

DARDANOS

Electronic Fuel Injection Control Systems



*EFI Control
MVC 03-8 New Generation*



*EFI Control MVC 01-24
New Generation*



EFI Control MVC 04-6



Selection of Sensors



Selection of Solenoids

- ✓ Precise injection control
- ✓ Application-tailored configurability
- ✓ For diesel, gas and dual fuel engines
- ✓ Compatible with various fuel injection systems
- ✓ Full functional redundancy capability

DARDANOS

Electronic fuel injection controls

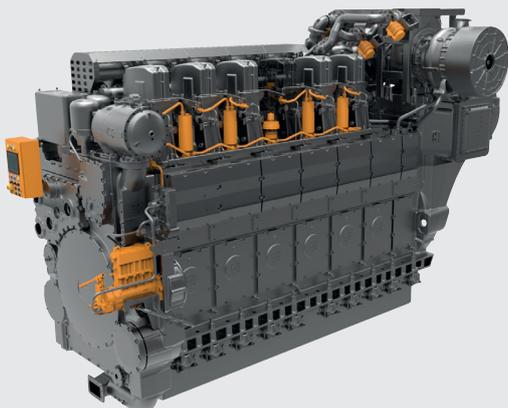
The DARDANOS series is designed as universal speed controllers for engines with electronically controlled injection systems.

In addition to their primary purpose of controlling speed, these controllers provide additional features that offer other benefits for your engines, such as optimised fuel efficiency, increase of engine power, lower environmentally harmful emissions. Thus Electronic Fuel Injection (EFI) helps in an essential way to comply with emission laws.

The systems are designed to fulfil a wide range of applications. Therefore, HEINZMANN offers devices for engines with different numbers of cylinders and modified housing tailored for the relevant application.

A choice of HEINZMANN sensors and solenoids completes the systems. They may be programmed by our configuration tool DcDesk 2000.

The DARDANOS system components are an essential part of HEINZMANN's complete common rail solution ODYSSEUS. Our customers can choose between different sizes of high-pressure pumps, injectors and rails in order to set up the ideal common rail system tailored for their particular application.



DARDANOS FEATURES

Basic speed control functions

- Start fuel quantity adjustment
- Speed ramps
- Variable speed setpoint demands
- Adaption of PID parameters
- Fuel quantity limitation
- Integrated engine monitoring functions
- Sensor monitoring functions
- Speed droop
- Proven functionality for marine, generator, locomotive & vehicle applications

EFI functions

- Map-controlled start of injection
- Start of injection adaptation to environmental conditions
- Single cylinder injection begin and period correction
- Map-controlled rail pressure regulation
- Rail pressure adaptation to environmental conditions
- Up to seven injections per cylinder
- Cylinder faults monitoring
- Solenoid click test (tool for wiring check)

General functions

- Up to three independent CAN bus lines (various protocols)
- Communication software DcDesk 2000 for monitoring & adjustment

DARDANOS SERIES

DARDANOS is conceived as a series of devices with varying extent to satisfy different demands and engine sizes. They are available for a wide range of engines starting with 24 and down to 6 cylinders/injectors.

HEINZMANN's electronic fuel injection controls drive solenoid actuated diesel and gas injection systems.

Together with HEINZMANN's MEGASOL Solenoid Operated Gas Admission Valves, it also forms an injection control system for gas and dual fuel engines. External communication is realised via various CAN protocols.

DARDANOS MVC 01-24

for up to 24 cylinders

DARDANOS MVC 03-8

for up to 8 cylinders

DARDANOS MVC 04-6

for up to 6 cylinders

For further information please see the relevant product manual:

MV 09 001-e

Basis Information 2000 for electronically controlled injection systems

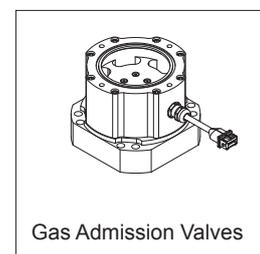
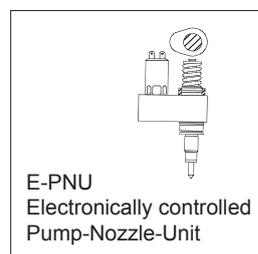
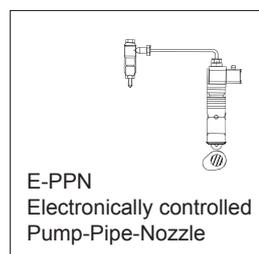
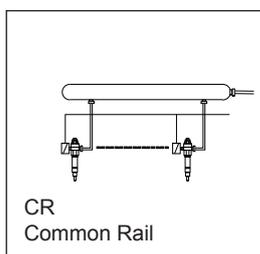
Powerful software package

HEINZMANN's configuration and visualisation software DcDesk 2000 offers all features required for configuration, testing, commissioning and servicing. Thanks to its design as a Windows®* program, DcDesk offers a lot of graphical features, printouts and records of data for documentation purposes. Using DcDesk 2000, the parameters of any connected device may be adjusted while the system is running and the response can be observed directly. It is also possible to prepare a data set not being connected with the device and to download it later on. The HEINZMANN SATURN technology expands the DcDesk 2000 by a remote control functionality. All features of DcDesk 2000 are available from a distance.

