

CRANE - Focused on Innovation: serving custo

"In a highly-dynamic industry where both technology and regulations are constantly evolving, innovation is extremely important in enabling the success of our Customers and continued growth of CRANE." - said Alex Alcalá, President - Crane ChemPharma & Energy



Crane (Crane Co.) owes its beginning to Richard Teller Crane, who, at the age of 23, started a brass and bell foundry in 1855. In 1858, Crane began to manufacture brass valves, and when its new factory opened in 1865, cast iron and malleable iron valves were added to the product offering. Commitment to innovation has continued to this day, along with an ethical vision passed on to successive generations of Crane managers based on R.T. Crane's original resolution: "I am resolved to conduct my business in the strictest honesty and fairness; to avoid all deception and trickery; deal fairly with both customers and competitors; to be liberal and just toward employees and to put my whole mind upon the business."

Today, Crane has approximately 11,000 employees in North America, South America, Europe, Asia and Australia, 2,300 of whom are active in ChemPharma & Energy. In 2013, the Fluid Handling unit generated overall revenues of 1.3 billion USD.

RARELY MATCHED IN THE INDUSTRY

Crane ChemPharma & Energy is a division of Crane Co.'s Fluid Handling segment. It designs and manufactures a variety of high performance products including valves,

actuation, sight glasses, lined pipe, fittings and hoses, and air operated diaphragm and peristaltic pumps. With more than 50 dedicated sites around the world, Crane's ability to provide global service is rarely matched in the industry.

The company has developed and standardized its capabilities to provide solutions for any application or project requiring valves for flow control of media that may be demanding, toxic, corrosive, liquid, gas, or slurries. No project is too large or too small, and Crane has the local and global resources and dedicated staff to provide solutions for MRO initiatives, projects including engineering support, and day-to-day requirements.

EXPERIENCE COUNTS

Crane ChemPharma & Energy draws upon a heritage of manufacturing innovation and cumulative experience of the Crane Corporation to provide its customers with a worldwide understanding of manufacturing quality standards and legislative requirements. This, coupled with a long established network of independent distribution partners, ensures a global network that provides the structure to design and deliver world-class products with world-class

service. What is important is the ability to serve customers from centers close to where they do business, and to have such centers staffed by people familiar with local customs and regulations while being supported by a global organization. Crane ChemPharma & Energy's local representatives know their customers and understand their current needs, and they continue learning about their future needs. In most cases, where an off-the-shelf solution is not suitable, Crane can provide a customized solution. Crane designs its products to meet international standards, so its solutions can be deployed anywhere. Local support centers customize service throughout all major world regions.

SERVICE ORIENTED

ChemPharma operates multiple Automation & Service Centers in North America including Baton Rouge (LA), Cincinnati (OH), and Portland (OR) to name a few. The mission is to provide automated valve packages, valve modification, on and off-site valve repair, and application counseling.

VALUE ADDING TOOLS

In its efforts to provide value to existing and potential customers, Crane created and introduced in early 1940s its Crane Technical Handbook TP410 which continues to be the authoritative and leading guide to principles aiding in the design of fluid-handling systems. It has recently been updated and enhanced by a companion website [www.TP410.com] where users can make real-time online calculations and solve necessary fluid handling equations. Crane has used its technical expertise to develop more effective solutions for chemical, power, biotechnology, oil & gas, and pharmaceutical industries, among others.

As another added service, Crane has launched a website combining Crane ChemPharma & Energy which offers customers an interactive process map feature enabling them to find a Crane solution for their specific needs.



NEW! Xomox® FK

HIGHLY ENGINEERED PRODUCTS

Products offered by Crane are comprehensive in range. Specific product lists are available on-line (at www.cranecpe.com), or from Crane ChemPharma & Energy's local representatives.

When you buy from Crane, you get more than a valve. You get an experienced team of professionals providing services including engineering, quality assurance, manufacturing, customer service, sales and valve services. You get support in completing the purchase, help with installation, advice about best practices, and long-term maintenance as well.

Crane serves power, chemical processing, oil & gas, and refining industries, providing highly engineered butterfly, ball, plug, gate, globe and check, and diaphragm valves among other specialized products. Some application examples show the widespread usage of Crane ChemPharma & Energy's products in numerous industrial segments. "They are often utilized in high-corrosive and high-erosive niche applications, in particular in combination with chlorine or PBC chemi-



NEW! Pacific® Forged

mers & the industry on a local level worldwide

cal streams for the production of plastics," states Jürgen Sonderschäfer, Vice President of Global Sales. "Furthermore, they are used in coal and gas-fired power stations in the energy segment and in refineries where crude oil is processed. Additional applications are the biopharmaceutical industry where our products support processes regarding the manufacture of



medicines or procedures in the mining sector, especially in terms of nickel and phosphorous handling."

