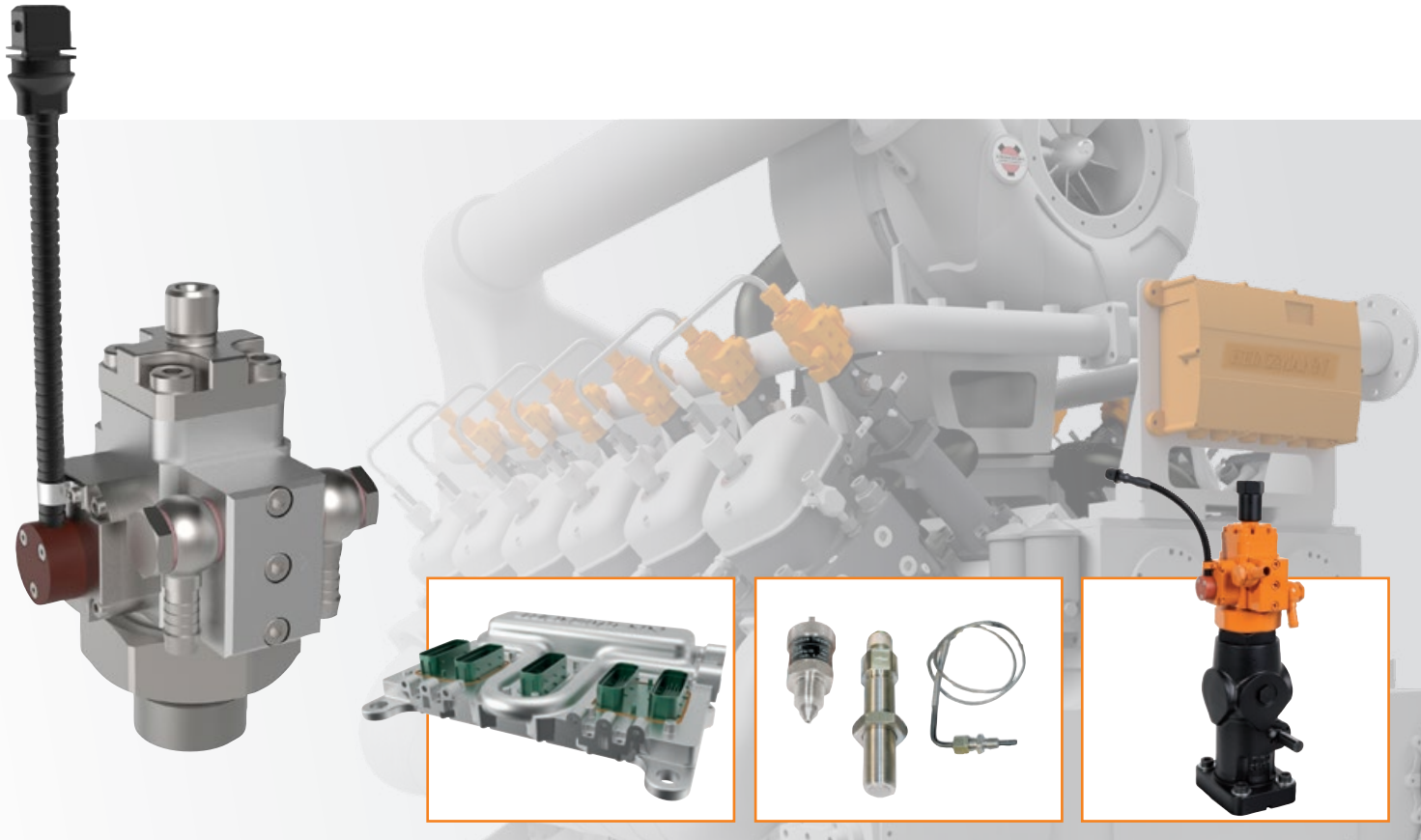


LAVINIA



Electronic Pump- Pipe-Nozzle (E-PPN)

- ▶ Reduced fuel consumption up to 12 %
- ▶ Lower Emissions
- ▶ Cost-effective solution
- ▶ Robust design
- ▶ Long lifetime
- ▶ Turnkey retrofit solution

LAVINIA

Electronic Pump-Pipe-Nozzle Control (E-PPN)

HEINZMANN electronic fuel control systems provide a comprehensive range of advanced fuel injection technologies.

