Temperature · Pressure · Process
A world leader in the development and manufacture of calibration instruments for pressure, temperature, and process.

A metek STC designs and manufactures some of the world’s best solutions for a wide variety of markets and applications. Whether it’s temperature, pressure, or process equipment you are looking for, we provide the highest quality products from our world-class calibration labs in California, Florida, and Denmark.

Combined with our software engineering and research office in India, our various sales and service centers, and over 150 distributors around the globe, our world-wide presence allows us to provide outstanding service no matter where you are!

**San Luis Obispo, CA USA**
Crystal Engineering
Crystal produces the industry’s most accurate, field-capable, easy-to-use, reliable pressure calibration and measurement equipment from our ISO 17025 accredited lab.

**Largo, FL USA**
Mansfield and Green
M & G designs and manufactures a variety of deadweight testers, hand-pumps, and comparators, for field and lab use from our ISO 9001 certified facility.
Bognor UK

Düsseldorf Germany

Paris France

Mumbai India
Software Engineering and Research

Allerød Denmark
JOFRA Calibration

JOFRA designs and produces portable, high-precision dry-block temperature calibrators, thermometers, sensors, and innovative process calibrators from our ISO 17025 accredited lab.

Shanghai China

Singapore Asia

Beijing China

Melbourne Australia

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Sales, Service, Manufacturing, and Engineering
Sales and Service
Why We’re Better

Effective Solutions

One Crystal pressure product often does the work of three to five devices from other manufacturers — replacing your data logger, your chart recorder, multiple test gauges, and even a dead-weight tester with a single device.

Our JOFRA dry-block temperature calibrators are the fastest solution available for accurately calibrating temperature. One high speed calibrator reduces test time while also offering automated, hands-off operation, allowing a technician to complete multiple tasks simultaneously. We even have a model that only requires calibration once every three years!
We use active temperature compensation to ensure you have lab accuracy in nearly any outdoor climate. We define our accuracy clearly, so you know where you stand without working complex calculations. And, our advanced simplicity interfaces allow you to quickly learn the product, helping to reduce user error.

Increased Safety

From the safest hoses and fittings available, to high over-pressure protection, our technology sets a new standard for safety. Why take a chance?
Dry-block and liquid-bath temperature calibrators featuring portability, accuracy, and speed.

Our dry-block and liquid bath temperature calibrators include five models, from rugged field to laboratory grade, and temperature ranges from -100 to 1205°C. Packed with advanced features, high accuracy and speed, and advanced documentation functions when combined with JOFRACAL software, we have the temperature calibrator to fit your needs.
# Innovative Temperature Measurement

From our active dual-zone calibration principle, to our patented Dynamic Load Compensation sensor, we are constantly striving to provide the most accurate and reliable temperature products available.

## High Quality Sensors

Since we produce reference temperature sensors for nearly any application, we probably have the right one for yours. For added safety, our intelligent design ensures correct identification and calibration data are loaded into our calibrators and indicators.

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### Specifications

<table>
<thead>
<tr>
<th>Temperature Range</th>
<th>Internal Accuracy (°C)</th>
<th>External Accuracy (°C)</th>
<th>Stability (°C)</th>
<th>Type</th>
<th>Insert Diameter (mm)</th>
<th>Dynamic Load Compensation</th>
<th>Sensor UnderTest</th>
<th>Input Test Set</th>
<th>Follows</th>
<th>Autostep</th>
<th>Switch Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>-10°C to 155°C</td>
<td>0.06</td>
<td>0.030</td>
<td>0.001</td>
<td>Dry</td>
<td>29.7</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>0°C to 125°C</td>
<td>0.07</td>
<td>0.030</td>
<td>0.001</td>
<td>Dry</td>
<td>29.7</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>10°C to 180°C</td>
<td>0.10</td>
<td>0.040</td>
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<td>29.7</td>
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<td>✓</td>
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</tr>
<tr>
<td>45°C to 155°C</td>
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<td>0.005</td>
<td>0.001</td>
<td>Dry</td>
<td>29.7</td>
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</tr>
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<td>30°C to 155°C</td>
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<td>0.005</td>
<td>0.001</td>
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</tr>
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<tr>
<td>22°C to 155°C</td>
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<td>0.010</td>
<td>0.01</td>
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</tr>
<tr>
<td>25°C to 155°C</td>
<td>0.20</td>
<td>0.040</td>
<td>0.01</td>
<td>Dry</td>
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</tr>
<tr>
<td>10°C to 125°C</td>
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</tr>
</tbody>
</table>

