

SEAMLESS UPGRADE ELEVATES PERFORMANCE

DA4 Mixproof Upgrade Replacement Insert - Nutritional Beverage

D4 Series helps fulfill today's customer demands for production flexibility, increased productivity, rapid return on investment (ROI), and improved product quality across the Food & Beverage, Dairy, Personal Care and Brewing process industries.

Challenge

A major healthcare company in the United States with a large installation of SPX FLOW equipment was looking to upgrade their existing APV brand DA3+ mixproof valves to the latest technology in order to improve processing performance of a difficult sugar and protein beverage. They also wanted to meet the current 3-A hygienic standards. The customer preferred to undergo this upgrade with minimal impact to cost, installation modifications, and downtime with their continuous production schedule.

Solution

The DA4-40 mixproof replacement insert fits right into the existing housing of the DA3+. This allowed the customer to easily upgrade to the D4 Series technology by simply swapping out the DA3+ insert with the DA4. This was done in a matter of minutes during a scheduled downtime interval and allowed production to restart almost immediately. The upgrade process saved cost and labor by not having to remove the existing housing and avoided welding any new pipework.

The DA4 insert was compatible with the existing proximity sensors, and the customer is also looking to upgrade to the latest control unit technology in the future.



The next generation of mixproof valve technology is the result of continued development from Waukesha Cherry-Burrell process technologies.



The DA4 has many improved features in order to improve performance and reliability:

Welded stainless steel actuator:

- Higher actuator spring force to close
- Fully enclosed to prevent wash down fluid ingress
- 72 psi / 5 bar minimum supply air pressure requirement for lower consumption
- Smaller actuator outside diameter for sleeker design

Open yoke between actuator and product zone:

- 3-A compliant design
- Avoids heat transfer into actuator
- Allows visual leak detection of damaged upper shaft seals

Axial design middle seat seal

- More resistant to water hammer and pressure surges
- Utilizes same installation tools and process as DA3+

In addition to the improvements, the DA4 captures the signature benefits of the DA3+ including extensive cleaning of the product contact surfaces, integrated flushing of the upper and lower shafts to eliminate external piping, and metal orifices in the seat area to control CIP flow during seat lift and reduce chemical and water loss consumption. The customer greatly values these features with their critical sugar/protein beverage and water/chemical loss key performance indicator (KPI) metrics.

