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VYMPEL
GmbH

HYGROVISION-BL

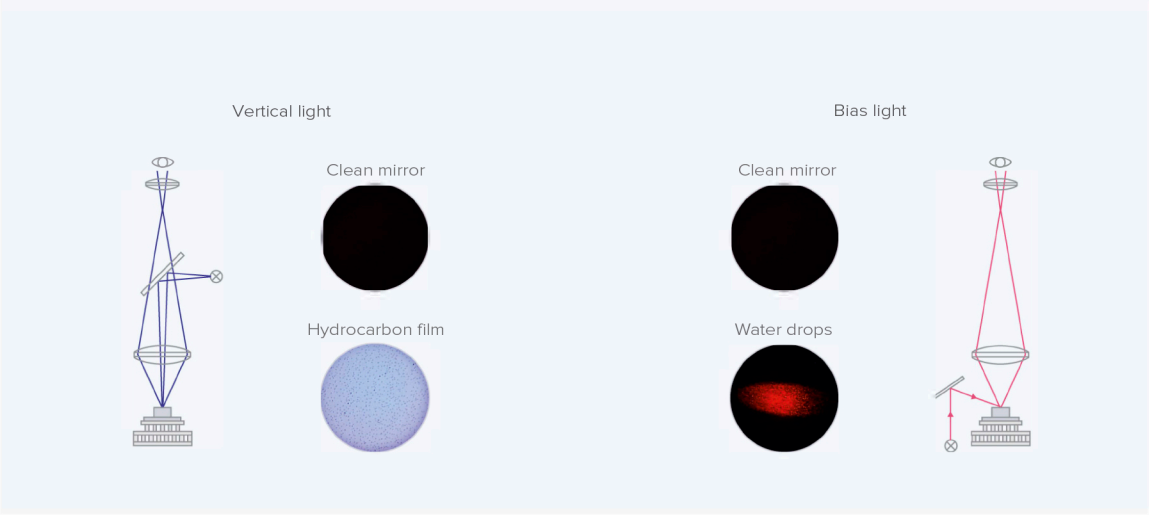
Automatic condensation hygrometer

Automatic condensation hygrometer with the option to measure manually.

The Hygrovision BL is designed for taking measurements of the water dew point and hydrocarbon condensation temperature as well as the visual monitoring of the condensation processes of gas at metering stations, underground storage and dehydration units, etc.

Characteristics

Range of dew point temperature measurement, °C	Range I	-30 ... T ambient
	Range II	-60 ... T ambient
Accuracy rate limits for dew point measurements, °C	Accuracy class A	±0.25
	Accuracy class B	±0.5
Range of hydrocarbon condensation temperature measurement, °C		-30 ... T ambient
Maximum pressure, bar, max		160/300
Explosion-proofing marking		1 Ex d[ib] IIA T5 X
IP degree of protection		IP67



Notes

VYMPEL
Precision | Economy | Safety

Hygrovision BL

Please note:
Product development and improvement are ongoing, therefore product data and specifications may be altered without prior notification.

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Hygrovision BL

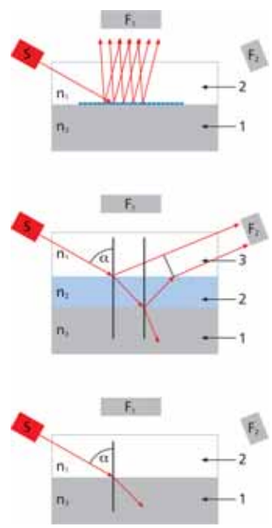
All in One

The **Hygrovision BL** dew point analyzer is a high precision instrument for measuring the dew points of water and hydrocarbons. Equipped with an optical visualization system, it is both compact and portable. The analyzer can be used in the automatic mode for continuous online measurements and in either manual or automatic mode as a portable device. It is a full-function alternative to both conventional manual-type dew point mirrors and standard automatic analyzers. In addition to the visual system, the analyzer is equipped with an automatic condensation detection system that employs photo-electric scanning and an interferometric analysis of the cooled surface of the mirror in order to register condensation. Dew point measurements made visually, which are very dependent on the experience of the technician, can be objectively checked and refined with the automatic system. The Hygrovision BL is equipped with a complex lighting system to illuminate the surface of the condensation mirror. This system enables the analyzer to distinguish between water and hydrocarbon condensation. (Fig. 1 & 2)

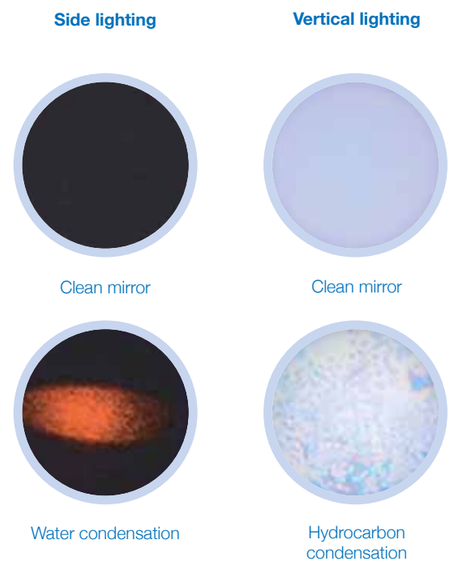
Fig. 1
Illustration of the optical system for observing water condensation

Fig. 2
Illustration of the optical system for observing hydrocarbon condensation

How it Works



The illustrations above show how the automatic systems register condensation: water (top), hydrocarbons (middle), and a clean mirror (bottom).



The images above illustrate how the surface of the mirror appears under various lighting, when observed through the microscope.

Product features

- An achromatic microscope for visually observing the condensation mirror's surface
- Two alternatives for illuminating the surface of the mirror enabling the instrument to register the difference between the dew point of water and hydrocarbons
- Automatic photoelectric scanning of the mirror's surface allows for faster dew point measurements as compared to a conventional observation only method. Moreover this scanning can provide information about the reflective integrity of the mirror's surface
- Two options for automatically cooling the the mirror (ref: DIN 51871)
- Automatic dew point measurement
- Automatic calibration mode
- Independent measurement of water and hydrocarbon dew points
- Optional connection of a pressure sensor
- Onboard storage of data regarding water and hydrocarbon dew points, operating pressures, and testing periods (max. 5 years).
- An IR port and a RS-485 interface for the electronic transfer of stored data (Modbus)
- Powered by the on-board battery or standard AC current
- A 4” touch-screen display for quick and easy operation that also provides information about various aspects of the analyzer, including the illumination mode and cooling/heating of the mirror

* Supplemental cooling is necessary when measuring dew points < -30° C.

** Dependent on BL version. Does not apply to accessories.

Technical Data

Measurement range	Water / HC	-60 °C...+30 °C* ΔT ≤ 60 °C
Absolute error	Water / HC	±0,5 °C...1 °C
Measurement cycle duration		10…15 min (automatic mode)
Sample gas volume flow rate		0,3...1 L/min
Ambient temperature		10 °C...+50 °C
Pressure measurement range		≤ 250 bar**
Housing protection type		IP 56
Explosion-proof rating		**ATEX:** Ex d ib IIA T5 **GOST R:** 1Ex d ib IIA T5 X **TC TR EX:** 1Ex d ib IIA T5 X
Interface		RS 485 ModBus Infrared
Data download		Firmware; Import download data directly to Excel
Battery-powered operation (per charge)		6 hours
Dimensions (without microscope)		153 mm x 202 mm x 257 mm
Weight (without accessories)		7,5 kg

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