

Product Guide 2026

Water & Wastewater Pump Monitoring Solutions

THERMANCY



Intelligent Pump Monitoring & Optimisation

Transforming Water & Wastewater Operations Through Data-Driven Insight

Kind on the environment

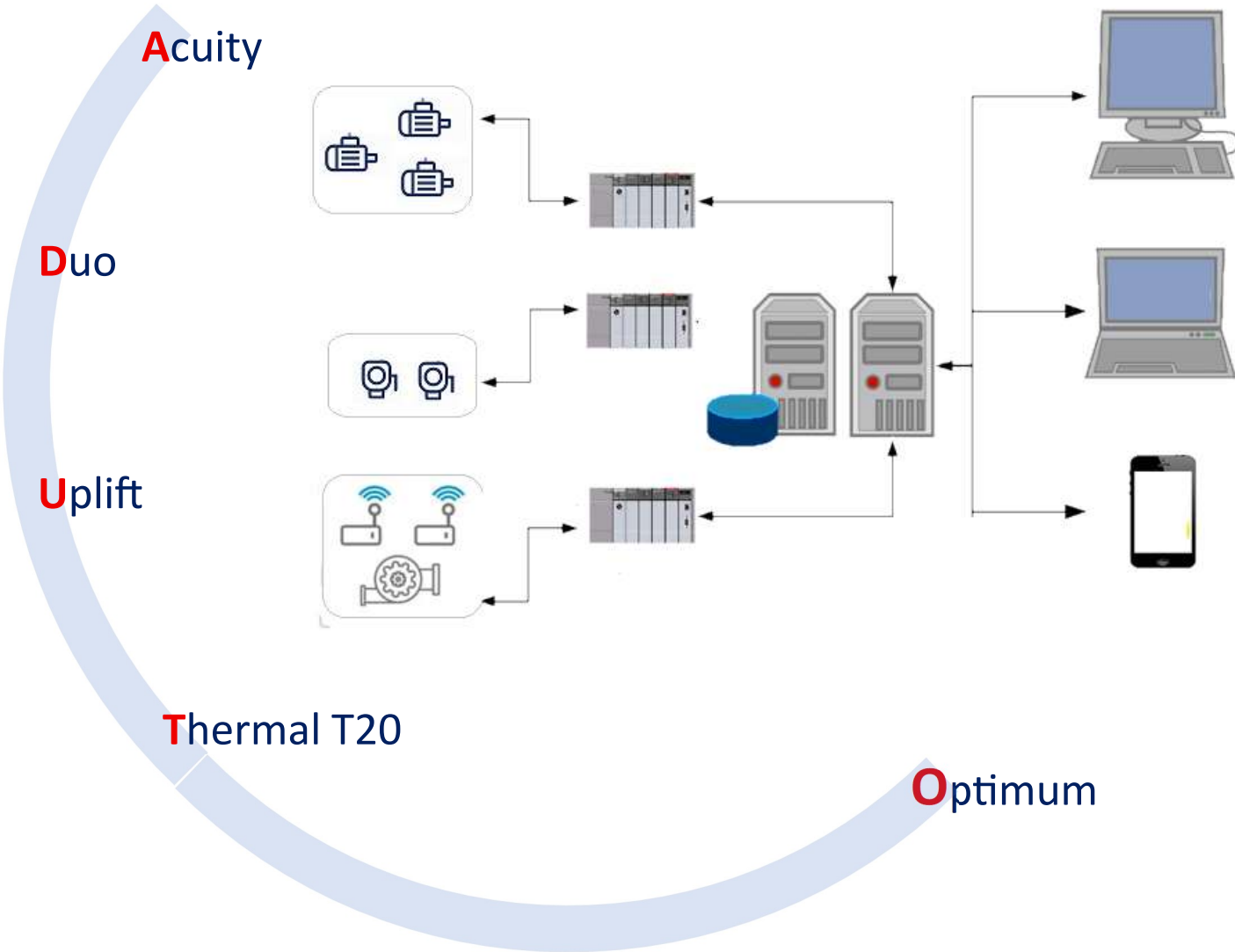
Thermancy offers environmentally friendly and practical solutions for your water and wastewater pump monitoring applications. With our technology, you can reduce pumping energy and protect the environment.

Engineering Excellence

For more than a decade, Thermancy has led the development and production of advanced pump performance monitoring and optimisation systems. As a specialist engineering company, we have a proven track record of delivering energy-saving solutions and innovative products to pump owners around the world.

Thermancy's modular range of pump monitoring instruments, flow measurement tools and software helps water and wastewater operators improve pumping efficiency, reliability, and operational safety across their networks.







Acuity

Technology	Thermometric
Category	Pump Monitor
Application	Potable, waste or processed water
Configuration	Wireless System — ideal for rapid installation, remote sites, or stations without existing comms cabling. Wired Modbus RTU System — ideal for SCADA-integrated sites or where hard-wired reliability is preferred.
Installation	Permanent

The Acuity thermodynamic pump monitor provides continuous, high-resolution insight into pump condition and performance, measuring head, power, efficiency, and flow rate in real time. This enables a shift to proactive maintenance, smarter pump scheduling, and improved variable-speed control, while maintaining stable station and network operation.

