

CAROTEK®

a SunSource Company

Industrial Repair and Service

Electronic

Mechanical

Fluid Process

Hydraulic



carotek.com

704.844.1100

What is the Carotek Advantage?

It's a group of highly trained associates, backed by industry leading systems and decades of product and application knowledge, working for you. As a national distributor with a local presence, **Carotek** fills a unique position as a full-service resource for you our customer. We provide system-wide solutions for your toughest applications, bringing together products, technical knowledge, service and support. From assistance in the design phase, through start-up and operation, ongoing maintenance and post-sales support, along with component service and repair, Carotek is your partner and your competitive advantage.

The **Carotek Advantage** is now stronger and better than ever! Our people, systems and capabilities make the difference and will get the **Right Product** to the **Right Place** at the **Right Time** and at the **Right Price** to keep you running efficiently and trouble-free!

Carotek - People, Products, and Solutions. When Expertise Counts.

Large Network of Repair Facilities Across North America





SunSource Family of Companies

For **over 85 years**, SunSource has provided quality components, designed and engineered systems, and maintained a high level of customer service to the mobile hydraulic and industrial markets. SunSource is dedicated to further strengthening our capabilities to serve our customers by providing a broader array of repair services for industrial hydraulics, fluid process equipment and electronic components. Our associates have access to an even wider range of capabilities than before and we are committed to providing the products, services and support our customers expect, ensuring a long successful relationship.

What is Industrial Service and Repair?

Today's workplace and factories utilize systems that range from simple to highly sophisticated. Hydraulic, electronic, and mechanical systems are everywhere – and they periodically breakdown. When that happens your system can come to a complete halt, costing you precious time and money.

Carotek and **SunSource** is your answer in these emergency situations by providing quick evaluations and expert repair of a wide range of systems and components. If it's not an emergency, our repair capabilities can keep your spares in like-new condition providing you with an insurance policy against the inevitable.

Each repair can include the following services to ensure a hassle-free, thorough, and complete repair:

- Free evaluations
- Experienced factory trained technicians
- 12-month operational warranty on the entire unit
- Free pick-up and delivery service in most areas
- Emergency services available
- System testing of all repairs (where applicable)
- Failure Analysis and Test Reporting
- On-Line order status tracking and reporting
- Remanufactured and surplus spares available

Using a network of **ISO certified repair facilities** across the United States, Carotek / SunSource has the facilities and know-how to repair your failed components. You can rest assured that we will complete your repair using factory trained, professional technicians with years of experience and an uncompromising attention to detail. We are so confident in our abilities and our processes, that we provide an industry leading **12-Month Operational Warranty** with every repair. This is just one more piece of the Carotek Advantage.



Electronic Repair

A Drives

Our Electronics Repair Department specializes in industrial drive components and their applications. We have the expertise and equipment to clean, check and dynamically test your component to replicate its malfunction, and the skilled technicians to fix it. Once the unit is approved for completion it is repaired and load tested on one of our custom built test stands to simulate your application under working conditions.

Common Brands: ABB, Allen Bradley, Fanuc, GE, Indramat, Mitsubishi, Reliance, Siemens, Yaskawa and many more.



B PLCs

PLCs have become the nerve center of the modern manufacturing facility, and it only takes one board failure to bring production to a halt. Carotek not only offers emergency repair service but in many cases we can offer an exchange board for immediate delivery. Whether you have an I/O card, Processor or Power Supply, our standard 3-5 day service covers all **major manufactures**. All PLCs are closed-loop system tested on a matching rack to ensure a quality repair.

Common Brands: Allen Bradley, GE, Instruments, Mitsubishi, Modicon, Reliance, Siemens, Texas, and many more.





C HMI/Touch Screens & Industrial Computers

The convenience of Human Machine Interface control panels has made them indispensable on the plant floor. Unfortunately, they are one of the most fragile components in your entire system. Carotek has a staff of trained technicians who will clean, static-check, and test your HMI to evaluate its condition. Upon your approval, we will repair and test your unit. Every HMI repair carries our 12-month operational warranty.



Common Brands: Allen Bradley, Eaton, Fanuc, ProFace, Siemens, TCP, Toshiba, Xycom, and many more.

