

# AEROSTAK

ULTRA-LIGHT PEM AIR-COOLED FUEL CELLS



Full line up of high-performance PEM fuel cells

Easy plug and play integration

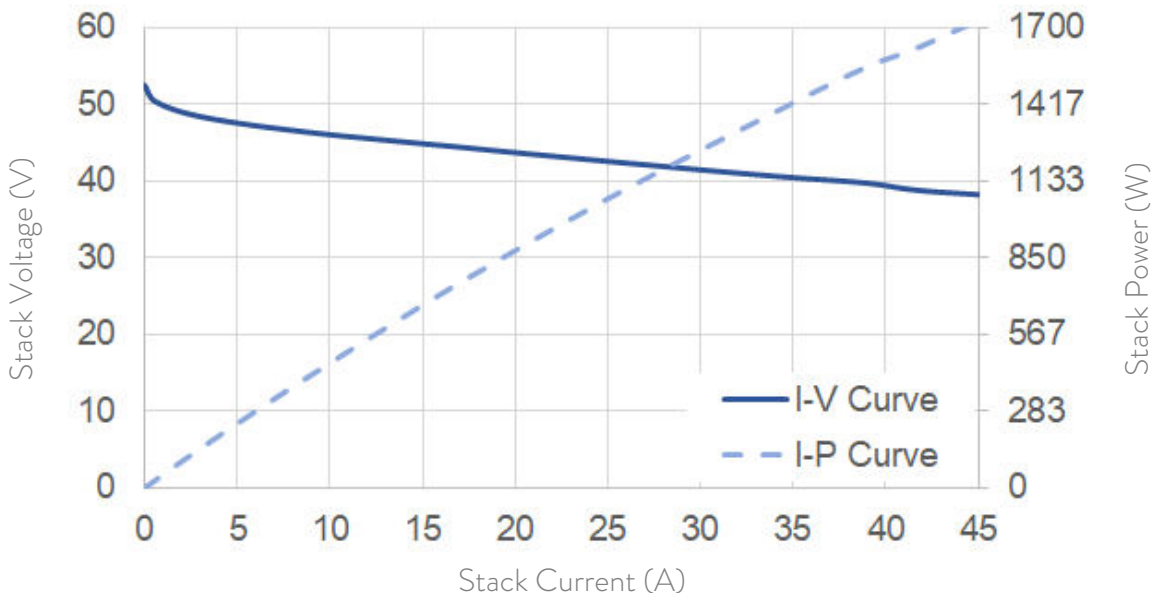
System accessories and components



# AEROSTAK 1500

## SPECIFICATIONS

Stack Design	<b>54 cells</b>
Stack Rated Power	<b>1500 W</b>
Stack Peak Power	<b>1700 W</b>
Stack Voltage Range	<b>32.4 V - 51.3 V</b>
Stack Current Range	<b>0 - 45 A</b>
Air Input Temperature	<b>0 - 35 °C</b>
Cooling	<b>Air (Integrated fan)</b>
Total FC System Weight	<b>2800 g</b>
FC System Dimensions (With Casing)	<b>302 mm x 120 mm x 145 mm</b>
Hydrogen Input Pressure	<b>0.6 - 0.8 bar</b>
Hydrogen Purity Required	<b>99.999 %</b>
Hydrogen Max. Consumption	<b>&lt; 26.0 L/min</b>
Start Up Time	<b>&lt; 30 s</b>
Suggested Hybrid LiPo	<b>9S (&gt;100C discharge rated)</b>

