

# Modular hydrogen refueling station Liquid-to-gas series | For light and heavy-duty

vehicles 700 bar



With more than 200 hydrogen stations delivered all over the world, Air Liquide provides **global hydrogen refueling solutions** from project definition to operation and maintenance support.

Part of the liquid-to-gas series, the modular station ranges for **light and heavy-duty vehicles** can supply **gaseous hydrogen at 350 and 700 bar using a liquid hydrogen** as a source. The modularity of the station enables support for different layouts and types of projects with a capacity up to 3,000 kg per day.

### Key benefits

- ✓ Refueling of large fleets at 700 bar
- ✓ Highly efficient liquid hydrogen pump
- ✓ No-fog vaporizer technology
- ✓ Optimization of CAPEX











# Modular hydrogen refueling station

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#### Performances

	Standard configuration	Extended configuration
Dispenser(s)	2 x H70 single (HD)	2 x H70 single (HD) 1 x H70 double (LD)
Max. vehicles in 1 hour	6 trucks (40 kg each)	10 cars (4 kg each) AND 5 trucks (40 kg each)
24h capacity based on standardized profile	2,160 kg/day	2,160 kg/day



<sup>\*</sup> Source trailers and dispensers excluded.

#### Technical specifications

Fueling time	• H70 - light-duty: 4 kg in 3 min • H35 - heavy-duty: 40 kg in 15 min
Noise	< 85 dBA at 1 m
Utilities	<ul><li>480 V, 3 phases, 60 Hz, 250 kVA</li><li>Compressed air system included</li><li>Nitrogen for maintenance purposes only</li></ul>
Safety	<ul><li>Hydrogen / flame detection</li><li>Emergency stop buttons</li><li>Flare adapted to urban use</li></ul>
Environment	Ambient operating temperature: -20°C to +40°C
Codes and standard	<ul> <li>ASME sect VIII, div 1/ (div 3)</li> <li>ASME B-31.3 / ASME B-31.12</li> <li>ISO 19880-1</li> <li>EIGA IGC 15/06 Guidelines for gaseous hydrogen station</li> <li>SAE J2601 2016 version (including MC method) / SAE J2600 / SAE J2799</li> <li>NFPA-2 / NFPA-55 / NFPA 70 / NFPA 496 and for South Korean market: KGS compliancy (Korean Gas Safety cooperation)</li> </ul>

• CE upon request

## Modularity

#### Compatible hydrogen sources

- Liquid hydrogen trailer
- LH<sub>2</sub> tank: 3,500 kg
- · Liquid ground storage: horizontal or vertical

#### Compression and storage

- MP storage capacity upon request
- 98% availability higher level of redundancy upon request

#### **Dispensers**

- Up to 3 dispensers per station
- Parallel refuellings possible
- Adaptable branding and colors

# Services & maintenance support

- Preventive and corrective maintenance contract
- Technical assistance and training
- Spare parts supply
- Remote control for operation and assistance



#### Contacts

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