

Flowserve Control Valve Products North American Quick Response Centers









North American Service Centers

The choice any maintenance professional must make is: Who should repair my valves? The best answer is to find a repair facility that meets the toughest deadlines, restores the valve as close to its original quality as possible, repairs a wide range of valve styles, and is cost-competitive.

That answer is Flowserve.

The factory-trained service technicians at Flowserve restore the original quality to all types of control, manual-operated or pressure relief valves, including Valtek®, Durco®, Kammer®, Fisher®, Masoneilan®, Hammel-Dahl®, etc. To ensure this quality, each Flowserve service center is equipped with thousands of commonly required parts, produced by the OEM or built by skilled valve machinists in-house.

Since Flowserve is an established valve manufacturer, it has the equipment and capacity to turn around any repair project quickly—large or small—including plant shutdowns.

Veteran application engineers stand ready at each location to recommend how to extend the life of the valve or to improve its performance. These engineers also specialize in upgrading valves to spring cylinder actuators and fourway positioners, or automating quarter-turn valves, which dramatically increases the performance of the valve.

Flowserve's wide experience with building custom engineered valves provides the critical expertise necessary to repair special service valves. If any valve—standard or nonstandard—proves unrepairable, Flowserve is capable of replacing the valve with a new valve, usually within the same time frame.

As with all Flowserve products, strict quality control is maintained at all stages of manufacturing, assembly and testing. In addition to several in-process inspections, all manufactured parts and valve assemblies are 100 percent inspected prior to delivery. These rigid controls ensure longer valve life, thus minimizing future extended plant shutdowns.

Finally, Flowserve backs up this quality with a high level of service, including 24-hour emergency repair, free pick-up and delivery within the facility's service area, and on-site repair with mobile repair units. In emergencies, Flowserve service technicians can be on-site in any North American plant within 24 hours—48 hours for any plant outside of North America.

All new and repaired valves are tested prior to shipment, using the Profiler™ control valve diagnostics system. Vital data about each valve is kept on record with Valtek's Profiler software, providing easy access for future reference. A copy of this Windows-type software is available to the customer at the completion of the repair project.



When Flowserve repairs any manual, control or pressure relief valve, it includes the following services:

Full Project Planning

Flowserve provides front-end field assessment and a complete survey of existing valves, upgrade recommendations, and satisfactory start-up.

Receiving Inspection

All important valve data (such as valve materials, actuator orientation, air-failure action, packing configuration, gaskets, etc.) are carefully recorded. These records, as well as photographs, are kept permanently on file for future reference.

Disassembly and Cleaning

Each part is cleaned by degreasing and sandblasting. Such detailed cleaning can often reveal additional areas of concern, preventing future problems.

Inspection

Each component is inspected for unusual wear, corrosion or erosion that may affect the integrity of the part or valve.

Upgrade Evaluation

Flowserve reviews valves prior to repair to determine if upgrading is needed—such as spring cylinder actuators, actuation systems for manual valves or fugitive emissions packing. In many cases, such upgrades cost little or no more than the amount of the original repair bid, while improving the valve's performance or increasing its life.

Repair Services

Each damaged part is repaired and restored to its original condition. Unrepairable components are replaced from Flowserve's large on-site inventories.

Reassembly

The valve is reassembled to OEM specifications to ensure correct actuator orientation, failure mode, packing configuration, accessory mounting, etc.

Testing

Each valve is stroked after reassembly to ensure correct operation, seat leak tested to ANSI B16.104 (FCI 70-2), hydrotested to ANSI B16.34, and quality tested using the Profiler diagnostic tester.

Documentation

The entire repair process is carefully documented, including receiving, assembly, seat leak test, hydrostatic test, actuator seal test, Profiler test and other important data. All data is managed by Flowserve's historical data management software.

Warranty

Flowserve offers a full one-year warranty on all new, repaired or remanufactured valves.

Whether you have one valve or hundreds, Flowserve is the answer to your valve maintenance requirements with the turnaround, service and quality you need.



| Locations, Capabilities | | QRC Location | | | | | | |
|---|-----------|--------------|-------------|--------------|----------|-------------|-------------|--|
| and Certifications | | | | | | | | |
| Capabilities | Deer Park | Beaumont | Baton Rouge | Philadelphia | Edmonton | Springville | Pittsburgh* | |
| Control valve repair | • | | | | | • | • | |
| Pressure relief valve repair | • | | | | | | | |
| New valve sales and assembly | • | | | | | • | • | |
| Quarter-turn valve automation | • | | | | | • | | |
| Full machine shop | • | | • | • | | • | | |
| Mobile repair unit | • | | | | | • | | |
| On-site repair | • | | | | | • | | |
| Maintenance and technical training courses | • | • | | | | • | | |
| Maintenance management program | • | | | | | • | | |
| Smart valve technical support | • | | | | | • | | |
| Full valve diagnostic capabilities | • | | | | | • | | |
| Free pick-up and delivery within service area | • | | | | | | | |
| Plant surveys | • | | | | | | | |
| In-line diagnostics | • | | | | • | | | |

| Certifications | | | | |
|--|--|---|---|--|
| Flowserve authorized Rx center | | | | |
| Duriron authorized Black Tie plug valve repair | | | • | |
| National Board VR Stamp | | | | |
| VR Repair Stamp | | • | | |

^{*}The Pittsburgh QRC provides full service and repair for Kammer products.



