

LD6000PTS 50M / LD6000PTS 80M / LD6000PTS 100M / LD6000PTS 150M

EN

INSTRUCTIONS
ACOUSTIC TUBE PROBE



 TROTEC

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Information on the use of these instructions

Symbols



Warning of electrical voltage

This symbol indicates dangers to the life and health of persons due to electrical voltage.



Warning of explosive substances

This symbol indicates dangers to the life and health of persons due to potentially explosive substances.



Warning

This signal word indicates a hazard with an average risk level which, if not avoided, can result in serious injury or death.



Caution

This signal word indicates a hazard with a low risk level which, if not avoided, can result in minor or moderate injury.

Notice

This signal word indicates important information (e.g. material damage), but does not indicate hazards.



Info

Information marked with this symbol helps you to carry out your tasks quickly and safely.



Follow the manual

Information marked with this symbol indicates that the instructions must be observed.



Wear protective gloves

Information marked with this symbol indicates that you should wear protective gloves.

You can download the current version of the instructions and the EU declaration of conformity via the following link:



LD6000PTS 50m
LD6000PTS 80m
LD6000PTS 100m
LD6000PTS 150m



<https://hub.trotec.com/?id=47047>

Safety

Read this manual carefully before starting or using the device. Always store the manual in the immediate vicinity of the device or its site of use.



Warning

Read all safety warnings and all instructions.

Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

- Do not use the device in potentially explosive rooms or areas and do not install it there.
- Do not use the device in aggressive atmosphere.
- Do not immerse the device in water. Do not allow liquids to penetrate into the device.
- Protect the device from permanent direct sunlight.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Do not open the device.
- Use batteries of type 6LR61 (9 V battery).
- Never charge batteries that cannot be recharged.
- Different types of batteries and new and used batteries must not be used together.
- Insert the batteries into the battery compartment according to the correct polarity.
- Remove discharged batteries. Batteries contain materials hazardous to the environment. Dispose of the batteries according to the national regulations.
- Remove the batteries from the device if you will not be using the device for a longer period of time.
- Never short-circuit the supply terminal in the battery compartment!

- Do not swallow batteries! If a battery is swallowed, it can cause severe internal burns within 2 hours! These burns can lead to death!
- If you think batteries might have been swallowed or otherwise entered the body, seek medical attention immediately!
- Keep new and used batteries and an open battery compartment away from children.
- Observe the storage and operating conditions (see Technical data).

Intended use

Only use the device for the non-destructive, acoustic leak detection in drinking water pipelines and within the measuring range specified in the technical data.

Any use other than the intended use is regarded as misuse.

Reasonably foreseeable misuse

Do not use the device in potentially explosive atmospheres or for measurements at live parts.

The device may only be used for drinking water systems. If used in other media, reuse for drinking water is prohibited.

Any unauthorised modifications, alterations or structural changes to the device are forbidden.

Personnel qualification

People who use this device must:

- have read and understood the instructions, especially the Safety chapter.

Residual risks



Warning of electrical voltage

There is a risk of a short-circuit due to liquids penetrating the housing!
Do not immerse the device and the accessories in water. Make sure that no water or other liquids can enter the housing.



Warning of electrical voltage

Work on the electrical components must only be carried out by an authorised specialist company!



Warning

Risk of suffocation!
Do not leave the packaging lying around. Children may use it as a dangerous toy.



Warning

The device is not a toy and does not belong in the hands of children.



Warning

Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way! Observe the personnel qualifications!



Caution

Keep a sufficient distance from heat sources.

Notice

To prevent damages to the device, do not expose it to extreme temperatures.

Notice

Do not use abrasive cleaners or solvents to clean the device.

Specific instructions for the Bluetooth headset and Bluetooth receiver



Warning of explosive substances

Do not expose the battery to temperatures above 40 °C! Do not let the battery come into contact with water or fire! Avoid direct sunlight and moisture. There is a risk of explosion!



Caution

Lithium-ion batteries might catch fire in case of overheating or damage. Ensure a sufficient distance to heat sources, do not subject lithium-ion batteries to direct sunlight and make sure not to damage the casing. Do not overcharge lithium-ion batteries. If the battery is not permanently installed in the device, only use smart chargers that switch off automatically when the battery is fully charged. Charge lithium-ion batteries in due time before they are discharged completely.

Information about the device

Device description

The devices LD6000PTS 50m, LD6000PTS 80m, LD6000PTS 100m and LD6000PTS 150m are used for acoustic leak detection in a pressurized water line, also on the house connection side. For this purpose, the devices have a bendable pig probe with integrated precision microphone and a contactable probe cable.

