



# PRX-VSR

Rebowl of Vertically Suspended/  
Vertical Turbine Pumps



# ITT

ENGINEERED FOR LIFE

# Engineering Capability

## Vertical Pump Capability

ITT, leader in high performance technology, once again sets the standard in critically engineered components with its Goulds Pumps Vertical Products Operation.

- State of the art hydraulics for performance optimization
- Thorough equipment re-rates to prolong service life
- Modeling in 3D to achieve accurate prototypes
- Pattern validation with advanced 3D solidification model
- Environmental analyses promote longevity in seismic activity, wind and thermal transient conditions
- Structural Dynamic Analysis helps maintain integrity of pumps
- Rotor Dynamic Analysis reduces field repairs
- ITT custom hydraulic designs are featured on our large vertical circulating water pumps
- Structural Static Stress Analysis for uniform loads
- Patented ITT "O" Discharge Head Design for pump reliability
- Computational Fluid Dynamics Analysis assesses fluid intake
- NPSH testing improves field performance
- Field service and support at every stage, from start-up to aftermarket. Anywhere in the world

## Upgrades Engineering Capability

Our PRO Services Aftermarket Engineering Center is part of the ITT PRO Services organization, ITT's global brand of aftermarket services/solutions for pumps and rotating equipment systems. The team has extensive experience and capability to provide solutions that will help customers increase mean-time-between-repairs (MTBR) and improve total cost of ownership (TCO).

Together the team has expert knowledge and understanding of pump related disciplines including – hydraulics, rotor-dynamics, vibration, and metallurgy. This understanding coupled with application knowledge in oil & gas, power, desalination, chemical process, pipelines, & industrial makes us well qualified to support you.

## Regional Repair Centers

New bowl assemblies are sourced from our product centers and inventoried locally for quick turnaround.

ITT PRO Services repair centers (PRO Shops), located around the world, finish the bowl assemblies to customer specifications.

We can deliver finished bowl assemblies in a wide range of hydraulic sizes to meet your application.



# Comprehensive Solutions

## Reliability has no quitting time.

Building on over 160 years of Goulds Pumps and Bornemann experience, PRO Services provides an array of services focussed on reducing equipment TCO and increasing plant output, including predictive monitoring, maintenance contracts, field service, engineered upgrades, inventory management, and overhauls for pumps. PRO Services can typically return savings of up to 25 percent annually.

## Addressing Needs

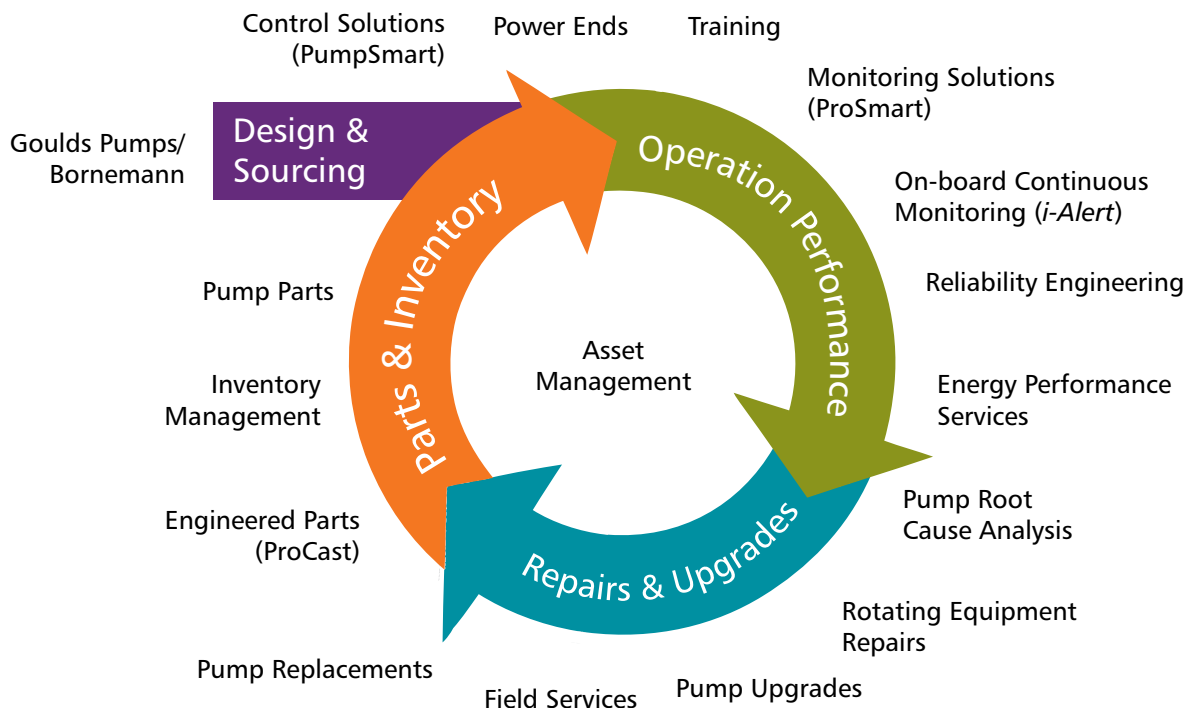
Depending on the issues and level of service needed, PRO Services will tailor solutions to fit your needs. We have the experts to get the job done right.

