

Capacity and product range:

For half a century the name of Rotork has stood for quality and reliability in the field of electric actuators. Clients in the global oil and gas industry and later the power, water and wastewater industries have come to appreciate Rotork's innovative valve actuation solutions, backed up by a worldwide service and support network that is second to none.

In 2001, with customer demand for its pneumatic models taking off, Rotork decided to create a separate division – Rotork Fluid Systems (RFS) – to manufacture and market pneumatic and hydraulic units. Supported by the worldwide network of offices and strengthened by the development of dedicated business units, RFS has grown consistently to become a world leader in the supply of pneumatic and hydraulic actuators.

Strategically placed to service the international valve industry, RFS manufacturing plants can be found in Melle (Germany), Lucca (Italy) and Rochester (New York). Valve World travelled to the main manufacturing plant in Lucca to meet up with RFS' Operations Director Stefan Davies and General Manager Sales srl Vittorio Stefani.



RFS Lucca manufacturing plant.

By Joanne McIntyre and David Sear

To put some context into how extensive Rotork's operations really are, Valve World could have travelled to any one of the 150 offices and 11 factories serving 76 countries worldwide and returned with exciting leads. We could for example have visited newly acquired Rotork Gears Italy, which will perfectly complement the existing extensive manufacturing facilities for gearboxes in the UK,



RFS' Operations Director Stefan Davies

the USA, the Netherlands and China. An alternative destination could have been Rotork's headquarters in Bath, the UK, to learn more about the exciting new flagship electric actuator, the IQ Pro, which provides even more functionality. The USA was also an option, for a meeting with recently acquired actuator specialist Jordan Controls, who have strengthened Rotork's offering in the critical role of the plant process control.

Faced with this wealth of choice, Valve World opted to look at one of the fastest growing areas of Rotork's business, namely pneumatic and hydraulic actuators. An area which has experienced considerable development, according to RFS Operations Director Stefan Davis. "We've cornered a large portion of the world market for pneumatic and hydraulic actuators and we intend to keep growing! Our main markets with RFS are oil and gas, petrochemicals and refining, including fire fighting systems."

RFS produces a full range of linear and quarter turn pneumatic, hydraulic, gas-over-oil and electro-hydraulic actuators, so there is a valve actuation product to suit clients' specific needs, according to Mr Davis. "Simply put, we sell safety devices. In fact, many of our products are sold as emergency shut down (ESD) safety devices for dangerous-to-handle media. Pneumatic and hydraulic actuators are also the product of choice when safety or speed is essential. While an electric actuator may take several minutes to fully close an 18" ball valve, our actuators can operate the self-same valve in just two to three seconds."

The greater majority of RFS actuators are spring-return models so they can move to a predetermined failure position in an emergency. Other actuators are designed for modulating duty, for instance in desalination plants. Mr Davis: "Our flexibility and in-house expertise means we can react very quickly when new legislation is introduced following incidents on say oil platforms or in power plants. When new safety specifications are created we can rapidly design and engineer a high quality product. Our extensive experience of actuator and valve sizing ensures that we will always use the best solution for both competitiveness and reliability."



RFS' General Manager Sales srl Vittorio Stefani.

This flexibility extends to the size of actuator RFS is able to produce. "The largest actuator we currently manufacture has a power output of 600,000 Nm (5.3 million inch pounds)," says General Manager Sales Vittorio Stefani. "That would be enough to cycle even the largest of valves in a de-

the keys to Rotork's success



Pre-compressed spring packs for 1/4 turn and linear operators.

Control Panel assembly area of the Lucca facility.



manding application. We believe we can make an actuator to fit any valve, and we have by far the largest range of linear actuators of any manufacturer in the world.”

Italian genes

Although Rotork has in fact manufactured pneumatic actuators for many years, the genesis of its current large range of pneumatic and hydraulic actuators came in 1999 when existing actuator manufacturer Fluid System srl was acquired in Italy. As order intake boomed, so the company relocated in 2002 to larger premises in Lucca, Italy, in a move which increased its manufacturing space by a factor of five. “We are proud of our Italian heritage,” says Mr Davis. “Of course we are a global company, with multi-cultural staff and clients, but we have continued to invest in our people and facilities in Italy for good reasons. The Italian valve industry remains strong and we are able to service their ever-increasing requirements both in manufacturing capacity and technical support documentation that is becoming a very important part of the product supply.” Another key step came with the take-over

of the German actuator manufacturer PCI in Melle. This yielded an additional 7000 square metres of capacity, almost doubling manufacturing capacity again, as well as a strong product portfolio of actuators used on pipelines. “Not only does PCI give us a product line with a tremendous amount of synergy, it also allows us to better support our customers in the Eastern Bloc market. PCI is a great base for Germany, the Czech Republic, Poland, Russia and other Eastern European countries,” says Mr Davis.

Now that the company has an enviable manufacturing capacity and a comprehensive product portfolio the focus has been diverted to other areas. “We are currently focusing on developing production techniques and testing facilities for specialist actuators such as those used in high pressure, sub-sea and pipeline applications. We doubled investments in our engineering department between 2004 and 2006, continually striving to increase the life span and torque of our actuators. This has resulted in a number of design changes as we continue to work on enhancing product performance,” notes Mr Davis.

