

VARIOTEC® 460 Tracergas | The specialist for leak detection with tracer gas and hydrogen



LEAK DETECTION
made in Germany

VARIOTEC® 460 Tracergas



Rely on precision and safety

The **VARIOTEC® 460 Tracergas** was developed especially for leak detection on underground pipes by using tracer gas. It is characterised by an outstanding price to performance ratio.

- Precise:** The extraordinarily low cross sensitivity of the gas-sensitive semiconductor (SC) with regard to moisture and methane ensures an absolutely sure result and a resolution down to 0.1 ppm H₂.
- Functional:** Thanks to an innovative operating concept, a large display and simple menu structure, device operators can quickly get reliable results.
- Efficient:** In combination with the bell probe D80 you can achieve outstanding reaction times.
- Flexible:** The expanded measuring range of the thermal-conductivity sensor, up to 100 % vol. H₂ easily allows for further measuring tasks.
- Integrated:** Save your measurements and transmit the results using the USB interface on the computer.
- Mobile:** The 4 AA-size rechargeable batteries can be charged in just 3 hours and the operating time is at least 8 hours. As an alternative, you can use disposable batteries.
- Reliable:** Sewerin measuring devices are well known for their quality and durability.

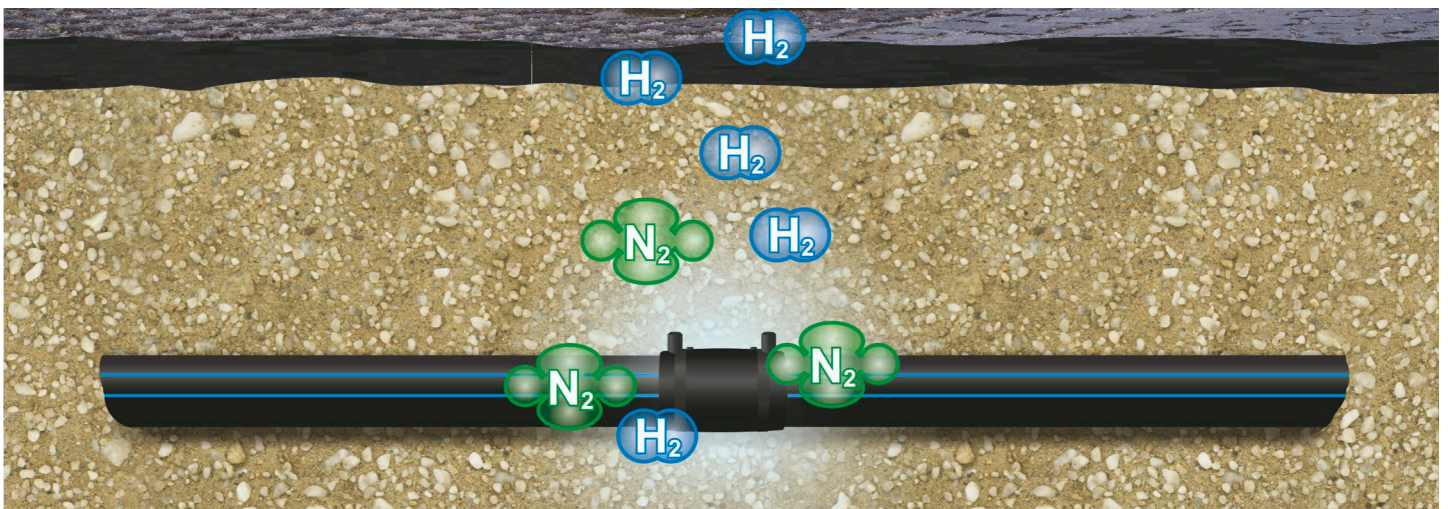
A tried and tested method

Using tracer gas is a tried and tested method of pinpointing leaks. It can be used in gas and water distribution networks, pipelines in buildings, heating systems, pressurised communication cables, gas-filled high voltage power lines and landfill sites sealed with double membrane layers. It can also be used to test for leaks in industrial products such as pipes, pumps, engine blocks and airfoils.

Detecting gas leaks by tracer gas involves feeding a mixture of 95% nitrogen (carrier gas) and 5% hydrogen into the pipelines or other equipment/products being tested. The hydrogen escapes through the leak and is detected by the highly sensitive, specialised sensor.

