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 electrolysers 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 electrolysers

Hydrogen is produced in PEM electrolysers (electrolysers with polymer electrolyte membranes) using purified water.
Our electrolyser 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**
Electrolyser 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 Nm³/hr	2.2 kg/hr 24 Nm³/hr
Nominal O_2 production rate(1)	8.7 kg/hr 6 Nm³/hr	17.3 kg/hr 12 Nm³/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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