



## Benefits Realized

- Improved plant profitability
- Reduced unexpected plant outages
- Improved production yields
- Improved process integrity
- Enhanced understanding of plant equipment and processes
- Enhanced preventative/predictive maintenance capabilities
  - Identifies bad valves
  - Real time performance mgmt.
- Attractive total cost of ownership
- Attractive ROI
- Provision for easy expansion

*"I could not have asked the installation to work any better."*

## Company's Area Owner

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# Wireless Valve Monitoring Yields Higher Profits

## Eltav Delivers Real-Time Valve Diagnostics at Major Chemical Plant

### OVERVIEW

The manufacturer is a leading producer of silicate, zeolite, and other performance materials serving the detergent, pulp and paper, chemical, petroleum, catalyst, water treatment, construction, and beverage markets.

A number of the customer's valves did not provide position feedback and required frequent, time consuming break-fix maintenance due to corrosion and general wear and tear. Replacing or repairing such faulty valves sometimes resulted in costly unexpected shut downs and the loss of valuable production time.

The organization sought out a system that could deliver real-time information about the status of the problematic valves. The system needed to provide status information to the operations staff and automation programs to ensure proper valve position. Furthermore, the system must provide performance data allowing technical staff to conduct performance audits and initiate predictive and preventative valve maintenance during off hours. Their requirements specified that the system would easily integrate into the existing industrial process control system and would not require a major installation effort or upset daily production.

### BUSINESS CHALLENGE

The customer needed a way to monitor problematic valves that frequently cause costly plant upsets when they fail. Due to the location of the valves in question, a hard wired solution based on limit switches was not practical or cost effective.

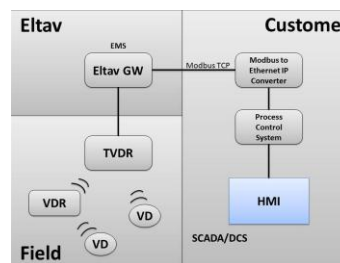
Major challenges include:

- Installation has minimal impact on running plant
- Significantly reduce outages due to valve failures
- Improve process integrity by delivering real time valve status
- Provide performance data to aid in valve maintenance
- Provide cost effective, low TCO solution
- Provide low maintenance & robust solution
- Allow for future expansion

### SOLUTION

The initial installation included 24 Wireless Valve Device (VD) units which were installed on the organization's FlowServe actuators.

The Valve Devices connect wirelessly to the Eltav Management System (EMS) – the central management and control application of the Eltav Wireless Valve Monitoring System – The EMS was connected to the existing Process Control System and immediately provided detailed information about faulty actuator status and activity. For the first time, the organization's staff had a comprehensive picture of all valve activity.



**Solution Architecture**

Eltav's Wireless Valve Monitoring System Diagnostic Feature indicated that 40% of the organization's monitored actuator/valve sets did not operate at full efficiency and required maintenance. Two actuators were found to be at the point of becoming totally defective. Eltav's Diagnostic Feature triggered preventive maintenance action, thus avoiding failure.



## BUSINESS CHALLENGES SOLVED

The organization summed up their experiences with the Eltav team and the benefits of the Wireless Monitoring System and provided the following feedback:

- The Eltav Wireless Monitoring System is simple to deploy and operates flawlessly.
- The proven predictive maintenance capabilities of the system are a major factor for selecting it.
- The installation quality, data accuracy, infrastructure performance, communications reliability and VD battery status features are particularly impressive.
- When compared with conventional solutions or competitive offerings, the Eltav total cost of ownership and ROI are particularly attractive.
- Substantial importance is placed on cultural values such as professionalism, integrity, fairness, diligence, service, and a strong spirit of teamwork. The Eltav team displayed similar principles when working at the US plant.
- The organization appreciated the fact that Eltav took their comments and requests seriously and felt that the two companies share the same goal – to make this deployment a real success.
- The Eltav system is transparent to the operator in the control room. It appears the same as any other valve.

The following are typical comments we received from company staff:

- Area owner: "I could not have asked the installation to work any better."
- Software engineer: "No issues from start to finish." With the Eltav System in the field, using wireless low frequency communication—provides rapid initial configuration and calibration during installation, as well as field reading of the VD's data.

## HOW ELTAV DID IT

The entire installation of the 24 Valve Device (VD) units and their respective routers took *only* 4 hours, and in no way interfered with the continuous operation of the plant.

**Valve Devices (VD)** are small, self-powered devices, bracket mounted directly on the valve or actuator, that transmit valve position in a wireless manner.



**Eltav's Valve Device (VD) installed on an Actuator**

**Valve Device Routers (VDR)** collect data from up to 32 associated VDs and transfer the information through the wireless network to the control center. Data transfer redundancy is assured by automatic routing of the wireless devices.

**Diagnostics** is a software feature that detects abnormal valve or actuator dynamics. This information is the basis for preventive action.

The Eltav **Operator's Device (OD)**—a portable, hand-held device that enables the operator to communicate with the Eltav System in the field, using wireless low frequency communication—provides rapid initial configuration and calibration during installation, as well as field reading of the VD's data.



**Configuring a Valve Device (VD) using the Eltav Operator's Device (OD)**

## THE FUTURE

The organization's management is completely satisfied with the Eltav system as presently installed. They affirmed that the installation of the Eltav system improved production yields. In short, the system is running very well and fulfills their expectations.

The organization is currently identifying the next areas where they will install additional Eltav equipment.

*For more information about the partnership between NovaTech and Eltav, and how NovaTech can help you implement a Wireless Valve Monitoring solution, call us at 800.253.3842 or visit us on the web at <http://www.novatechweb.com/process/eltav-wireless-monitoring/>*