



HYDRO

ORTOMAT-MTC (04G)

Noise level measurement with correlation



ZEROWATERLOSS
vonroll-hydro.world

ORTOMAT-MTC - Process optimization in permanent leak monitoring

ORTOMAT-MTC is a leak detection investment which delivers two-way savings:

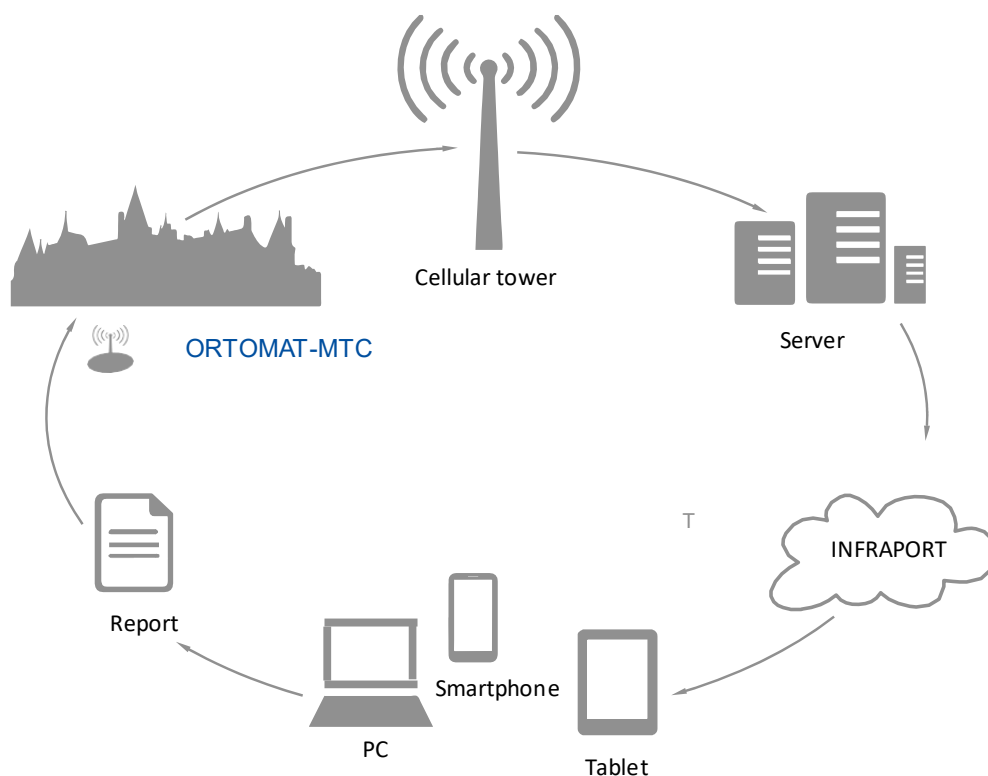
1. **Repair cost savings**

Early detection and rapid locating can prevent water damage, saving costly repairs and service outages later when leaks turn into breaks.

2. **Water loss savings**

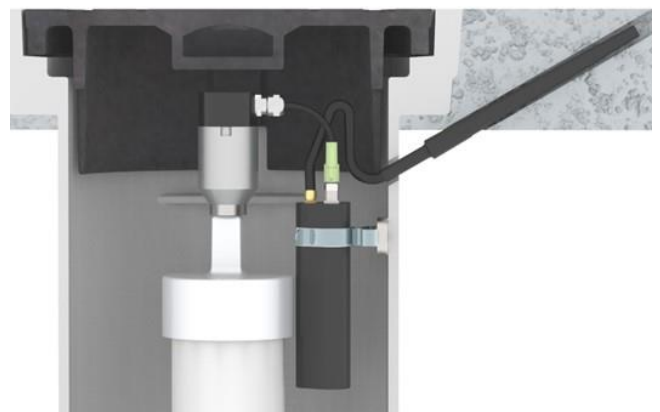
Small, hidden leaks can lead to surprisingly high water losses: At a water pressure of 45 psi, a leak with a diameter of 1/3 inch leads to an annual loss of 6.5 million gallons; at 145 psi, the loss is 14 million gallons.

Using the latest technology, the ORTOMAT-MTC leak monitoring system detects the location of leaks at an early stage. Pipelines operating under pressure can be monitored on a temporary or permanent basis. With automatic correlation, leaks are pinpointed between loggers. Data from loggers is automatically transmitted to the cloud and available online via vonRoll hydro's INFRAPORT visualization and mapping portal. The user is provided with graphical, quantitative, and audio information about leaks.



