



WaterMind

Intelligence for Commercial and Industrial Meters

WaterMind helps utilities to protect their revenue, improve their operational efficiency and enhance customer satisfaction.

FEATURES AND BENEFITS

- » IP68, compatible with pit conditions
- » Meter index collection for billing
- » Flow and consumption monitoring
- » High capability on pressure monitoring enabling pressure transient detection
- » Real time alarms
- » On-site and remote configuration
- » Easy installation

Robust & reliable hardware

WaterMind housing is rugged for an easy and safe manipulation and is suitable for installation in flooded pits.

Accurate measurement

WaterMind accurately captures pulse input from the meter in both directions, enabling reliable meter index monitoring and flow-rate based analysis. WaterMind samples pressure every second through built-in transducers, enabling high accuracy pressure monitoring and transients detection.

Real time alarms

In the event of a cable cut, important backflow detection or excessive or inadequate flow or pressure, WaterMind immediately sends a SMS to the operations team and data to the server for analysis. Additionally, the system can be configured to send alarms by email.

Software as a Service (SaaS)

WaterMind data management software is provided as a service.

A pay-per point fee minimizes total cost of ownership considering the limited number of large meters to be connected.

Data analysis is available via a web browser from any PC workstation.

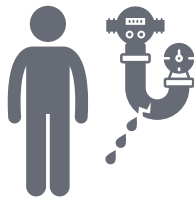
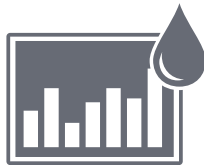
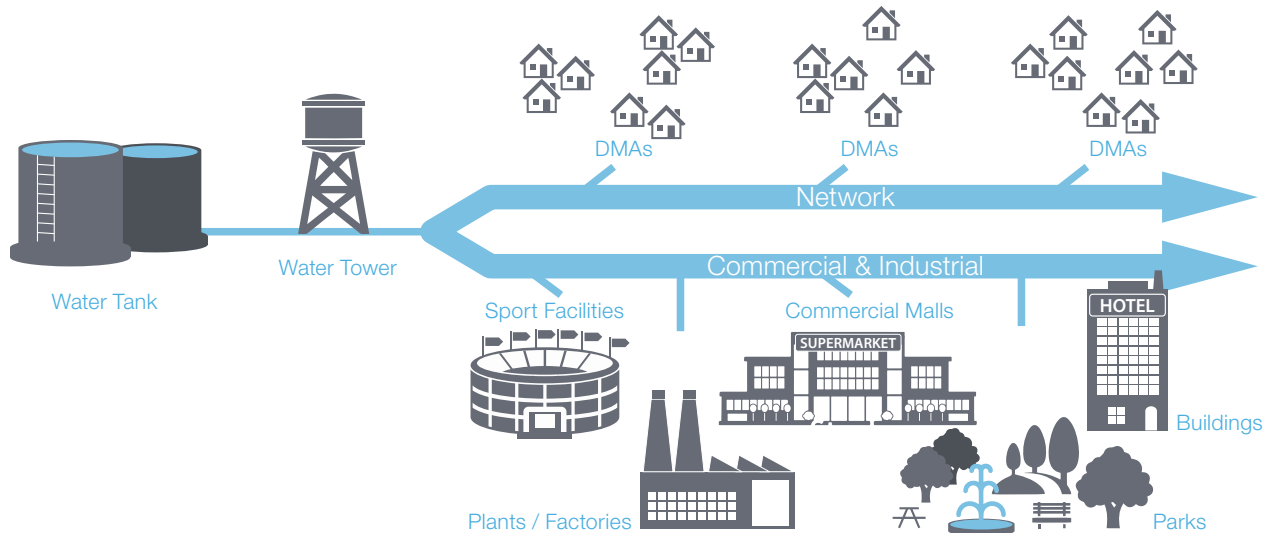
Additionally, integration with utility software is easy and flexible.

Approval & Standards

- » IP68 certification
- » RED, Directive 2014/53/EU,
- » ROHS 2 2011/65/UE

CONTRIBUTES TO ALL WATER DISTRIBUTION PROCESSES

WaterMind contributes in generating outcomes for billing of end users as well as for network monitoring.



