

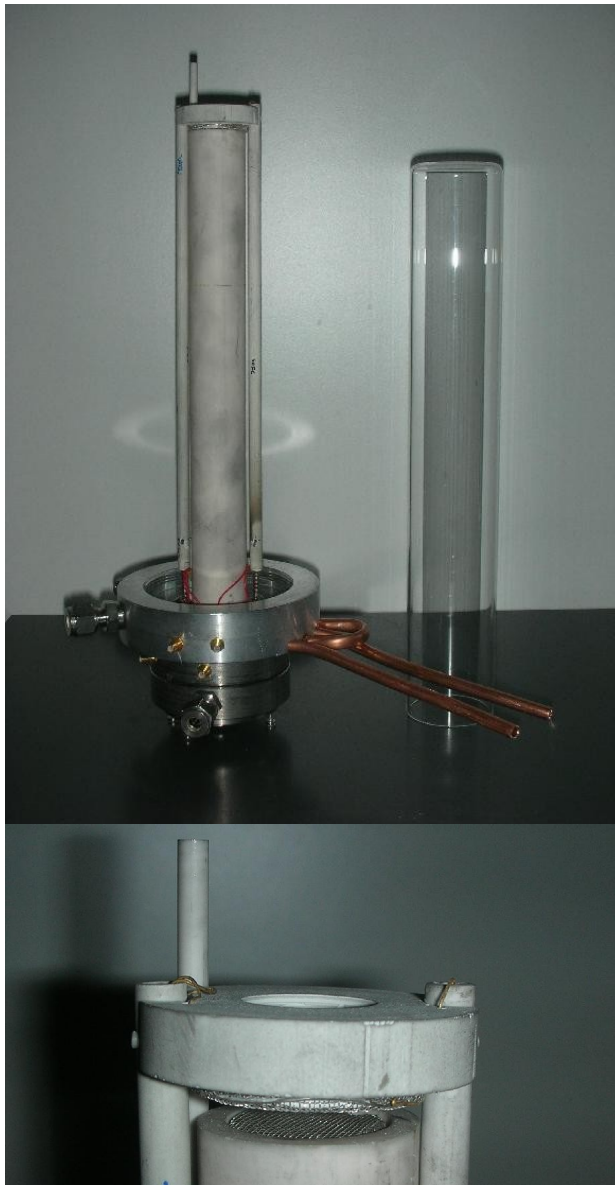


## FCSH-1000

FUEL CELLS SAMPLE HOLDER



MaterialsMates Italia



**A one inch sample holder, with a detailed view of the contact grids on the gas diffusers. Different options are available for sizes, grid materials and sealing methods**

So far, producing the coin, with anode, electrolyte and cathode was but the first task of the whole job, since a cell around the sample was mandatory, to finalize the test.

The FCSH-1000 cell, designed and manufactured by **Cell Company**, provides all necessary seals, contacts and gas flow paths, to make the coin fully operating.

The system can use samples one inch in diameter, and has spring-loaded contacts on both sides of the coin to insure an optimum and reliable contact.

With a maximum operating temperature of 1000 °C, and an intrinsically-safe H<sub>2</sub> handling thanks to a properly confined anode gas path, the cell is able to cover a wide range of applications, including those requiring a chemical potential across the sample.

The measuring head is wired with wire-compensating connections for high accuracy, and the water-cooled plate allows high stability during long testing cycles.

All parts of the cell are fully reusable, since they do not stick together when working.

Contact us to find out more on the device features, as well as on the ancillary equipment available.



**PHYSICAL FEATURES**

<b>Temperature range</b>	0-1000 °C
<b>Sample size</b>	12-26 mm dia, 3 mm thickness max (to be specified when ordered)
<b>Contact plates</b>	Platinum gauze , spring loaded
<b>Construction materials</b>	Alumina 99.5 %; platinum 99.5 %; fused silica tube; viton o-rings and membranes
<b>Sealing gasket</b>	Pure (99.5%) gold , annealed
<b>Gas flow</b>	Anode and cathode in/out connections with gas path blowing towards the sample face
<b>Sealing pressure</b>	About 20 N
<b>Gas compatibility</b>	Any reducing or oxidizing gas compatible with fused silica and alumina
<b>Gas connections</b>	6 mm Swagelock-type double-ferrule connectors
<b>Gas tightness</b>	Viton O-rings
<b>Orientation</b>	Vertical

**ELECTRICAL FEATURES**

<b>Connections</b>	Banana 2 mm
<b>Measuring configuration</b>	2-wire connections +2 wire compensation
<b>Residual resistance</b>	<5 mOhm
<b>Effective wire resistance</b>	<2 Ohm @ 25 °C
<b>Maximum current capability</b>	5 A
<b>Sample temperature</b>	Type K Inconel shielded thermocouple

**DIMENSIONS & OTHERS**

<b>Mechanical</b>	260 X 45 mm (L x Dia) cover tube
	80 X 70 mm (Dia x h) connection body
	4 mm copper tubing (0.1 Lt /min recommended)
	1,2 Kg

**Water cooling**

**Weight**

**ORDER CODES AND OPTIONS**

See lower chart

FCSH-1000 AU G

