



Extending Equipment Life



Pump Repairs

Field Service

Babbitted
Bearing

Re-engineering

Upgrades

Blower Repair

Repair and maintenance of all types and brands of rotating equipment, engineered upgrades, field service, contract maintenance and inventory management.

PRO Services



ITT Industries

Extending Equipment Life

All equipment requires repair or rebuilding eventually – no matter how well it is designed or maintained. It might also need to be upgraded to the latest specifications. That's where PRO Services comes in. When your pump, blower, compressor, or any rotating or reciprocating equipment does need service or after-sales support, you can turn to PRO Service shops with complete confidence.

No other service company can match PRO Services total customer care. PRO Services also helps customers develop effective maintenance and asset management programs to lower maintenance costs, improve uptime and reduce inventory costs. Our highly experienced PRO Services team provides:

- Quality service alternatives (repair, rebuild, or re-engineer).
- Equipment maintenance (on or off site).

- Equipment upgrades for older equipment.
- Hydraulic re-rates to run equipment at its designed operating point.
- Equipment and system assessment and trouble-shooting using the latest state-of-the-art techniques and instrumentation.
- Systems analysis.
- Scheduled maintenance and plant shutdowns (parts, manpower and complete turnkey support).
- Rationalize parts inventory and develop reduction options.
- Complete takeover of maintenance at customer's site.

PRO Services provides a totally integrated solution to industry through its network of service centers, bringing a total commitment to quality, service, repair and parts to its customers worldwide.

PRO Technical



The PRO Services Engineering/Design Team provides mechanical and hydraulic upgrades on all pump makes and models to reduce cost of ownership, meet current industry standards, reduce energy consumption, increase reliability and

extend equipment life! PRO Services can re-engineer obsolete equipment into like-new condition, rebuilt to current industry specifications, as well as Reverse Engineer and provide Finite Element Analysis.

Field service problem solving and design verification can be performed quickly and cost effectively.



PRO Castings



ProCast has established and maintained a reputation for providing the very highest quality foundry and machining services.

ProCast manufactures NEW replacement parts that meet or exceed manufacturers standards. The combined resources of the ProCast Team assures the fastest possible response to the needs of industrial customers worldwide, including capabilities to manufacture new replacement parts that often exceed O.E.M. standards.

ProCast has the resources, technology, personnel and the proven experience to quickly repair and to manufacture quality replacement parts for virtually any industrial rotating pump in service anywhere in the world today. ProCast provides technical assistance, raw castings, finished machine parts or total equipment and repair.

The ProCast Team's functions include engineering, sales, quality control, inventory control and accounting.

- Autocad Drawing system
- 12,000 Machine Drawings and 2100+ active patterns on file
- State-of-the-art coordinate measuring machine that produces a digital image of the part to be replicated at our main facility or at the customers site
- Controlled to ISO requirements
- Customized software facilitates E.D.I. guaranteed stock and inventory management

Order your replacement pumps parts on the Internet anywhere, anytime! Contact ProCast to learn more at 1-800-278-7117 or check us out at www.procastparts.com.



PRO Repair Capabilities



Our local PRO Service centers are equipped and trained to perform all of your industrial repairs. Our ISO-9002 Certified PRO Service centers have the experience and expertise not only to repair your equipment, but offer upgrades, resulting in extended run times and reduced costs to our customers. Our goal at PRO Services is to reduce the cost of ownership, improve reliability, and increase profitability for our customers. "Extend Equipment Life."

Individuals charged with the important responsibility of keeping the plant up and the process running

benefit from PRO Services Repair. PRO Repair technicians repair ALL brands of pumps and rotating equipment:

- Vacuum pumps
- Mixers
- Centrifuges
- Turbines
- Babbitted bearings
- Blowers
- Agitators
- Gear boxes
- Compressors
- Fans

...reducing your cost of ownership and extending equipment life. No need to source different product specialists depending on the equipment needing repair. One call, one face, one invoice.



PRO Field Service



PRO Field Service includes servicing pumps and rotating equipment, of ANY manufacture at your site, worldwide. PRO Services has factory trained certified field technicians and a fleet of completely equipped service vehicles which will rush to your plant to handle emergency breakdowns 24/7/365. When on-site repair is impractical, PRO Field Service will coordinate the removal, transfer, repair and return to service of your equipment.

PRO Services also specializes in planned maintenance, plant shutdown, repair and contract services to handle all of your scheduled / routine maintenance.



PRO Upgrades



Your local PRO Service Center offers solutions to lowering **Total Cost of Ownership** of your pumping systems. This can be achieved by *upgrading your older style API process pumps to today's high performance standard of API 8th edition.*

The question of whether to Replace or Upgrade your existing equipment is a challenge faced by most end users today. When casing, piping, and foundation are in good shape, upgrading your existing pump to comply with 8th edition performance usually is economically attractive compared to new pump installation. By exploring all options available, a better decision can be made in this area.

