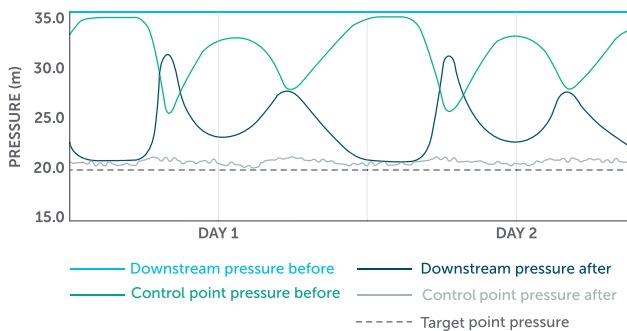i2O™
Intelligent water networks

Advanced pressure management
Remotely control and automatically optimise pressure throughout your network

AUTOMATIC OPTIMISATION

i2O uses a dedicated patent protected pilot valve designed specifically for the purpose. Target pressures are achieved accurately and smoothly without introducing transients. The system has availability greater than 99.9%, and offers the highest levels of information security. You will be trained and supported in using the product by our Technical Support team and online help centre.

Legend:
— Downstream pressure before
— Control point pressure before
— Downstream pressure after
— Control point pressure after
----- Target point pressure

BUSINESS BENEFITS

i2O'S CLIENTS USE ADVANCED PRESSURE MANAGEMENT TO ACHIEVE A WIDE RANGE OF BUSINESS BENEFITS

- Leakage and non-revenue water reduction
- Energy cost reduction
- Scheduling for predictable variances
- Asset life increase
- Operating cost reduction
- Improved customer service
- Drought risk mitigation
- Reduced carbon emissions

OVERVIEW

ADVANCED PRESSURE MANAGEMENT ENABLES REMOTE CONTROL AND AUTOMATIC OPTIMISATION OF PRESSURE AT PRVS AND PUMPS ACROSS YOUR ENTIRE NETWORK, REDUCING BACKGROUND LEAKAGE BY 20%, REDUCING BURSTS BY 40% AND REDUCING ENERGY COSTS AND CARBON EMISSIONS

REMOTE CONTROL

- You decide and set your control philosophy for PRVs and pumps
- Fixed outlet pressure precisely controlled with minimum factor of safety
- Schedule in advance for known variations: events, intermittent supply
- Implement a control curve that you have manually calculated

AUTOMATIC OPTIMISATION

- Algorithms determine the optimal control philosophy for PRVs and pumps to achieve a minimum control point pressure
- Adjust for flow-related headloss
- Adapts to changes in demand over time: fire demand, seasonal, cultural and growth-related changes

Advanced pressure management offers a full range of control configurations including fixed downstream pressure, client-defined flow modulation, and automatic optimisation including no-flow. These can be scheduled and mixed in a daily time profile that can be set infinitely into the future so that regular and irregular events can be anticipated.

Contact us
T (+44) 02380 111 420
E info@i2owater.com

2 Vancouver Wharf, Hazel Road, Woolston
Southampton, SO19 7BN, United Kingdom
www.i2owater.com

FEATURES

- A wide range of interval and dial-up configurations
- A full set of alarm functions on all data channels
- The controller gathers data that enables transient detection and PRV condition monitoring
- The ability to determine the timeframe for pressure changes in order to introduce changes slowly and reduce customer complaints
- Multiple failsafes
- Easy to install Control Logger and Advanced Pilot Valve
- Robust, reliable and easy to maintain – no recalibration required during the lifetime of the product, batteries and SIMs can be exchanged in the field; field-upgradeable firmware; with long warranty and low levels of returns
- A wide range of comms options including 2G, 3G+2G, NB-IoT + 2G, and internal/external antennas
- External battery packs to extend life and/or increase the frequency of communications
- No need for an i2O logger at the critical point because our platform can ingest data from other manufacturers' loggers

HARDWARE

OUR ADVANCED PRESSURE MANAGEMENT SOLUTION INCORPORATES THREE PIECES OF HARDWARE

PRV MONITORING AND CONTROL

i2O's APV is fitted on a secondary pilot rail. A 3 pressure logger monitors upstream, downstream and control space pressure and flow acts as the controller for the APV.

PUMP MONITORING AND CONTROL

i2O's pump optimiser monitors downstream pressure and flow and sends a pressure demand set-point to a PLC controlling VSD pump(s) or directly to a variable speed drive.

CONTROL POINT MONITORING

i2O's loggers monitor pressure at the control point.

MORE INFO

Learn more about our intelligent network solutions! Visit **WWW.i2OWATER.COM** or contact us today at **INFO@i2OWATER.COM**

HOW IT WORKS

i2O's patented algorithm takes pressure and flow data and automatically determines the optimal control curve that should be applied. Any changes in supply, demand, headloss, etc. over time are incorporated automatically into an updated control curve without the need for any manual analysis or intervention.

DEPLOY AND CONFIGURE	DATA GATHERING	SELECT AND SET CONTROL PHILOSOPHY	CONTROL PRVS AND PUMPS
· Install hardware · Configure devices	· Flow · Downstream pressure · Upstream pressure (PRV only) · Control space pressure (PRV only) · Control point pressure	· Set target pressure · Set timings · Implement your own control curve or use i2O's automatic optimisation · Set alarms	· Monitoring