FluoroSeal Inc. has been a leading provider of innovative solutions for the flow control industry for over three decades. From their alloy sleeved plug valves, their family of fully lined products, and their pneumatic rack & pinion actuators and accessories, FluoroSeal can offer a complete, single-sourced valve and actuation package.

By Brittani Schroeder and Sarah Bradley

FluoroSeal: Full-line, vertically integrated, specialty valve manufacturing

Valve World Americas recently spoke with Rob Enneking, Sales Manager Americas, and Mansher Singh, Project Manager, about what sets FluoroSeal apart from other manufacturers, their latest product developments, and their hopes for the future of the company.

Over the last 37 years, FluoroSeal has manufactured standard and customized valves and valve accessories for a wide range of markets including chemical, petrochemical, oil & gas, power, pharmaceutical, pulp and paper, and mining. Headquartered in Montreal, QC, Canada, the company has a global sales and distributor network, with more than 500 employees worldwide. FluoroSeal is a privately-held company which has been led by Ziad Homsy, President, and Robert Tian, Vice President, since 2000.

"Our owners are both engineers and have been in the valve business throughout their entire careers. They understand the market and the needs of our customers and are focused on our main goal: to satisfy our customers,"
said Enneking. Being part of a privately-held company also gives the FluoroSeal team a sense of flexibility. "If someone in our Missouri City, Texas facility has an idea, they can call the owners to explain the idea, the associated costs, and the benefit to the customer and many times have a decision about it by the end of the phone call. There is not a long, drawn-out approval process to get simple things done, which makes us a leaner, faster-moving machine than the bigger manufacturers out there."

Reaching milestones

FluoroSeal recently acquired Brdr. Christensen, a manufacturer of lubricated plug valves that services the oil and gas industry, and their wholly-owned subsidiary, Seguro, who manufactures rubber seated gate valves for the water and wastewater industries. "Over the last 18 months, we have reorganized into the FluoroSeal Group, which was made necessary by these acquisitions," relayed Enneking. "We are very excited about the acquisitions because they will allow us to expand our presence in the oil and gas industry with the Christensen line, and the water/wastewater industries with the Seguro line."
Acquiring Brdr. Christensen and Seguro was a strategic move for FluoroSeal as the products that the newly acquired companies manufacture compliment FluoroSeal's core product lines. "This decision will help

FluoroSeal | Automated Steam Jacketed Sleeved Plug Valve.

us move deeper into markets we have only slightly penetrated before," explained Singh. "For example, the Christensen lubricated plug valves service applications such as oil and gas transmission lines, pipelines, and storage facilities, where traditional sleeved plug valves are not regularly used. We are happy to begin our journey there."

Staying connected

Acquisitions are not the only way FluoroSeal is staying connected in the marketplace. The company is active in several

FluoroSeal | PFA Lined Spring-loaded Piston Check Valve.

FluoroSeal | Lined Ball Valve.

industry organizations, including API, ISO, ASME, and MSS. “We are a voting member in many of these organizations, and are actively making connections through the members we meet,” explained Enneking. “API, for example, is comprised of end-users and manufacturers/contractors; MSS is for manufacturers, and the others are a mix. In other words, we can interact with a lot of professionals and stay on top of the trends in the market.”
FluoroSeal also attends some industry-specific conferences and expos, such as Valve World America and Valve World Europe. “We attend those kinds of events to help us stay ahead and to see what is happening in the marketplace. The large exhibition and the technical conferences are outstanding opportunities to learn,” continued Enneking.