Chemical Processing: main processing industries served include Organics, Inorganics, Plastics, Fertilizers, Synthetic Fibers, and Paints and Coatings. Crane ChemPharma's unique strength is in applications where any combination of the following conditions is present: the toxic nature of the medium requires 100% leak tight shut off, or the media is extremely corrosive, or solids are present, or the media is potentially abrasive. Some of the household names include XOMOX®, Duo-Chek®, Flowseal®, Krombach®, Saunders®, among many others.

Power Generation: serving customers ranging from coal and gas powered plants to nuclear facilities, Crane has one of the most diverse and technically advanced valve portfolios in the world. Crane's world-renowned brands such as Pacific®, CRANE®, Krombach®, Stockham®, and others, are synonymous with quality and durability. If you are involved in the construction of a new power generation facility, or in the operation and maintenance of an existing power plant, Crane can provide the right valve at the right

price at the right time. Crane has one of the largest installed bases of products in power generation that can be found anywhere on the planet, and its engineers will work with you hand-in-hand to find the optimal solution for your specific application.

Oil & Gas: gas treatment and transmission involves a great variety of processes where valves are indispensable. Crane supplies its customers valves for gas separation units, gas terminals, liquefaction, gas metering, protection, and dozens of other uses. Many of the Crane brands already mentioned provide the protection and operational excellence demanded by customers, such as NOZ-CHEK®, Pacific®, Krombach®, and Saunders®, to name a few.

Refining: Asphalt Plants, and Hydrocracker or a Coker are among the many applications served by Crane. Crane has the valves you need to ensure safe, reliable and cost effective operations. Crane's Resistoflex® brand of hoses and fittings provides customers with confidence, along with many other recognized brands such as CRANE®, XOMOX®, Pacific®, Flowseal®, Duo-Chek®, and Krombach®.

NEW AT CRANE!

To meet the demands of growing markets, Crane ChemPharma & Energy has enhanced its already extensive expertise necessary to better service the Chemical and Power industries.

Delivering superior fugitive emissions protection and a unique dual-material body gasket, the new **Xomox® FK Ball Valve** from Crane ChemPharma & Energy combines all of the critical safety and performance features required for demanding applications in the chemical process industry.

Engineered to address the inherent dangers within volatile chemical applications,



the Xomox FK adheres to the industry's most stringent standards and combats the harmful effects of temperature and pressure fluctuation with a combination of innovative features:

- Three independent stem seals offer superior fugitive emissions control, and are certified to the following standards: EPA Method-21, ISO-15848 and TA-Luft according to VDI 2440.
- Self-relieving seats relieve excess pressure to protect the integrity of the valve while maintaining bi-directional operation.
- The patented SX ball stem design provides high maximum stem torque capability and built-in side load resistance, which extends valve life under severe conditions including thermal cycling.
- A dual-material, spiral-wound body gasket with a chemically-inert PTFE inner seal and a secondary graphite outer seal provide a fire-tested design on every valve.

Developed specifically for high-stress, high thermal-cycling applications, new **Pacific® Forged Valves** prove that not all forgings are equal. Crane's unique forging process and next-generation design reduce the total cost of ownership, assuring consistent quality and long life for every valve.

The distinctive design of this new line offers numerous benefits to users, including:

- Superior Forging Quality (100% Tested): Multi-stage ultrasonic testing is standard on all forgings and finished valves, so customers can rely on consistent & continuous valve quality despite the most severe process conditions.
- Lower Cost of Operation: A contoured shape and a proprietary hard-face overlay process make Pacific-Forged valves resistant to cracks and delamination, reducing maintenance and plant downtime.
- Quick lead-time: 90% of valve types can ship in less than 20 weeks.

HERITAGE OF INNOVATION AND QUALITY SINCE 1855

Crane Co. was founded in Chicago in 1855 and focused on operational excellence in the production of valves and castings. "Since the company's founding, Crane's business has been based on this philosophy of innovation and operational excellence," explains Brian Sweeney, VPGM of Crane ChemPharma & Energy, Xomox & WTA. "In 1912, for example, Crane built the first truly modern factory and was listed on the New York Stock Exchange in 1935." Over the years, Crane's products found application in various prestigious industrial projects. "The enterprise supplied railing material for San Francisco's Golden Gate Bridge in 1937," states Sweeney. "In 1969, Crane delivered pumps for use in the US federal space and Apollo programs. Twelve years later, in 1981, the company also provided the NASA space shuttle braking system."

