HEINZMANN®
thinking in drive and control

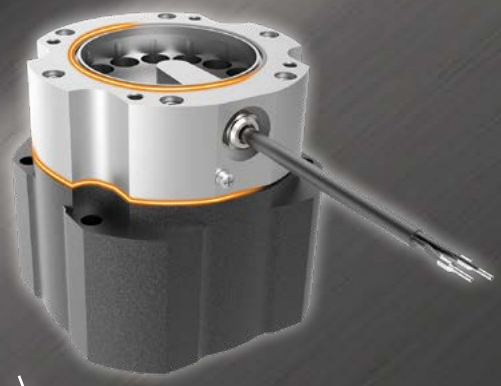
For Gas & Dual-Fuel Engines

MEGASOL

Gas Admission Valves

Precise cylinder
individual gas metering

Excellent load response



Available for
alternative fuels

Long life cycle

Low operational costs

Engine & Turbine Management

MEGASOL
Gas Admission Valves

MEGASOL (MEtering of GAs by SOLenoids) is HEINZMANN's series of electrically actuated gas admission valves. It is intended for gas and dual-fuel operation on industrial turbocharged four-stroke engines.

As the gas is injected into the intake manifold close to the intake valve, each cylinder requires one MEGASOL. Together with HEINZMANN's DARDANOS series applying MVC (Magnetic Valve Control) MEGASOL ensures precise gas metering and allows cylinder individual gas flow balancing in entire operating range.

MEGASOL valves are suitable for new engines as well as retrofits and are bolt-on compatible to market standard. The MEGASOL double walled versions are intented for marine gas and dual-fuel engines.

The MEGASOL valves are characterised by very low leakage. Their robust and life time optimised design ensures very long maintenance intervals.

BENEFITS

- Precise cylinder individual gas metering
- Fast response
- Very low leakage
- Excellent load response of the engine
- Suitable for new engines as well as for retrofit solutions
- Bolt-on compatible to market standard
- Outstanding long lifetime

APPLICATIONS
On industrial four-stroke engines

- Gas Engines
- Dual-Fuel Engines
- For stationary and mobile applications (Genset, Marine, Locomotive, Off-road...)

- Installation on intake manifold
- Corrosion proof versions available
- Versions for alternative fuels on request
- Wide range of engine output from 50 up to 1200 kW per cylinder depending on fuel type and pressure range

HEINZMANN –
Expert for Gas Engine Management

MEGASOL VALVES

MEGASOL H60 ... H425

These models are designed to operate with a comparatively high differential pressure of supplying air and gas.

PRODUCT FEATURES

- Identical housing size
- Different flow rates available
- Bolt-on compatible to market standard
- Cost effective even as a replacement for existing installations
- Versions for alternative fuels on request

MEGASOL M200 ... M425

The marine specific versions of the MEGASOL valves are intended for marine gas and dual-fuel engines. It complies with the standards of the international classification societies.

PRODUCT FEATURES

- Double-walled housing for gas leakage detection
- Different flow rates available
- Technical data equivalent to standard versions
- Resisting to corrosion for a wide range of gaseous fuels
- Versions for alternative fuels on request

MEGASOL H1000

The HEINZMANN MEGASOL 1000 is capable to work with higher pressure drop between air and gas due to its state of the art flow dynamic design. Therefore, the gas pressure has less effect on opening and closing duration and there is no delay due to it.

