

The best in fuel cell and metal hydride technology



- RELIABLE FUEL CELLS FROM 12W - 30W
- REFILLABLE HYDROGEN CARTRIDGES
- ON DEMAND DESKTOP HYDROGEN REFUELING
- SOME OF THE MOST EFFICIENT FUEL CELLS ON THE MARKET

H-12

12W

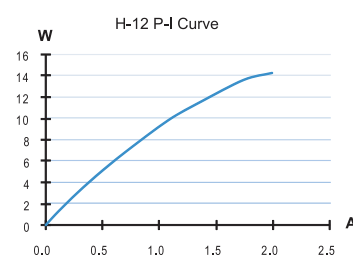
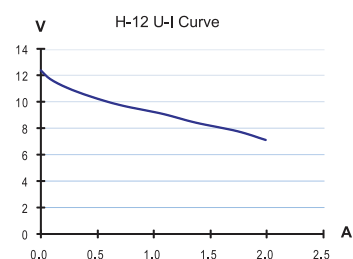
FCS-B12



- Integrated fan and casing
- 12W stack with blower

INCLUDES

Type of fuel cell	PEM
Number of cells	13
Rated power	12W
Rated performance	7.8V@1.5A
Purging valve voltage	6V
Blower voltage	5V
Reactants	Hydrogen and Air
Ambient temperature	5-30°C (41-86°F)
Max stack temperature	55°C(131°F)
Hydrogen pressure	0.45-0.55Bar
Humidification	Self-humidified
Cooling	Air (integrated cooling fan)
Stack weight (with fan & casing)	275g(±30g)
Controller weight	90g(±10g)
Stack size	75x47x70mm
Flow rate at max output	0.18L/min
Hydrogen purity	≥99.995% dry H ₂
Start up time	≤30s (ambient temp.)
Efficiency of system	40% at full power



H-20

20W

FCS-B20



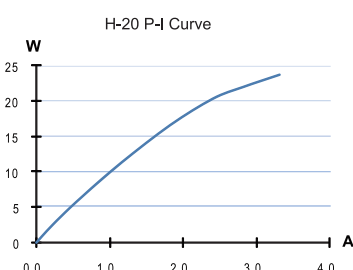
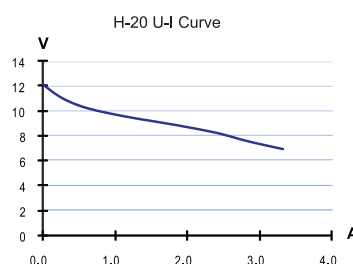
Controller



- Miniature electronic valve
- Control electronics
- Integrated fan and casing
- Low voltage protection
- 20W stack with blower

INCLUDES

Type of fuel cell	PEM
Number of cells	13
Rated power	20W
Rated performance	7.8V@2.6A
Purging valve voltage	6V
Blower voltage	5V
Reactants	Hydrogen and Air
Ambient temperature	5-30°C (41-86°F)
Max stack temperature	55°C(131°F)
Hydrogen pressure	0.45-0.55Bar
Humidification	Self-humidified
Cooling	Air (integrated cooling fan)
Stack weight (with fan & casing)	275g(±30g)
Controller weight	90g(±10g)
Stack size	75x47x70mm
Flow rate at max output	0.28L/min
Hydrogen purity	≥99.995% dry H ₂
Start up time	≤30s (ambient temp.)
Efficiency of system	40% at full power



H-30

30W

FCS-B30



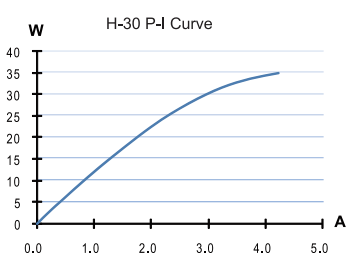
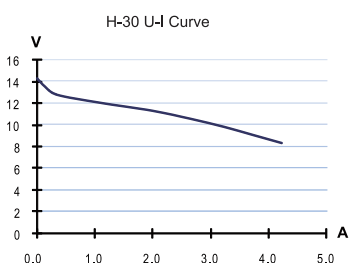
Controller



