

Over the last several years, several local power generation facilities have needed to upgrade their circulating water system, in order to improve the performance and safety of this critical process system. FreeState Flow Solutions was called upon by several facilities to provide a cost effective solution to reduce the overall life-cycle cost and improve performance of these typically large and high maintenance valves. The Crispin K-Flo AWWA C504 Double Flanged Butterfly Valve has proven to be the solution that fits the bill.

K-FLO

BUTTERFLY VALVES



84" Crispin K-Flo Series 47 Supplied to a Power Generation Customer in 2015

Crispin K-Flo may be a new name to many engineers, end users, and contractors in the Midwest, but the valve is not new to the industry.

K-Flo Valve History:

- 1957—Dominion Valve designs the 47 Series butterfly valve.
- 1977—Keystone purchases the 47 Series design from Dominion Valve.
- 1997—Keystone/Tyco sells the 47 Series design to CMB Industries.
- 1999—CMB renames the brand to K-Flo.
- 2005—Crispin Valve purchases the K-Flo Butterfly Valve line.

The K-Flo butterfly valve has a proven track record and long history of success, in fact, many of the AWWA specifications that still list Keystone today were written around the 47 Series Butterfly Valve that is now being sold as the Crispin K-Flo.

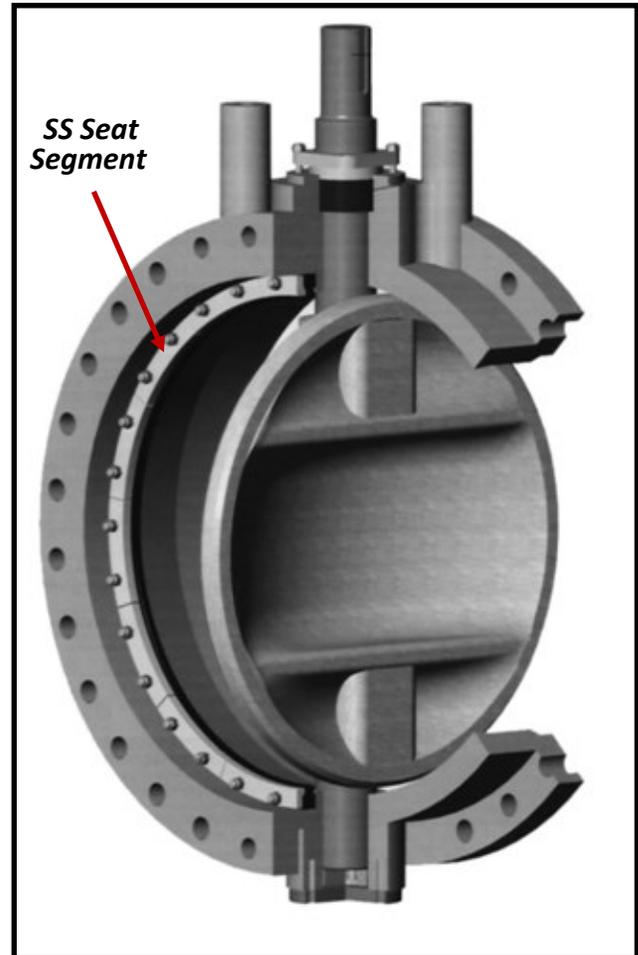
K-FLO
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Why does the Crispin K-Flo stand out from the competition? The technical attributes are unique as it relates to the seating surface and how it engages with the disc edge. The rubber seat is mechanically retained to the body using stainless steel hardware (as pictured on the right). This design allows for inline replacement of the seat onsite by plant personnel. Additionally, this design allows for adjustments that can provide quick and easy leak abatement. Click on the link to see a video that displays how easy it is to stop a minor leak with the Crispin K-Flo butterfly valve.

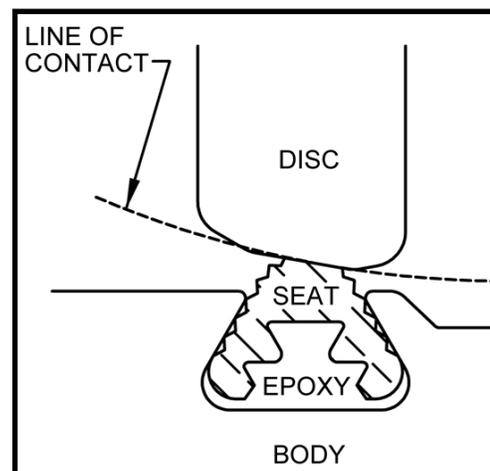
[YouTube Video of Seat Adjustment.](#)

The typical large diameter butterfly valve has a seat which is epoxied to the body of the valve (as pictured on the bottom right). In order to perform maintenance on these valves, the end user is typically required to ship the valves to the original manufacturer, or another outside valve repair facility, in order to remove and replace the seat. This is costly and requires a longer outage to make the necessary repairs.

The Crispin K-Flo is priced right up-front, is a drop in replacement for AWWA C504 flanged valves, and is readily available out of their factory in Berwick, PA. These factors make it an easy choice for your large diameter valve needs.



**Traditional Seat Design
with Epoxy Filler**





In 2015 FreeState Flow Solutions and Crispin K-Flo supplied four 66" Series 47 Butterfly valves to a local power plant to replace their existing Circulating Water Intake Valves.

This project included valves with bonnet extensions, new gear boxes, electric motor operators, expansion joints (from Holz Rubber), gaskets, and bolting hardware.

Beginning in 2013 FreeState Flow worked with another local power plant to replace valves in their circ water system. Sizes ranged from 24" to 84".

Existing valves were installed in an area that experienced turbulent flow which caused the disc to oscillate excessively in normal operation and requiring frequent valve maintenance. FreeState recommended replacing the existing valves with a more robust Crispin K-Flo butterfly valve designed to meet CL250 service combined with an AUMA GS gearbox. Following the installation of the K-Flo butterfly valves, the problem has been eliminated.





The Flagship Project for K-Flo Valves



In 2014 & 2015 FreeState Flow Solutions supplied eight 48" and eight 54" Condenser Isolation valves to a power generation facility in the Midwest. The scope of work included reverse engineering custom mono-flange valves. These valves replaced the original valves that had been a costly maintenance problem at the facility for many years.

Some of the valves are installed inside the condenser and bolted directly to the condenser wall. Double flanged valves were also installed on both the inlet and discharge piping.



FreeState Flow Solutions also provided service support to retrofit their existing motor operators onto the new valves. The combination of upfront engineering and field service at time of installation made this project one of the national highlights for Crispin K-Flo installations in the US market.

The major benefits to the end user were the low initial cost, gained reliability, and low maintenance cost moving forward.

Some Other Water Specialty Brands Offered by FreeState Flow Solutions

