

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 dis-

tances of several feet. 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.

Supply Pressure psig	Cost of Air Leaks and Open Lines										
	Orifice Diameter in Inches										
	1/64	1/32	1/16	1/8	1/4	3/8	1/2	5/8	3/4	7/8	1
	Leakage Rate in CFM at Supply Pressure										
70	0.30	1.20	4.80	19.19	76.76	172.71	307.04	479.75	690.83	940.30	1228.15
SCF/Year	157,165	628,659	2,514,637	10,058,546	40,234,194	90,526,937	160,936,776	251,463,713	362,107,746	492,868,877	643,747,104
kWh/Year	488	1,953	7,813	31,253	125,011	281,275	500,044	781,319	1,125,099	1,531,385	2,000,176
Cost	\$59	\$234	\$938	\$3,750	\$15,001	\$33,753	\$60,005	\$93,758	\$135,012	\$183,766	\$240,021
80	0.34	1.34	5.36	21.46	85.82	193.10	343.29	536.39	772.40	1051.32	1373.15
SCF/Year	175,720	702,881	2,811,525	11,246,099	44,984,394	101,214,887	179,937,576	281,152,463	404,859,546	551,058,827	719,750,304
kWh/Year	546	2,184	8,736	34,943	139,770	314,483	559,081	873,564	1,257,932	1,712,186	2,236,324
Cost	\$66	\$262	\$1,048	\$4,193	\$16,772	\$37,738	\$67,090	\$104,828	\$150,952	\$205,462	\$268,359
90	0.37	1.48	5.93	23.72	94.88	213.49	379.54	593.03	853.96	1162.33	1518.15
SCF/Year	194,276	77,103	3,108,412	12,433,649	49,734,594	111,902,837	198,983,376	310,841,213	447,611,346	609,248,777	795,753,504
kWh/Year	604	2,415	9,658	38,632	154,530	347,691	618,118	965,810	1,390,766	1,892,987	2,472,472
Cost	\$72	\$290	\$1,159	\$4,636	\$18,544	\$41,723	\$74,174	\$115,897	\$166,892	\$227,158	\$296,697
100	0.41	1.62	6.50	25.99	103.95	233.88	415.79	649.67	935.52	1273.35	1663.15
SCF/Year	212,831	85,325	3,405,300	13,621,199	54,484,794	122,590,787	217,939,176	340,529,963	490,363,146	667,438,727	871,756,704
kWh/Year	661	2,645	10,581	42,322	169,289	380,900	677,155	1,058,055	1,523,599	2,073,788	2,708,621
Cost	\$79	\$317	\$1,270	\$5,079	\$20,315	\$45,708	\$81,259	\$126,967	\$182,832	\$248,855	\$325,034
125	0.49	1.98	7.91	31.65	126.60	284.86	506.41	791.27	1139.43	1550.89	2025.65
SCF/Year	259,220	1,036,880	4,147,518	16,590,074	66,360,294	149,310,662	265,441,176	414,751,838	597,242,646	812,913,601	1,061,764,704
kWh/Year	805	3,222	12,887	51,547	206,187	463,921	824,748	1,288,669	1,855,683	2,525,790	3,298,991
Cost	\$97	\$387	\$1,546	\$6,186	\$24,742	\$55,670	\$98,970	\$154,640	\$222,682	\$303,095	\$395,879
	Atmosphere 14.7	Cost/kWh \$0.120	Hours/Day 24.0	Days/Week 7	Weeks/Year 52.0	hp / scfm 0.25					

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 hours
- Easy operation via membrane keypad
- Adjustable sensitivity



LD 450 is available either as stand-alone 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
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 hours
Operating temperature:	-41 to +122 °F
Storage temperature:	-68 °F to +140 °F