

FCATS™ G500

PEM FUEL CELL Stack Test Station



- » Approx power range: 2 - 12 kW (available to 30 kW)
- » Proven track record of accurate humidification
- » Optional fast responding steam humidification
- » Industry leading safety features
- » HyWARE II™ control and automation software
- » Data monitoring of cell voltage and all process parameters
- » Easily expandable for additional I/O and diagnostic tools
- » Fully automated for unattended operation
- » Optional configuration for high temperature PEM research
- » Available CE certificate of conformity

G500 features

- » Optimized footprint
- » Included Lexan safety enclosure
- » Automatic N₂ purge on shutdown
- » Integrated fume hood with H₂ sensor
- » Liquid stack cooling capability
- » Patented back pressure control
- » 17" LCD monitor and PC
- » Ample 19" rack space
- » Water balance capability
- » Optional integrated impedance device
- » Generous workspace for the test article with Dri-Dek[®] work surface

The FCATS™ G500 is the most stable and accurate stack test station available. Dozens of G500s have been successfully delivered to the world's leading stack and automotive OEMs.

HyWARE II™ : Our control and automation software offers exceptional functionality with a user-friendly graphical interface. Enhanced with our proprietary HyAL™ automation language and load following technology, HyWARE II comprehensively manages the full range of test station parameters with a simple user-friendly interface that permits even novices to assemble automation scripts in minutes. HyAL is exponentially more powerful than look-up table automation systems, and computer programming skills are not required to create even complex automation scripts. Greenlight even offers optional pre-written scripts to help you start testing right away.

Specifications

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.

Includes 3 levels of safety:

1. Hard-wired interlocks
 2. Factory software interlocks
 3. User-configurable software interlocks (warning high/low alarms and shut-down high/low alarms)
- » N₂ purge
 - » H₂ sensor
 - » Manual emergency stop
 - » Optional stack enclosure

POWER RANGE	2 - 12 kW; available to 30 kW
GAS FLOWS	(custom ranges available) 100:1 turndown MFC's
Standard anode flow range	1.25 - 250 nlpm; available to 750 nlpm
Standard cathode flow range	3.75 - 750 nlpm; available to 1250 nlpm
GAS MIXING	
Anode and cathode inlets	up to 8 gases available
GAS HUMIDIFICATION	steam injection or contact available
Dew point control	up to 95°C † (203°F) † optional high temperature operation
Gas temperature	up to 110°C † (230°F) † optional high temperature operation
Dry gas by-pass	optional
LIQUID STACK COOLING	
Temperature control (facility provided fluid)	up to 95°C (203°F) †
STACK PRESSURE CONTROL	
Back pressure control	5 - 300 kPa † (45psi) † higher pressures available
PROGRAMMABLE LOAD BANK	
Load, current, voltage	12 kW, 1000 A, 400 V; other configurations available
CELL VOLTAGE MONITORING	
Standard number of channels	32 channels; additional channels available (average accuracy +/- 1mV)
DIMENSIONS (L x H x W) (approximate)	2819 x 2261 x 1168 mm (111 x 89 x 46 in)

† Dependent on actual operating conditions - higher temperature, pressure options available
Greenlight Innovation Corporation, Burnaby, B.C. Canada. All specifications and illustrations contained in this brochure are based on the latest product information available at the time of printing. Greenlight reserves the right to make changes at any time without notice in materials, equipment, specifications and models. Printed in Canada.

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