



# HYDRO CAB POWER CORE

SELF RECHARGING FUEL CELL

## HydroCab PowerCore with Enapter AEM Electrolyser 4.0

- Combines water electrolysis and fuel cells in one self-sufficient energy system for short- and long-term energy storage
- Can be integrated into all existing PV, wind or hydropower plants
- Logistics-free, sustainable energy solution
- Easy operation, independent of external electricity price fluctuations
- Up to 2 Nm<sup>3</sup>/h H<sub>2</sub> production and up to 8 kW electric output power configurable
- Integrated dryer ensures H<sub>2</sub> purity of 99.999% (5.0)
- H<sub>2</sub> outlet pressure already 35 bar
- Fuel cells can be integrated modularly up to 8 kW power
- Suitable hydrogen storage solutions for effectively available energy from 40 kWh to >1,000 kWh
- Modularly scalable and expandable at any time
- Plug and play, easy installation and low maintenance operation

## Examples for system configurations



	0.5 m <sup>3</sup> H <sub>2</sub> per hour H <sub>2</sub> Production		1 m <sup>3</sup> H <sub>2</sub> per hour H <sub>2</sub> Production		
Configuration	2.5 kW-0.5 Nm <sup>3</sup> /h	4 kW-0.5 Nm <sup>3</sup> /h	8 kW-1 Nm <sup>3</sup> /h	2.5 kW-1 Nm <sup>3</sup> /h	4 kW-1 Nm <sup>3</sup> /h
<b>Power Output (Charging)</b>	2.5 kW @ 48 V or 1.92 kW @ 24 V	4 kW @ 48 V or 2.88 kW @ 24 V	8 kW @ 48 V or 5.76 kW @ 24 V	2.5 kW @ 48 V or 1.92 kW @ 24 V	4 kW @ 48 V or 2.88 kW @ 24 V
<b>Rated Current</b>	52 A @ 48 V or 80 A @ 24 V	83 A @ 48 V or 120 A @ 24 V	166 A @ 48 V or 240 A @ 24 V	52 A @ 48 V or 80 A @ 24 V	83 A @ 48 V or 120 A @ 24 V
<b>H<sub>2</sub> Consumption</b>	Less than 70g per kWh				
<b>Emission</b>	Water Vapor				
<b>Operation</b>	Altitude 0 – 4000m   Ambient Temp +5°C - +40°C   Humidity 10 - 90%				
<b>H<sub>2</sub> Production (Storage)</b>	500 NL/h 1 kg/24h	500 NL/h 1 kg/24h	1000 NL/h 2 kg/24h	1000 NL/h 2 kg/24h	1000 NL/h 2 kg/24h
<b>Power Consumption</b>	2.4 kW	2.4 kW	4.8 kW	4.8 kW	4.8 kW
<b>Standby Consumption</b>	<b>15 W</b>	<b>15 W</b>	<b>30 W</b>	<b>30 W</b>	<b>30 W</b>
<b>Water Consumption</b>	0.4 L/h	0.4 L/h	0.8 L/h	0.8 L/h	0.8 L/h
<b>Output Pressure</b>	35 bar				
<b>H<sub>2</sub> Purity</b>	~ 99.9% (Impurities ~1000 ppm H <sub>2</sub> O, < 1 ppm of any N <sub>2</sub> /O <sub>2</sub> /Ar/CO/CO <sub>2</sub> )				
<b>With Dryer</b>	~ 99.999% (Impurities : < 1 ppm of any H <sub>2</sub> O/N <sub>2</sub> /O <sub>2</sub> /Ar/CO/CO <sub>2</sub> )				
<b>Water purity</b>	< 20 μS/cm (@ 25°C)				

## Hydrogen Storage

850 L Steel Vessel @ 35bar	5 m <sup>3</sup> Steel Vessel @ 35 bar	30 m <sup>3</sup> Steel Vessel @ 35bar	Super Capacitors
30 Nm <sup>3</sup> / 40 kWh (electrically usable)	175 Nm <sup>3</sup> / 230 kWh (electrically usable)	1050 Nm <sup>3</sup> / 1400 kWh (electrically usable)	5 kWh @48 V

\* other sizes on request.

\*\*Heat energy additionally usable.