Using the thermodynamic method, it delivers accurate flow and efficiency data even where conventional flow meters cannot be installed due to limited straight-pipe runs or challenging hydraulic layouts.

Rapid payback

Achieves energy-saving returns within months.

Improved performance

Optimises pump efficiency and reliability.

Easy installation

Compact sensor design simplifies fitting.

Flexible comms

Choose wireless or Modbus RTU for dependable data transfer.

Secure data

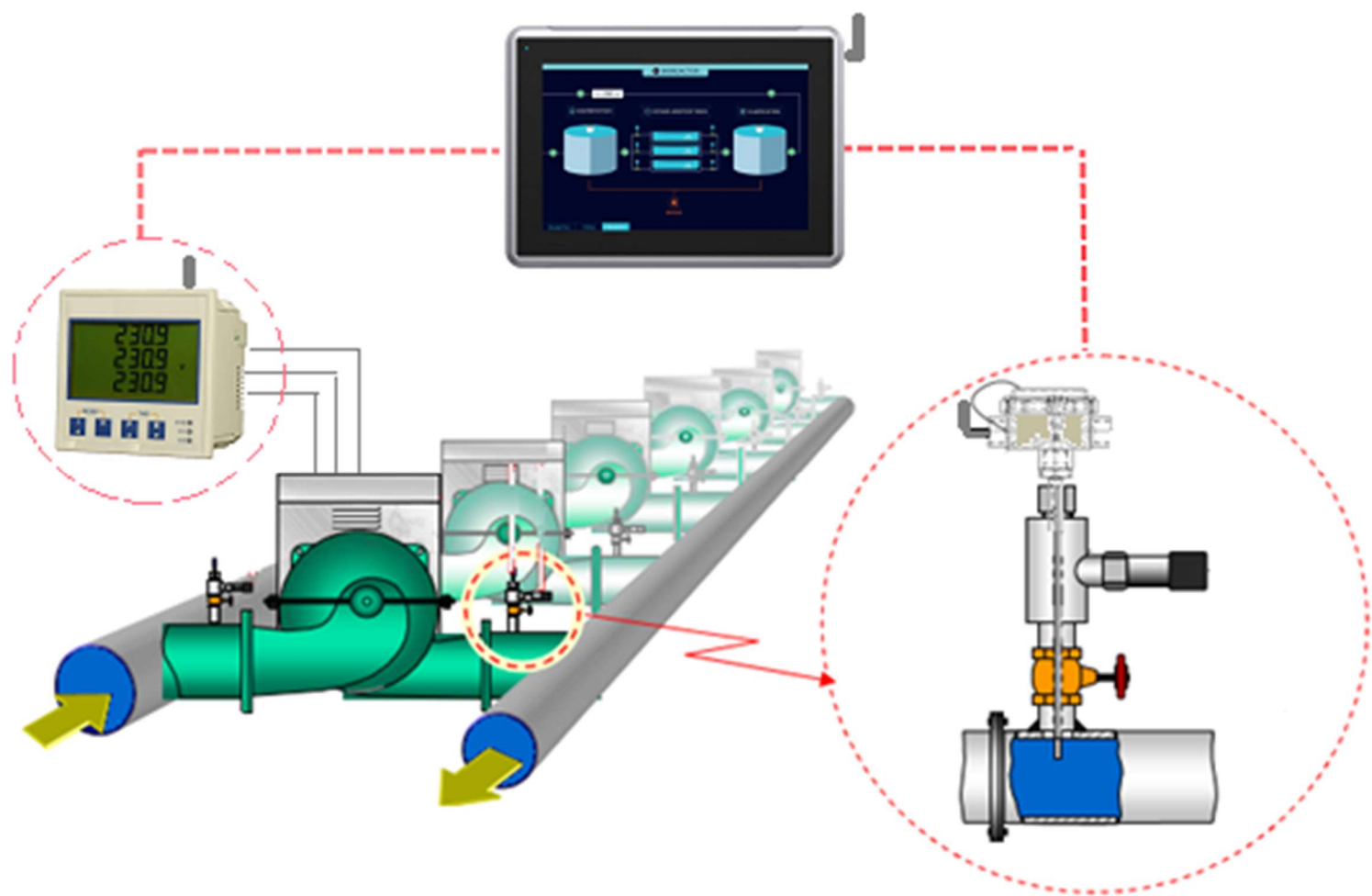
Authenticated communication keeps performance data protected.

Operational value

Reduces costs, downtime, and inefficiency across networks.



