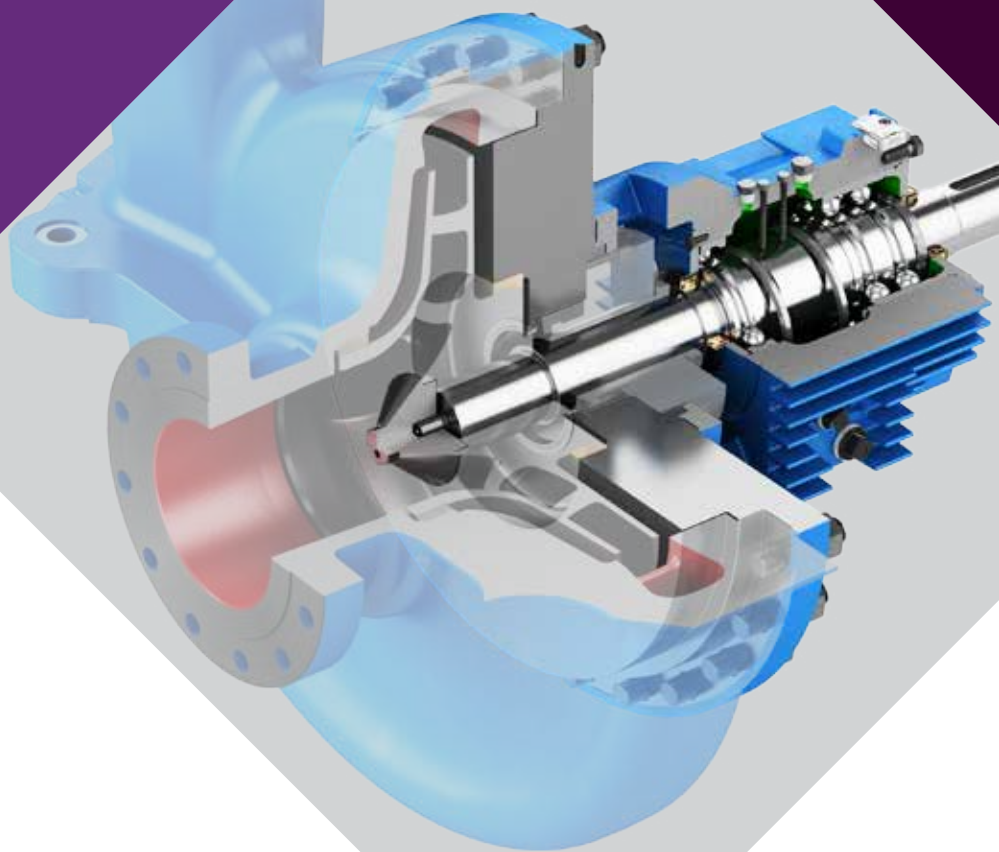




PRX-OH2

Back Pull-out Upgrade



ITT

ENGINEERED FOR LIFE

ITT Design Capabilities

Leading Edge Design Technology & Capability

ITT are experts in engineered pumps that meet the demands of our customers. Design, development and analysis are carried out by our highly experienced and skilled engineers utilizing the latest technology.

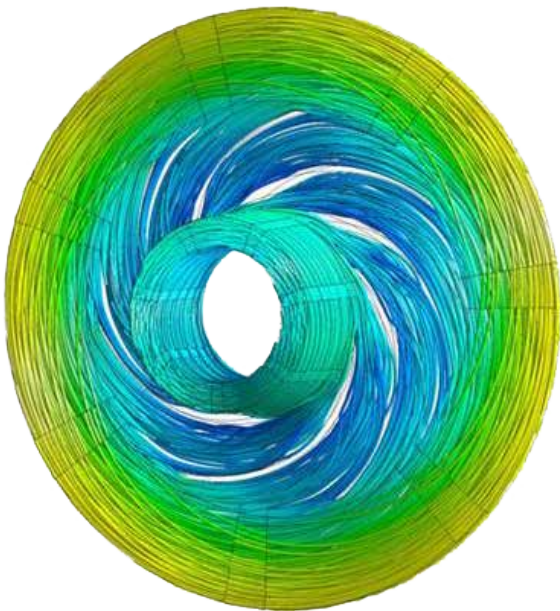
ITT is a world leader in technology and engineering including:

- Hydraulic Design
- Materials Science
- Mechanical Design
- Fluid Dynamics
- Rotor Dynamics
- Stress and Structural Analysis
- Prototype Modeling and Testing

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 reduce mean-time-between-repairs (MTBR) and improve total cost of ownership.

