

Devices for acoustic and  
tracer gas water leak location

# HL 500 H<sub>2</sub>



## Benefits

- ▶ **Unique combination of ground microphone and tracer gas detector**
- ▶ **Everything included in a set (control unit, ground microphone, H<sub>2</sub> sensor)**
- ▶ **Highest location precision due to visualisation of up to nine measuring points (gas concentration / sound)**
- ▶ **Highest sensitivity for tracer gas detection**



**sebaKMT**

# Equipment to acoustically locate water leaks



Procedure of leak locating

## ► How does acoustic leak location work?

With a damaged pipe, water streams out of the leak producing two types of noise:

1. The water flowing out of the pipe causes it to vibrate. With the Hydrolux and an attached microphone, you can hear these leak vibrations even at remote locations where contact with the pipe is possible (valve, hydrant, connection to a building etc.)
2. The water issuing at the leak location creates sounds which are transmitted through the ground to the surface. With the help of a ground microphone, the Hydrolux picks up these sounds and graphically displays the volume and the frequency spectrum.

## ► The Hydrolux series of equipment

The modern DSP technology used together with a 16 bit audio codec provides the user with high audio quality. Background noise is simultaneously minimised. This means that leaks which only produce a quiet sound can also be reliably identified. The Hydrolux is easy to carry even for longer periods of work due to the small housing and low weight. The large back-lit display provides easy reading of the measurement results. Hydrolux is simple to use which makes it a fine companion in your daily search for leaks.

With the modern series of Hydrolux equipment HL 500 H<sub>2</sub> and HL 5000 H<sub>2</sub>, you can find leaks particularly quickly, easily and reliably. The equipment uses modern digital signal processing technology (DSP) to clearly recognise the leak sound, even when there is a lot of noise in the environment. The sounds are not just perceived audibly, but are also displayed graphically using ultra-modern dual segment analysis (DSA) technology. For the user this means more reliability when locating water losses.

## ► Modern DSA technology for optimised leak location

DSA technology stands for „dual segment analysis“. In a normal noise spectrum, background noise (cars, wind, passers-by, etc.) drowns out the actual sound of the leak. After calculation and evaluation the background noise is displayed as a narrow bar in the graph. The actual sound of the leak is identified by the minimum value, which is displayed as a wide bar in the graph. The nearer that you get to the leak, the higher this bar gets.

## ► How does tracer gas/test gas measurement work?

The use of tracer gas for locating leaks in water pipes with electronic gas detection equipment has been tried and tested for several years.

To find a leak, the pipe to be investigated is filled with tracer gas (forming gas - 5% hydrogen and 95% nitrogen) through a hydrant or house connection. This escapes from the leak and is precisely located at the surface. Owing to its low specific density and molecular structure, tracer gas has the particular characteristic of quickly penetrating all materials (concrete, tiles, tarmac etc.) and rising vertically, where it can then be detected using the HL 500 H<sub>2</sub>.

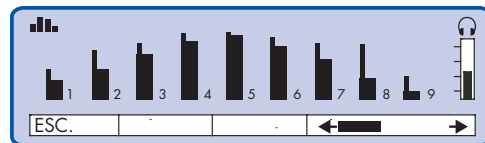
Due to its precise and quick reaction, the HL 500 H<sub>2</sub> is ideal for accurately locating even the smallest of leaks.

# HL 500 H<sub>2</sub>



Tracer gas measurement

## ► The histogram measurement - Seeing and hearing leaks and the distribution of gas concentration

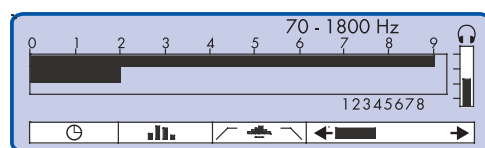


Forget about reading numbers. With histogram measurements, in future, you can both hear and see the leak. Up to nine measurements are saved and displayed as a DSA sequence with this function. The narrow segment shows the level of background noise, the wide segment shows the sound of the leak. The leak is there where the wide segment is highest. You can't get clearer than that!

### The advantages at a glance:

- Combination of acoustic and tracer gas leak location in one device
- Histogram function for sound and gas concentration
- Hear and see leaks: Histogram measurement with 9 simultaneously displayed DSA measurements
- Low weight - non-tiring to use
- High audio quality - Completely digital 16 bit audio codec

## ► The classical listening function



The classical display of the listening function has also been optimally adapted the user's requirements in the Hydrolux series. Maximum and minimum sound levels are clearly displayed as a DSA graph. The drag display function eases the job of acoustically locating plastic pipelines, using the pipe pecker RSP3.

# We are happy to provide you with information!



## Features of the Hydrolux equipment

Function	HL 500 H <sub>2</sub>
LCD display	x
DSA technology	x
DSP technology, 16 bit audio codec	x
Histogram	x
Drag display	x
Fixed filter sets	x
Back-light	x
Software updates	x
Sound insulation to VBG121 (< 85 dB)	x
Weight	1200 g
Dimensions	(L x B x H) 215 x 95 x 110 mm
Operating time	≥ 35 h, Tracer gas operation > 8 h
Power supply	10 x Mignon 1.5 (opt. rechargeable)
Connection options	PAM W-2, PAM B-2, PAM T-3, H <sub>2</sub> Sensor

### Scope of Delivery (set)

- Leak location equipment / amplifier ①
- Headphones ④
- Equipment case ⑤
- Carrying belt ⑥
- Tripod adapter (PAM U-D) ⑦
- H<sub>2</sub> sensor with rod ⑩
- Active universal microphone PAM B-2 with magnet and probe tip ⑪

### Optional accessories

- Slide valve adapter 20 mm
- Slide valve adapter 42 mm
- Ground microphone (PAM W-2) ②
- Connection lead VK 65 ③
- Extension set for PAM B-2 and PAM T-3 sensor rods
- Carrying rod PAM W-1 / PAM W-2 ⑧
- Carrying rod PAM T-3 ⑨
- Tripod adapter PAM W-2-D ⑫

**For more information, see:  
[www.sebakmt.com](http://www.sebakmt.com)**

SebaKMT  
Dr.-Herbert-lann-Str. 6  
96148 Baunach/Germany  
Tel. +49(0) 95 44 - 6 80  
Fax +49(0) 95 44 - 22 73  
sales@sebakmt.com  
[www.sebakmt.com](http://www.sebakmt.com)

# sebaKMT

Our range of products: Equipment and systems to locate faults in power and communications networks, as well as for leak location on pipe networks · line location equipment · CCTV inspection · seminars · service · contracting.

Technical data subject to change without notice.

**ISO 9001:2008**