D Servo Motors



Our Industrial Repair group has been focusing on servo and spindle motor repair as a core competency since day one. Every incoming unit is thoroughly cleaned, inspected, diagnosed, and repaired by skilled technicians. Our in-house machining and rewind capabilities allow us to provide high-quality and fast turn-around, with normal turnaround of 10 days or less on most repairs depending on the failure of the motor. All motors are closed-loop system tested, under load, to meet or exceed OEM specification prior to return. Every motor comes with a service report letting you know what was repaired and supported with our 12-month operational warranty.

Common Brands: Allen Bradley, Fanuc, Indramat, Kawasaki, Mitsubishi, Nachi, Pacific Scientific, Rexroth, Siemens, and many more.

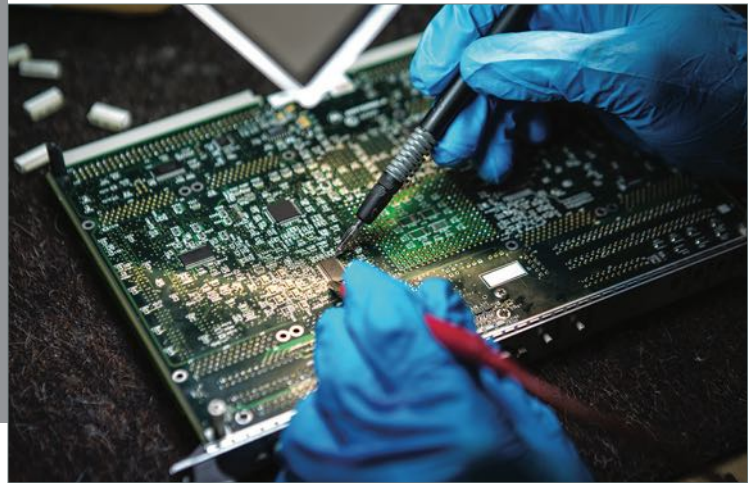
E Torque Tools & Controllers

Carotek has the ability to repair and test DC torque tools (nut runners), their associated controllers and cable assemblies. Each tool is completely rebuilt and tested with the matching controller. Calibration and repair reports are supplied with each unit upon successful closed-loop testing. The controllers are each dynamically tested with the nut runner tool and measured / calibrated on a torque angle stand. All documentation is traceable to NIST standards.

Common Brands: Aimco, Atlas Copco, Bosch, Cooper Cleco, Estic, FEC, Gardner Denver, GSE (CP Tech-Motive), Ingersoll-Rand, Rotor Tool, Stanley, Uryu and many more.



Electronic Repair *cont'd*



F Welders & Weld Controls

Our certified technicians can repair your welder or weld controller and bring your equipment back up to full OEM-specifications. With our load testing capabilities and our attention to detail, we can ensure your unit's peak performance.

Common Brands: Dengensha, ESAB, Fronius, Lincoln, Miller, OTC Daihen, Panasonic, Robotron, WTC Weltronic, Yaskawa Motoweld, Hitachi and many more.



G Light Curtains

All light curtains are thoroughly evaluated and rigorously tested by our experienced technicians. After the initial test, every unit is then duration tested for at least 8 hours to verify the proper operation of the unit before it's returned to you.

Common Brands: Banner, Dolan Jenner, Sick Optic, STI, and many more.



H Teach Pendants

When your teach pendants fail, you need them repaired fast so your vital equipment isn't sitting idle any longer than necessary. We system test every teach pendant repair on the matching robotic controller to ensure proper operation. We stock many replacement membranes, E-stops, and displays for prompt service.

Common Brands: ABB, Comau, Fanuc, Kawasaki, KEB, Nachi, Yaskawa, and many more.



I Power Supplies

A failure in a power supply can stop an entire line. Rely on Carotek to clean, static-check, and load test your power supply. Upon your approval, repair time is usually 10 days or less and emergency service is always available.


Common Brands: Bailey, Condor, Cosel, Elpac, Lambda, Power One, Sola, and many more.



