

# Common Rail Fuel Injection Retrofit

for Medium-Speed Marine Diesel Engines



- ▶ Reduction in black smoke emission
- ▶ Lower total cost of ownership
- ▶ Increased dynamic performance



- ▶ Customised HEINZMANN Common Rail Retrofit System
- ▶ Installation and commissioning service
- ▶ Full aftermarket support

**HEINZMANN  
COMMON RAIL**

More efficiency  
for your engine.

# RETROFIT OF MARINE ENGINES TO COMMON RAIL FUEL INJECTION SYSTEM

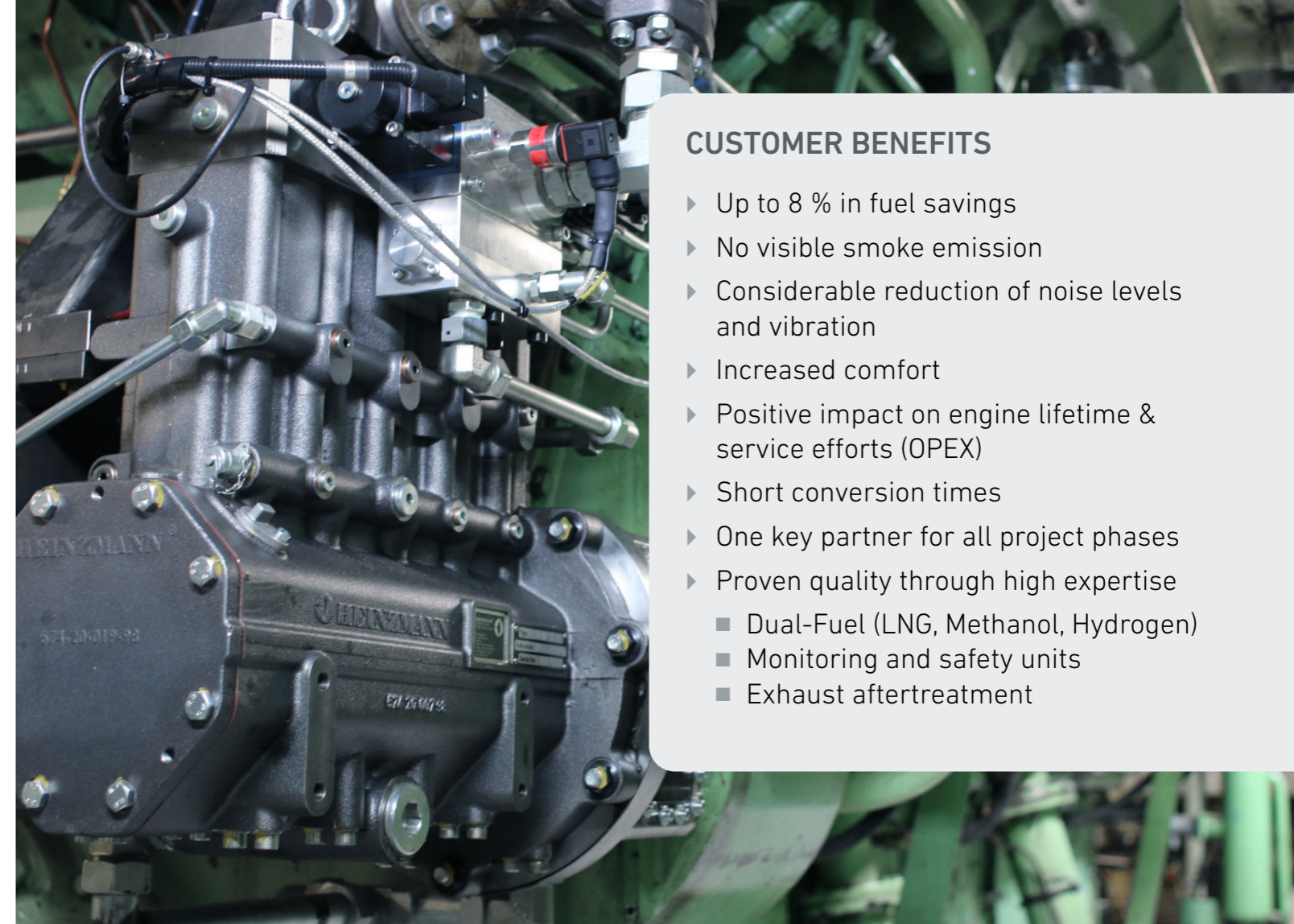
HEINZMANN provides turnkey retrofit solutions for exchanging conventional fuel injection systems on medium-speed marine engines in the output range from 1 MW to 15 MW to fully electronically controlled systems. With a minimum of engine modifications resulting in low investment and short conversion times the common rail retrofit can be performed on nearly any engine type. The open construction allows the most flexible integration in the existing control and automation systems of a vessel. The system can be extended at any time by the addition of other HEINZMANN packages (e.g. dual-fuel retrofit for usage of alternative fuels) in order to stay up to date – whatever is needed by customer requirements or legal demands.