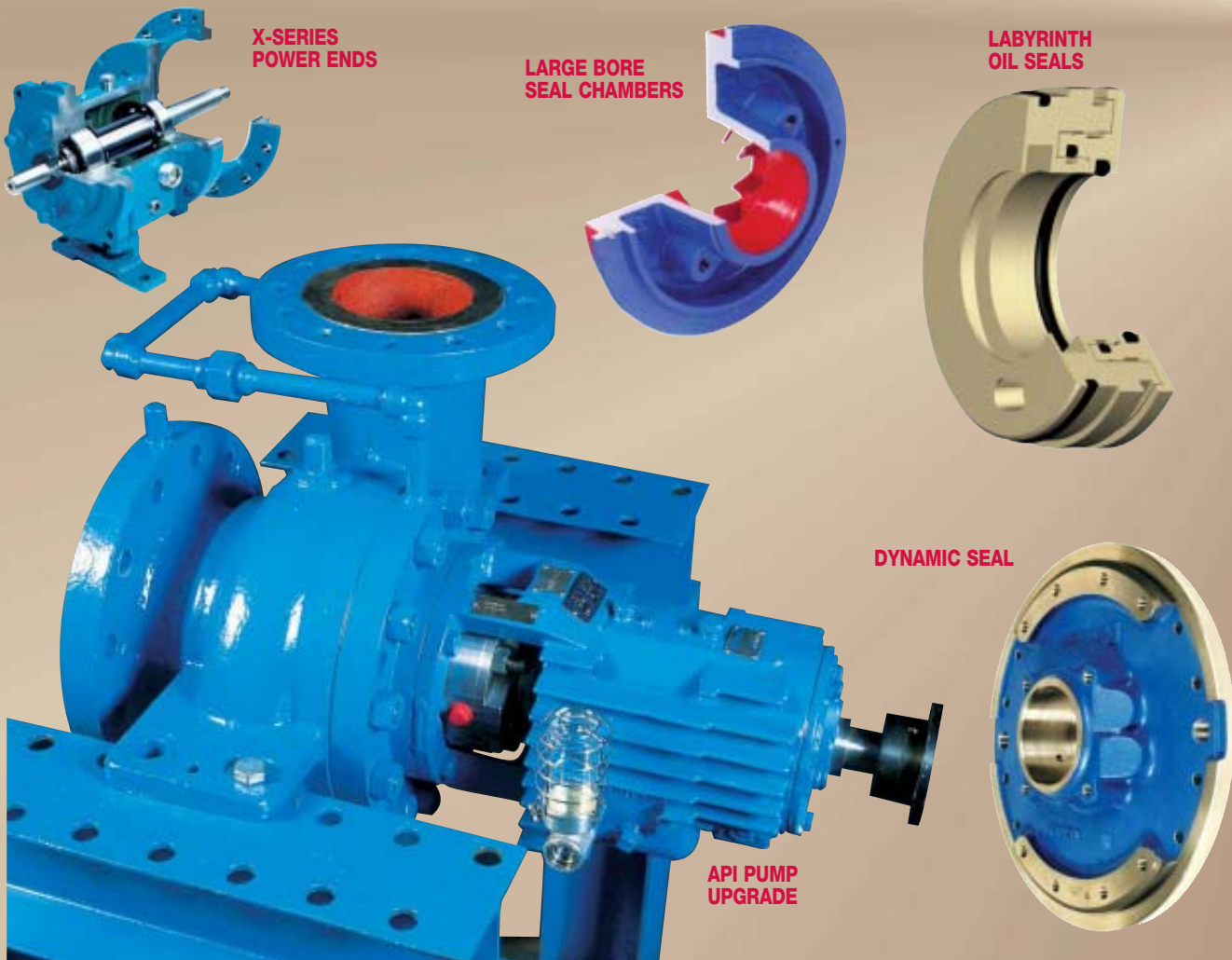
Upgrades may involve hydraulic modifications and/or power end conversions. PRO Service Centers are experienced with all manufacturers including IDP (Pacific, Worthington, IR), Flowserve (Byron Jackson, United Centrugal, Wilson Snyder), Sulzer (Bingham), and ITT (Goulds).

Experienced engineering and production staff are equipped with the latest technology and training for upgrades and performance enhancements quickly and professionally.

PRO Service Centers provide a thorough AS FOUND report of components and a complete workscope for repairs with a firm price. Also provided is a complete owners manual at shipment that includes cross sectional of upgrade, spare parts stock sheet, and standard owners manual at shipment that includes cross sectional of upgrade, spare parts stock sheet, and standard owners manual. Additional documentation can be provided as required.

