HEINZMANN®

Electronically controlled gas positioners

E-LES 30/50/80 SMC

DATA SHEET

E-LES 30 SMC

E-LES 50 SMC

E-LES 80 SMC

Features

- Designed for integration into an existing AFR control
- Suitable for different gas types and qualities
- Precise adjustment of gas dosing over a wide range of gas flow due to its optimised V-shape design
- Reliable, high resolution stepper motor
- Special coating for smooth operation and improved chemical resistance

Description

HEINZMANNs electronic gas valves E-LES are advantageously applied to gas engines.

They are situated in the gas line after the zero pressure regulator and are connected to the inlet of the gas mixer. The HEINZMANN E-LES-series allows to adjust and trim the required gas amount very precisely at any operating state.

The reliable, high-resolution stepper motor drives a mandrel with an external thread. With the rotation of the mandrel, a PTFE-coated aluminium piston with a corresponding internal thread moves linearly inside a coated bushing. This bushing shows three exponentially shaped intake openings. Their optimised design allows a linear change of gas flow according to the stepper motors position. To prevent clearance between mandrel and piston thread a special threading is used.

The digital control is CAN-compatible with all common protocols and is therefore perfectly suitable for integration into an existing AFR control unit.

The position setpoint is assigned by CAN or by an analogue input, which can be configured for numerous input signal specifications.

Application range

- **E-LES 30 SMC:**
  5 kW up to 130 kW
- **E-LES 50 SMC:**
  120 kW up to 500 kW
- **E-LES 80 SMC:**
  450 kW up to 1750 kW

These values refer to a mechanical efficiency of 37 %, lambda 1.6 and a charge pressure of 2.0 bar and are for guidancy only. Assumed lower heating value (LHV) of 36 MJ/Nm³ for natural gas.

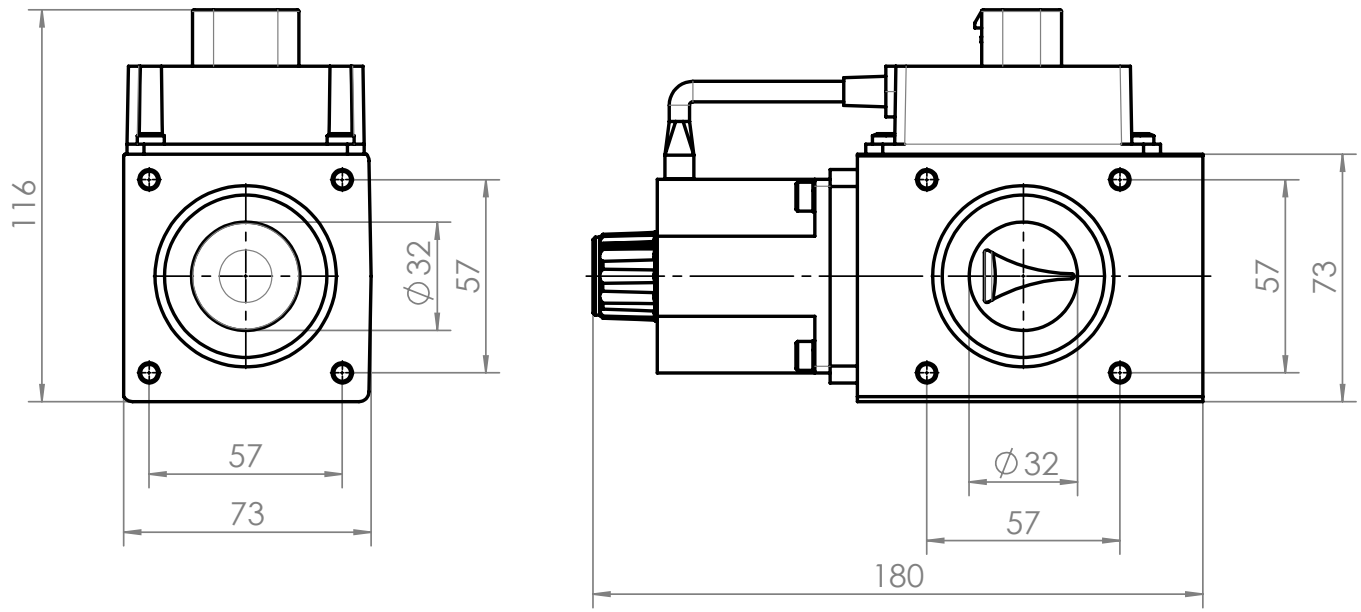
For proper statement a calculation based on actual engine data is necessary.