Installation

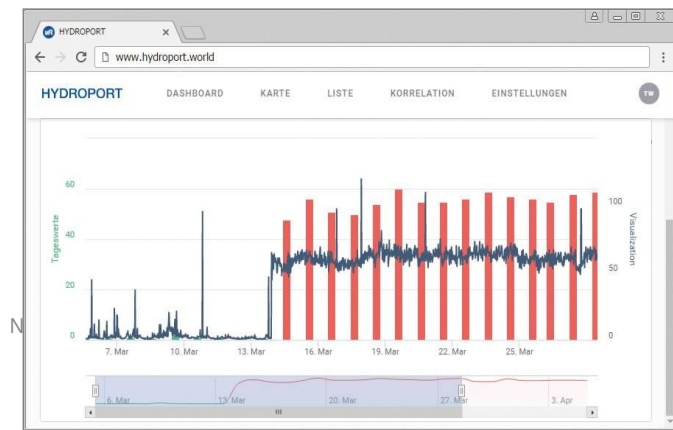
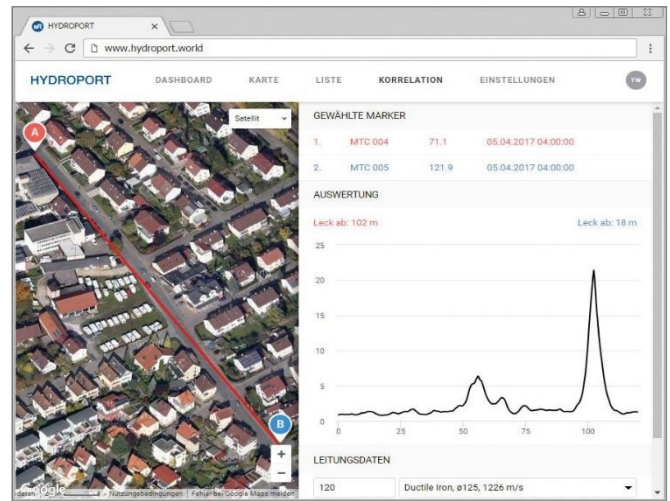
Magnetic adapters connect ORTOMAT-MTC loggers to the inside of manholes, valve boxes or directly to pipes. The devices have a durable stainless-steel housing designed for the most adverse conditions. Thanks to their small size and simple installation, loggers can be quickly put into position and activated.



Valve box installation

Pipeline Monitoring

The ORTOMAT-MTC operates 24/7, But during the day's lowest water use, usually between 2AM and 4AM, pipelines are specially monitored. A vibration sensor attached to each logger records even the smallest noises in the pipeline. Loggers are synchronized so that noises detected from multiple devices can be compared and accurately located. Sounds are recorded and saved as audio files, allowing leak noises to be compared over time. ORTOMAT-MTC also offers the option of HYDROALERT, a feature which detects authorized or unauthorized opening of hydrants along the section of network being monitored. If openings occur, designated users receive immediate notification by email or text.

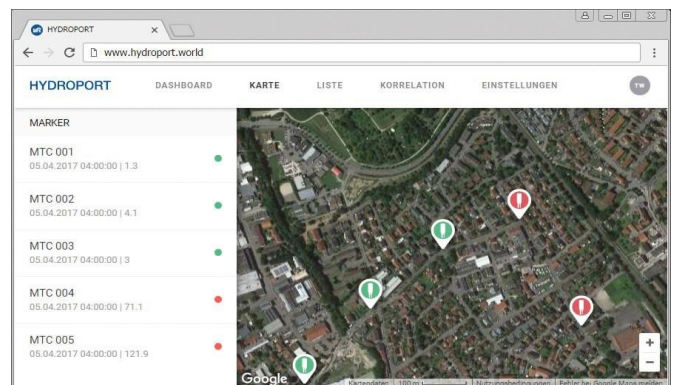


Data Analysis

No special device is needed to visualize and manage measurement information. Data from ORTOMAT-MTC is always available online on the cloud-based application INFRAPORT, accessed via PC, tablet, or smart phone. INFRAPORT allows users to see water network data anytime. It provides mapping, graphical, and quantitative analysis of all information captured by the loggers. Sound files even allow users to listen to the actual noise recorded by each logger.

Data Transfer

ORTOMAT-MTC provides fully automated communication with the web server. Newly detected leaks are reported immediately. As an all-in-one solution, no radio repeaters or radio networks are needed to transfer data. ORTOMAT-MTC works with existing mobile phone networks. Setting changes and firmware updates are issued remotely from the server using over-the-air programming (OTA/FOTA). This process is fully automated, ensuring that system maintenance is kept to a minimum.



Benefits

- Temporary or permanent early leak detection and pinpoint location
- Unique time synchronization of the individual measurement points for exact correlation
- Independent measurement points communicating directly with the server through cellular networks
- Easy-to-understand analysis and measurement
- Easy installation
- No need for wireless repeater
- Loggers use standard AA lithium batteries
- Available with integrated SIM chip or interchangeable SIM card
- Monitoring area is easy to expand over time
- ORTOMAT leak monitoring has been proven out through thousands of installations worldwide.

