

INSTALLATION GUIDELINES



FAST INSTALLATION, ZERO INTERRUPTION

The PIPELIFE SmartProbe can be installed in 1.5 – 3 hours without disrupting the water supply or risking contamination. Once installed, sensors and batteries can be quickly serviced or exchanged at ground level.

APPLICATION AREA

Potable water network pipes

Operating pressure < 10 bar

Compatible with:

- PE pressure pipes
- PVC pressure pipes
- Cast iron pressure pipes
- AC pressure pipes

DO NOT USE THE SMARTPROBE ON ANY OTHER TYPE OF PIPE

The SmartProbe should be installed on a road embankment or sidewalk, away from traffic. Do not install underneath an active roadway.

INSTALLATION METHOD

The hot tapping method enables non-disruptive connections with existing pipes. The water flow can remain uninterrupted and there is no need to empty the pipe section.

GROUND LEVEL ACCESS

After installation, the SmartProbe's components are easily accessible above ground without interrupting the water supply.

SWAPPABLE SENSORS

The sensor cartridges can be easily exchanged when different readings are required. They can be accessed at any time from the ground level and exchanged within minutes.

EQUIPMENT REQUIRED FOR THE INSTALLATION OF SMARTPROBE

INCLUDED MATERIALS

SmartProbe with saddle

Sensor cartridge

Communication box

Communication box attachment

Battery

ADDITIONAL MATERIALS*

SmartProbe sensor tool

SmartProbe flush tool

SmartProbe access cover (ID): 200 mm

Riser pipe (ID): 200 mm SN4/SN8 L = 1.5 m

Slip coupling (ID): 200 mm SN4/SN8

Flush hose with Gardena tap connector: L = 1.5 m

Chlorine spray (optional)

KIWA certified lubricant

Drill kit

TOOLS*

Socket spanner

Ratchet: 1/2"

22 mm hex socket: 1/2"

17 mm hex socket: 1/2"

Combination spanner: 22 mm

Power drill (optional)

Torque wrench

Extension piece: 1/2"

Brush for the lubricant



*Not included

1. Access cover
2. Communication box (battery inside)
3. Flush pipe
4. Riser pipe
5. Operating platform
Flush valve | Sensor valve | Cartridge insertion
6. Operating lever
7. Sensor cartridge
8. Bayonet lock
9. Flush valve
10. Sensor valve
11. Riser pipe wedge
12. Stainless steel saddle
13. Pin to control the flush valve
14. Sensor cable
15. Upper saddle
16. Lower saddle
17. Sensor valve control mechanism
18. Spindle bolt (to lower the sensor)
19. Cable sensor exit
20. Spacer bolt
21. Safety lock (to the lock cartridge when it is in a position)
22. Flush valve connection (hose connector)
23. Sensor tool
24. Flush tool





SMARTPROBE INSTALLATION IN 5 STAGES

Make sure to read through all the instructions before attempting installation.

STAGE 1:

MOUNTING THE SADDLE

The PIPELIFE SmartProbe is fitted like a tapping saddle, using 6 bolts to secure the saddle in position.

1. Remove the device from the box and disassemble the lower saddle. Keep bolts, washers and clips separated.
2. Use a clean brush or cloth to evenly grease the rubber on the lower and upper saddle with lubricant.
3. Use a chlorine spray to clean the pipe in the trench from sand and other debris that could risk contamination. Ensure there is at least 20 cm of space to maneuver underneath the saddle.
4. Fit the upper saddle on the pipe and move it to the desired position. Use a spirit level to ensure it is aligned correctly.
5. Next, fit the lower saddle on the underside of the pipe and affix it to the upper saddle with the clips, washers and bolts. Make sure the upper saddle's rubber flaps are properly tucked into the lower saddle. Hand-tighten the bolts.
6. Then, with a spanner, continue to tighten the nuts crosswise to 100 Nm. Make sure the saddle remains level while tightening.

STAGE 2:

HOT TAPPING

The smart device is installed by tapping a hole into the pressure pipe while under pressure. A flushing valve keeps the system and water supply free from contamination.

