COVER STORY

RPV. the "worldleading valve stockist", has supported their customers globally with Goodwin International dual plate check valve stock from their facility in Suffolk. UK for over 20 vears to date. With over 7,000 comprehensive product lines stocked, RPV recently added to this extensive valve stock with a multi-million order of Goodwin's nonslam axial flow check valve.



By Lucien Joppen

Examples of our (Goodwin International and RPV.) major end-user clients are BP, Royal Dutch Shell, Chevron, Total, Saudi Aramco.

RPV, the "world's leading valve stockist", expands its portfolio

fter carefully analysing the market's historical enquiries and purchases, RPV chose to stock Goodwin International's axial valve range. They ensure that the right valve is on the shelf, ex-stock, for even the most critical applications when their clients need it most. Due to the demanding needs of RPV's customers, it has always been necessary to stock high-quality valves in low-temperature carbon steel, as well as exotic material such as 316 stainless steel, duplex/super duplex stainless steel, Inconel, and even Hastelloy.

RPV's initial, multi-million-pound investment into axial valves has mirrored the same philosophy as other product lines held, investing in high-quality products from low-temperature carbon steel, as well as exotic materials.

High service level

RPV has been in business for more than a quarter of a century. "The philosophy back then was the same as it is now", says Robert Palmer, founder of RPV. "RPV provides valves critical to the oil and gas industry on short lead times. We hold large levels of high specification varied stock which is key for us so we can provide our extremely short lead times for our customers'.

"We can also quote, receive orders, process, quality check, and ship in less than 24 hours which is the level of service our customers need and expect. We are on hand to assist during emergency or scheduled shutdowns to offer replacement valves when needed at a delivery time which suits the project or end-user when time is of the essence or when the client simply cannot wait for a manufacturers' lead time."





RPV has over 7,000 product lines and at the beginning of 2020 added the solid disc axial flow check valve to their product range.

our customers as we continue to expand our operations."

Turbulent-free flow path

Focusing our attention on the non-slam axial flow valve, which is the latest addition in the Goodwin-assortment in RPV's inventory, the non-slam axial style valve is a flanged solid disc valve fitted with CFD modeled streamlined internals. Its performance has been verified by physical testing. The internals allow for a turbulent-free flow path around the disc and diffuser, which provides a high-pressure recovery, minimising the pressure drop across the valve. A low-pressure drop can be associated with energy savings in plants, which makes the axial valve a green and competitive solution when considering full valve life cycle costs.

"Similar to the Goodwin International dual plate check valve, the Goodwin style axial flow check valve features a light-weight disc. Accompanied with a short stroke length, this ensures that the valve will respond quickly to a change in flow. The fast response ensures that reverse velocity cannot build and damage equipment", states Steven Withers, Quality Assurance Director of RPV.

Gap in the market

Boasting over 18,000m² of warehousing, testing, and machining facilities to date across their UK site, RPV has continually invested during quieter periods, as well as expanding and taking on new product ranges. This continued improvement and investment in its extensive high-quality product ranges sets RPV aside from its competitors, the company states.

The continued growth of the company is also reflected in the opening of a brand new warehouse and office space over 1,000m² in size, in Pasadena, Texas, servicing the US and Canadian markets as a stockist. In 2019, it was the right move for RPV to have stock on the ground in the USA, Robert Palmer says.

"We knew that there was a gap in the market for a stockist in the USA and since we have such a presence out there", Palmer says. "It seemed like the logical progressive step that should be taken for us to be able to better respond and address the needs of







RPV has taken on a new range of products in the non-slam axial flow check valve. The company states that it has invested in the latest technology even during market downturns and uncertain times.

Lead time reduction

RPV states this valve is specifically used in applications where reliability and high performance are paramount. Its speed of response and dynamic behaviour prevents unwanted phenomena such as slam and water hammer from occurring, which in turn prevents damage to the system it is installed within.

"Having supplied to Robert for over two decades, we have seen first-hand his uncanny ability to predict what the market will need and have it stocked in his warehouses for when it has been required", says Matthew Goodwin, Managing Director of Goodwin International. "By working with us and analysing historic sales, Robert knows what valves are out there are have been required globally and from this decided to become the first major global stockist of axial non-return valves. This will massively reduce lead times on what is typically a non-stock item helping our customers when they need rapid delivery



and carving out yet another niche for RPV to excel at."

