

INTELLIGENT CONTROL VALVES ARE A VITAL TOOL FOR SMART NETWORKS

A Smart Water Network is an integrated set of products, solutions and systems that enable utilities to remotely and continuously monitor and diagnose problems, prioritise and manage maintenance issues, and use data to optimise all aspects of the water distribution network. Managing distribution of water correctly can save money and ensure the overall performance of the network is improved.



The AVK control valve mounted with the pressure management device (PMD) communication device is a local controller that can provide a wide range of control applications in a smart pressure management system.

The features are a highly accurate control and auto-adaptive PID in order to fit the valves for a multitude of different hydraulic conditions.

The pressure management device is supplied with pre-configurable hydraulic control functions and data-logging features that enable the operator to preset conditions for flow and pressure.

The unit will communicate with the flow meter and adjust the pressure according to flow regardless of time of the day. Should an unforeseen large volume of water have been consumed leading to a higher flow, the unit will increase the pressure in order to deliver more water and to avoid pressure fluctuation in the pressure zone. Once the flow is returning to normal condition, the system will automatically adjust to lower pressure again.

Reducing the pressure is a major method of reducing the overall leakage level. This graph shows how the control valve can control the pressure in relation to the flow. If the flow goes up, so will the pressure, while if the flow decreases, as will the pressure. This is especially relevant at night-time flow, or if an unforeseen event happens.

AVK intelligent control valve has been a proven solution for reducing leakage and burst frequency, bringing optimal and cost effective pressure control to your network. How can intelligent control valves contribute to a smart network?

They can:

- Provide optimised and calm network pressures
- Offer pressure feedback
- Offer valve position feedback
- Pressure Management Areas (PMAs)
- React to system failures – isolate bursts, re-zone areas
- Reduce leakage
- Flow control
- Level control
- Work alongside other equipment – pumps, meters
- And combinations of all the above (multi-function)

