



LD 500/510 leak detector with camera –
indicates leakage rate in l/min and costs in €

The LD 500
meets the
requirements of
Class I „Standard
Test Method for eaks
with ultrasound“
(ASTM Int. - E1002-5)
✓



Find out your leak size (l/min)
and potential saving (€/year)



Find the smallest leaks in
far distance



Auto level: Auto adapts the
sensitivity automatically to
the environment and elimina-
tes the ambient noise reliably



Photograph leaking parts



Describe the leak and
necessary actions



Transmit the leak details via
USB to your desktop software
or via Bluetooth to your App



Create an ISO 50001 report



Seek the leak the whole
day (9 hours)

	costs per year					
pressure	Leak size - 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 within one year in case of operation 24 h/365 days, calculated with compressed air costs of 1.9 ct/Nm³.



Leakage

LD 500/510 is a consistent advancement

The new leak meters LD 500/510 with integrated camera and leakage calculation are ideal measuring instruments which help to find and document even smallest leakages (0.1 l/min corresponds to approx. 1 € p. a.) easily even in far distances.

LD 510 is the worldwide first leak meter with an additional freely assignable sensor input for all CS sensors. In addition to the leakage measurement and detection also all necessary measurements with regards to dew point, flow, pressure, and temperature ... can be carried out.



Leak detection at:

- Compressed air, gas, steam and vacuum systems
- Steam Traps
- Seals
- Refrigeration systems

Accessories



Acoustic trumpet
bundles the acoustic waves of smallest leakages, disturbing ambient noise will be eliminated



Focus tube with focus tip
for precise locating of smallest leakages in narrow areas



Optionally available:
Gooseneck enables a positioning of the leakage on the spot – even in case of hardly accessible locations.



The noise-proof headset enables the leak detection also in EXTREMELY loud ambient. The ambient noise will be faded out, the leakage (inaudible ultrasonic sound) will be transformed to an audible signal. The laser grants an exact locating.



Leakage files stored in LD 500 are exported to a USB stick for issuing a report by software

If the leakage is found and stored the following data are also stored in the LD 500 and will be available after the export in the software resp. The CS LeakageApp CS Leak Reporter for issuing a report:





- Photo of the leakage point
- Date / time
- Company name / department / machine
- Size of the leakage in liters/min (unit selectable)
- Costs of the leakage per year in € (currency selectable)

Detailed reports can be issued via PC software or CS Leakage-App CS Leak Reporter, which can be placed at the disposal of the operators of compressed air systems resp. the head of the respective department.

The report can be issued for the whole company or for each department and it documents the detected leakages easily and clearly. Due to the summation at the end of the report it is easy to get an overview on the whole leakage amount in liters/min as well as the total leakage costs per year.

Leak Tags in hardcopies for documentation on-site

Leakage - report for ISO 50001 Audits

Photo	Leak	Location	Loss [l/min]	costs per year [Euro]	CO2 equivalent kg/year	ToDo	Status
<div><div>Level 81.5 dB Loss 10.9 l/min Cost 114 €/Y</div><div><div>Home</div><div>Align</div><div>0</div><div>system</div><div>30.96</div><div>12.03.17</div><div>12.03.17</div></div></div>	26	shpb08	10,9	114	600	Change connector	<div><div>Done Date: 27.11.2017 Durch: Max Mustermann</div></div>
<div><div>Level 45.4 dB Loss (1.2) l/min Cost 12 €/Y</div><div><div>Home</div><div>Align</div><div>0</div><div>system</div><div>10.75</div><div>10.75</div><div>10.75</div></div></div>	27	CO2 system	4,1	48	230	Change pressure reducer	<div><div>Open</div></div>
			Total	151	157		



By means of the History Report the continuous improvements which have been reached during several months/years due to consequent leakage detection and leakage elimination can be documented.



Description	Order no.
Set LD 500 consisting of:	0601 0105
LD 500 leak detector with acoustic trumpet, and integrated camera, 100 leak tags for marking the leakages on site	0560 0105
Transportation case	0554 0106
Sound-proof headset	0554 0104
Focus tube with focus tip	0530 0104
AC adapter plug	0554 0009
Helix cable for connecting the ultrasonic sound sensor	020001402
Set LD 510 consisting of:	0601 0106
LD 510 leak detector incl. acoustic trumpet, with integrated camera and additional input for external sensors, 100 leak tags for marking the leakages on site	0560 0106
Transportation case	0554 0106
Sound-proof headset	0554 0104
Focus tube with focus tip	0530 0104
AC adapter plug	0554 0009
Helix cable for connecting the ultrasonic sound sensor	020001402
Equipment:	
CS Leak Reporter – for detailed ISO 50001 reports. Gives an illustrated survey of the found leakages and their possible savings. Measures for elimination including status display can be defined for every leakage.	0554 0105
Gooseneck for leakage detection at sites which are difficult to access	0530 0105
Parabolic mirror for leak detection at long distances	0530 0106
Ultrasonic probe for leak testing	0554 0103
500 leak tags for marking the leakages on site	0530 0107
Calibration:	
Recalibration LD 500/LD510 inclusive certificate	0560 3333
Further sensors for connection to LD 510:	
FA 510 dew point sensor for mobile devices, -80...+20°Ctd, incl. mobile measuring chamber, 5m connection cable and perforated protection cap	0699 1510
Flow sensor VA 500, Max version (185 m/s) sensor length 220 mm, incl. 5 m connection cable	0695 1124
Standard pressure sensor CS 16, 0...16 bar, ± 1 % accuracy of f. s	0694 1886
Differential pressure sensor 1.6 bar diff.	0694 3561

Technical data

LD 500/510

Working frequency:	40 kHz ± 2 kHz
Connections:	3.5 mm stereo jack for headset Power supply socket for connecting an external recharger
Laser:	Wave length: 645...660 nm Output power: < 1 mW (laser class 2)
Display:	3,5" Touch screen
Interface:	USB interface
Data logger	2 GB SD memory card (100 million values)
Power supply:	Internal rechargeable Li-Ion batteries approx. 9 h continuous operation, 4 h charging time
Ambient temperature:	0...+50°C
EMG:	DIN EN 61326
Auto level:	Adapts the sensitivity automatically to the environment and eliminates the ambient noise reliably
Sensitivity:	min: 0.1 l/min at 6 bar, 5 m distance, approx. 1€/year compressed air costs

Technical data external sensor input (only LD 510)

Measuring range:	Please see external CS sensors
Accuracy:	Please see external CS sensors
Voltage supply:	Output voltage: 24 VDC ± 10% Output current: 120 mA in continuous operation

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