

Water installations in your home – do they comply with legislation?

Water leakage can come from many different sources in our house, apartment, or office. Over DKK 2 billion of damage is caused each year by water leakage in Danish homes. It can make our houses uninhabitable and lead to damp, mould and other unpleasant conditions.

But according to Leon Buhl, a Senior Consultant at the Danish Technological Institute, there is no reason whatsoever for this water damage. In Denmark, we have worked with water damage since the 1980s – along with the other Nordic countries, we consider ourselves to be technological leaders. There are several options for preventing or stopping water leaks – in general, utility meters, the district heating system or moisture sensors can be used.

Water protection saves up to 50% on bills for the renovation of water damage

Water protection is nothing new – the technology already exists. Solutions available for tackling water leakage in homes and businesses are:

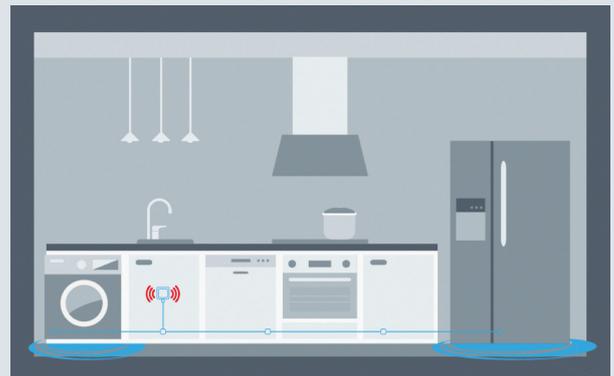
- Humidity sensors that can be strategically placed next to a Quooker tap, toilet, IT room etc.
- Domestic hot water meters measure pressure loss, which can be used to identify fluctuations in water consumption and thus see when there may be a water leak.
- The district heating system is used to perform tightness controls of the installation and valves during asymmetric metering.

As an example, we can take a closer look at how humidity sensors work, as these play a significant role in the solution in Scandinavia. Imagine living in a house or apartment where in addition to various larger water installations such as washing machine, dishwasher, toilet and perhaps a large refrigerator, you also have many small ones, such as washbasins and possibly a Quooker tap. Every single one of these water installations represents a potential water leakage problem.

Humidity sensors can be strategically placed next to the individual water installation or they can cover a range of installations. If the water pipe to your Quooker tap leaks, your moisture sensor will ensure that a solenoid valve shuts off the water.

The system will be able to send a signal to a controller that processes the signal, sends it to a central unit that then sends a notification to you and your plumbers.

Experience from Norway has shown that an apartment complex with around 700 apartments can save 50% of the



Humidity sensors protect one installation only and are placed next to the individual water sources.



A pressure loss meter protects the entire home/building and covers all rooms. This solution is placed next to the main water inlet to the home/building.

costs related to water leakage. This has led some insurance companies to lower their premiums if the homeowner can document the installation of water protection.

In Denmark, we have legislation that helps consumers, installers, and consulting engineers to protect ourselves against water damage. This legislation is called the Building Regulations. The most recent Building Regulations (BR18) were adopted in 2018. Here, it states first and foremost that leakage must be detectable, that water installations must be protected against leakage, and that it must be easy to find leaks in general. According to Leon Buhl however, many of us do not comply with this legislation – and he sees a very clear reason for this. Most people are simply unaware this legislation exists.

Lack of information about the legislation

Today, many people work with water leakage and water protection in buildings. They include everyone from house builders and consulting engineers to plumbers.

As the Building Regulations have not been explained or communicated adequately to everyone, it means that we often live in houses where there is no water protection, and this is where the problem starts.

Leon Buhl explains that if we direct our attention slightly north, Norway has effectively solved this challenge: In 2011, similar legislation came into force – with one clear difference. In Norway, a house is not approved if it does not live up to the requirements for water protection.

“We’re not there yet in Denmark,” says Leon Buhl, who continues: “Even though the legislation came into force in 2018, we’ve discovered that many people in the industry have not yet been informed of it.”

Part of his job is to work with various measures to inform the industry and consumers, as well as the many other stakeholders, as shown in the figure below. Among other things, a labelling system is being set up to classify the different water protection solutions.



How do we protect ourselves against water leakage?

To ensure that our Quooker, toilet or washing machine does not start to cause problems, we need to guarantee that the industry complies with applicable legislation by:

None of us want water damage or to stand beside frustrated owners trying to deal with water damage. The solution is simple: We must comply with the law and work together to do so. Only by combining the forces of industry, educational establishments and authorities can we protect ourselves against the big problems and costs associated with water damage.

- ✓ Informing consumers and professionals of the legislation and the best solutions, including labelling for water protection solutions
- ✓ Using the Building Regulations' guidelines when installing water protection solutions
- ✓ Only approving buildings and water installations if they comply with Danish building legislation