



Paint Test Equipment



Dewpoint Meter



Dewpoint Meter

The Dewpoint Meter enables testing for the estimation of the probability of condensation on a surface to be painted and establishing whether conditions are suitable for painting or not.



The steel surface temperature generally should be at least 3°C above the dew point when paints are applied. Below this temperature the Dewpoint Meter will sound an alarm and the display colour will change to warn you that the surface conditions are not suitable too paint.

Measurements of relative humidity, dew point, air temperature, Surface temperature and surface temperature proximity to dew point (delta T) are shown.

Built in infrared thermometer for surface temperature measurements.

Interchangeable Humidity Sensor allows the user to replace damaged or out-of-calibration-date Sensor.

Specification

Accuracy Humidity Sensor: 10–90% $\pm 2\%$ rh.
0–10/90–100% $\pm 3\%$ rh.

Resolution Humidity Sensor: 0.1%rh.

Resolution Temp: 0.1°C (0.2°F).

Accuracy infrared Thermometer: $\pm 2\%$.

Range infrared Thermometer: -20°C to 80°C.
(-4°F to 176°F)

Compliance

ISO 8502-4.



Supply

Supplied in an industrial foam-filled Carrying Case with a Humidity Sensor and Surface Temperature Probe.

The Calibration Certificates with traceability to UKAS are an optional extra.

IR Based – With 12:1 (D:S) Ratio
Range -4°F to 176°F (-20°C to 80°C)
Accuracy $\pm 3.6^\circ\text{F}$ ($\pm 2^\circ\text{C}$)



Ordering

H4001	Dewpoint Meter 1–100%rh/-10 to 70°C (14–160°F). Inc Humidity Sensor
HS301	Spare Humidity Sensor 0–100%rh/-10 to 70°C (14 to 160°F)
NH101	Humidity Sensor Calibration Certificate
HA001	PC Download Cable



Paint Inspection Kit

The Dewpoint Meter is also supplied in the Paint Inspection Kit. The Paint Inspection Kit contains all the equipment for the testing of blast-cleaned steel and coating inspection using the following equipment.



Testex Replica Tape / Replica Tape Gauge. Surface Profile measurement of blast-cleaned steel.

Bresle Test. Measurement of salts and corrosion products on blast-cleaned steel.

Dust Tape Test. Assessment of the quantity and size of dust particles on blast-cleaned steel.

Dewpoint Meter. Testing for the probability of condensation on blast-cleaned steel.

Wet Film Gauge. Wet film thickness measurement of the coating.

Coating Thickness Meter. Dry film thickness measurement of the coating.

Ordering Information

K3001. Paint Inspection Kit

NK002. Paint Inspection Kit Calibration Certificates



Instructions

Information

When using the Dewpoint Meter it is good practice to monitor the display for temperature stability. The Humidity Sensor should be given sufficient time to equilibrate with the environment to be measured. The larger the initial temperature difference between the Sensor and the environment to be measured, the more time temperature equilibration requires to provide a valid measurement.



Switch On/Off

Switch the Dewpoint Meter on by pressing the On button. To switch off, press and hold the button until the display shows DEVICE IS SWITCHING OFF. Alternatively, the instrument will switch itself off after a period that the Auto Off is set to under the Setting Menu Functions.

Pause Readings

Measurements on the display can be paused by pressing the right arrow button.

Replacing Battery

When the battery requires replacement, low battery indicator will show one bar and flash

With the instrument switched off remove the screw then the cover located on the rear of the Instrument, replace with an alkaline PP3 battery, ensuring correct polarity.



Instructions

Surface Temperature

When the Dewpoint Meter is used in conjunction with the built in infra red thermometer you can ensure that there is no moisture on the blast-cleaned steel before painting.

Remove the rubber cap from the infra red sensor and point at the substrate. Press the infra red temperature button (IRT) and the measurements will show on the display.

If you press the infra red temperature button (IRT) twice the laser sight will activate.

The display will show the Surface Temperature Difference (difference between surface temperature and dewpoint), Surface Temperature and Air Dewpoint.

The Surface Temperature Difference measurement must be over 3°C to ensure that there is no moisture on the steel before painting. If the Surface Temperature Difference measurement is under 3°C the green background will change to amber, flash and sound an alarm as a warning not to paint. If the Surface Temperature Difference measurement falls below 0°C the amber background will change to red.



The Surface Temperature Difference is also referred to as a delta T reading in some specifications.



Instructions

Menu

All functions are accessed through a menu-driven display by pressing the left button. To scroll through the menus use the up and down arrow buttons and enter by briefly pressing the on button.



To exit from the menu, press the left Menu button again and the Dewpoint Meter will revert back to normal measurement mode.

Instructions

Hygrometer

The Hygrometer Menu Function shows the Relative Humidity and Air Temperature on the display.



Instructions

Psychometrics



Dew Point

Dew Point, Relative Humidity and Air Temperature are shown on the display.

Grams Per Kilogram

Grams Per Kilogram, Relative Humidity and Air Temperature are shown on the display.

