



Smart water metering

**kamstrup**

---

## So much more than consumption metering

- Manage your water waste
- Catch leakages and bursts as they occur
- Optimise the pressure and lower your energy expenses
- Be well prepared for customer enquiries



## So much more than measuring consumption

Smart water metering is not only a question about consumption metering and increased accuracy. It is also about developing and improving customer relations. It is about operational optimisations, quality control, revenue protection, asset management and much more. It is about being capable of making the right choices and investments – based on more than just estimates and theoretical models.

Meter data can be used for much more than accurate billing. Increased knowledge about the distribution network and improved utilisation of data can give you continuous access to updated knowledge about consumption, pressure and non revenue water – as well as the tools to transform this knowledge into concrete optimisations, reduced water waste and fewer bursts. In other words - intelligent trouble shooting and optimisation of your network.

With a smart metering solution from Kamstrup, you will get easy access to all meter data, including a number of tools that help you to be proactive in you planning and daily work.

**In short – intelligent  
troubleshooting and  
optimisation of the network.**



## Utilise your meter data to see the bigger picture



The utilisation of data depends on how it is presented. The information needs to be visualised logically in order for it to be used in your daily work and to create the foundation for making decisions. Therefore, READY Manager now offers a range of functions which easily gives you an overview of your data and the tools to utilise it.

READY Manager can visualise the consumption of individual meters shown as a bar chart over a given period of time. This can then be coupled with alarms to show any connections between the consumption and a given alarm. Therefore, many customer inquiries regarding consumption and troubleshooting can be processed directly from the utility - thus reducing the number of field visits. When the events leading to a burst or leakage is known, the starting time and location can be identified more easily, and the problem can be corrected faster for a minimal water waste.

## Manage your water waste and take action where the need is greatest

READY Manager includes an effective analysis of water waste which continuously keeps you up to date on the amount of wasted water in the entire network or in selected areas. Instead of one annual calculation of water waste, you can now get a continuous overview and react as soon as the tendency in an area is rising.

Monitoring both the general pressure level and pressure surges in the distribution network enables you to take action before leaks and bursts occur. This means that you can catch leaks and bursts far earlier or prevent them thereby limiting the level of non-revenue water and reduce the risk of collateral damage.

By comparing the water waste in different sections, READY Manager can be used to focus the active search for leakages and to create the foundation for both prioritisation and dimensioning when renovating the distribution network.

This enables you to take action where the need and benefit are greatest.

Kamstrup can supply meters in all sizes from  $\frac{3}{4}$ " to DN1200.

This means that you can create full transparency in your distribution network through sectioning and district metering.

Your district and main meters can be read with the same system as the consumption meters.

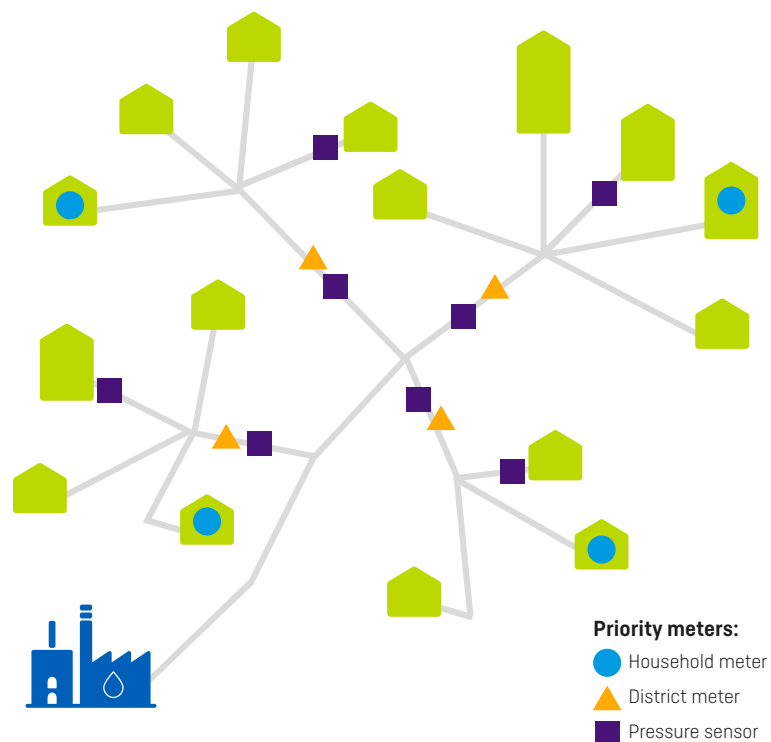
Since the meter reading and data management takes place in the same system, you can analyse on accurate and current data.

