vonRoll hydro

TECHNOLOGY WITH A FUTURE

Ortomat-LC

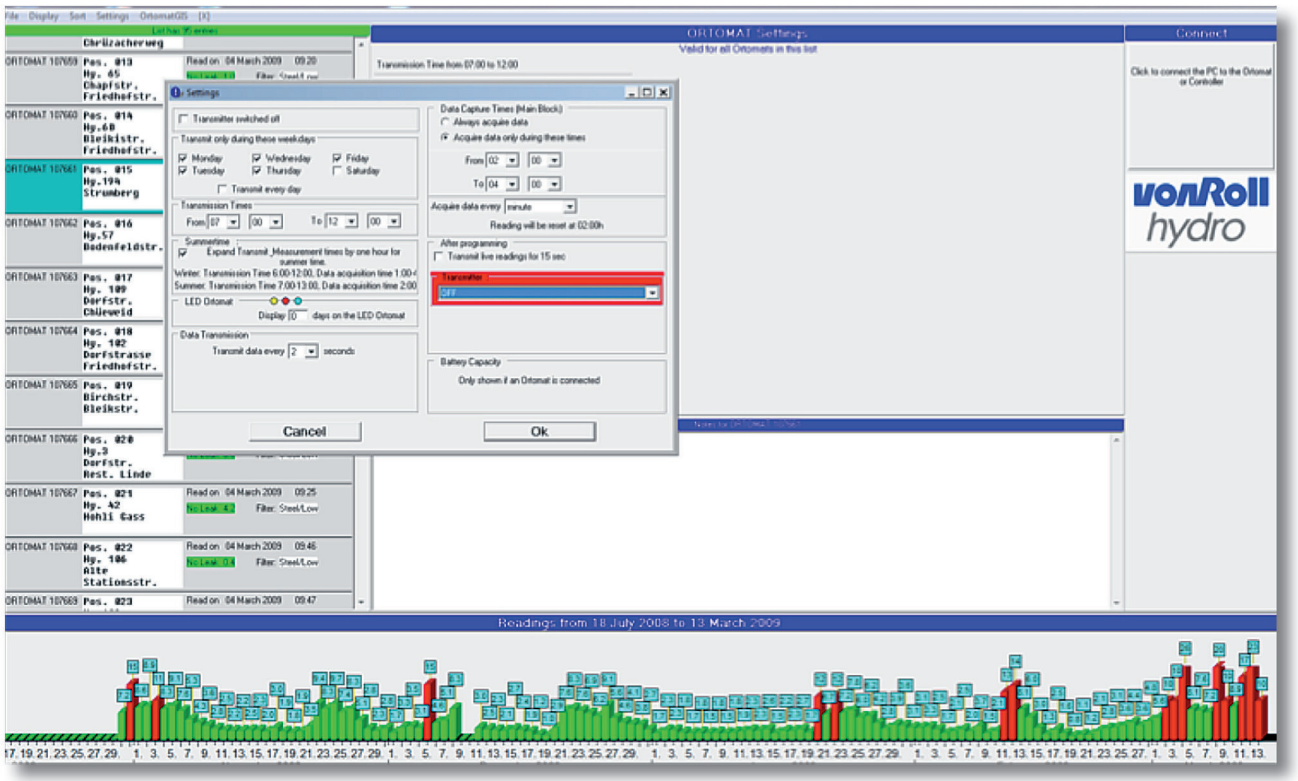
- Mobile or permanent leak monitoring
- Simple installation and operation
- Installation without calibration phase
- Clear leak recognition
- Can be used without software

Ortomat-LC – How to make savings in the supply of water

Ortomat is an investment in making savings in two ways:

If you can detect leakage, repair costs can be saved.
Early recognition and rapid location of leaks can prevent damage caused by water which, at worst, could cost as much as a complete Ortomat system.

If you can detect leakage, you can save water.
Small, concealed leaks can cause amazingly high losses of water: At a mains pressure of 3 bar, a leak with a diameter of 8 mm leads to an annual loss of 24,870 m³ of water; at 10 bar a loss of even 52,580 m³.



