

OUR SERVICE & SOLUTION EXPERTS

Caltron is made up of our service and solution experts. Our engineers are available to offer comprehensive, integrated solutions designed to meet the toughest process control challenges.

EMERSON LIFECYCLE SERVICES

- FM Certification Program of local service centers provides FM compliant repair capability
- Emerson sponsored service center Quality Audits
- ISO 9001 Certified QuickShip Manufacturing for specialty/short lead-time products
- Factory specified and certified NIST traceable calibration/test equipment
- Inline Maching capabilities
- Only utilize OEM parts for repairs
- State-of-the-art Diagnostic tools:
- AMS™ Suite: Intelligent Device Manager
- ValveLink™ Software
- FlowScanner™ 6000/QL2
- Valve Seat Leak Detection
- TREX Handheld Communicators
- Spray Nozzle Tester

AIR-OPERATED VALVE SERVICES

- Diagnostic Testing: data collection and analysis. Remote monitoring and analysis also available for customers who have implemented Emerson's Valve Asset Monitoring
- Factory Engineering Support with access to OEM drawings
- Tubing and fittings – removal and installation
- Actuator removal and installation
- Actuator Inspections, PM's, and rebuilds
- AOV Accessories: PM's, Troubleshooting, and replacements (Positioner, Trip Valve, I/ P, Regulator, Solenoid, Limit Switches, etc.)
- Calibrate, Bench Set, & Stroke Actuator & Accessories
- Valve and Actuator Troubleshooting & Repair

REPAIR PROCEDURES

- Our Technicians follow repair procedures that are performed to OEM specifications and Manufacturer's recommendations

GLOBAL VALVE TRACKER

- Online portal access to asset repair status, documentation, and history

MOTOR-OPERATED VALVE SERVICES

- Electrical Terminations / Determinations
- Actuator Removal and Installation
- Electric Actuator PM's: external inspection, grease samples, stem lube, switch compartment inspection, mounting bolt torque
- Electric Actuator Rebuilds
- Actuator Accessory PM's
- Install Local Controlling Devices i.e. Dead-Man Switches & Jumpers
- Set-up Operator electrically using M&TE, Limit Switch and Torque Switch adjustments
- Valve and Actuator Troubleshooting & Repair

PROCESS PRESSURE & SAFETY RELIEF VALVES

- National Board Certified Safety/Relief Valve Repair
- Vacuum Relief Valves
- Natural Gas, Steam, Liquid, Sanitary Regulators
- Tank Blanketing Regulators
- Detonation & Flame Arrestors
- Explosion Vents
- Tank Hatches & Vent Valves
- Rupture Disks

INSTRUMENT CALIBRATIONS AND VALIDATIONS

- Precise calibration at your local Emerson Service Center or onsite
 - Obtain Calibration Certificates as required by your industry
 - Ensure calibration is consistent with ISO 10474 3.1B or EN 10204 3.1
 - In-house systems are designed to meet the intent of ANSI Z540-
 - 1-1994
 - Receive "as found" inspection and "as left" data results
 - Ensure calibration and validation is consistent with ISO 10474 2.1 or EN
 - 10204.2.1
- Measuring methods and test equipment used in inspection and validation are traceable to NIST

ASSET OPTIMIZATION PROGRAM

- Storage and inventory management of spare valve and actuator assets

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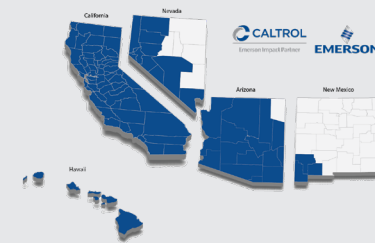
ACTUATION AND VALVE SERVICES

- Manual and Automated Gate, Globe & Check Valve Repair
- High-Pressure Pressure Seal Valve Repair
- Ball & Butterfly Valve Repair
- Lubricated and Lined Plug Valve Repair
- Check Valve repair and Diagnostic testing
- ASME Section IX Certified Welders
- Post-Weld Heat-Treat Services
- Hydraulic Bolt-Torque Capabilities
- PMI, UT Thickness, and Hardness Testing Capabilities
- Part Fabrication
- Pressure Seal (metal) and gasket fabrication
- Start Up & Commissioning Services

ENGINEERED SOLUTIONS

- Bad Actor Application Review
- Predictive Maintenance Optimization
- Packing Program Evaluation
- Obsolescence Planning
- Severe Service Review
- System Controllability and Variability reduction services

SERVING THE SOUTHWEST US & HAWAII



Emerson Lifecycle Service Locations
Benicia, CA | Paramount CA

INDUSTRY PRODUCTS & SOLUTIONS

CONTROL & SAFETY SYSTEM SOLUTIONS

MECHANICAL RELIABILITY SOLUTIONS

VALVES & AUTOMATION INSTRUMENTATION

PRESSURE REGULATORS

FLOW & MEASUREMENT SOLUTIONS

WATER & WASTEWATER SOLUTIONS

PROCESS PUMPS & EQUIPMENT

ENGINE & COMPRESSOR CONTROLS:
(Through SPARTECH, Caltron's Joint Venture with Spartan Controls)