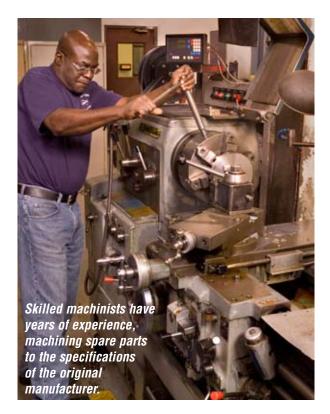
The Philadelphia QRC offers a wide selection of valve repair services to the northeastern United States.



The Deer Park QRC has a large inventory of spare parts, actuators, positioners and accessories.



Complete machine shops at Quick Response Centers ensure immediate manufacture of spare parts.





Maintenance and technical schools are regularly offered on-site at Flowserve QRCs.



Deer Park QRC

| Contact Information | 5114 Railroad St. Deer Park, TX 77536 Telephone 281 479 9500 Facsimile 281 479 8511 Telex 774 652 |
|------------------------|---|
| Established | 1976 |
| Operation Size | 32,000 square-feet |
| Inventory Size | \$4 million |

Beaumont QRC

| Contact Information | 2920 West Cardinal Dr. Beaumont, TX 77705 Telephone 409 842 6600 Facsimile 409 842 5213 After Hours 409 842 6600 |
|------------------------|--|
| Established | 1985 |
| Operation Size | 10,500 square-feet |
| Inventory Size | \$0.5 million |

Baton Rouge QRC

| Contact Information | 12134 Industriplex Blvd. Baton Rouge, LA 70809 Telephone 225 751 9880 Facsimile 225 755 0728 After Hours 225 751 9880, 800 480 9674 |
|------------------------|--|
| Established | 1988 |
| Operation Size | 30,000 square-feet |
| Inventory Size | \$3 million |

Philadelphia QRC

| Contact Information | 104 Chelsea Pkwy. Boothwyn, PA 19061 |
|------------------------|--|
| | Telephone 610 497 8600 Facsimile 610 497 6680 |
| Established | 1991 |
| Operation Size | 11,800 square-feet |
| Inventory Size | \$3 million |



Flowserve QRCs recondition all types of positioners and other accessories.



Flowserve service centers feature professional technicians at each operation, ensuring the best manufacture and highest quality possible.



Following repair, a specially designed steam boiler assists with testing of pressure relief valves.

Edmonton QRC

| Contact Information | 9044 - 18th St. Edmonton, Alberta T6P 1K6 Canada Telephone 780 449 4850 Facsimile 780 449 4851 After Hours 780 449 4850 780 699 9948 |
|------------------------|--|
| Established | 1972 |
| Operation Size | 44,000 square-feet |
| Inventory Size | \$3 million |



Flowserve has mobile repair units available for onsite repair projects.

Springville QRC

| Contact Information | 1350 N. Mountain Springs Pkwy. Springville, UT 84663 Telephone 801 489 2300 Facsimile 801 489 2299 After Hours 801 369 9582 |
|------------------------|---|
| Established | 1966 |
| Operation Size | 125,000 square-feet |
| Inventory Size | \$28 million |



Valve repair is accomplished using factory-trained technicians.

Pittsburgh QRC

| Contact Information | 1300 Parkway View Dr. Pittsburgh, PA 15205 |
|------------------------|--|
| | Telephone 412 787 8803 Facsimile 412 787 1944 After Hours 412 787 8803 |
| Established | 1982 |
| Operation Size | 12,000 square-feet |
| Inventory Size | \$2 million |



Flowserve QRCs stock a wide range of spare parts.





United States Flowserve Corp. Flowserve World Heads

Flowserve World Headquarters 5215 N. O'Connor Blvd. Suite 2300 Irving, TX 75039

Phone: 972 443 6500 Fax: 972 443 6800

To find your local Flowserve representative:

For more information about Flowserve Corporation, visit www.flowserve.com or call USA 1 800 225 6989

Flowserve Corporation has established industry leadership in the design and manufacture of its products. When properly selected, this Flowserve product is designed to perform its intended function safely during its useful life. However, the purchaser or user of Flowserve products should be aware that Flowserve products might be used in numerous applications under a wide variety of industrial service conditions. Although Flowserve can (and often does) provide genes updiedlines, it cannot provide specific data and warnings for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of Flowserve products. The purchaser/user should read and understand the Installation Operation Maintenance (IOM) instructions included with the product, and train its employees and contractors in the safe use of Flowserve products in connection with the specific applications.

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