WATERMIND NETWORK OPERATIONAL EFFICIENCY

WaterMind provides a web portal with advanced outcomes to help utilities to improve network operation and leak detection.

Hydraulic Network Modelling

WaterMind helps to fine-tune the hydraulic model of the distribution network, through permanent monitoring of flow and pressure.

Network Stability Analysis

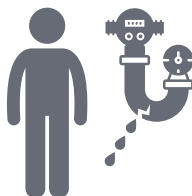
Instability, pressure surges and transients can be identified using WaterMind to help further understand network stress.

Leakage Assessment

The system reports night flow analysis that is an indicator of potential new leakage inside a DMA.

Water Balance

WaterMind generates a water balance assessment by accurately monitoring water input in both directions.



REVENUE PROTECTION AND C&I END-USER SATISFACTION

Revenue protection outcomes are enabled for utilities due to the advanced features of the WaterMind software including meter right-sizing assessment and meter index monitoring. A web portal option is available to the end-users that allows to increase the level of services provided to key Commercial and Industrial accounts.

Meter Right-Sizing Assessment

Under-sized meters will age quickly while over-sized meters will not capture accurately the whole range of flow consumption.

WaterMind detects wrongly sized end points, and provides analysis to determine the most appropriate meter size to ensure optimized revenue.

C&I and High-End Tariff Scheme

WaterMind allows the utility to determine the service level requirements for water delivery to large industrial accounts or critical applications customers, who have contractual minimum pressure and capacity flow range of supply.

Back Flow Assessment

Water potability can be potentially impacted upstream of the endpoint due to backflow. WaterMind provides backflow detection to assess this issue.

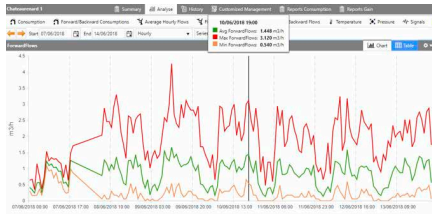
Abnormal Consumption Pattern Assessment

The system addresses different categories of abnormal consumption patterns, indicating a deviation from normal usage.

Billing

The system offers a daily and reliable index to the utility for billing purposes. WaterMind allows easy and flexible exports to the billing system.

SOFTWARE AS A SERVICE FEATURES



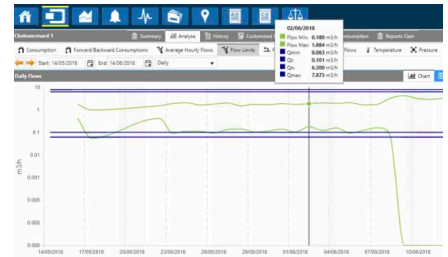
Bi-directional Flow Monitoring

Forward and backward flow-rates are aggregated with different granularity from 1min interval logging data.



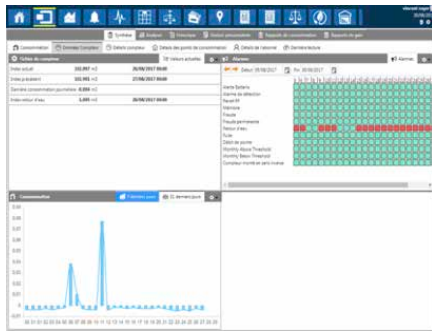
Pressure Monitoring

Average, maximum, minimum and standard deviation pressure values are captured for every logging interval, based on 1 second sampling frequency, allowing night analysis and transient detection.



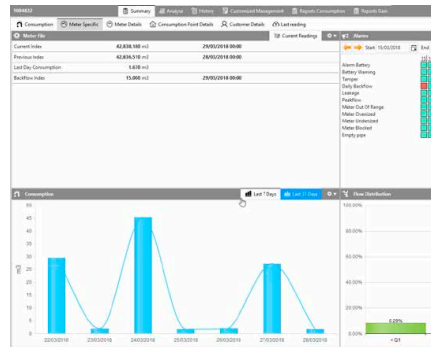
Flow-rate Alerts Monitoring

Thresholds for acceptable high and low flow-rates are configurable to provide visual follow-up of events on the network.