## Repairs & Upgrades

PRO Services facilities (PRO Shops) provide an array of repairs and upgrades services to extend equipment life. Our PRO Shops help customers develop effective maintenance and asset management programs to lower maintenance costs, improve uptime, reduce inventory costs and extend equipment life.



## Your Total Solution For Equipment Life Cycle Optimization



# Rebowling Your Pump

After years of continuous, heavy-duty service, the performance and operation of vertically suspended pumps can decline. Often indicated by excessive vibration, cavitation and loss of head, excessive wear, continuous pump failures, corrosion, etc. resulting in increased power consumption, maintenance costs and reduced availability.

With the aim of being more economical than a complete new pump, rebowling a pump could be the solution for many pump problems with no disturbance to the existing piping and re-using some of the original pump parts such as the discharge head, mounting plate and the driver.

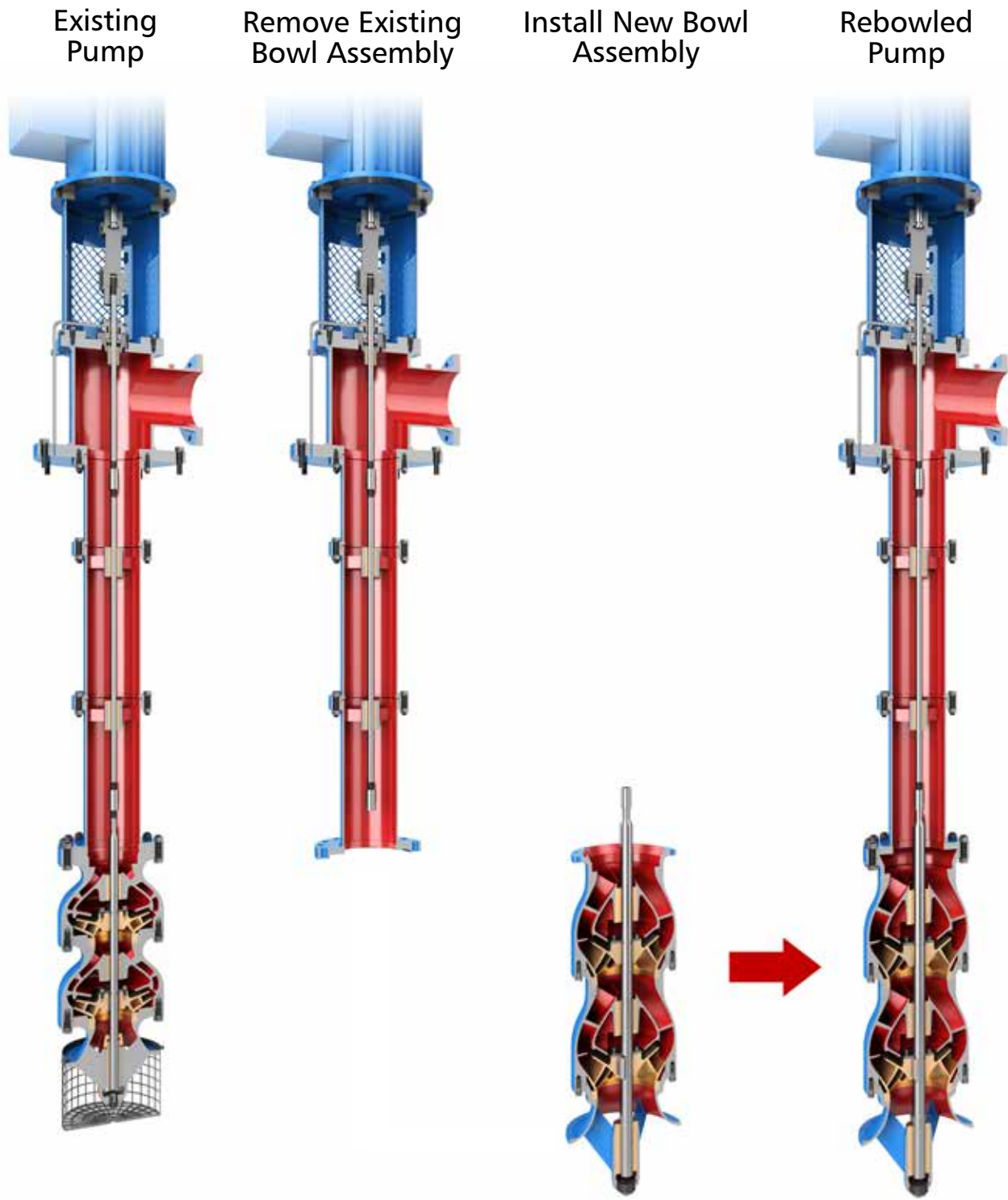


## Rebuilding Your Pump Can Yield the Following Benefits:

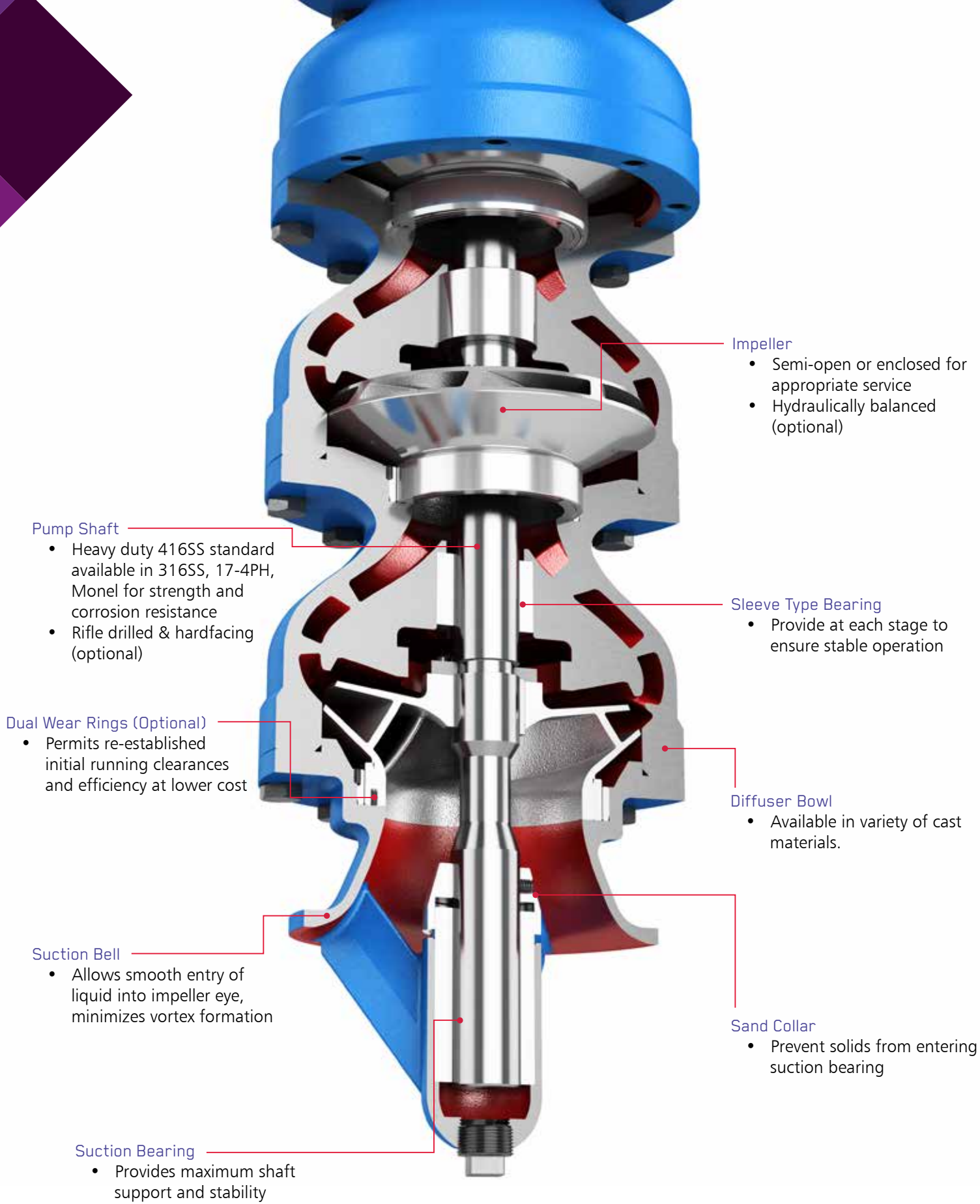
- Improved pump performance
- Reduced power consumption
- Lower maintenance costs
- Extended pump life
- Less costly than a new pump
- Reduced downtime
- No change in piping or motor
- Upgraded system hydraulics
- Increased efficiency
- Shorter lead time than getting a new pump
- Material and mechanical upgrades if required



