



Bray: Actuating change in the process industry

If you've spent any time in the process industry, the signature red profile of a butterfly valve from Bray International, Inc. is a familiar sight. For the last 30 years, the company's reputation in this market is second to none. When economic pressures forced the industry to focus on improved productivity, Bray had a choice to make, stand pat or actuate change. In an industry accustomed to going with the flow, actuating change can be challenging. How has Bray navigated global economic uncertainty and leveraged new technologies to become a leader in rotary valve automation and control?

By Deirdre Morgan & Sarah Bradley



Davenport, Vice President of Sales and Marketing, “allows us to develop products to solve real problems that real customers struggle with. Working directly with the end user, we can produce solutions tailored to fit their individual needs.” Bray has more than 50 sales, distribution and service offices around the world, staffed with highly trained flow control experts. This global network means the company can quickly react to the needs of their customers no matter where they are. In today’s digital world, communication is no longer restricted to the office during normal business hours. The rise in digital and social media gives customers 24/7 access to information, and providing that information is no longer just optional. “We live in a world that is more connected than ever,” states Mark Ricks, Digital Marketing Manager, “this unprecedented connectivity opens up new channels for communication giving us insight into customer needs like never before.” He goes on to explain, “Analyzing the data generated by these digital interactions allows us to monitor and react to industry trends in real time, further improving customer experience.” Bray stays connected with its global customers online at bray.com and on social media platforms like LinkedIn. Engaging with their customers has given Bray a clearer understanding of the challenges they face. Equipped with this knowledge and guided by strong leadership, the company has developed solutions to help their customers meet those challenges. Through a series of

strategic acquisitions and considerable investment in R&D, Bray has quietly built a formidable line of fully automated flow control solutions for every application.

Developing solutions

Over the years, this customer-focused approach has led to the development of solutions for many of their customer’s challenges. For instance, at one time a technician was required to manually open and close a valve, resulting in inefficient operation and an unsafe working environment. With the advent of automation technologies came safer working conditions, improved efficiency and more control over the quality of the final product. Further advancements led to the rise of smart controls and monitoring devices, which offered even more control of the process media. While these innovations solved many problems for the end user, procuring each of these components from a different manufacturer and then ensuring reliable operation of the entire assembly was still a struggle. Recognizing this struggle Bray began positioning itself as a single source provider of complete automated flow control solutions. Designing the valve, actuator and control devices to work together as a single unit improves reliability and reduces both initial cost and total cost of ownership. The importance of component compatibility cannot be overstated, as Brian Daugherty, Global Product Manager of Actuators and Controls explains, “Our customers don’t have to contact multiple

Understanding customer needs

“It all starts with our customers,” explains Ken Ricard, Global Marketing Manager, “at the end of the day, our success is linked to the success of our customers.” Recognizing the correlation between their own success and that of their customers, the company works hard to maintain close relationships with end users. “Keeping the lines of communication open,” says Mike





Bray Technical Center, Houston, TX, USA

suppliers just to start up their equipment, one call to their local Bray representative and they are up and running.” Having one point of contact for all components makes start up and commissioning easier, ultimately improving overall productivity. Aside from the reliability benefits, providing the entire fully automated valve package also offers procurement advantages for their customers. According to Paul van Oudenaren, Global Product Manager of Ball Valves, “there are many advantages to sourcing each component from one place, foremost among these are faster lead times.”

Bray employs a dedicated team of engineers and product managers to design, validate and launch new products. At their research facilities in the US, China and India, this Rapid Response Engineering Team works around the clock to develop innovative actuation and control solutions. Utilizing their global team and working closely with end users allows Bray to engineer better products, faster. Bray’s actuation and control products, designed for seamless integration with their entire valve product line, ensure reliable flow control for any application. “The biggest value proposition we bring to the table,” Paul explains, “is leveraging our engineering expertise across all of our different product lines to develop packaged solutions for our customers.” This sets Bray apart from the competition.

Bray has developed several solutions for reliable quarter turn actuation including the Direct Mount Series 92/93 Extreme Temperature Pneumatic Actuator and the Series 98 Scotch Yoke Pneumatic Actuator.