PRODUCT FEATURES

- Enhanced flow dynamic design
- Increased flow capacity due to higher pressure range
- Precise gas dosing and shot to shot accuracy
- Versions for alternative fuels on request

TECHNICAL DATA

MEGASOL	60 ... 425	400 (24V)	1000
Flow rate (Z-Value)	17 ... 128	105	250
Supply voltage	90 VDC	24 VDC	90 VDC
Max. differential pressure Δp	< 3.0 bar / 43 psi	< 1.5 bar / 22 psi	< 1.5 bar / 22 psi
Max. absolute pressure air supply	6 bar / 87 psi	3 bar / 43.5 psi	3 bar / 43.5 psi
Max. absolute pressure gas supply	8 bar / 116 psi	4 bar / 58 psi	4.5 bar / 65 psi
Leakage when closed (Δp = 1 bar, 20 °C)	<0,25 % of steady state flow-rate		
Permissible max. backfire pressure, peak	0.5 bar / 7.25 psi		
Operating temperature	-20 °C ... +105 °C / -4 °F ... +221 °F		
Max. temperature gas supply	80 °C / 176 °F		
Response time to fully open (Δp = 1bar)	< 3 ms	< 5 ms	< 4 ms
Response time to fully close (Δp = 1bar)	< 2 ms	< 2 ms	< 3 ms
Required air and gas filtration	5 µm		
Diameter gas inlet	44 mm / 1.73 inch	44 mm / 1.73 inch	95 mm / 3.74 inch

MEGASOL D200 ... D300

The valves of D-series are suitable for new engines, retrofit projects and drop-in replacements.
Their compact design conforms to modern gas or dual-fuel engine requirements.

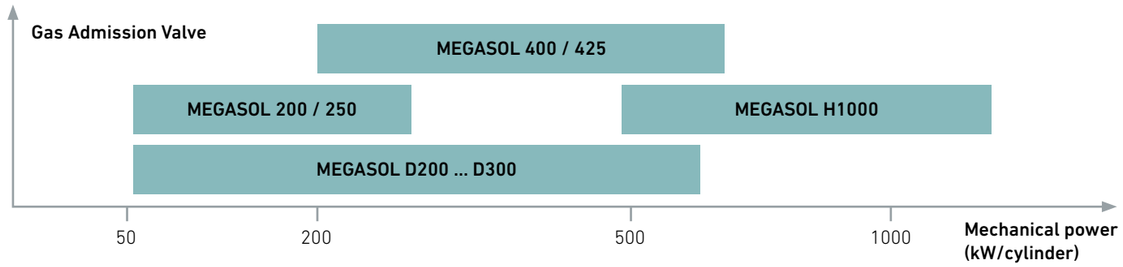
PRODUCT FEATURES

- Embedded installation compatible with various intake manifold designs
- Available in multiple models to meet different engine flow requirements
- Integrated filter screen
- Compact design
- Corrosion-resistant, suitable for various gaseous fuels

TECHNICAL DATA

MEGASOL	D200	D260	D300
Supply voltage		90 VDC ... 110 VDC	
Max. differential pressure Δp		2.5 bar	
Max. absolute pressure air supply		6 bar	
Max. absolute pressure gas supply		8 bar	
Leakage when closed (Δp = 1 bar, 20 °C)		< 0.25 % of steady flow rate	
Permissible max. backfire pressure, peak		0.5 bar	
Operating temperature		-20 °C ... +105 °C	
Max. temperature gas supply		80 °C	
Response time to fully open (Δp = 1bar)		< 3 ms	
Response time to fully close (Δp = 1bar)		< 2 ms	
Required air and gas filtration		5 µm	
Pick current		15 A ... 20 A	
Hold current		8 A ... 10 A	
Integrated filter		150 mesh	

