



We pioneer motion

Electrolysis can ensure the success of the energy transformation

PEMWE needs energy.

Fossil fuels such as natural gas or coal are currently often used. This produces grey hydrogen which is why hydrogen production using finite resources is not climate neutral. However, if renewable energy such as wind power is used to split H_2O , green hydrogen is produced. This is climate neutral and should be the standard in the future to achieve ambitious energy transformation goals. This is where Schaeffler gets involved. Green hydrogen can be produced from pre-treated water using PEM electrolyzers and wind energy.

Our aim is to make this type of hydrogen synthesis freely available to industry in the future.

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Components for Schaeffler PEM electrolyzers

Hydrogen is produced in PEM electrolyzers (electrolyzers with polymer electrolyte membranes) using purified water.

Our electrolyzer stacks are available in a range of sizes and designs. The Hydron PowerStacks K0, K1 and K10 are specifically developed to facilitate research and development activities on membranes, catalyst and electrodes. The Hydron PowerStack K50 and K100 are suitable for industrial applications.



Specifications	HYDRON K50	HYDRON K100
Electrolyzer type	Polymer Electrolyte Membrane	Polymer Electrolyte Membrane
Product class / power rating @ 100 % capacity	50 kW _e	100 kW _e
Specifications for stack with cell quantity	30	60
Nominal H ₂ production rate ⁽¹⁾	1.1 kg/hr 12 Nm ³ /hr	2.2 kg/hr 24 Nm ³ /hr
Nominal O ₂ production rate ⁽¹⁾	8.7 kg/hr 6 Nm ³ /hr	17.3 kg/hr 12 Nm ³ /hr
Maximum H ₂ and O ₂ discharge pressure (PS) ⁽²⁾	35 bar (g)	35 bar (g)
Stack Dimensions (L x H x W) ⁽³⁾	455 x 465 x 400 mm	455 x 665 x 400 mm
Stack Weight	~ 360 kg	~ 550 kg

(1) Nominal stack operating current 968 A.

(2) Maximum allowable working pressure at operating temperature.

(3) Max. outside envelope, incl. media connectors and power terminals.

Technical details and components are subject to change without notice.

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