

Short description

# Common rail injector LI3



The LI3 Injector has been specially developed for large diesel system applications in the mining, railway, maritime and power generation segments. Extremely high reliability and robustness when faced with aggressive fuels and harsh conditions of use with regard to vibrations at impact loads of up to 10 g are vital for such kinds of applications. For this reason, the injector design is equipped with a double-walled housing, flat-seat control valve and coated components. The hydraulic design provides functional resistance against internal deposits (IDID). For maximum efficiency, the LI3 features a continuous leak-free operation and is configured to ensure minimum control leakage < 50 ml/min. Due to an internal, high-volume pressure tank with up to 43 cm<sup>3</sup> no rail is required and the pressure loss is minimised. Different types of housing geometries and nozzle variants are possible. 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

- Continuous leak-free operation
- Minimum control leakage (< 50 ml/min under full load)
- Stable multiple injections, up to four injections possible
- Pressure tank integrated in injector – no rail required
- High flexibility thanks to individual in-house manufactured nozzle variants
- Individual housing geometries possible
- Variants with radial and axial high-pressure connector
- Robust and reliable in the harshest environments according to VDI 3838, ISO 10816-6, IP6K9K
- Double-walled injector housing for maximum security TA Luft, US EPA Tier 4f, IMO III
- Extremely robust against aggressive fuels (compatible with EN590, Jet A1 fuels, B10 S10/B30, SS 155435, BS 2863, GB 19147, NATO F, MGO)

**LIEBHERR**

# Common rail injector LI3

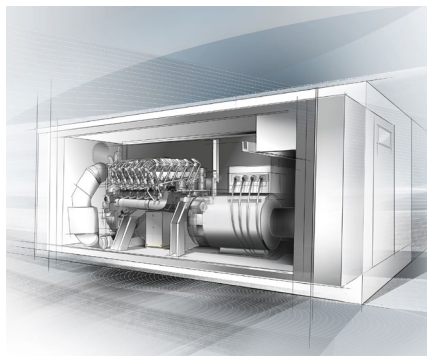
## Technical information

System pressure	300 - 2,200 bar
Nozzle diameter	13 mm
Nozzle flow	1,600 - 4,000 ml / 30 sec
No. of injections	4
Min. injection separation	400 $\mu$ s
Max. power per engine cylinder	290 kW / cyl*
Permanent leakage	0
Control leakage	< 50 ml / min @ 2,200 bar
Injector configuration	Single- or T-connector
Weight	~ 4.4 kg
Service life off-highway	15,000 hours
No. of holes	6-10 in one row
K factor	0 - 3
HE factor	10 - 30 %
Ambient conditions	-40 °C to +125 °C
Vibration specification	VDI 3838 / ISO 10816-6

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

## Anwendungsbereiche:

Mining, Marine, Power Generation



### Liebherr-Components AG

Post box 222 · 5415 Nussbaumen, Switzerland  
+41 56 296 43 00 · components@liebherr.com  
www.liebherr.com

### Liebherr USA, CO.

1465 Woodland Drive · Saline, MI 48176, USA  
+1 734 944 63 34 · components.usa@liebherr.com