Leakage sounds can be transmitted to the corresponding headphones via Bluetooth and rendered audible. The sound level is displayed analogously on the device.

The exact leakage position can be determined with a mechanical metre counter.

Using the separately available combination detector LD6000 with Bluetooth receiver LD6000PTS, frequencies can be visualized and points of leakage can be indicated in form of a bar graph.

A separate frequency generator (not included in the scope of delivery) in the 33 kHz range allows the entire fibre optic cable or the probe tip to be contacted. With a suitable receiver, the pipeline course can be detected and the leakage point located with pinpoint accuracy.

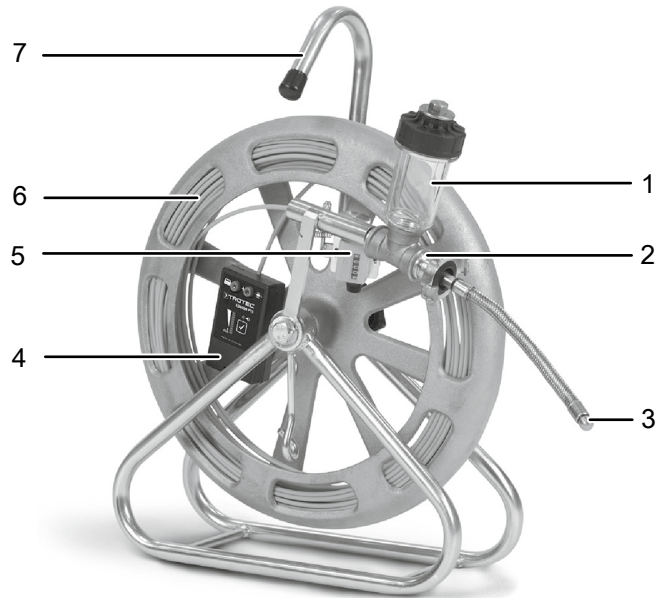
The devices are suitable, for example, for use on the following elements of a piping system:

- domestic water meter
- free-flow valve
- dismantled piping
- tapping saddle
- hydrant

The images in these instructions show the device LD6000PTS 50m by way of example.

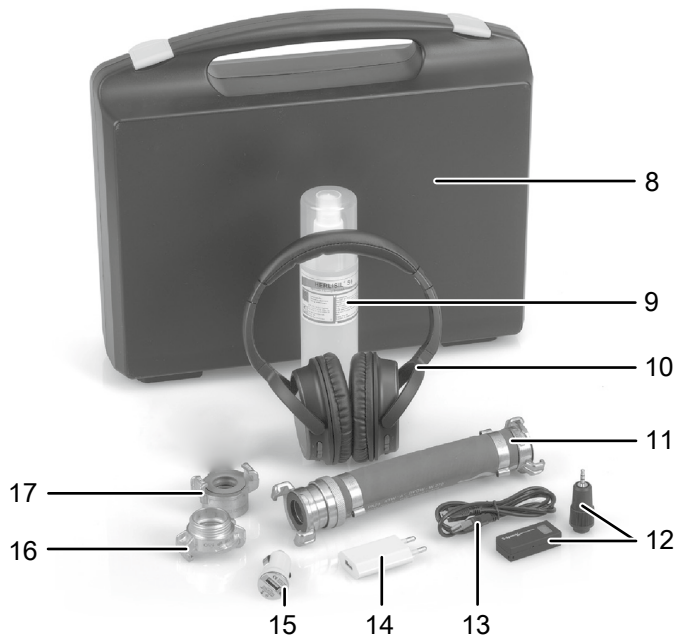
Device depiction

LD6000PTS tube probe



No.	Designation
1	Disinfectant storage container
2	Cable passage
3	Sensor head
4	Bluetooth transmitter unit
5	Mechanical metre counter
6	Polykat fibreglass
7	Tubular steel frame

Accessory case (optional)



No.	Designation
8	Transport case for accessories
9	Disinfectant
10	Bluetooth headphones
11	Hose adapter
12	LD6000PTS Bluetooth receiver (optional)
13	Mini USB charging cable
14	Charging adapter 230 V socket
15	Charging adapter 12 V cigarette lighter
16	Geka coupling 1 inch internal thread
17	Geka coupling 1 inch external thread

