

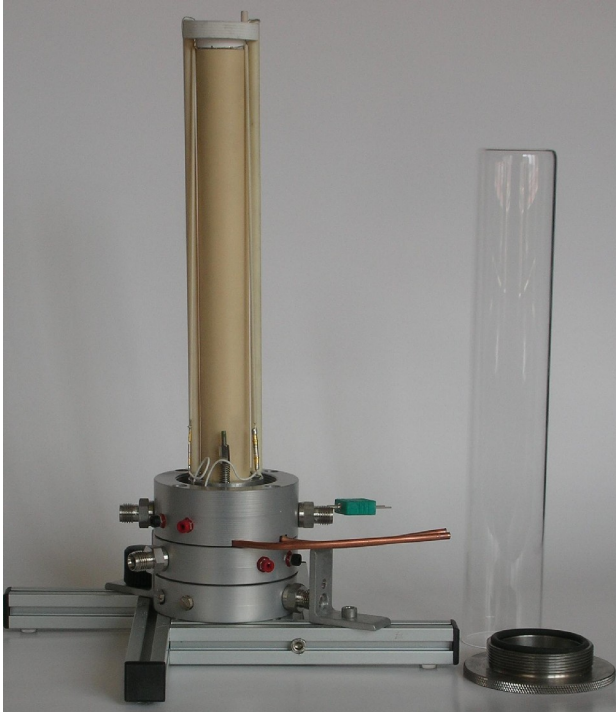


FCSH-V3

CERAMIC SEAL FUEL CELLS SAMPLE HOLDER



MaterialsMates Italia



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

What you can expect from a company that is fully dedicated to innovation is a continuous effort in improving their products beyond the previous performance level.

At **Materials Mates Italia** we follow strictly this statement and we keep our systems in an improvement process that lasts since the foundation of the company.

The FCSH-V3 cell, designed and manufactured by **Cell Company**, opens new perspectives in testing coin cells, allowing the low temperature-range devices to perform at their best.

Besides the excellent performance level common to our product range, the V3 makes the ceramic/glass seal technique available for reusable sample holders: another world's first in our long list of achievements.

With a maximum operating temperature of 1000 °C, and an intrinsically-safe H₂ 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.

New options are available, like the laser-cut contact plates for ultimate life-time of the grids

An engineered surface treatment on all the parts exposed to the gas path keeps the purity of the reactants stable up to the output connection.

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

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

ELECTRICAL FEATURES

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

DIMENSIONS & OTHERS

Mechanical	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

