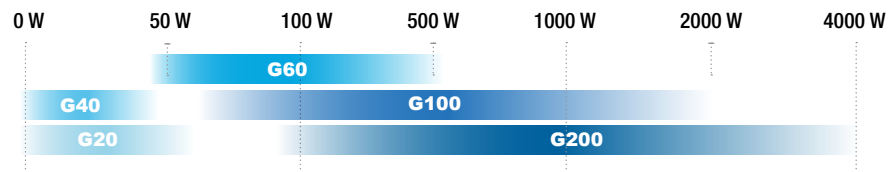


**G20 • G40 • G60**  
**G100 • G200**

# PEM FUEL CELL

## Single Cell and Component Test Stations



- Emerald™ control software for fully automated, unattended operation
- Comprehensive, user-adjustable safety features
- Expandable with additional I/O and diagnostic tools
- Multiple humidification technologies available, including optional Rapid Response™
- Accurate reformate gas simulation (automated blending)
- Available CE certificate of conformity
- Available with optional environmental chambers, high temperature and DMFC operation

# Specifications



|   | G20  | G40  | G60              | G100                                       | G200             |
|---|--|--|------------------|--|------------------|
| <b>APPROXIMATE POWER RANGE</b>                                | 1 - 100 W  | 5 - 50 W                                       | 10 - 500 W       | 40 - 2000 W                                | 80 - 4000 W      |
| <b>GAS FLOWS</b>  | 100:1 turndown MFC's   |  |                  |  |                  |
| <b>Standard anode flow range</b>                              | 0.01 - 1 nlpm  | 0.015 - 1.5 nlpm                               | 0.1 - 10 nlpm    | 0.25 - 25 nlpm                             | 0.8 - 80 nlpm    |
| <b>Standard cathode flow range</b>                            | 0.02 - 2 nlpm  | 0.025 - 2.5 nlpm                               | 0.2 - 20 nlpm    | 0.8 - 80 nlpm                              | 2 - 200 nlpm     |
| <b>GAS HUMIDIFICATION TECHNOLOGY</b>                          | gas immersion with sparger                                   | contact humidifier (optional low flow sparger) |                  | contact humidifier                         |                  |
| <b>Dew point control</b>                                      | up to 90°C † (194°F)†  |  |                  |  |                  |
| <b>Gas temperature</b>  | up to 110°C † (230°F)†                                       |  |                  |  |                  |
| <b>Humidifier by-pass</b>                                     | optional; with automatic control                             |  |                  |  |                  |
| <b>ELECTRICAL END PLATE HEATER CONTROL</b>                    | individual anode & cathode PID heater controls               | included                                       |                  |  |                  |
| <b>LIQUID CELL COOLING</b>                                    | -  | high temperature operation optional            |                  |  |                  |
| <b>CELL PRESSURE CONTROL</b>                                  | automated  |  |                  |  |                  |
| <b>Back pressure control</b>                                  | Up to 300kPa† (45psi)† higher pressures available            |  |                  |  |                  |
| <b>LOAD BANK</b><br>Standard, current, voltage                | 80A, 50V   | 80A, 50V                                       | 125 - 1000A, 50V | 125 - 1000A, 50V                           | 500 - 1000A, 50V |
| <b>CELL VOLTAGE MONITORING</b><br>Standard number of channels | 1 (average accuracy +/- 1mV)                                 | up to 1000 channels (average accuracy +/- 1mV) |                  |  |                  |
| <b>DIMENSIONS</b>   | 635 x 546 x 788 mm<br>(25 x 21.5 x 31 in)<br>Benchtop design | 890 x 710 x 1855 mm<br>(32 x 28 x 73 in)       |                  | 1375 x 1132 x 1810 mm<br>(54 x 45 x 72 in) |                  |

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

**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.



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