Leancat Electrolyzers

NEW!

H_2Gem

Modular Hydrogen generator

UP to 27 kW

H_2Gem 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 Nl/h (0.55 kg/h) or 144 Nm³/24h (13.12 kg/24h).

Specifications

Number of WE modules:
1 – 6

Production power of H_2Gem:
2.5 – 27 kW

Production of H_2:
1499.5 – 6012 Nl/h
0.05 – 0.5465 kg/h

Max. production H_2 / 24 h:
144288 Nl/24h
13.12 kg/24h

H_2 Output pressure:
10 – 35 bar

O_2 operating pressure:
non-pressurised

Hydrogen purity:
99.99 %

Total energy for 1 kg H_2:
56.21 kW

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

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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
- working pressure 10 – 35 barg

ROWM – Water Management Module with Reverse Osmosis

- production and supply of deionized water for WE modules
- standard tap water input with pressure range 2 – 6 bar
- reverse osmosis system producing deionized water of DIN ISO 3696 Type 1 quality (conductivity < 0.2 µS/cm²)
- integrated 12-liter reservoir ensures system operation for at least 2 hours in case of water supply interruption or reverse osmosis failure
- conductivity sensor for continuous water quality monitoring
- ion trap with easy refill and exchange mechanism

Water Management Module

- deionized water supply for the WE modules
- capacity of 20 l of Deionized 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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