



FUEL CELL STACK TESTING

- Variable power range available (Standard 100 kW)
- For simulation of all requirements for mobile applications
- Extended safety features including LEL hydrogen detector and cabin ventilation
- Fully automated for safe, reliable and unattended operation
- Contact humidification system for up to 90°C dew point and up to 250 °C gas temperature (option)
- Programmable automated purge and dead-end function
- Maximum performance and safety via integrated PLC
- Optional interface to environmental chamber and tilt unit

HORIBAFuelCon

Evaluator S100-LT



GENERAL FACTS

Standard anode flow range [NI/min]	20 to 2,000 (up to 4,000 NI/min on request)
Standard cathode flow range [NI/min]	50 to 5,000 (up to 10,000 NI/min on request)
Footprint L x W x H, [meter] (inches)	Test station: 7.0 x 2.0 x 2.4 (276" x 79" x 95")
Standard gas temperature	130 °C (266 °F)
Humidity range [HR]	Precise, dynamic-response humidification Dry (by-pass) to 100 % @ 90 °C (194 °F)
Back pressure control range [bara]	1.1 to 5.0
Electronic load	Up to 1,000 A / 600 V / 100 kW (more on request)
CVM (Cell Voltage Monitoring)	CVMpro-G4 MCM-IntelliProbe-U10 (SMART Testsolutions) -1 to 5 V or -3 to 3 V; accuracy ±0,1 %; up to 800 channels
Thermal management	Water-based liquid loop up to 130 °C (266 °F) or oil-based liquid loop up to 230 °C (446 °F), max 5.0 bara system pressure
Safety features	PLC controlled 3-level alarming system, programmable nitrogen purge, emergency stop, hydrogen LEL-detector
Data logging	SQL data base
Operational modes	Various dead-end and purging modes

The Evaluator S100-LT is tailored to the needs of complex fuel cell stacks and evaluation. The design allows endurance testing and accelerated life time simulation which can be optimized for the typical needs of stationary or mobile applications. The various safety features include a closed test cabin and an integrated ventilation system connection and flow monitoring with LEL hydrogen detectors to safeguard the operator and your facility. Mechanical and software interfaces are available to integrate environmental chambers or shaker platforms into test programs.

The S100-LT is perfectly designed for the dynamic simulation of mobile applications in order to study

OPTIONS

Reformate simulation
Altitude simulation
Load voltage and current extension on request
Environmental chamber connection
Shaker and tilt unit operation

SAFETY

CE conformity marking (according to)
EMC directive 2014/30/EC
Low voltage directive 2014/35/EC
ATEX directive 2014/34/EC
General product safety directive 2001/95/EC
Machinery directive 2006/42/EC
Pressure equipment directive 2014/68/EC

Risk assessment
DIN EN ISO 13849
DIN EN ISO 12100

fuel cell system behavior and optimize system design. In addition, we offer hardware-in-the-loop tools for simulating subsystem and balance of plant components. Combined with HORIBA FuelCon's sophisticated TestWork software, this system operates using either hydrogen or reformate fuels and is a powerful tool designed for MEA and stack developers and manufacturers to accelerate the time to market.

The integration of several devices from our TrueData line of diagnostic products such as our impedance analyzer allows operators to perform detailed studies of material behavior under real application operating conditions.

Please feel free to download the latest information available at www.horiba-fuelcon.com. If you have any questions, please do not hesitate to contact us. We will be happy to support you and discuss your testing requirements!

HORIBA FuelCon reserves the right to make changes at any time without notice.

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