J Robotics Repair

Carotek industrial repair has over 40 robotic manipulators and controllers to be able to system test your robotic components. Devices such as teach pendants, servo amplifiers, power supplies, and control boards are closed-loop system tested on the exact same type robotic system that you use in your manufacturing process. This allows us to not only verify that the original problem with the unit has been corrected, but to also verify that all other working parameters are correct.

A Sample of the Robots We Service

ABB ROBOTICS	COMAU ROBOTICS	FANUC Robotics	Kawasaki	KUKA	MOTOMAN a YASKAWA company	NACHI ROBOTIC SYSTEMS, INC.
						
ABB IRC 5	Comau C3G	Fanuc RJ	Kawasaki FS Series	Kuka KR 150	Motoman ERC	Nachi AX/SH200
ABB S2	Comau C5G	Fanuc RJ2	Kawasaki FD Series	Kuka KR 6	Motoman MRC	Nachi AR/SA160
ABB S3	Comau Smart 3	Fanuc RJ 3	Kawasaki M Series	Kuka KR 15	Motoman XRC	Nachi AW/SH166
ABB S4	Comau Smart S2	Fanuc RJ 3iB	Kawasaki UT 150	Kuka KR 30	Motoman NX	
ABB S4C	Comau C3G+	Fanuc R30iA	Kawasaki AD/UX150	Kuka KR C2	Motoman XRC Mini	
ABB S4C+		Fanuc R30iB	Kawasaki C32/2X165U	Kuka KR C4	Motoman DX	
		Fanuc RH	Kawasaki C52/2x165U	Kuka KR 210		

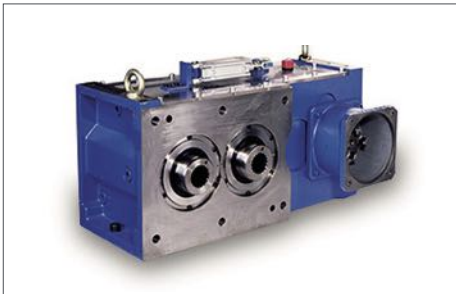
Our Robotic Fleet is Dedicated to Test the Following:

- CPU/Power Supplies and I/O Cards
- Servo Drives/Multi Axis Amplifiers
- Servo Motors
- Teach Pendants
- Wrist Assemblies

Mechanical Repair

A

Gear Boxes/Gear Reducers/ Cyclo Drives



Rely on Carotek when it comes to remanufacturing gear boxes and rotary drives. Our customers have come to expect the same level of quality and service that we have delivered throughout four decades of hydraulic and electronic component repair.

Common Brands: Dodge, Falk, Flender, Rexnord, SEW-Eurodrive and many more.



B

Machine Tool Spindles

Our in-house capabilities to perform machining, motor rewinding, and feedback repair ensures the highest quality while controlling costs and delivery time. Upon receipt of your spindle, it will undergo an extensive evaluation process to determine the exact cause of failure. Each quote will have a detailed failure analysis report for your review. Upon your approval, your spindle will be completely rebuilt and recalibrated in one of our Class 10,000 HEPA climate controlled clean rooms. Every spindle will be dynamically balanced and fully tested to allow for proper run in.



Common Brands: Bryant, Chiron, Cincinnati, Colonial, Gamfior, GMN, Gros-Ite, Heald, Hessap, Hofmann, Hurco, Kessler, Makino, Mazak, Mitsubishi, Mori Seiki, OKK, Okuma/Howa, Omlat, Pope, Setco, Studer, Toyoda and many more.

C Ballscrews

Carotek specializes in remanufacturing precision ballscrew assemblies as well as manufacturing from print or reverse engineering. We will evaluate your ballscrew to identify possible misalignment, excessive load, or heat related issues. We pride ourselves on prompt deliveries, and emergency service is always available to help get your machine back up and running fast!



D Vacuum Pumps

We understand the value of keeping your equipment running, so when you are having issues with your vacuum pump, you can rely on Carotek to service your unit and minimize your downtime. We have expertise with the kinds of vacuum pumps found throughout manufacturing industries including rotary vane, liquid ring, scroll, piston and lobe.

Common Brands: BOC Edwards, Gardner Denver, Kinney, Leybold, Stokes, Nash, Siemens, Somarakis, Varian, and many more.



