

For Gas-Fueled Engines

# ELEKTRA

## Gas Metering Control Units

Integrated electronic

Fast response

Outstanding accuracy

Easy to integrate

Proven reliability



# ELEKTRA

## Gas Metering Control Unit (GMCU)

**The second generation of HEINZMANN's Gas Metering Control Units: GMCU-II is the ideal solution for flexible high accuracy gas dosing control on stationary engines. It serves as main component of a full authority gas engine management system.**

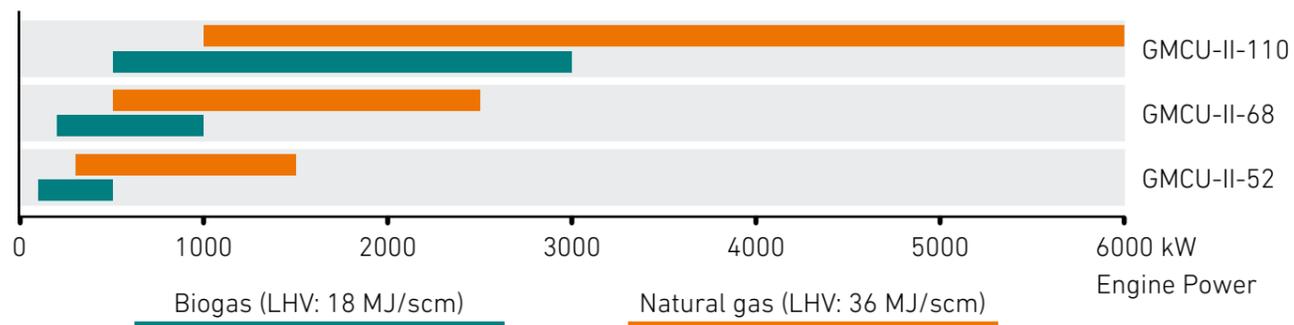
A flow rate setpoint transmitted via CAN is processed in a digital control system with approved calculation models, taking into account any temperatures and pressures. Combined with the fast acting high-precision valve actuator StG 3, the adjustment of the required gas flow towards the gas mixer is highly precised.

To cover different engine sizes, the GMCU-II series is available in various dimensions.

### BENEFITS

- ▶ Proven reliability
- ▶ High accuracy flow control
- ▶ Flexible I/O interfaces for customised solutions
- ▶ Fast response on fuel demands and stable operation
- ▶ Full compensation for variations in input pressure and gas temperature
- ▶ Wide input pressure range. No zero pressure regulator required
- ▶ Suitable for different gas types and qualities as well as admixture of hydrogen (H<sub>2</sub>)
- ▶ Tolerant to wet biogases and corrosive contaminants
- ▶ Clean and robust design with minimisation of external cables and without external pipes
- ▶ Available size variants for various engine power ranges

### POWER RANGE



\*The stated output ranges may vary depending on the pressure range, temperature and gas type.

### FEATURES

#### HIGHLY INTEGRATED DESIGN

The highly integrated design of the GMCU-II system requires only little wiring, allows easy installation and avoids configuration errors. Controller and sensors are integrated in the housing to provide the best mechanical and electrical conditions. Pressure pipes are an integral part of the housing and therefore completely protected from external influences.

#### ANY GAS QUALITY

For a given gas quality, the actual flow follows the flow demand very quickly and with high accuracy. For application with variable gas qualities, the flow can be corrected by communicating additional information on the current gas properties to the GMCU-II.

The gas metering unit can be used for a wide range of gases: LPG, natural gas, landfill and wood gas as well as admixture of hydrogen.

#### FAST RESPONSE

Precise, fast, and adaptive: The flow rate adjusts to the setpoint immediately under all gas pressure and temperature conditions.

#### WIDE PRESSURE RANGE

The algorithms used, the high accuracy throttle valve-actuator device and the precise calibration of the gas metering unit provide an outstanding flow control within a wide inlet pressure range. Changes in pressure and temperature are fully compensated.