The Direct Mount Series 92/93 extreme temperature pneumatic actuator

To better serve their customers in the power industry, Bray developed the Flow-tek Series M4. This severe service metal seated ball valve is primarily used for high pressure, high temperature steam isolation. In these applications, media often exceeds 1000°F (537°C) resulting in a considerable amount of heat transfer from the top of the valve to the bottom of the actuator. As Brian explains, “these severe conditions surpass the temperature ratings of our standard Series 92/93.” A common method for dealing with the heat transfer in these applications is to install a bracket, creating separation between the valve and actuator. While the additional bracket reduces the heat transferred to the actuator, it increases the potential for hysteresis. “A large percentage of valve failures are actually caused by misalignment of the actuator,” explains Paul, “a direct mount actuator significantly reduces the chance for misalignment, lowering the likelihood for valve failure.” Bray developed the Direct

Mount Series 92/93 Extreme Temperature Pneumatic Actuator as a reliable solution for these critical, severe service applications.

The Series 98 Scotch Yoke pneumatic actuator

For reliable actuation of larger valves, Bray’s engineers developed the modular Series 98 Scotch Yoke Pneumatic Actuator. Fully configurable with symmetric or canted yokes, multiple pressure module sizes, and spring module options, the base Series 98 actuator will meet customers valve automation needs.



The Flow-tek Series M4 with Direct Mount Series 92/93 Extreme Temperature Pneumatic Actuator.



For application specific requirements the Series 98 offers additional options of extended travel stops, manual overrides and a hydraulic damper which is used for fast valve stroke applications. Engineered for efficiency, the compact design of the Series 98 generates output torques ranging from 10,600 to 885,000 in-lb (1,200 to 100,000 Nm).

In addition to reliable actuation, many customers need a way to monitor and control valve position. Monitoring and controlling hundreds, sometimes thousands of valves operating simultaneously in a given application can be a monumental task. To assist in this undertaking, Bray offers several control devices including the Series 6A Smart Positioner for pneumatic actuators and the Servo NXT for their Series 70 electric actuators.

The Zero-Bleed Series 6A smart positioner

Looking for cost effective ways to improve efficiency and reduce energy consumption, some in the process industry took note of the high costs associated with generating air to operate their valves. Valve positioners proved to be major culprits, accounting for a significant amount of air loss. To lower their customer's "bleed rate" or combined air loss from traditional valve positioners, Bray offers the energy efficient, Zero-Bleed Series 6A Smart Positioner for

pneumatic actuators. Mounting directly to the top of the actuator, the Series 6A controls and monitors valve position based on end user parameters. Designed for preventive and predictive maintenance, the Series 6A alerts the user to air leakage, packing and seat issues, control signal deviation and other potential problems. Detailing the features of the Series 6A, Shahrum Iqbal, Controls and Automation Engineer explains, "this device is designed to interface with most network communication protocols, which means the Series 6A seamlessly integrates with just about any end user



The Zero-Bleed Series 6A Smart Positioner

asset management system." Connected to their network, this smart positioner alerts the user to potential issues before they become problems, reducing downtime and ultimately saving money.

The Series 70 electric actuator with Servo NXT

To provide control and monitoring capabilities for their line of electric actuators, Bray developed the Servo NXT as an optional feature of the Series 70 Electric Actuator. Factory installed inside the Series 70 housing, this smart device combines precise control of valve position and advanced monitoring with seamless integration. The user-friendly design, features one touch auto-calibration for simplified commissioning and an easy to read on-board menu-driven LED display.

Looking to the future

Sustaining growth in the flow control industry requires keeping pace with emerging technologies and developing talent for the future. Bray continues to lead the way on both fronts, planning for the future without losing focus on their current customers. Ken explains, "While we will continue to expand our product offering through research and development, this will always be done with our customers in mind." As Bray International, Inc. continues to actuate change in the process industry, it's clear one thing will never change, their commitment to customer success.



Bray fully automated valve solutions operating in a cryogenic application.