E Blowers

Carotek specializes in many types of blower reconditioning, including Positive Displacement, and Centrifugal. We have in-house machining and dynamic balancing equipment to restore peak performance to your unit.

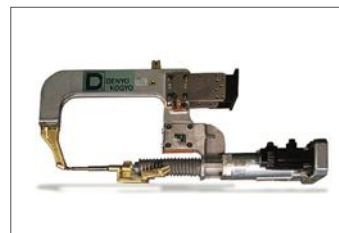
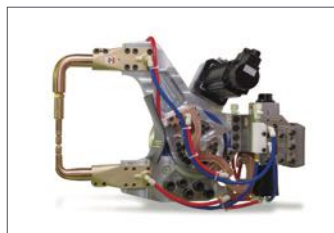
Common Brands: Dresser, Leybold, Roots, Siemens, and many more.



F Weld Guns

If you are performing resistance welding, Carotek is a premium service provider to remanufacture your weld guns, tip adapters, arms, cylinders and more. Whether your welding is on a fixture, pedestal, portable, or on a robot, we can help you reduce your maintenance cost and increase your machine up-time. All weld gun and component rebuilds are pressure tested before being returned to you.

Common Brands: Centerline, CMW, Denyo Kogyo, Milco, Obara, Savair, and many more.



Fluid Process Repair

Carotek and **SunSource** proudly serves the Automotive, Biofuels/Ethanol, CAFO Biogas, Chemical, Industrial, Sanitary, Food & Beverage, Pharmaceutical, Pulp and Paper, OEM, Municipal Water & Wastewater Treatment Markets.

We have several facilities across the US available to service and repair your pump and related equipment. Our repair operations are fully equipped with machinery capable of handling every step of the process, including:

- Complete Refurbishment and Reconditioning
- Machining and Welding
- Dynamic Balancing
- Fabrication and Assembly
- Pump and Motor Alignment
- Part Reproduction for Damaged or Obsolete Part Replacement

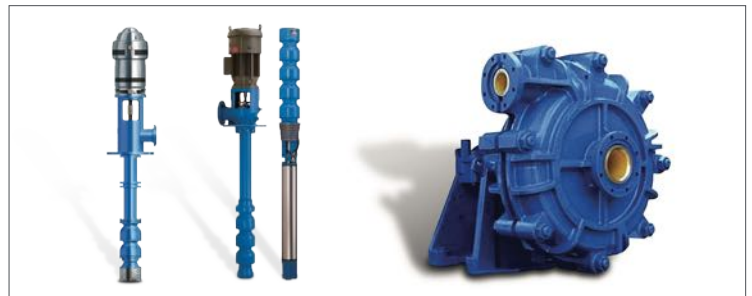
A Fluid Process Pumps

- ANSI Pumps
- Double Suction Pumps
- Multi Stage Pumps



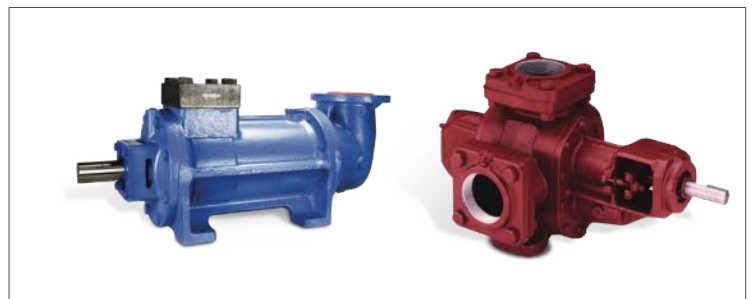
B Vertical & Horizontal Pumps

- High Temp / Hot Oil Pumps
- Boiler Feed Pumps
- Slurry Pumps
- Vertical Turbine Pumps



C Positive Displacement Pumps

- Progressive Cavity Pumps
- Screw Pumps
- Sanitary Pumps
- Paint Pumps



Common Brands: Ampco, ARO, Brinkmann, Dean, Durco, Flowserve, Fybroc, Gorman-Rupp, Goulds, Hydra Cell, Ingersoll Rand, Iwaki, IMO, Knoll, Liestritz, Mono, Moyno, Peerless, Sandpiper, Scott, Sulzer, Tarby, Tuthill, Yamada, Viking, Waukesha, Wilden, and many more.

