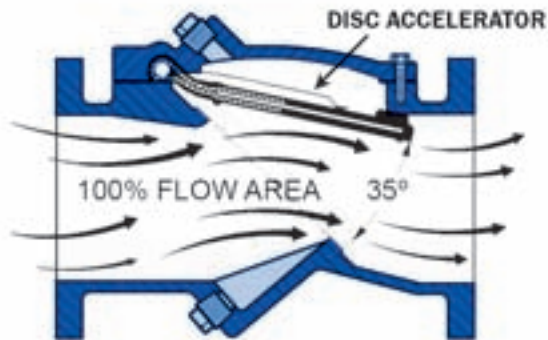


PRODUCTS IN ACTION



By Rachel J. Hartman

shutting down valve slam



A special kind of check valve solves the common problem of valve slam in Fresno, Calif.

The Problem of Valve Slam

The city of Fresno Water Department in California was experiencing valve slam at its well stations. Slam occurs after pump stoppage, when the system flow reverses back toward the pump before the valve is fully closed. Once the valve closes, this causes a sudden stoppage of the column of water and resultant water hammer, which could cause serious damage to the pumping system.

Initially, the city installed globe control valves in the well stations; however, these valves failed to prevent slam. In a second attempt, a competitor's plug valves with actuators and pulse cards were installed to slow the flow and thus prevent slam. However, the competitor's valves allowed significant flow reversal prior to the valve being fully closed. As a result, the valves experienced slam and potentially damaging pump impeller reversal in the vertical turbine pumps.

Successful Solution

A Val-Matic representative in northern California, DL Equipment, recommended the city install a Surgebuster check valve at the pumping station. The Surgebuster check valve closes quickly to help eliminate slam. It works by achieving rapid closure through a short disc stroke of 35 degrees and allows for 100% full flow area. The Surgebuster is equipped with a disc accelerator, which is a precision-formed stainless steel mechanism that works by closing the valve disc rapidly, thus minimizing flow reversal and resultant water hammer.

DL Equipment is confident in Val-Matic Valve's performance and offered the city 90 days same as cash to try the Surgebuster. The city decided to install the Surgebuster, and within a week, they called DL Equipment to say the valve successfully stopped the slam.

More Replacements

The city of Fresno has placed additional check valve orders and is replacing its pumping station valves with the Surgebuster at a rate of one valve per quarter for the next four years, focusing on the city's most demanding well stations. [www](#)

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ARTICLE SUMMARY

Challenge: Fresno's water department was experiencing valve slam at its well stations—a problem that could cause serious damage to a pumping system.

Solution: The Surgebuster check valve, which achieved rapid closure and was equipped with a disc accelerator, quickly eliminated the problem.

Conclusion: The city has been pleased with the new valve's performance, prompting it to and replace all its pump station valves with new Surgebusters.

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