#### USER-FRIENDLY CONFIGURATION

System set up and monitoring is made with the user-friendly DcDesk tool. Comprehensive features allow easy understanding and effective work.

#### COMMUNICATION

Signals can be exchanged both via various standard signals (analogue or PWM) and via CAN bus. A large number of protocols are supported when using the CAN bus.

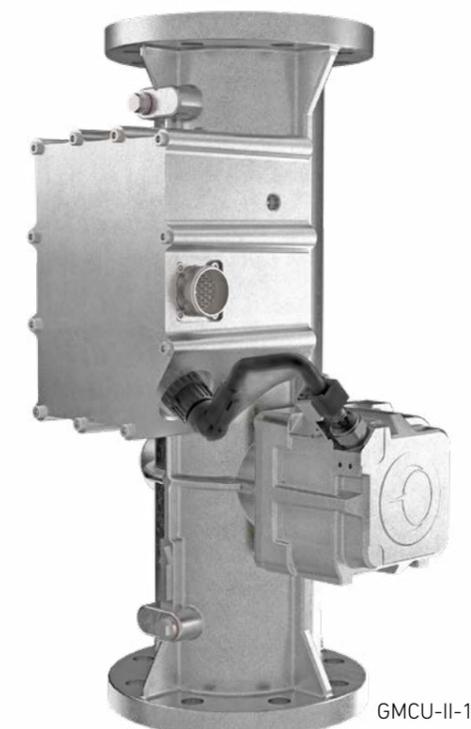
#### APPLICATION RANGE

The Gas Metering Control Unit GMCU-II can be used on stationary gas engines. It is available as a pure fuel gas dosing system by performing flow control. The GMCU-II system contains a very flexible digital control unit. Freely configurable I/Os allow it to be customised for almost any application.

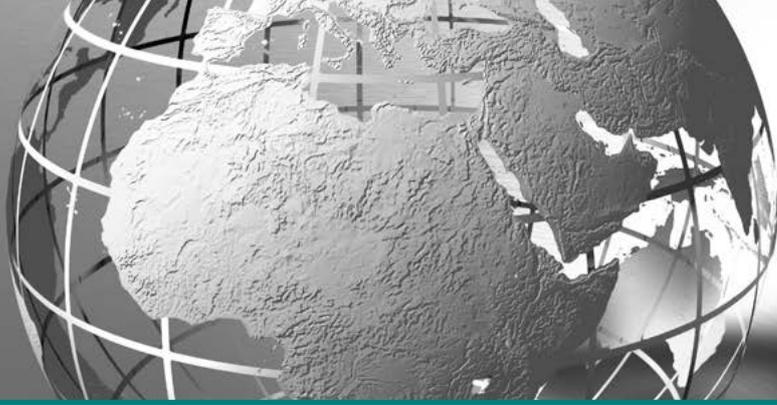
In combination with other HEINZMANN components, the GMCU-II can be the optimal core component of a complete AFR system.



GMCU-II-52 & GMCU-II-68



GMCU-II-110



## HEINZMANN GROUP – THINKING IN DRIVE AND CONTROL

HEINZMANN is a globally active family business founded in 1897 with its headquarters in Schönau (Germany), in the Black Forest.

Today, in the field of engine management HEINZMANN is one of the leading suppliers of components and systems for industrial combustion engines, generators and turbines. As a specialist and development partner, HEINZMANN is committed to developing exactly the right solution for increasing efficiency and reducing emissions.

In the Electric Drives division, HEINZMANN also demonstrates innovative strength and development expertise in engine technologies of the future. The company has established itself as a reliable partner and system provider for electric drive systems.

Our collaborative interaction with more than 40 globally active subsidiaries and sales companies characterizes the spirit within the HEINZMANN group of companies and makes us a reliable partner.

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