

Pressure management

NeoFlow pressure regulating valves for network efficiency

Detection Services:
Specialised water loss management services, Australia

NeoFlow reliable pressure regulation improves network stability and secures continuity of supply

Overhauling water supply for a climate-vulnerable community

Mer Island in the Torres Strait had access to water for only 3–6 hours a day. The network was highly volatile and losses were significant. To achieve a rapid reduction in disruptions and establish ongoing, reliable supply, Detection Services opted for NeoFlow pressure regulating valves from GF Piping Systems.

Project background

The community water supply on Mer Island, home to 500 people at the very northern end of the Great Barrier Reef, had long been insufficient. The existing infrastructure could not meet demand, and was difficult to operate and maintain. Options to provide additional capacity had been exhausted. A proactive approach to preventing water loss was urgently required in order to scale up supply while meeting local logistical challenges.

Technical solution selected

NeoFlow pressure regulating valves were chosen to equip new pressure supply zones, and could be installed by local operations teams following online training. The polymer valves are naturally corrosion-free, offering long-term stability. Featuring an axial flow design using only three primary components – with neither an actuator stem nor diaphragm included – and only one moving part, maintenance and troubleshooting of these parts will be simple. NeoFlow's compact dimensions, three times more compact than a standard metal PRV, allow easy retrofitting even in confined spaces. Installation is quick and easy: the valve is simply inserted between two flanges with threaded rods and bolts to close the body. The saved space can be used to install measuring equipment or water quality sensors without modifying other components. NeoFlow valves represent an environmentally friendly solution that reduces maintenance costs, increases reliability even in conditions of extreme flow rates and ensures excellent efficiency over time.

Improvements achieved

The two new pressure supply zones, featuring NeoFlow pressure regulating valves, formed a basis for advanced pressure controllers. Once the system was up and running, the network could immediately operate at the calibrated target pressure, with volatility a thing of the past. Within the next 4–6 weeks, levels at the rain-water catchment and water storage lagoons reached nearly 100%. Expensive and energy-hungry portable desalination units could be switched off. The community now has access to round-the-clock water for the first time in 20 years.

Your contact

Georg Fischer Piping Systems Ltd
Ebnatstrasse 111
8201 Schaffhausen / Switzerland

Telephone +41 (0)52 631 11 11
mail@georgfischer.com
www.gfps.com



For advanced pressure control the NeoFlow was installed in two pressure supply zones.



The NeoFlow needs 40% less time for installation than a standard metal PRV.

Customer benefits

- Simple, durable low-maintenance design
- Easy to retrofit, install and operate
- Excellent performance characteristics
- Savings in costs, energy and resources
- Improved reliability and continuity of supply

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