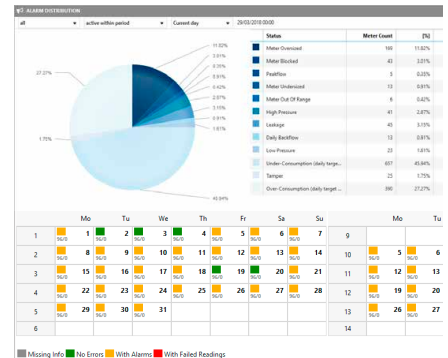
Backflow Monitoring

Backflow information and statistics, aggregated with different granularity, include the volume and the number of occurrences logged during a period.



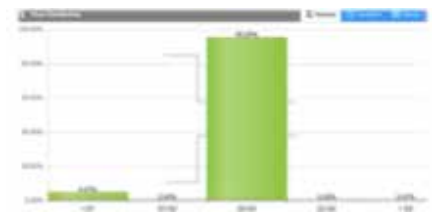
Index Monitoring

The daily index is captured for accurate and reliable billing.



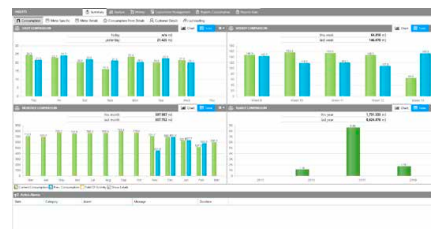
Real-Time Alert Messages

- » Blocked meter
- » Tamper / cable cut
- » Flow-rate above or below limits
- » Pressure below or above limits
- » Backflow detection
- » Low battery
- » Leakage
- » Over/under-sized meter



Meter Right-Sizing Monitoring

Over and under-sized meters are identified together with potential volume loss based on flow-rate segmentation analysis.



Consumption Monitoring

Consumption is aggregated with a granularity of 1min logging intervals. End-user consumption can be displayed and benchmarked against previous activity periods.

Technical Specifications

Inputs	Meter input	1 bi-directional meter input Compatible with mechanical meter pulse input (2/5 wires) and with bidirectional electromagnetic/static meter pulse input - Max Pulse Frequency: 100Hz - Min Pulse Width: 5ms
	Pressure input	Up to 2 pressure sensors as option
Audit	Pressure audit	Continuous high precision pressure monitoring - Better than +/- 0.1% FS (Full Scale) precision - Better than +/- 0.2% FS drift, no need for recalibration in lifetime
	Internal back-up memory	From 32 days of storage, up to 4 years depending on model (inputs) and logging frequency configuration
Output	GSM / GPRS / UMTS 2G /3G	Daily data transmission via GPRS / UMTS network Real-Time Alarms via short messages (SMS) and GPRS / UMTS
Installation and Maintenance	Protection class	IP68 enclosure compatible with pit conditions
	Operating temperatures	-10°C to + 50°C
	SIM card	Internal slot mounting. Easy installation and exchange by utility operators. Roaming SIM supported
	Local configuration and access to data	Configuration and access to data via Standard USB on any laptop with provided software application
	Antenna	Internal antenna as standard External antenna port is available as option for hard-to-reach signal locations
	Firmware upgrade	Over the air through GPRS / UMTS connection
	Power supply	Autonomous lithium battery type. 5 years lifetime with daily data transmission / Easily exchangeable. External battery pack or connection to external power sources 6V - 30V are available as options
Variants	Configurations: with/without Pressure sensor	Provided in the below configurations including flow and pressure cables - 3G/2G Pulse - 3G/2G Pulse & Pressure - 3G/2G Pulse & 2xPressure

Dimensions

A.....(Diameter)	mm	115
B.....(Height)	mm	140
C.....(Total Height)	mm	155
D.....(Fast Couples Height)	mm	15
Weight	kg	0.68



WaterMind Advanced Logger
3G/2G Pulse & 2xPressure

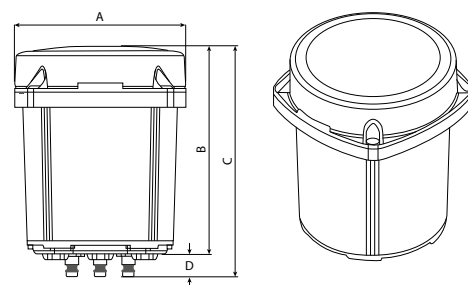
**Ideal combination
with any C&I Itron meter**



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