## All from one source

- ▶ Detailed feasibility evaluation including on-site visit
- ▶ System tailoring to customer requirements – performance and cost optimised
- ▶ In-house manufacturing and assembly of all system components
- ▶ Complete replacement of the existing high-pressure fuel system
- ▶ Installation, commissioning, performance test and training service
- ▶ Overhaul, repair and spare part service

## CUSTOMER BENEFITS

- ▶ Up to 8 % in fuel savings
- ▶ No visible smoke emission
- ▶ Considerable reduction of noise levels and vibration
- ▶ Increased comfort
- ▶ Positive impact on engine lifetime & service efforts (OPEX)
- ▶ Short conversion times
- ▶ One key partner for all project phases
- ▶ Proven quality through high expertise
  - Dual-Fuel (LNG, Methanol, Hydrogen)
  - Monitoring and safety units
  - Exhaust aftertreatment



## CUSTOMER EXPECTATIONS

- Savings in operating costs
- Reduction in fuel consumption costs
- Low maintenance and service costs
- Reduction in black smoke emission and CO<sub>2</sub>

## KEY FEATURES OF COMMON RAIL

- ▶ Constantly high injection pressure regardless of engine load always ensuring a good combustion quality with high efficiency and lowest soot emissions.
- ▶ Precise and map-based injection timing at the start and during injection provides lowest fuel consumption, reduced vibration and noise levels as well as extended component life.
- ▶ Optional combination with permanent cylinder pressure monitoring allows greater balanced injection for all cylinders resulting in further improvements in consumption, noise and vibration.

## HEINZMANN Service Package

- ▶ Customer-specific project planning
- ▶ Commercial feasibility calculation support
- ▶ Design works
- ▶ System adaption
- ▶ Installation
- ▶ Commissioning
- ▶ Tests
- ▶ After-sales service

