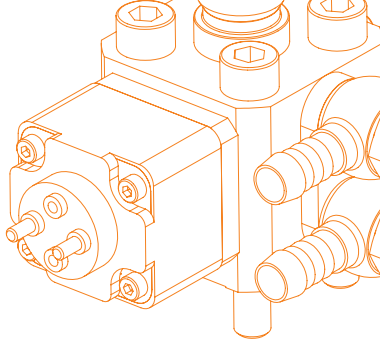
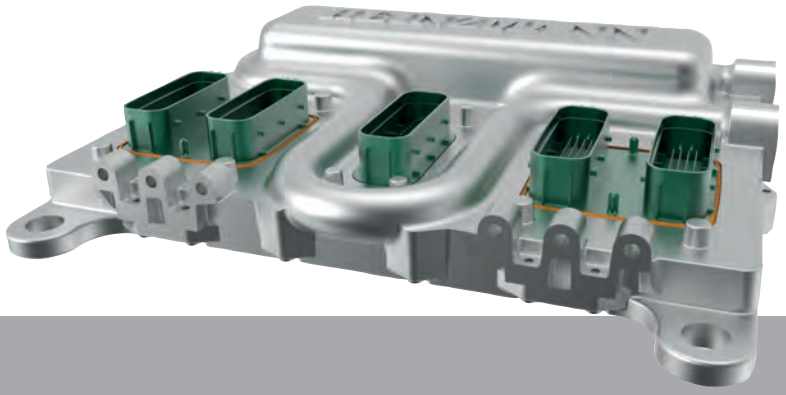
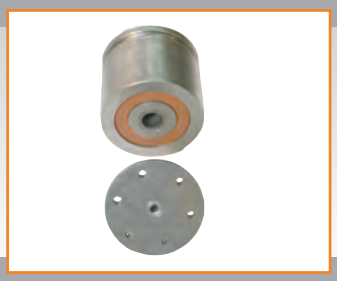
HEINZMANN®



SOLENOIDS

for Electronic Fuel Injection





Round Solenoids

E-Core Solenoids

- ✔ Solenoids for injectors
- ✔ Solenoids for single fuel injection pumps
- ✔ Solenoids for gas valves

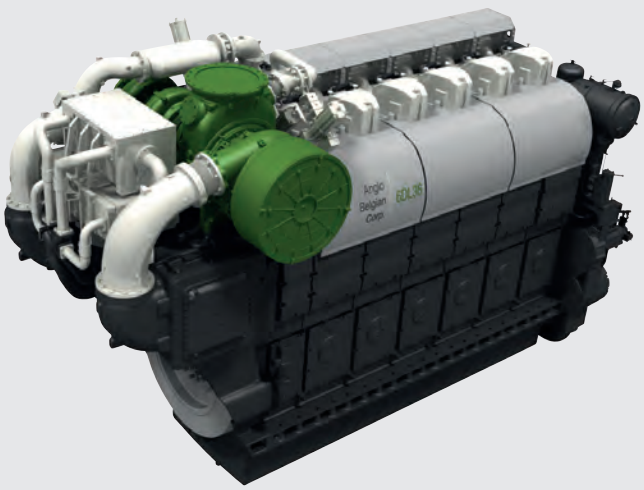
Engine & Turbine Management

SOLENOIDS

In modern management systems for combustion engines increasing numbers of solenoid operated injectors and single fuel injection pumps are in use. Those components cover the requirements for fuel efficiency and emissions.

Beside complete valve systems HEINZMANN offers solenoid systems with and without armature in a wide range of sizes and makes for all typical applications. In addition to standard types customised versions are also available. Magnetic forces range from 50 N to 800 N.

The robust and long lasting solenoid design guarantees a safe functionality during the component lifetime.



