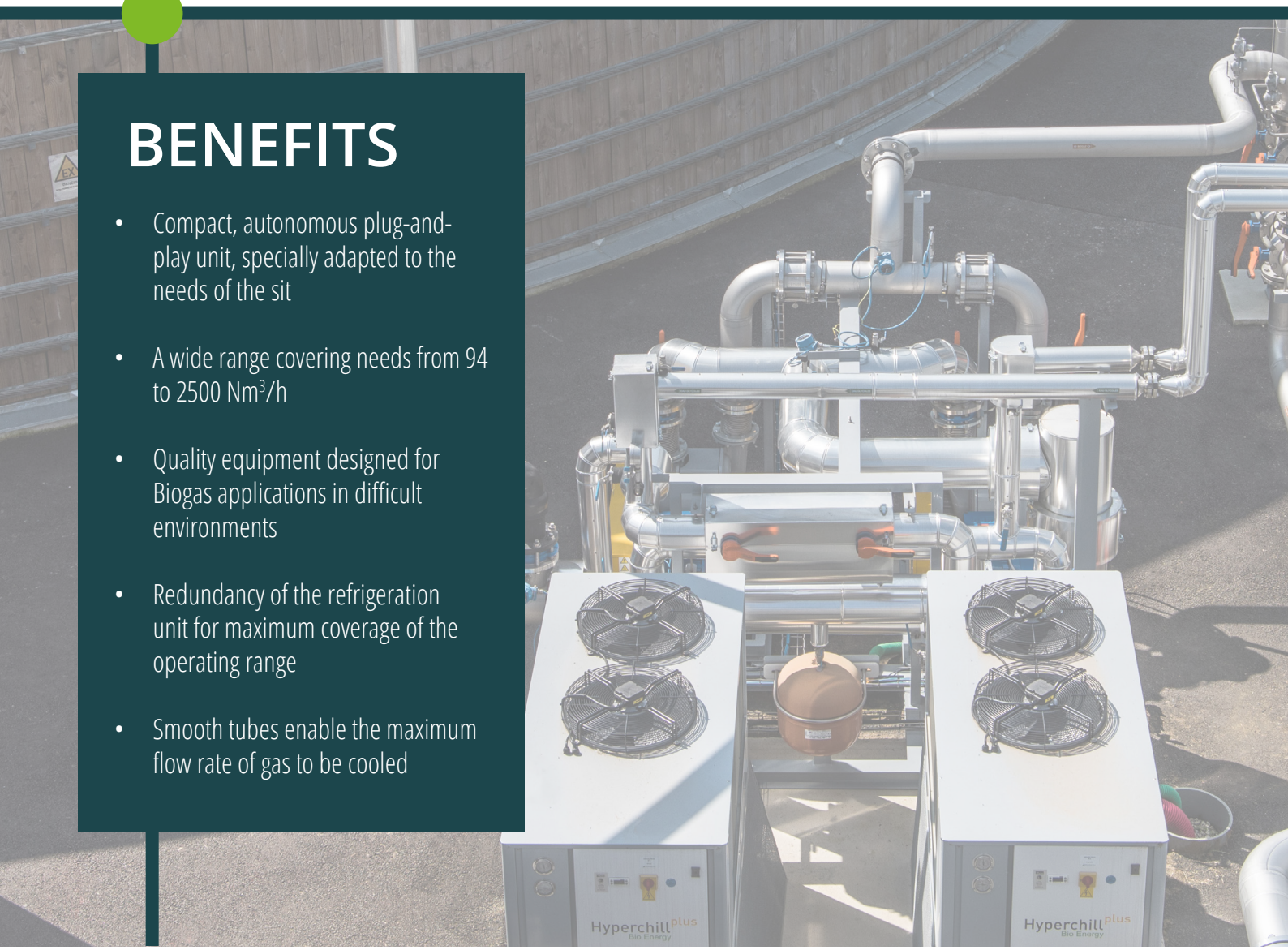
BIOGAS DRYING AND COOLING

As it leaves the digester, raw Biogas is **saturated with water and must be dried before it can be used**.
It is therefore **cooled to 5°C in the VALOGAZ unit, which separates and eliminates the liquid fraction contained in Biogas**. The unit is dimensioned in a way that allows cooling the maximum flow rate of gas in even the toughest conditions.

For this, PRODEVAL employ **the use of smooth, 316L stainless steel tube,** alongside with two chillers to handle any variations in temperature.
The gas is then moved onto the next stage, VALOPACK, pollutants capture and treatment unit, via the blower.

BENEFITS

- Compact, autonomous plug-and-play unit, specially adapted to the needs of the sit
- A wide range covering needs from 94 to 2500 Nm^3/h
- Quality equipment designed for Biogas applications in difficult environments
- Redundancy of the refrigeration unit for maximum coverage of the operating range
- Smooth tubes enable the maximum flow rate of gas to be cooled



VALOGAZ

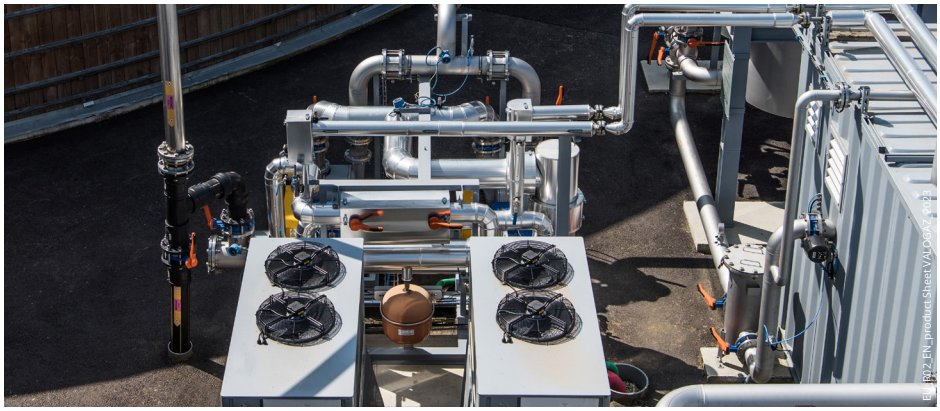
BIOGAS DRYING AND COOLING

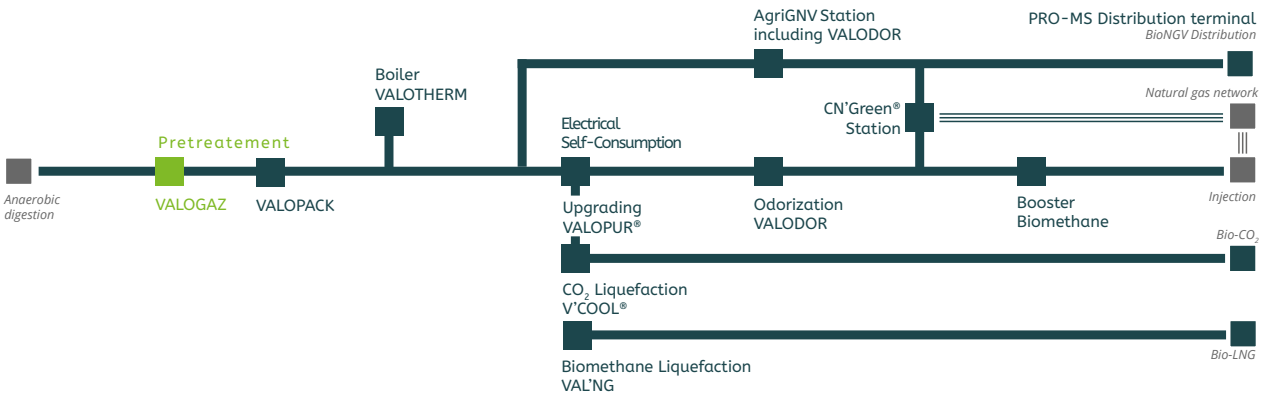
The VALOGAZ unit is delivered on a plug-and-play skid, which contains for the whole range:

