



# Alkaline Aluminum-Air Fuel Cell Power Supply System APS 100

**Alternative Power Source**  
Technology Update of Alpha-prototype stage

## APS 100

Altek Fuel Group presents its portable Alkaline Fuel Cell Power Supply APS 100.

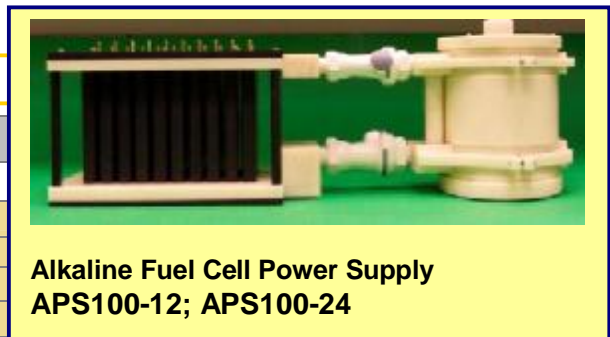
APS 100 is based on Altek's unique aluminum-air fuel cell technology, with a specific energy of over 300 Wh/kg (500 Wh/kg is coming soon), and offers an ideal design capable of being integrated into numerous portable and stationary applications.

With a continuous power output over 100 watts, Altek's APS 100 Fuel Cell Power Supply features efficiently designed catalyzed gas diffusion electrodes, industrial anode alloys and composite electrolyte.

APS 100 also features the ability to mechanically recharge the electrical capacity without any power interruption by using Altek's Fuel Cartridges. This allows for the APS 100 to be fully independent from the electrical grid and, therefore, ideally suitable for remote areas.

APS 100 is fully scalable to meet other power requirements and has been designed with an overall approach that considers core materials, volume manufacturing processes and battery stack performance in the context of a total fuel cell for both portable and stationary applications, optimizing performance and integration.

PEM Fuel Cell Power Supply is coming soon.



**Alkaline Fuel Cell Power Supply APS100-12; APS100-24**

### Product Data Sheet

#### PERFORMANCE

Rated net Power	100W Nominal
	200W Maximum
	250W Peak@30sec
DC voltage	12 <sub>±</sub> 2V
Oxidizer	Air, breathing
Fuel Cartridge Replaceable	<b>Standard (Industrial) Aluminum Alloy</b>
Electrolyte Cartridge Replaceable	Alkaline NaOH, KOH, NaCl or mix of that with proprietary additives
Operating temperature	-25°C ... +45°C / -13°F ... +113°F

MODEL	APS100-12	APS100-24
Electrical Capacity, Ah	120	240
Energy, Wh	1500	3000
Specific Energy, Wh/kg	>300	>350
Discharge time, hrs	12	24
Lifetime, hrs	>3000	>3000