Bluetooth transmitter unit



No.	Designation	Function
18	9 mm sockets	for connecting a frequency generator
19	<i>Sound transmission</i> LED	illuminated = sound transmission active not illuminated = sound transmission muted
20	Multifunction button	operating the Bluetooth transmitter unit
21	<i>Level</i> LEDs (ten bars)	indicate the intensity of the sound
22	<i>Battery</i> LED	illuminated = sufficient voltage flashing slowly = replace battery soon flashing quickly = replace battery before next measurement
23	<i>Bluetooth</i> LED	illuminated = connection established flashing = device in pairing mode not illuminated = no connection established, last active connection is paired

Technical data

Parameter	Value			
Model	LD6000PTS 50m	LD6000PTS 80m	LD6000PTS 100m	LD6000PTS 150m
Interfaces	Bluetooth banana plug	Bluetooth banana plug	Bluetooth banana plug	Bluetooth banana plug
Detection depth	max. 3.5 m	max. 3.5 m	max. 3.5 m	max. 3.5 m
Operating conditions	0–80 °C	0–80 °C	0–80 °C	0–80 °C
Operating time	> 12 h	> 12 h	> 12 h	> 12 h
Dimensions (length x width x height)	160 x 400 x 569 mm	160 x 400 x 569 mm	380 x 780 x 830 mm	380 x 780 x 830 mm
Weight	17 kg	22 kg	27 kg	37 kg
Sensor				
Antenna	integrated	integrated	integrated	integrated
Frequency range	10–16,000 Hz	10–16,000 Hz	10–16,000 Hz	10–16,000 Hz
Protection type	IP68	IP68	IP68	IP68
Diameter	12 mm	12 mm	20 mm	20 mm
Length	90 mm	120 mm	140 mm	140 mm
Bending radius	min. 40 mm	min. 60 mm	min. 100 mm	min. 100 mm
Fibre optic cable and reel				
Cable	4.5 mm Polykat fibreglass	4.5 mm Polykat fibreglass	9 mm Polykat fibreglass	9 mm Polykat fibreglass
Bending radius	min. 100 mm	min. 100 mm	min. 240 mm	min. 240 mm
Max. length	50 m	80 m	100 m	150 m
Breaking load	40 kN	40 kN	40 kN	40 kN
Passage				
Max. pressure	16 bar	16 bar	10 bar	10 bar
Bluetooth transmitter unit				
Level indication	LED bar graph, 10 levels			
Protection type	IP66			
Battery	9 V			
Bluetooth	2.0 / class 2 / 2.4 GHz / + 1.5 dBm (1.14 mW)			
Range	10 m			

Accessories for all models:

Parameter	Value
Bluetooth headphones	
Battery	Li-ion battery
Operating time	8 h
Bluetooth	2.0 / class 2 / 2.4 GHz
Range	10 m
Bluetooth receiver (optional)	
Battery	Li-ion battery
Operating time	6 h
Bluetooth	2.0 / class 2 / 2.4 GHz
Range	10 m
Bluetooth speaker (optional)	
Battery	Li-ion battery
Operating time	8 h
Bluetooth	2.0 / class 2 / 2.4 GHz
Range	10 m

Scope of delivery

- 1 x Measuring device LD6000PTS (without battery)
- 1 x Pressure lock with Geka coupling (approved for use in drinking water systems)
- 1 x Bluetooth headphones
- 1 x Charging cable for headphones
- 1 x Quick guide

Additionally available accessories

- LD6000PTS Bluetooth receiver
- LD6000 combination detector
- LD6000 accessory case

Transport and storage

Notice

If you store or transport the device improperly, the device may be damaged.

Note the information regarding transport and storage of the device.

Transport

Use the matching transport case to transport the accessories in order to protect the accessories from external influences.

Before transporting the device, proceed as follows:

- Lock the storage container for the disinfectant in place by means of the rubber strap provided at the reel.
- Make sure that the device does not suffer any severe shocks during transport.

The supplied Li-ion batteries are subjects to the requirements of dangerous goods legislation.

Observe the following when transporting or shipping Li-ion batteries:

- The user may transport the batteries by road without any additional requirements.
- If transport is carried out by third parties (e.g. air transport or forwarding company), special requirements as to packaging and labelling must be observed. This includes consulting a dangerous goods specialist when preparing the package.
 - Only ship batteries if their housing is undamaged.
 - Please also observe any other national regulations.

Storage

When the device is not being used, observe the following storage conditions:

- dry and protected from frost and heat
- protected from dust and direct sunlight
- the storage temperature complies with the values specified in the Technical data
- Batteries are removed from the device
- Always store the disinfectant in an upright position (lid facing up).

Start-up

Inserting the batteries into the transmitter unit

Notice

Make sure that the surface of the device is dry and the device is switched off.