Together the team has expert knowledge and understanding of pump-related engineering disciplines – hydraulics, rotor-dynamics, vibration, metallurgy. Coupled with deep knowledge of the oil & gas, power & desalination, chemical process, pipelines and general industry, the team is well qualified to provide solutions to your pumping requirements.



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 total cost of ownership (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

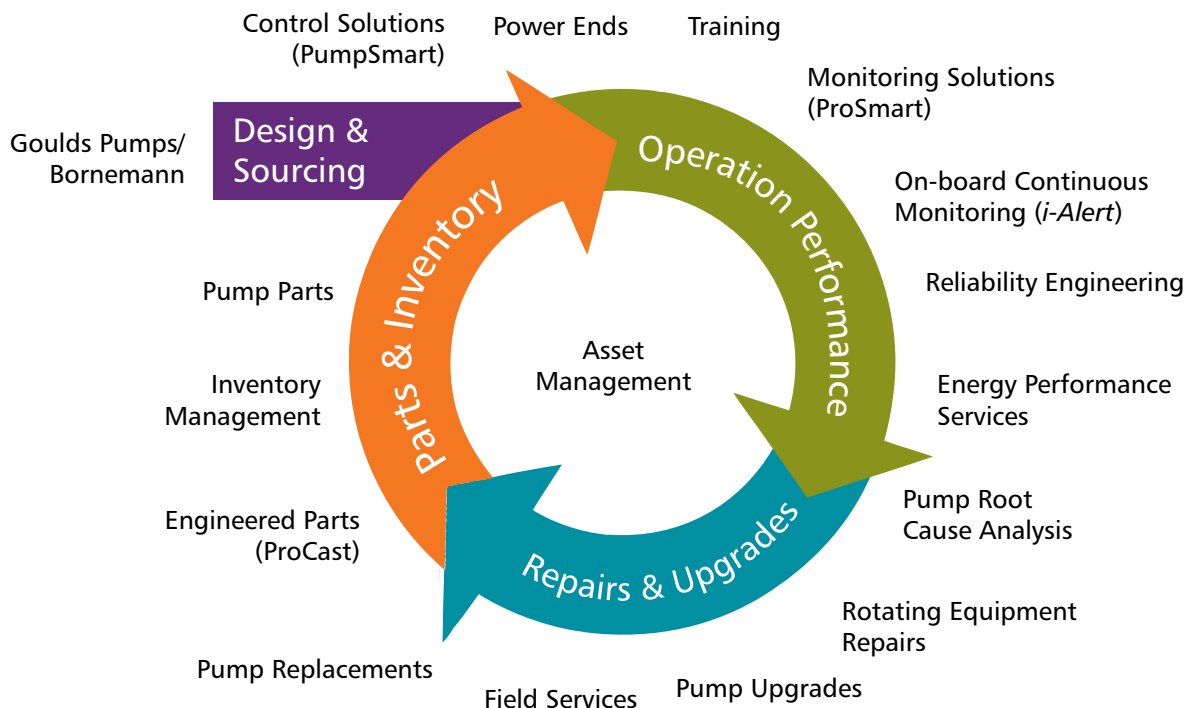
Depending on the issues and level of service needed, PRO Services will tailor solutions to fit your needs. We have the experts to get the job done right.

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



PRX-OH2 Back Pull-Out Upgrade

Description

The PRX-OH2 is a back pull-out assembly which provides a complete replacement to your existing equipment while keeping the existing impeller and casing.

The replacement scope consists normally of bearing housing assembly, shaft, seal chamber cover with wear ring, throat bushing, keys and impeller nut. It is available in 4 API seal chamber sizes (#2/4/6/8) and 3 materials classes (S-6/C-6/A-8).

PRX-OH2 Heritage

The PRX-OH2 is developed from the long established Goulds Pumps 3700 model, a centerline-supported, flexibly coupled horizontal overhung (OH) high temperature and pressure process pump designed to meet or exceed latest API 610 edition.

ITT Goulds Pumps has 40+ years of API experience. More than 17,000 OH units are installed worldwide for various applications in the Petroleum, Petrochemical and Natural Gas industries.

