

## Short Description

# Common Rail Injector LI2



The LI2 injector has been developed for demanding applications in both off-highway and heavy-duty on-highway conditions. For such kinds of applications, robustness against aggressive fuels due to solid materials and the high-resistance flat-seat control valve, high efficiency with a minimum fuel consumption as well as accuracy and stability of the injection volumes are of vital importance. The hydraulic design provides functional resistance against internal deposits (IDID). Different types of housing geometries and nozzle variants are possible. A 9 mm nozzle alongside the classic 7 mm variant for very high throughputs up to 2,200 ml/30 sec. can be chosen. For maximum efficiency, the LI2 features a continuous leak-free operation and is configured to ensure minimum control leakage < 30 ml/min. The innovative 3-way valve allows separate adjustment of the needle opening and closing speed. This results in stable multiple injections with high precision. Supreme flexibility for customer-specific adaptation is achieved through the in-house manufacturing of the nozzles, control valves and other function-relevant micro-precision parts.

### Features

- Modular 7 and 9 mm nozzle variants available for nozzle flow up to 2,600 ml/30 sec and cylinder outputs up to 180 kW/cyl
- Continuous leak-free operation
- Minimum control leakage (< 30 ml/min under full load)
- Extreme robustness against aggressive fuels (compatible with EN590, Jet A1 fuels, B10 S10/B30, SS 155435, ASTM)
- Different injection rates possible due to a 3-way valve
- Stable multiple injections, up to five injections possible per power stroke
- Low pressure loss in the injector due to high internal pressure tank capacity and low hydraulic throttling
- Individual housing geometries possible
- Side-feed and top-feed variants
- Robust and reliable in the harshest environments according to VDI 3838, ISO 10816-6, IP6K9K
- Euro VI, US 10, EU Stage V, US EPA Tier 4f compatible

# Technical Data

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### Technical Information

|                                |                                    |
|--------------------------------|------------------------------------|
| System pressure                | 250–2,500 bar                      |
| Nozzle diameter                | 7 mm/9 mm                          |
| Nozzle flow                    | 600–2,600 ml/30sec                 |
| No. of injections              | 5                                  |
| Min. injection separation      | 250 µs                             |
| Max. power per engine cylinder | 7 mm: 95 kW/cyl, 9 mm: 180 kW/cyl* |
| Permanent leakage              | 0                                  |
| Control leakage                | <30 ml/min @ 2,200 bar             |
| Injector configuration         | Side-feed / top-feed               |
| Weight                         | ~0.450 kg                          |
| Service life on-highway        | 1.6 million km                     |
| Service life off-highway       | 15,000 hours                       |
| No. of holes                   | 6–10 in one row                    |
| K-factor                       | 0–2.5                              |
| HE factor                      | 10–35%                             |
| Ambient conditions             | -30 °C to +125 °C                  |
| Vibration specification        | VDI 3838/ISO 10816-6               |

\*Reference values. Real engine performance depending on engine specifications.

**Applications:** On-Highway, Agriculture/Forestry, Civil Engineering, Marine, Power Generation

