

The Client

Santa Margarita Water District, California

The Challenge

- Inlet valve unable to handle 100-pound pressure drop
- Unreliable hydraulic control
- Limited space (only 6") for water meter
- Unable to control water pressure and water amount

The Solution

Singer's MV Electronic Control with Metering plus Anti-Cavitation Trim and automated rate-of-flow control package

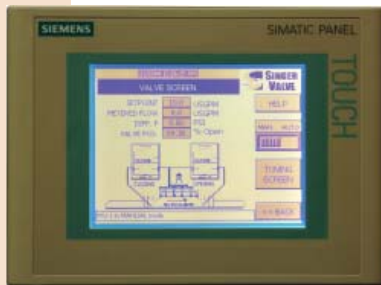
The Result

- Handles high pressure without cavitation
- Controls water volume
- Verifies water usage
- Monitors valve remotely

California Pumping with Singer Metering Valve

Las Flores, California – In Southern California's semi-arid climate, the Santa Margarita Water District relies on imported water to supply its 48,000 residential and commercial customers. At its Plaza Pump Station, one of 17 in the district, source water was coming in through a hydraulic control valve, which wasn't functioning consistently. The high-pressure differential was a concern because it was causing cavitation in the control valve. And the district was unable to measure the amount of water being pumped from another water agency.

"Sometimes we'd pick up too much water, sometimes not enough," says Steve Notch, senior maintenance mechanic for Santa Margarita Water District. "We were breaking 100 pounds of pressure across that valve. In addition to not knowing how much water we were flowing, the valve was cavitating itself to death."



"Singer offers an application guarantee," says general manager Kari Oksanen. "When we receive all the field information and recommend a Singer solution for that application, we guarantee that the valve will perform."

Notch knew he needed a valve that could handle the pressure in the cavitation zone. His first consideration, a ball valve, wouldn't suffice. After successfully testing Singer's Anti-Cavitation Trim for six months at another trouble spot, Notch thought a Singer valve could solve the pump station problem. "Our first Singer valve worked great," says Notch, "so it was natural to look into other applications."

After speaking to a Singer field representative, Notch realized he could add features like the Anti-Cavitation Trim to a Singer valve, just like buying a car and ordering the options.

The result is that one Singer valve at the Plaza Pump Station performs several functions. The valve features Singer's Anti-Cavitation Trim so it can handle the pressure drop. The valve is a solenoid flow control valve with metering functions that allows Santa Margarita to control and verify the volume of water taken. And it has an automated control panel so the valve can be monitored either on site or from a remote location. "Now we can break 100 pounds of pressure across that valve," says Notch, "and it solves the guessing game of how much water we're flowing."

"When an agency bills us and tells us how much water we used for the month," he adds, "we verify the volume with our Singer Metering Valve."

Since then, Santa Margarita Water District has installed six Singer valves and has added Singer control systems on other valves.

About Singer's customer service and technical support, Notch says it doesn't matter whom he contacts at Singer because he always gets results. "Sometimes they call me and ask me how everything is going," says Notch. "That's outstanding."

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Benefits of Singer's Electronic Control Valve with Metering

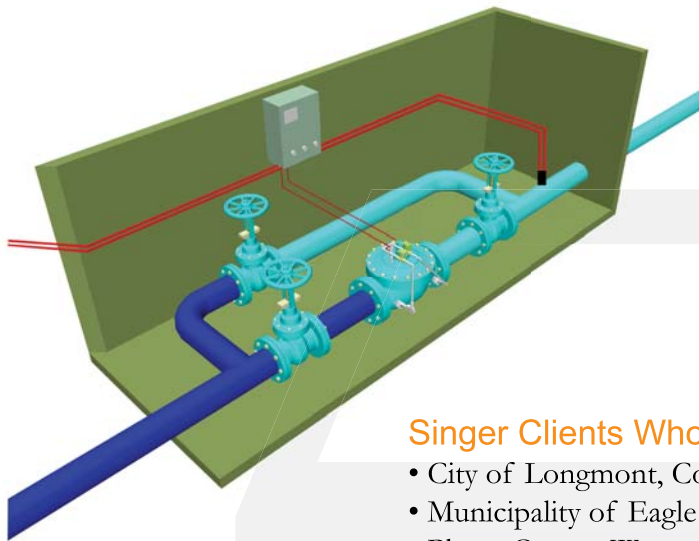
- Ideal for limited spaces; straight runs unnecessary for accurate readings
- Weather-tight box interfaces with PLC (programmable logic control)
- Measures within 2 to 5% accuracy
- Controls the flow by precise positioning of the valve
- Separate flow meter not required; valve is all-in-one package
- Can be customized to the system application requirements
- Easy user interface with Optional HMI (Human-Machine Interface) touch screen

Why It Works

- Controller is designed, programmed, built and tested in Singer's factory
- Controller is tested in Singer's factory with the valve for accurate control and reading
- Extensive testing conducted during research and development
- Direct Singer support

Did You Know...

Singer designs and manufactures PLC-based panels. The electronic control panels incorporate industrial PLC to control multiple processes such as pressure reducing, flow control and inlet sustaining.



Singer Clients Who Use It

- City of Longmont, Colorado
- Municipality of Eagle Mountain, Utah
- Placer County Water Agency, California
- Port Perry, Ontario, Canada
- Boucherville, Quebec, Canada

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