- 1 100% galvanized frame with lifting lugs
- 1 Blower painted to RAL 6012, with IE3 rated motor
- 1 Tubular heat exchanger
- 1 Condensate separator with level detection
- 2 chillers
- Gas pipes
- Fully insulated chilled water pipes

VALOGAZ options:

- A second identical blower allows 100% redundancy in the event of the first blower failure
- -20°C/+40°C on cooling unit





VALOPACK

POLLUTANTS CAPTURE AND TREATMENT

After the first pretreatment process, the VALOPACK filtration unit is designed **to extract pollutants** (H_2S - hydrogen sulphide, siloxanes and VOCs - Volatile Organic Compounds) **from Biogas before continuing the upgrading process,** using two **activated carbon filter tanks**.

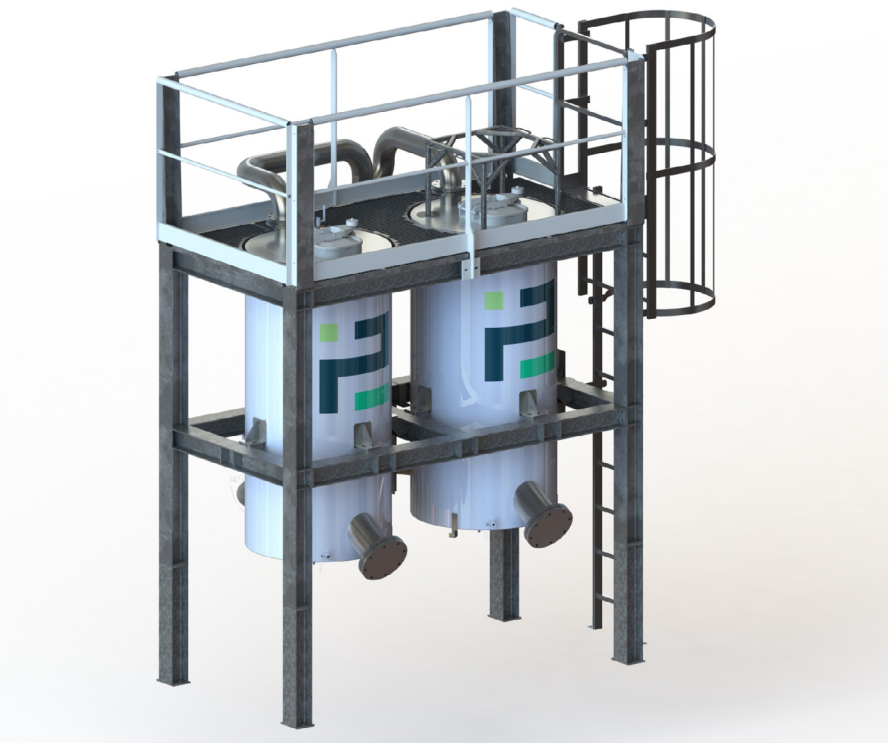
There is also a 3 µm dust filter located after the activated carbon filters, preventing dust from spreading after load changes. The type of activated carbon is chosen based on the concentration of each pollutant in the Biogas (dealing specifically with H_2S or VOCs).

BENEFITS

- Lead-lag assembly: Possibility of changing the order of the filters, even during operation and maintenance, to improve the quantity of pollutants retained by the activated carbons and to optimize the loading rate
- Optimal filtration and continuous operation
- H_2S measurements between filters: On-line sequential monitoring of loading rates and anticipation of activated carbon renewal

VALOPACK

POLLUTANTS CAPTURE AND TREATMENT



The VALOPACK unit is delivered on a plug-and-play skid, which contains for the whole range:

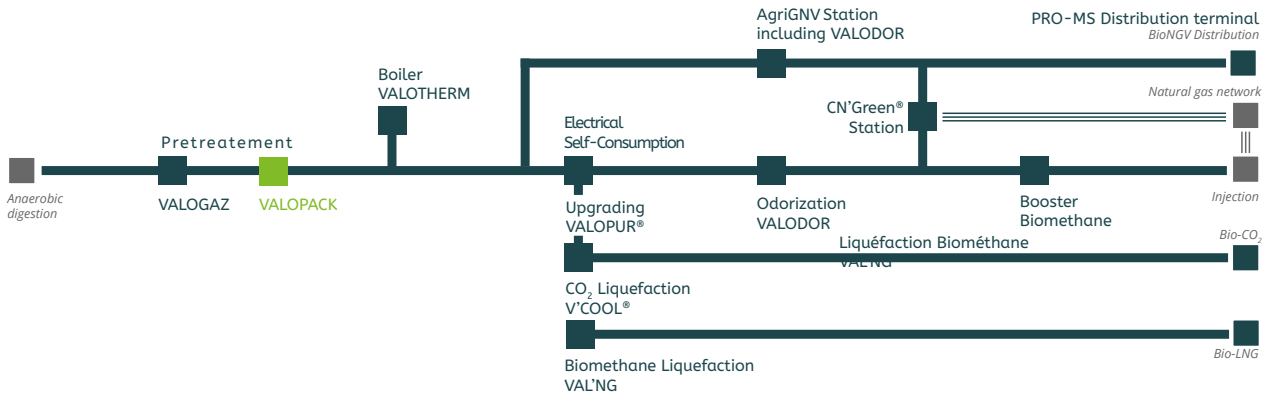
- 1 Hot-dip galvanized frame
- 2 Tanks
- All lead-lag piping with manual valves
- Sampling points for upstream/ downstream gas analysis

Excluded from the supply:

- The 1st load of activated carbon (quote on request according to activated carbon type)

VALOPACK options **:**

- Manual hoist
- ATEX Electric hoist
- Oxygen generator for optimizing H_2S adsorption
- Dust filter for VALOPACK stand-alone
- Valves on tank draining for 0.5 and 1 m^3 models



