

PRODUCT DATA SHEET

Dew Point Testers

Chanscope II & Model 13 Bureau of Mines Dew Point Testers

The Chandler Bureau of Mines Dew Point Tester is a primary instrument used to measure the dew point temperature of any gas. It is rugged, portable, and can provide very repeatable results. Because it is a primary standard, the dew point tester requires no calibration and is frequently used to verify results of electronic hydrocarbon and water dew point analyzers.

The Chandler Dew Point Tester is a chilled mirror device that operates by achieving the conditions required by the definition of dew point. A polished mirror is at one end of the chamber and a viewing window at the other. The operator controls an expandable gas through a valve, cooling the polished mirror until the dew point temperature is observed. Both moisture and hydrocarbon dew point temperature are obtained using the same method. The observed dew point temperature and pressure may be entered into the moisture content software available with the dew point tester to calculate the water content of the sample gas, such as natural gas.

Accurate performance

The Model 13 Bureau of Mines Dew Point Tester is the industry standard for dew point measurements, meeting ASTM D1142.

Flexibility

Both the Chanscope II and Model 13 are primary instruments capable of measuring both water and hydrocarbon dew point temperatures in a single analyzer, eliminating the need for (and cost of) multiple instruments.

Easy to use

With no electrical power required, simply connect the process gas and coolant and you are ready to perform your measurements.



Model 13 Bureau of
Mines Dew Point Tester

Chanscope II

KEY BENEFITS

- Meets ASTM D1142
- Portable and rugged for repeatable results
- No calibration needed
- RTD traceable to NIST (Chanscope II)
- Easy to maintain and use
- Verify fixed installation analyzers
- Measure both water and hydrocarbon dew point temperatures
- Capable of measurements in sour natural gas

APPLICATIONS

- Natural gas pipelines
- Natural gas custody transfer stations
- Natural gas processing plants
- Natural gas liquid separation
- Industrial gases
- Heat treating furnaces

KEY MARKETS

- Natural gas
- Steam and heat treating
- Industrial gas
- Refining
- Chemical and petrochemical

PERFORMANCE SPECIFICATIONS

Chanscope II Dew Point Tester

Accuracy	±0.2°C (±0.4°F) at 40°C (104°F) to -90°C (-130°F) (NIST Certification Included)
Dew point temperature ranges	-29°C (-20.2°F) to ambient, with liquid propane -62°C (-79.6°F) to ambient, with liquid carbon dioxide -129°C (-200.2°F) to ambient, with optional liquid nitrogen chiller
Chiller devices available	Regular (propane) Liquid nitrogen chiller: Dipstick-type used for dew point measurements down to: -129°C (-200.2°F) and below with liquid nitrogen -75°C (-103°F) with dry ice/acetone NOTE: The liquid nitrogen chiller allows faster dew point determinations, but care should be taken to allow components to reach thermal equilibrium, reducing errors caused by temperature overshoot
Ambient temperature range	-20°C (-4°F) to 40°C (104°F)
Operating pressure	Up to 5000 psig (34.6 MPa) Optional LCD readout pressure gauge available
Connections	Sample inlet and outlet: 1/8" NPT; refrigerant, 1/8" tube
Power	Battery-powered (NiMH), 100-240VAC, 50/60 Hz, smart charger
Ship weight	11kg (25 lb)
Carrying case (W x H x D)	457 x 178 x 355 mm (18 x 7 x 14 in.) water-tight, form-fitted resin case
Approvals and certifications	Russian Gosstandart Pattern Approval

Model 13 Bureau of Mines Dew Point Tester

Accuracy	±0.25°C (±0.5°F)
Dew point temperature range	Dependent on which thermometer is chosen
Operating pressure	Up to 5000 psig (34.6 MPa) Optional LCD readout pressure gauge available
Connections	Sample inlet and outlet: 1/8" NPT; refrigerant, 1/8" tube
Ship weight	11kg (25 lb)
Carrying case (W x H x D)	457 x 178 x 355 mm (18 x 7 x 14 in.)
Approvals and certifications	Russian Gosstandart Pattern Approval

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