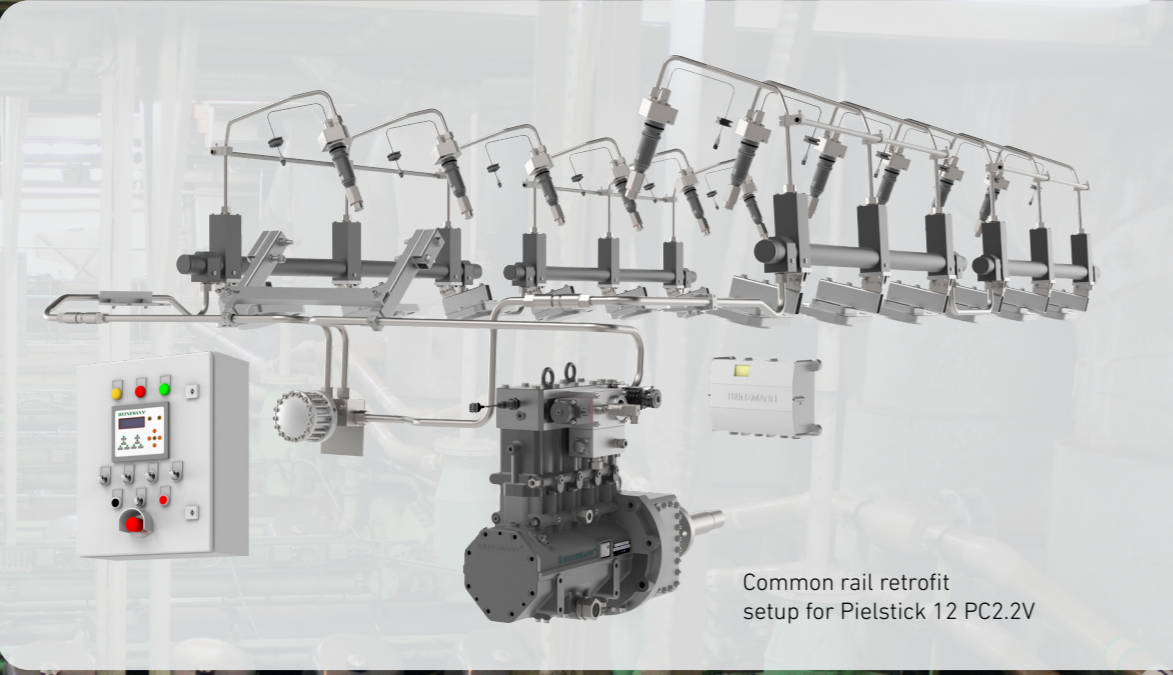
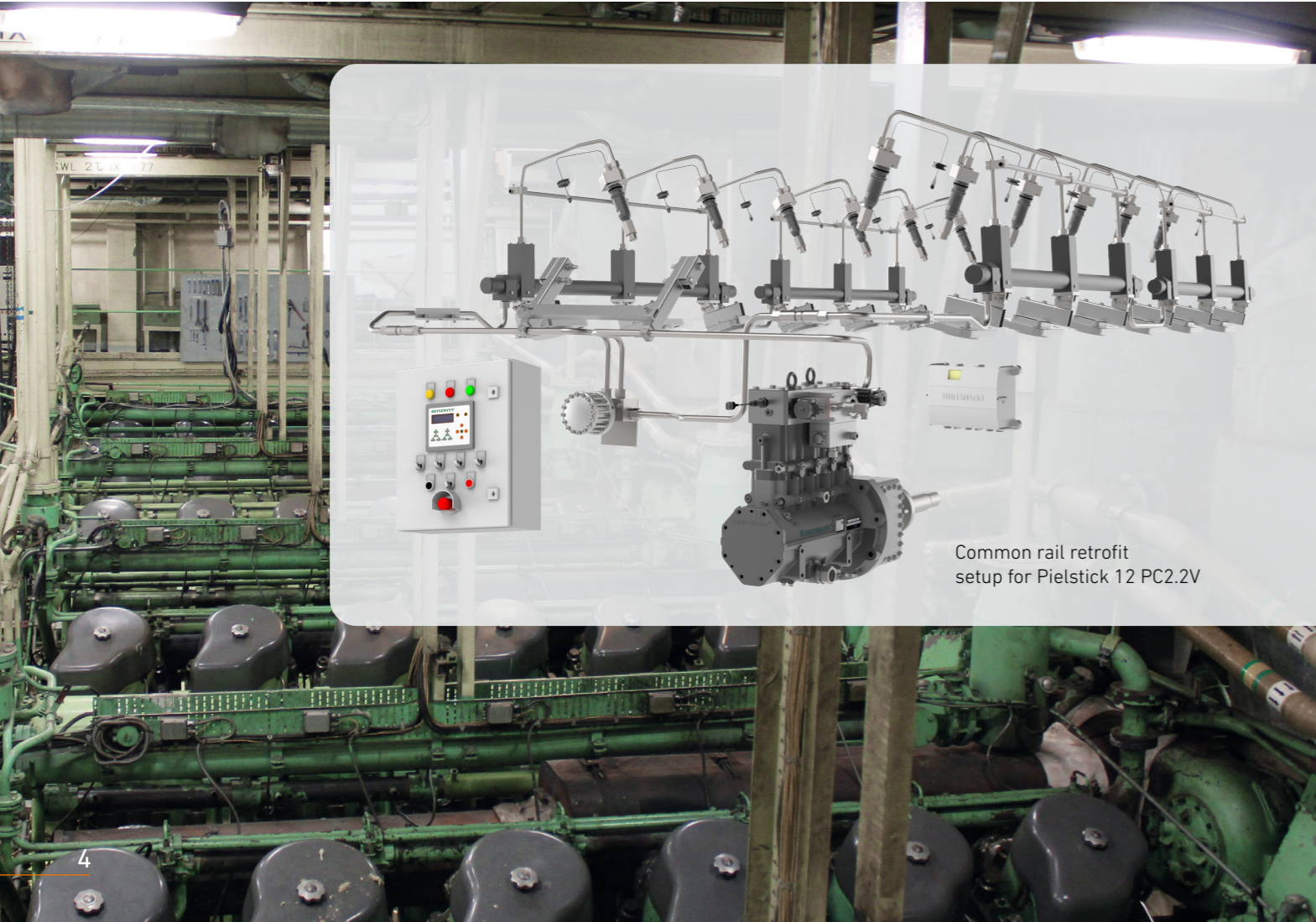
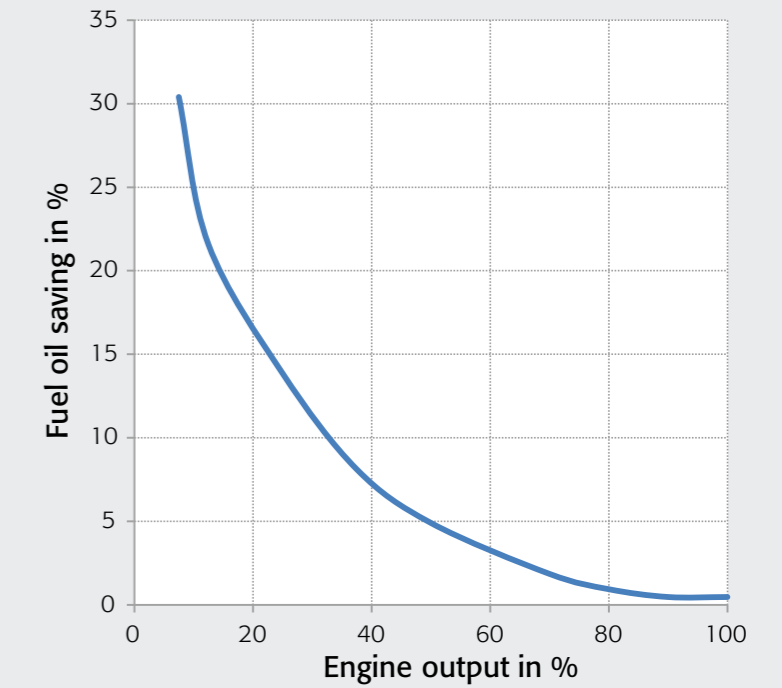


