



The EFOY H₂Cabinet X-Series

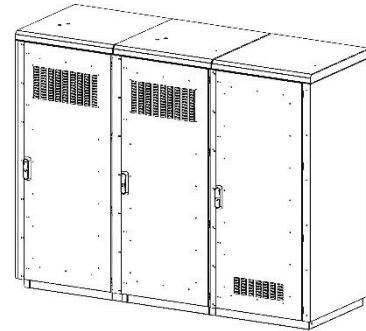
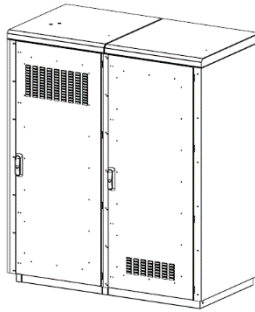
Our EFOY Hydrogen Energy Solutions for outdoor installation come as a fully integrated cabinet solutions. Depending on the customer's needs, we provide set-ups for stand-alone power supply, hybrid solutions for PV integration or total UPS-systems.

Made for your outdoor application: the X-Series.

Configuration	EFOY H ₂ Cabinet X2.5	EFOY H ₂ Cabinet X5.0
Nominal Output Power	2.5 kW	5.0 kW
Fuel Cell(s)	EFOY Hydrogen Fuel Cell 2.5 (1 unit)	EFOY Hydrogen Fuel Cell 2.5 (2 units)
Controller	EFOY Hydrogen Controller Monitoring and control of the EFOY Hydrogen Fuel Cell(s)	
Power Distribution	Power distribution and protection of all components inside the cabinet	
System voltage	48 V DC	
Output voltage	41 - 57 V DC	
Compatible H ₂ source	6 bottles ¹ , 300 bar, Hydrogen 3.0 or higher	
Battery installation	48 V / 30 Ah 4 batteries of 12 V and 30 Ah in series	48 V / 60 Ah 4 batteries of 12 V and 60 Ah in series
Housing	EFOY H ₂ Cabinet X2.5 1FC-6H2-P300-39U or EFOY H ₂ Cabinet X2.5 1FC-12H2-P300-39U	EFOY H ₂ Cabinet X5.0 2FC-6H2-P300-39U or EFOY H ₂ Cabinet X5.0 2FC-12H2-P300-39U
Optional Configuration	<ul style="list-style-type: none"> - Remote Monitoring System - Rectifier and/or Inverter for AC power output - DC/DC module for constant DC power output - Charge controller for integration of PV-modules - Uninterruptible power supply module - Additional hydrogen storage (space for 6 extra bottles, additional hydrogen compartment, bigger cabinet dimensions) - Flexible hydrogen connection to various hydrogen storage solutions 	

The EFOY H₂Cabinet Housing

The housing of your outdoor energy solution is available in different variants, according to the number of EFOY Hydrogen Fuel Cells and the amount of hydrogen you need.



EFOY H ₂ Cabinet variants	H ₂ Cabinet X2.5 1FC-6H2-P300-39U	H ₂ Cabinet X5.0 2FC-6H2-P300-39U	H ₂ Cabinet X2.5 1FC-12H2-P300-39U	H ₂ Cabinet X5.0 2FC-12H2-P300-39U
Coupling for Fuel Cell(s)	1	2	1	2
Coupling for H ₂ bottles	6	6	12	12
Dimensions (H x W x D)	approx. 2200 x 2000 x 900 mm		approx. 2200 x 3000 x 900 mm	
Weight	450 kg (empty cabinet) Up to 1.100 kg (fully equipped)		650 kg (empty cabinet) Up to 1.600 kg (fully equipped)	
Housing	Aluminium, powder coated, RC2			
Temperature range	-33 °C to +45°C			
IP class	IP 54			
Features	<ul style="list-style-type: none"> - Active ventilation and heating of the cabinet - Air supply and waste heat duct - Robust design: RC2 ready - IP 54 and F30 - Pressure sensors and blowers - Pressure reducer with pressure sensors and solenoid valve - Relaxation station with 6 connections for hydrogen bottles 3.0 or higher (300 bar)* - Documentation and maintenance plan - Built-in 19" rack: installation space for EFOY Hydrogen Fuel Cell(s), EFOY Hydrogen Controller, power distribution, power converting, batteries and further electronics 			



The EFOY Hydrogen Fuel Cell 2.5

The EFOY Hydrogen Fuel Cell is the centre of your energy solution: here the chemical reaction takes place and electrical energy is produced. You can equip your solution with either one or two fuel cells, according to your power demand.

EFOY Hydrogen Fuel Cell 2.5

Power output ²	2.500 W
Nominal voltage	48 V
Weight	27.0 kg
Nominal consumption	0.06 kg/kWh
Dimensions (L x W x H)	536 x 483 x 311 mm



The EFOY Hydrogen Controller

The EFOY Hydrogen Controller is the control centre your energy solution: it controls the one or two EFOY Hydrogen Fuel Cells of your energy solution and provides interfaces for external signal transmission.

EFOY Hydrogen Controller

Dimensions (L x W x H)	446 x 483 x 133 mm
Weight	7.6 kg
Supply voltage	36 – 72 V DC
Current consumption	Max. 2 A @ 48 V basic structure
Connectors / external Interfaces	<ul style="list-style-type: none"> - RS 485 Interface - Ethernet - Alarm contacts - Stop signal - Rectifier voltage reduction - Heating / cooling - 24 V power supply
Communication / Protocols	<ul style="list-style-type: none"> - MODBUS RTU (RS 485) - Web Interface (Ethernet: Firefox 44.0 and Java SE 8)

Hydrogen Supply

You can order your energy solution with a total of 6 connections for hydrogen bottles or with a total of 12 bottles, according to the chosen housing variant.

In both cases the hydrogen bottles will not be provided directly by SFC but by your local hydrogen supplier.



Hydrogen

Content	6 x 50 l	12 x 50 l
Pressure	300 bar	
Connection thread	W 21.80 x 1/14 LH (DIN 477 no. 1)	
Weight	480 kg (6 x 80kg)	960 kg (12 x 80kg)
Nominal capacity	108 kWh	216 kWh
Autonomy @ 2.5 kW	43.2 h	86.4 h
Autonomy @ 5.0 kW	21.6 h	43.2 h

¹ Hydrogen bottles are not provided by SFC Energy but can be purchased from standard hydrogen suppliers.

² The output power decreases with the operating hours, depending on the installation situation and the operating conditions. Power reduction at temperatures above +35 °C.

All technical data at test conditions of 20 °C / 68 °F
Subject to modifications and errors
Valid from 01.07.2021