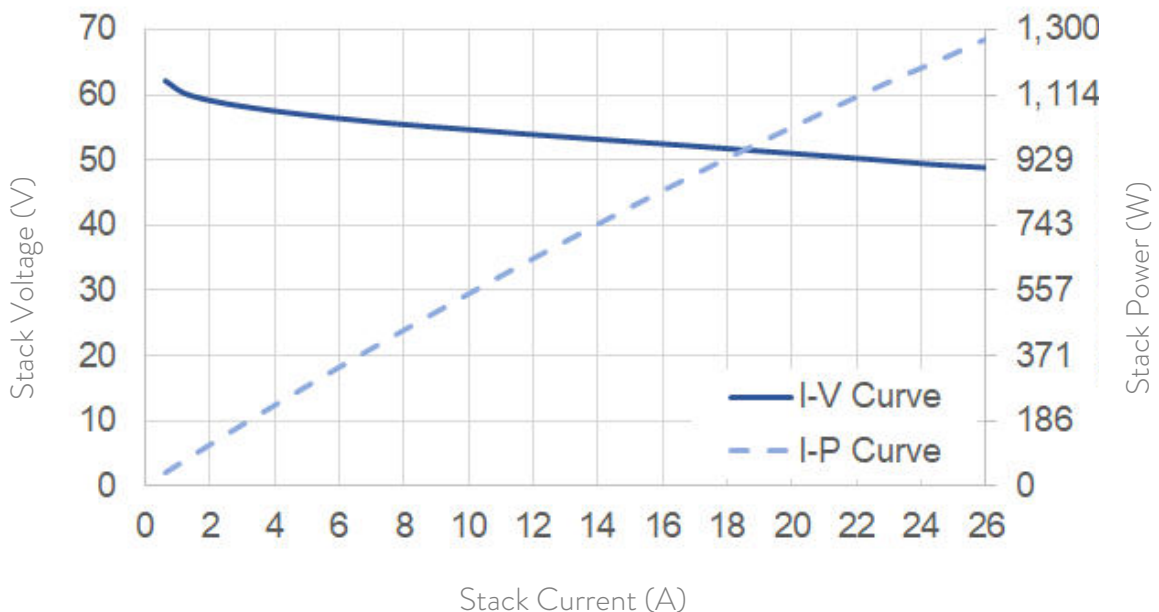




# AEROSTAK 1000 - HV

## SPECIFICATIONS

Stack Design	<b>65 cells</b>
Stack Rated Power	<b>1000 W</b>
Stack Peak Power	<b>1300 W</b>
Stack Voltage Range	<b>39.0 V - 61.8 V</b>
Stack Current Range	<b>0 - 35 A</b>
Air Input Temperature	<b>0 - 35 °C</b>
Cooling	<b>Air (Integrated fan)</b>
Total FC System Weight	<b>1800 g</b>
FC System Dimensions (With Casing)	<b>194 mm x 127 mm x 193 mm</b>
Hydrogen Input Pressure	<b>0.6 - 0.8 bar</b>
Hydrogen Purity Required	<b>99.999 %</b>
Hydrogen Max. Consumption	<b>&lt; 16.5 L/min</b>
Start Up Time	<b>&lt; 30 s</b>
Suggested Hybrid LiPo	<b>11S (&gt;100C discharge rated)</b>