D Centrifugal Pumps

Carotek has the capability to remanufacture your centrifugal pump to a like-new condition – any size, any brand. We offer complete inspection of shaft, frame, bearings, packing, stuff box, impeller, volute, and front cover to ensure a high quality repair.

Common Brands: Bell & Gosset, Byron Jackson, Flowserve, Gardner Denver, Gorman-Rupp, Goulds, Ingersoll-Rand, Johnson, NOV-Mission, O'Drill-MCM, Worthington, any many more.



E Coolant Pumps

Common Brands: Giant, Gusher, Hydra-Cell, Knoll, Wanner, and many more.



Hydraulic Repair

The Carotek team is the most complete and comprehensive hydraulic pump, motor, and cylinder repair organization in the USA.

We have over 40 years experience in the remanufacturing and repairing of hydraulic components from nearly every OEM in business over the last half century. We have developed an in-depth series of procedures to catalog, evaluate, estimate, repair, test and return ship your equipment utilizing the highest quality craftsmanship with the quickest turnaround.

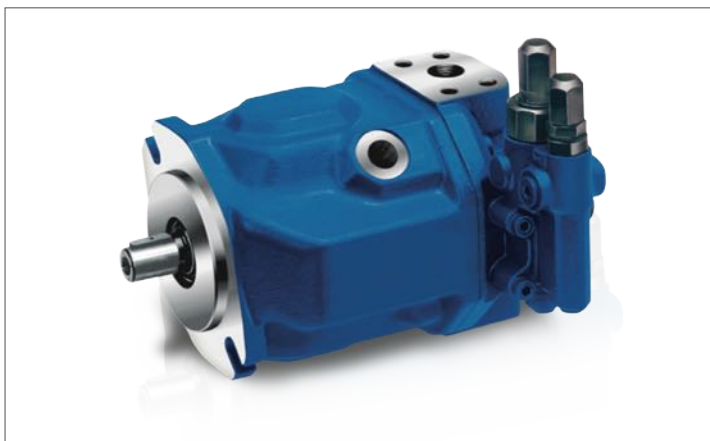




A Pumps & Motors

We service hundreds of hydraulic pumps every week. Every unit is completely disassembled and evaluated so that we can identify possible root causes of failure. Damaged parts are replaced or remanufactured, and the unit is rebuilt. The final product is load tested to confirm that it performs to OEM-specific standards before being painted and packaged for return.

Common Brands: Bosch Rexroth, Calzoni, Denison, Oilgear, Parker, Racine, Staffa, Tokimec, Tokyo Keiki, Vickers, and many more.



Hydraulic Repair *cont'd*

B Oilgear Pumps

Our repair group is widely recognized as the aftermarket leader in Oilgear repairs and exchanges. To meet the needs of our customers, we stock hundreds of rebuilt Oilgear pumps. Most of the time we can have a rebuilt Oilgear pump on the way to you in 1-2 days, and all rebuilt exchanges carry a 2-year operational warranty.



**ONE CALL
GETS IT ALL!**

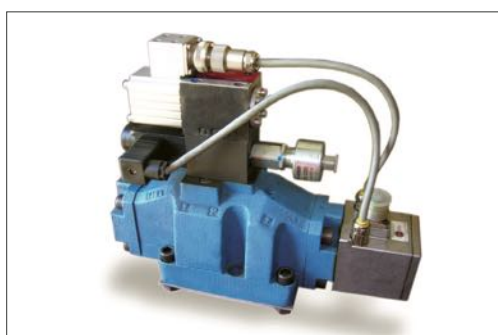




C Valves

Carotek industrial repair team has been repairing all major brands of servo valves, proportional valves, and directional valves for over **40 years**. Our skilled technicians average over 15 years experience and will thoroughly test, evaluate, and repair your valve to OEM specifications. If your need is critical, we can offer emergency turnaround. All valves are static and dynamically system tested to ensure a quality repair, complete with our 12-month operational warranty.

Common Brands: Atchley, Bosch, Dowty, HR Textron, Oilgear, Moog, MTS, Parker, Rexroth, Schenck Pegasus, STAR, TSS, Vickers, and many more.