Acuity System Overview



Per Pump Items

Qty	Item	Description	Location
1	Suction Sensors	A temperature probe and pressure transducer to measure data on the suction side of the pump	Suction pipe of the pump
1	Discharge Sensors	A temperature probe and pressure transducer to measure data on the discharge side of the pump	Discharge pipe of the pump
2	Tee-pieces	To allow the temperature probe and pressure transducer to be fitted to a single fitting on the pipe	Suction & Discharge
1	Power meter	To measure instantaneous power consumed by the motor driving the pump	Electric room

Per Station Items

1	Manager	To coordinate communication between the wireless sensors or wired RS485 connected sensors.	Pump room
1	HMI or Industrial PC	Data collection, processing and display. Remote devices can access the HMI to collect pump performance data for each pump	Pump room



Duo

Technology	Conventional
Category	Pump Monitor
Application	Potable, waste or processed water
Configuration	Wireless System — ideal for rapid installation, remote sites, or stations without existing comms cabling. Wired Modbus RTU System — ideal for SCADA-integrated sites or where hard-wired reliability is preferred.
Installation	Permanent

The Duo conventional pump monitor applies advanced algorithms and real-time analytics to calculate pump efficiency, pump head, power consumption, and flow rate with precision. Installed permanently on the pump, it enables operators to track performance trends, identify deterioration early, and determine the optimal time for maintenance, repair, or replacement.

The system integrates seamlessly with existing site instrumentation—including station flow meters, pressure transducers, and power meters—allowing it to build a comprehensive picture of pump and station behaviour.

Core inputs

Uses pressure, temperature, and power data for its main measurements.

Added accuracy

Accepts extra site values for better insight.

Performance tools

Supports maintenance planning, scheduling, and speed optimisation.

Easy integration

Shares analogue, digital, and SCADA signals with existing systems.

Combined data

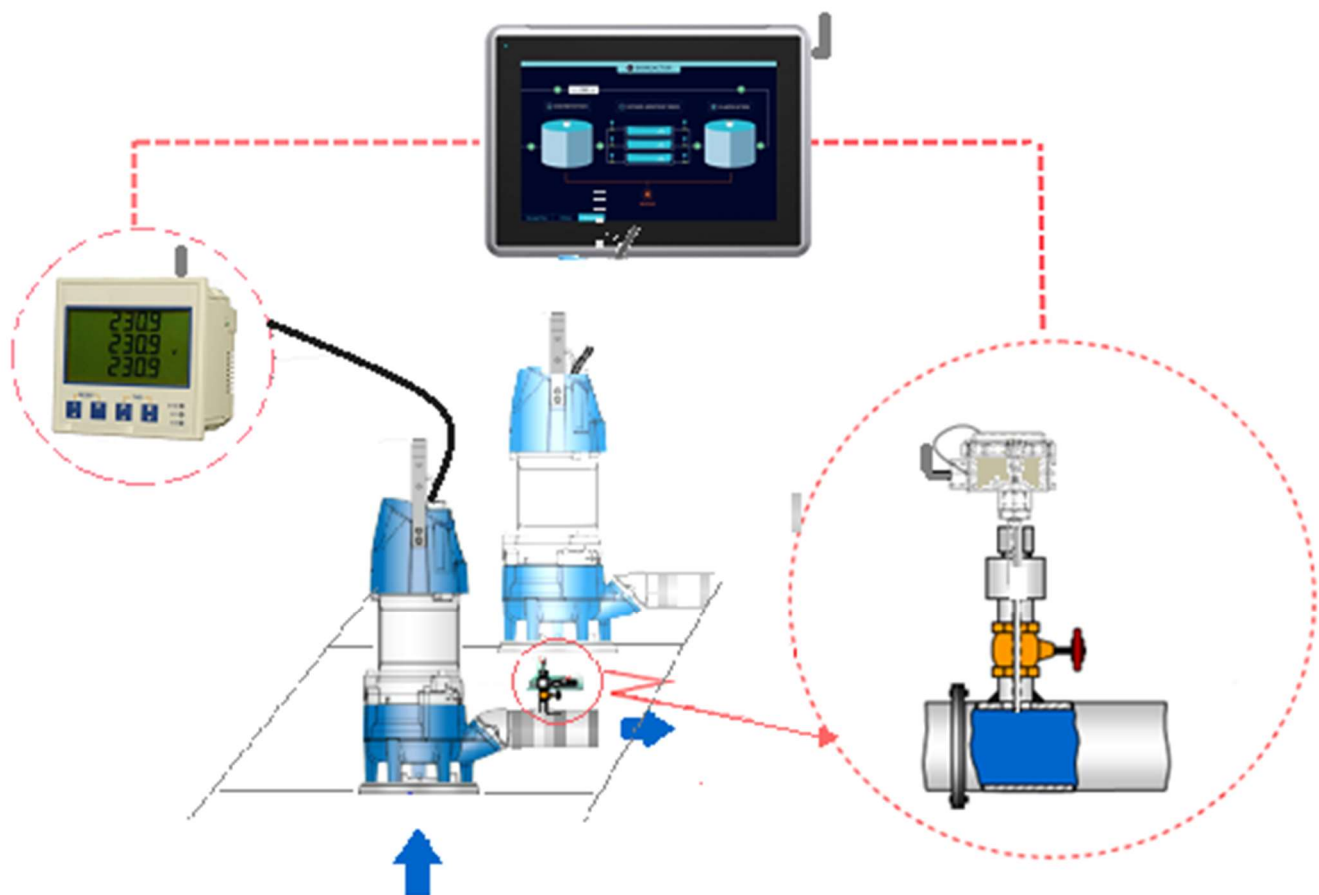
Merges Thermancy and site measurements into one view.