1. Remove the battery compartment cover from the transmitter unit.
2. Use the battery clip to connect the new battery with correct polarity.
3. Slide the battery compartment cover back on the transmitter unit.

Disinfecting the device



Caution

The disinfectant is a neutral, liquid cleaning agent based on specially stabilized 3 % hydrogen peroxide. Always wear suitable protective gloves when filling the storage container or the spray bottle.

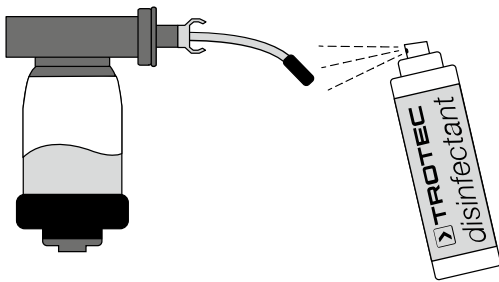


Notice

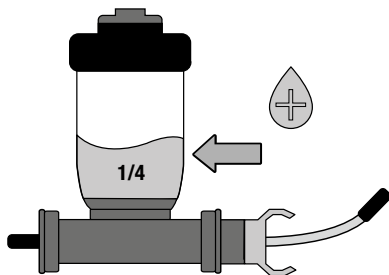
Before usage, all device parts coming into contact with drinking water must be disinfected.

When inserting the fibre optic cable into the pipeline, it is continuously pulled through the disinfectant solution. There is no need to observe a specific exposure time during insertion. The agent is pH neutral and can be fed into the waste water system without prior neutralization after use.

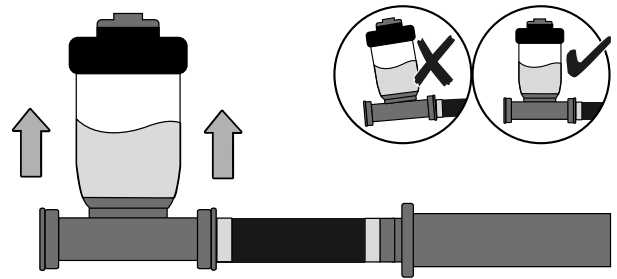
1. Spray the sensor head (3) with the disinfectant (9) and leave it to act for approx. 5 minutes.



2. Fill the storage container (1) to approx. 1/4 with disinfectant.



3. During measurement, position the storage container (1) vertically upwards to enable a continued flow of disinfectant.



Operation

Switching the device on

1. Press the multifunction button (20) for 3 seconds.
⇒ The transmitter unit switches on.

Establishing a Bluetooth connection

In order to transmit the sound recorded by the sensor head, a Bluetooth connection has to be established between the transmitter unit and the headphones/Bluetooth receiver/speaker.



Bluetooth transmitter

Bluetooth setting	Operation	LED display
Re-establish last Bluetooth connection	Switch on transmitter (Press multifunction button (20) for 3 seconds)	Bluetooth LED (23) inactive
Switch Bluetooth into pairing mode	Press multifunction button (20) for 6 seconds while switched off	All Level LEDs (21) light up, Bluetooth LED (23) flashes
Establishing connection	Wait for other end	Blue LED on receiver unit flashes
Bluetooth connection is established		Bluetooth LED (23) constantly illuminated
Connection error		All Level LEDs (21) flash

Bluetooth headphones

Bluetooth setting	Operation	LED display
Re-establish last Bluetooth connection	Switch on headphones (10) (Press On/Off button for 5 seconds)	Blue LED on headphones flashes briefly and then lights up continuously
Switch Bluetooth into pairing mode	Switch on headphones (10) (Press On/Off button for 7 seconds)	Blue LED flashes quickly
Bluetooth connection is established		A brief acoustic signal sounds in headphones, blue LED on headphones lights up continuously
No connection		Blue LED on headphones flashes quickly

Bluetooth receiver for LD6000 (optional)

Bluetooth setting	Operation	LED display
Re-establish last Bluetooth connection	Switch on Bluetooth receiver (12) (Press On/Off button for 4 seconds)	Blue LED on Bluetooth receiver flashes
Switch Bluetooth into pairing mode	Press On/Off button on Bluetooth receiver (12) for 7 seconds while switched off	Blue and red LED on Bluetooth receiver flash quickly alternately
Establishing connection	Wait for other end	Blue and red LED on Bluetooth receiver flash quickly alternately
Bluetooth connection is established		Blue LED on Bluetooth receiver flashes slowly
No connection		Blue LED on Bluetooth receiver flashes quickly

