

# KAHN

## Hygrometers

NEW LOWER COST  
and FASTER RESPONSE SPEED

## Easidew *Plus* Portable Hygrometer

A compact, easy to use portable hygrometer including integral sampling system for quick measurement of compressed air process gas moisture content.

- -58°F to +68°F dewpoint range
- NIST traceable
- Exceptionally fast and reliable
- Rugged NEMA 6 enclosure
- Line or atmospheric dewpoint measurement
- Integral sampling system
- Long battery life

### Simple And Affordable

The Easidew *Plus* Portable Hygrometer has been designed to make field checks of the dewpoint in air and other process gases as simple and quick as possible. The totally self-contained instrument arrives ready to use. Simply connect your sample gas to the Swagelok fittings, turn on the instrument and it will respond.

The Easidew *Plus* Portable Hygrometer is also economical to buy, install and operate. Volume manufacturing allows us to keep the price low. Installation costs are minimal because of its ruggedness and simplicity. And ongoing operating costs are low, because the Easidew *Plus* Portable is reliable and durable. Only periodic re-certification is required to maintain your calibration traceability.

### Interchangeable Sensor Technology

The key to the Easidew *Plus* performance is its sensor technology. Kahn's polymer capacitive moisture sensor is coupled with our long-established microprocessor based measurement circuitry to produce a fully calibrated and interchangeable sensor module. All calibration data is stored within the sensor memory, so that even untrained personnel can accomplish calibration exchange or service in seconds. The Easidew *Plus* Portable sensor is simply disconnected, removed from its sample block and replaced by a new, fully calibrated unit.



### Fully Integrated Sampling System

The Easidew *Plus* Portable Hygrometer is unique among portable Hygrometers. It incorporates a complete sampling system that allows easy measurement of the dewpoint of any air or gas line, clean or dirty, at up to 4350 PSIG pressure. A fixed orifice port configuration allows you to select measurement at atmospheric or line pressure. An integrated filter housing, accepting standard fiber filter cartridges, gives 99.5% protection against particles to 0.3 micron. All these features are standard with every Easidew *Plus* Portable Hygrometer.

### Measurement In Your Control

The Easidew *Plus* Portable Hygrometer utilizes an extremely clear and bright red LED display so that you can quickly determine the dewpoint of your process even in the most dimly lit plant. The hygrometer is equipped with a 4-20 mA analog output for connection to a chart recorder, data-logger or computer system.

### Practical Design

As its name suggests, Easidew *Plus* Portable has been designed to be easily transported. It is small with an ergonomic handle, weighs less than 9 pounds and its bright yellow color means it will never be lost! On the functional side, Easidew *Plus* Portable is protected to NEMA 6 when the lid is closed and its low power requirements allow uninterrupted battery operation for up to 16 hours.

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## What is Dewpoint?

Dewpoint is defined as the temperature at which the water vapor pressure of a gas equals the saturated water vapor pressure. It is therefore the temperature at which condensation "just begins" to occur if a gas is cooled.

Dewpoint is a fundamental unit and directly equivalent to water vapor pressure or parts per million. It is a very convenient measure of actual water content of a gas because it is not a function of temperature in the same way relative humidity is.

## Calibration

The Kahn Easidew *Plus* Portable is factory calibrated to insure consistent, accurate readings. The calibration of all Kahn ceramic, polymer capacitive and chilled mirror sensors is traceable to the National Institute of Standards and Technology through master Kahn optical hygrometers which have been directly calibrated at the NIST and are periodically recalibrated. A certificate of traceability is provided with all of these instruments. All sensors are fully interchangeable without the need for display recalibration. In addition all calibrations are guaranteed for one year.

## Installation And Operation

The Kahn Easidew *Plus* Portable Hygrometer is battery operated to allow for field use. A battery charge indicator on the instrument front panel keeps you informed of battery status. The NiMH battery pack is long lived and easily recharged using the supplied charger. The battery can quickly be replaced if necessary.

# SPECIFICATIONS

### Sensor Type:

Kahn Polymer Capacitive Moisture Sensor

### Calibration Range:

-58 to +68°F (-50 to +20°C) dewpoint

### Accuracy:

±3.6°F (±2°C) dewpoint

### Operating Temp:

-4 to +122°F (-20 to +50°C)

### Storage temperature:

-40 to +167°F (-40 to +75°C)

### Operating Pressure:

Vacuum to 4350 PSIG

### Display:

3.5 digit red LED display, flush mounted

### Output:

4-20 mA signal via 1/4" output jack.  
Maximum load resistance 400 Ω

### Case:

Yellow polypropylene. Battery charger, sample tubing, and output jack stored in lid

### Flow Rate:

2 to 10 SCFH (1 to 5 l/min)

### Ingress protection:

NEMA 6 (IP68)

### Power:

Rechargeable NiMH battery pack /  
Battery charge indicator

### Charger:

115 VAC

### Run Time:

12-16 hours

### Charge Time:

16 hours (maximum)

### Sample Connections:

1/4" Swagelok stainless steel compression fittings for gas in/out

### Sample System:

Stainless steel, fully self-contained sample system with filter and fixed orifice ports for flow control at low pressure or atmospheric measurement.

Additional orifice, 1/4" metering valve, and 1/4" orifice port adapter for high pressure (150 PSIG to 4350 PSIG) measurement.

### Filter:

99.5% retention @ 0.3 micron with cartridge supplied; spare cartridges are available

### Traceable Certification:

-58 to +68°F (-50 to +20°C) dewpoint traceable to NIST

### Weight:

8.8 pounds (4.0 kg)

### Dimensions:

10.8"L x 4.9"H x 9.9"D

#### NOTE:

The information included herein was correct at the time of publication and supersedes all previously published data. However, it is our policy to continually improve our products to ensure ever better performance. Consequently, current Kahn products may incorporate modifications not shown or described on these pages

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