Reliable operation

Helps cut downtime and maintain efficient pumping.



Duo System Overview



Per Pump Items

Qty	Item	Description	Location
1	Suction Sensor	A pressure transducer to measure data on the suction side of the pump	Suction pipe or sump
1	Discharge Sensor	A pressure transducer to measure data on the discharge side of the pump	Discharge pipe of the pump
2	Tee-pieces	To allow the temperature probe and pressure transducer to be fitted to a single fitting on the pipe	Suction and/or Discharge
1	Power meter	To measure instantaneous power consumed by the motor driving the pump	Electric room

Per Station Items

1	Manager	To coordinate communication between the wireless sensors or wired RS485 connected sensors.	Pump room
1	HMI or Industrial PC	Data collection, processing and display. Remote devices can access the HMI to collect pump performance data for each pump	Pump room



Uplift

Technology

Conventional

Category

Flow meter

Application

Lift Station

Configuration

Wireless System — ideal for rapid installation, remote sites, or stations without existing comms cabling.

Wired Modbus RTU System — ideal for SCADA-integrated sites or where hard-wired reliability is preferred.

Installation

Permanent

The Uplift is a dedicated lift-station flow-measurement system built around a robust data processing module and advanced analytical engine. Designed specifically for wet-well environments, it integrates seamlessly with both analogue and digital instrumentation, including ultrasonic level sensors and discharge-pressure transducers.

By applying advanced machine-learning techniques, Uplift reliably calculates the station outflow. A built-in blockage-detection algorithm continuously validates measurement quality and raises immediate alarms when abnormal conditions are detected, ensuring operators always have reliable, high-integrity data.

Sensor ready

Works with analogue, digital, ultrasonic, and pressure inputs.

Flow engine

Purpose-built module with analytics for lift-station flow measurement.

Blockage alarms

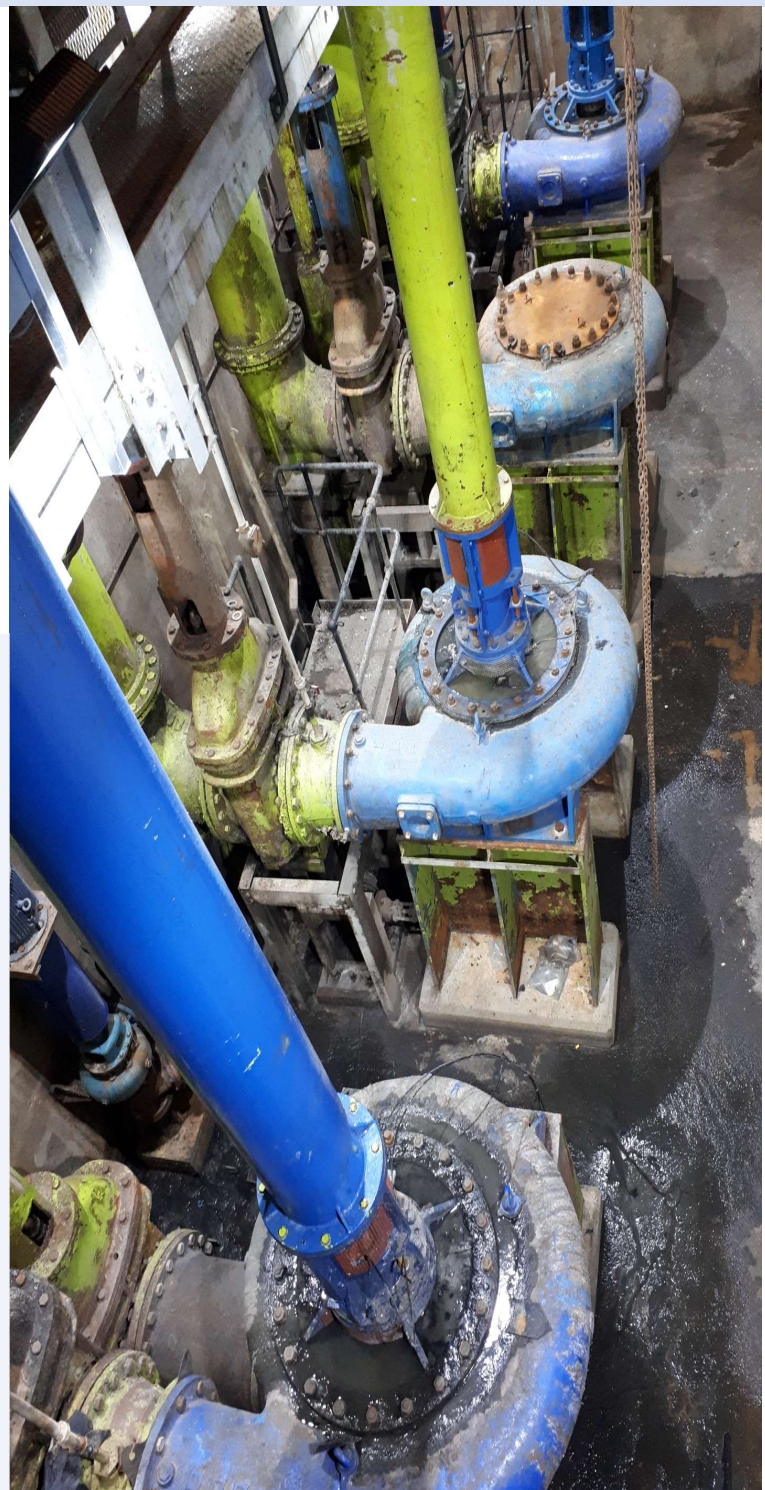
Detects abnormal conditions and raises instant alerts.

