Singer Pilot Guarantees Water to Desert Pilgrims

The Client
Ministry of Public Works and Housing, Saudi Arabia

The Challenge
• Broken pipes
• Faulty pilot
• Flooding

The Solution
Singer's Model 160 Pressure Reducing Pilot

The Result
A dependable pressure reducing valve with no line breaks

Uniquely designed, the Singer Model 160 Pressure Reducing Pilot is self-cleaning and self-flushing, thereby eliminating debris build-up. It also minimizes turbulence and false readings.

Mina, Saudi Arabia – Imagine a barren desert valley gradually teeming with two million people during the annual Islamic pilgrimage called the Hajj. Now imagine the demand for shelter and sanitation.

The Mina Valley, located between the city of Makkah and the Plain of Arafat, is one of the pilgrimage's seven locations. To accommodate the pilgrims who must overnight before traveling on, the government of Saudi Arabia provides them with shelter in residential towers and tents. The Mina Pilgrims Accommodation Project, in association with the Ministry of Public Works and Housing, was involved in constructing one of the housing projects.

Over time, however, the housing project's water system was plagued with problems. Multiple broken pipes and a dysfunctional pressure reducing valve flooded the entire area. Frustrated and uncertain about how to solve the problem, Abdul Rahman of Hussain Al Ali Contractors contacted Singer Valve Gulf Region manager Ramzi Soujah.

"The pressure reducing valves in question had completely stopped regulating the pressure for quite some time," says Soujah, after he had inspected the site. "The pressure reducing pilots required five or six turns before a pressure change was noted downstream."

Soujah also noticed the pilots' sensing ports—where it senses the increase of downstream pressure—were extremely small and susceptible to being plugged by dirt and mineral build-up.

Soujah replaced the faulty pilot with a Singer Model 160 Pressure Reducing Pilot. Immediately, the valve began to regulate the pressure. Needless to say, Rahman and his team were relieved and pleased.
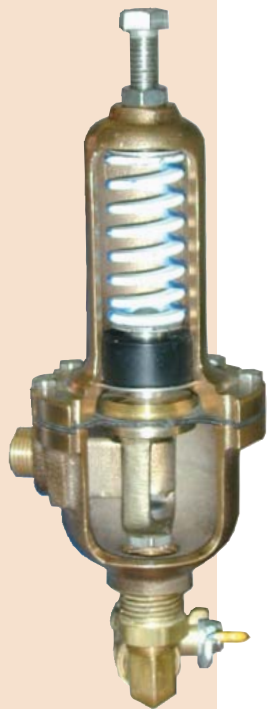
"I was extremely pleased with the quality and design of the Singer pilot," says Rahman. "The pilot has operated beautifully ever since."

Uniquely designed, the Singer Model 160 Pressure Reducing Pilot has a non-clogging pilot guide stem above the diaphragm, which is totally removed from the flow of water in the main pilot chamber. Because the outlet is located in the bottom of the pilot, 90 degrees to the inlet, the pilot is self-cleaning and self-flushing, thereby eliminating debris build-up. It also minimizes turbulence and false readings. The pilot, therefore, was the ideal solution for the Mina housing project's situation.

After observing positive results with the Singer pilot, the contracting firm purchased Soujah's entire stock of Model 160 Pressure Reducing Pilots. Now they're evaluating where to place other Singer products.

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Benefits of Singer's Model 160 Pressure Reducing Pilot

• Cleans and flushes automatically
• Requires low maintenance
• Offers precise control
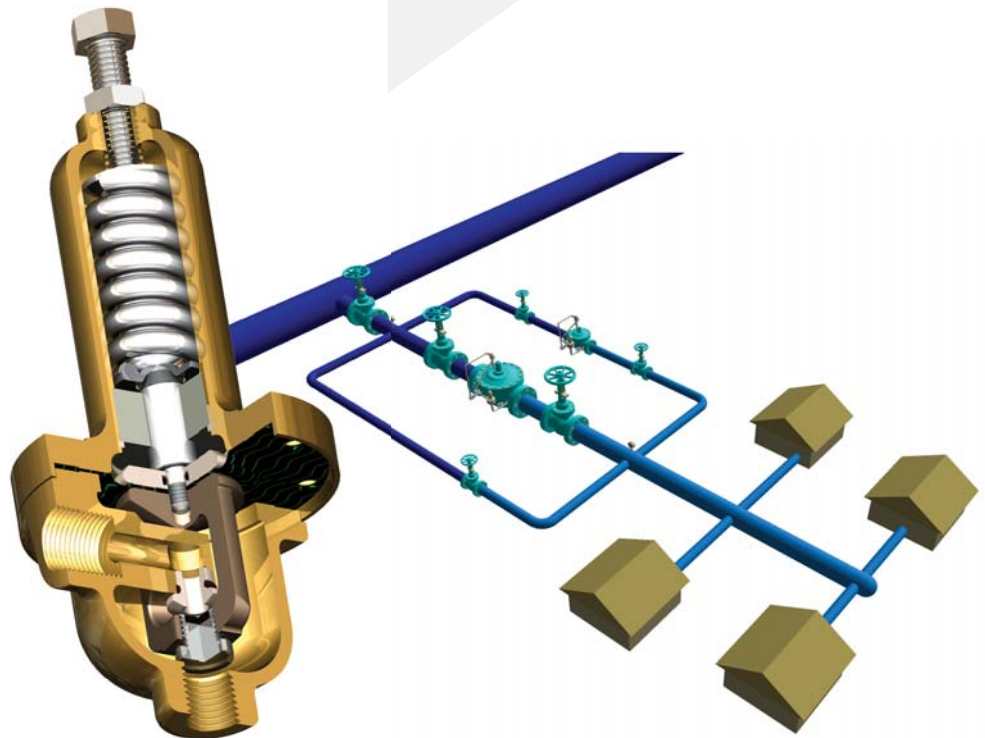• Provides long-term repeatable accuracy

How It Works

Model 160 is a spring and diaphragm operated, normally open pilot. The inner valve is held open by the spring. When the control pressure below the diaphragm exceeds the force of the spring, the pilot valve closes.

Singer Clients Who Use It

• Los Angeles Department of Water & Power, California
• Aguas de Barcelona, Barcelona, Spain
• Hidrocapital, Caracas, Venezuela
• Virgin Valley Water District, Mesquite, Nevada

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