Centres of Excellence

Although Rotork is without question a global player, it prides itself on taking a local approach to the range of markets it serves. Mr Stefani explains how this is achieved: “Our very specialised manufacturing centres around the world are set up to serve specific markets. Furthermore, we have established offices in strategic markets who are dealing with contractors and end users every day, not just when they are fulfilling large contracts.” As each regional market develops, so Rotork creates ‘Centre of Excellences’, companies with expanded scope of supply, providing stock, testing and packaging of associated controls, that serve particular local markets. Mr Stefani: “If you purchase an actuator package from one of our Centres of Excellence, they will typically draw the base actuator from their own stocks, buy the necessary controls locally, assemble and test the unit and provide all the necessary documentation and qualifications. In short, they deliver a product that is based on our global, proven technology, but tailor-made to the regional market.” Giving an example, Mr Stefani mentions a ►



Actuator to valve assembly at the Calgary Centre of Excellence.

RFS UK Centre of Excellence, Leeds.



Stop Press: The IQ Pro

IQ Pro Rotork's latest Intelligent Actuator facilitates on site configuration and data transfer

IQ Pro Provides:

- Customer configurable multilingual text capability
- Data logger valve torque signature profiling
- Status and monitoring diagnostics

Setting Tool Pro enables:

- Non intrusive infrared communication
- Intrinsically safe for use in hazardous areas
- On site actuator configuration & download



large project in Australia, for which actuators were supplied through one of Rotork's Canadian plants with all the control stations being manufactured in RFS Australia, in close co-operation with the contractor, the end user and the service company set to take over the plant maintenance and who were also involved in the design phase. The end user will have local documentation and the testing will be done in Australia. Mr Stefani: "We won the contract largely because of the local support we can offer. I do not believe any other manufacturer in the world could offer this."

RFS has already set up multiple Centres of Excellence in key countries such as Italy, Germany, the UK, Australia, Canada, Singapore and the USA. Mr Stefani: "We have excellent sales coverage and over the past five years or so we have worked on building an even stronger supply base. We've done this by establishing more local offices to market and promote our products. Our international sales team has also been successful in securing very large project orders. In consequence, this factory is a hive of activity as we are successful in both the project and day-to-day business."

Total technical support

Rotork believes that the support it can offer contractors and end users is increasingly valuable in securing business around the globe. "It is important that we be a partner to our customers, not just a supplier," says Mr Davis. "Actuators are becoming increasingly complicated so a high level of support is vital. That starts right from the technical details we include in quotations sent to customers. Just as every product we make is customised for the application, every quotation is customised too. Every job requires a certain level of individual tailor-made documentation and interpretation of the specifications to provide what we believe to be the best solution for the application. This initial support is crucial to valve makers and contractors. Customers expect that their suppliers will thoroughly understand the specification throughout every stage of an application. RFS is able to do this as close attention is paid to ensuring actuator build conforms to the standards of the specific certifying body. Furthermore, our clients can rely on us for commissioning, for resolving faults in their system logic and operating speed, and for technical advice on a wider scale than just the functioning of



Actuator final assembly, Melle, Germany.



Final assembly line at the Rochester plant.



Panels and large actuators awaiting final test in Lucca.

the actuator and valve system.” Today’s customers also have higher expectations regarding delivery times, continues Mr Davis. “Our industry has been so busy over the past three to four years that speed of delivery is one of the major criteria for contractors. That’s why RFS has multiplied production capacity substantially by moving to Lucca, leaving spare capacity for large or urgent projects. So far this has allowed us to work on projects with requirements of 3000 actuators.”

As part and parcel of this requirement for faster deliveries, contractors have also changed the way they approach projects. Rather than simply splitting an order into motor operated actuators and air operated actuators, they may now also divide it up according to the size of the actuators as well as specialty products, notes Mr Davis. “What we see is that contractors are starting to target different companies for each of these sub-orders, simply because they were concerned whether suppliers would have sufficient capacity to cope with anything larger. At Rotork, our huge product range and multi-site production capacity means we can and do supply complete projects. This suits the customer because they can use the same common actuator,

tailored to their interface, throughout the entire system.”

Finally, Mr Stefani touches on another way in which RFS is supporting customers, namely advising them about how to comply with the SIL (Safety Integrity Level) regulations. “Our expertise here is highly valued by contractors and end users because they won’t get a license to operate until they have full SIL certification for each part the operation. They need a lot of support, not just for the actuator but also to provide an operating philosophy for a fully integrated system. That’s because SIL

is about the interaction of a group of components and the net reliability of that group. We can provide customers with that data and support. Because Rotork is at the forefront of actuator technology, be it electric, pneumatic, hydraulic and even gas over oil and electro-hydraulic actuators, we have been able to develop a comprehensive structure for dealing with SIL. Thanks to our dedicated SIL engineers and thorough testing, clients can rest assured they will be acquiring both safety and speed when they purchase a Rotork actuator.”

FACTS & FIGURES

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| Name: | Rotork |
| Product: | pneumatic, hydraulic, electric, electro-hydraulic and gas-over oil valve actuators, geared operators controls systems and accessories. |
| Applications: | oil and gas (including pipelines and sub-sea); petrochemicals; refining; water treatment, wastewater treatment, power |
| Electric & Gears manufacturing facilities: | UK (Bath, Leeds, Mansfield), Italy (Milan), USA (Rochester NY, Milwaukee), Holland (Losser), Malaysia (Kuala Lumpur), India (Chennai, Bangalore), China (Shanghai) |
| RFS manufacturing facilities: | Italy (Lucca 8600 square metres), Germany (Melle 7000 square metres) and the USA (Rochester NY 5000 square metres) |
| Centres of Excellence: | UK (Leeds), USA (Houston, San Francisco), Canada (Toronto, Calgary), Singapore, Germany (Melle), Australia (Bayswater), Italy (Lucca). |
| Staff: | 1300 worldwide |
| Turnover: | Over USD 300 million |