

## Features

- Chilled-mirror type portable hygrometer
- Automatic & manual dew point measurement
- First-principle measurement – no measurement drift
- High-resolution visualization system
- Water dew point measurement in accord with DIN 51871, ISO 6327, and ASTM D 1142
- Hydrocarbon condensation temperature measurement in accord with ISO TR 11150, ISO TR 12148, and ASTM D 1142
- Registration of both the water dew point and hydrocarbon condensation temperature with one instrument
- Can be powered by battery or connected to an external power source
- Large touch-screen display for easy intuitive operation
- Integrated automatic diagnosis mode
- Automatic calibration of the hydrocarbon condensation temperature
- Data interfaces: IR-port & RS-485 Modbus



## Technical data

<b>Measurement range</b>		-60...+30 °C* ΔT ≤ 70 °C
<b>Accuracy</b>	Class A Class B	±0.25 °C ±0.5 °C
<b>Measurement frequency</b>		12...18 cycles / hour (max)
<b>Sample gas flow rate</b>		0.2...2.0 NI/min.
<b>Ambient temperature</b>		-10...+50 °C
<b>Gas sample pressure</b>		≤ 160 bar ≤ 230 bar
<b>Ingress protection rating</b>		IP66
<b>Explosion-proof rating</b>	ATEX GOST R TC TR Ex	II 2G Ex IIB T5 Gb 1 Ex d IIB T5 1 Ex d IIB T5 X
<b>Interfaces</b>		RS-48 Modbus / RTU Infrared
<b>Data storage capacity</b>		5 years of measurement data
<b>Battery-powered operation</b>		≤12 hours
<b>Dimensions</b>		153 x 202 x 257 mm
<b>Weight</b>		7.5 kg

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

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



# HYGROVISION BL

## Portable automatic chilled-mirror hygrometer



VYMPEL

## HYGROVISION BL

### All in one

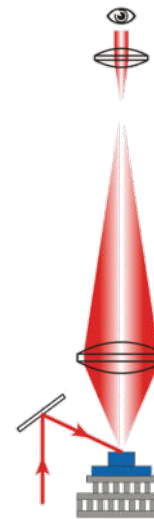
The **Hygrovision BL** represents a revolutionary advance in high-precision condensation mirror hygrometry. This uniquely capable portable analyzer offers both automatic and manual measurement of the water dew point and hydrocarbon condensation temperature in natural gas and other gaseous media.

The Hygrovision BL directly registers the water and hydrocarbon condensation temperatures, providing a first-principle measurement of physical properties of the gas.

**The visualisation system** provides optical traceability and monitoring of condensation processes. In addition, the system has two different lighting options ensuring that the water and hydrocarbon condensates can be easily distinguished. (Fig. 1 & 2)

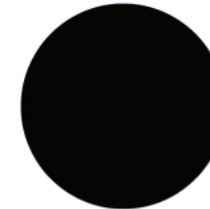
The Hygrovision BL is equipped with VympeL's advanced laser-based technology for operation in the automatic mode.

This system monitors the surface of the temperature-controlled condensation mirror and incorporates technology based on the principle of **interferometric analysis**.

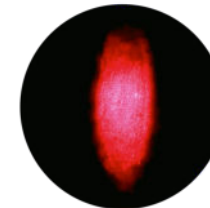


**Fig. 1**  
Optical system for observing water condensation

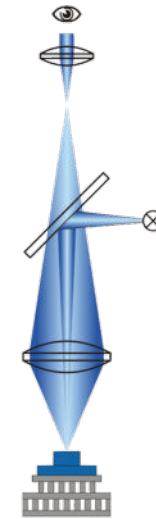
#### Side lighting



Clean mirror

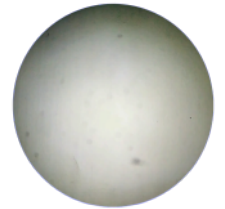


Water condensation

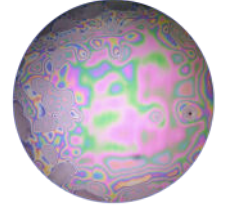


**Fig. 2**  
Optical system for observing hydrocarbon condensation

#### Vertical lighting



Clean mirror



Hydrocarbon condensation



### Laser-based Analysis

VympeL's advanced registration technology takes advantage of the phenomenon of "total refraction" to achieve a previously unattainable degree of accuracy.

The Hygrovision BL can be used for stationary online measurements in automatic mode and for taking measurements manually as a portable dew point analyzer.

It is a fully-fledged alternative, not only to conventional manual dew point mirrors, but also to standard automatic dew point analyzers.



### Optical System

For taking measurements manually, the Hygrovision BL's visualization system consists of two main components:

- a removable 40 power microscope and
- a dual-lighting system

Under the microscope, the condensation processes of both water and hydrocarbons are revealed in great detail.

These two lighting options make it possible to not only see the condensation clearly, but also to easily see what type of condensate is present.