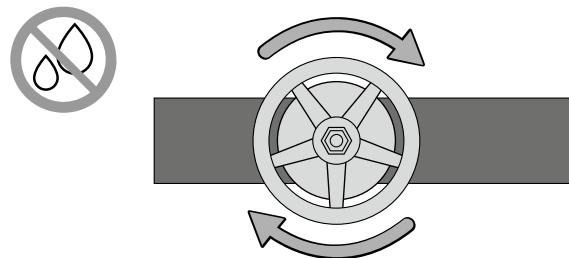
Bluetooth speaker (optional)

Bluetooth setting	Operation	LED display
Re-establish last Bluetooth connection	Switch on speaker (Press On/Off button for 4 seconds)	Power LED on speaker illuminated
Switch Bluetooth into pairing mode	Switch on speaker Briefly press Bluetooth button on speaker	Bluetooth LED on speaker flashes quickly
Establishing connection	Wait for other end	Bluetooth LED on speaker flashes quickly
Bluetooth connection is established		Bluetooth LED on speaker illuminated
No connection		Bluetooth LED on speaker flashes slowly

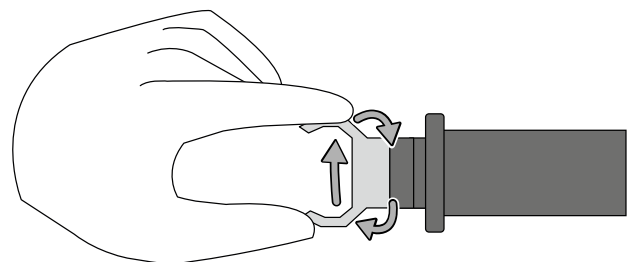
Connecting the cable passage

The cable passage (2) is connected for a smooth insertion of the flexible sensor head (3) in the drinking water line. The passage comes with a Geka coupling approved for use in drinking water systems.

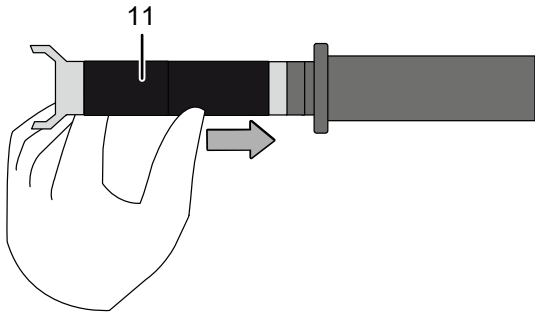
1. Close the shut-off valve of the water line.



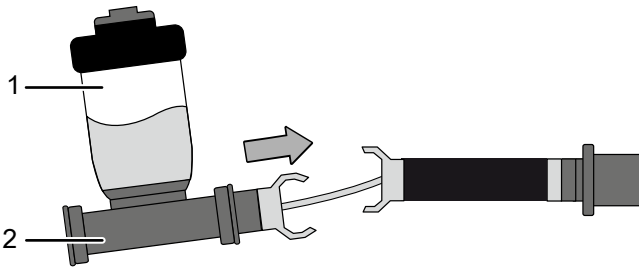
2. Prepare the end of the pipe section to be examined with a supplied Geka coupling (16, 17).
 ⇒ Connect preferably straight pieces or branches of 45° to avoid the sensor head from getting caught during insertion (3).



- If the distance between the attached Geka coupling and the next shut-off valve is too small, use the optional hose adapter (11) to connect the cable passage.



- Connect the Geka coupling to the cable passage (2).
⇒ Make sure that the storage container with the disinfectant (1) is positioned vertically upwards.



Inserting the sensor head

Notice

In case of DN50 pipes, the fibre optic cable can be pushed around bends of 90°. Despite this flexibility, please proceed with extreme caution during any application with 90° bends due to the high breaking load.



Info

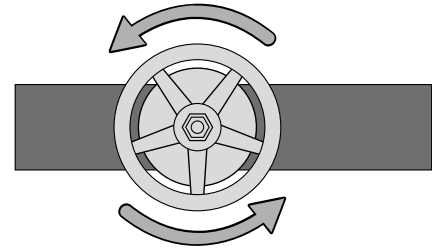
The sound recorder is very sensitive and records even barely perceptible sounds. Nevertheless, despite this sensitivity, it cannot be excluded that a leak is not recognized under certain conditions. This might either be due to the fact that the leak causes no leakage noise or else the sensor head (3) no longer works correctly. Therefore, check the sensor head prior to every measurement by running your fingernail over the tip.