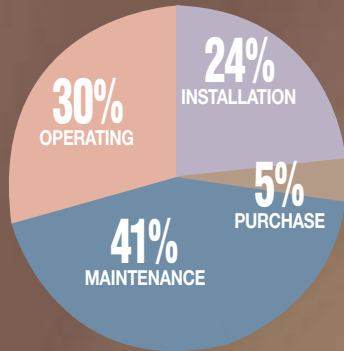
New Life for Old Pumps

PRO Upgrades also include high quality repair/rebowling capabilities for vertical turbine pumps. Easily and economically restore your vertical turbine pump's original performance (and in many instances, improve it) by rebowling. Complete new





PRO Upgrades



Total Cost of Ownership

20 year life-cycle costs. Based on 6000 hr/year. That \$5,000 ANSI pump can cost \$150,000-\$200,000 over 20 years!



liquid ends match all makes of vertical turbine pumps from 6" to 120"...regardless of manufacture.

Once the mechanical and hydraulic requirements are determined, a complete replacement bowl assembly can be shipped for on-site adaptation and installation or, if preferred, easily accomplished at the nearest PRO Service Center.

Reduce Equipment, Installation and Operating Costs

PUMPSMART® intelligent flow system significantly increases equipment life. PumpSmart is an advanced technology system that works with any centrifugal pump utilizing a smart VFD controller and our proprietary control software.

Features of PumpSmart:

- **Reliability** - Longer pump and seal life means reduced maintenance and downtime.
- **Control** - Improved pumping accuracy and repeatability means better process control.
- **Operating Cost** - Variable speed cuts energy cost up to 70%.
- **Flexibility** - Control any centrifugal pump up to 700HP.



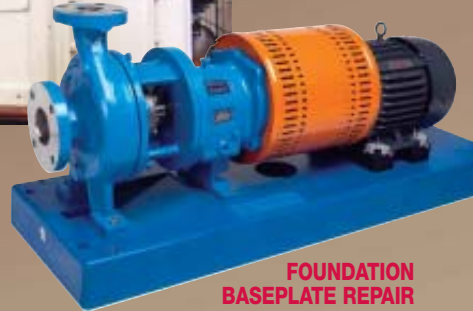
REBOWLING SERVICES



UPGRADE FOR API PUMPS



GEARBOX REPAIR



FOUNDATION BASEPLATE REPAIR



PS200 PUMPSMART

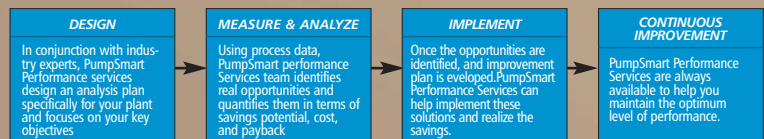
PumpSmart may also eliminate the need for control valves, flow meters, recirculation piping, and suction valves, reducing capital and installation costs.

Identifying Opportunities to Optimize Pump Life Cycle Performance

With PRO Services as your partner, significant savings from pumping efficiency improvements are available to the process industries. Optimizing pump life cycle performance provides a new path to help achieve this goal. The largest consumers of industrial motor energy, typically, are the centrifugal pumps moving fluid throughout your operation. Studies show that average pumping efficiency is below 40%, with 10% of pumps operating below 10% efficiency.

Oversized pumps and throttled discharge valves are the two major contributors to lowering efficiency and reliability.

Optimizing pump system performance has the potential to achieve 30% to 70% improvements in pump and process reliability, energy and maintenance cost, and asset management. Let PumpSmart Performance Services help re-engineer your process back into the future.



PRO Services – There When You Need Us



ORDER PARTS ON-LINE
www.procastparts.com

- Order your replacement pump parts on the Internet “anywhere...anytime!”
- Special promotions and discounts
- Extensive searchable catalog
- User-friendly navigation with simple shopping cart functionality
- Credit card purchases accepted
- Online order status and history
- Customer email notifications
- Contact ProCast to learn more or check us out at www.procastparts.com!

Products Repaired

Blowers	Gearboxes
Centrifuges	Pumps
Fans	Conveyors
Crushers & Pulverizers	Industrial Engines
Pistons & Rods	Miner Tooling
Steam & Hydro Turbines	Bearing Housings
Ash Handling Systems	Couplings
Mixers & Shafts	Boiler Feed Pumps
Babbitted Bearings & Thrust Shoes	
Air and Gas Compressors & Components	
Compressor, Pump, Fuel, & Air Start Valves	
Packing Cases & Stuffing Boxes	
Burner Register & Nozzles	
Trunnions & Thrust Rolls	
Kilns	



1-800-278-7117

ISO 9002 Certified Facilities

For more information call your nearest PRO Service Center.

PRO Services



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