Efficiency insight

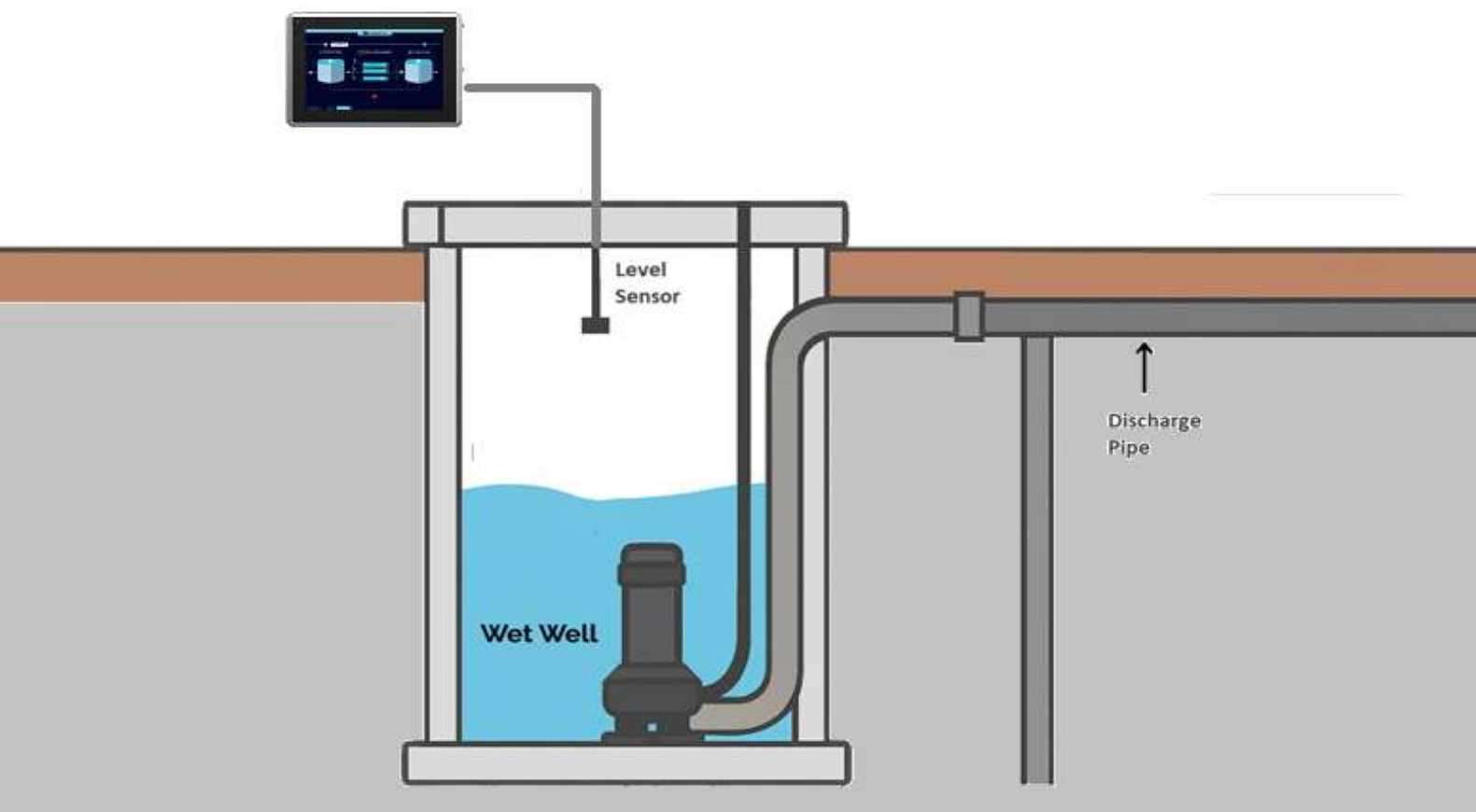
Uses motor-power data to track pump efficiency and wear.

Reliable platform

Flexible architecture that improves reliability and supports informed decisions.