Extra protection for critical applications

Due to the significance of the investment RPV made in Goodwin International's axial check valves, it was written about as a notable item in the chairman's statement of Goodwin PLC's (Goodwin International's parent company) annual report, which was released to the London Stock Exchange last August. Increasingly, on critical system designs, it is necessary to have a redundant safety valve with a different failure mechanism. "Having both the dual plate and axial valve products gives us the ability to meet customer requirements for dissimilar check valve products offering projects a fail-safe solution, a requirement which we are seeing more and more frequently", says Sarah Mower, Sales Manager of RPV. "We have noticed the demand for installing dissimilar check valves has increased with some of the major key end-users who want to provide that extra protection for critical applications where the safeguarding of expensive equipment is paramount."

Custom advice

The axial valves in RPV's stock inventory can be specifically modified if required by the customer's process conditions. RPV has the capability, knowledge, and expertise to review process conditions and adjust the valve dynamic response at their facility according to the data provided by the customer. RPV has also completed an official training programme by Goodwin International to analyse the flow conditions utilising Goodwin International proprietary software. They have trained engineers ready to adjust a valve as necessary, which allows RPV to address various process flow conditions on an ex-stock basis. By doing so, RPV can ensure a valve operates at its optimum performance level, reducing pressure drop and increasing the longevity of the valve.

Challenging

No different from every company and individual around the world, COVID-19 appeared out of the blue early on this year. This has had a profound effect on the business as certain routines had to be rapidly changed, with different rules and regulations being imposed in different countries simultaneously. To juggle with the requirements at home and overseas, as the majority of RPV sales are exported, has been an extremely challenging time. "I am pleased to confirm that RPV has responded proactively and soon adapted their operations during the COVID-19 pandemic and

of course, keeping its employees safe during

this time has been paramount. Throughout

the pandemic, measures were immediately taken internally to adhere to all government advice at all times and with the precautions taken. Everyone has been kept safe whilst working at RPV", says Kevin Frost, Finance and Operations Director at RPV.

Remote inspections

There have of course been some unavoidable disruptions. These have given RPV some challenges, as many of the ports and airports across the globe locked down initially and, due to the remote working of its customers, setting up to perform supplier payments remotely caused a few delays. "However, in all instances, we have worked with our customers and all of our business processes have worked out in their entirety", Kevin Frost says.

Steven Withers, Quality Assurance Director at RPV, adds: "Additional investment in our testing facilities due to COVID-19 has allowed us to deliver seamless remote monitoring of functional tests by our customers anywhere in the world. The technology that we have adopted has been working extremely well, with customers or third party inspectors engaged on their behalf to be able to safely perform inspections without physically being on the premises. We have successfully conducted remote inspections of high-pressure gas testing, full cryogenic low-temperature testing, as well as non-destructive testing such as dye penetrant inspection, magnetic particle inspections and coating inspection of valves that we have painted with multi-coat technical paint systems."

Open for business

Withers states that the benefit for "our customers is allowing an inspector to witness tests in multiple sites all over the world now in a single day, as many valve suppliers have had to introduce similar measures. This way of remote inspection is likely to carry on long after the pandemic has subsided, as it has brought about major efficiencies and time savings of inspectors travelling to sites. Performing inspection activities in this way has eliminated waste and increased the efficiency of time spent performing inspections." RPV's stock of the new axial flow check valve range was delivered during the height of the pandemic, with the final shipment to their warehouse in April 2020. To maintain safe operations of petrochemical plants, RPV has remained open throughout the pandemic to ensure that they could serve the needs of their customers, with urgent valves when they were required.

Testing

Delivering a quality product is paramount to RPV and as a reflection of this, the company has continually invested in state-of-the-art, in-house testing facilities.

In early 2012, RPV built a new engineering and testing facility to consolidate all testing into one building. Their in-house testing facilities consist of standard hydrostatic shell and seat testing, high-pressure gas testing, fugitive emissions, and helium testing, magnetic particle, liquid penetrant, and PMI. Steven Withers, Quality Assurance Director at RPV states. "We also can carry out PMI using the Optical Emissions Spectroscopy (OES) method, which is becoming an increasingly common requirement in end-user and project specifications to differentiate between low and high carbon grades of material." All testing activities can be witnessed at the site or remotely and can be signed off by a third-party inspector upon client request. The



test facilities at RPV are available as a standalone service if needed, but more importantly, these contribute to reducing lead times for RPV customers. "Valves no longer need to leave RPV's site to be tested, ultimately saving on shipping times when time is of the essence for our client", says Steven Withers, Quality Assurance Director.

Having their machine and test house means that RPV can re-pressure test valves if required and can carry out any customer-specific nondestructive testing. Furthermore, testing can be viewed via a website link from anywhere in the world, which has proven beneficial for inspections during the current COVID-19 pandemic.

The company now has full control over the testing process, meaning high priority orders can be expedited and shipped in less than 24 hours. In emergency shut-down situations where replacement valves are needed, saving time is paramount.