SOLENOIDS FEATURES

- ✔ ***High power density and efficiency***
- ✔ ***Short opening and closing times***
- ✔ ***Quick response of force***
- ✔ ***Precise force adjustment***
- ✔ ***Robustness and durability***
- ✔ ***Diagnostic capability***
- ✔ ***Easy system integration***

APPLICATIONS

Control components for E-PNU, E-PPN and CR injection systems for diesel engines

- Fuel injectors
- Unit pumps
- Single high-pressure pumps

Control components for gas engine dosing systems

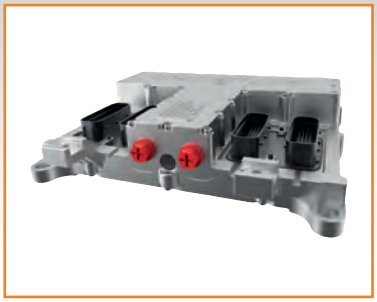
- Gas admission valves
- Gas shut-off valves
- Direct fuel injection valves

Hydraulic valves

- On-off valves

Special applications

- Robotics
- Automatisation



ROUND AND RECTANGULAR (E-CORE) VERSIONS AVAILABLE IN DIFFERENT POWER RANGES

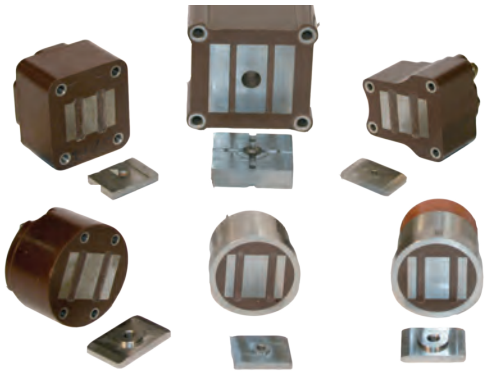
Round solenoids

These pot solenoids have a closed, circular shape and ensure easy assembly. HEINZMANN round solenoids are available in a variety of sizes with solid or laminated cores.

Anchor plates and cable outlets are customer specific.

E-core solenoids

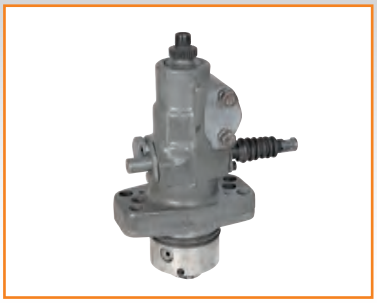
These rectangular solenoids have a characteristic E-shaped core made from laminated sheet package. Features of these solenoids are a very high density of the magnetic field and minimum loss of Foucault current. E-core solenoids are available in a variety of sizes and with customised anchor plates and cable outlets.



Technical data

Nominal voltage	90, 60, 42, 24 VDC
Voltage range	40 ... 110 VDC, 16 ... 33 VDC for rated voltage version 24 VDC
Hold current	2 up to 10 A
Current at life start	up to max. 27 A
Permitted hydraulic pressure	normal 0.5 bar max. 5.0 bar
Operating temperature range	-40 up to 130 °C
Storage temperature	-40 up to 150 °C

Operating stroke	up to 0.25 mm (optional for gas valve up to 1 mm)
Minimum air gap	0.05 mm
Protection class	IP66 K
Contamination	Resistant to contaminants present in engine environment
Insulation resistance	10 MOhm at 500 VDC
Electric strength	2500 AC (50/60 Hz) (only plug and socket connector)



ROUND SOLENOIDS

Solenoid RM 03

- Dimensions Ø 25 mm x 45 mm
- Control stroke 0.20 mm
- Minimum air gap 0.05 mm
- Start current 20 A
- Hold current 10 A
- Current rise time 0.15 ms
- Initial magnetic force 280 N

Applications

- Diesel injectors

Solenoid RM 04

- Dimensions Ø 30 mm x 30 mm
- Control stroke 0.20 mm
- Minimum air gap 0.05 mm
- Start current 25 A
- Hold current 10 A
- Current rise time 0.25 ms
- Initial magnetic force 350 N

Applications

- Injectors for diesel and gas engines

Solenoid RM 05

- Dimensions Ø 38 mm x 45 mm
- Control stroke 0.20 mm
- Minimum air gap 0.05 mm
- Start current 5 A
- Hold current 3 A
- Current rise time 0.25 ms
- Initial magnetic force 350 N

Applications

- High-pressure pumps

Solenoid RM 06

- Dimensions Ø 20 mm x 41 mm
- Control stroke 0.20 mm
- Minimum air gap 0.05 mm
- Start current 27 A
- Hold current 10 A
- Current rise time 0.25 ms
- Initial magnetic force 180 N