Uplift System Overview



	Per Pump Items				
	Qty	Item	Description	Location	
	1	Level Sensor	A level sensor measuring the real time height of the fluid in the sump	Sump	
	Optional items				
	1	Discharge Sensor	A pressure transducer to measure data on the discharge side of the pump	Discharge pipe of the pump	
	1	Fitting	To allow the pressure transducer to be fitted to the pipe	Discharge	
	1	Power meter	To measure instantaneous power consumed by the motor driving the pump	Electric room	
	Per Station Items				
	1	HMI or Industrial PC	The processing unit collects data at high speed, processing the data to compute pump performance parameters including pump flow out of the station. The processing unit can be connected to an HMI or the site SCADA to display measured and computed parameters.	Pump room	



T20

Technology	Thermal
Category	Flow meter
Application	Potable, waste or processed water
Configuration	Wireless System — ideal for rapid installation, remote sites, or stations without existing comms cabling. Wired Modbus RTU System or 4-20mA — ideal for SCADA-integrated sites or where hard-wired reliability is preferred.
Installation	Permanent

The T20 flow meter is a high-performance thermal mass flowmeter designed for direct, in-pipe measurement of fluid velocity and flow rate. Built around an all-welded 316 stainless-steel insertion probe, it is engineered for durability and long-term stability in demanding industrial environments.

The T20 flow meter integrates seamlessly with existing monitoring and control systems.

Valve-fit design

Fits standard ½-inch gate valves with 100–350 mm probe lengths.

Wide ranges

Measures 3–300 cm/s with $\pm 2\%$ FS accuracy.

Fast response

Delivers real-time flow data with a rapid 1-second update rate.

Robust operation

Handles pressures up to 40 bar with 24 V DC supply.

Flexible outputs

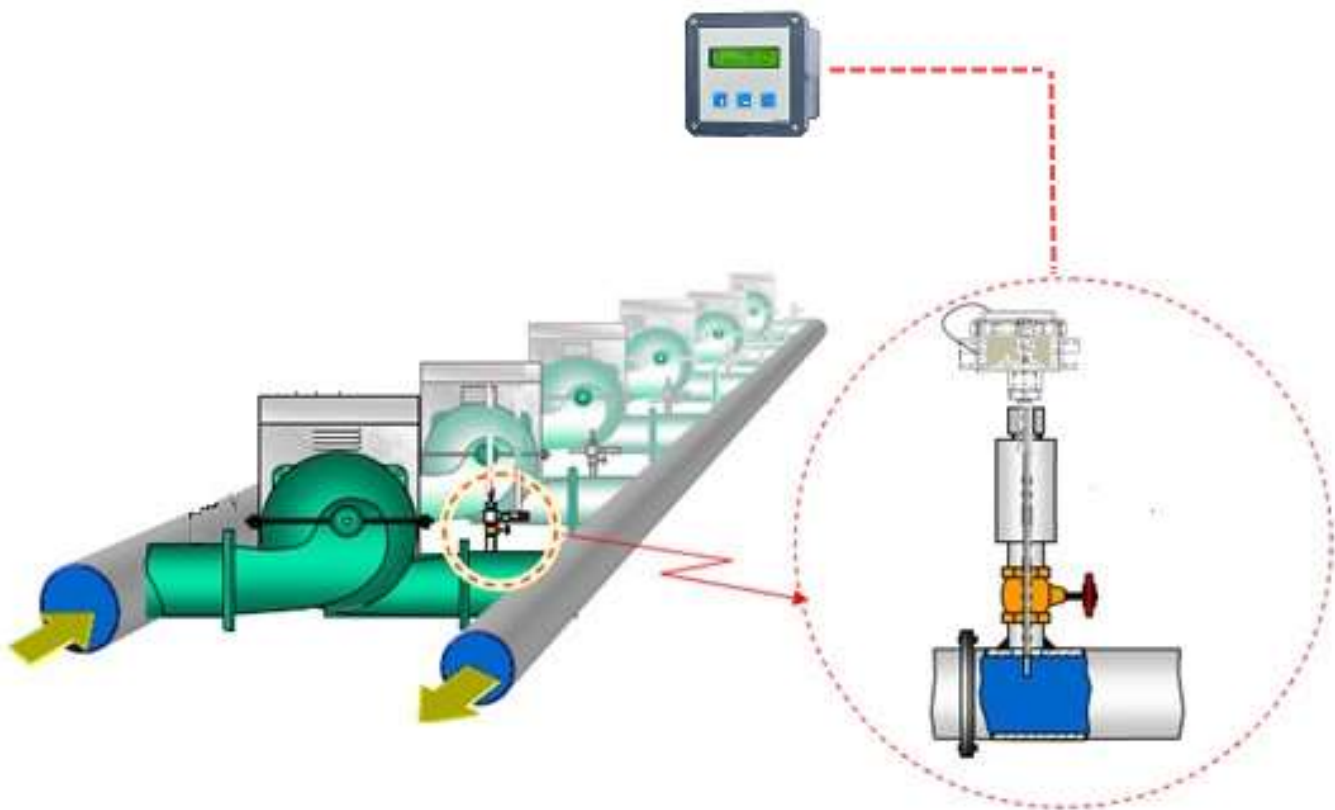
4–20 mA, Modbus, and wireless outputs ensure seamless integration with SCADA, PLCs, and remote telemetry systems.