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APPLICATIONS

The DARDANOS Control Units are used in locomotive, marine, genset and vehicle applications.



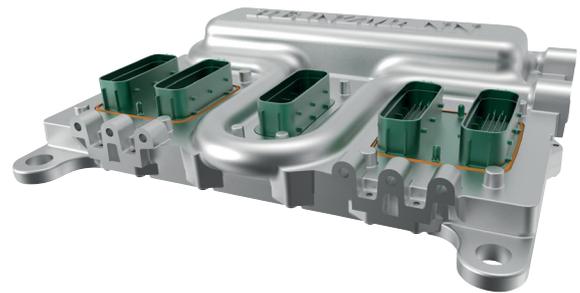
SPECIFICATIONS

	MVC 01-24	MVC 03-8	MVC 04-6
Supply voltage (max./min)	24 VDC (33/15 VDC)	24 VDC (33/12 VDC)	24 VDC (33/12 VDC)
Max. inj. boost/hold current	30/18 A	26/13 A	26/13 A
Ambient temperature	-40...+80 °C	-40...+80 °C	-40...+80 °C
	-40...+125 °C with cooling	-40...+120 °C with cooling	no cooling
Permissible humidity	up to 95 % at 55 °C	up to 95 % at 55 °C	up to 95 % at 55 °C
Protection grade	IP6K9K	IP69K	IP6K9K
Vibration	max. ± 2 mm at 10_24 Hz max. 0.24 m/s at 24_64 Hz max. 9 g at 64_2000 Hz	max. ± 2 mm at 10_24 Hz max. 0.24 m/s at 24_64 Hz max. 9 g at 64_2000 Hz	max. ± 2 mm at 10_24 Hz max. 0.24 m/s at 24_64 Hz max. 9 g at 64_2000 Hz
Shock	30 g, 11 ms – half sine wave	30 g, 11 ms – half sine wave	30 g, 11 ms – half sine wave

DARDANOS MVC 01-24

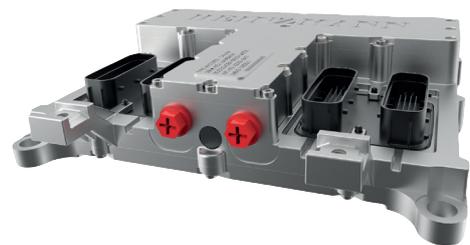
The MVC 01-24 is HEINZMANN's most powerful electronic fuel injection control for engines, such as diesel, gas and dual fuel up to a maximum of 24 cylinders. For diesel common rail it can control the rail pressure of up to four separate pumps. It can drive solenoids with flexible configurable voltage in a range of 24-110 VDC.

MVC 01-24 comes with a comprehensive number of in and outputs. The system architecture of this sophisticated EFI control is tailored for redundant mode.



DARDANOS MVC 03-8

MVC 03-8 manages and controls electronically fuel injected reciprocating engines, such as diesel, gas and dual fuel up to a maximum of 8 cylinders. For diesel common rail it can control the rail pressure of two separate pumps. It can drive solenoids of 48 VDC or 60 VDC.



DARDANOS MVC 04-6

MVC 04-6 is designed for electronically fuel injected reciprocating engines, such as diesel, gas and dual fuel up to a maximum of 6 cylinders. For diesel common rail it can control the rail pressure of two separate pumps. It can drive solenoids of 48 VDC or 60 VDC.



HERMES

Redundant EFI control system

The DARDANOS Control Units for single main propulsion engines are the core elements of the extended control systems HERMES for marine applications.

The redundancy of this system ensures high reliability and availability.

This marine certified solution includes:

- ➔ DARDANOS Control Units
- ➔ Monitoring system
- ➔ Power supply
- ➔ Shutdown system
- ➔ Package of engine sensors
- ➔ Wiring harness
- ➔ HMI with possibility of remote communication
- ➔ Control panel

Besides the full redundant speed governor the solution includes an engine monitoring and a safety shutdown system. Power supply with triple redundancy completes the various functionalities. Sophisticated HMI provides the possibility of remote control and diagnosis.

