

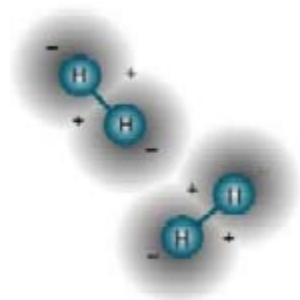
DETECTING WATER LEAKS USING TRACER GAS



Tracer gas is a well proven and successful technique for localising a wide variety of leaks including but not limited to:

- Customer Side Leakages
- Water distribution pipes
- Pressurised telephone cables
- For integrity testing in products such as valves, engine blocks, aeroplane wings ...
- Within buildings and houses
- Heating systems
- SF6 insulated or oil filled power or communication cable ducts

WHY USE HYDROGEN AS THE TRACER GAS?



The pipe, or item with the leak, has a mixture of 95% nitrogen and 5% hydrogen gas introduced to it. Hydrogen being the lightest and smallest molecule, will escape at the leak and make its way to the surface where it is detected by the highly sensitive Variotec 8 tracer gas detector.

The tracer gas being made up of only 5% hydrogen and the balance of nitrogen is :

- Non flammable - See ISO 10156, IEC60079-20:2000., IEC60079, EN61779
- Non toxic - approved for use in water networks
- Non corrosive
- Readily economically available from gas suppliers and welding supply companies (it is used as a blanket gas)
- Totally safe and does not damage the environment in any way. Unlike helium, which has also been used for some types of leak detection, hydrogen is renewable and cheap; helium is finite and expensive
- The smallest, lightest molecule so permeates all surfaces including , tarmac, block paving grass and even, eventually, concrete, rising quickly to the surface. Like water it will take the easiest route to surface so it is wise to consider the make up of the ground when deciding where the leak location is likely to be.



SAMPLING PROBES



There are a wide selection of search probes available :

- Carpet probes for long stretches of smooth surfaces
- Bell probes for localising in undergrowth or on floors
- Cone probe for localisation in the ground
- Hand probe for searching around cupboards and pipes

SPECIFICATION

- Operating temperature: - 10° ... +40° Celsius
- Display quasi analogue and large digital numerical gas levels -Not just LEDs!
- Protected to : IP 54
- Dimensions (W x H x D): 129 x 192 x 65 mm
- Sample intake: built-in membrane pump
- Operating time: ~ 8 hours
- Power supply: NiCd. Rechargeable via 12V whilst in the case
- Weight: 1.5 kg