

Leak detector LD 450

If pressurized gases escape through leaks in pipe systems (e.g. leaky screw connections, pipe corrosion etc.), noises are generated in the ultrasonic range. With the LD 450, even the smallest leakages, which cannot be heard by the human ear and which are not visible due to their size, can be detected even from distances of several meters. The LD 450 transforms the ultrasound, which is inaudible to humans, into audible frequencies. With the comfortable, sound-proof headset, these noises can be heard even in extremely noisy environments. The LD 450 leak detector is a further improvement on the proven predecessor models (LD 300 and LD 400) and impresses with its significantly refined sensor technology and its improved support in the tracing of leaks. With the help of the integrated laser pointer, which serves for target heading, the leak can be localized more accurately.

Applications

Leak detection on:

- compressed air, gas, and vacuum systems
- Door seals



LD 450 with focus tube and focus tip for exact detection.

Costs per year

Pressure	Size of leak - diameter (mm)					
	0.5 mm	1.0 mm	1.5 mm	2.0 mm	2.5 mm	3.0 mm
3 bar	€90	€361	€812	€1,444	€2,256	€3,248
4 bar	€113	€451	€1,015	€1,805	€2,820	€4,061
5 bar	€135	€541	€1,218	€2,166	€3,384	€4,873
6 bar	€158	€632	€1,421	€2,527	€3,948	€5,685
7 bar	€180	€722	€1,624	€2,888	€4,512	€6,497
8 bar	€203	€812	€1,827	€3,248	€5,076	€7,309

Table: Leakage costs in one year, with 24-hour operation 365 days a year, calculated with compressed air costs of 1.9 ct/Nm³.

Through the use of a specially designed acoustic trumpet, a better focusing of the sound waves is achieved. This acoustic trumpet acts like a directional microphone, focusing ultrasonic waves to improve acoustic performance. Due to the special design of the acoustic trumpet, the use of the laser pointer is not hindered.

Leak test: An easy to handle ultrasonic transmitter is available for detecting leaks in systems that are not under pressure. The transmitter is positioned so that the sound can enter the pipe system.

The ultrasonic signal penetrates the smallest openings, which can then be detected with the LD 450.

Special features

- Robustness and low weight ensure fatigue-free use in industrial environments
- Improved detection of leakages with the acoustic trumpet
- Modern Li-Ion battery with high capacity, external charger
- Minimum operating time 10 h
- Easy operation via membrane keypad
- Adjustable sensitivity



LD 450 is available either as standalone device or in a complete set. The set includes a robust impact-resistant transport case which contains all necessary components and accessories.



DESCRIPTION	ORDER NO.
LD 450 set comprising:	0601 0204
LD 450 leak detector for compressed air systems	0560 0204
Transport case	0554 0106
Sound-proof headset	0554 0104
Focus tube with focus tip	0530 0104
Plug-in power supply	0554 0009

DESCRIPTION	ORDER NO.
Acoustic trumpet	0530 0109
Accessories not included in the set: Ultrasonic transmitter	0554 0103

TECHNICAL DATA of LD 450	
Operating frequency:	40 kHz \pm 2 kHz
Connections:	3.5 mm stereo jack for headset. Power supply socket for connecting an external charger
Laser:	Wavelength: 630...660 nm Output power: < 1 mW (laser class 2)
Operating time:	>10 h (Continuous operation)
Charging time:	approx. 4 h
Operating temperature:	-5 to +50 °C
Storage temperature:	-20 °C to +60 °C

Note



A series of horizontal dotted lines for writing notes.