

DewTech 390

Lab Grade Chilled Mirror Hygrometer with -90°C to +20°C Dew/Frost Point Range

The Edgetech Instruments DewTech 390 is a precision, laboratory grade hygrometer system that features measurement of an extremely wide range of dew/frost points in a variety of gases. Based on the primary method chilled mirror sensor technique, it assures highly accurate measurement of dew/frost point temperature to as low as -90°C frost point and as high as +20°C dew point.

The DewTech 390 is intended for laboratory use and has all the attributes needed for that purpose. Other hygrometers with specifications similar to the DewTech 390 are priced much higher without offering technical or useful advantages. The DewTech 390 provides the high value and top performance Edgetech Instruments' products are known for.

At the core of the DewTech 390 is a primary method, three stage Peltier cooled chilled mirror sensor. For peak efficiency, the performance of the Peltier is maximized through an integral cryo-cooling refrigeration system giving it very wide rangeability.

The DewTech 390 is ideal for metrology labs, scientific research, low dew/frost point process measurements or any application where high precision measurement of dew/frost point over a wide range with fast response and high stability are required.

The DewTech 390 is supported in the USA in a modern, ISO 9001:2015 registered facility with ISO/IEC 17025:2005 accredited calibration laboratory. It is delivered with a UKAS traceability certificate.

Features:

- Measures dew/frost point in gases to as low as -90°C (-130°F)
- Periodic recalibration is not required
- Displays moisture concentration at atmospheric pressure or compensates for pressure variations with input from an optional pressure transducer
- Can optionally be configured to display temperature or pressure as well as dew/frost point
- User programmable dual alarm capability can be set for latching or auto-reset mode
- Programmable via front panel or by remote access
- Data outputs include dew/frost point and alarm status
- Analog and serial outputs include RS232 communication with terminal, printer or computer
- Scalable throughout the entire operating range of psychometric variables



The Edgetech Instruments DewTech 390

Applications:

- Calibration laboratories
- Metrology laboratories
- Government agencies
- Educational institutions
- R&D test & measurement
- Pharmaceuticals quality control
- Medical gas measurement
- Furnace gas measurement
- Plastics manufacturing
- Semiconductor fabrication
- Power and energy production



Edgetech Instruments

ISO/IEC 17025:2005 Accredited
ISO 9001:2015 Registered

Technical Specifications

The **DewTech 390** features a user friendly display panel, an easy access sensor, plus multiple outputs and alarm capabilities. Standard configurations include bench top or 19 inch rack mount with front sensor access for easy cleaning and inspection.

Sensor:

Three stage Peltier cooled chilled mirror with additional refrigeration

Measurement Range:

Dew/frost point, -90°C to 20°C
(-130 to 68°F)

Accuracy:

Dew/frost point, $\pm 0.1^{\circ}\text{C}$

Automatic Balance Control (ABC):

Automatically corrects for most mirror contaminants
Automatically rebalances the optics at start up
Programmable ABC interval for unattended operation

Display:

Scrolling 8 Line graphic data display with backlight
Dew/frost point temperature in $^{\circ}\text{C}$ or $^{\circ}\text{F}$
Relative humidity, ambient temperature, ppm_v and pressure

Optional Inputs:

Pressure transducer for ppm_v calculations
Temperature sensor for relative humidity calculations

Outputs:

0 to 5 Vdc, 4 to 20 mA, 0 to 10 Vdc, or 0 to 20 mA
User scalable, available simultaneously, one output per measurement parameter

Power:

110 to 230 Vac, 50/60 Hz

Sample Pressure:

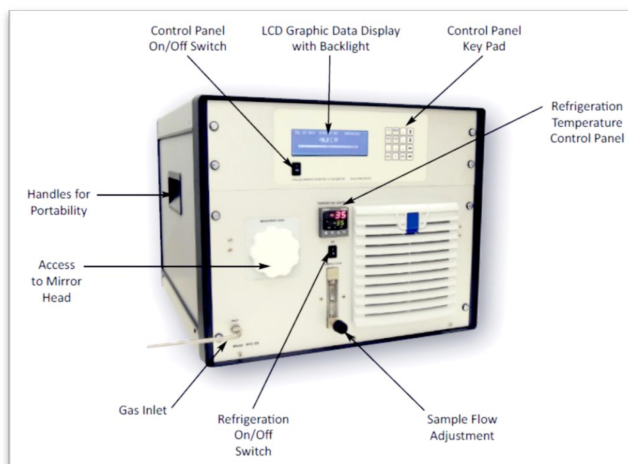
0 to 75 psia
(0 to 5 bar)

Sample Flow Rate:

0.5 to 5.0 SCFH
(0.25 to 2.4 liters/minute)

Integral Cryo-Cooling Refrigerant:

R 404A



The DewTech 390 Bench Top Configuration

Dimensions:

23.62 x 20.47 x 17.13 in
(600 x 520 x 435 mm)

Packed Dimensions:

29.13 x 26.77 x 22.23 in
(740 x 680 x 590 mm)

Weight:

103 lb. (47 kg)

Packed Weight:

154 lb. (70 kg)