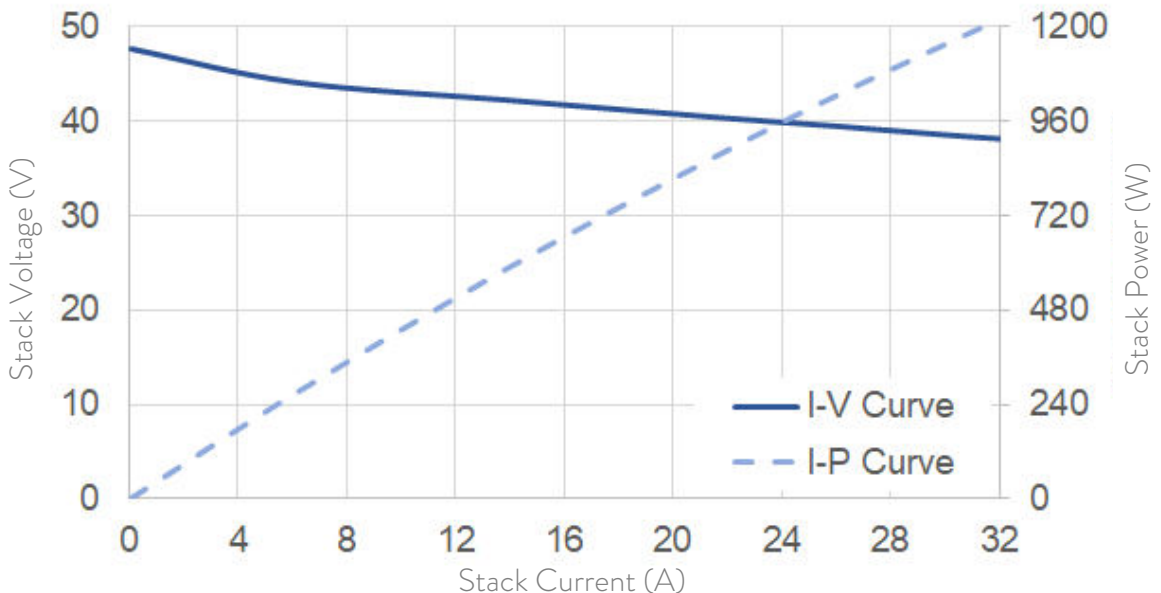




# AEROSTAK 1000-LV

## SPECIFICATIONS

Stack Design	<b>50 cells</b>
Stack Rated Power	<b>1000 W</b>
Stack Peak Power	<b>1200 W</b>
Stack Voltage Range	<b>30.0 V - 47.5 V</b>
Stack Current Range	<b>0 - 40 A</b>
Air Input Temperature	<b>0 - 35 °C</b>
Cooling	<b>Air (Integrated fan)</b>
Total FC System Weight	<b>2036 g</b>
FC System Dimensions (With Casing)	<b>254 mm x 170 mm x 125 mm</b>
Hydrogen Input Pressure	<b>0.6 - 0.8 bar</b>
Hydrogen Purity Required	<b>99.999 %</b>
Hydrogen Max. Consumption	<b>&lt; 16.5 L / min</b>
Start Up Time	<b>&lt; 30 s</b>
Suggested Hybrid LiPo	<b>9S (&gt;100C discharge rated)</b>

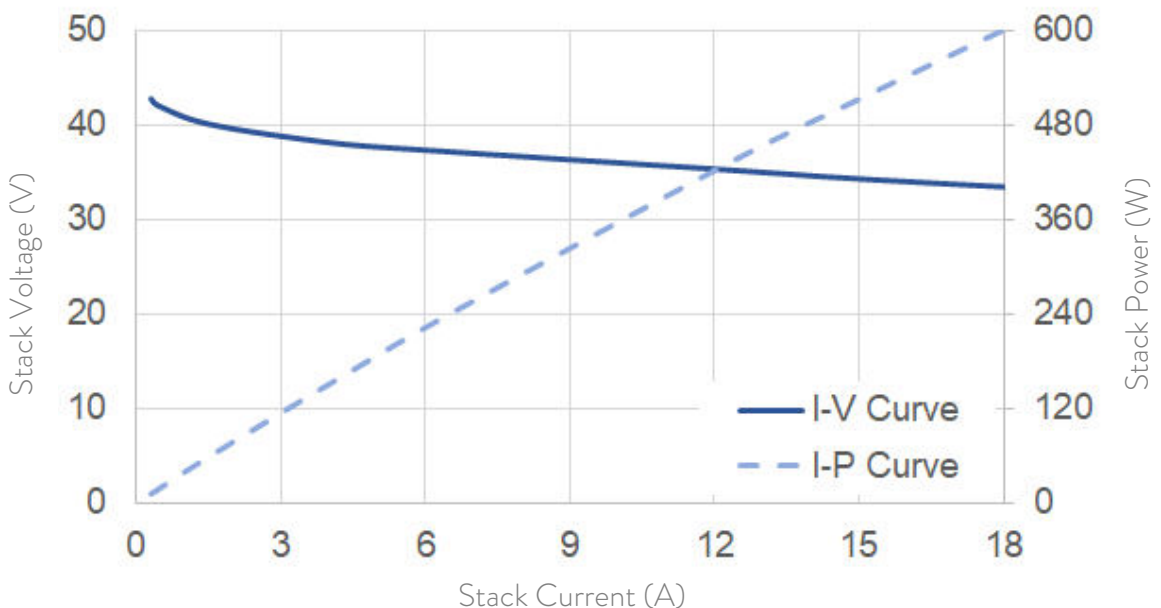




# AEROSTAK 500

## SPECIFICATIONS

Stack Design	<b>45 cells</b>
Stack Rated Power	<b>500 W</b>
Stack Peak Power	<b>600 W</b>
Stack Voltage Range	<b>27.0 V - 42.8 V</b>
Stack Current Range	<b>0 - 25 A</b>
Air Input Temperature	<b>0 - 35°C</b>
Cooling	<b>Air (Integrated fan)</b>
Total FC System Weight	<b>1300 g</b>
FC System Dimensions (With Casing)	<b>194 mm x 105 mm x 166 mm</b>
Hydrogen Input Pressure	<b>0.6 - 0.8 bar</b>
Hydrogen Purity Required	<b>99.999 %</b>
Hydrogen Max. Consumption	<b>&lt; 7.6 L/min</b>
Start Up Time	<b>&lt; 30 s</b>
Suggested Hybrid LiPo	<b>8S (&gt;100C discharge rated)</b>

