



H₂Gem

Modular Hydrogen generator

UP to 27 kW

H₂Gem can be equipped with 1 – 6 PEMWE 1000 electrolyser modules, Water management module, hydrogen dryer, rack and PLC with safety control.

The power of the entire electrolyser system can be continuously controlled from 2.5 to a maximum power of 27.5 kW. Hydrogen production is up to 6000 NI/h (0.55 kg/h) or 144 Nm³/24h (13.12 kg/24h).

Specifications

Number of WE modules:
1 – 6

Production power of H₂Gem:
2.5 – 27.5 kW

Production of H₂:
500 – 6012 NI/h
0.05 – 0.5465 kg/h

Max. production H₂ / 24 h:
144288 NI/24h
13.12 kg/24h

H₂ Output pressure:
10 – 25 bar

O₂ operating pressure:
non-pressurised

Hydrogen purity:
99.99 %

Total energy for 1 kg H₂:
56.2 kWh

Demi water consumption:
0.675 – 9 l/h

Cooling water flow rate:
180 – 2520 l/hod

Rack dimensions (w x d x h):
1070 × 660 × 2200 mm



PEMWE 1000 – Water Electrolyzer Module

- advanced PEM (Proton-exchange membrane) based water electrolyzer stack LCWE25-45-HEX
- integrated water/water heat exchanger
- 5 l demineralized water tank
- conductivity sensor
- embedded control with 3,5" color display
- CAN Open communication to PLC
- ion trap with easy filling exchange



Water Management Module

- demineralized water supply for the WE modules
- capacity of 20 l of Demineralized water guarantees operation of the system even in the event of a reverse osmosis failure for min. 3 hours
- conductivity sensor
- ion trap with easy filling exchange



Dryer Module

- two-column drying system based on molecular sieve
- humidity sensor ensures automatic switching between drying and regeneration modes to ensure continuous drying.
- pressure and temperature sensors
- heating for drying of the columns
- back-pressure valve



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