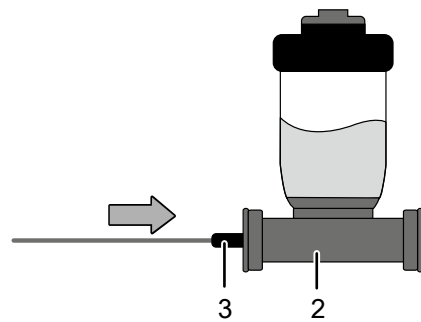
Info

In the course of the insertion process, a very loud scratching noise can be heard in the headphones/speaker, which is caused by the pushing. You can mute the sound using the multifunction button (20).

- Before opening the shut-off valve, make sure that all connections have been made correctly. Then slowly open the shut-off valve.



- Carefully slide the sensor head (3) into the pipe through the connected cable passage (2).



- Push the fibre optic cable (6) further into the pipe in increments of 30 to 50 cm. Allow the sensor head (3) to come to a rest at the end of each step in order to record the sounds in the environment of the sensor head.
- If the sensor head (3) gets stuck inside the pipe, try to loosen it by carefully pushing it back and forth.

Acoustic leak detection with Bluetooth headphones

In the case of leak detection in connection with the Bluetooth headphones, the noisiest spot in the defective pipe is the search target. We proceed on the assumption that every leak brings about a leakage noise. The closer you get to the fault location, the more sound energy will be recorded by the sensor head (3), which results in a perceptible increase in volume. At the same time a shift in the pitch to higher frequencies will be audible.

- Push the sensor head (3) into the pipe until you have located the spot with the loudest noise and the highest pitch.
- For fine tuning, push and pull the sensor head (3) past the spot you have just determined for a number of times.
⇒ There is a leakage at the defined spot.



Acoustic leak detection with level indicator



Info

The integrated level indicator is for orientation purposes only. A leaking sound does not necessarily cause a full-scale deflection of the *Level*/LED (21).

1. Gradually push the sensor head (3) into the pipe.
⇒ The more of the *Level*/LEDs (21) light up, the closer the sensor head (3) is to the leakage.

Acoustic leak detection with Bluetooth receiver and LD6000 combination detector



Info

By use of the LD6000 combination detector, frequencies up to 4000 Hz can be visualized. The best results with the LD6000 combination detector can be achieved in the user-defined application in smart mode as well as in non-stop measuring mode. For detailed information on measuring with the LD6000, see the separate LD6000 manual.

The LD6000 combination detector is not included in the scope of delivery and is available as an option.

1. Connect the headphones to the LD6000 combination detector.
2. Connect the Bluetooth receiver (12) to the LD6000 combination detector.
3. Gradually push the sensor head (3) into the pipe.
⇒ The larger the numeric display of the LD6000 combination detector and the higher the pitch (see lower frequency-response diagram of the LD6000 combination detector), the closer the sensor head (3) is to the leakage.



Pipe and pinpoint location with a locating device

Notice

The search pig at the tip of the probe is optimized for use with 33 kHz. Other common frequencies can only be used to a limited extent or not at all. Use a suitable frequency generator.

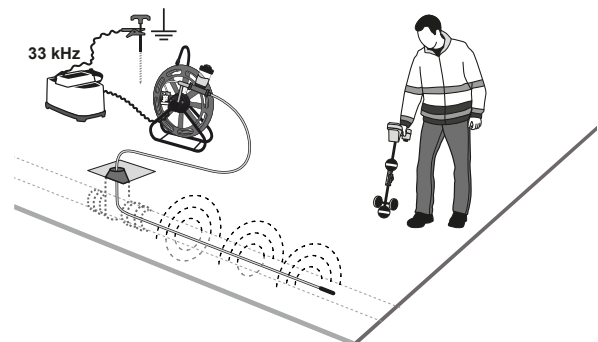
Notice

For pipe and pinpoint location, you need a commercially available locating device, which consists of a generator (transmitter) and a receiver as standard. The locating device is not included in the scope of delivery.

1. Carry out an acoustic leak detection.
2. Leave the sensor head (3) at the position where you have determined the maximum level.
3. Connect the frequency generator of the locating device to the device.

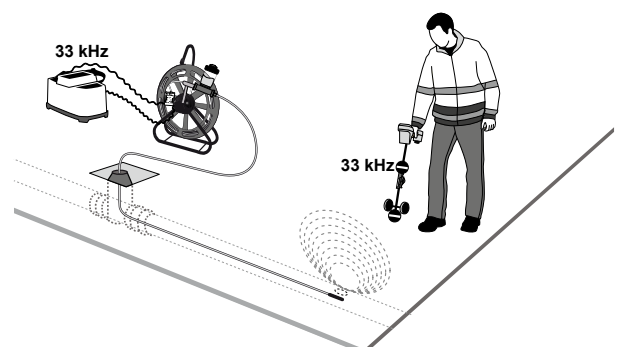
⇒ Probe detection

Connect one of the 9 mm sockets (18) to the frequency generator and insert an earth spike into the ground to which you connect the other socket of the frequency generator in order to track the course of the inserted fibre optic cable.