VALOTHERM

BIOGAS BOILER

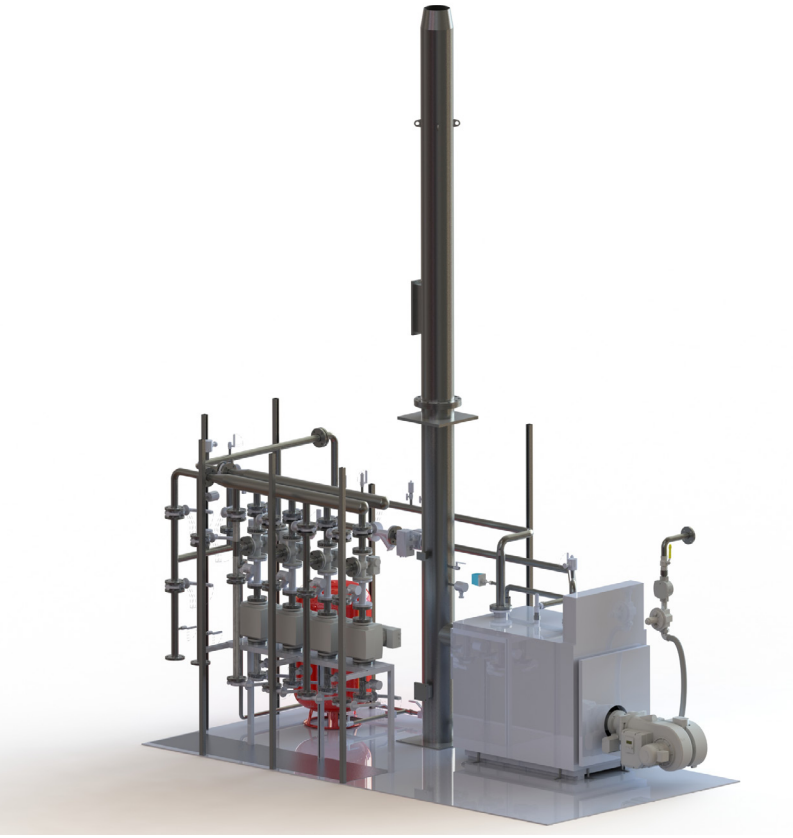
With VALOTHERM, a **part of Biogas is reused in a high efficiency boiler in order to supply hot water to the digester's heating network and thus maintain its optimal operating temperature**. The heat recovery is done through a gas/water exchanger that includes heat recovery from the compressor(s) and possibly the chiller. The equipment (boiler, burner, glycol water circuit) is sized according to the characteristics of Biogas and their layout is adapted according to the site constraints.

BENEFITS

- Turnkey equipment, autonomous, developed according to the needs of the site
- Simplicity of on-site connections:
  - Biogas piping
  - Glycol water network
  - Power supply
  - Condensate
- Containerized unit for quick installation and commissioning
- Possibility of integrating the control of Biogas booster from the boiler for greater autonomy and optimization of the installation

VALOTHERM

BIOGAS BOILER



The VALOTHERM Biogas boiler unit contains for the whole range:

1 Container with a closed and equipped room, painted RAL 6012 quality C3, including:

- Gas safety detection (process room)
- Smoke detection
- Ventilation
- 1 Hot water boiler between 70 and 90°C
- 1 Modulating Biogas burner
- 1 Biogas supply line with fireman box and shut-off valves
- 1 Self-supporting combustion chimney (6 m)
- 1 Heat recovery system
- 1 Expansion tank (volume defined in the technical data sheet according to the model)
- Safety markings
- 1 flame check valve

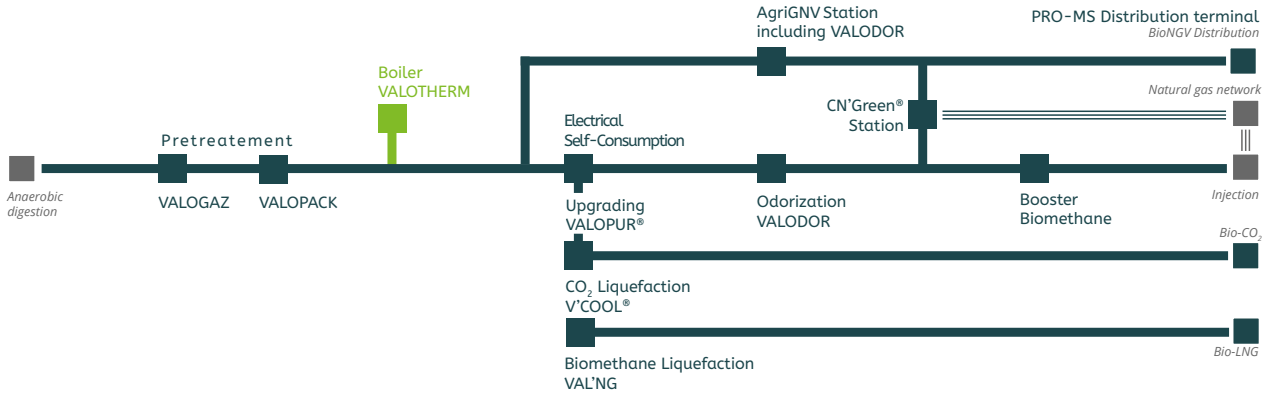
Depending on the models and options selected, the boiler room will be equipped with:

- 1 Control cabinet shared with the VALOPUR® Biogas upgrading unit

EU_R02_EN_Product Sheet VALOTHERM_2023

VALOTHERM options:

- Control cabinet for stand-alone operation
- Modification of the RAL container
- Container paint for corrosive environment
- Secondary outlet with manifold
- Secondary outlet with secondary circuit regulation (max distance and/or pressure drop to be validated)