Software

Application

Ortomat LC – permanent or mobile leak monitoring for buried drinking water piping

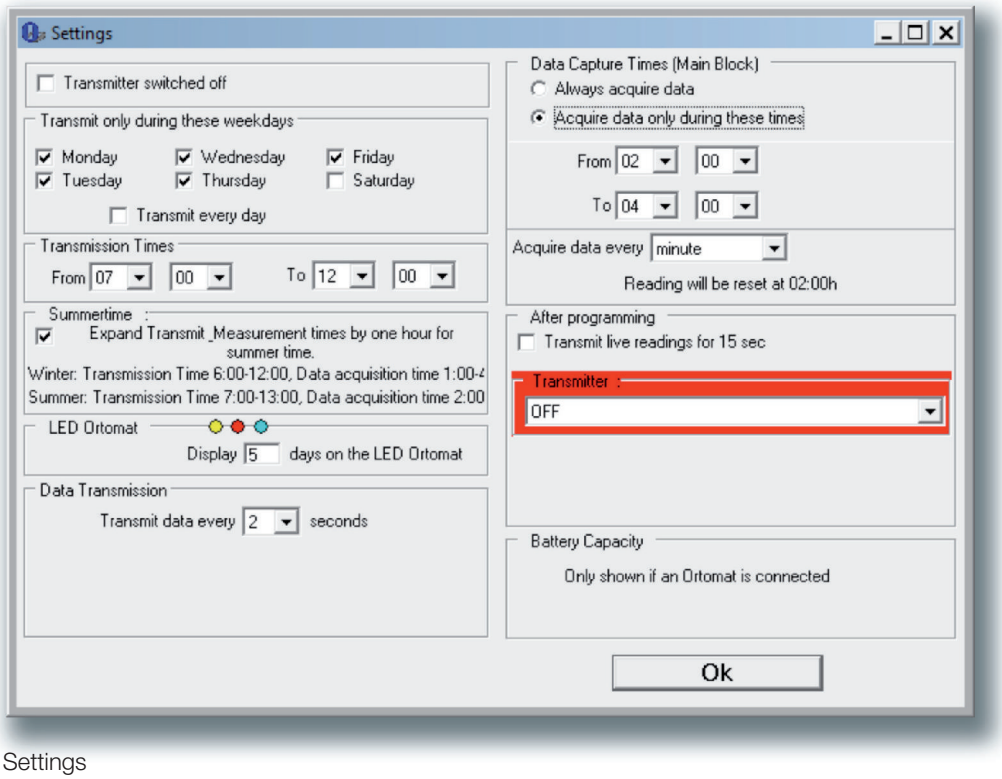
To provide permanent leakage monitoring, Ortomats (noise loggers) are installed in water supply network such that both incoming lines and the distribution network are monitored comprehensively for leakage noise. It is necessary that noise structures are analysed in the night between 02.00 and 04.00 o'clock when consumption is at its lowest. The Ortomats are equipped with a microprocessor and intelligent software which decide on the state of leakage directly after the measuring period ends. Locations where leakage occurs are immediately recognised and are stored ready for reading-out by the water supply utility using the mobile phone network. In the Ortomat system, battery power supplies are controlled such that, depending on programming, a battery service life of more than 7 years can be attained.

Installation methods

Depending on the possibilities available, Ortomat LC data loggers can be integrated in the water mains without having structural measures. Slide-valve rods and manholes or installations in buildings can be considered as being good measurement points.
The device is completely sealed and can therefore be used without difficulty in the most exacting environmental conditions. This highly sensitive noise logger is fixed at the point of measurement magnetically.

Data acquisition

The noise data for the pipeline sections are stored in the measuring electronics of the Ortomat and are available for data transfer during programmable “on-air” periods. When reading out the data in the field, measured data are temporarily received and stored by the controller. As soon as a measurement has the been made, a “beep” is emitted by the controller which signals that the measured data has been stored in memory. The beep signal appears in two different audible signals, depending whether there is leakage or not. The measured data can be displayed numerically and/or graphically on the controller’s graphics display. Data transfer to a PC allows data to be analysed and stored.



Settings

Analysis of the measured data

On the one hand, the measured data can be displayed and interpreted directly in the field by using the controller. The hand-held unit's clear graphics display shows the measured values for the previous 40 days, which are shown as columns. These represent the lowest noise levels measured for each night.