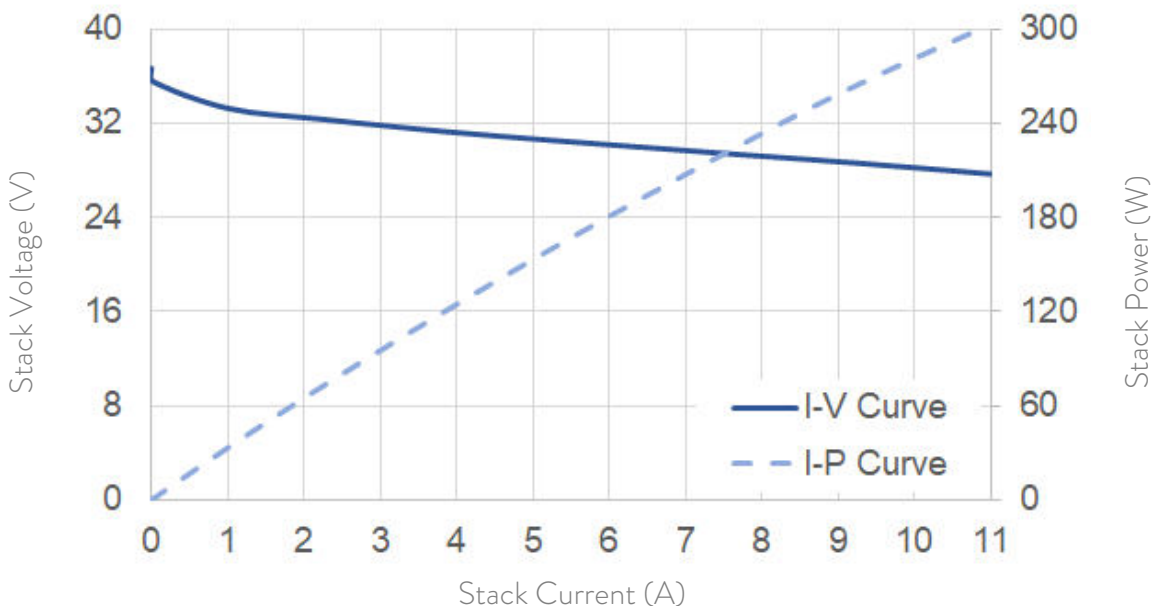




# AEROSTAK 250

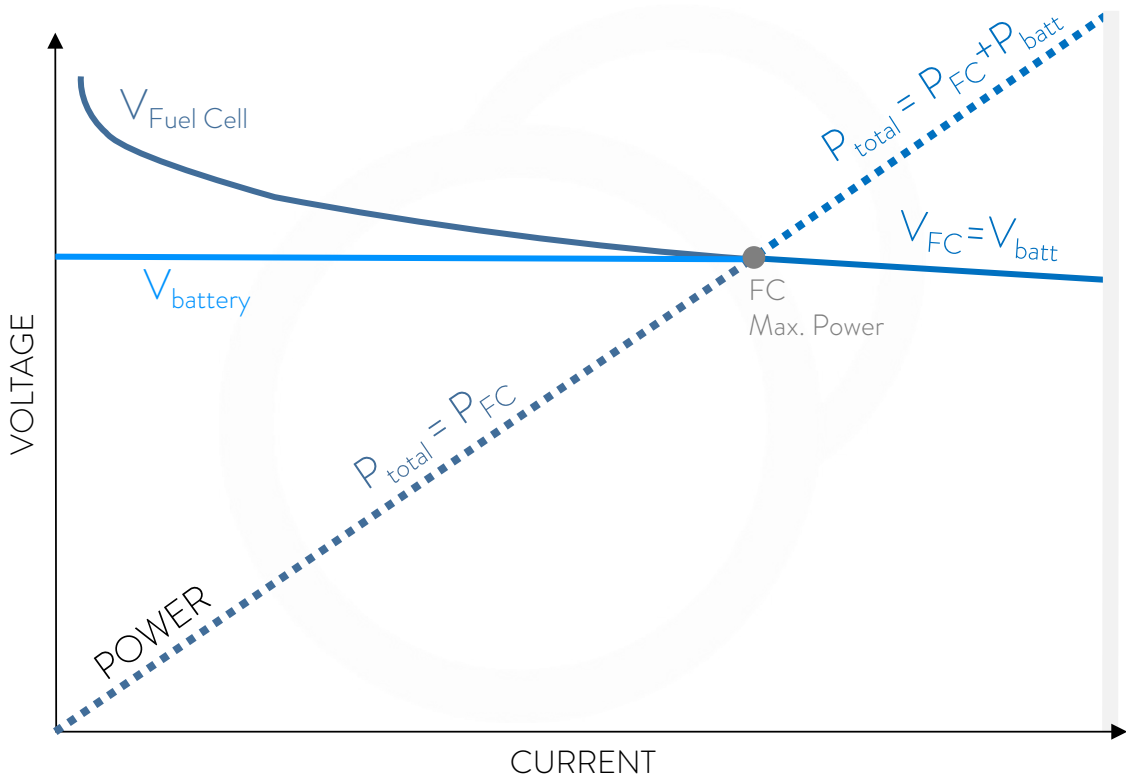
## SPECIFICATIONS

Stack Design	<b>37 cells</b>
Stack Rated Power	<b>250 W</b>
Stack Peak Power	<b>300 W</b>
Stack Voltage Range	<b>22.2 V - 35.2 V</b>
Stack Current Range	<b>0 - 13.5 A</b>
Air Input Temperature	<b>0 - 35 °C</b>
Cooling	<b>Air (Integrated fan)</b>
Total FC System Weight	<b>730 g</b>
FC System Dimensions (With Casing)	<b>110 mm x 120 mm x 124 mm</b>
Hydrogen Input Pressure	<b>0.6 - 0.8 bar</b>
Hydrogen Purity Required	<b>99.999 %</b>
Hydrogen Max. Consumption	<b>&lt;3.8 L/min</b>
Start Up Time	<b>&lt;30 s</b>
Suggested Hybrid LiPo	<b>7S (&gt;100C discharge rated)</b>



# AEROSTAK HYBRIDIZATION

The AEROSTAK is a complete Fuel Cell system including proprietary electronics for hybridization with a Lithium Polymer battery. The LiPo provides additional electrical power when the load required exceeds the capacity of the Fuel Cell stack. The electronics module also provides up to 1.5A to recharge the LiPo when excess power is available.



# HYDROGEN STORAGE ACCESSORIES



**A-Series  
CYLINDERS**

Weight	Volume	Hydrogen	Dimensions	Energy
1.85 kg	5 L	157 g	Ø: 152mm L: 395 mm	1960 Wh
2.85 kg	9 L	283 g	Ø: 173mm L: 528 mm	3528 Wh
3.50 kg	12 L	377 g	Ø: 196mm L: 532 mm	4704 Wh



**EN CERTIFIED CYLINDERS**

Weight	Volume	Hydrogen	Dimensions	Energy
1.5 kg	2.0 L	53 g	Ø: 113 mm L: 369 mm	640 Wh
1.9 kg	3.0 L	80 g	Ø: 115 mm L: 485 mm	960 Wh
2.9 kg	6.0 L	160 g	Ø: 161 mm L: 481 mm	1920 Wh
3.1 kg	6.8 L	182 g	Ø: 161 mm L: 520 mm	2170 Wh
3.3 kg	7.2 L	193 g	Ø: 161 mm L: 545 mm	2300 Wh



