



## SINGLE CELL TESTING

- Up to 300 W power range
- For R&D on SOFC/SOEC cells, electrodes, gaskets or catalysts
- Plug and play system with minimized dimensions and footprints
- Fully automated for safe, reliable and unattended operation in hydrogen safe area
- Various clamshell furnace designs
- TrueXessory housings for active cell areas up to 4 x 4 cm<sup>2</sup>
- Mechanical load to apply defined compression forces
- Excellent reliability by included hardware PLC
- Maximum safety according to latest directives
- Optionally embedded impedance analyzer

**HORIBA**FuelCon

Evaluator C50-HT



## GENERAL FACTS

Standard fuel flow range [Nl/min]	0.01 to 1
Standard air flow range [Nl/min]	0.05 to 5
Footprint L x W x H, [meter] (inches)	1.1 x 0.8 x 1.65 (43" x 31" x 56")
Gas humidity range	Dry (by-pass) to $T_{DP} = 95\text{ }^{\circ}\text{C}$ (203 °F) corresponding to 0...85 % steam
Clamshell furnace	Ø 250 mm x 375 mm height (10" x 15")
Electronic load	Up to 6 V / 100 A / 300 W True-0-Volt-Mode (included)
Active test item temperature setting	Up to 1,100 °C (2,012 °F) by clamshell furnace
Safety gas purge	Programmable, separate and independent nitrogen / safety gas purge on fuel and air side
Safety features	4-level alarming system, emergency stop, Furnace atmosphere sampling
Data logging	SQL data base

The Evaluator C50-HT offers the outstanding performance of HORIBA FuelCon's Evaluator C and S series in a clever package design. The system contains all necessary features for SOFC/SOEC cell testing including anode humidification, flow and temperature control, protection gas purge and electronic load management. Combined with HORIBA FuelCon's sophisticated TestWork software, this system provides full adaptability.

Using either hydrogen, methane or reformat fuels, the C50-HT is ideally designed for material developers and universities conducting fuel cell research, or stack developers performing single cell testing.

Equipped with high temperature clamshell furnace, cell housing and mechanical load to apply defined compression forces, this test station is tailored for

## OPTIONS

Reformat simulation  
Direct injection humidifier for 100 % steam  
TrueData-EIS (impedance analysis)  
TrueXessory-HT (cell fixtures and housings)  
Reversible load operation (electrolysis and fuel cell mode)  
Compression load control  
Embedded leakage test  
UPS

## 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

screening materials and components, optimizing production processes, durability analysis and running endurance tests on small SOFCs/SOECs.

HORIBA FuelCon's proprietary TrueXessory devices include full ceramic cell fixtures for button and squared cells up to 4 x 4 cm<sup>2</sup> active cell area. The test housings allow quick and easy cell assembly and provide reproducible non-destructive testing of cell performance.

The integration of devices from our TrueData line of diagnostic products such as our impedance analyzer or electrolysis load module allows to perform studies of material behavior under typical conditions of your application.

Please feel free to download the latest information available at [www.horiba-fuelcon.com](http://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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**HORIBA**FuelCon

Steinfeldstr. 1  
39179 Barleben | Germany

T +49 39203 514 400  
F +49 39203 514 409

info@horiba-fuelcon.com  
www.horiba-fuelcon.com