

The Client

Regional District of
Central Okanagan,
Kelowna, British
Columbia

The Challenge

Finding a sewage
pressure relief valve
that can handle high
pressure

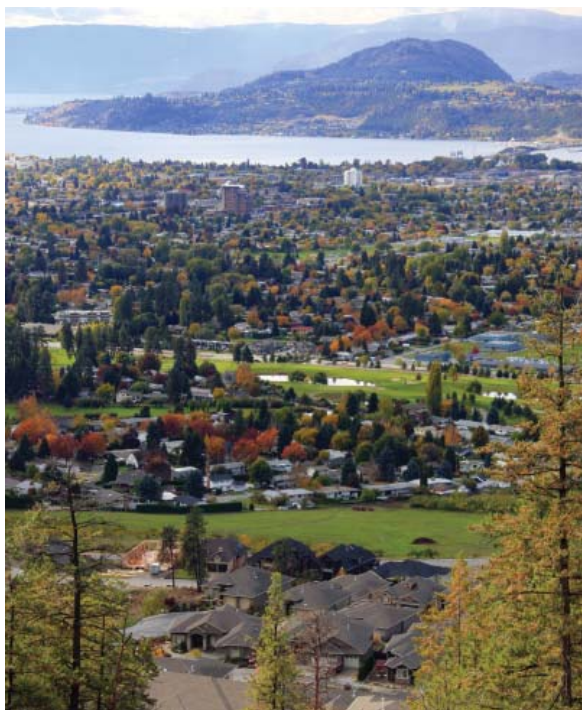
The Solution

Singer's Dynamic
Lifter®—Sewage
Pressure Relief
Valve

The Result

A reliable pump
station with 100%
surge protection

Singer Valve Prevents Surges at Sewage Lift Station



When choosing the best spot for the Casa Loma lift station near Kelowna, B.C., the Regional District of Central Okanagan chose a scenic location next to Lake Okanagan. As the sole pump station in that area, it pumps raw sewage 210 feet (64 m) higher than the sanitary sewer trunk. But, with such high pressure and two large pumps, the pump station required extra protection in the event of either power or pump failures.

John Robins of Robins FloTech Ltd, Singer Valve's representative in British Columbia, suggested that the district consider Singer Valve's dynamic lifter. Robins, along with Stantec Engineering, helped the district find the right solution.

"We wanted surge protection," says Jim Kentel, civil manager at Stantec Engineering in Kelowna, B.C. "That's where Singer Valve came in."

"The beauty of the Dynamic Lifter is that it works," says Brian Blann, president of Singer Valve. "And because maintenance can be done in-line, the valve is easy to check."

"The Dynamic Lifter enables the pump station to pump raw sewage with high head applications," says Kentel. "We wanted to provide the operators with a reliable and low maintenance solution."

Unlike other sewage pressure relief valves, the Dynamic Lifter works because the interface chamber combines with the piston to force the valve open using full system pressure throughout the surge. Because it permits larger relief flows, it minimizes over pressure. Other sewage pressure relief valves don't open fast enough or wide enough for the application. The Singer version, however, opens quickly and fully and it has an adjustable closing speed to prevent closing surges.

Although the valve is available as spring-and-oil operated, the Casa Loma Lift Station has the air-operated version so it can handle the high pressure quickly and efficiently.

"We're always cautious with domestic sewer because of the material," says Kentel. "The inconsistencies in material size can block pilots and affect servicing. However, the operators haven't reported any problems since the Singer valve was installed."

The Dynamic Lifter can handle large solids and it can be serviced easily by applying external pressure (such as a hand pump) to the test connection, opening the valve for routine maintenance.

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Benefits of Singer's Dynamic Lifter® Sewage Pressure Relief Valve

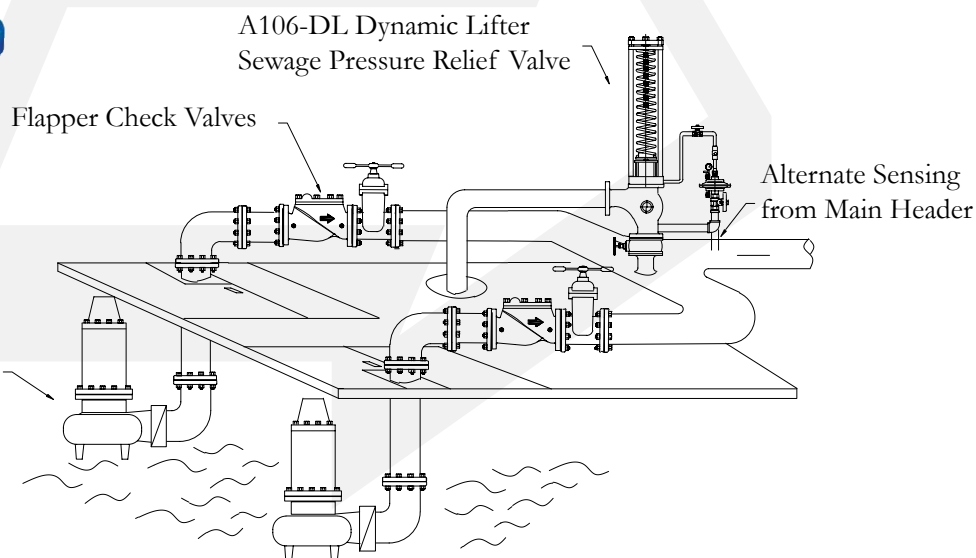
- Boosted opening minimizes surge pressure
- Premium materials for low maintenance
- "No tools" field cycle and operation test
- Adjustable closing speed
- In-line maintenance possible
- Available as spring-and-oil operated or air-operated

How It Works

Singer Valve's Dynamic Lifter® is a direct-acting spring-loaded relief valve that is adjusted to open when the pressure exceeds the setpoint (about 10 per cent above the normal operating pressure). The valve closes drip tight when pressure falls below the setpoint. The air-actuated design is used for higher relief pressures or where pressurized air actuation is preferred.

Did You Know...

By closing the sensing ball valve and applying external pressure to the test connection, the Dynamic Lifter may be cycled open for routine maintenance. Neither tools nor disassembly is required.



Singer Clients Who Use It

- Public Service Commission, Tijuana, Mexico
- Halifax Regional Municipality, Nova Scotia, Canada
- Borough of Phoenixville, Pennsylvania

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