



Case History

Cla-Val X143HP Hydro Power Generator Installation

Customer Type: Municipal Water Utility - United Kingdom

Location of Installation:

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Contact us for project references.

Application Description:

- The site consisted of a vault with an existing 12 year old 150mm (6-inch) Cla-Val Pressure Reducing Valve used to lower pressure from 11 bar (approx. 160 psi) to 7.5 bar (approx. 110 psi)
- The zone that the valve services consists of two reservoirs with a distribution system in between
- The pipeline is sensitive to high pressure, however, problems occur during peak demands when the furthest reservoir suffers from insufficient pressure
- The solution was to increase downstream pressure at peak demand, but reduce pressure to protect the pipeline at lower demands. The installation included a remote telemetry unit and the installation of an electronic flow meter
- Since the cost associated with running a power supply to the vault was considered prohibitive, a Cla-Val X143 Hydro Power Generator was installed to supply 24 VDC power to the site
- Downstream pressure adjustment was achieved using a 24V electronic pilot actuator (CRD-33) with Cla-Val 131-L2 electronic valve controller
- The 131-L2 controller accepts a 4-20mA flow signal and sends a 4-20mA command signal to the CRD-33 and then through the site RTU to the water utility control center

Equipment powered by the X143HP:

- Remote Telemetry Unit
- Electronic Flow Meter
- Cla-Val 131-L2 Electronic Valve Controller
- Cla-Val CRD-33 Electronic Actuated Pilot Control



Reference Documents

If you are viewing this document digitally, click on any of the links below to view the reference documents. Otherwise, please visit our website at www.cla-val.com and type X143HP in the search field to gain access.

- [X143HP Engineering Data E-Sheet](#)
- [X143HP Application Overview M-Sheet](#)
- [CRD-33 Engineering Data E-Sheet](#)

Inside the X143HP Control Panel



Two 12 Volt batteries for 24 VDC total



Cla-Val 131-L2 Controller

Cla-Val X143HP Power Generator



Cla-Val CRD-33 Electronic Actuated Pilot Control