PEM Fuel Cell
Stack Test Station

- Approximate power range: 0.5 - 6kW
- Customizable with a wide variety of options
- Industry leading safety features
- Emerald™ control and automation software
- Fully automated for unattended operation
- Optional database, remote control and network functions
- Optional configuration for high temperature PEM research
- Available CE certificate of conformity
**G400 Features**

- Small footprint
- Automatic N² purge on shutdown
- Integrated fume hood with H₂ sensor
- PID loops for cell endplate heaters
- Widescreen monitor and PC included
- Ample 19" rack space
- Generous workspace for the test article with Dri-Dek® work surface

Additional options include:
- Water balance capability
- Integrated impedance device
- Dead-ended operation
- Optional safety enclosure
- HT PEM operation
- Reformate simulation

The G400 is a highly accurate, stable and flexible platform for short stack R&D testing. **Emerald™**: Our flexible control software features a user-friendly interface, and is enhanced with our proprietary automation capability. The flexible Emerald™ scripting language allows complex script assembly within minutes for all types of users; from novices to experts.

**Specifications**

<table>
<thead>
<tr>
<th>POWER RANGE</th>
<th>50 - 6000 W (custom ranges available)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAS FLOWS</td>
<td>100:1 turndown MFC’s</td>
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<tr>
<td>Standard anode flow</td>
<td>1.5 - 150 nlpm</td>
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<tr>
<td>Standard cathode flow</td>
<td>3.75 - 750 nlpm</td>
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<tr>
<td>GAS HUMIDIFICATION TECHNOLOGY</td>
<td></td>
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<tr>
<td>Dew point control</td>
<td>up to 95°C † (203°F)† optional high temperature operation</td>
</tr>
<tr>
<td>Gas temperature</td>
<td>up to 110°C † (220°F)‡ optional higher temperatures available</td>
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<tr>
<td>Dry gas by-pass</td>
<td>optional; with automatic control</td>
</tr>
<tr>
<td>ELECTRICAL END PLATE HEATER CONTROL</td>
<td></td>
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<tr>
<td>LIQUID CELL COOLING</td>
<td>included</td>
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<tr>
<td>CELL PRESSURE CONTROL</td>
<td>up to 95°C (203°F)† (high temperature operation available)</td>
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<tr>
<td>Back pressure control</td>
<td>included</td>
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<tr>
<td>LOAD BANK</td>
<td>up to 300 kPa † (45psi)‡; higher pressures available</td>
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<tr>
<td>CELL VOLTAGE MONITORING</td>
<td>water cooled; 6 kW, 600 A, 120 V; other configurations available</td>
</tr>
<tr>
<td>DIMENSIONS (L x W x H) (approximate)</td>
<td>1582 x 1367 x 1827 mm (62 x 54 x 72 in)</td>
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</tbody>
</table>

† Dependent on actual operating conditions - higher temperature, pressure options available

Includes 3 levels of safety:
1. Hard-wired interlocks with
2. Factory software interlocks
3. User-configurable software interlocks (warning high/low alarms and shut-down high/low alarms)
   - N, purge
   - H, sensor
   - Manual emergency stop
   - Optional safety enclosure

**PERFORMANCE COMMITMENT:**
At Greenlight, we pride ourselves on making the world’s best fuel cell testing equipment. We are committed to your satisfaction and we will do whatever it takes to meet or exceed your expectations.