### Temperature Range

- 28°C to 250°C
- 28°C to 350°C
- 33°C to 425°C
- 28°C to 400°C
- 28°C to INFRARED 600°C
- 28°C to 600°C
- 28°C to 650°C
- 33°C to 660°C
- 33°C to 700°C
- 100°C to 1205°C

### Functions

- AutoStep
- Switch Test
- Mains Voltage Immunity
- Sensor UnderTest Input
- Dynamic Load Compensation
- Calibration
- Follows
- Autostep
- Switch Test
- Mains Voltage Immunity

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* RTD, TC, mA active, mA passive, and switch.
† At 33 to 350°C / At 350 to 425°C.
Pressure

Calibration solutions featuring digital gauges & calibrators, plus pneumatic & hydraulic dead-weight testers.

Shown from left to right:
The HPC50 Series, APMi, nVision, XP2i, and HPC40 Series

Shown from top to bottom:
The Type T Series, PKII Series, and HK Series.
Our pressure equipment includes some of the world's most popular digital gauges and calibrators for a variety of applications and markets. Included are intrinsically safe “% of reading” gauges and calibrators, differential pressure gauges, reference data recorders, calibrators with built in pumps, and unique pneumatic and hydraulic deadweight testers. In many cases, one handheld calibrator can replace multiple instruments, reducing on-going recalibration and maintenance costs.

Our recorders collect readings as quickly as ten times per second, and store up to one million data points.

We provide the world's only ball-type deadweight testers, where the ball and weights float on a thin film of air, which is virtually frictionless. This design eliminates the necessity to rotate the weights during testing, and allows the user to concentrate on the instrument itself. Our testers are engineered to offer user-friendly, safe operation, in the field, or in a lab. Both pneumatic and hydraulic testers are available.
Process

The ASC-400 is our latest multifunction process calibrator, which includes an easy-to-use, advanced simplicity user interface. Read and source RTD, thermocouple, current, voltage, frequency, and resistance to calibrate or verify your process sensors. Or, combine with the APM CPF pressure modules to calibrate pressure, or a dry-block to calibrate temperature.

If you don't need the advanced features found in our multifunction calibrator, our single task instruments, including the mAcal and ASM Series make calibrating instruments like pressure transmitters and temperature sensors fast and easy.
Our pressure generation products include everything from small pneumatic hand pumps to a precision hydraulic pressure comparator capable of generating up to 15,000 psi / 1000 bar / 100 MPa.

Crystal Pressure Fittings (CPF) are a new line of quick-test pressure fittings for calibration and test applications, designed with an emphasis on safety. They feature leak-free performance up to 15,000 psi / 1000 bar, and include a safety weep hole to alert you before you accidently disconnect from a pressurized system. The weep hole can also be used as a bleed point. CPF fittings seal two ways: use fingers for an o-ring seal or use a wrench for a metal to metal cone seal (good to -40°C).

Our pressure hand pumps, comparators, and fittings & hoses are the perfect complement to our popular pressure gauges and calibrators. Each is available as a stand-alone pump or part of a complete system with the indicator included. From pneumatic and hydraulic hand pumps, to pressure comparators capable of controlling pressure up to 15,000 psi / 1000 bar, to the safest, most reliable pressure fitting and hose system available, we have the pressure generation equipment to make your job easier.