quickCONNECTfixture

Liquid Cooling

- quality assurance
- reproducibility
- quick & easy assembly
- increased productivity
- cold start & deep freeze
- extreme temperatures (-20 to 180°C)
- for 5, 25 and 50 cm² active area

### technical data

<table>
<thead>
<tr>
<th>qCf liquid cooling</th>
<th>qCf FC25/100 V2.0 LC</th>
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<tbody>
<tr>
<td>weight</td>
<td>5.95 kg</td>
</tr>
<tr>
<td>piston diameter (actuator)</td>
<td>100 mm; anti-twist, low friction</td>
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<tr>
<td>liquid cooling</td>
<td>cooling/ heating liquids (external thermostat)</td>
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<tr>
<td>max. operating temp.</td>
<td>-20 to 180°C (200°C short term)</td>
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<tr>
<td>max. force (@ 8 bar/116 psi air supply)</td>
<td>6.28 kN / 616 kg / 1412 lbf / 2.5 N/mm²</td>
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<tr>
<td>air supply device</td>
<td>4 mm; pneumatic 5/2-way valve</td>
</tr>
<tr>
<td>media supply (fuel/air)</td>
<td>6 mm (Swagelok compatible)</td>
</tr>
<tr>
<td>connecting-, heating elements</td>
<td>stainless steel / lapped, gold-plated, Viton seals</td>
</tr>
<tr>
<td>delivery includes</td>
<td>qCf, load plugs (Ø 6mm / M6; MultiContact), manual</td>
</tr>
</tbody>
</table>

The quickCONNECTfixture (qCf) is an invaluable tool in research and development and strong demands of quality assurance. All kinds of PEM fuel cell internal components, like membranes, electrodes and CCMs, MEAs, GDLs can be checked very easily. Enabling fully reproducible test conditions, the contact pressure on the active fuel cell area (5, 25, 50 cm²) can be regulated directly via pneumatic actuator. Flow fields, both standard designs from balticFuelCells and custom-made, can easily be exchanged. Besides the basic models FC 25/100 and FC 50/125, qCf is also available as customised solution with different active fuel cell areas and other customer specific demands.

1. **qCf** – quickCONNECTfixture, connected to the test stand
2. **cellFixture** – first is running, another can be equipped with specimens separately

Performance of a balticFuelCells PEFC-CCM (nobel metal load 0.4 mg/cm² each anode and cathode) with different contact pressure impact.

Maximum power density by determination of optimum contact pressure on active area

Continuously adjustable contact pressure assures full reproducibility of test conditions

Independence of thickness of internal fuel cell components by self adjusting piston and special sealing concept

No hose coupling and electrical wiring for replacement of cellFixture required

Highly comfortable operation and easy assembly of cellFixture into quickCONNECT fixture qCf – 1st is running, 2nd can be fitted with new components

Time saving assembly due to quick release and automatic plug connections

Quick and easy clamping/assembly of cellFixture without tools and precise exchange of cell internal components

Designed for strong demands in the area of quality assurance and lab environments

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**baltic FuelCells**

innovation in fuel cell technologies

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Made in Germany
quickCONNECTfixture qCf
testing equipment for fuel cells & batteries

- testing of cell components
- quality assurance
- high reproducibility
- quick & easy assembly
- increased productivity

qCf consists of a supporting frame and a cell fixture. The supporting frame works as a pneumatic actuator on the cell fixture. A moving monopolar plate in the cell fixture enables to control the compression force on the cell internal specimens. Patent: EP 1 839 364 38, US 2007/0275287 A1, WO 2006/05695 A1

fuel cell test equipment
for laboratory & industrial environment

Easy & quick exchange of specimens/ internal fuel cell components:

1. dismount cell fixture
2. exchange of cell internal specimens
3. mount cell fixture

15 seconds 30 seconds 45 seconds 60 seconds ready!