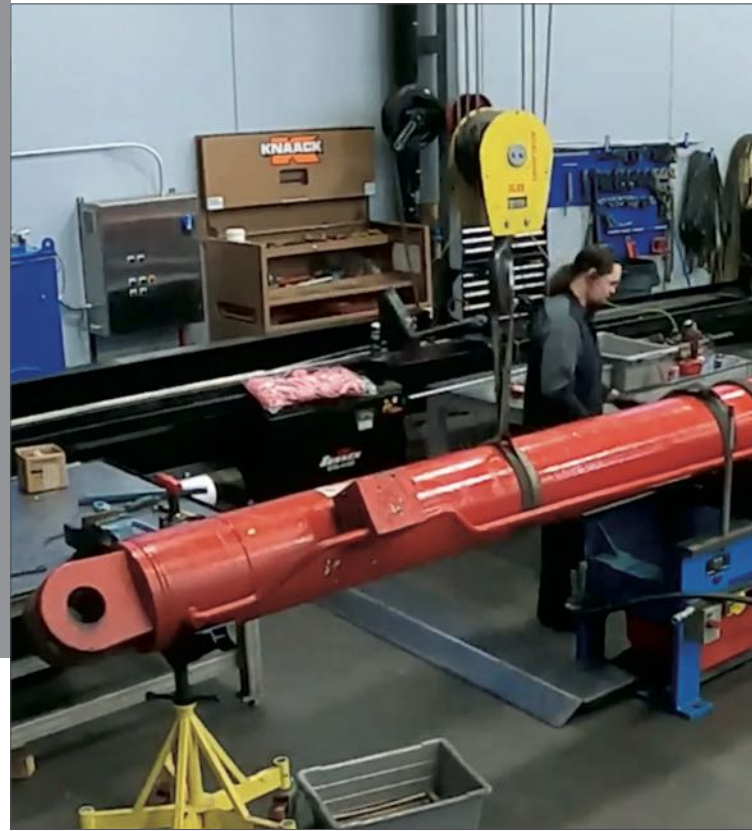
Hydraulic Repair *cont'd*

D Cylinders

Carotek can repair and remanufacture all of your hydraulic cylinders. Our in-house machining department cuts down the lead time for repairs significantly, and allows us to produce parts for your damaged cylinders. We have the capability to manufacture new rods, pistons, bushings, and tubes. Every cylinder we repair leaves our facilities operating like a brand new cylinder.

Our experienced technicians can repair cylinders up to 32 ft. in length and 36 in. diameter, up to 40,000 lbs. in weight. Whether it is repair work or manufacturing a new unit, fast turn around and quality work is our objective for all customers.

Common Brands: Caterpillar, Hanna, Hydroline, Komatsu, Milwaukee, Parker, Rexroth, Sheffer, Yates and many more.



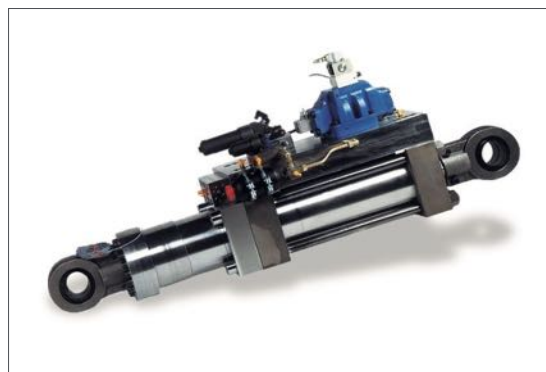


E Precision Servo Actuators

With over **40 years** of expertise in the Hydraulic and Mechanical Repair field, Carotek provides remanufacturing services on servo actuators. Carotek supports the Industrial, Commercial, Military and Amusement industries. Our trained technicians understand the importance of meeting the exacting requirements and the operational demands of precision equipment. Carotek uses only OEM manufactured parts in our rebuild process. When original parts or components are no longer available, we will manufacture the required components to the exact specifications of the OEM drawings.