VALOPUR®

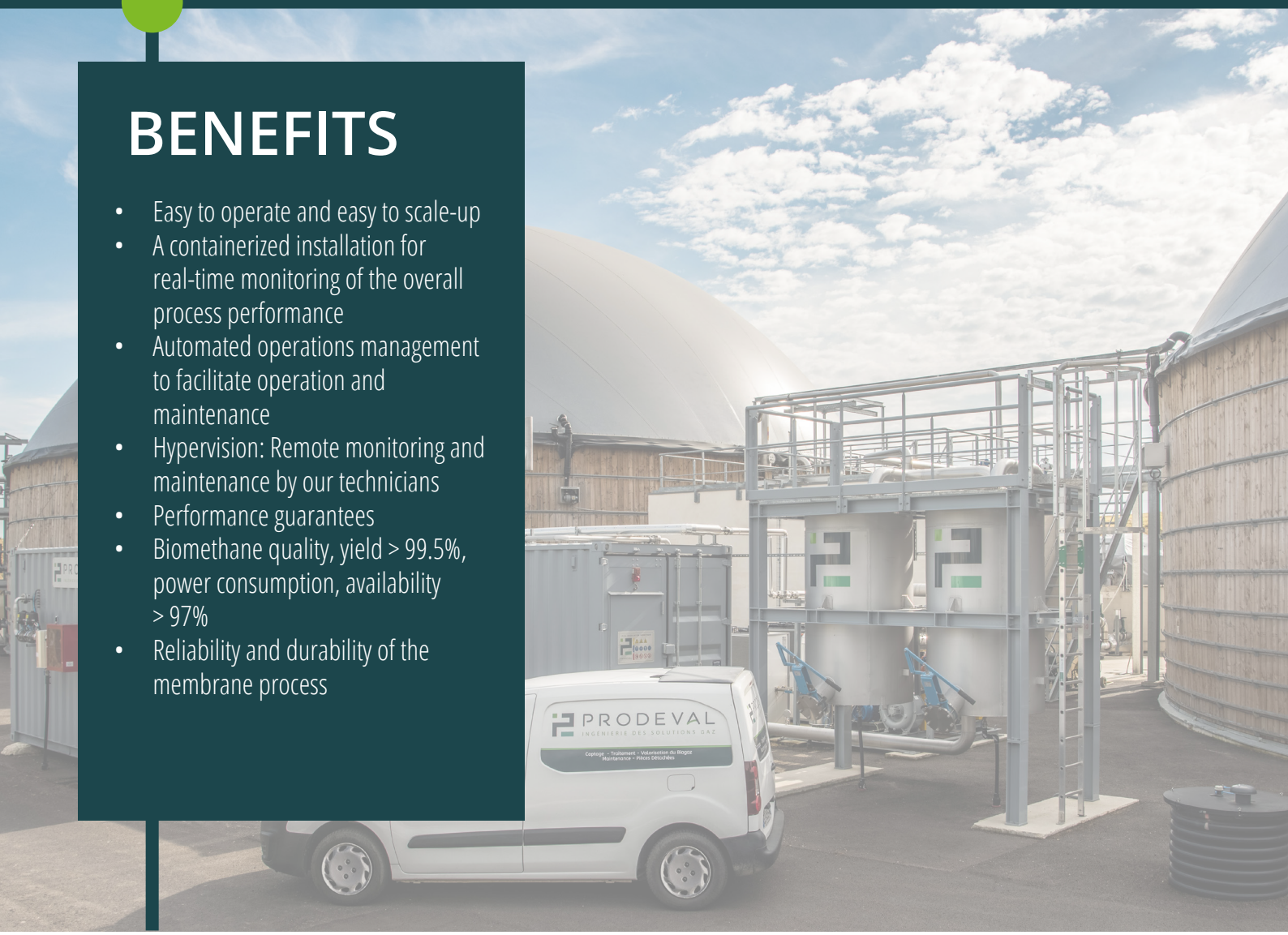
MEMBRANE BIOGAS UPGRADING

After the digester and pretreatment process, the compressed gas undergoes further filtration within the VALOPUR® unit. This is a compact unit housed within a pre-equipped container and composed of **three stages of membranes which separate CO_2 from CH_4 (patented EVONIK process)**.

This system allows to produce a Biomethane compliant to the network specifications, with upgrading efficiency up to 99.5 %. Once purified, Biomethane is channelled towards the grid injection station, which is connected to the natural gas network. The three stages membrane system deliver **operational flexibility, ensure optimal upgrading efficiency** across the unit's operating range.

BENEFITS

- Easy to operate and easy to scale-up
- A containerized installation for real-time monitoring of the overall process performance
- Automated operations management to facilitate operation and maintenance
- Hypervision: Remote monitoring and maintenance by our technicians
- Performance guarantees
- Biomethane quality, yield > 99.5%, power consumption, availability > 97%
- Reliability and durability of the membrane process



VALOPUR®

MEMBRANE BIOGAS UPGRADING

The SEPURAN® Green Membranes range contains for all products:

- Membrane with 316L stainless steel casing
- 1 Diaphragm installation kit for 16 barg application
- The model and configuration should be chosen according to the Biogas upgrading unit selected and the operating conditions.

The difference in size of the molecules gives them different diffusion speeds through the walls of the membranes, thus separating methane (low diffusion speed) from other compounds (carbon dioxide, water, oxygen, etc.).

The Biogas Compressor unit contains for the whole range:

- 1 Compressor integrated in its casing, with a RAL supplier paint C3 quality
- 1 IE3 motor on the compressor
- 1 Heat recovery system
- 1 Variable speed drive
- The main components of the control-command system (Programmable Logic Controller - PLC - and Human-Machine Interface - HMI), excluding the control cabinet
- Pre-wiring of equipment (specific cable length per model) for connection to a control cabinet

Upgrading unit

1 Biogas membrane upgrading unit, excluding compressor, including:

- Raw Biogas analysis (CH_4, CO_2)
- Off-gas analysis (CH_4)
- Safety devices
- Water and oil filtration downstream compression
- Biomethane flow and quality control
- Instrumentation without local display
- Safety shut-off valves
- Biomethane and off-gas recirculation valves in case of non-conformity
- Biomethane flow metering
- 304L stainless steel gas piping

Containerized and secured unit

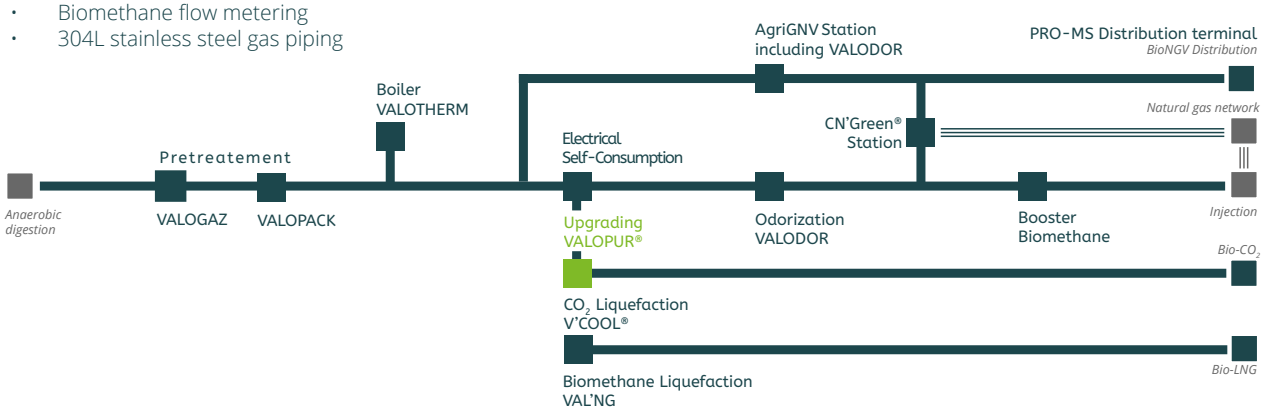
1 Container, painted RAL 6012 C3 quality, including:

- Wall insulation
- Gas safety detection (Process room)
- Smoke detection and air conditioning in the technical room
- Ventilation

1 control cabinet with an HMI (Human Machine Interface)

Safety markings on the whole installation

Biogas booster and drying unit (VPGA 2G models)



BOOSTER BIOMETHANE

The upgraded Biogas comes out of the VALOPUR at a pressure lower than 20 barg. The RNG Booster is a solution that can be integrated into any type of Biogas treatment and recovery facility **to meet the specifications for injection into medium and high pressure gas networks, virtual pipeline or fueling stations**. In order to transport RNG at such pressurized networks, **additional compression is necessary to allow its injection in complete safety.** The pressure in these pipelines is variable, ranging from 20 to 300 barg.

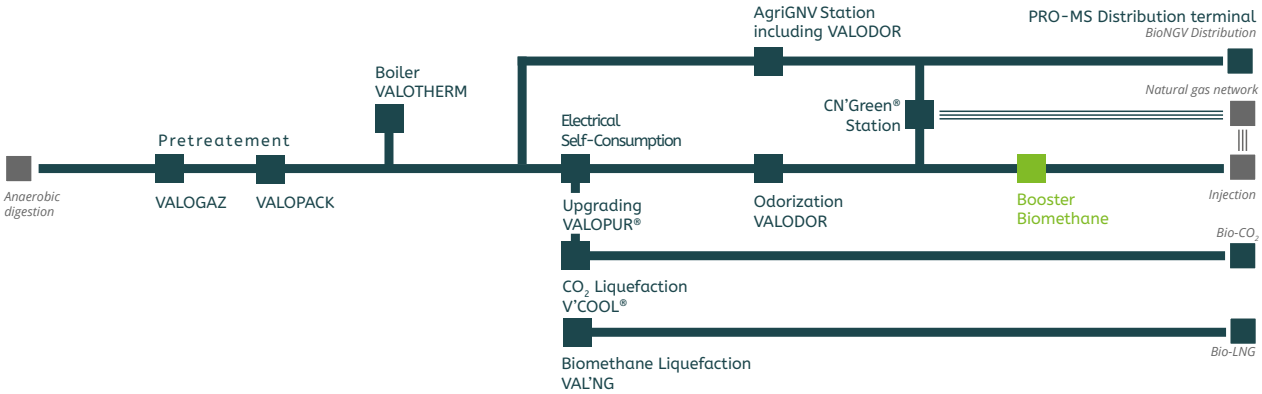
BENEFITS

- Made by PRODEVAL
- Easy integration on any type of existing treatment and upgrading Biogas installation below 18 barg
- Modular compression for reinjection between 20 and 71 barg, depending on the network's conditions
- Maintenance and monitoring performed by PRODEVAL in the same way as all the installations

BOOSTER BIOMETHANE

The BOOSTER BIOMETHANE unit contains for the whole range:

- 1 Compressor integrated in its casing, with a RAL supplier paint C3 quality
- 1 IE3 motor on the compressor
- 1 control cabinet including speed variator, automat and HMI (Human Machine Interface)



VALODOR

BIOMETHANE ODORIZATION

The VALODOR unit is designed to **odorize Biomethane as it exits the Biogas upgrading unit**, ensuring that it conforms to the standards required for injection into the natural gas network.
THT (tetrahydrothiophene) is the compound used for odorization. Part of the Biomethane is channelled towards the VALODOR unit before being saturated with THT. Then, Biomethane is mixed back in with the main flow in order to achieve the concentration outlined in the network standard.

