



OVERVIEW

Hydrogen as a kind of Energy Storage
Energy storage by Hydrogen production through electrolysis process, offer a promising synergy with non predictable energy source (renewable energy as solar, wind etc...).

Hydrogen as a fully Green Energy Vector

Hydrogen is 100% Green compliance

- No need for waste disposal
- No pollution due to its use (no greenhouse gases)

TECHNOLOGY

Power rate from 1 to 6 MW with high power density for large scale production

Modular PCS with Insulated Gate Bipolar Transistors (IGBT) and low harmonics content.

Scalable outdoor solution skid 20'40' with transformer and rectifier for all the environment conditions

CE equipment labelled included all relevant IEC and IEEE Standards

APPLICATIONS

- Power to Gas Energy Storage
Converting surplus renewable energy into hydrogen gas by rapid response electrolysis and its subsequent injection into the gas distribution network
- Electric power generation fuel cells
- Renewable Chemistry H2 as fundamental chemical block for a variety of commodity chemicals and fuels (ammonia, synthetic methane etc...)
- Thermal power generation steam turbine
- Automotive refuelling station



ENVIRONMENTAL CONDITIONS

Installation	Outdoor
Storage Temperature	-20°C to +55°C
Operational Temperature	-20°C to +40°C ¹
Relative Humidity	< 95% (not condensing)
Altitude above the sea level	< 1.000 m
IP Rating	IP54

INPUT ELECTRICAL DATA

Input Frequency	50/60 Hz
Input Voltage	From 6 to 33 kV ¹
Auxiliary Voltage	400 V
Power factor	> 0,99
THDi	< 2 % ¹

OUTPUT ELECTRICAL DATA

Voltage range	From 500 to 1500 Vdc
Max. Current	4000 A ²
Current Ripple	< 2 % ²
Max Efficiency	98,1 %

DIMENSIONS AND CHARACTERISTICS

Mechanical configuration	Open Skid Container
L x P x H (mm)	12192 x 2438 x 2896 mm
Approx. mass (kg)	23.000 kg

CONTROLS

Voltage	Digital Limit control
Current	Digital control
Communication	Modbus TCP, Profinet, Ethernet IP

¹Derating for temperature > 40°C

¹Derating for altitude > 1000m

¹Standardize bushings

¹Referred to PSU Nominal Power

²Considering current load from 8% to 100%

²Dedicated exit cable box