Evaluation and Deterioration Test System for Planar Single Cell in SOFC

**BEL-SOFC**

### Features
- Evaluation and deterioration test system for planar single cell in SOFC. Compact structured equipment enables simple and easy replacement of the cell.
- Electrolyte-supported cell and anode-supported cell are measurable by means of unique metal or glass seal.
- Dedicated software developed in house and electrochemical measurement system enable unique automatic measurement desired by each user.
- Easy setting of experimental conditions. Test data such as open circuit voltage, impedance, I-V, etc. are automatically saved.
- Incorporated support software alleviates complicated operational procedure and reduces human errors.

### Measurement Software

![Measurement Software Image]

### Measurement Examples

![Measurement Examples Image]

### Applications
- Catalysis reaction
- Battery materials
- Energy
- Fuel cell

### Specifications

| Number of measured samples | Electrolyte-supported single cell (ϕ20-25mm dia.)
|                           | Anode-supported single cell (ϕ20mm dia.)
|                           | ※Different diameter size of cell and multiple cell can be negotiated.
| Gas                       | H₂, O₂, N₂, CH₄, CO, saturated water vapor
| Temperature               | Control: 400~1,000℃ (max 1,200℃)
| Pressure range            | 100kPa (Abs) * Diaphragm pump is used for substitution of gases in the case of the gas cylinder changing and liquid water re-filled. (achieving vacuum: approx. 350Pa)
| Electrochemical evaluation method | Impedance measurement and I-V measurement by 3 terminal (Each electrode case)
|                           | and 4 terminal pole (overall cell case)
| Safety feature            | Short circuit breaker, lowering water level alarm, hydrogen detection alarm, CO detection alarm, Methane detection alarm TIC1- temperature highest limit alarm (heater OFF), Heater disconnection alarm (only for TIC1)
| Footprint                 | About 2.0m² (2.0(W) × 1.0(D) m) (w/o electrochemical measurement system)
| Dimensions, Weight       | 1,100(W) × 1,800(H) × 600(D) mm (body: 750(W) × 1,425(H) × 600(D) mm) 150kg

MicrotracBEL Corp.
8-2-52 Nanko-Higashi, Suminoe-ku, Osaka, 559-0031, Japan
TEL : +81-6-6655-0362  FAX : +81-6-4703-8901

https://www.microtrac.com/
E-mail : international@microtrac-bel.com