



FuelBox IC90

Transportable Fueling Station for Gaseous Hydrogen



Description/application

The FuelBox based on Linde's Ionic Compressor technology is a transportable fueling station for lightweight vehicles like passenger cars or other 700-bar vehicles like trucks. It is ideal for small demo and test fleets. The highly compact, containerized system includes the equipment required for compressing, storing, cooling and refueling the hydrogen (H₂) at 700 bar.

Typical fueling / station parameters*

- Number of refuelings: 75/day
- Refueling time according to SAE J2601-2020: 4 min
- Handling time: 3 min
- Back-to-back: 5/hour
- Parallel refueling: no

*Vehicle type: passenger car (4.8 kg H₂ refueled mass), at ambient temperature of 20 °C

Components

- Compressor unit: Ionic Compressor IC90
- High pressure storage: 24 × 1,000-bar 50-liter PED cylinders
- Bank storage management system
- Electric cabinet including air conditioning and instrument air supply
- Hydrogen pre-cooling unit
- Refueling equipment for 700-bar refueling (TK17 700 bar)
- EI90 fire protection walls

Technical data / performance

- Nominal inlet pressure: 6–200 bar, GH₂
- Outlet pressure: < 900 bar
- Capacity: 27.5 kg/h
- Specific energy consumption FuelBox: 1–4.36 kWh/kg
- Connection power: max. 150 kVA, 400 V, 50 Hz, 3 phases + PEN
- Ambient operating temperature: from -20 °C to +40 °C
- Noise level: 70 dB (A) at a distance of 10 m
- Footprint (L × W × H): 5 m × 2.44 m × 5.18 m (without chimney)
- Weight: about 25 t
- Fueling capacity: max. 60 g/s
- Refueling protocol: SAE J2601-2020

Optional features

- Plant monitoring
- Card reader and point-of-sale system
- Crash sensor

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