Enthalpy

Enthalpy, Relative Humidity and Air Temperature are shown on the display.

Vapour Pressure

Vapour Pressure, Relative Humidity and Air Temperature are shown on the display.

Custom

This Menu Function will allow you to display the customised measurements.

Instructions

Settings



Language

Language options of English, Norwegian, French, German, Swedish, Spanish, Italian and Dutch can be selected by using the up and down arrows. When selected press the On button to save.

Units

Metric or imperial measurements can be selected by using the up and down arrows. When selected press the On button to save.

Custom

Customise the display with up to four different measurement types by using the up and down arrows. When selected press the On button to save. When Custom is selected under the Psychometrics Menu Function the display will show the selected measurement types.

Date and Time

Set the Date and Time so when readings are stored for download to a PC the downloaded readings will show the date and time.

Select the Date by using the up and down arrows to change numbers and the side arrows to move through the numbers, then press the On button and the display will allow you to set the Time using the same arrow buttons. When selected press the On button to save.

Auto Off

Select the number of minutes for the instrument to automatically switch off by using the up and down arrows. When selected press the On button to save.

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Brightness

Select the display brightness by using the up and down Arrows. When selected press the On button to save.

Buzzer

Select the buzzer to be on or off. When selected press the On button to save.

Calibration

This function is for Paint Test Equipment use only.

Logging

The logging will allow you to set a logging period and a job number so that measurements can be stored for PC download.

Select the Start and Stop by using the up and down arrows to change numbers and the side arrows to move through the numbers, then press the On button and the display will allow you to set the Log Interval and Job Number using the same arrow buttons. When selected press the On button to save.

The memory can be cleared from all measurements by selecting Clear Data using the up and down arrows. When selected press the On button to clear.

USB Connection

Measurements can be stored in the memory by pressing the right arrow button for one second until RECORD SAVED appears.

Select File Viewer by using the up and down arrows. When selected press the On button to save. All stored measurements can be downloaded to a computer directly into Excel.

Connection is made using the optional USB PC Download Cable to the download socket on the Dewpoint Meter and the USB port on the computer. Ensure the Dewpoint Meter is switched off when connecting the cable.

Switch the Dewpoint Meter on and USB Connected will show on the display. Locate the HygroMaster storage device on the computer and view the files.

When stored readings are in Excel using the Surface Temperature Probe Function the results are shown as follows:

Measurement 1: Surface Temperature
Measurement 2: Air Dewpoint
Measurement 3: Surface Temperature Difference

The memory can be cleared from all measurements by selecting Clear Data under the Logging Menu Feature.



Paint Test Equipment



Rust Grade Book

Rust Grade Book

The Rust Grade Book specifies a series of Rust Grades and Preparation Grades of blast-cleaned steel surfaces. The various Grades are defined by written descriptions together with photographs.



The Book identifies four levels (designated as Rust Grades) of mill scale and rust that are commonly found on surfaces of uncoated erected steel and steel held in stock. It also identifies certain degrees of visual Cleanliness (designated as Preparation Grades) after surface preparation of uncoated steel surfaces and of steel surfaces after overall removal of any previous coating.

Four Rust Grades, designated A, B, C, and D respectively are specified.

There are also fourteen Preparation Grades by blast-cleaning, indicating the degree of cleaning, together with detailed descriptions of the surface appearance to the following Sa Grades.

Grade Sa 1. Light blast-cleaning.
 Grade Sa 2. Thorough blast-cleaning.
 Grade Sa 2½. Very thorough blast-cleaning.
 Grade Sa 3. Blast-cleaning to visually clean steel.

Specification

Compiled by: ISO.

Edition: Second. 2007-05-01.

Translation: English, French, German & Swedish.

Compliance

ISO 8501-1



The Rust Grades and Preparation Grades shown are examples taken from the Rust Grade Book to show the quality of the pictures and to assist with the understanding of the book.



Ordering

- | | |
|-------|---|
| U1007 | Rust Grade Book (ISO 8501-1) |
| NPC08 | Rust Grade Book Conformance Certificate |

About Us

Paint Test Equipment is a global leader in the manufacture of specialist test equipment specifically for the industrial painting and coating industries for the protection of steel assets from corrosion, mainly in the oil, renewables and steel construction sectors. We have over 30 years experience and extensive knowledge in delivering practical solutions in supporting our customers with world class products for corrosion prevention.

Prevention of corrosion on steel is essential to extend the asset lifetime, optimise performance and minimise downtime for expensive maintenance work. Using Paint Test Equipment products ensures that industrial coatings are applied to the highest achievable quality standards of ISO compliance.

We supply small, medium and multinational companies with the full range of technologies and innovations in our unrivalled portfolio of products for our customers to grow their business and enhance profits through cost effective corrosion management equipment.

Paint Test Equipment is committed to providing proactive and innovative solutions to meet customer requirements for the highest quality, user friendly inspection equipment. Paint Test Equipment is the partner of choice.

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