Main component of the electronically controlled HEINZMANN E-PPN system is the solenoid activated injection control valve. The unit is located in the high-pressure fuel line of diesel engines. It provides a precise and speed/load dependent fuel injection timing for optimised combustion under all operating conditions.

The LAVINIA E-PPN system extends the existing fuel system. Application is possible for retrofit of diesel engines in field as well as for factory upgraded engines (OEM).

Controlled by a HEINZMANN EFI control it offers the benefits of electronic fuel control such as mapped injection timing, cylinder balancing and limitation functions. The valve offers the option of single cylinder shut-off. In dual-fuel applications the E-PPN valve enables independent timing for the pilot fuel injection.



LAVINIA Benefits

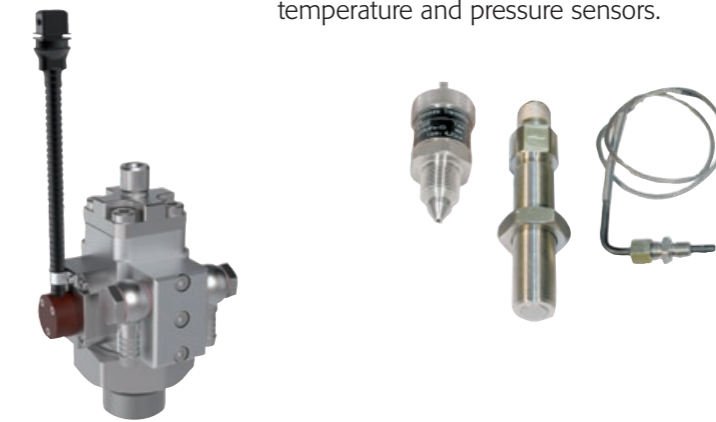
- ✓ Complete kit for installation on diesel engines with single fuel pumps
- ✓ Allows full electronic control of injected fuel quantity and injection timing
- ✓ Speed/load dependent injection timing
- ✓ Possibility to switch off cylinders at idle and low loads
- ✓ Cylinder to cylinder balancing based on exhaust gas temperature or cylinder pressure
- ✓ Optimisation of advance ignition angle depending on speed and load
- ✓ Lowering of idle speed
- ✓ Up to 350 kW/cylinder
- ✓ Up to 1600 bar system pressure
- ✓ For retrofit and new engines
- ✓ Ideal for dual-fuel engine conversions to achieve best conversion ratios and efficiency
- ✓ Customisable to different types of fuel pumps
- ✓ Double-walled piping version for marine applications available
- ✓ Service-friendly design

APPLICATIONS

- ➔ Variable and fixed speed applications (locomotives, trucks, ships, gensets)
- ➔ Replaces existing mechanical/hydraulic/electronic governors with fuel rack control
- ➔ Extensions for dual-fuel conversion of diesel engines

LAVINIA SYSTEM COMPONENTS

HEINZMANN provides a universal solenoid activated injection control valve for precise fuel injection timing for optimised combustion. Due to its modular design the valve can be easily adapted to existing high-pressure pumps and injectors of different manufacturers. No major changes are required with diesel engines for E-PPN valve installations.