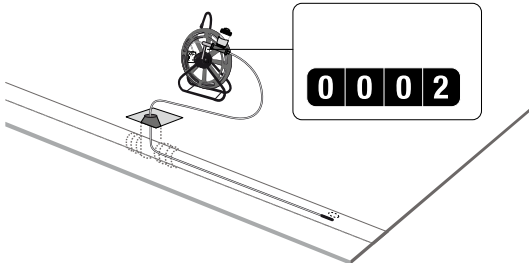
⇒ Pinpoint location

Connect both 9 mm sockets (18) to the frequency generator to contact the search pig at the tip of the probe and to determine the exact position of the search pig.

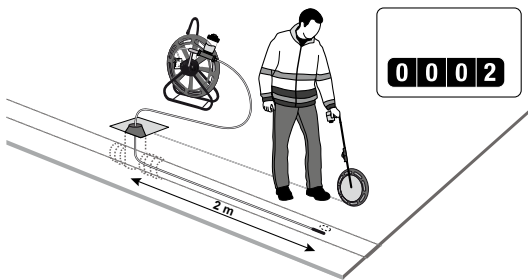


Pipe and pinpoint location with the measuring wheel

1. Carry out an acoustic leak detection.
2. Leave the fibre optic cable at the position where you have determined the maximum level.
3. Read the uncoiled length from the mechanical metre counter (5) and write down the determined value.



4. Walk down the corresponding length along the pipeline course with a measuring wheel.
 - ⇒ The sensor head is located at the position in the pipe where the indication of the measuring wheel corresponds to that of the mechanical metre counter (5).



Enabling/disabling sound transmission

- ✓ The transmitter unit is switched on.
 - ✓ A Bluetooth connection is established.
1. Briefly press the multifunction button (20).
 - ⇒ The *Sound transmission* LED (19) is illuminated.
 - ⇒ Sound transmission is enabled.
 2. Briefly press the multifunction button (20) again.
 - ⇒ The *Sound transmission* LED (19) is no longer illuminated.
 - ⇒ Sound transmission is muted.

Switching the device off

1. Press the multifunction button (20) for 3 seconds.
 - ⇒ All *Level* LEDs (21) light up.
 - ⇒ The transmitter unit switches off as soon as you release the multifunction button (20).

Examples of application

The following application examples show possibilities for connecting the device to special elements of the piping system.

Insertion via domestic water meter

1. Shut off the water supply.
2. Disassemble the water meter.
3. Mount the Geka coupling.
4. Attach the hose adapter (optional).
5. Connect the cable passage.
6. Open the water supply again.
7. Insert the probe into the pipe.

Insertion via free-flow valve

1. Shut off the water supply.
2. Disassemble the free-flow valve.
3. Fit the Geka coupling.
4. Attach the hose adapter (optional).
5. Connect the cable passage.
6. Open the water supply again.
7. Insert the probe into the pipe.

Insertion via detached pipe

1. Take the pipeline out of service.
2. Disassemble the pipeline.
3. Attach the matching adapter with Geka coupling.
4. Connect the cable passage.
5. Put the pipeline back into service.
6. Insert the probe into the pipeline.

Insertion via hydrant

1. Attach the adapter for hydrants with Geka coupling.
2. Connect the cable passage.
3. Fully open the hydrant.
4. Insert the probe into the hydrant.

Insertion via tapping saddle

1. Tap the pipeline with a 45° tapping saddle.
2. Attach the Geka coupling to the tapping saddle.
3. Connect the cable passage.
4. Open the tapping saddle completely.
5. Insert the probe into the pipeline.

Maintenance and repair

Battery change

The batteries of the transmitter unit must be changed when the *Battery* LED (22) flashes quickly or when the device can no longer be switched on (see chapter Inserting the battery).

Charging the battery

The battery of the Bluetooth headphones (10) should be recharged when the battery is low. To do so, connect the supplied charging cable to the device and to the mains.

Cleaning

Do not use any sharp objects or aggressive chemicals to clean the device.