BENEFITS

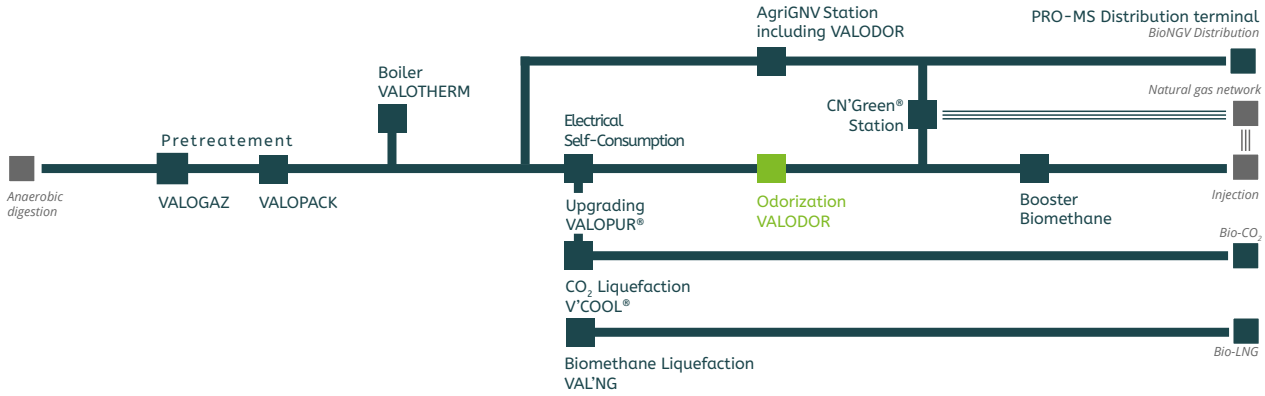
- Simple integration into the VALOPUR® Biogas upgrading process
- Rapid stabilization of the desired THT content
- Accuracy of THT content in Biomethane
- No losses during injection as a result of shutting down and starting back up again

VALODOR

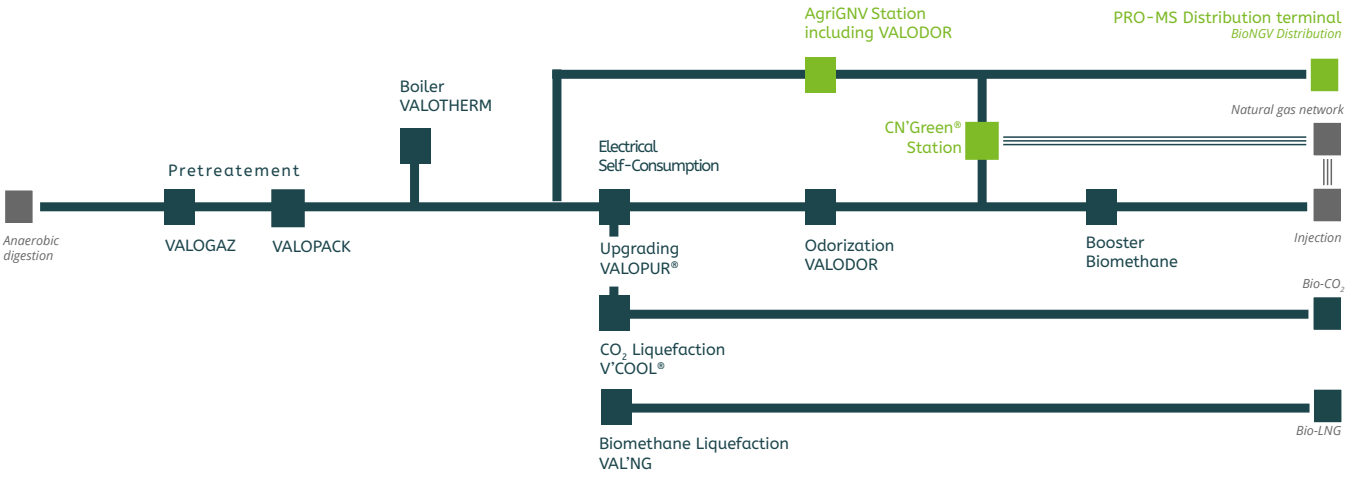
BIOMETHANE ODORIZATION

The VALODOR SA unit is delivered plug-and-play in a stand-alone version and contains for the whole range:

- 1 Skid integrated in a cabinet for outdoor installation, with RAL 7047 C3 quality paint
- Pre-wiring of equipment (specific cable length per model) for connection to a control cabinet
- Double sided fittings to ensure connections with commercial THT drums



OUR MOBILITY SOLUTIONS



AGRIGNV

LOCAL BIOGAS PRODUCTION AND DISTRIBUTION STATION

AGRIGNV is designed for **operators of anaerobic digestion plant** (farmers, manufacturers, regions, etc.) who want to **upgrade an excess of Biogas production as BioGNC** (Compressed Natural Gas) for local distribution. The AGRIGNV® works in parallel to the initial application (cogeneration or Biogas boiler).

Complete, competitive solutions tailored to suit each need:

- **Private** or **public** BioNGV stations
- Quick refueling via our PRO-MS distribution terminal
- For **all types of vehicles** (light, heavy, farm vehicles, etc.)
- **Capacity of 37 Nm³/h of Biogas**

BENEFITS

- Local fuel distribution: To get away from fossil fuels and help reduce greenhouse gas emissions
- Economically and technologically suitable solution for a small fleet of vehicles
- Ideal for powering vehicles, whether they are light vehicles, trucks or farm vehicles or other means of transport
- Continuous conformity control of the BioNGV produced (compliance with ISO 16723 - 2)
- Robust equipment, in compliance with the ISO 16923 standard (design, construction, operation, inspection, and maintenance of natural gas refueling stations)
- Solution integrated in a container for easy implementation

AGRIGNV

LOCAL BIOGAS PRODUCTION AND DISTRIBUTION STATION

AGRIGNV options:

