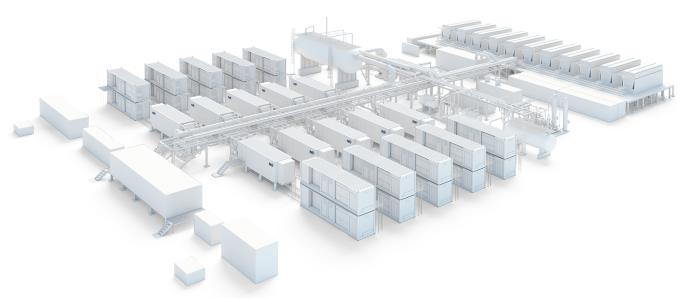


## **PEM 100**

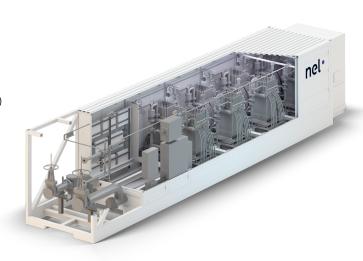
## Proton Exchange Membrane (PEM) 100 MW Standardized Plant Solution



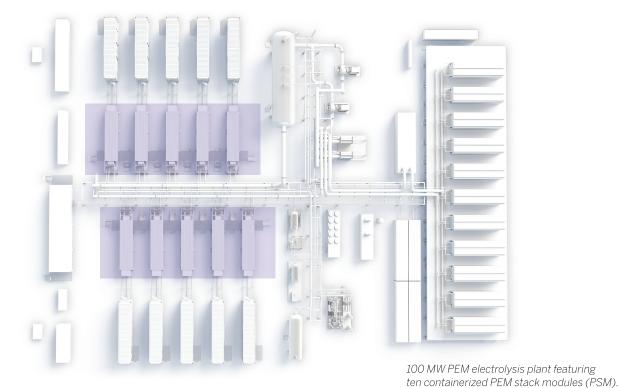
100 MW PEM electrolysis plant featuring ten containerized PEM stack modules (PSM).

The PEM 100 is a complete standardized electrolyser plant design, in a cost-optimized configuration. The design approach integrates ten containerized electrolyser stack modules into a consolidated balance of plant to reduce risk and create a standard building block for larger plants.

- Industry leading reliability and cell stack life
- Containerization eliminates need for a building
- Pre-integated modules for reduced EPC scope
- Backed by long term performance guarantees
- Largest installed base globally
- Third party certified and field-proven safety
- Lowest total cost of hydrogen
- Comprehensive process design package (PDP) available for reduced FEED cost and schedule



MODEL	PEM 100
Class	100 MW
Electrolyte	Proton Exchange Membrane (PEM) – caustic-free
HYDROGEN PRODUCTION	
Nominal Production Rate Nm³/h (m³/h @ 0°C, 1 bar) kg/24 h	20,200 Nm³/h 43,000 kg/24 h
Delivery Pressure – Nominal	30 barg (435 psig); full differential pressure $\rm H_2$ over $\rm O_2$
Nominal Power Consumption at Stack per Unit of H <sub>2</sub> Gas Produced at 100% Capacity <sup>1</sup>	4.72 kWh/Nm³ 53.2 kWh/kg
Nominal Power Consumption by Plant (Stack + BoS + Bop + Cooling) per Unit of H <sub>2</sub> Gas Produced at 100% Capacity <sup>1</sup>	5.0 kWh/Nm³ 56.7 kWh/kg
Purity (with optional dryer)	99.999+%
Turndown Range	10 to 100%
SITE AND UTILITIES	
Standard Siting Location	Outdoors
Ambient Temperature <sup>2</sup>	-30 to 50°C (-22 to 122°F)
Altitude Range <sup>3</sup>	Sea level to 1,000 m (3,281 ft)
Electrical Requirements	35 kV, 50/60 Hz
Plant Dimensions W x D <sup>4</sup>	96 m x 69 m (315 ft x 226 ft)





Specifications are subject to change. Please contact Nel Hydrogen for solutions to best fit your needs.

- Beginning of life and dependent on configuration and operating conditions.
  Ambient temperature requirement for PSM containerized electrolyser stack modules only.
  Consult Nel Hydrogen Applications Engineering Department for installations above 1,000 m (3,281 ft).
  Site conditions may cause the design to vary.