

**CUSTOMER:** GAEC DU MILLIER

**POWER PLANT:** 225 kWel

**LOCATION:** BEUZEC-CAP-SIZUN

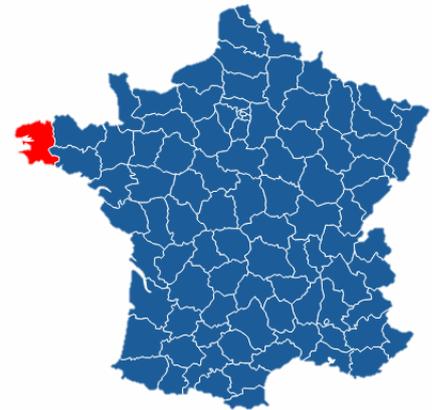


## KOHLER-SDMO: BIOGAS, A RENEWABLE ENERGY PRODUCTION PROCESS

### GAEC DU MILLIER

Established in February 1990, GAEC DU MILLIER is a farmers' collective specialising in dairy cattle and pig breeding. Located in Beuzec-Cap-Sizun in Brittany, it is managed by the Sergent family and their 4 employees.

The farm operates with 325 sows, in addition to 130 dairy cows producing 1 million litres of milk each year. 200 hectares of cereals and animal feed are also grown. In order to optimise the quality of its products, the family firm is developing its production methods towards a more sustainable model and is adapting its activities in the face of the ever-changing competitive environment.



### EXPRESSION OF NEED: TO RECYCLE LIVESTOCK EFFLUENT (MANURE AND SLURRY)

GAEC DU MILLIER is located in a catchment area that is significantly affected by the proliferation of green algae mainly generated by local farming activities. In order to reduce its negative impact on the environment, the Sergent family launched a project to construct a biogas plant to produce electrical and thermal energy in a sustainable manner throughout the year using effluent from the farm's livestock.

André Sergent decided to call in the company MAIVEO, a specialist in biogas plants, to manage the project and to encourage collaboration with local companies. He identified the new activity being developed by KOHLER-SDMO, with its expertise in the design, installation and maintenance of the cogeneration module.



## PROJECT IMPLEMENTATION: INSTALLATION OF THE BIOGAS UNIT

Methanisation is a natural biological process that can be used to recycle organic material (manure, green waste, fats, etc.) into energy. Also called anaerobic digestion, this technology uses micro-organisms to break down organic material in the absence of oxygen, producing biogas, a gaseous mixture that constitutes a source of renewable energy and produces a solid residue called digestate, which can subsequently be used as fertiliser.

With the benefit of its experience in the field of natural gas cogeneration and with close historical ties with the farming industry, KOHLER-SDMO is ideally placed to tackle the world of anaerobic digesters. The biogas plant of GAEC DU MILLIER, now operating under the new company name of CAP METHA, is a benchmark project for KOHLER-SDMO.

With rated output of 236kWe and permanently coupled to the grid, the CAP METHA plant is equipped with a KOHLER-SDMO biogas module BL240 (225kWe), incorporating a 6-cylinder in-line LIEBHERR engine. The project represents total investment of some 1.4 million euros. The biogas plant is anticipated to make a return on investment in 7 years.

For GAEC DU MILLIER, a biogas unit also represents an opportunity to diversify its income in an agricultural environment where traditional activities (milk, beef, pigs, etc.) are regularly in crisis. The electricity produced by cogeneration is sold to EDF and the heat given off by the engine is consumed by the anaerobic digester, by the heating system in the pig sheds and to dry fodder. The buildings are therefore better ventilated and heated, enhancing livestock sanitation. And finally, the digestate from the anaerobic digestion process is used as fertiliser.



## KOHLER-SDMO SOLUTION: The guarantee of rapid and reliable installation monitoring, maintenance and servicing.

The corrosive environment of the farm and the maritime atmosphere presented particular technical constraints regarding sustainable and constant use over the longer term. KOHLER-SDMO therefore designed a bespoke concrete container to protect the cogeneration module over time.

Via KOHLER-BES, its sister company, KOHLER-SDMO covers the whole of France, offering a rapid and effective maintenance service. It adapts its services to the client's individual needs, offering tailor-made solutions.