Technical data

Power supply	nom. 24 VDC ±30 %
Current consumption	max. 1.5 A
Residual ripple	max. 10 % at 100 Hz
Admissible voltage drop	max. 10 % at max. power consumption
Fuse (required externally)	6 A
Frequency stepper motor	500 Hz
Ambient temperature	-20 … +75 °C
Storage temperature	-40 … +85 °C
Admissible humidity	up to 98 % at 55 °C
Admissible pressure of fuel supply	max. 0.1 bar (g)
Admissible concentration of hydrogen sulphide (H_2S) in fuel	max. 0.1 %
Vibration	max. 2 m/s at 10 ... 20 Hz max. 0.24 m/s at 21 ... 63 Hz max. 9 g at 64 ... 2000 Hz
Shock	50g, 11 ms, half sine
Protection grade	IP23
Connector	Tyco 14 pole

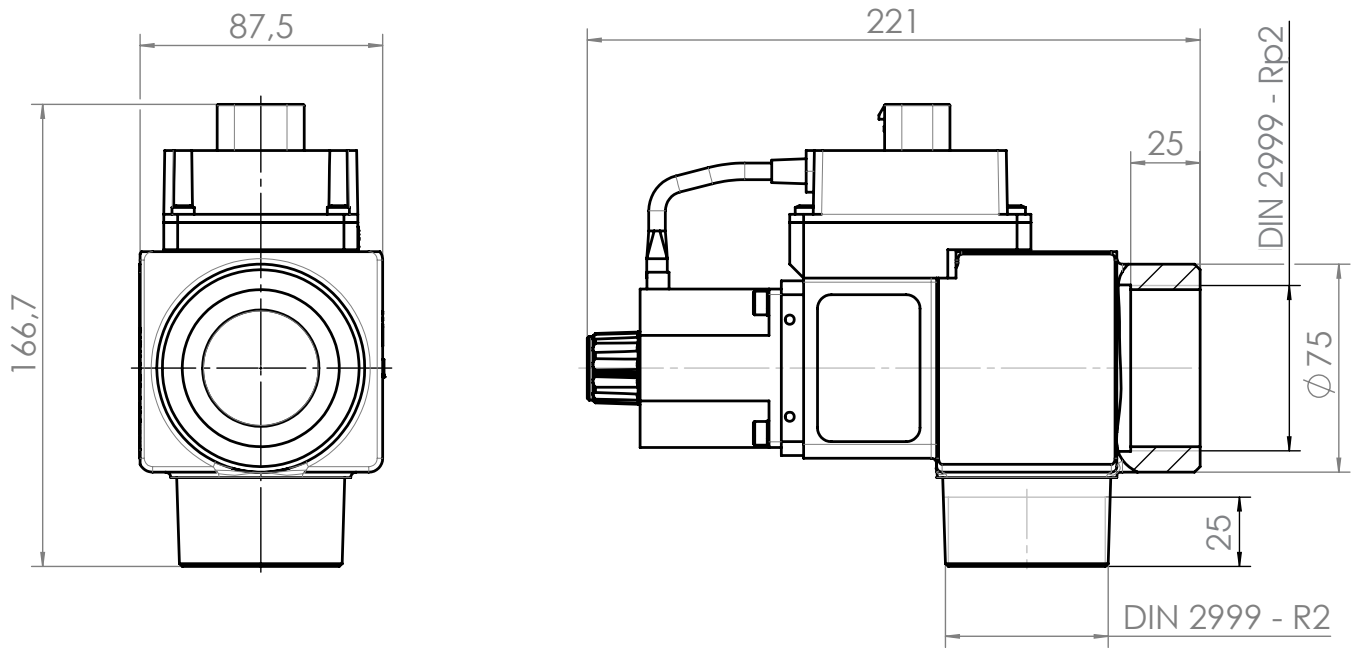
E-LES 30 SMC	
Valve resolution	1400 steps / 7 revolutions
Response time 0 … 100 %	2.5 s
Weight	approx. 2 kg
E-LES 50 SMC	
Valve resolution	2000 steps / 10 revolutions
Response time 0 … 100 %	4.0 s
Weight	approx. 5 kg
E-LES 80 SMC	
Valve resolution	3800 steps / 19 revolutions
Response time 0 … 100 %	8.0 s
Weight	approx. 12 kg