**PRESSURE REGULATOR**

<b>Weight</b>	270 g
<b>Dimensions</b>	approx. 110 mm x 70 mm x 35 mm
<b>Output Pressure</b>	0.55 bar to 0.7 bar
<b>Input Pressure</b>	350 bar max input pressure
<b>Mechanism</b>	2-stage regulating valve
<b>Inlet connector</b>	M18
<b>Safety</b>	Overpressure gauge
<b>Option</b>	Pressure Transducer

# HYDROGEN REFUELING ELECTRIC BOOST COMPRESSOR



34 - 100 bar pressure



up to 350 bar pressure

**Compresses industrial hydrogen gas to up to 350 bar (5,075 PSI)**

**Dimensions**

(L) 940mm x (H) 292mm x (D) 559 mm  
(L) 37" x (H) 11.5" x (D) 22"

**Weight**

65.9 kg (145 lbs)

**Voltage**

120 or 240VAC single phase  
(other voltages available as well as 3 phases)

**Motor Frequency**

60/50-Hz

**Operational Speed**

70 cycles/min (variable speed option)

**Cooling**

Air cooled

**Noise**

Low < 63 dB

**Maximum Inlet and Outlet Pressure**

414 bar

**Minimum Input Pressure**

34 bar

**Maximum Flow Rate**

617 SLPM (dependent on input pressure)

Automatic stop & restart high limit switch factory set at 300 bar (adjustable)

Automatic stop & restart low limit switch factory set at 35 bar (adjustable)

Manual start/stop switch

Safety relief valve set at 317 bar (adjustable)

Inlet/outlet gauges dual scale, inlet & outlet filters (5-Micron), outlet shutoff valve (needle type), bleed valve (needle type)

Hour meter with 6-digits

NPT or 37° Flare 1/4" - Male inlet/outlet ports

All items are mounted on a tubular frame and control panel with gauges and valves panel mounted.



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