

Fuel Cell Test Station TS10kW



LEANCAT
FUEL CELL TECHNOLOGY

WIDE RANGE OF FULLY CUSTOMIZABLE
PROFESSIONAL TESTING SOLUTIONS
100W – 130kW



Gas supply specification

Value

MFC Gas flow - anode	0–500 slpm
MFC Gas flow - cathode	0–1000 slpm
MFC additional gas (CO, ...)	Optional
N2 purge	Yes

Pressure control and measurement

Backpressure gas controller - anode and cathode	Yes
Cell inlet pressure sensor range - anode and cathode	Yes
Gas inlets pressure sensors	Yes

Humidification

Humidifier – micro bubbler	Yes
Dew point	From room temperature to 95°C
Anode/Cathode Dry gas bypass function	Yes
Automatic water reservoir refilling	Yes
Low water level warning	Yes
Programmable over temperature shutdown	Yes
Automatic dry by-pass	Yes

FC stack connectivity

Thermally isolated inlet hoses	Yes
Internal tubing heaters	Yes
Thermocouples	Yes
Cell heater	Integrated PID control
Cell voltage monitor	Customized number of inputs

Electronic load 10 kW

Programmable electronic resistive load	Const. Voltage
Standard working modes	Const. Current
Current ranges	Customised
Voltage range	Customised
Useable maximum power	11 kW
Regenerative load	Optional

Impedance spectroscopy

Integrated EIS	Optional
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Automation and control system

Desktop master PC	OS Windows 10
Internal slave industrial computer	PLC controlled by PC using web interface
Remote control	Yes
Software with graphic interface	Yes
Data storage	Yes

Dead end operation, optional

Hydrogen pressure regulator	Manual
Hydrogen humidification	No
Air humidification	With dry bypass
Hydrogen purge valve with water separator	Programmable dwell time
Connectivity to an external hydrogen return pump	Yes
Hydrogen/oxygen backpressure regulator	No

FC stack cooling

Cooling/heating by using demineralized water	Yes
Cooling with water - tap water heat exchanger	Yes
Programmable temperature	Yes
Cooling chiller	Optional
Pre-heating by integrated tubular heater	Yes
Conductivity/temperature sensor	Yes
Pressurized water tank	Yes
Stainless steel water pump	Yes
Overheating security stop	Yes

Security

Security shut down with hydrogen/nitrogen purging	Yes
Emergency Manual shut down switch (E-stop)	Yes
Remote Emergency shut down (HW interlock)	Yes
Closed exhaust system with water separator	Yes

Dimensions and weight

Size	1600x1200x1800 mm
Weight	600 kg

Send us your requirements and we will prepare a detailed offer for your turn-key project. We have 10+ years of experience in MEA and stack testing.



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