

Quality&Precise



MAXWELLON DP200-80

-80°C to 20°C
Chilled Mirror Dew Point Meter
2024

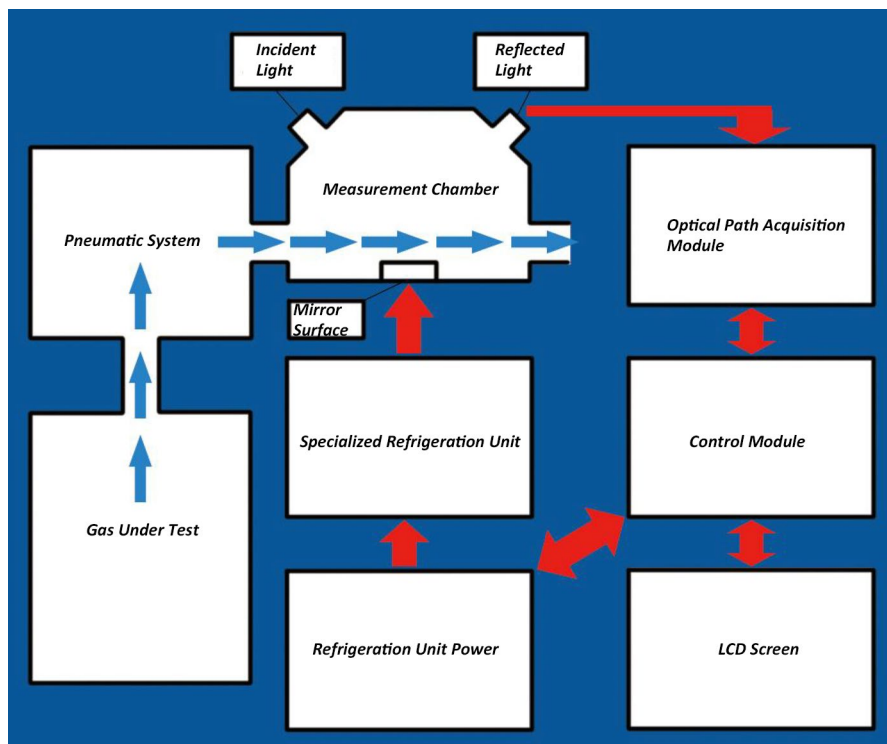
Maxwellon

The DP200-80 Chilled Mirror Dew Point Meter, developed by Maxwellon, is a precision instrument specifically designed for dew point measurement in gases such as nitrogen (N₂), hydrogen (H₂), oxygen (O₂), compressed air, SF₆, propylene, ethylene, and others.

Using the chilled mirror principle, combined with an intelligent human-machine interface and fully automated continuous analysis, the DP200-80 delivers high accuracy, wide measurement range, long-term stability, and drift-free performance. It is widely applied in industries such as food processing, pharmaceuticals, electric power, chemical engineering, gas, defense, and research institutions.

■ Working Principle

The Chilled Mirror Hygrometer operates based on photoelectric detection technology and is recognized as one of the most precise and stable types of dew point meters used as a standard in the metrology industry. Its working principle is as follows: the gas under test flows through the measurement chamber and over a mirror at a specified pressure. When the temperature of the mirror falls below the dew point (the saturation temperature of water vapor in the gas), the water vapor in the gas condenses into dew or frost. This condensation causes the light shining on the mirror to scatter diffusely. The system monitors changes in the intensity of the reflected light from the mirror and calculates the dew point temperature based on these changes.



■ Key Feature

- **Wide Measurement Range:** -80°C to +20°C
- **Fast Response:** Automatic balance system reduces measurement time
- **High Accuracy:** ±0.15°C (First-Class Humidity Standard)
- **High Resolution:** 0.01°C
- **Contamination Detection:** Built-in mirror contamination check with manual cleaning support
- **Real-Time Curve Display:** Displays full dew point trend curves and records measurement duration
- **Stable and Repeatable:** Suitable for continuous and online analysis
- **User-Friendly Interface:** Chinese-language smart touchscreen interface
- **Flexible Calibration:** Supports both single-point and multi-point calibration, no software required

■ Specifications

Measuring Range (Dew/Frost Point)	-80°C to +20°C
Measurement Accuracy	±0.15°C (First-Class Humidity Standard)
Display Resolution	0.01°C
Repeatability	<±0.05°C
Sensitivity	±0.01°C
Response Time	±15°C dp within 1 minute (stable reading)
Flow Measurement Range	0–2 L/min
Flow Measurement Accuracy	<±0.25% FS
Recommended Gas Flow	0.3–1 L/min (suggested: 0.7 L/min)
Pressure Tolerance	<1.5 MPa
Display	7-inch color industrial LCD screen
Display Units	°Cdp, °C, %RH, PPMV, L/min
Gas Interface	1/4" stainless steel compression fittings
Power Consumption	200W
Power Supply	~220V ±10%, 50Hz
Signal Output	RS 232
Operating Temperature	-20°C to +50°C
Operating Humidity	≤95% RH



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