

Water Supply Management Service Stabilizes Operations & Increases Uptime with Smart, Electric Multi-Turn Biffi™ ICON3000 Actuator

RESULTS

- Increased uptime and stability of operations with the pre-installed Modbus® communication protocol
- Optimized support and technology for a sustainability project with the latest hardware and software for electric actuators
- Improved actuator performance and lifecycle support by partnering with an OEM technology provider



APPLICATION

Suction pump inlet, discharge pump outlet and reservoir of water pumping station.

CUSTOMER

Water resource transmission and management service in Thailand.

CHALLENGE

Four of the 10-year-old motor-operated valve actuators at the water pumping station were found to have aging and degradation issues. They have become rusty and would provide inaccurate butterfly valve positioning, increasing maintenance downtime and impeding water supply transmitted to commercial end-users.

This prompted the customer to seek a reliable actuator product and service provider—one that offers the latest hardware innovation and sustainability technology—to stabilize operations, increase plant uptime and support a new decarbonization project.

The Biffi ICON3000 electric actuator installed in Thailand optimizes water supply management and helps achieve sustainability goals.



SOLUTION

When the customer reached out to iVAC Automation Co. Ltd. (an authorized local distributor in Thailand), they presented Emerson's Lifecycle Services (LCS) program as a trusted solution. The LCS team, then, offered to conduct a site walk down inspection to assess the issue and propose an appropriate solution.

After a thorough assessment of the water supply system, the Biffi ICON3000 with Modbus for control with additional 4-20 mA output feedback was offered as the solution. It is an electric actuator capable of detecting and logging internal situations in the main functional systems and controlling operation via the Modbus® communication protocol. It is designed with hardware and software flexibility, allowing for multiple mounting options, and having a contactless digital motor speed sensor and Bluetooth® wireless connectivity. Such design allows for standardized maintenance, improved torque curve analysis, and remote pipeline and valve condition monitoring.

The Biffi ICON3000 also provides backup systems that allow it to continue operating seamlessly even without the main power source, such as a high-definition absolute encoder of up to 8,580 output revolutions and A-Manager software for functional settings and backlog download and analysis.

With all these innovations packed in a single model, the customer optimized operations at the water pumping station at a competitive price. The first replacement of four actuator units eventually led to multiple subsequent replacements, culminating in a final total of 26 units. Ultimately, the new Biffi ICON3000 installations replaced outdated and worn-out units and supported a pipeline modification project.






Biffi ICON3000 installed at a water supply transmission site

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