## Focus your troubleshooting and optimisation with priority meters

Metering data forms the foundation for the utility's analysis and decision making. In some cases, it can be an advantage with shorter reading intervals in order to get the necessary information. Thus, READY Manager can upgrade up to 50 optional meters to priority meters, which will be read in 5-minute intervals. The priority meters can either be regular household meters, larger district meters or pressure meters, depending on the information you need. You can change which meters are read as priority meters continuously, if your analytical needs change.

The short reading interval contributes to a more nuanced picture of your network when looking for errors or optimising operations. This is particularly useful in relation to monitoring pressure in the distribution network for optimisation purposes. With a reading frequency of 5 minutes, the pressure variations resulting from the flow in the network can be mapped. Based on that knowledge, the pressure can be optimised in order to lower the energy costs for pumping out water and to minimise the risk of bursts.

*Example of placing priority meters*



# Adjust the pressure, extend the asset lifetime, lower your leakage losses and save energy

A READy network solution lets you collect information about the pressure in your distribution network. By installing Kamstrup PressureSensors at strategic places in the network, you will get valuable information about your possibilities for optimising the pressure. If you use hydraulic models, the information about the pressure can also be used as an input for, and calibration of, the models.

Often, it will be possible – either in periods or permanently - to lower the general pressure in the network creating tangible advantages in the form of lower operation and energy expenses as well as a distinct decrease in non revenue water. When the pressure is under constant surveillance, water utilities can operate much closer to the minimum demands. A reduction in pressure creates an opportunity for decreasing water loss from leaks in the network. Meanwhile, the pressure sensors will warn if the pressure should drop to a critical level. A pressure reduction of 10 % will – depending on the pipe material – result in a leakage reduction of 10-20 %.

Furthermore, Kamstrup PressureSensors will register any harmful pressure surges, enabling you to identify the sources and eliminate them. Fewer pressure surges means fewer incidents regarding pipe bursts and markedly lower costs. By minimizing pressure and reducing the number of pressure surges in the network, the general stress on the distribution network is reduced to extend the lifetime of the components.

The pressure in your distribution network affects both the energy consumption as well as the number of leakages or bursts. In addition, there is a clear connection between your maximum pressure and the number of pipe bursts in your network.

Nonetheless, knowledge about pressure is often limited to information about the extraction pressure combined with sporadic measurements.



# Intelligent water metering with a solution from Kamstrup

A solution from Kamstrup represent the next generation of smart metering technology. Our solutions give water utilities the possibility to achieve the highest level of control, efficiency and flexibility available on the market.

Consumption metering

MULTICAL® 21

Precise metering of consumption and the foundation for smart water metering.

District metering

MAG8000

Detailed knowledge about the distribution network enabling analysis of water waste and night time flow.

Pressure metering

Kamstrup  
PressureSensor

Optimised pressure reducing energy costs, water waste and expenses for maintenance of the infrastructure.

Automatic reading

READY – Network  
reading

Say goodbye to manual meter reading and get automatic access to consumption data on an hourly or daily basis.

Analysis and visualisation

READY Manager

Full utilisation of meter data with flexible data control, analysis and visualisation.

Consumer involvement

eButler

Let your consumers benefit from remote reading and enable them to monitor and optimise their energy consumption.

IT and operations

Kamstrup Hosting  
and Support

Optimal return on investment enabling a focus on the core business.

## One agreement for all services

Do you want full return on investment, while being able to focus on your core business? Then a service- and hosting agreement might be the right choice for you.

A service agreement with hosting by Kamstrup makes it easy for you to get started. It reduces manual work and secures a high meter reading quality and performance, without you having to worry about IT equipment and installations. Data is provided to you whenever needed, and Kamstrup handles every aspect of data security, backup, encryption, software updates etc.

After every reading we offer, besides the consumption data, a full report on network performance and a to-do-list, which enables you to make the right decisions and take action where it is needed.

In other words, being a Kamstrup service customer means that you get access to our extensive centre of competence. All in order for you to spend your time where it creates most value for your business.



---

### **Kamstrup A/S**

Industrivej 28, Stilling  
DK-8660 Skanderborg  
T: +45 89 93 10 00  
F: +45 89 93 10 01  
info@kamstrup.com  
kamstrup.com

Think forward