

Short description

LDI Hydrogen injector



The injector for hydrogen direct injection LDI has been designed to significantly reduce greenhouse gas emissions in future mobile off-highway applications. Direct injection allows performance characteristics such as power and driving behaviour similar to those of a diesel engine. The LDI injector ensures a consistent and efficient combustion process through stable injection rates. This consistency optimises engine performance and operation stability. Due to the design, a precise and stable minimum volume control is possible for smooth engine behaviour. Utilising advanced sealing technologies, the LDI is completely leakage-free, enhancing both safety and combustion stability. Its flexible and robust construction makes it suitable for a wide range of engine sizes and power levels, characterised by high adaptability and reliability.

Features

- Robustness against high vibration values and various hydrogen purity classes
- Direct actuated injector
- Platform designed for 12 g/s @ 30 bar
- Gas-tight design
- Good dry running capabilities, no lube oil
- Hermetically separated solenoid drive concept
- High flexibility due to customisable diffuser caps
- Compact injector dimensions, similar to diesel injectors
- Top-feed with axial or radial inlet
- Integrated last chance filter

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Technical information

System pressure	5 – 30 bar
Max. pressure	30 bar
Flow rate	12 g/s @ 30 bar
Number of injections	2
Max. power per engine cylinder	~ 75 kW/cyl
Min. quantity capability	~ 2 mg/stroke
Weight	~ 0.5 kg
Electrical connector	2-pole connector, code A, contact pin 2.8x0.8
Injector configuration	Top-feed with axial or radial inlet
Hydrogen fuel temperature	-40 °C to +120 °C
Fuel phase	gaseous

Applications:

Agriculture / Forestry, Civil Engineering, Marine, Power Generation