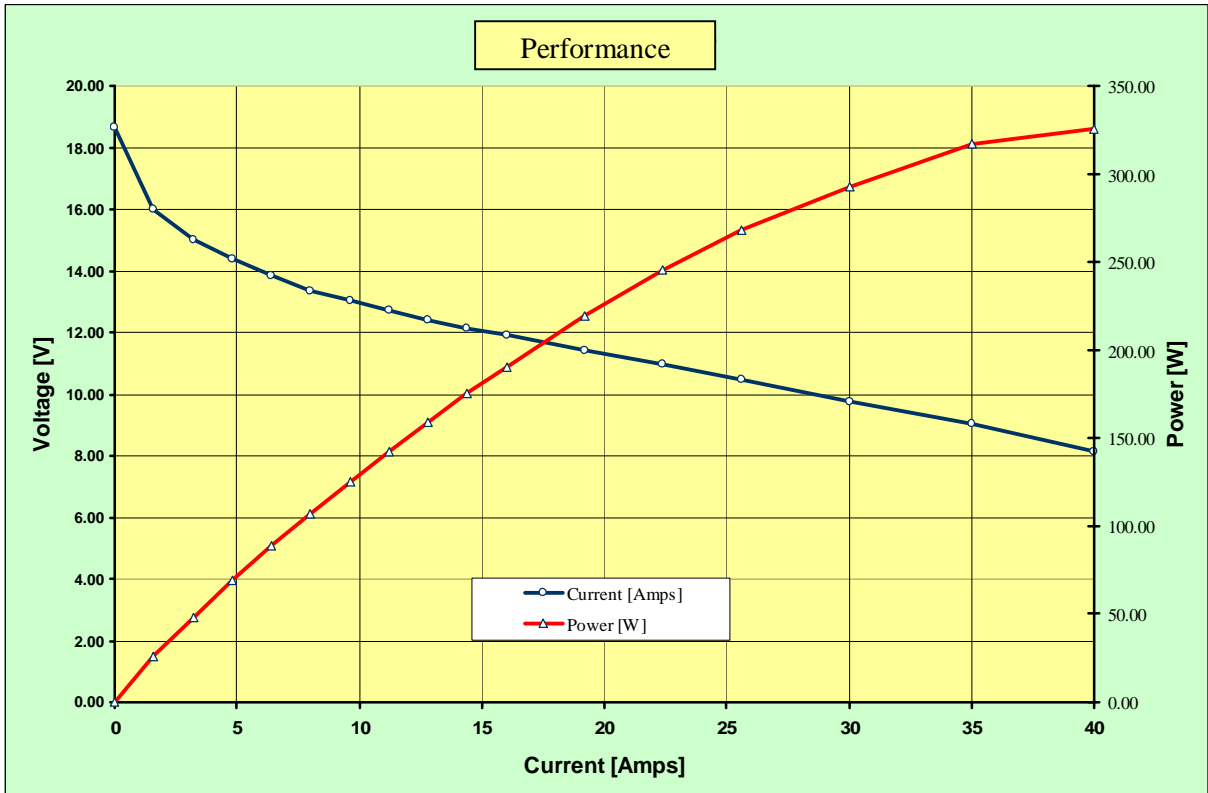
#### WEIGHT, kg

	APS100-12	APS100-24
Fuel Cell Stack	2.0	2.0
Fuel Cartridge	Aluminum Anode - 0.37; Electrolyte – 2.5 (0.5 dry powder inside)	Aluminum Anode - 0.74; Electrolyte – 5.0 (1.0 dry powder inside)
APS100 (Fuel Cell Power Supply System)	4.95	7.9

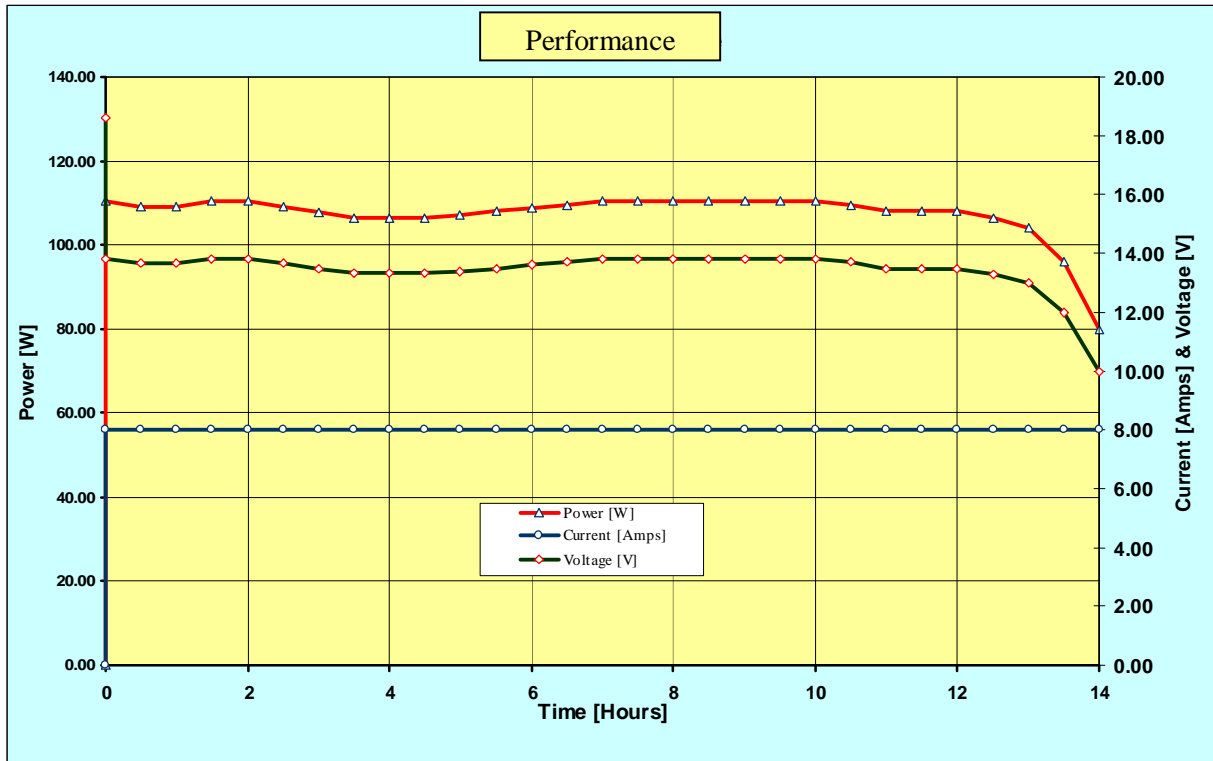
#### DIMENSIONS LENGTH x WIDTH x HEIGHT, cm

	APS100-12	APS100-24
Fuel Cell Stack	18.0x12.5x12	18.0x12.5x12
Fuel Cell System	35.0x12.5x12	35.0x12.5x12

Specifications and descriptions in this document were in effect at the time of publication. Altek Fuel Group Inc. reserves the right to change specifications or to discontinue products at any time (02/07).



**Fig.1** Voltage and Power vs. Current of Altek's Alkaline Fuel Cell Power Supply System **APS 100-12**



**Fig.2** Power, Voltage and Electrical Current vs. discharge time of Altek's Alkaline Fuel Cell Power Supply System **APS 100-12**