



**PROCESS
INSTRUMENT
SOLUTIONS**

OPTIMISING BIOGAS PRODUCTION WITH INSTRUMENTATION AND CONTROL



PROCESS INSTRUMENTATION AND ANALYTICS OPTIMISES THE EFFICIENCY OF BIOGAS PRODUCTION

Pressure, temperature, flow, level, liquid and gas analysis must be monitored at various locations in a biogas plant. The correct choice of instrumentation and analytical systems influences both the efficiency and life-span of the plant.

Process Instrument Solutions is a specialist instrumentation and system integration company with a wealth of experience in the supply, installation, commissioning and support of biogas plant measurement and control systems.

INSTRUMENTATION

Technical partners for leading manufacturers including Siemens, Burkert, Labom, Fox and Hach; Process Instrument Solutions offers a comprehensive portfolio of industry-aligned solutions covering all requirements and budgets, from project development to installation, commissioning and support.

SITE ENGINEERING SERVICES

Process Instrument Solutions not only supply your instrumentation but we will also expertly install, commission, calibrate and service the products whether initially sourced through us or already installed at your plant. We provide **CompEx**® trained professional technicians and engineers with extensive knowledge, supported by high-precision equipment and instrumentation and championed by our world-leading partners.

PARTNERS

SIEMENS**bürkert**
FLUID CONTROL SYSTEMS**Labom**



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PROJECT SCOPING AND ANALYSIS

Whether you are commissioning a new plant or optimising biogas production from an existing facility, effective measurement is crucial to operational efficiency and Return on Investment (ROI). With extensive biogas experience, we identify requirements and evaluate a range of suitable solutions, delivering robust measurement systems that are easily maintained and that deliver long term accurate results.



SYSTEM SELECTION AND INTEGRATION

Efficient biogas production from wastewater, landfill or feedstocks requires multiple process-wide measurements of biogas concentrations, temperatures, pressures and moisture contents. We combine the very latest award-winning solutions to the challenges of measuring water levels CH₄ and CO₂, all critical in biogas production.



INSTALLATION AND COMMISSIONING

We are experts in installing, commissioning and troubleshooting instrumentation and control systems. Whether we are installing a replacement flow meter or delivering a complete biogas measurement solution, we believe a global understanding of the project and application is key to ensuring that your process goals are met.



MONITORING AND SUPPORT

We understand the cost of instrumentation failure. We not only supply instrumentation that delivers long term stability for negligible maintenance, our experienced customer care team ensures that every product we sell is supported, either through our own network of service and support engineers or from the original manufacturer.

BIOGAS MEASUREMENT CHALLENGE

Whether you are manufacturing biogas for use in CHP plants or for direct supply into the gas grid, effective measurement underpins operational efficiency and ROI, optimising methane content is crucial to economic biogas production.

Oxygenation, temperature, pressure and moisture all affect methane production; as does fermentation material, feed and stirring rates.

The variety of measurements required and the testing environmental conditions poses many challenges. The instrumentation not only needs to be corrosive resistant, it also needs to make adjustments for the high water and carbon dioxide content that have historically made biogas a demanding medium to measure. A new generation of flow meters specifically designed for optimal performance in biogas production are revolutionising the accuracy, stability and complexity of biogas measurement.

1	2	3	4	5	6
OEM agnostic solutions	CHP, cogeneration & grid	Diagnostics & predictive solutions	Service & support engineers	PLC & DCS Systems	SCADA Systems

BIOGAS MEASUREMENT SOLUTION



“Measure gas flow rate in standard units with no temperature & pressure compensation.”

The multi award-winning Fox Model FT1, Thermal Gas Mass Flow Meter from Fox Thermal Instruments measures gas flow rate in standard units (SCFM, NM³/hr, LBS/HR, KG/HR & many more) without the need for temperature and pressure compensation.

The Model FT1's DDC-Sensor™ technology platform allows it to operate using the Gas-SelectX® gas menu selection tool.

A free software tool – FT1 View™ - is available for the Model FT1 that allows the user to connect to and configure the FT1 using a PC or laptop.



THE GAS-SELECTX® ALLOWS YOU TO CHOOSE THE PERCENTAGES OF 3 GASES FOR THE IDEAL GAS MIXTURE.



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SIEMENS ULTRAMAT 23 EXTRACTIVE GAS ANALYSER

Unleash the Power of Biogas Analysis with Siemens ULTRAMAT 23 Extrative Gas Analyser!

The Siemens ULTRAMAT 23 Extrative Gas Analyser can revolutionize biogas monitoring, offering precision, reliability, and cost-efficiency like never before. The ULTRAMAT 23 can monitor and optimize biogas processes effortlessly.

Up to four gas components can be measured continuously: two infrared-sensitive gases (CO₂ and CH₄), plus O₂ and H₂S with electrochemical measuring cells.

SIEMENS SITRANS LR200 RADAR TRANSMITTER

Harness the power of radar technology to precisely monitor biogas levels like never before, with Siemens SITRANS LR200 Radar Transmitter!

SITRANS LR200 is a 2-wire, 6 GHz pulse radar level transmitter for continuous monitoring of liquids and slurries in process vessels including high temperature, pressure, agitation, and turbulence to a range of 20 m (65 ft).



YOUR LIFE CYCLE BIOGAS PARTNER



As measurement and automation experts, we work closely with our biogas clients from project inception to installation, commissioning and full life cycle support. We deliver efficient, sustainable and cost-effective solutions that add quantifiable commercial value to biogas production.

To find out how we can help or to discuss your requirements with our expert team, call us today on **+44 1449 674986** or email us at **solutions@pi-team.co.uk**.