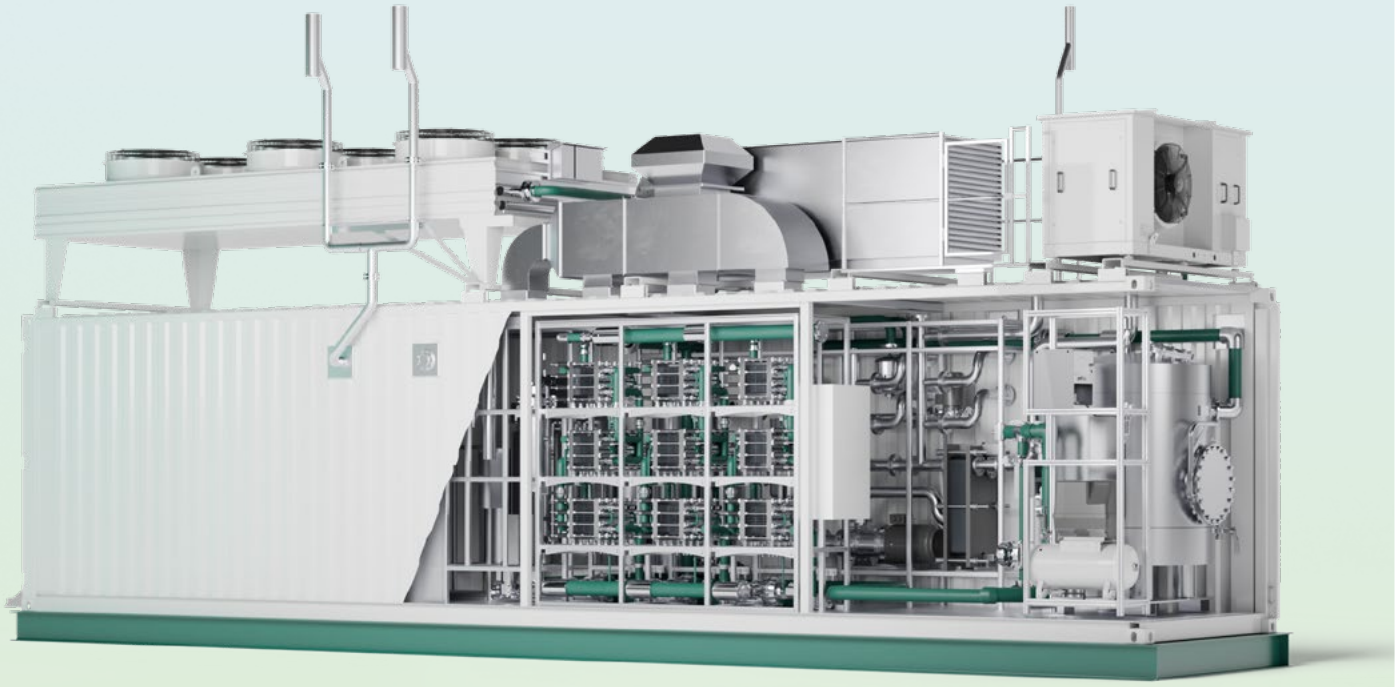
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QUEST ONE PEM-ELECTROLYZER ME450

Ready. Set. Supply.

Figure is for illustrative purpose only

Quest One High Performance Electrolyzers

QUEST ONE

PEM electrolyzers for a sustainable energy supply system – Quest One ME450

Plug-and-play hydrogen: The Quest One ME450 electrolyzer is a proven turn-key solution for the easy and efficient production of green hydrogen. In the space of just one standard 40-foot container, enough hydrogen can be produced to refuel 90 cars daily. Each ME450 has an electrolysis capacity of 1 MW and can produce 450 kg of high purity hydrogen daily. Its modularity makes it suitable for projects requiring 1 – 5 MW of electrolysis capacity. Thanks to a multiple stack design, high plant availability and excellent spare parts availability, and our extensive service offering, risks can be minimized, and costs reduced. Due to the proven design, the technology of the Quest One PEM electrolyzer is reliable and future-proof.

H_2 production nominal	450 kg/d | 210 Nm^3/h
System specific energy consumption [1,2]	4.7 kWh/Nm^3 H_2 | 52,5 kWh/kg
System efficiency [1,2]	76 %
Performance class	1 MW
H_2 production modulation range	42 – 210 Nm^3/h | 20 – 100 % H_2
H_2 purity	5.0 (meets ISO 14687:2025 Table 3)
H_2 operating pressure	30 bar (g)
Load change	30 s (Standby to nominal load)
Heat recovery (optional)	Heat output: 170 kW BoL | 350 kW EoL <= 57 °C Transfer to customer system | >90% system efficiency
H_2O required quality	EU Directive 2020/2184-EU | See also additional applicable specifications from QUEST ONE GmbH
H_2O consumption nominal	260 kg / h (at 10° dH)
Power supply electrolysis [3]	3 x 480 V Y, 3 x 480 V ▲ / 50 Hz (acc. IEC 60038), Connecting power: 1.35 MVA
Power supply peripherie	3 x 400 V / 50 Hz (acc. IEC 60038), Connecting value: 150 kW
Dimensions L x W x H	40‘ Container, incl. attachments ca. 13.2 x 4.0 x 5.7 m
Weight	ca. 36 t (operational)
Ambient temperature [4]	-20 °C bis +40 °C

Technical changes reserved
[1] Standard conditions: BoL, 15 °C outdoor temperature
[2] 200 Nm^3/h, based on Higher Heating Value (HHV).
[3] Transformer is required for galvanic isolation
[4] Optionally expandable down to -30 °C with the cold package

We are the fuel of the global energy transition

As a technological pioneer, we have been playing a decisive role in shaping hydrogen technology for over 25 years. We believe that mobility, production, and consumption are possible without emissions. To achieve this, Quest One builds on cooperation with visionary customers and partners, and the power of our parent company Everllence (former MAN Energy Solutions). Together, we are making hydrogen production green and the CO_2-neutral transformation of all sectors a reality.

Find out more at **questone.com**

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