Clean the Bluetooth transmitter with a soft, damp and lint-free cloth. Make sure that no moisture enters the housing. Do not use any sprays, solvents, alcohol-based cleaning agents or abrasive cleaners, but only clean water to moisten the cloth.

Repair

Do not modify the device or install any spare parts. For repairs or device testing, contact the manufacturer.

Errors and faults

The device has been checked for proper functioning several times during production. If malfunctions occur nonetheless, check the device according to the following list.

The transmitter unit does not establish a Bluetooth connection to the headphones/Bluetooth receiver/speaker:

- Make sure that the headphones/Bluetooth receiver/speaker is/are switched on.
- The headphones/Bluetooth receiver/speaker may already be paired with another transmitter. Repeat pairing. Pairing may not have been performed correctly. Repeat pairing.

Transmitter unit and headphones/Bluetooth receiver/speaker cannot find each other in pairing mode:

- Make sure that the transmitter unit and the headphones/Bluetooth receiver/speaker are in pairing mode. Wait a few seconds for the two devices to connect.
- Make sure that the transmitter unit and headphones/Bluetooth receiver/speaker are not too far apart. Observe the maximum range (see Technical data).

The level indicator of the transmitter unit flashes in pairing mode:

- An error has occurred in pairing mode. Switch the transmitter unit off and back on. Repeat pairing.

The Bluetooth connection between the transmitter unit and the headphones/Bluetooth receiver/speaker is lost during operation:

- Make sure that the transmitter unit and headphones/Bluetooth receiver/speaker are not too far apart. Observe the maximum range (see Technical data).
- The batteries of the transmitter unit or the battery of the headphones/Bluetooth receiver/speaker may be too weak. Change the battery of the transmitter unit or charge the battery of the headphones/Bluetooth receiver/speaker.
- The transmitter unit or the headphones/Bluetooth receiver/speaker have switched off for no reason. Switch the device back on.

The transmitter unit can no longer be switched on or off:

- There is a software error. Briefly disconnect and reconnect the battery of the transmitter unit.

The Bluetooth connection between transmitter unit and headphones/Bluetooth receiver/speaker is established correctly, but no sound can be heard:

- Muting of the transmitter unit may be active. Briefly press the multifunction button (the *Sound transmission* LED (19) is illuminated).
- The fibre optic cable may have been damaged or is visibly kinked (cable break). Have the device repaired by authorised expert staff or by Trotec.
- The sensor head may have been damaged or torn off. Have the device repaired by authorised expert staff or by the manufacturer.

Fibre optic cable/probe head location is not possible:

- Make sure that the frequency generator is correctly connected to the transmitter unit.
- The pipe may be located too deep in the ground or underneath a sealed surface with metal. In this case, location is not possible.
- The fibre optic cable may have been damaged or is visibly kinked (cable break). Have the device repaired by authorised expert staff or by Trotec.

Disposal

Always dispose of packing materials in an environmentally friendly manner and in accordance with the applicable local disposal regulations.



The icon with the crossed-out waste bin on waste electrical or electronic equipment is taken from Directive 2012/19/EU. It states that this device must not be disposed of with the household waste at the end of its life. You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. You can also find out about other return options that apply for many EU countries on the website <https://hub.trotec.com/?id=45090>. Otherwise, please contact an official recycling centre for electronic and electrical equipment authorised for your country.

The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment.



In the European Union, batteries and accumulators must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators. Please dispose of batteries and accumulators according to the relevant legal requirements.

Only for United Kingdom

According to Waste Electrical and Electronic Equipment Regulations 2013 (SI 2013/3113) (as amended) and the Waste Batteries and Accumulators Regulations 2009 (SI 2009/890) (as amended), devices that are no longer usable must be collected separately and disposed of in an environmentally friendly manner.

Declaration of conformity

We – Trotec GmbH – declare in sole responsibility that the product designated below was developed, constructed and produced in compliance with the requirements of the EU Radio Equipment Directive in the version 2014/53/EU.

Product model / product: LD6000PTS 50m,
LD6000PTS 80m,
LD6000PTS 100m,
LD6000PTS 150m

Product type: Acoustic tube probe

Year of manufacture as of: 2022

Relevant EU directives:

- 2011/65/EU
- 2012/19/EU
- 2014/30/EU

Applied harmonised standards:

- EN 300 328 V2.2.2
- EN 55022:2010/AC:2011
- EN 61000-6-2:2005
- EN 61000-6-4:2007/A1:2011

Applied national standards and technical specifications:

- EN 61000-4-2:2009-12
- EN 61000-4-3:2006/A2:2010-07
- EN 61000-4-4:2012
- EN 61000-4-6:2014-08

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