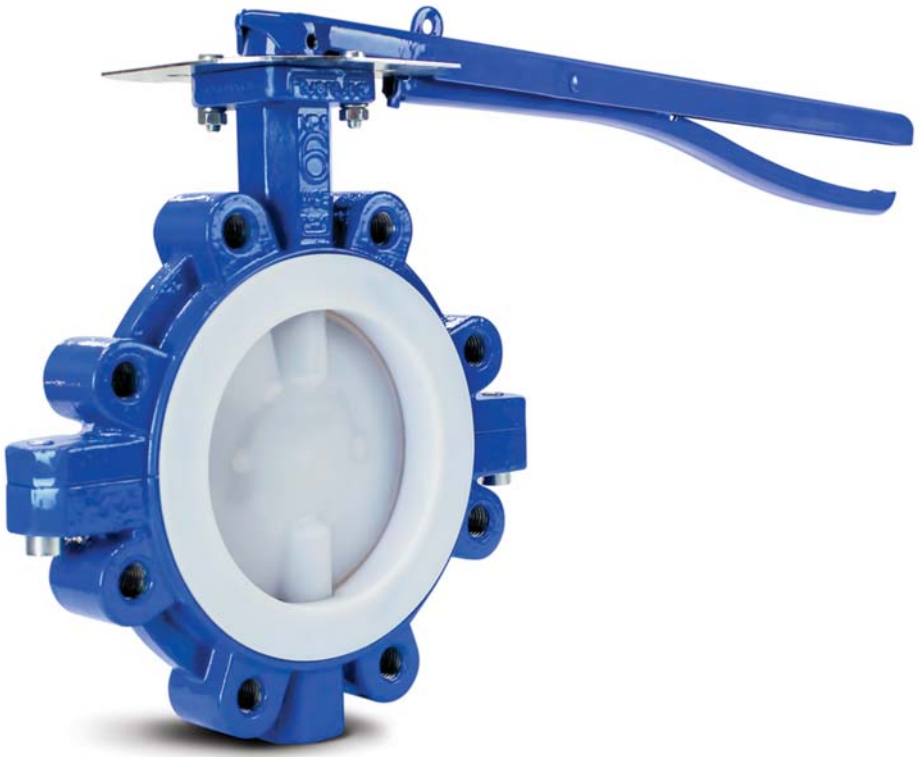
Serving the customer

By staying on top of market trends, FluoroSeal can develop products that solve customer problems. “We definitely listen to what our customers say. Through recent interviews, we learned that our customers wanted a PFA-lined check valve that would function in any orientation. That prompted us to develop our PFA lined spring-loaded piston check valve. A spring-loaded piston check valve has many advantages over other types of check valves. Whereas other check valves such as swing check, ball check, and poppit check rely on gravity or back pressure to seal the valve, a spring-loaded piston check can be installed into any orientation because it does not rely on gravity or line pressure to properly function.”
In today’s world, required end-user deliveries are becoming shorter and shorter due to several factors such as reduced project lead times, reductions in planning personnel, etc. To satisfy the end-user delivery requirements FluoroSeal maintains a large stock of inventory in all global locations.
“We stock a lot of finished product,” said Singh, “which means we will have it when the customers ask for it.”
To provide the best service to its clients, FluoroSeal has implemented a fully integrated supply chain which includes three wholly-owned foundries. “We produce the vast majority of the castings we use in our products which allows us to control our lead times,” stated Singh. “We are not at the mercy of third-party foundry production schedules or capacity restraints which benefits our customers and us.” More importantly, by producing most of their own castings, FluoroSeal is able to control casting quality which helps ensure a quality end product.

FluoroSeal | EZ-Seal® Lined Plug Valve with ISO Bracket.