Versatile applications

Suitable for drinking water, cooling circuits, low-solids wastewater, and sensitive pharmaceutical or process-water applications.



T20 Flow Meter System Overview



Per Pump Items

Qty	Item	Description	Location
1	T20	A pressure transducer to measure data on the suction side of the pump	Suction and/or Discharge
1	Pipe fitting	To allow the T20 to be inserted in to the pipe.	Suction and/or Discharge

Per Station Items

1	Manager	To coordinate communication between the wireless sensors.	Pump room
	Direct	RS485 connections can connect directly to the host system.	
	Direct	4-20mA signals can connect directly to the host system	

Optional

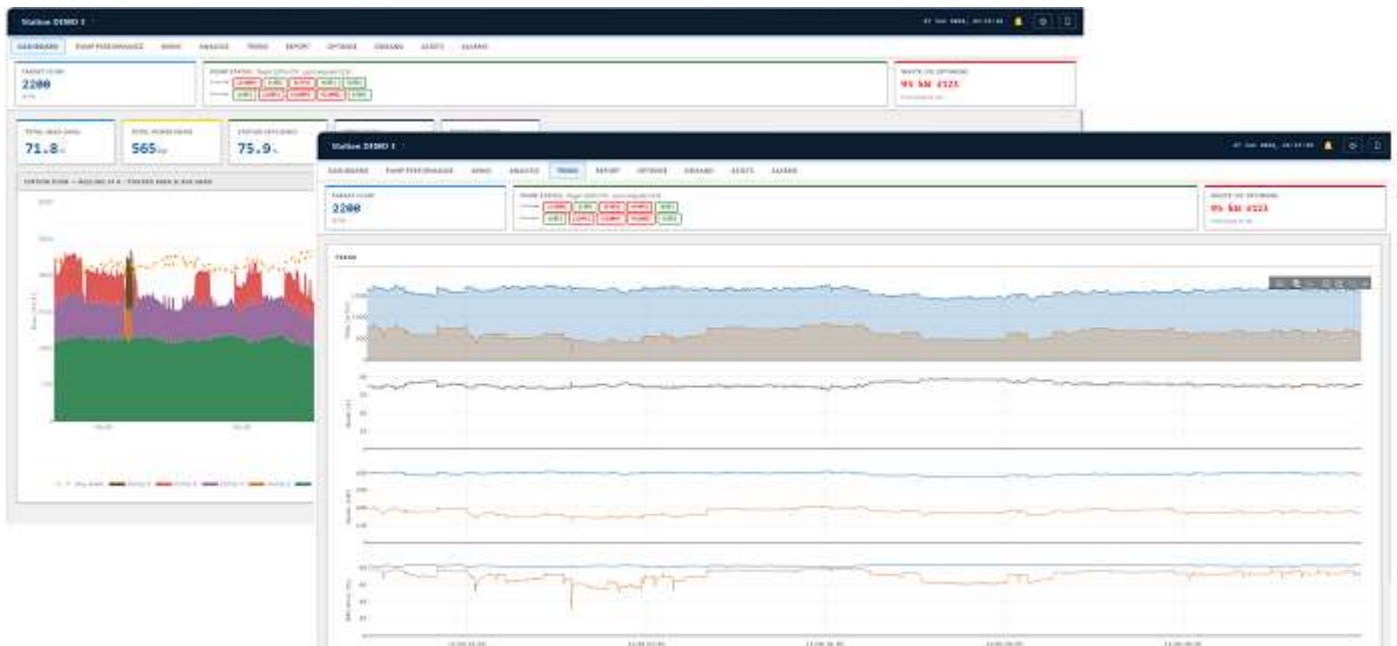
1	Display	A single line LED or LCD module is available as an optional extra to provide a local display of the flow rate.	Pump room
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Optimum

Technology	Software Platform
Category	Software (Pump Optimisation Platform)
Application	Pump Analysis, Optimisation & Asset Management
Configuration	Web-based (accessible via any modern browser)
Installation	On-Premise / Perpetual License (installed on your infrastructure)

Optimum is a comprehensive pump optimisation and asset management software platform developed by Thermancy. Built for the water and wastewater industry, Optimum provides operators and managers with real-time decision support, advanced analytics, and continuous optimisation to reduce energy consumption, lower maintenance costs, and extend asset life.



DASHBOARD

Real-time command
ISA aligned interface with five live KPI cards for instant station awareness.

Visual flow context
24-hour stacked area chart showing pump contributions with an overlaid head-trend line.

Comparative clarity
Sidebar real-time data.

PERFORMANCE

Engineering workspace
Pump chart unifying curves, historical data, on a shared flow axis.

Operational insight
View BEP and 24-hour scatter to assess pump behaviour.