## Conversion Kit

- ▶ High-pressure pumps
- ▶ Injectors
- ▶ High-pressure pipework and rail
- ▶ Controller
- ▶ Sensors
- ▶ Application-dependant installation kit
- ▶ Monitoring and safety functions (optional)



## EXAMPLARY FUEL CONSUMPTION SAVING



Common rail retrofit setup for Pielstick 12 PC2.2V

## PROJECT DURATION

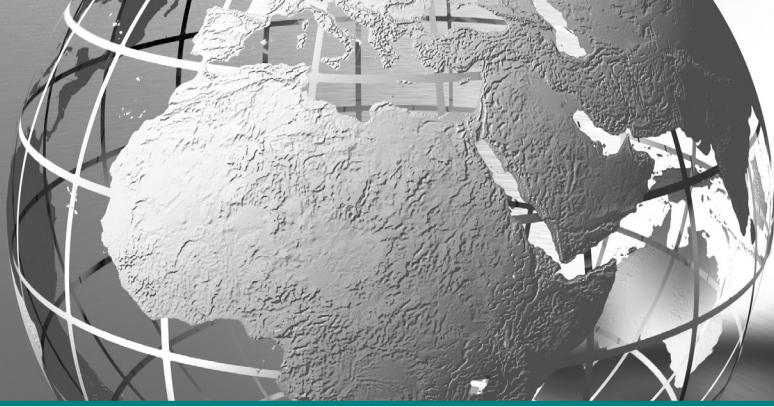
Contract preparation	2
Onsite evaluation	2
Specs book	3
Design	9
Production drawings	4
Production finished	10
Acceptance test	4
Delivery	2
Installation / Commissioning	4
Final customer acceptance	5
<b>Total project duration</b>	<b>8 - 12 months</b>

■ weeks

## RELIABLE PROJECT IMPLEMENTATION GUARANTEED

Our skilled specialists can customise the common rail retrofit system to suit your engine perfectly, your specific application and your needs. This refers in particular to the design, simulation and the layout of the high-pressure components.

When orders have been received, all main components are manufactured in-house using state-of-the-art machinery in order to meet highest quality standards. A worldwide service network assures the availability of exchange and spare parts as well as repair and necessary after-sales service activities.



## HEINZMANN Group

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, CPK Automotive and Giro Engineering 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.

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