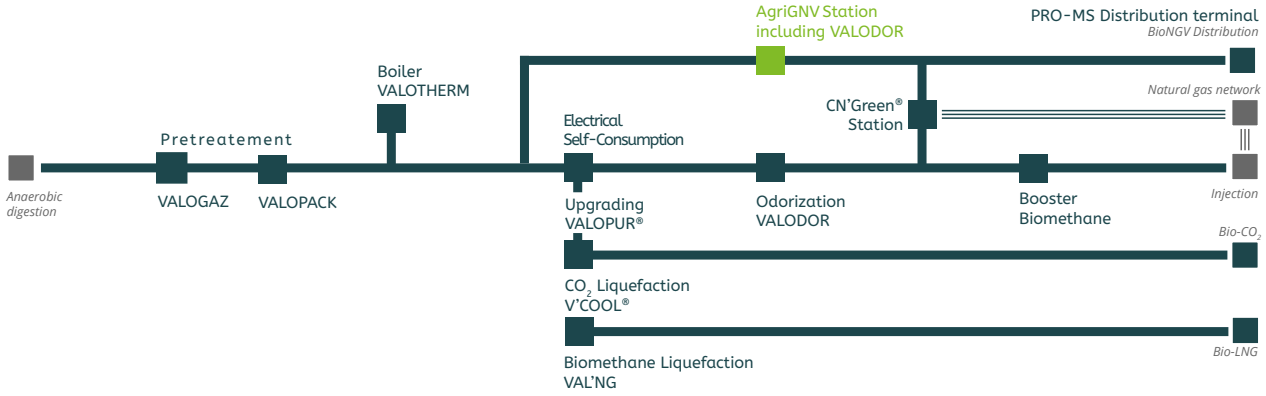
- Biogas supply booster
- Self-service distributor with RFID badges and/or credit card payment
- Condensate well with integrated
- Lift pump
- RAL C3 quality modification (variant)

The AgriGNV BioNGV production and distribution unit is delivered plug-and-play and contains for the whole range:

1 Container with RAL 6012 C3 quality paint, including:

- 1 Compressor
- 1 Biogas upgrading unit
- 1 Rack of storage bottles 3,36m³ Max
- 1 Control cabinet
- 1 PRO-MS distribution terminal
- 1 Identification system with RFID badges
- Odorization of BioNGV
- Smartfill (filling optimization system)
- 1 distribution terminal with NGV1 nozzles
- PRODEVAL logo with baseline at bottom of container

Safety markings



CN'GREEN®

CNG DISTRIBUTION STATION

PRODEVAL has developed through the CN'GREEN® brand **CNG/BioCNG (Compressed Natural Gas) refuelling station solutions scalable to adapt to both public and private CNG stations.**

In a CN'GREEN®, the components have been **optimized to be fully integrated into a single container**.
The CN'GREEN® station has been designed with the aim to **reduce the initial cost of investment** and to ease operational set up with fast commissioning system.

BENEFITS

- Private or public CNG and BioCNG stations, entirely developed at PRODEVAL in order to offer maximum continuity of service, allowing us to be as responsive as possible
- Compact and modular solution adaptable to all types of vehicles (light, heavy, agricultural...)
- Easy to install and integrate on site. Containerized station allowing the equipment to be installed on plots where space is limited
- Possibility of self-service multi-card payment

CN'GREEN®

CNG DISTRIBUTION STATION

CN'Green® CNG distribution station contains in its basic supply:

1 Containeur with RAL 9001 C3 quality paint, including:

- 1 Compressor
- 1 Rack of storage bottles*
- 1 Control cabinet
- Non-transactional kiosk
- Location for distribution terminals*
- Location for self-service distributor*
- 1 Private non-transactional self-service distributor with RFID identification badges*
- Safety markings*

**Depending on model*

CN'GREEN® options:

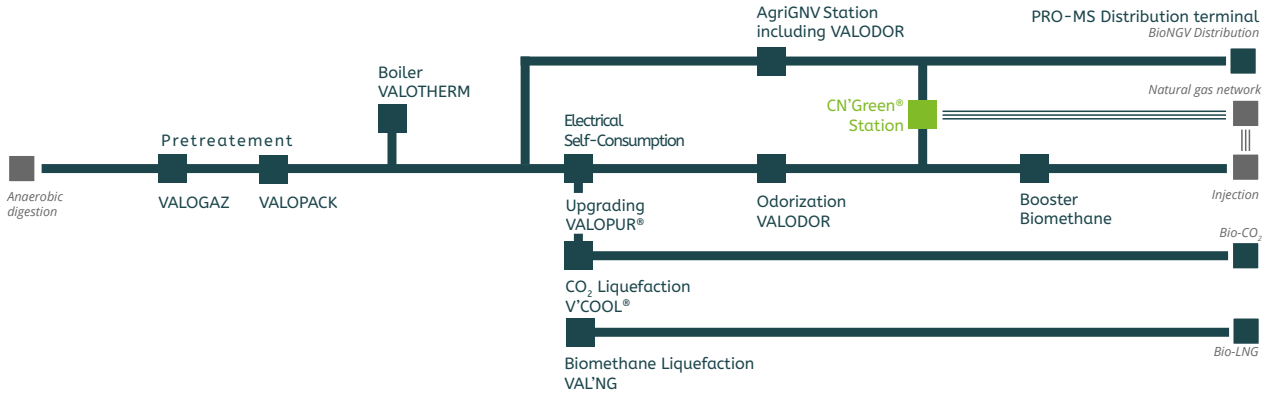
- Modification of the RAL paint of the container
- Additional storage volume
- Additional compressor
- Upstream pressure-reducing station

CN'GREEN® stations are installed on an arranged exit (by the grid operator) of the natural gas network, to which a pressure regulating unit may be added either by the grid operator or by PRODEVAL.

The gas entering the station has the same composition as standard natural gas (ISO 15430). Pressure levels will depend on the distribution network.
The gas will be expanded before entering the CN'GREEN® unit to ensure a constant pressure. It will then be compressed for storage in high pressure cylinders. It can then be used to supply vehicles with CNG.

CN'GREEN® refuelling stations from PRODEVAL are capable of handling a wide range of usage frequencies and CNG refuelling capacities.

