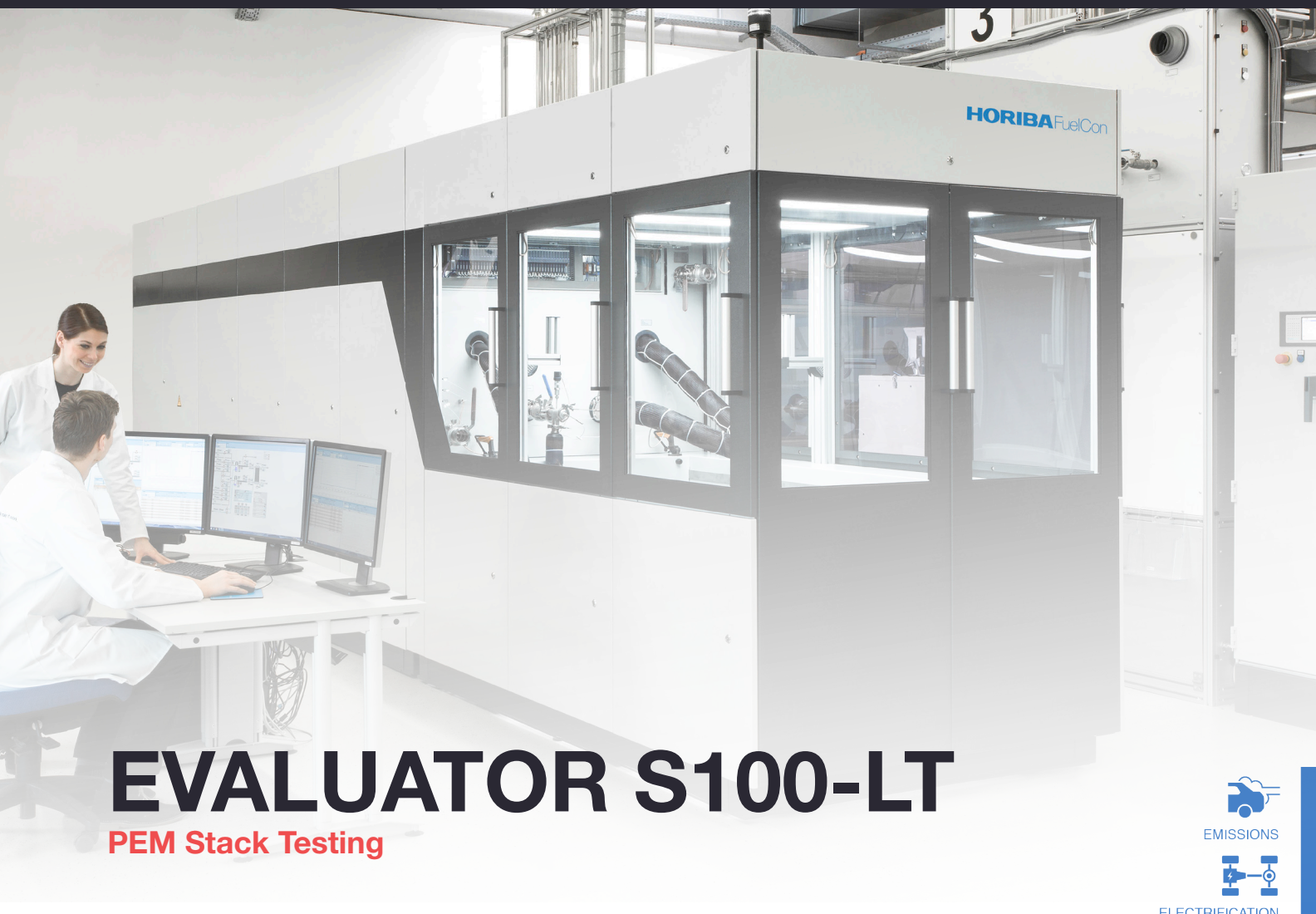

EVALUATOR S100-LT

PEM Stack Testing

EMISSIONS

ELECTRIFICATION

CAV

DATA

- 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
- Maximum performance and safety via integrated PLC

HORIBA Automotive

EVALUATOR S100-LT

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 fuel cell stack behavior and optimize stack 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 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 CVM - cell voltage measurement allows operators to perform detailed studies of material behavior under real application operating conditions.

GENERAL FACTS	
STANDARD ANODE FLOW RANGE [NL/MIN]	20 to 2,000 (up to 4,000 Nl/min on request)
STANDARD CATHODE FLOW RANGE [NL/MIN]	50 to 5,000 (up to 10,000 Nl/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 % at 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

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

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