Dimensions E-LES 30 SMC

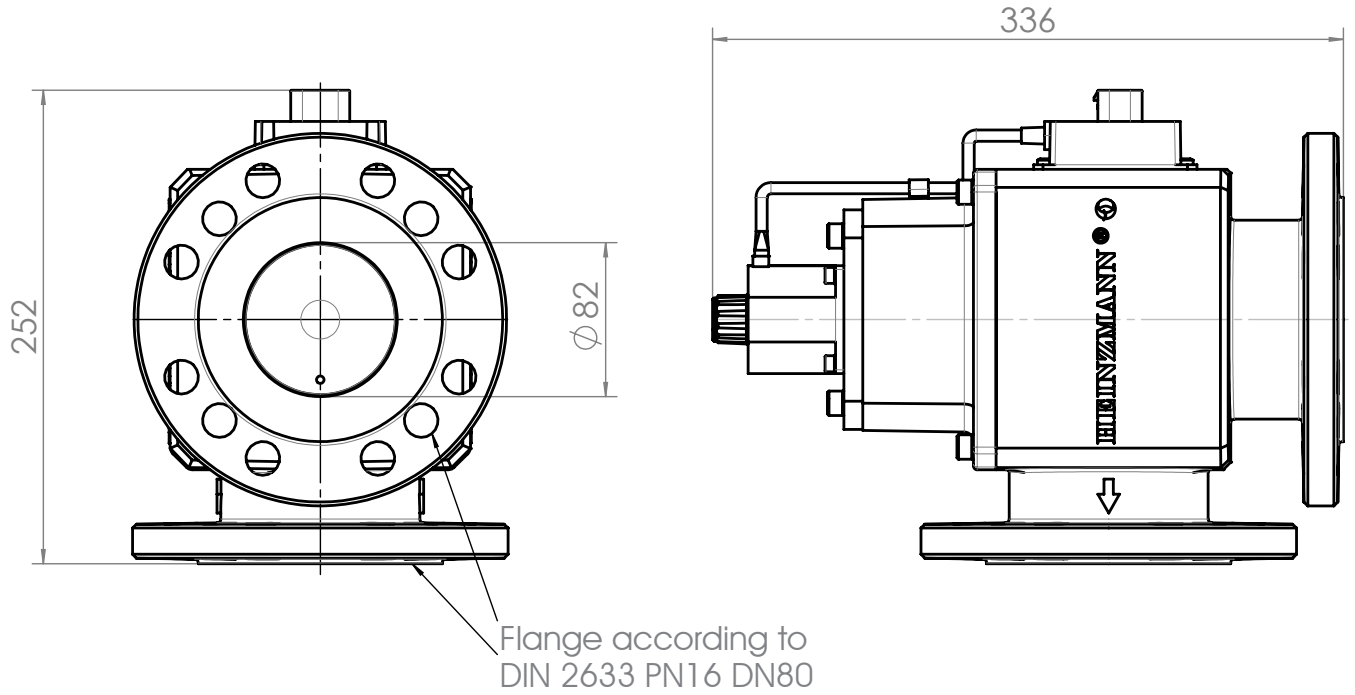


Mounting plates available with ¾", 1", 1¼" and 1½"

Dimensions E-LES 50 SMC



Dimensions E-LES 80 SMC



Certificates

on request

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