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**H-TEC SYSTEMS**

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**H-TEC SYSTEMS**  
High Efficiency  
Electrolyzers

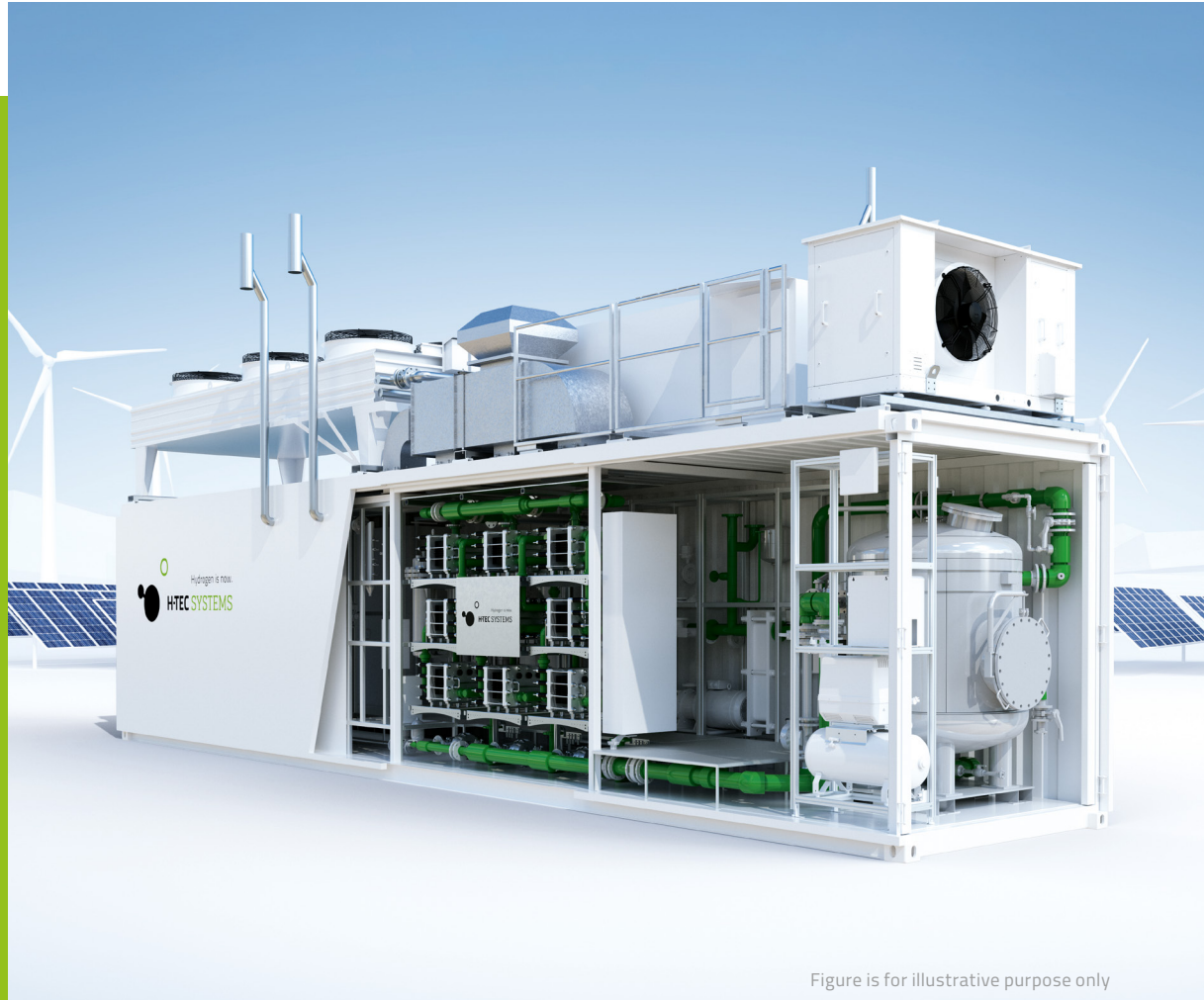


Figure is for illustrative purpose only

# H-TEC SYSTEMS PEM Electrolyzer **ME450**

# PEM electrolyzers for a sustainable energy supply system – H-TEC SYSTEMS ME450

Plug-and-play hydrogen: The H-TEC SYSTEMS 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 H-TEC SYSTEMS PEM electrolyzer is reliable and future-proof.

<b>H<sub>2</sub> production nominal</b>	450 kg/d   210 Nm <sup>3</sup> /h
<b>Energy consumption<sup>1</sup></b>	4,7 kWh/Nm <sup>3</sup> H <sub>2</sub>   53 kWh/kg
<b>System efficiency<sup>1</sup></b>	75%
<b>Performance class</b>	1 MW
<b>H<sub>2</sub> production modulation range</b>	42 – 210 Nm <sup>3</sup> /h   20 – 100 %
<b>H<sub>2</sub> purity</b>	5.0 (meets ISO 14687:2019 Table 2)
<b>H<sub>2</sub> output pressure</b>	20 – 30 bar (g)
<b>Load change</b>	30 s (Standby to nominal load)
<b>Heat recovery</b>	Heat output: 170 kW BoL   350 kW EoL 57 °C Transfer to customer system   >90% system efficiency
<b>H<sub>2</sub>O required quality</b>	TrinkwV 2020   EU Directive 2020/2184-EU
<b>H<sub>2</sub>O consumption nominal</b>	260 kg/h (at 10° dH)
<b>Power supply electrolysis<sup>2</sup></b>	3 x 480 VY, 3 x 480 V ▲ / 50 Hz (acc. IEC 60038), Connecting power: 1.325 MVA
<b>Power supply peripherie</b>	3 x 400 V / 50 Hz (acc. IEC 60038), Connecting value: 150 kW
<b>Dimensions LxWxH</b>	40' Container, incl. attachments ca. 13.2 x 4.0 x 5.7 m
<b>Weight</b>	ca. 36 t (operational)
<b>Ambient temperature</b>	-20 °C to +40 °C

Technical changes reserved

<sup>1</sup> Standard conditions: BoL, 15 °C outdoor temperature, 30 bar (g) H<sub>2</sub> transfer pressure and 200 Nm<sup>3</sup>/h, based on Higher Heating Value (HHV).

<sup>2</sup> Transformer is required for galvanic isolation

## 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, H-TEC SYSTEMS

builds on cooperation with visionary customers and partners, and the power of our parent company MAN Energy Solutions. Together, we are making hydrogen production green and the CO<sub>2</sub>-neutral transformation of all sectors a reality.