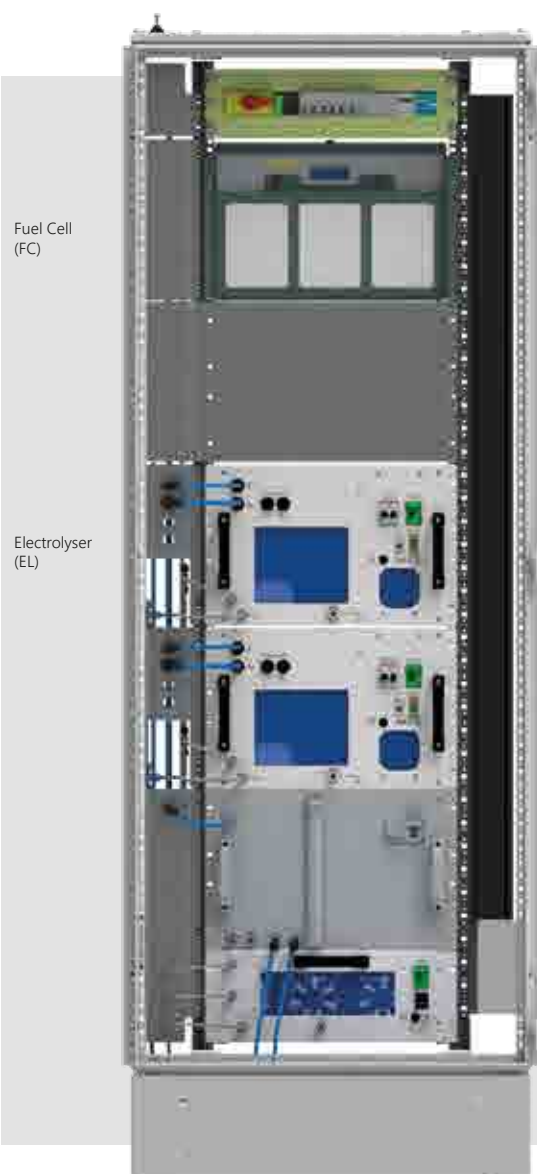


Powercore Indoor Cabinet

Powered by nature

Self Recharging Fuel Cell



- 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 Nm³/h H₂ production and up to 8 kW electric output power configurable
- Integrated dryer ensures H₂ purity of 99.999% (5.0)
- H₂ 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

POWERING THE WORLD WITH GREEN HYDROGEN.

This is a design data sheet, changes to the technical parameters are protected.

System Configuration



	0.5 m³ H2 per hour H2 Production		1 m³ H2 per hour H2 Production		
Configuration	2.5 kW-0.5 Nm³/h	4 kW-0.5 Nm³/h	8 kW-1 Nm³/h	2.5 kW-1 Nm³/h	4 kW-1 Nm³/h
Power Output (Charging)	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
Rated Current	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
H2 Consumption	Less than 70g per kWh				
Emission	Water Vapor				
Operation	Altitude 0 – 4000m Ambient Temp +5°C - +40°C Humidity 10 - 90%				
H2 Production (Storage)	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
Power Consumption	2.4 kW	2.4 kW	4.8 kW	4.8 kW	4.8 kW
Standby Consumption	15 W	15 W	30 W	30 W	30 W
Water Consumption	0.4 L/h	0.4 L/h	0.8 L/h	0.8 L/h	0.8 L/h
Output Pressure	35 bar				
H2 Purity	~ 99.9% (Impurities ~1000 ppm H ₂ O, < 1 ppm of any N ₂ /O ₂ /Ar/CO/CO ₂)				
With Dryer	~ 99.999% (Impurities : < 1 ppm of any H ₂ O/N ₂ /O ₂ /Ar/CO/CO ₂)				
Water purity	< 20 µS/cm (@25°C)				

Hydrogen Storage

*

850 L Steel Vessel @ 35bar	5 m³ Steel Vessel @ 35 bar	30 m³ Steel Vessel @ 35bar	Super Capacitors
30 Nm³ / 40 kWh (electrically usable)**	175 Nm³ / 230 kWh (electrically usable)	1050 Nm³ / 1400 kWh (electrically usable)	5 kWh @48 V
			7,5 kWh @48 V

* other sizes on request.

**Heat energy additionally usable.

Use Cases

Hydrogen's versatility as energy storage is possible with our plug-and-play building blocks

Source: Enapter AG



Grid Storage France

Hydrogen keeps this refuge in the Alps operational all year-round. Since 2015, it runs autonomously for up to 16 days without sunshine using a 2 kW fuel cell.

Electrolyser 500 NL/h

Storage 5 kg



Mobile Refueling China

Electrolysers are integrated into a mobile drone refueling station. The electrolyser produces hydrogen right onsite to refuel drones that need to be in the air for durations of over 12 hours.



Power-to-Gas Australia

Solar made hydrogen is combined with CO₂ which is extracted directly from the air to create renewable methane. Such "power fuel" can be used for heating and cooling, transport or industrial use.



Renewable Storage La Reunion Island

Only accessible by foot or helicopter, the community is energy independent with solar and hydrogen since 2017. The storage system provides 10 days of autonomy.

Electrolyser 500 NL/h

Storage 3 kg



Residential MicroGrid Chang Mai, Thailand

Off Grid community of 6 building with 86 kWpV solar is energy positive since operation. Power produced also operates water pumps for irrigation

Electrolyser 1000 NL/h



Power to Heat Netherlands

In June 2019, the first hydrogen project for residential heating was officially opened in Rozenburg near Rotterdam. Green hydrogen is directly used to generate heat.

Electrolyser 4,000 NL/h



Residential MicroGrid In Münster, Germany

1x EL 2.0 in combination with a fuel cell to provide seasonal storage.

Electrolyser 500 NL/h

600 L Storage



Telecom BTS Lompia, Malaysia

2x EL 2.0 in combination with a fuel cell to provide fully autonomous energy 24/7.

Electrolyser 1000 NL/h



Telecom BTS Hoddies Creak Australia

2x EL 2.0 in combination with a fuel cell to provide fully autonomous energy 24/7.

Electrolyser

1000 NL/h