COMBIMASS®

Technical Data

Gas analyzer station GA-s hybrid eco for monitoring the gas quality and the H_2S-filter – the OEM-solution

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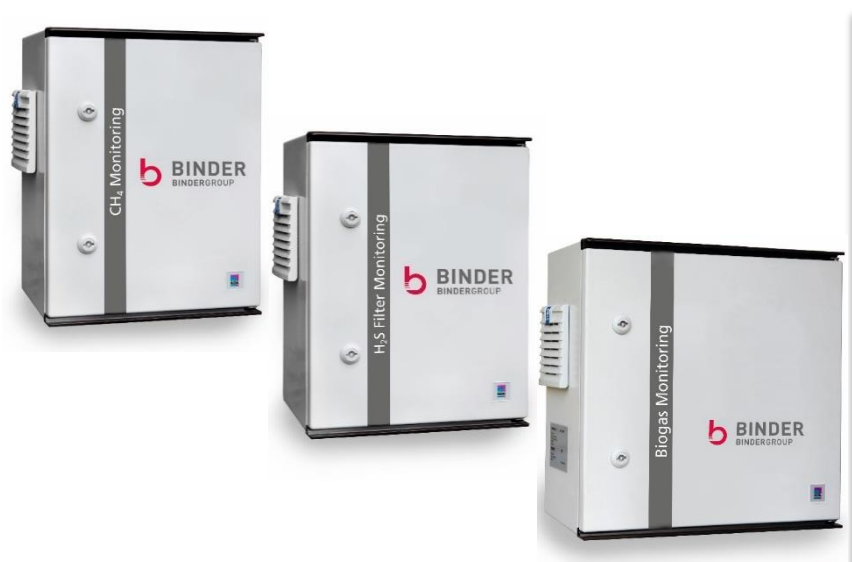

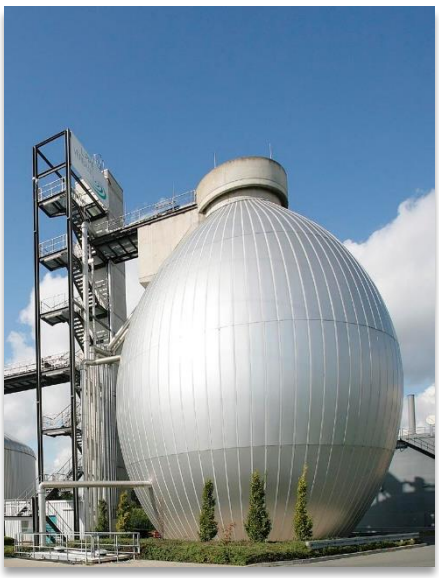

BINDERGROUP
MEASUREMENT & CONTROL

BETTER CONTROL. BETTER ENVIRONMENT.

For decades now, Binder has been supplying leading plant manufacturers with innovative systems for industrial gas flow measurement. In the last few years, the demand for reliable, precise and cost-effective measuring systems for biogas, sewage gas and landfill gas has increased significantly.

Modern biogas plants cannot meet commercial and environmental requirements without appropriate measuring and analysis technique. Analyzer are used to determine gas composition of each single digester, to monitor the operation of H_2S-filter and gas-cleaning in front of CHP units.

In sewage treatment plants, the analyzers are used to monitor the H_2S-filter upstream of the CHP units respectively monitor the gas quality directly after the digester. Compared to AD plants the gas quality doesn´t change so much in time.

The COMBIMASS® GA-s hybrid eco analyzer station is a typical OEM product. It has a modular design and is thus optimally prepared for maintenance by service companies. It consists of a ventilated control cabinet for indoor installation (e.g., in the CHP room) with a pump and the required number of valves, a permanently stored measuring program as well as user-specific gas cells and measuring ranges.

Gas analyzer equipment requires a regular service and maintenance, in order to keep the measurement results at a high level of accuracy in the long term. In addition to a regular replacement of the filter in the cabinet, checking and recalibrating gas cells, if necessary, replacing them depending on the frequency of use and the concentrations of the biogas components. If analyzer technology is not maintained on a regular basis, the reliability and availability of the measured values cannot be guaranteed.

The GA-s hybrid eco analyzer station is an OEM product. All spare and wear parts can be replaced on site by the expert operator or a service company. This takes less than 15 minutes. Only the gas modules should be serviced by the manufacturer or a local service center.

TECHNICAL DATA ANALYZER STATION

COMPONENTS OF THE ANALYZER CABINET

- Analyzer cabinet for wall mounting: 300x400x200/ 400x400x200 (plastic), IP22, 24 VDC, for indoor- installation in a safe ambient, in externally monitored room (+5 to + 40°C, non-corrosive), all connections on the cabinet are prepared for plastic hoses (recommendation: norprene Ø 6.4 mm/ Ø 3.2 mm; option tygone Ø 6.0 mm/ Ø 4.0 mm)
- 2-5 Valves NC (1x GAS1-IN, 1x Gas2-IN,1x purging air), 1 biogas pump, 1 control module
- Transmission of data via 1-3 analog signal 4-20 mA
- Transmission of a common alarm via relays
- 1-2 Gas pre-treatment, consisting each of 1 coalescence filter with manual emptying, 1 flame arrestor, mounted on a ground plate for wall mounting
- Gas module(s) depending on the version, pressure- and temperature compensated (other gases on request)

  COMBIMASS® CH_4 -NDIR-hybrid 0-100 Vol.-%
  COMBIMASS® O_2 -EC-hybrid 0- 30 Vol.-%
  COMBIMASS® H_2S -EC-hybrid 0- 50 … 10,000 ppm (various measuring ranges)

FURTHER OPTIONS of hybrid eco-series

- Test gas input
- All gas connections prepared for stainless-steel tubes
- Power supply in a separate field housing 230 VAC/24 VDC
- Gas cooler with Hardware-Extension DTG-GK for higher gas temperatures
- Transmission of date and single alarms via Modbus RTU
- Read & transmit an analog signal of the flow meter of COMBIMASS® series

STANDARDIZED VERSIONS

- COMBIMASS® GA-s hybrid eco CH_4
- COMBIMASS® GA-s hybrid eco H_2S
- COMBIMASS® GA-s hybrid eco $2xH_2S$
- COMBIMASS® GA-s hybrid eco $CH_4 + H_2S$
- COMBIMASS® GA-s hybrid eco $CH_4 + H_2S + O_2$

DESIGN CABINET/ GAS FLOW SCHEME (EXAMPLE)