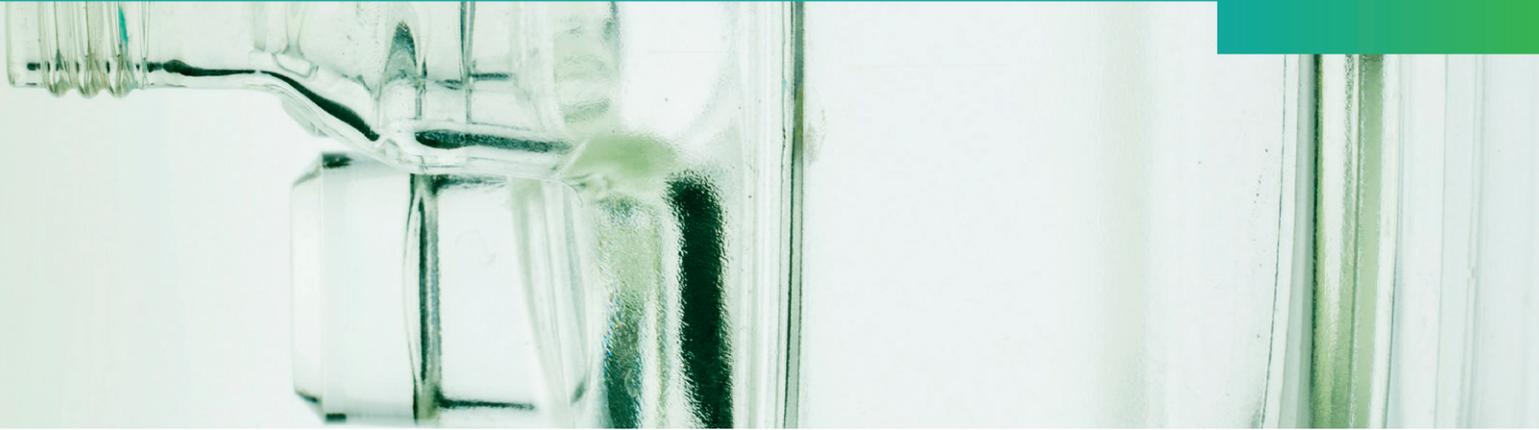


Water-Use Info from Watershare®



Water-Use Info provides a good understanding of water demand: when water is needed, how much, at what temperature, whether there is a need for potable or non-potable water, at what location in the house, building or drinking water distribution network. It also gives a good understanding of the discharge of water: when water is discharged to the sewer, how much is discharged, at what temperature and containing what substances.

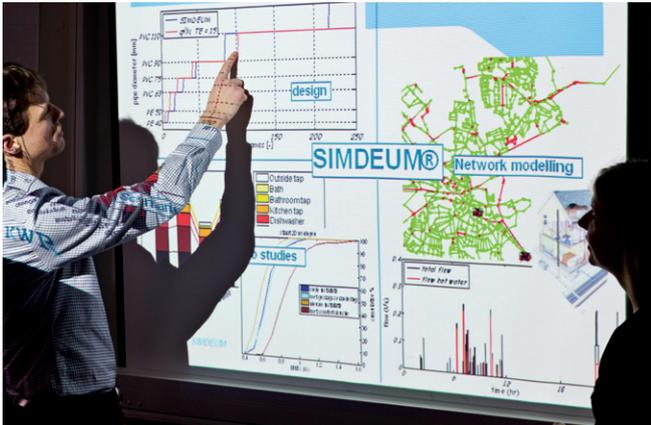
In the design stage of a drinking water installation or drinking water distribution network it is essential to understand the prospective water demand. The optimum pipe diameter or water heater capacity is determined by balancing energy use and cost on one hand and comfort (enough pressure, at the right temperature) and health (good water quality) on the other. In the operating stage of a drinking water installation or drinking water distribution network the understanding of actual water demand is required to interpret pressure and water quality measurements. A good hydraulic network model, with a suitable set of drinking water demand patterns, can help the interpretation of all kinds of sensors. Understanding water discharge is required in the design and operation of wastewater systems – to define, for example, when energy and nutrients need to be recovered.

The Watershare® **Water-Use Info** helps to understand local residential and non-residential water demands without the need for water flow measurements. The tool sheds light on all aspects of water demand and discharge, both in quantity (total volume and water flows at the fixture level) and in quality (required water quality for potable and non-potable water and water temperature, quality and temperature of discharged water). These aspects can be viewed for a variety of scenarios, e.g. demographic scenarios with different household compositions and technical developments in water using appliances which use more water, less water or a different source of water such as rain water.

What we can do for you

The **Water-Use Info** tool consists of the SIMDEUM® water demand pattern generator and the SIMSEM® water discharge model. These tools generate a set of possible demand and discharge patterns that will allow you to gain a lot of insight and extract the most suitable parameters to help you in designing or operating an installation or network.

We can assist in determining the input parameters for the tool duly adapted to your local circumstances. This means determining where to find the best data on household composition, time-budget studies and consumption of water-using appliances. We can also help in interpreting the results and translate them into design parameters or apply them in hydraulic and water quality models.



- Insight into quantitative and qualitative water demand and discharge when matching water demand with alternative sources of water, such as recycled water and rain water.
- Insight in quantitative and qualitative water demand in the operating stage of the drinking water distribution network.

Implementation case

The Dutch water company Dunea is currently building self-cleaning networks. In the networks' design the company needs to estimate the maximum water demand for one to two hundred connections involving several different types of customers. The design rule they are implementing is based on SIMDEUM® simulation results.

The Dutch Building Services Knowledge Centre, ISSO, issues normative publications on the design of drinking water installations in homes and non-residential buildings. For hotels, offices and nursing homes, the design parameters for cold and hot water systems are based on SIMDEUM® simulation results. The new publication, ISSO-55, will be published at the end of 2012.

Water-Use Info benefits

- Understanding of water use over the course of the day, broken down by end use – how much water is needed, and when, for toilet flushing, showering, consumption, etc.
- Understanding of required water quality and quality of discharged water over the course of the day.
- Insight into quantitative and qualitative water demand in the design stage of the drinking water installation and distribution network.
- Insight into quantitative and qualitative water discharge for the recovery of thermal energy and nutrients from wastewater.

The Watershare® Concept

KWR has launched the Watershare® concept, which is dedicated to the sharing of expert water-related tools with selected partner knowledge institutes. Watershare® encompasses a wide range of benchmarked practical tools designed for areas like water quality and health, sustainability, water technology, asset design and management, and water systems.

Partnering in Watershare® offers the knowledge institute substantial benefits, and contributes significantly to improving the institute's and its end-users' performance and effectiveness. The Watershare® partners become members of a family of trusted and highly reputable institutes, and have the opportunity to build an attractive business model.

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