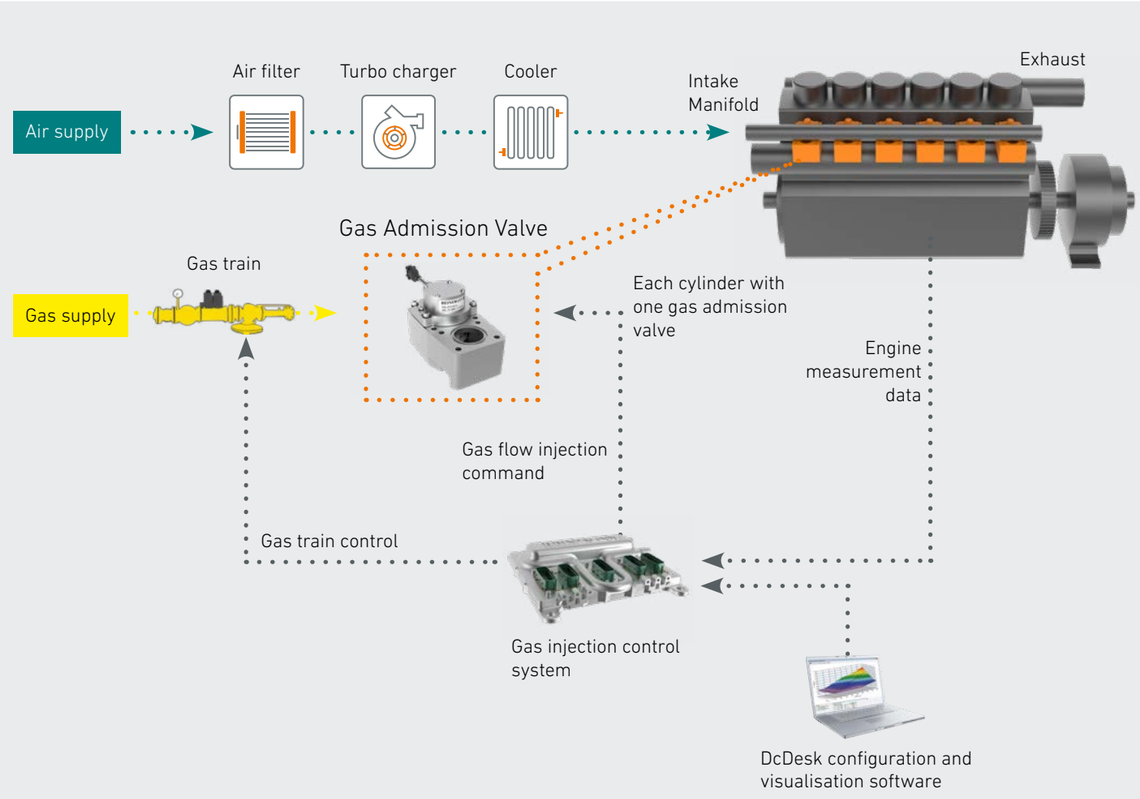
POWER RANGE OF MEGASOL VALVES

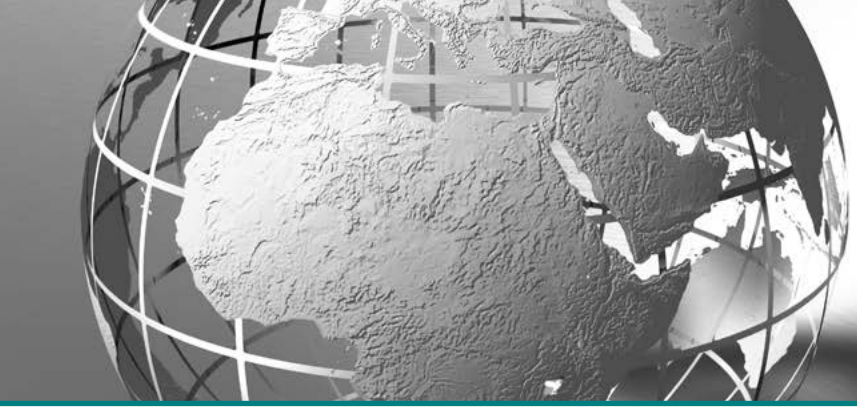


PRINCIPLE OF INSTALLATION

MEGASOL valves are one component of a complete HEINZMANN gas injection system made up of:

- Engine control unit (HEINZMANN DARDANOS series of electronic fuel injection control units)
- One MEGASOL valve for each cylinder
- Sensors (speed, load, pressure, temperature sensors, etc.) and cables
- Other governors according to your needs





HEINZMANN®
thinking in drive and control

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 characterises the spirit within the HEINZMANN group of companies and makes us a reliable partner.

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