Applications

- Diesel injectors

Solenoid RM 07

- Dimensions Ø 71 mm x 40 mm
- Control stroke 1.1 mm
- Minimum air gap 0.05 mm
- Start current 15 A
- 2 versions: laminated or solid solenoid core
- Hold current 1 A
- Current rise time 2.5 ms
- Initial magnetic force 650 N

Applications

- Gas valves

Solenoid RM 08

- Dimensions Ø 41 mm x 22 mm
- Control stroke 0.40 mm
- Minimum air gap 0.05 mm
- Start current 27 A
- Hold current 10 A
- Current rise time 0.25 ms
- Initial magnetic force 450 N

Applications

- Diesel injectors
- High-pressure pumps

Solenoid RM 09

- Dimensions Ø 13.5 mm x 18 mm
- Control stroke 0.15 mm
- Minimum air gap 0.05 mm
- Start current 27 A
- Hold current 5 A
- Current rise time 0.25 ms
- Initial magnetic force 50 N

Applications

- Diesel injectors

Solenoid RM 10

- Dimensions Ø 19 mm x 15 mm
- Control stroke 0.35 mm
- Minimum air gap 0.05 mm
- Start current 12 A
- Hold current 3 A
- Current rise time 0.20 ms
- Initial magnetic force 120 N

Applications

- Gas valves
- Diesel injectors
- Dosing valves

E-CORE SOLENOIDS

Solenoid SM 04 / SM 04-S1

- Dimensions Ø 38 x 46 mm / Ø 40.5 x 42 mm
- Control stroke 0.20 mm
- Minimum air gap 0.05 mm
- Start current 25 A
- Hold current 10 A
- Current rise time 0.20 ms / 0.40 ms
- Initial magnetic force 350 N

Applications

- Diesel injectors
- Unit injection pumps

Solenoid SM 05

- Dimensions Ø 38 x 59 mm
- Control stroke 0.20 mm
- Minimum air gap 0.05 mm
- Start current 25 A
- Hold current 10 A
- Current rise time 0.4 ms
- Initial magnetic force 350 N

Applications

- Robotics
- Actuating systems
- Hydraulic valves

Solenoid SM 06

- Dimensions Ø 46 x 51 mm
- Control stroke 0.20 mm
- Minimum air gap 0.05 mm
- Start current 25 A
- Hold current 10 A
- Current rise time 0.4 ms
- Initial magnetic force 370 N

Applications

- Diesel injectors
- Unit injection pumps

Solenoid SM 07

- Dimensions (l/w/h) 44 x 48 x 56 mm
- Control stroke 0.20 mm
- Minimum air gap 0.05 mm
- Start current 25 A
- Hold current 10 A
- Current rise time 0.4 ms
- Initial magnetic force 350 N

Applications

- Diesel injectors
- Unit injection pumps

Solenoid SM 08

- Dimensions Ø 38 x 42 mm
- Control stroke 0.20 mm
- Minimum air gap 0.05 mm
- Start current 25 A
- Hold current 10 A
- Current rise time 0.4 ms
- Initial magnetic force 300 N

Applications

- Diesel injectors
- Unit injection pumps

Solenoid SM 09

- Dimensions (l/w/h) 63 x 59 x 48 mm
- Control stroke 0.40 mm
- Minimum air gap 0.05 mm
- Start current 25 A
- Hold current 10 A
- Current rise time 0.4 ms
- Initial magnetic force 800 N

Applications

- Gas valves
- Unit injection pumps

Solenoid SM 10

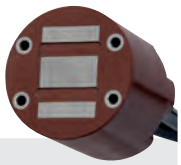
- Dimensions (l/w/h) 42 x 45 x 47 mm
- Control stroke 0.20 mm
- Minimum air gap 0.05 mm
- Start current 25 A
- Hold current 10 A
- Current rise time 0.4 ms
- Initial magnetic force 300 N

Applications

- Diesel injectors
- Unit injection pumps

Solenoids SM 13

- Dimensions Ø 46 x 78.3 mm
- Control stroke 0.20 mm
- Minimum air gap 0.05 mm
- Start current 25 A
- Hold current 10 A
- Current rise time 0.4 ms
- Initial magnetic force 350 N



Applications

- Injectors with redundant control

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ELECTRONIC FUEL INJECTION

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GENERATOR MANAGEMENT

ELECTRIC AND HYDRAULIC ACTUATORS

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ENGINE EMISSION MANAGEMENT

TURBINE MANAGEMENT

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