**Depending on model*



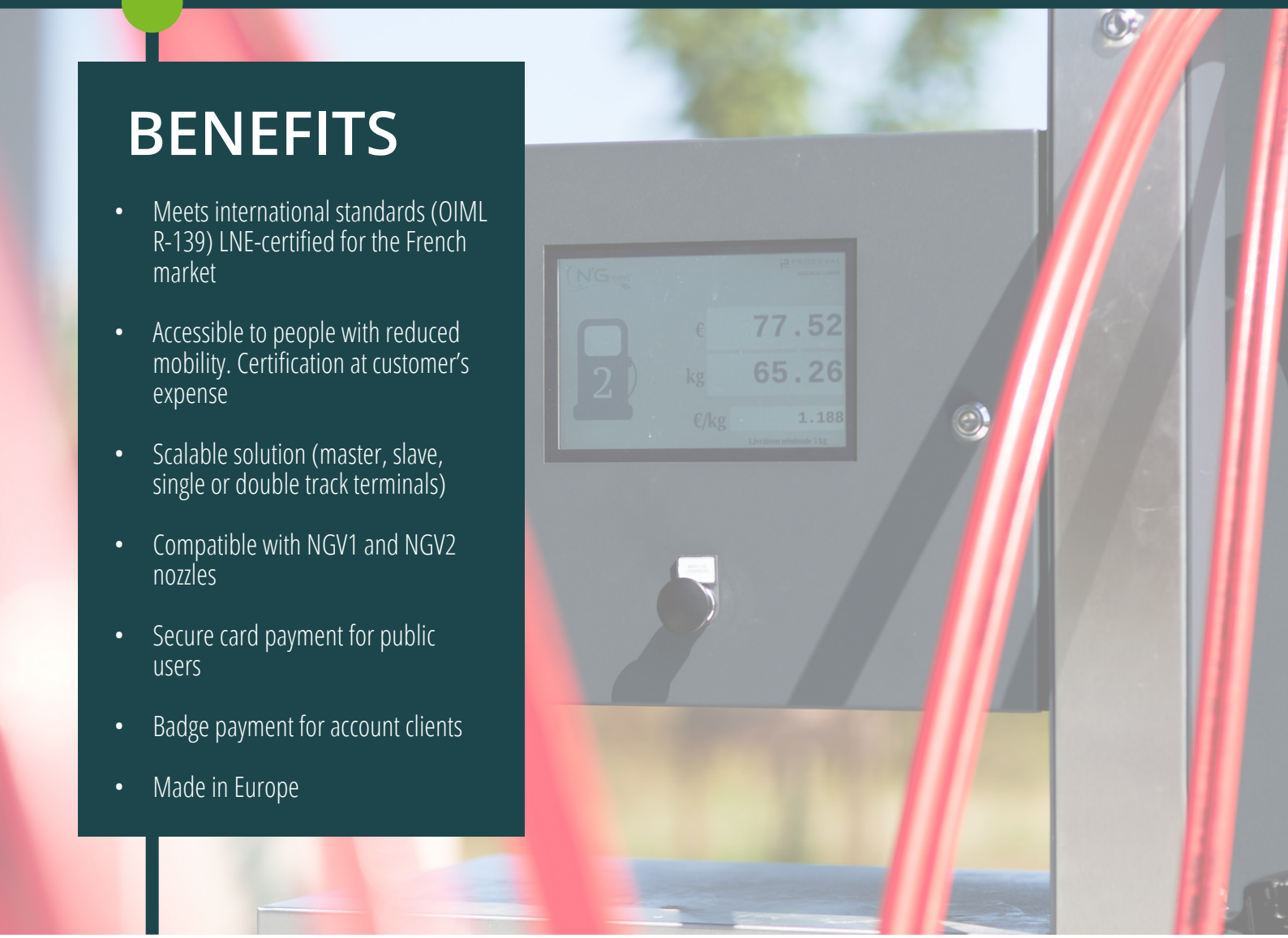
PRO-MS

CNG DISTRIBUTION TERMINAL

PRODEVAL designs and develops its own CNG (Compressed Natural Gas) distribution terminals, equipped with the latest technology.
The PRO-MS distribution terminals are adapted to the PRODEVAL CNG stations or other manufacturers.
Reliable, easy to use, they are designed for both **public or private use** and are suitable for **light vehicles, buses, heavy-goods vehicles and farm vehicles**.
PRO-MS terminals have been **certified by the French National Laboratory for Metrology** and Testing in accordance with the standard OIML R139, and meet the requirements of the standard ISO 16923.

BENEFITS

- Meets international standards (OIML R-139) LNE-certified for the French market
- Accessible to people with reduced mobility. Certification at customer's expense
- Scalable solution (master, slave, single or double track terminals)
- Compatible with NGV1 and NGV2 nozzles
- Secure card payment for public users
- Badge payment for account clients
- Made in Europe



PRO-MS

CNG DISTRIBUTION TERMINAL

The PRO-MS distribution terminal contains in its basic supply:

1 Frame with RAL 6012 paint, including:

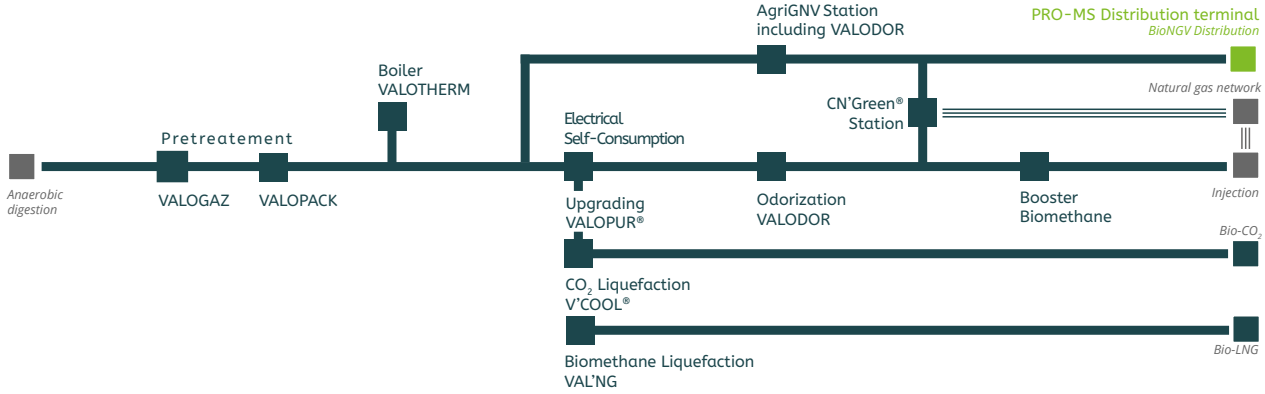
- Places for 2 to 4 dispensing pistols type NGV1 and NGV2
- 1 HMI per track allowing the display of the quantity distributed and the price
- (Bio)CNG metering and distribution process equipment
- Safety markings

Compatible with the following equipment:

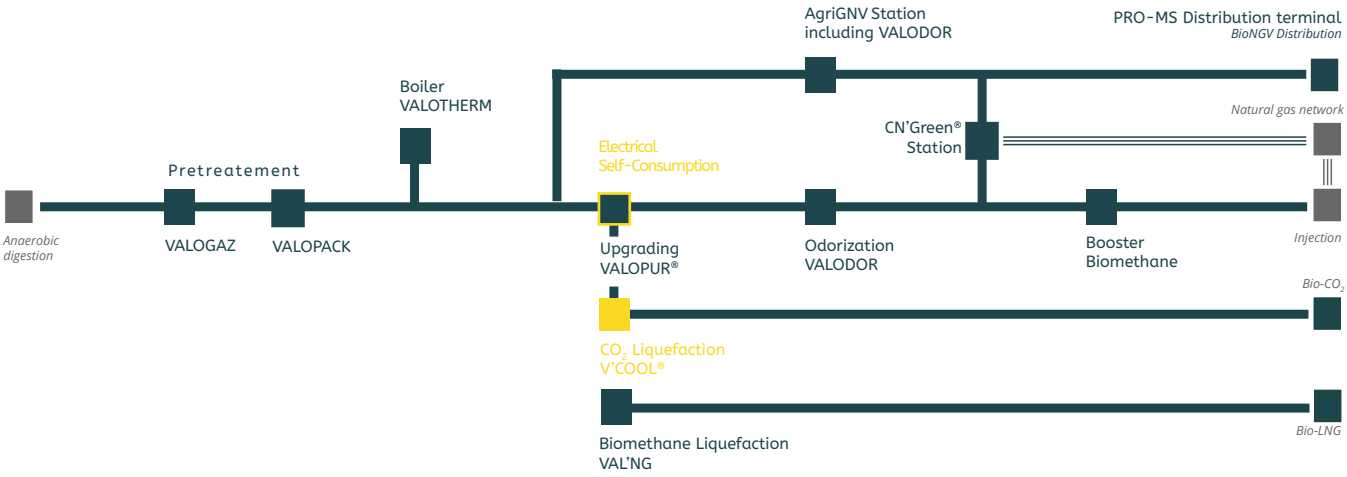
- AgriGNV or CN'Green® stations
- Any type of CNG station

PRO-MS options:

- NGV1 pistol (for light vehicles)
- NGV2 pistol (for heavy vehicles)
- Payment terminal / Self-service distributor
- Process and transactional metering equipment



OUR OPTIMISATION SOLUTIONS



V'COOL®

CO2 LIQUEFACTION

Biogas produced by Anaerobic Digestion contains mainly methane (CH_4 - 50 to 70%) and carbon dioxide (CO_2- 30 to 45%). Following the upgrading of Biogas into Biomethane the stream usually released into the atmosphere - called "**off-gas**" - contains about 99% CO_2 and 1% CH_4.

