



# BENDER CCP

ENGINEERED ROTATING EQUIPMENT SPECIALISTS



# UNICO MECHANICAL

ENGINEERED ROTATING EQUIPMENT SPECIALISTS



# PUMP REPAIR & UPGRADES

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## **A Reputation for Quality and Expertise in Pump Repairs and Upgrades**

At Bender CCP, we are dedicated to providing the finest service for your engineered rotating equipment. Our trained technical team and well-equipped shops are available to you 24/7 to keep your equipment running optimally. We are the “one-stop shop” for all your needs: troubleshooting, failure analysis, repairs/upgrades, testing, welding, machining, fabrication, start-up, etc. Our broad experience translates into improved equipment efficiency and/or MTBF.



Bender CCP provides complete equipment repair, upgrade and overhaul service on all makes and models including API 610, ANSI B 73.1, Vertical, In-Line, Multistage Vertical Turbine, Centrifugal Pumps, Progressive Cavity, Reciprocating, Rotary, and more. No matter the model, manufacture or age of your equipment, Bender CCP can have you back up and running quickly and reliably. Bender CCP's workmanship is performed according to OEM and industry standards and is 100% guaranteed.

We have the capability to support all the modifications and improvements you need, with huge in-shop capacity, technical expertise in thermal spray, machining, grinding and replacement parts fabrication and refurbishment. In addition, we can machine large Discharge Heads.

## Bender CCP Pump Repair and Upgrade Capabilities

### Pump Repair Services Include:

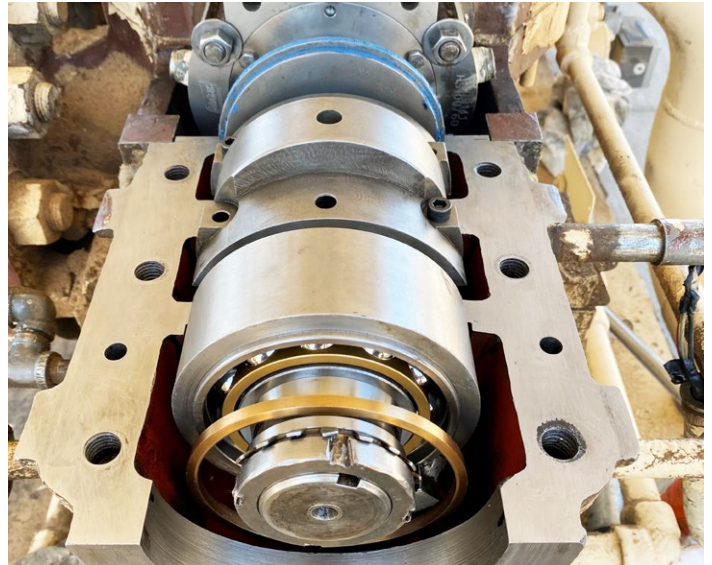
- Removal From Job site (If needed)
- On-Site Troubleshooting
- Complete Disassembly and Inspection Including non-destructive testing and precise measuring
- Sandblasting and thorough cleaning of all component parts
- Mechanical Repairs/Parts Replacement
- Pump parts Fabrication (As Required)
- Reassembly
- Performance Testing
- Reverse Engineering
- Delivery & Re-Installation
- Shaft Laser Alignments
- Field Machining of Pump Bases

### Pump Manufacturers Include:

- Flowserve
- Sulzer
- Ebara
- ITT Goulds
- Floway
- Union
- United
- Fairbanks Morse
- Patterson
- Worthington
- Dresser
- KSB
- Bingham
- Byron Jackson
- Layne
- Peerless
- Westinghouse
- Pacific
- Delaval
- Moyno
- Seepex
- Indar
- Torishima



*Field Service Base Installation*



*Many of our services can also be performed in the field such as bearing and seal changes*

## Pump Repair Procedure

- Match Mark Mating Components, and take pictures
- Inspect for improper clearances, corrosion, erosion
- Flow issues, cavitation and damage
- Clean and NDT parts as needed
- Take measurements and runouts
- Determine upgrades and repairs
- Balance rotating element to 4W/N
- Assemble Pump, Testing, Paint & Tag

## In-Shop Capability

- 100 Ton Lifting Capacity
- 37FT Under the Hook
- Machining up to 17' Diameter
- Machining up to 60' Length
- OD & ID Grinding
- 115,000 Sq/Ft Shop Space

## Modifications/Improvements

- Conversion to Mechanical Seals
- Installation of Labyrinth Seals and Bearing Isolators
- Change in Metallurgy (Nitronics, 17-4, Etc.)
- Bearing Upgrade (Vespel, Thordon, Etc.)
- Wear-Resistant Coatings
- Epoxy Coatings

## Thermal Spray Services

- Shaft Refurbishment
- Ceramic Coating for Bearing Areas
- Chrome Replacement Coatings
- In-House Babbitt Bearing Refurbishment
- Hard-Facing for Extreme Services





## CERTIFICATIONS & QUALIFICATIONS

<p><b>Quality Management System</b></p>	<ul style="list-style-type: none"> <li>• ISO 9001-2015 QMS Certified: Certification</li> <li>• NAVSEA Standard Item 009-04 Compliant</li> <li>• QMS Audit Compliant - Part of San Diego Ship Repair Association</li> </ul>
<p><b>Safety Management System</b></p>	<ul style="list-style-type: none"> <li>• OHSAS 18001 Compliant</li> </ul>
<p><b>Welding and NDT</b></p>	<ul style="list-style-type: none"> <li>• Level III Examiner oversight</li> <li>• NAVSEA SWRMC approved IAW MIL-STD-248</li> <li>• Qualified &amp; Certified American Welding Society (AWS), American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code (BPVC) and NAVSEA MIL-STD-248</li> <li>• R, U, &amp; S Stamp Holder</li> </ul>
<p><b>HVOF Thermal Spray</b></p>	<ul style="list-style-type: none"> <li>• NAVSEA Approved Facility and Procedures - MIL-STD-1687-A and MIL-STD-2138 for Thermal Spray Repairs and New Component manufacturing</li> <li>• American Bureau of Shipping (ABS) Approved Facility and Procedures</li> </ul>
<p><b>The Society for Protective Coatings (SSPC)</b></p>	<ul style="list-style-type: none"> <li>• Corporate Member, Council of Facility Owners (CFO)</li> <li>• NBPI Certified Coatings Inspector</li> </ul>
<p><b>National Association Corrosion Engineer (NACE)</b></p>	<ul style="list-style-type: none"> <li>• Level III Certified Coatings Inspector</li> </ul>



323-232-2371  
[benderccp.com](http://benderccp.com)



707-745-9970  
[unicomechanical.com](http://unicomechanical.com)

SHOP LOCATIONS: Benicia, CA • Corona, CA • Kent, WA • San Diego, CA • Vernon, CA