

M30 Hydrogen Generator

Hydrogen on demand: When you need it, where you need it!



Our range of reactors is tailored to the specific needs of each project, with one range for low consumption and another for those requiring larger volumes. Hydrogen generation capacity can go from 150 kW in the lower range to several MW in the upper one, taking advantage of the scalability of our products

Methanol Reformers' Hydrogen generation technology produces hydrogen from Methanol – on site and on board. The M30 hydrogen generator delivers up to 384 kg hydrogen per day to support fuel cells in excess of 200 kW.

Using an easily transported and stored blend of methanol plus water, the M30 product delivers high-purity hydrogen at pressures up to 2 bar. Integration with commercial fuel cell modules is easily achieved via a low-pressure hydrogen buffer tank. Applications include primary and backup power for stationary applications, distributed (grid independent) BEV charging stations, hydrogen fueling stations, and onboard heavy duty vehicles (trains, trucks, off-road machinery). Very low, and even negative, carbon intensities are achieved using renewable methanol.

For more information, please contact with info@methanolreformer.es

Advantages:

- Environmentally friendly
- Low capital expenditure (Capex)
- Low operating expenditure (Opex)
- Modularity: scalable from 150 kWh to several MW
- High energy efficiency > 80%
- Reliable and low maintenance
- Vibration resistant
- Long service life (approximately > 20,000 operating hours for the filter membrane and > 40,000 for the catalyst)
- Fast hydrogen availability - takes less than 3 minutes to start hydrogen supply.

Applications (on board / on site):

- Hydrogen (HRS) (FCEV Charging Stations)
- Charging Stations for Electric Vehicles (BEV)
- Hydrogen Supply Backup Systems
- Power Supply Backup Systems
- Transport: trains, trucks
- Off road & heavy duty
- Railway: on board, on site refueling, retrofitting

Website: www.methanolreformer.com

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Global Headquarters: World Trade Center. Moll de Barcelona s/n Edificio Este Planta 5

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M30 Hydrogen Generator Product Specifications*

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System Architecture H ₂ Generator System H ₂ Purifier	Includes feedstock pump, air blower, feedstock reformer, H ₂ purifier, controls Proprietary bi-metallic membrane purifier
H₂ product Output Purity H ₂ Buffer Tank Delivery Pressure	3,000 sLm 16.2 kg/hr (max output) ≥ 99.97% (dry basis) with < 0.2 ppm CO ₂ (meets ISO 14687 purity standard) 0.7 - 2.0 bar
Efficiency Methanol/ Water Consumption Efficiency at Steady State Optimal	210 L/hr average at 3000 sLm Hydrogen production > 80%
Control options Controls Communication Protocol Operating Modes Remote Access	Bosch ECM control package CAN - SAE j1939 Automated or Manual Optional: Access to Wi-Fi required for remote access
Electrical power requirements Cold Startup Mode Hot Standby H ₂ Production Mode Minimum Power to H ₂ Generator	≤ 8 kW at 200 VAC (Constant), < 0.2 kW at 24 VDC ≤ 4 kW at 200 VAC, <0.2 kW at 24 VDC (avg. energy consumption) ≤ 1.3 kW at 200 VAC, < 0.7 kW at 24 VDC ≥ 40 A at 200 VAC, ≥ 20A at 24 VDC
Startup time From Ambient Temperature From Hot Standby	24 hrs. depending on system power conditions & ambient temp. < 5 min to H ₂ production; < 30 min to rated H ₂ production
Dimensions Size (L x W x H) = Volume Weight	(2.34 m X 1.13 m X 1.62 m) = 4.3 m ³ 1,770 kg
Feedstock requirements Methanol/ Water DI Blend Ratio Methanol Specifications De-Ionized Water Specifications	Premixed Methanol 62.5 +/- 0.5 wt% with balance DI water Methanol must meet IMPCA purity standard DI water must be ≥ 14MΩ-cm

*Specifications subject to change

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