E-PPN control unit

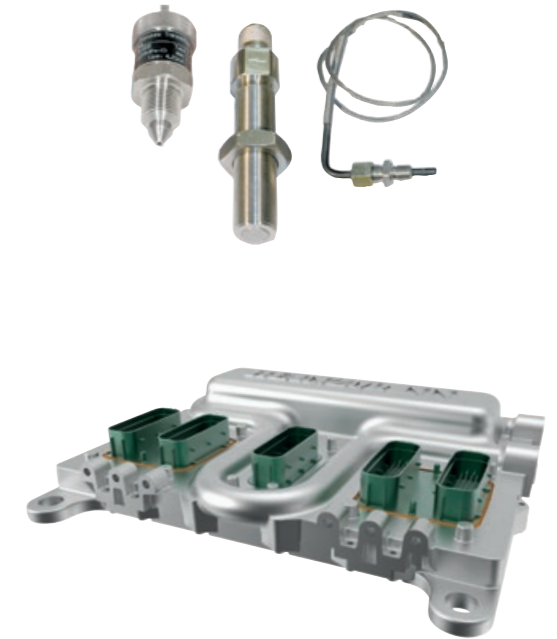
The E-PPN control system is based upon the reliable and proven EFI control DARDANOS.

The MVC 01-24 is HEINZMANN's most powerful electronic fuel injection engine control up to a maximum of 24 cylinders. MVC 01-24 comes with a comprehensive number of inputs and outputs. It can be installed easily on most types of diesel engines.

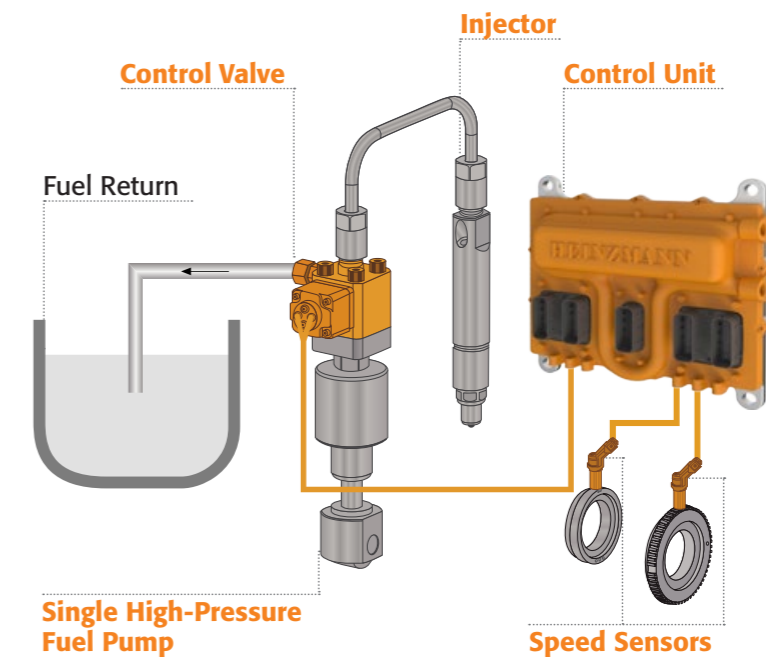
For more information please refer to the *DARDANOS EFI Control Systems leaflet*.

Sensors

HEINZMANN provides a comprehensive choice of inductive and Hall-effect speed sensors, as well as temperature and pressure sensors.



FUNCTIONAL DIAGRAM



HEINZMANN Group

Quality & Precision
since 1897

The Group started in 1897 with
Heinzmann GmbH & Co. KG,
and now includes
HEINZMANN UK,
HEINZMANN China,
HEINZMANN Korea,
HEINZMANN India,
HEINZMANN Australia,
HEINZMANN AUTOMATION,
REGULATEURS EUROPA,
and CPK Automotive as
member companies.

The HEINZMANN Group
operates numerous global
subsidiaries, including eight
production sites and an
international distributor
network.

Our product portfolio
comprises engine
management system
solutions, as well as exhaust
gas aftertreatment solutions,
for industrial combustion
engines and turbines. It also
encompasses automation
systems, primarily for the
shipping industry.



● Head office ● Subsidiaries ● Subsidiaries with production facilities ● Distributors and dealers

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