V'COOL® unit **liquefies** this **CO_2** while recovering the residual methane which can be returned to Biogas plant.

BENEFITS

- Reducing greenhouse gas emissions
- Capture the last methane residues in the off-gas and optimize the plant's upgrading efficiency as much as possible
- Market a bio-CO_2 to various industries, such as agriculture and food processing...

V'COOL®

CO2 LIQUEFACTION

The V'COOL® unit is delivered plug-and-play and contains for the whole range:

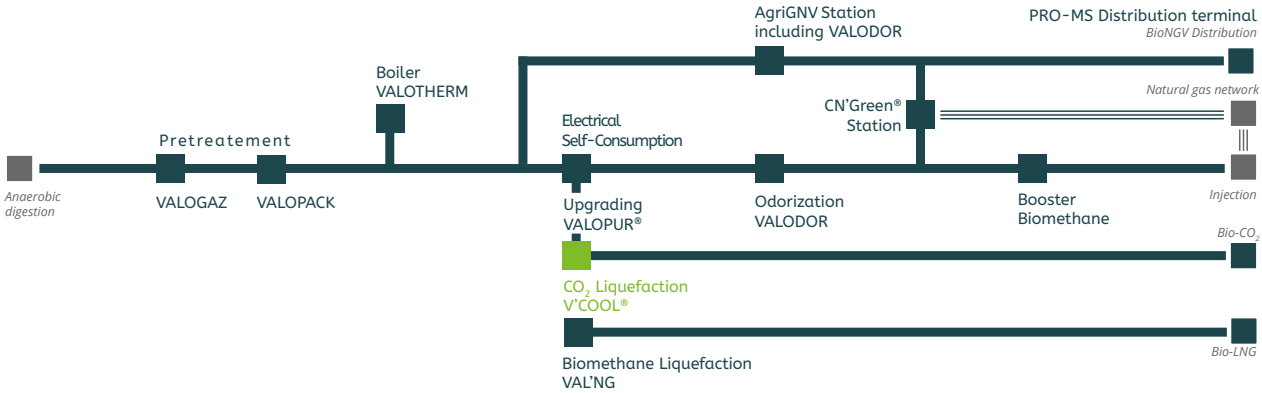
INDUSTRIAL and FOOD GRADE

Both ranges consist of the following basic components:

- A two-stage off-gas compression unit
- A CO^2 filtration and drying unit
- A CO^2 liquefaction unit
- A control cabinet and PLC display unit

A "green CO_2" used in different industries

- **Agriculture** for cultivation in greenhouses
- **Materials** for pickling metal parts, additives
- **Transversal processes** for cooling purposes, laser technology, arc welding
- **Food industry** for freezing, food preservation, beverage carbonation
- **Chemistry** for supercritical fluid extraction/chromatography, cryo-grinding, carbonating agent
- **And many other uses** such as smoked effects with dry ice, anti-limescale treatment, dry ice for fire extinguishers, propellants for aerosols.



ELECTRICAL SELF-CONSUMPTION

The self-consumption by **cogeneration module** has been specially developed for a **Biogas application** (methanization installations...), to allow the Biogas sites to be in **total or partial electrical self-consumption and thermal self-sufficiency**.

The process aims to supply a **high efficiency cogeneration engine** with dried and treated Biogas (H_2S, VOCs, Siloxanes) to provide **an alternative solution to the current energy market context**.
This **Plug and Play** solution integrates with all the technologies already on site. Our team ensures the assembly, installation, commissioning and complete maintenance of the cogeneration.

BENEFITS

- Biomethane carbon intensity reduction: Units do use electricity, often produced from fossil energy or nuclear one. This solution allows to clean Biomethane production without using non-renewable energy sources.
- Energetic resilience and self-sufficiency: This electrical self-consumption solution is allowing to produce half of the operator' site power supply or entirely.
- A proficient expertise and renowned aftersales services: 2G Energy and PRODEVAL, two international entities, strongly structured, reliable, owing to their high technologies.

Picture: 2G Energy

ELECTRICAL SELF CONSUMPTION

SELF-CONSUMPTION unit options:

- Heat recovery variant
- Noise level possible 52 dB / 55 dB
- Oil storage tanks

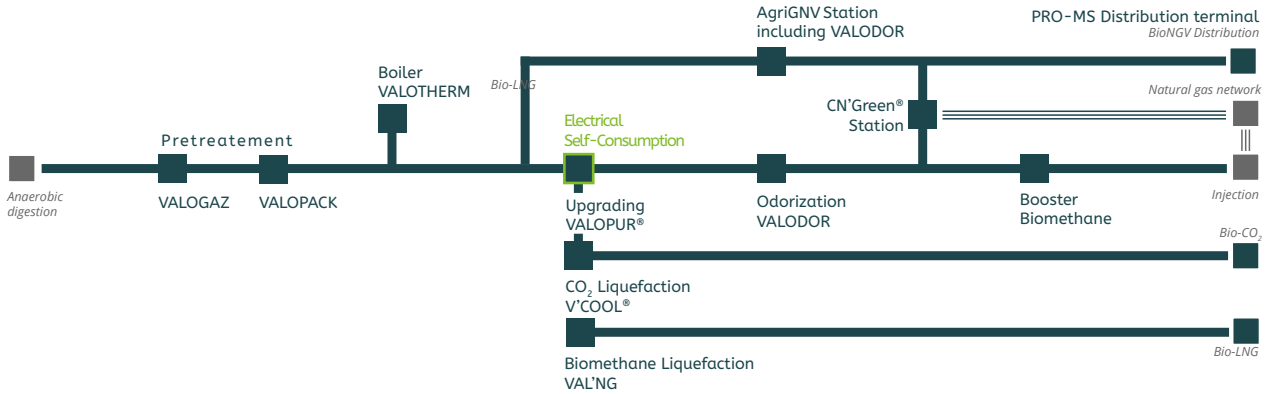
The SELF-CONSUMPTION unit contains for the whole range:

1 Container with RAL 6005 C3 quality paint, including :
- Wall insulation
- Gas safety detection (local process)
- Ventilation

1 Biogas Cogeneration unit, including:
- Integrated emergency cooling control
- Water preheating and cooling system
- Lead/acid starter battery
- Permissible pressure regulator < 400mbar
- Gas quick-closing valve
- Emergency cooler 65 db(A) at 10 m
- Mixing cooler in the form of a table top cooler 65 dB(A) at 10 m (valid for power ≥ 160 kW)
- Exhaust silencer 65 dB(A) at 10 m
- Exhaust gas heat exchanger 180 °C
- Oil pump with distribution rail
- Oxidation catalyst
- Exhaust gas measurement opening Standard NFX 44052
- Power cabinet for synchronization and current injection
- Generator and power switch
- Data and grid injection interfaces
- Integrated POWER PLANT module
- Controller with zero crossing single-engine system
- Establishment of measurement and monitoring indicators

1 Control cabinet with an HMI (Human Machine Interface)

Safety markings on the whole installation



PRODEVAL

RNG PROCESS TECHNOLOGIES

FOLLOW US

www.prodeval.com