ASSET MANAGEMENT EDUCATIONAL SERVICES

24/7 SERVICE
(877) 827-8132
WWW.CALTRON.COM



Emerson Impact Partner



Caltron Service & Support Locations

Corporate Office
1385 Pama Lane, Suite 111
Las Vegas, NV 89119

Benicia Office
531 Getty Ct, Suite A
Benicia, CA 94510

Chandler Office
2900 S Gilbert Rd #6
Chandler, AZ 85286

Santa Fe Springs Office
11904 Burke St.
Santa Fe Springs, CA 90670

Taft Office
801 Black Gold Ct
Taft, CA 93268

Irvine Office
300 Commerce #100
Irvine, CA 92602

Livermore Office
2685 Collier Canyon Rd
Livermore, CA 94551

Ontario Office
1609 S Grove Ave #106
Irvine, CA 91761

Hawaii Office
94-432 Maikoiko
Waipahu, HI 967

8AM-5PM M-F AND EMERGENCY 24/7 SUPPORT CALL TOLL FREE (877) 827-8131

WORLD-CLASS CUSTOMER SERVICE

- Dedicated Repair Coordinators and Repair Sales
- 24/7/365 on-call support
- Multiple service facilities
- Local technicians are immediately available, on short notice, year-round.
- We can provide very fast response times during unplanned events.

OEM CERTIFIED REPAIRS

- OEM Certified repairs for all Emerson brand valves and actuators
- Fisher, Bettis, Vanessa, Yarway, Clarkson, KTM, K-Lok, Keystone, Sempell, Hancock, Neotecha, Fasani, Raimondi, Rovalve, Morin, A.E. Valves, Biffi, EI
- Anderson Greenwood, Crosby, Enardo, Varec, Penberthy

FIELD SERVICE TRAILERS

- Dedicated Outage Managers, Repair Coordinators & Service Sales
- 24/7/365 on-call support
- Multiple service facilities
- Local technicians available, on short notice, year-round.
- Fast response times during unplanned events.
- NBIC VR Certified: Technicians can test, repair and re-certify as required using calibrated instruments.
- Full field repair capabilities including valve industry specialized testing and in-line repair equipment, mobile machine shop with lathe, portable lapping equipment, calibration instruments, and maintenance reliability software.
- 45' Gooseneck trailer- full capacity mobile unit with lathe and sandblaster
- 25' trailer- full capacity mobile unit with lathe and sandblaster
- 4- Utility trucks with test stands
- 3 Ton Crane Truck



OUTCOME-BASED SERVICES

WHAT IS IT?

- A unique, 7-step outage planning process for scope identification, quoting and execution.
- Accurate health reports of both actuator and valve.
- Focus on which actuators / valves need to be pulled or repaired rather than pulling or repairing all
- Identify parts needed and scope of repairs
- Improved budget and schedule accuracy; scope growth and discovery items are significantly reduced
- Decreased unscheduled, nexpected, and non-budgeted repairs by detecting problem valves prior to failure

DESIRED OUTCOMES

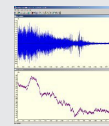
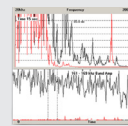
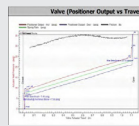
- Predictability – Outage scope, schedule, and budget
- Reliability - Early detection of failures
- Efficiency – Improved asset performance
- Root cause analysis, empirical test data, solutions

ADDRESS KEY MILESTONES WHEN PREPARING FOR AN OUTAGE

- Work Scope Defined
- Work Package Planning
- Scheduling
- Budget development
- Resource loading

NON-INTRUSIVE DIAGNOSTIC TEST METHODS:

- Ultrasonic Seat Leak Detection
- AOV Diagnostics
- MOV Diagnostics
- Check Valve Diagnostics
- Relief Valve Set Pressure Verification and Re-certification



OUTAGE EXCELLENCE PROGRAM

With our time-proven maintenance programs and resources, we can help to implement an outage excellence plan that includes:

PROJECT MANAGEMENT

- Pre-outage planning for all valve types
- Work-scope scrub
- Work package development
- Schedule Development
- Readiness assessments
- Walk down
- Parts verification
- BOM and Spec Sheet updates
- Risk Assessments and contingency planning
- HIT (High Impact Team) meetings

OUTAGE EXECUTION

- Field and Shop repairs for all valve types
- Diagnostic Testing
- Status Reporting
- Pre-job briefs
- Turnover
- Behavior Observations
- Condition Reporting
- Schedule adherence
- Schedule optimization

REPORTING

- Realtime status updates through online portal
- Digital Repair condition reporting with pictures
- Internal QC verification documentation
- Delay reporting to be used for constraint removal
- Real-time Budget Forecasting
- Internal burn-down curve reporting

INTEGRATED VALVE TEAM WAR ROOM - CONTINUOUS IMPROVEMENT

- Ongoing documentation of lessons learned
- Gap analysis with action plan implementation
- Post-Outage Critiques to capture lessons learned
- Fleet Summit meetings to include all sites/ corporate for information sharing
- Procedure Adherence Program
- Human Performance Improvement Plan

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