# What is in the Rebowl Program







# Applications



Chemical/Petrochemical



Power generation



Water intake

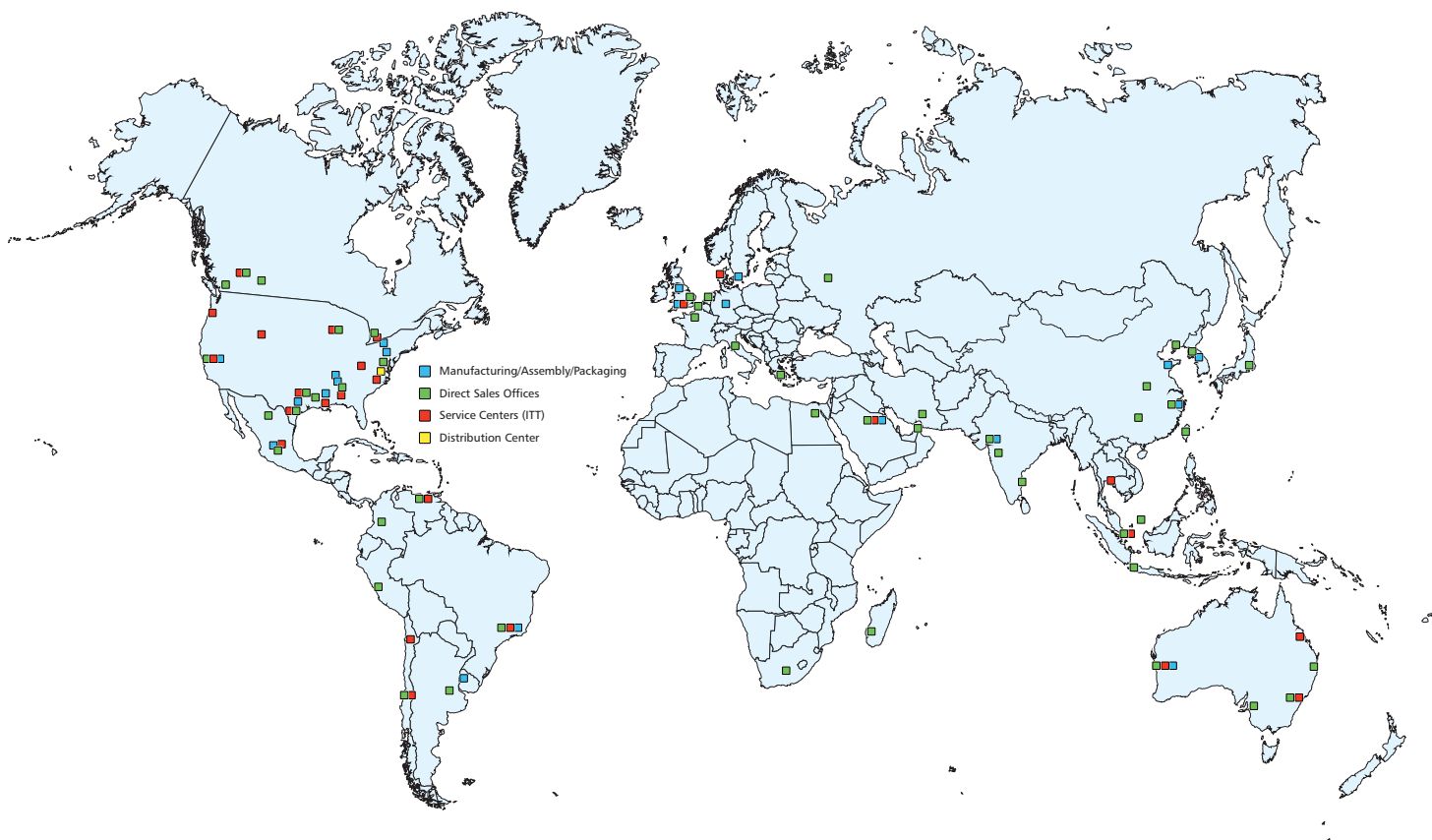


Mining



Oil & Gas

# Wherever you are, we're there too.



Reliability has no quitting time.

Building on over 160 years of Goulds Pumps experience, PRO Services provides an array of services focused on reducing equipment total cost of ownership (TCO) and increasing plant output, including predictive monitoring, maintenance contracts, field service, engineered upgrades, inventory management, and overhauls for pumps and other rotating equipment.

## Your Total Solution For Equipment Life Cycle Optimization