Providing the full package

FluoroSeal products have both technical and commercial advantages for the customers. “We have a major advantage over other sleeved plug valve manufacturers. We not only supply fully rated ASME Class 150 sleeved plug valves but also supply fully rated Class 300 and Class 600 valves - not all manufacturers can do this. We are able to do this because of our unique corebox design and how we control stresses which are applied to our sleeve,” Enneking explained.
FluoroSeal’s sleeved plug valve line include 2-way and 3-way versions, standard and fugitive emission designs, regular and full port, fully and partially jacketed versions, double block & bleed, cage control designs, characterized openings for special flow control, as well as special service modifications such as oxygen, chlorine, and HF Alkylation. “The jacketed versions of the sleeved valves work well in applications where the media needs to be heated to stay in the liquid phase. For example, media such as sulfur, plastics, and resins needs to be kept hot to stay in the liquid state or else they solidify. The jacketed sleeved plug valves ensure that the material remains in its intended state,” explained Singh.
Another offering for both the FluoroSeal sleeved and lined plug valves is the EZ-Seal adjustment system. The EZ Seal adjustment system provides a different means of adjusting both the stem seal and in-line seal. It also provides local indication of how much valve life is remaining. “The EZ-Seal was a product we developed, designed, patented and introduced into the market. FluoroSeal is the only manufacturer who can supply this unique adjustment system,” Enneking stated. The EZ-Seal uses an easily accessible single bolt adjustment as opposed to multiple adjustment screws. This eliminates the possibility of sideloading the plug or stem packing when making an adjustment.
In FluoroSeal’s fully lined valve family, there is the standard lined plug valve, lined butterfly valve, lined full port ball valve, and the lined piston check valve. “All of our lined products are designed for applications where the process



FluoroSeal | Lug Lined Butterfly Valve.

FluoroSeal | Automated Severe Service Sleeved Plug Valve.

media is corrosive. Our customers use the lined valves when they want the chemical resistance of a high alloy product but at a more economical cost," said Enneking.

To round out their offering, FluoroSeal supplies fully automated valve packages. "We have a pneumatic rack & pinion actuator, as well as a full line of accessories that includes solenoid valves, limit switches, positioners, speed control devices, manual override gears, and more. We think it is essential to provide a single-source automation package to our customers" Enneking said.

Product traceability

One feature that comes standard with every valve manufactured and sold by FluoroSeal is a unique serial number. This serial number is traceable back to a specific test sheet, which allows the company to determine when the valve was built, when it was tested, who tested it, what type of pressure testing was performed, and what the heat numbers were for the major components. "In my experience, I have not seen many manufacturers who serialize all of their valves. They will serialize some, if any, but not all," said Singh. Giving every valve a serial number provides traceability to the testing information, as well as the material certifications and the certified test reports for the valve body, plug, disk or cover.

Emissions resistance

Over the last 15 years, FluoroSeal has noticed that the market requirement for low emission valves has changed from occasional requirement to the norm. "All of our products by design have good emissions resistance because we saw that trend emerging in the marketplace. When we designed our PFA lined ball and butterfly valves, we designed them specifically for tight emissions control. We have incorporated live loaded stem packing which provides tight emissions resistance as a standard on our lined ball and lined butterfly valves," Enneking described. "I think all of our products have been designed with emissions resistance in mind, whether it is some of our older/more established products or our newest products."

> *"We are very excited about the acquisitions because they will allow us to expand our presence in oil and gas and water/wastewater.*

"When it comes to applications such as toxic or hazardous media, FluoroSeal can offer a standard sleeved plug valve or the Fugitive Emissions (FE) resistant version which provides better emissions resistance to the atmosphere," Enneking said. The primary seal to the atmosphere in both designs is the compression of the sleeve or body liner between the valve body and the plug making the stem seal indeed a secondary seal. The stem seal on the standard design incorporates a series of fully adjustable diaphragms while the FE version utilizes integrally live loaded packing as well as a mechanically loaded outboard gasket. "Our sleeved plug valves are uniquely designed for emissions resistance to the atmosphere. That means that our 'standard,' off-the-shelf valve is going to have the same emissions resistance to the atmosphere as other manufacturer's top-of-the-line fugitive emissions valve, which in the end provides a cost-benefit to our customers," said Singh.

Looking ahead

FluoroSeal began as a specialty valve company over 37 years ago, and their focus on creating the perfect valve for their customers is still a driving motivation today. "As we go forward, I think the most important thing will be listening to our customers and providing them what they really need," said Enneking. "We want to branch out into new markets with our acquisitions, while also taking care of our core product lines. We are definitely looking forward to the exciting times we have ahead of us."