The low amount of hydrogen (just 5%) means that this method is safe: the gas is incombustible as per ISO 10156 thanks to the use of nitrogen as the carrier gas. It is non-toxic, and therefore also permitted for use in drinking water networks, as well as non-corrosive.

Tracer gas is cheap and easy to obtain from technical gas or welding gas dealers. It is also environmentally-neutral and permeates all cover layers such as asphalt, concrete and other seal coats. Tracer gas always looks for the shortest route from the leak to the surface.



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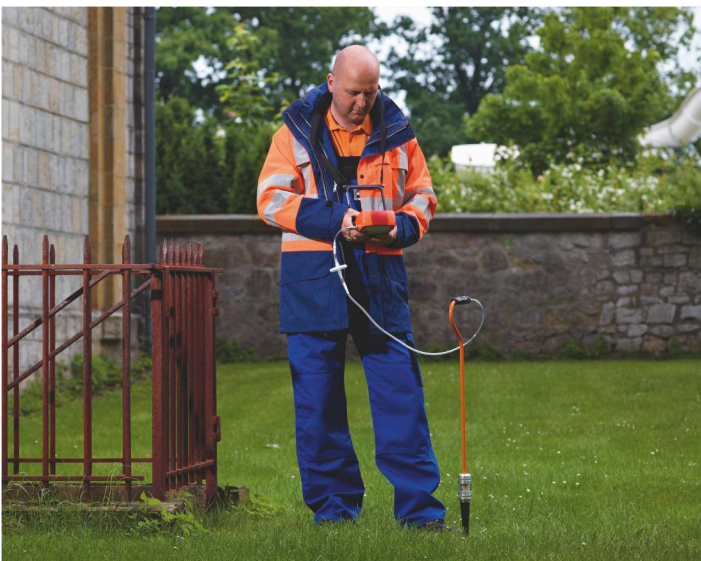
Inspection above ground

With the **VARIOTEC® 460 Tracergas** and a bell or carpet probe you can measure the smallest concentrations of gas above a gas pipe laid in the ground, so you can reliably determine the discharge location above a leak on gas or water pipe lines.



Inspections in houses

Detect the smallest traces of gas in buildings and pinpoint the source of the gas, e.g. for leaks in internal, covered pipe systems.



Measuring in bar holes





In combination with a localisation probe you can measure the gas concentration in the ground. In this way, you can exactly pinpoint the suspected leak site.



Gas measurement

Ensure that the lines are either completely filled with or completely emptied of gas when commissioning or decommissioning hydrogen pipelines.

Applications

Application		Measuring range (H ₂)	Sensors
Inspection above ground		0.0 ppm – 5 % vol.	Gas-sensitive semiconductor Thermal conductivity sensor
Measuring in bar holes		0.0 % vol. – 100 % vol.	Thermal conductivity sensor
House		0.0 ppm – 5 % vol.	Gas-sensitive semiconductor Thermal conductivity sensor
Gas measuring		0.0 % vol. – 100 % vol.	Thermal conductivity sensor



Technical data

Dimensions (W x D x H):	approx. 148 x 57 x 205 mm
Weight:	approx. 1000 g
Protection rating:	IP54
Certificate:	TÜV 07 ATEX 553353 X II2G Ex d e ib IIB T4 Gb Basic device without leather bag for: CH ₄ , C ₃ H ₈ , C ₄ H ₁₀ , tracer gas with max. 5 % H ₂ in N ₂ II2G Ex d e ib IIC T4 Gb Basic device with leather bag for: CH ₄ , C ₃ H ₈ , C ₄ H ₁₀ , tracer gas, H ₂
Charging voltage:	12 V DC (max. 1 A)
Operating temperature:	-20 °C – +40 °C
Storage temperature:	-25 °C – +60 °C
Atmospheric pressure:	800 – 1100 hPa
Humidity:	5 – 90 % r.h., non-condensing
Interface:	USB
Memory:	8 MB
Display:	320 x 240 pixels



Accessories that add value

- Bell probe D80, carpet probe, localisation probe
- Carrying case
- Test gas generator PGG H₂ for producing small amounts of hydrogen for function control of the “Inspection above-ground” and “House” application ranges.

Please contact us for a comprehensive quotation, including additional technical specifications and information on accessories.