

Howell Water Treatment Plant - High Service Pump Station



PROBLEM: The city had 4 pneumatic pump check ball valves installed for several years. They have had several issues with the valves sticking closed and open. Operational problems and parts issues became more apparent as the valves aged. Recently two of the pumps were upgraded with VFD controls and the pump checks were changed to air cushioned swing checks. The other two pumps are to stay with on-off controls or as the city describes “gun and go”.

SOLUTION: The city decided to use APCO spring loaded rubber flapper swing check, model 100SR. Two items intrigued the city personnel ; first – the rubber flapper seating edge is at a 45% angle which means quick closure and still opens to a full port area, second – the adjustment spring is easily adjustable from the outside of the valve with no disassembly required, also the valves can be adjusted quickly if the system pressure changes. Having a free moving rubber disc also that is sensitive to the pipeline pressure works very well in this application.

The valves were purchased with a factory preset of 70PSI downstream and were never adjusted in the field. Both valves ran beautifully from the first operation. The city’s worst fear was to experience slams or bangs in their system at valve closure, this fear is now gone and to date the city has had no issues.

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