Benefits of Upgrading your OH2 Pumps with PRX-OH2

- **Increased Reliability**
 - Robust design
 - Low shaft flexibility index (L^3/D^4) increasing stiffness and MTBR
 - Upgrade to latest edition API mechanical seals, reducing emissions
- **Minimal Site Disruption & Reduced installation costs**
 - Pipework remains in same position/No driver movement in the majority of cases
 - Inventory for building PRX-OH2 held at PRO Shops ensuring quick turnaround for upgrade and minimal downtime
- **Reduction in Site Inventory & Lead Time**
 - 4 frame sizes available maximizing flexibility and minimizing inventory

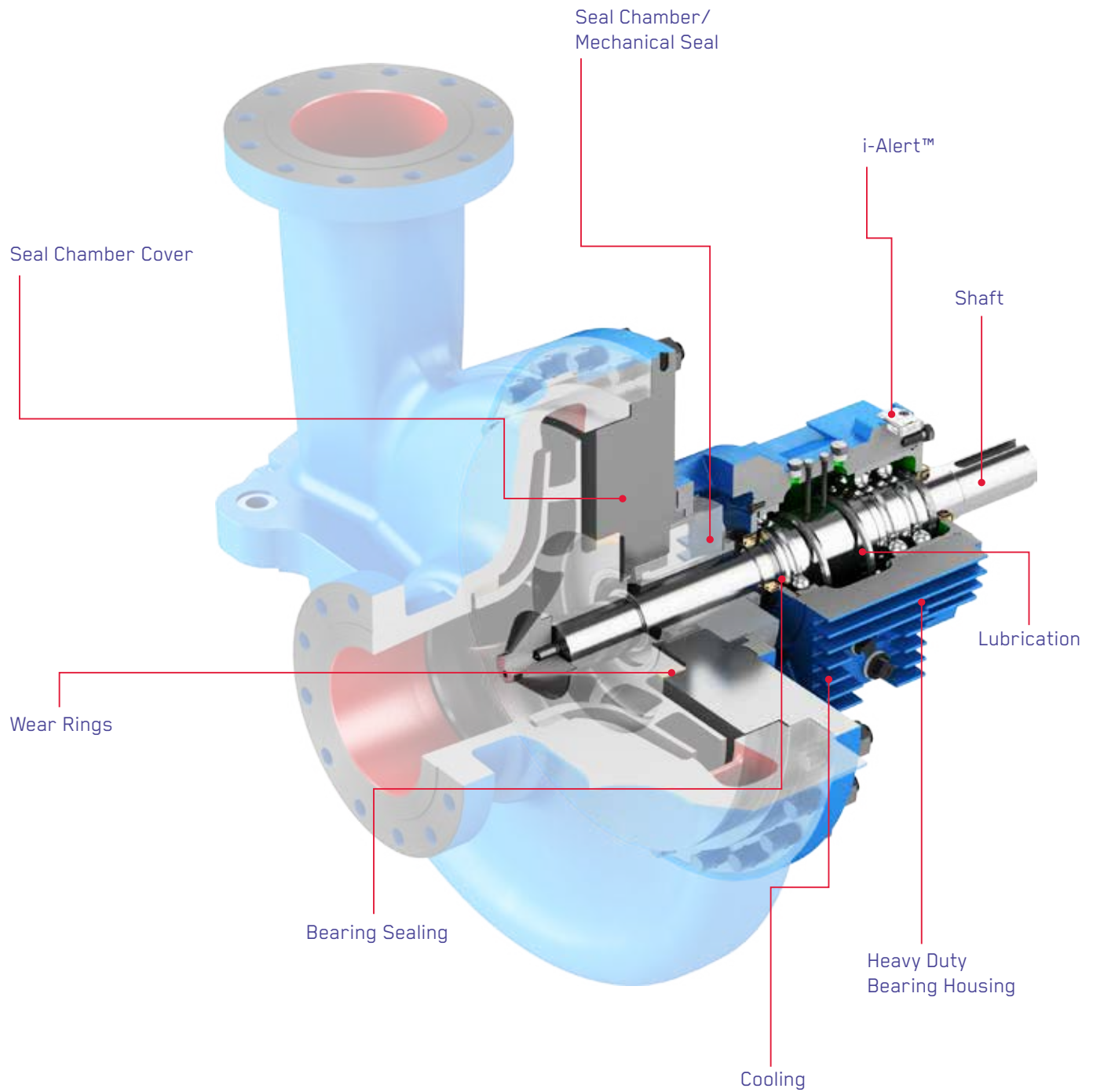


Before Upgrade



After Upgrade

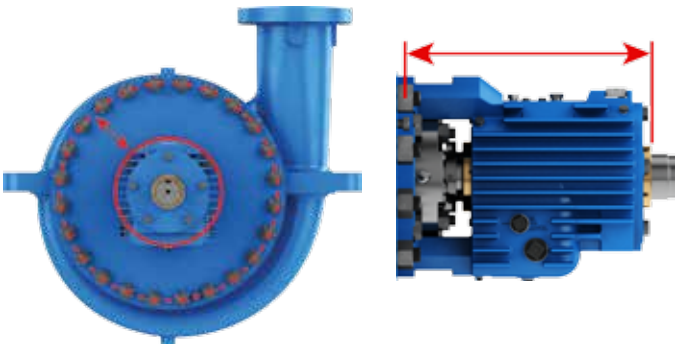
PRX-OH2 Main Features



Main Features

Bearing Housing

- **Designed for Retrofit**
 - No driver movement (in the majority of cases) due to optimized bearing housing length
 - Optimised bearing bracket outside diameter
 - No interference with casing to cover bolt
 - No need to modify standard bearing housing
- **Maximum shaft diameter within space envelope = Maximum MTBR!**



Wear Parts

- **Wear Rings**
 - Seal chamber cover wear ring custom designed to match existing equipment diameters
 - Throat bushing custom designed to match existing equipment
