

GFDO_RF_00019_EN (05.23)

Axial design leads to accurate and very stable flow

The installation of the NeoFlow PRV took place in Sibu, a landlocked city in the central region of Sarawak, Malaysia, with a population of around 160.000 people. It was possible to achieve a low outlet pressure with NeoFlow even at a low flow.

Project background

In the past, Sibu's water board relied on a metal PRV in the dimension DN250 combined with a controller to manage the pressure in one of their district metering areas (DMA). Here, the PRV was meant to reduce the upstream pressure of 6 bar to a downstream pressure of 1.6 bar. However, the metal valve was not capable of reliably responding to the controller which only resulted in a downstream pressure of 2 bar. In addition, the pressure difference experienced by the valve caused the disc to oscillate during low flow rates which led to frequent failure and damage.

Selected technical solution

During the search for a solution, GF Piping Systems Malaysia approached Sibu water board. The goal was to maintain a stable downstream pressure of 1.6 bar regardless of the upstream pressure and flow conditions. After gathering data from the customer, GF Piping Systems recommended installing NeoFlow in the dimension DN300. Thanks to its axial flow construction, NeoFlow was capable of regulating pressure with a minimum opening of 6% during periods of low flow rates without the need for a controller. The decision to install NeoFlow was also made due to the valve's durable materials and simplified construction which prevents damage. After a month of operation, the Sibu water board has been pleased with NeoFlow's consistent performance and has appreciated its quick response to pressure changes.

Achieved improvement

The improvement achieved is a more stable control at low flow volume demand to the consumer. The client wanted to reduce their pressure to 1.6 bar but their existing metal valve could only achieve 2 bar minimum due to the limitation of the valve. Even at 2 bar setting the metal valve becomes unstable and used to oscillate violently causing heavy vibration to the valve parts, resulting in frequent maintenance of the valve. However, the wide span piston range and axial flow direction of the NeoFlow enables the valve to minimize the valve to an opening degree of 6% to control the pressure at low flow demand at night without causing any instability to the valve. The PRV was able to deliver 1.6 bar efficiently and consistently after the installation.

The installation took place without any complications.



In order to meet the requirement, a DN300 valve was installed, which is 10 times lighter than the previous metal PRV.

Customer benefits

- Simple-, and low-maintenance design
- Durable materials which prevent damages
- NeoFlow opens with a degree of 6% to control the pressure at low flow without causing any instability

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