1. Attach the hose with the Gardena tap connector to the flush pipe connector. Direct the hose towards a storm drain by the side of the road.
2. Take the broaching tool to hand and fit it with the correct drill head:
 - Brad Point drill for PVC
 - Hole cutter for cast iron and PE
 - AC mill for AC
3. Place the broaching tool on the SmartProbe.
4. Open the sensor valve with the flush tool by pulling it upwards.
5. Lower the drill bit onto the top of the pipe. Drill slowly and carefully.
6. Open the flush valve with the flush tool. Check the markings to see what position the valve is in.
7. Drill evenly downwards by turning the ratchet. Keep an eye on the outflow of the water hose while broaching. The broaching tool's internal thread section must be tightened manually while drilling the hole. This mechanism will secure the head of the drill on the pipe as it makes the hole. Close the flush valve after drilling.
8. Slowly raise the drill bit.
9. Close the sensor valve with the flush tool by pushing it down.
10. Open and close the flush valve to release the remaining pressure from the system
11. Remove the broaching tool.

STAGE 3:

FITTING THE SENSOR CARTRIDGE

The cartridge can now be fitted onto the saddle. After opening the sensor valve, the sensor can be vertically lowered into the pipeline.

1. Fit the slip coupling over the device and onto the saddle.
2. Remove the sensor cartridge from the packaging.
3. Turn the bolt on the sensor cartridge to lower the sensor module until the rubber ring is visible.
4. Then, use the lubricant to grease the rubber ring and the cartridge around the bayonet pin.
5. Next, place the cartridge in the saddle and screw it into the bayonet connection.
6. Secure the cartridge in the saddle with the safety lock on top of the operating platform.
7. Attach the hose with the Gardena tap connector to the flush valve.
8. Open the flush valve halfway to flush the system.
9. Gently open the sensor valve with the flush tool by pulling it upwards.
10. After 5 seconds, close the flush valve with the flush tool.
11. With the 17 mm hex socket spanner, slowly turn the spindle bolt to lower the sensor cartridge until the spacer bolt aligns with the hole. Do this manually or use a drill set to the lowest possible RPM.
12. Turn the cartridge completely downwards by turning the spindle bolt until it has been secured. Use the spacer bolt as an indicator.

STAGE 4:

CUTTING THE RISER PIPE TO THE REQUIRED HEIGHT AND FITTING IT ONTO TO THE COUPLER

The riser pipe should be cut to the necessary height for optimal accessibility and fit onto the coupler.

1. Measure and saw the riser pipe to the desired length. Do not forget to chamfer the cut edges.
2. Glue the access cover to the riser pipe with the appropriate cleansers and adhesives for the material. If you are using a concrete base, this will be your final step.
3. Place the riser pipe with the access cover into the slip coupling. It should stick out above ground level by 5 – 10 cm. Make sure that the sensor cable doesn't get stuck or fall into the trench.
4. Fill in the trench and repair the paving. Next, push the access cover down until it is level with the paving.

STAGE 5:

PLUG AND PLAY

The sensors are plugged directly into the communication box and instantly connect to the cloud.

1. Unscrew the communication box and insert the prescribed battery and the three silicone pouches provided. Next, screw the lid back onto the communication box.
2. Mount the communication box to the inside of the access cover with the attachment clip.
3. Plug the sensor cable into the communication box and tighten it.
4. The sensor will immediately start measuring and transmitting data.
5. The flush tool and sensor tool can be used to operate the valves and exchange the sensors. This can be conducted from the surface level and only takes a few minutes.



The contents and information contained in this brochure are intended for general marketing purposes only and shall not be relied upon by any person as complete or accurate. In particular, this brochure cannot replace proper expert advice on the characteristics of the products, their usage, suitability for any intended purpose, or the proper processing method. All contributions and illustrations in this brochure are subject to copyright. Unless explicitly otherwise stated, the repetition of content is not permitted. The use of photocopies from this brochure is for private and non-commercial use only. Any duplication or distribution for professional purposes is strictly forbidden. Non-Liability: PIPELIFE has established this brochure to the best of its knowledge. PIPELIFE cannot accept any liability suffered or incurred by any person resulting from or in connection with any reliance on the content of or the information contained in this brochure. This limitation applies to all loss or damage of any kind, including but not limited to direct or indirect damages, consequential or punitive damages, frustrated expenses, lost profit or loss of business.