Humidity and temperature calibration products
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Michell Instruments and Rotronic offer a comprehensive suite of humidity and temperature calibration systems and components. These range from full-function systems suitable for use in national metrology laboratories to transportable humidity generators for quick field verifications. They are all designed to calibrate probes from any manufacturer and can be used in combination with chilled mirror reference hygrometers to produce traceable humidity calibrations.

**HygroGen2-S – Humidity Calibrator**
- Chamber volume: 2 litres; Working volume 1.5 litres
- Humidity changes (5...95 %rh, 0.1 %rh stability): <5 minutes
- Temperature changes (23...50 °C, 0.01 °C stability): < 5 minutes

**HygroGen2-XL – Large Capacity Humidity Calibrator**
- Chamber volume: 20 litres; Working volume 17 litres
- Humidity changes (5...95 %rh, 0.1 %rh stability): <15 minutes
- Temperature changes (23...50 °C, 0.01 °C stability): < 15 minutes
- Calibrate probes, data loggers, hand helds and chart recorders

**Optional Features**
- **Autocal**: Automated calibration, adjustment and certificate generation for HC2-S probes.
- **Remote API**: Allows users to integrate the HygroGen2 into their own or third party systems.

**OptiCal – Precision Relative Humidity and Temperature Calibrator**
- Generate 10 to 90 %rh over +10 to +50 °C (+50 to +122 °F) temperature
- UKAS accredited calibration, as standard
- Humidity and temperature profile generation for unattended verification of sensors

**HygroCal100 – Humidity Validator**
- Combine with Optidew 401 chilled mirror hygrometer for cost-effective traceable calibrations
- Intuitive UI makes automating probe verification simple
- Automated validation procedures for hands-off probe verification
- Internal calibration correction cycle ensures continued confidence

**S904 – Relative Humidity and Temperature Calibrator**
- Generate 10 to 90 %rh over +10 to +50 °C temperature
- Excellent chamber stability and uniformity
- Manual control or optional straightforward automated set point programming

Companions of

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CHILLED MIRROR REFERENCE HYGROMETERS

Michell Instruments’ chilled mirror reference hygrometers provide fundamental measurements of dew point with excellent long-term stability. They are all designed to operate as standalone devices but can also be used in combination with humidity generators to provide highly accurate humidity calibrations.

Optidew 401 – Cost-effective Chilled Mirror Hygrometer

- New chilled mirror hybrid sensor gives fast dynamic response to changes in humidity
- Accurate to ±0.15°C dew point, ±0.1°C temperature
- Wide measurement range from -40 to +120°C dew point

S8000 and S8000 RS – High Precision Chilled Mirror Hygrometer

- Accuracy of ±0.1°C
- Precision measurement to -90°Cdp (100 ppb) with no need for additional cooling
- Sensor head optimised for fast response to low moisture levels
- Compact 19” x 4U package

S8000 Remote – High Precision Chilled Mirror with Remote Sensor

- -40 to +120 °C dew-point range with ±0.1 °C dew point accuracy
- Small, compact design
- Easy integration with HygroGen2

Humidity Standards

Rotronic’s humidity standards are hermetically sealed ampoules of calibration salts, for inexpensive on-site calibrations. They are supplied with a Swiss Calibration Services (SCS) certificate, guaranteeing the traceability and accuracy.

- Simple and safe to use
- Unlimited lifetime
- Practical packs of 5 ampoules of the same humidity value
  (approx. 0.8 ml per ampoule)

Humidity values

0.5 %rh, 10 %rh, 11 %rh, 20 %rh, 35 %rh, 50 %rh, 60 %rh, 65 %rh, 75 %rh, 80 %rh, 95 %rh

Calibration Devices

There is a suitable calibration device for every Rotronic sensor. These small, airtight containers enclose the humidity sensor exactly. The lower screw-on part is filled with the humidity standard material. After an approx. 60 min. settling period, the desired humidity value is reached and the device can now be adjusted to match the reference humidity value.

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DEW-POINT CALIBRATION

DCS-80, DCS-100 – DEW-POINT CALIBRATION SYSTEM

- Complete dew-point calibration solution with optional compressor, dryer, dew-point generator, reference instrument and optional manifold
- Generated output responds quickly to a change of set point
- Simple operation through manual flow mixing or push-button switching of set points

CUSTOM HUMIDITY AND TEMPERATURE CALIBRATION SYSTEMS

Where a standard product doesn’t meet the specific needs of an application, Michell’s team of design engineers will work with you to develop a custom solution. Michell offers a sophisticated range of humidity/dew-point generators, pressure swing dryers and chilled mirror reference hygrometers – coupled with four decades of experience in working with national standards laboratories to provide humidity calibration equipment around the world.

PROCESS SENSING TECHNOLOGIES (PST)

The PST Group consists of a group of manufacturers who together provide an unmatched suite of instruments, analyzers and sensors for precision measurements in industrial process control, environmental monitoring, natural gas and petrochemical processing as well as applications in food and medicine.

Using our products, customers save millions of dollars each year through increased energy efficiency in their processes and reduced process disruptions. The quality of food, medicines, semi-conductors and thousands of manufactured goods depends on reliable measurements of critical parameters such as humidity, oxygen, CO, N2, H2, Hydrocarbons, pressure or CO2 during production, storage and transport. Our products directly improve the profitability of our customers and help them to stay compliant with stringent industry regulations.

COMPANIES

Analytical Industries – Pomona, CA, USA
Michell Instruments – Ely, UK
Rotronic – Bassersdorf, CH
LDetek – Quebec, CA
Dynament – Mansfield, UK
Ntron – Navan, IE
SST – Coatbridge, UK

MARKET LEADER

In oxygen sensors and gas analysis instrumentation, humidity and trace moisture instrumentation, impurities in gases analysis and flammable gas sensors.

GROUP FACTS

- 10 Proprietary Sensing Technologies
- 15 Sales and Service Locations
- Global support network with 50+ authorized distributors
- 7 Manufacturing Locations

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