



A smart way to constantly monitor the roof and find leaks early:

VILPE® Sense Leak Detector



Roofing experts estimate* that half of all buildings are subject to roof repairs before the end of the roof's lifetime.

Moisture damage tends to go undetected until it is too late: water has already penetrated the structure of the roof, leading to costly renovations. On a roof of thousands of square metres, merely locating a leak is a challenge.

Save time & money with predictive maintenance.

* A study carried out by VILPE and the research firm Kantar in 2020.
More information is available from VILPE.

What causes leaks?

Construction work after roof installation. Activity on the roof increases the risk of damage. Even if in excellent condition after installation, a roof can be damaged when other construction work is performed, for instance moving HVAC equipment or installing solar panels.

Maintenance work. It is important to maintain the roof but activities on the roof increase the risk of damage. For instance, snow removal can cause unnoticeable damage which may lead to a leak.

Monitoring difficulties. It is hard to find a leakage on a roof of thousands of square metres. This is even harder on green roofs where the waterproof membrane is not visible. When snow covers the roof, it is difficult to inspect the roof layers.

High risk areas. Every building has areas which are more prone to damage, for example areas near (roof) windows or flag poles. Mild winters increase the risk of horizontal rain, which in turn increases the risk of moisture damage to wall structures.

Extreme weather conditions. Climate change increases the number of storms, which pose a threat to building structure.

What the VILPE Sense Leak Detector does for you

- **Locate possible leakages quickly and accurately.** When the system alerts you to a potential leak, you can locate the problem area on the roof right away on a humidity map. At this stage, there is no need for a person on the roof to locate the problem.
- **Prevent leakages and humidity problems at an early stage.** The damage can be fixed as soon as it occurs.
- **Constant roof monitoring.** The condition of the roof is not monitored by irregular roofing inspections; instead, the roof is monitored 24/7.
- **Easier maintenance.** The system facilitates roof inspections as it makes the opening of roof structures unnecessary. Repairs can be directed immediately to the right spot, making them cheaper and faster to implement.
- **Monitor large areas.** The system locates the leakage quickly, which makes it particularly useful for larger roofs of thousands of square meters.

Humidity map

The VILPE Sense Leak Detector automatically creates a humidity map for locating potential leaks. The user can access the humidity map on the VILPE Sense cloud service.

On the humidity map, dark blue means that the system has detected higher levels of humidity in this particular area in comparison to the average roof humidity level. This indicates that there is a leak on the roof.



Any roof picture with the right dimensions is suitable for the humidity map.

Planning and installation

The VILPE Sense Leak Detector can be installed on roofs or walls.

We recommend using 10 sensors to cover an area of approximately 200 m².

For example, the distance between two sensors can be about 4–5 metres. However, the shorter the distance between the sensors, the more accurate the data provided. If an area needs closer monitoring or it is prone to leakages, we recommend placing more sensors here.

Mark the locations of the sensors on the humidity map picture before the installation begins. This will facilitate the registration of the sensors during installation. Please see the installation and registration instructions for more detailed information.



In this example, the roof area is approximately 600 square metres and it is monitored by 30 sensors.



We recommend installing the sensors at the same depth using a VILPE Croco fastener. When the sensors are installed at the same depth, the system can make a more accurate interpretation of the humidity levels on the roof.

Sensors can be configured to measure the humidity level at selected times, with a maximum frequency of twice a day.

The system requires a VILPE Sense Mobile Base Station installed in the roof structures or indoors. The Mobile Base Station receives data from the sensors and uploads and stores this data directly to the cloud service.

200 Leak Detector sensors can be connected to one mobile base station. A maximum of 50 VILPE Sense Control Units (MCU-2) can be connected to one mobile base station.



The VILPE Sense Mobile Base Station

The VILPE Sense family

The VILPE Sense system monitors the condition of the building and allows the building owner to avoid unexpected and expensive renovations. The VILPE Sense product family consists of two solutions: the **VILPE Sense Leak Detector** and the **VILPE Sense Humidity Control**.

The VILPE Sense Humidity Control ventilates the structures on demand, whereas the VILPE Sense Leak Detector locates leaks. The two systems can be used separately or together. For example, the Humidity Control can ventilate a certain roof area while the Leak Detector monitors the rest of the roof area to detect leakages.

The VILPE Sense Leak Detector

- Locating and detecting leakages
- Roof monitoring

Usage examples

Where to use it?

- Roofs
- Walls

The VILPE Sense Humidity Control

- Buildings that need improved structural ventilation
 - Removes excess humidity
 - Dries the insulation layer

- Roof structures
- Crawl spaces

Package

10 RHT-2 sensors for the VILPE Sense Leak Detector system.

The battery of a sensor lasts at least 15 years. After this period, new sensors need to be installed as the battery cannot be changed.

The VILPE Sense Mobile Base Station and VILPE Croco fasteners are sold separately.



PRODUCT

VILPE SENSE ROOF LEAK DETECTOR, 10 X SENSOR RHT-2
VILPE SENSE MOBILE BASE STATION + SIM
VILPE SENSE MOBILE BASE STATION

PRODUCT CODE

735045
735043
735044