Live diagnostics
Side bar showing real time pump performance values

ANALYSIS

Deep diagnostics
Multi-day datasets reveal efficiency drift, hydraulic loading changes, and long-term performance trends.

Comparative analysis
Correlate behaviour with operational events and maintenance.

Actionable insight
Exportable metrics and filtering.

Least-cost control

Continuously evaluates pump, motor, and system conditions to select the lowest-cost pump combination.

Target modes

Supports single-flow optimisation and demand-forecast-driven scheduling.

Tariff-aware operation

Incorporates half-hourly energy tariffs to minimise operational expenditure.

Structured alarms

Tracks active, acknowledged, and historical alarms with severity-based prioritisation. There are 4 alarm levels for each parameter with easy-to-read description.

Dashboards

Reports energy use, CO₂ emissions, uptime, and pump-failure metrics.

Operational transparency

Provides clear performance and sustainability insights for compliance and reporting.

Live station mimic

Customisable diagrams show real-time pump status, flow, head, power, and efficiency.

Fleet-wide mapping

Interactive map displays all stations with colour-coded status indicators. The number of visible stations on the map depends on the users access rights.

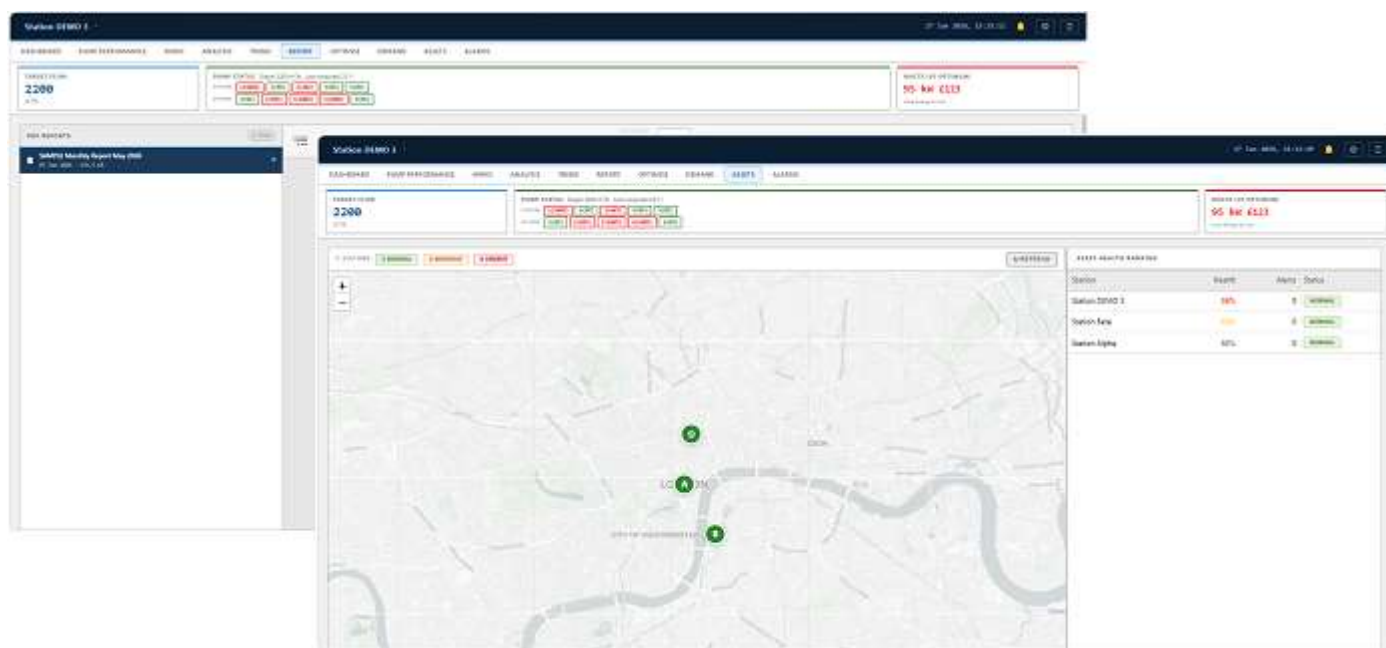
Instant summaries

Pop-up panels provide quick access to key station information and health metrics.

OPTIMISE

ALARM MANAGEMENT

ASSET MAPPING



Login and Logout Access

Authentication

Secure application authentication with 8-hour expiry and sliding expiration to manage active sessions.

Role-Based Access

Admin, Operator, and Viewer roles restrict access to sensitive pages like User/Station Management.

Granular Permissions

Per-station and per-feature access (e.g., Dashboard, Optimise) can be toggled for individual users.

The screenshot shows the login screen for the Optimum Pump Optimisation Platform. The screen features the Optimum logo and the text 'Pump Optimisation Platform'. Below the logo, there are input fields for 'USERNAME' and 'PASSWORD', each with a placeholder text 'Enter username' and 'Enter password' respectively. A 'SIGN IN' button is located below the password field. At the bottom of the screen, the text 'Optimum v4.0 - © Thermancy Smart Pump Monitoring' is displayed.



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