



MAKEEN
ENERGY

Biogas-LPG Technology

Our experience. Your success

LPG is enabling biogas transformation

For years, biogas plants has focused on generating electricity, but a changing energy landscape has pushed many biogas producers away from electricity production to explore new revenue streams. One of these is producing gas for the national grids. There's just one problem: the biogas doesn't have the necessary calorific value to meet the strict gas grid standards. This means that it needs to be enriched with propane (a key component of LPG) before it can be accepted into the grid – a process that requires the right equipment.



Approximately 50 systems built or delivered in the last 15 years.

Our turnkey solution

To solve this challenge, we have developed a reliable, ready-to-install equipment package designed specifically for propane enrichment in biogas plants. This package includes everything from LPG tanks and piping to vaporizers, with different sizes corresponding to the specific desired capacity of the biogas plant in question.

By integrating these systems, network operators can effectively elevate the calorific value of their gas, making sure that it lives up to the grid standards and unlocking new revenue opportunities.

Benefits:

- Biogas-LPG plant technology proven for decades
- Planning, manufacturing, and installation from a single source
- Selection of components from well-known manufacturers and from in-house production
- Based on years of experience in plant construction and continuous development by our technicians and engineers
- Quality made in Germany

Selected plant examples and equipment scope

Across several projects in Germany, we have delivered and installed systems tailored to each site's needs.

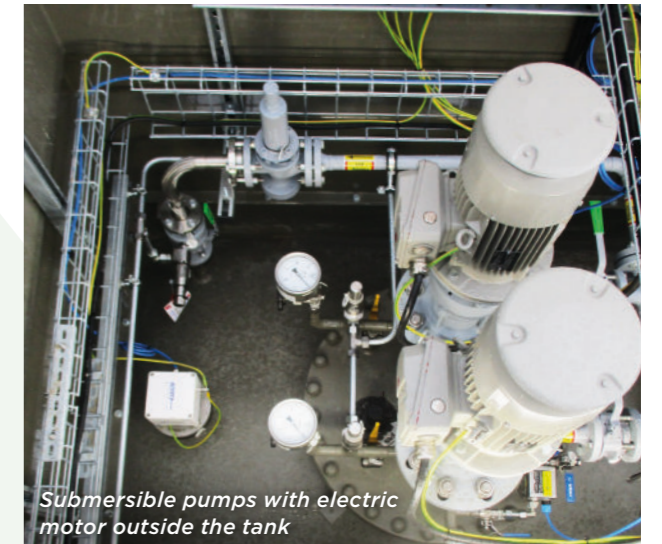
For Kirchgellersen (2013) and Ebsdorfer Grund, Marburg (2019), we supplied a 62 m³ tank with gas extraction via autogenous pressure, complete with full tank equipment, an evaporator system, and an electrical control system.

For Schwarzenfeld, Bayern (2021) and Lönningen (2024), we delivered a 62 m³ tank featuring gas extraction via a redundant submersible pump system, as well as comprehensive tank equipment and evaporator systems.

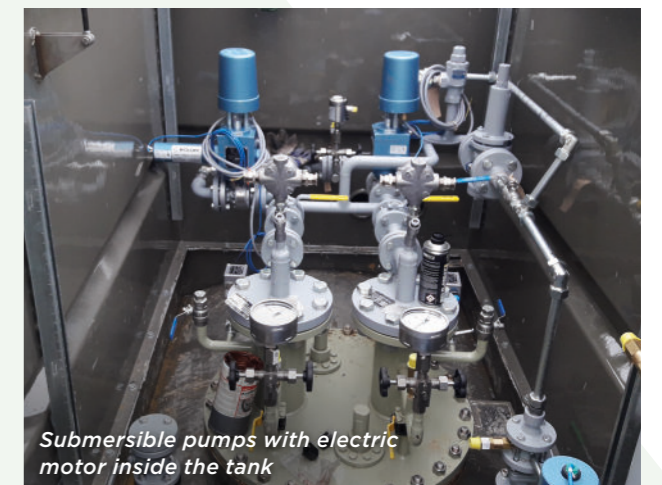
Our services at a glance

We and our excellent partners are here to help with everything from the first idea to ongoing support – and everything in between.

- Consulting and requirements analysis
- Customer-specific product and application development
- Project management
- CAD design, P&I diagrams
- Permit and approval procedures
- Construction scheduling
- Construction management
- Service and maintenance



Submersible pumps with electric motor outside the tank



Submersible pumps with electric motor inside the tank



Quick-closing fittings to protect against gas leakage

MAKEEN ENERGY

Find more information about your local
MAKEEN Gas Equipment contact on
makeengasequipment.com/get-in-touch
Or scan the QR-code.



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MAKEEN Gas Equipment offers a wide range of high-quality gas equipment and components along with expert guidance from the beginning to the end of your project. In that way, our one-stop shop philosophy – and many warehouses around the world – provide you with much more than just a product. MAKEEN Gas Equipment is a company under MAKEEN Energy.

MAKEEN Energy is a global, market-leading corporation that delivers technological solutions, equipment, and customer support to the energy industry. We employ approx. 4,000 people across 6 continents and operate in over 140 countries. With our global reach, local presence, and decades of experience, we can deliver responsible solutions that make a difference to people and planet.