Benefits of this complete system are:

- ➔ Double independent supply from the mains with accumulator backup
- ➔ Full diagnosis and control via monitoring system
- ➔ Optimised decision strategy for redundant control signals
- ➔ Easy service and maintenance
- ➔ Increased system safety by independent shutdown system

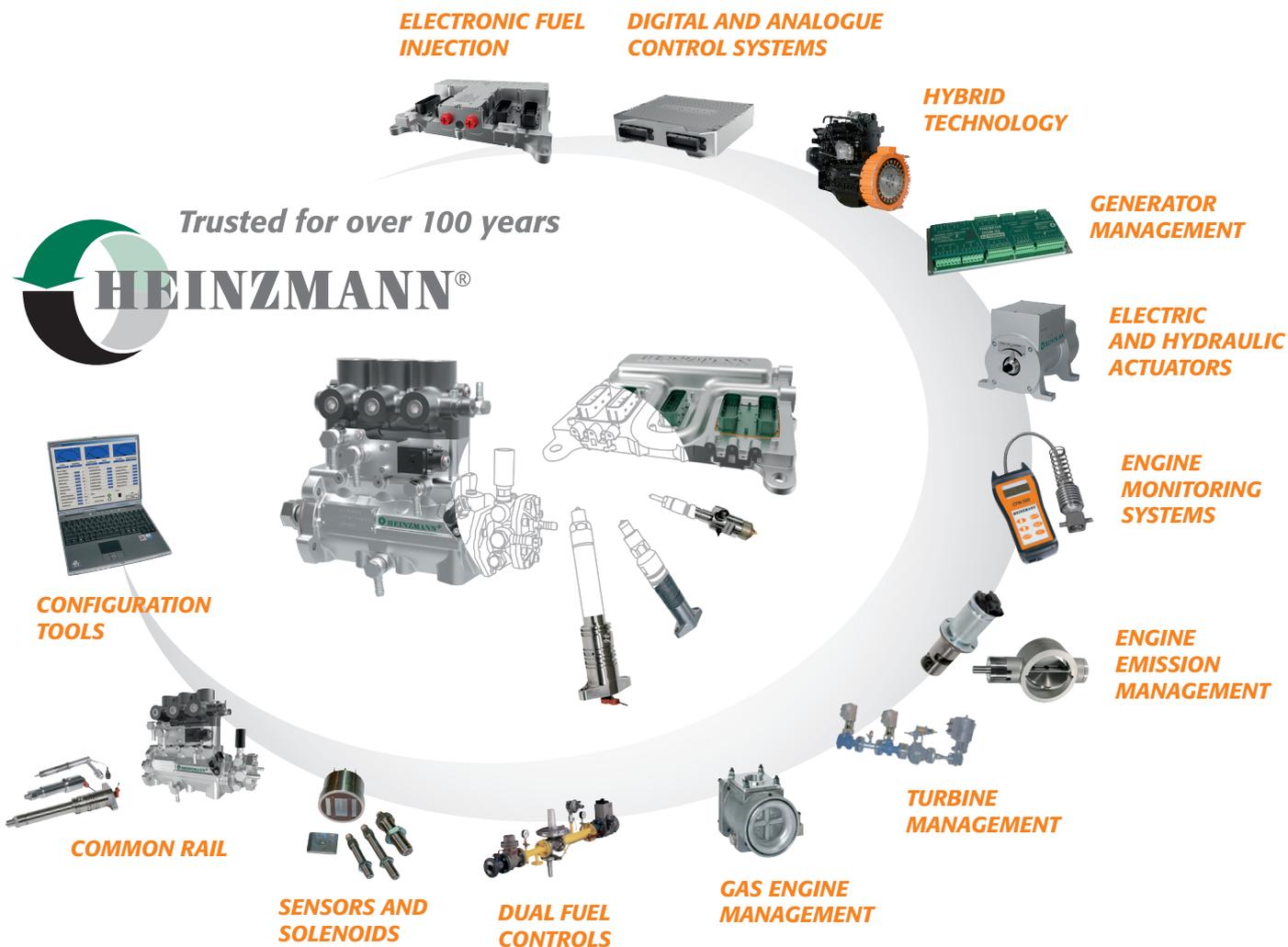




Head Office:

Heinzmann GmbH & Co. KG

Am Haselbach 1
 D-79677 Schönau/Germany
 Phone: +49 7673 8208 - 0
 Fax: +49 7673 8208 - 188
 Email: info@heinzmann.de



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www.heinzmann.com