

# 1 k W P E M f u e l c e l l



## *Independence 1000*

Introduced in 2001, the Independence 1000 represents the latest in design and performance achievement in Modular Cartridge Technology™ fuel cells. The Independence 1000 is powered by eight of Avista Labs' hot swappable 650 series modular power cartridges. It is designed to provide power in a variety of backup power situations, especially as a replacement for battery



stacks needed to provide power for extended periods of time, and as an alternative back up power source where internal combustion generators are not practical.

The Independence 1000 is quiet and generates electricity using industrial grade hydrogen, with a little heat and pure water being the only by-products —

making it ideal for indoor use. Using Avista Labs patented Modular Cartridge Technology architecture, the cartridges can be replaced in seconds while the unit continues to power a load.

### Specifications

<i>Power Output:</i>	
Continuous	1kW
<i>Voltage:</i>	48VDC
<i>System Start-up Time:</i>	
50% power	instantaneous @ 25°C
100% power	< 5 minutes @ 25°C
<i>Operating Conditions:</i>	0°C – 45°C (32°F – 113°F)
<i>Efficiency:</i>	36-40% @ full load
<i>Fuel Supply:</i>	Industrial grade H <sub>2</sub>
<i>Supply pressure:</i>	3-5psi, 6psi max.
<i>Fuel Consumption:</i>	15 liters/min@1kW 6.5 l/m @ 500w
<i>Size:</i>	89.2cm h x 48.5cm w x 78.2cm d (35.1"h x 19.1"w x 30.8"d)
<i>Weight:</i>	269 lbs.
<i>Modes:</i>	Direct power supply - remote or manual start



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