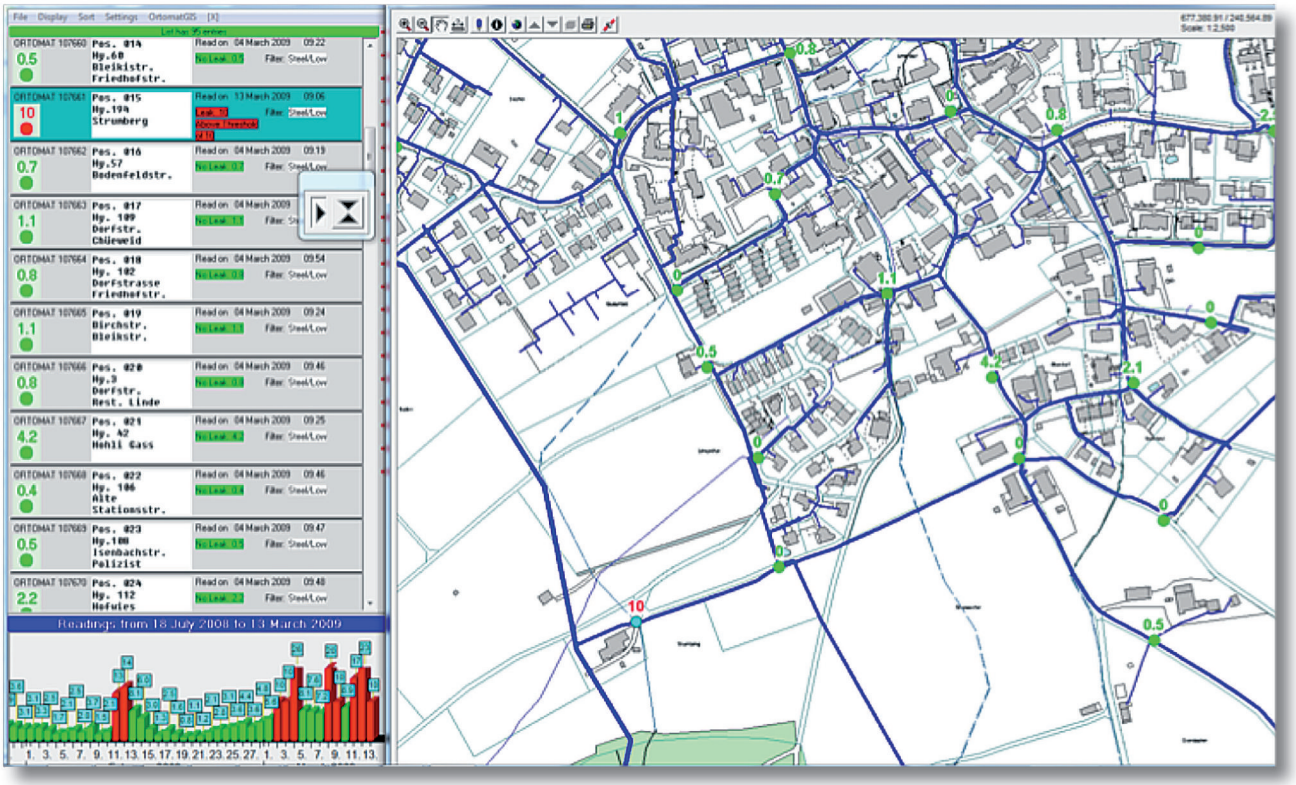
The logger's current leak status can also be read out optically at any time via an integrated LED display by simply actuating a magnet on the backsite of the Ortomat-LC. No further system accessories are needed for this.

On the other hand, information provided by the monitoring system can be displayed and managed using the Ortomat PC software.

Four clearly arranged windows permit the programming, monitoring and analysis of the entire system. The software manages the defined measurement points and presents the results of the measurements in a clear manner. For the visualisation of the measurement points installed in the pipeline network, the Ortomat-GIS software is available as an option. Ortomat-GIS is a high-quality mapping tool based on the water supply utility's current digital pipeline data.

Experience gained with the Ortomat LC system

The Ortomat LC system is used world-wide and satisfies users with its excellent leak detection properties and simple operation.
Leakage can be recognised at an early stage before high consequential damage occur. Repairs can be planned and, as a result, the number of night-time emergency operations can be significantly reduced. Water supply utilities which use the Ortomat system have already been able to improve their water loss statistics even in the first year of operation.



Ortomat-LC GIS

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