All incoming units are thoroughly inspected, cleaned, diagnosed, and repaired by skilled technicians, who average over 20 years of experience. A typical repair of a precision actuator includes such work as grinding and chroming the rod, honing the tube, installing new seals, calibrating the LVDT and testing the actuator with its servo valves.

Common Brands: Instron, Moog, MTS, Parker, Schenk Pegasus, Vickers, Western Shore and many more.



Electronic, Mechanical, Fluid Process,

Electronic Repair

Drives



PLCs



HMI/Touch Screens & Industrial Computers



Servo Drives



Light Curtains



Teach Pendants



Nut Runners & Controllers



Robotic Repair

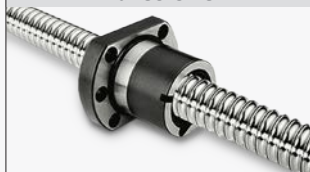


Mechanical Repair

Gear Boxes



Ballscrews



Spindles



Pneumatics & Vacuum



Fluid Process Repair

Fluid Process Pumps



Vertical & Horizontal Pumps



Positive Displacement Pumps



Centrifugal Pumps



Hydraulic Repair

Pumps



Motors



Servo Valves



Directional & Proportional Valves



Hydraulic Repair & Service

Brand Names Include

Servo Motors



Keeping Industrial America Running!

Welders & Weld Controls



ABB
Allen Bradley
Atlas Copco
Baldor
Baumuller
Compumotor
Control Techniques
Cooper Cleco
Cutler Hammer
Dynamic
Emerson

Eurotherm
Fanuc
Fincor
Fronius
Fuji Electric
GE
Giddings & Lewis
GSE
Hitachi
Inland Motor Drives
KEB

Kollmorgen
Lambda
Lenze
Lincoln Electric
Indramat
Magnetek
Miller
Mitsubishi
Modicon
Okuma

Reliance
Saftronics
Pacific Scientific
Siemens
Stanley
TB Woods
Telemecanique
Texas Instruments
Toshiba
Yaskawa

Brand Names Include

Blowers



Vacuum Pumps



Alcatel
Bryant
Cincinnati
Desoutter
Dodge
Duplomatic
Edwards
Falk
Fellows

Gardner-Denver
Gros-lte
Haskel
Hofmann
Kessler
Kinney
Leybold
Mazak
Mori Seiki

Nash
Norgen
Numatics
Oerlikon
Okuma
Rexnold
Ross
Setco

SEW-Eurodrive
SMC
Stokes
Sumitomo
Tol-O-Matic
Toyoda
Varian

Brand Names Include

Coolant Pumps



Ampco
ARO
Brinkmann
Byron Jackson
Dean
Dresser
Durco

Flowserve
Fybroc
Gardner Denver
Gorman-Rupp
Goulds
Hydra Cell
IMO

Ingersoll-Rand
Iwaki
Johnson
Knoll
Leybold
Liestritz
Mono

Moyno
Peerless
Roots
Sandpiper
Scott
Siemens
Sulzer

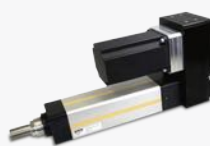
Tarby
Tuthill
Viking
Waukesha
Wilden
Worthington
Yamada

Brand Names Include

Cylinders



Actuators



Abex
Atchley
Bosch
Calzoni
Cincinnati
Daikin
Denison
Dynapower

Dynex Rivett
Hagglund
Hanna
HPM
Hydro-line
Hydura
Milwaukee
Moog

MTS
Nachi
Oilgear
Parker Hannifin
Pegasus
Racine
Rexroth
STAR

Sumitomo
Tokimec
Tokyo Precision
Towler
Voith
Wagner
Yuken

FACTORY AUTHORIZED REPAIR CENTER FOR:

- Eaton
- Fairfield
- Fronius
- Haldex Barnes

- Hartmann
- Hitachi
- Kawasaki
- KEB

- Lincoln Electric
- Linde
- LSIS
- Miller

- NSW (Nippon Stud Welding)
- Permco
- Poclairn

- Rotary Power
- Sauer-Danfoss
- SEW-Eurodrive
- Siemens

- Staffa
- STAR
- Vickers

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**People,
Product, and
Solutions
when
Expertise Counts**



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