- Miniature electronic valve
- Control electronics
- Integrated fan and casing
- Low voltage protection
- 30W stack with blower

INCLUDES

Type of fuel cell	PEM
Number of cells	14
Rated power	30W
Rated performance	8.4V@3.6A
Purging valve voltage	6V
Blower voltage	5V
Reactants	Hydrogen and Air
Ambient temperature	5-30°C (41-86°F)
Max stack temperature	55°C(131°F)
Hydrogen pressure	0.45-0.55Bar
Humidification	Self-humidified
Cooling	Air (integrated cooling fan)
Stack weight (with fan & casing)	280g(±30g)
Controller weight	90g(±10g)
Stack size	80x47x75mm
Flow rate at max output	0.42L/min
Hydrogen purity	≥99.995% dry H ₂
Start up time	≤30s (ambient temp.)
Efficiency of system	40% at full power



Hydrogen on demand for universities and schools



HYDROFILL PRO

FCH-020

- Produces hydrogen safely
- Indispensable for HYDROSTIK based engineering projects
- Input is just water and electricity

FEATURES

HYDROSTIK PRO

LWH22-10L-5

- Stores hydrogen safely in a non-compressed, solid metallic form
- Powers Horizon fuel cells up to 30W
- Refillable multiple times

FEATURES



The world's only on demand hydrogen supply system for refilling HYDROSTIK PRO metal hydride cartridges. By generating hydrogen through water electrolysis, HYDROFILL PRO enables homes and classrooms to become energy self-sufficient. Then, rather than compressing hydrogen gas, the safe and reliable HYDROSTIK PRO binds hydrogen with a metal alloy to form a solid metal hydride. Perfect for next generation science kits and engineering projects.

FCH-020	HYDROFILL PRO	Stack type	PEM electrolysis cell
		Dimensions (WxDxH)	145x153x208 mm (5.7x 6x8.2 in)
		Weight	1.8Kg ±5% (3.97Lbs ±5%)
		Rated power	≤23W
		Input voltage	DC: 10V-19V
		Water input	De-ionized or distilled water
		Water temperature	10-40°C (50-104°F)
		Water consumption	Approx. 20ml/hr (1.2in3 /hr)
		H2 output pressure	0-3.0 MPaG (0-435.11 PSI)
		H2 generation capacity	Up to 3L/hr (0-183 in /hr)
		Purity	99.995%
		Compatible cartridge	HYDROSTIK & HYDROSTIK PRO
		Refilling time for one Cartridge	Around 4 hours (at 25°C room temperature)

LWH22-10L-5	HYDROSTIK PRO	Name	HYDROSTIK PRO
		Model number	LWH22-10L-5
		Capacity	10 L hydrogen
		Hydrogen purity	≥99.995%
		Cartridge size	ø22x88mm
		Weight	Approx. 105g
		Storage material	AB5 metal hydride
		Rated charging pressure	3.0MPa
		Working temperature	0-55°C (0-131°F)
		Service life	10 years

REFILLING TREE

21-RT-21



- Charge up to 21 Hydrostiks at once
- M6 screws provided to block surplus holes
- Takes up to 1h to charge all 21
- Dual headed pressure regulator required but not included.

HOW IT WORKS

REFUELING TUBING CONNECTOR

M6



- Enables single Hydrostiks to be refilled from large cannister
- Connects to Refueling Tubing

HOW IT WORKS

REFUELING TUBING

FSC-RA-5

350L



- Connects Refilling Tree (or single Hydrostik) to hydrogen cannister
- Also used to check leakages from cartridges

HOW IT WORKS

SINGLE REFILLING ADOPTER

FSC-RA-1



- Facilitates Hydrostik recharging from small hydrogen cannister
- Connects to silicon tubing

HOW IT WORKS

1-STEP PRESSURE REGULATOR

FSC-PR-1



- Facilitates release of hydrogen from Hydrostik
- Connects to silicon tubing

HOW IT WORKS

SILICON TUBING

FCEA-14



- Connects Single Refilling Adopter to small hydrogen cannister
- Also connects to 1-Step Pressure Regulator

HOW IT WORKS