



FuelBox IC50-P

Transportable Fueling Station for Gaseous Hydrogen



Description/application

The FuelBox IC50-P based on Linde's Ionic Compressor technology is a transportable refueling station for 350-bar heavy-duty vehicles like trucks and buses as well as 700-bar lightweight vehicles like passenger cars. It is ideal for small demo and test fleets. The highly compact containerized system includes the equipment required for compressing and refueling the hydrogen (H₂) at 350 bar.

Typical fueling / station parameters¹

	Main refueling: 350-bar vehicles			700-bar vehicles ²
	Bus or truck (≤ 60 kg H ₂ refueled mass)	Train (≤ 125 kg H ₂ refueled mass)	Forklift (≤ 1.8 kg H ₂ refueled mass)	Car (≤ 3.8 kg H ₂ refueled mass)
Refueling performance for type IV tanks				
Number of refuelings	<20/day	5/day	50/day	15/day
Handling time	3 min	6 min	3 min	3 min
Refueling performance for type IV and III tanks				
Parallel refueling	No	No	No	No
Refueling time	45–80 min	2.5 h	15 min	56 min

¹At an ambient temperature of 20 °C, an inlet pressure of at least 31 bar and an operation time of 15 hours/day

²Max. pressure vehicle tank: 400 bar

Components

- Ionic Compressor IC50-P
- Electric cabinet including air conditioning and instrument air supply
- Hydrogen pre-cooling to ambient temperature
- Refueling equipment for 350-bar refueling (TK17 350-bar HF)
- EI90 fire protection wall

Technical data / performance

- Nominal inlet pressure: 31–200 bar, GH₂
- Outlet pressure: < 500 bar
- Fueling capacity: 52 kg/h (60 g/s depending on the protocol)
- Direct filling of vehicles from compressor (online filling)
- Specific energy consumption FuelBox: 1–1.92 kWh/kg
- Connection power*: max. 120 kVA, 400 V, 50 Hz, 3 phases + PEN
- Ambient operating temperature: -20 °C / +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 20 t
- Refueling protocol: D Map Fast or alternative refueling protocol
- Calibration capability according to OIML R139

*Without H₂ pre-cooling unit

Optional features

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

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