



TRUEXESSORY-HT

Ceramic Cell Housing for SOFC/SOEC MEAs



EMISSIONS



ELECTRIFICATION



CAV



DATA



- Cell housing for SOFC/SOEC MEA and component evaluation
- Available for standard cells with 4 x 4 cm² active area and button cells
- Unique sealing concept allows non-destructive cell testing
- Fully ceramic housing avoids contamination during extended test runs
- Easily integrates into the Evaluator test station performs

TRUEXESSORY-HT

SOFC/SOEC Housing

The TrueXessory-HT SOFC cell housing is developed for testing of single SOFC and SOEC MEAs with 4 x 4 cm² active cell areas as well as for button cells. The unique sealing concept allows complete non-destructive testing with very high reproducibility. Together with our Evaluator-HT test stations, the cell housing is a powerful tool for all testing areas including: basic research, material optimization, quality testing, benchmarking and lifetime testing of SOFC and SOEC MEAs.

The housing is made of precise, surface-ground ceramic components and does therefore not only reduce the retrofitting time and effort, but also avoids any contamination. Fuel and air gas inlets and anode outlets including pre and trace heating are already included. The housing is equipped with integrated temperature and differential pressure measurements for reproducible test results. Furthermore, fuel and air current collectors and cell voltage sense lines are included and already connected to the electronic load.

Optional equipment such as the impedance analyzer, or the TrueData-LOAD operating reversibly in fuel cell or electrolysis mode allows for highly sophisticated research.

MATERIAL	
Aluminium oxide	

COLLECTORS	
ANODE COLLECTOR	Nickel mesh
CATHODE COLLECTOR	Platinum mesh
CURRENT COLLECTORS	Inconel rods through the mechanical load road
WIRING BETWEEN MESHES AND COLLECTORS	Platinum wire

HEATING & TEMPERATURE	
MAX. TEMPERATURE	1,000 °C
MAX. HEATING RATE	5 K/min
TEMPERATURE MEASUREMENT	Integrated thermocouple
OPERATING PRESSURE	Ambient 1,013.25 hPa

GENERAL FACTS	
FLOW FIELD STRUCTURE	Parallel channels
CELL SIZE	5 x 5 cm ² (4 x 4 cm ² active area) Button cells up to 4 cm diameter
APPLICABLE MEA TYPES	ESC, ASC, MSC

MATERIAL	
Force control	
Impedance analyser	
Reversible load operation (electrolysis and fuel cell mode)	



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