



EVALUATOR S200-LT

PEM Fuel Cell Stack Testing



- Variable power range available (Standard 150+ 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
- Maximum performance and safety via integrated PLC



EMISSIONS



ELECTRIFICATION



CAV



DATA

HORIBA
Automotive

EVALUATOR S200-LT

The Evaluator S200-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 S200-LT is perfectly designed for the dynamic simulation of mobile applications in order to study 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 our sophisticated HORIBA TestWork software, this system operates using either hydrogen or reformat fuels and is a powerful tool designed for stack developers and manufacturers to accelerate the time to market.

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

GENERAL FACTS	
STANDARD ANODE FLOW RANGE [NL/MIN]	40 to 4,000 (deviation on request)
STANDARD CATHODE FLOW RANGE [NL/MIN]	100 to 10,000 (deviation on request)
FOOTPRINT L X W X H, [METER] (INCHES)	Test station: 8.0 x 2.0 x 2.4 (315" 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/800 V/150+ 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, pro- grammable nitrogen purge, emergency stop, hydrogen LEL-detector
DATA LOGGING	SQL data base
OPERATIONAL MODES	Various dead-end and purging modes

OPTIONS	
Reformat 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

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