 - Optional impeller and casing wear rings can be supplied if required



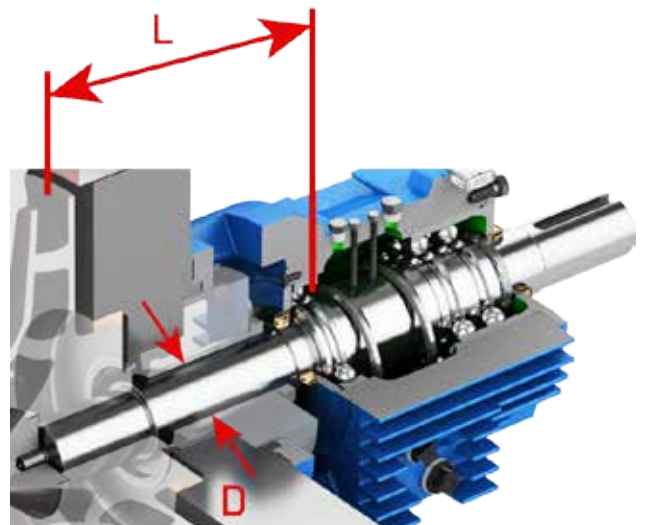
Lubrication & Cooling

- **Lubrication**
 - Ring oil lubrication as standard
 - Simple conversion to oil mist lubrication if required
 - Bearing isolators fitted to maintain quality of oil and maximise bearing life
- **Cooling**
 - Integrally cast cooling fins on exterior of frame
 - Cooling fan on thrust end and radial heat flinger options available
 - Water cooling with heat flinger to be considered for pumps on hot standby



Shaft

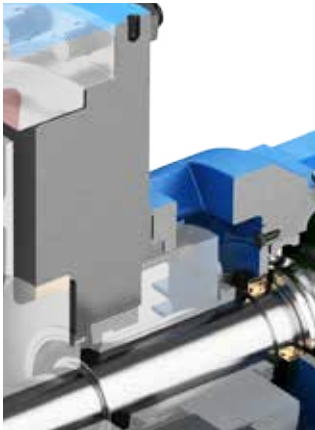
- **Low L^3/D^4 ratio minimises shaft deflection**
 - L = Distance from center line of impeller to center line of radial bearing
 - D = Diameter at mechanical seal
- **Shaft end machined to match existing impeller bore and key**



Main Features

Seal Chamber/Mechanical Seal

- Seal Chamber Cover
 - Designed to meet API requirements for mechanical seal chamber
 - Customized drilling and dimensions to suit existing casing interface
- Mechanical Seal
 - Optimized interface sizes to reduce inventory for API compliant seal
 - Sizes – #2/4/6/8
 - Standardization on only 4 sizes reduces customer inventory levels
 - Optional supply of mechanical seal if required



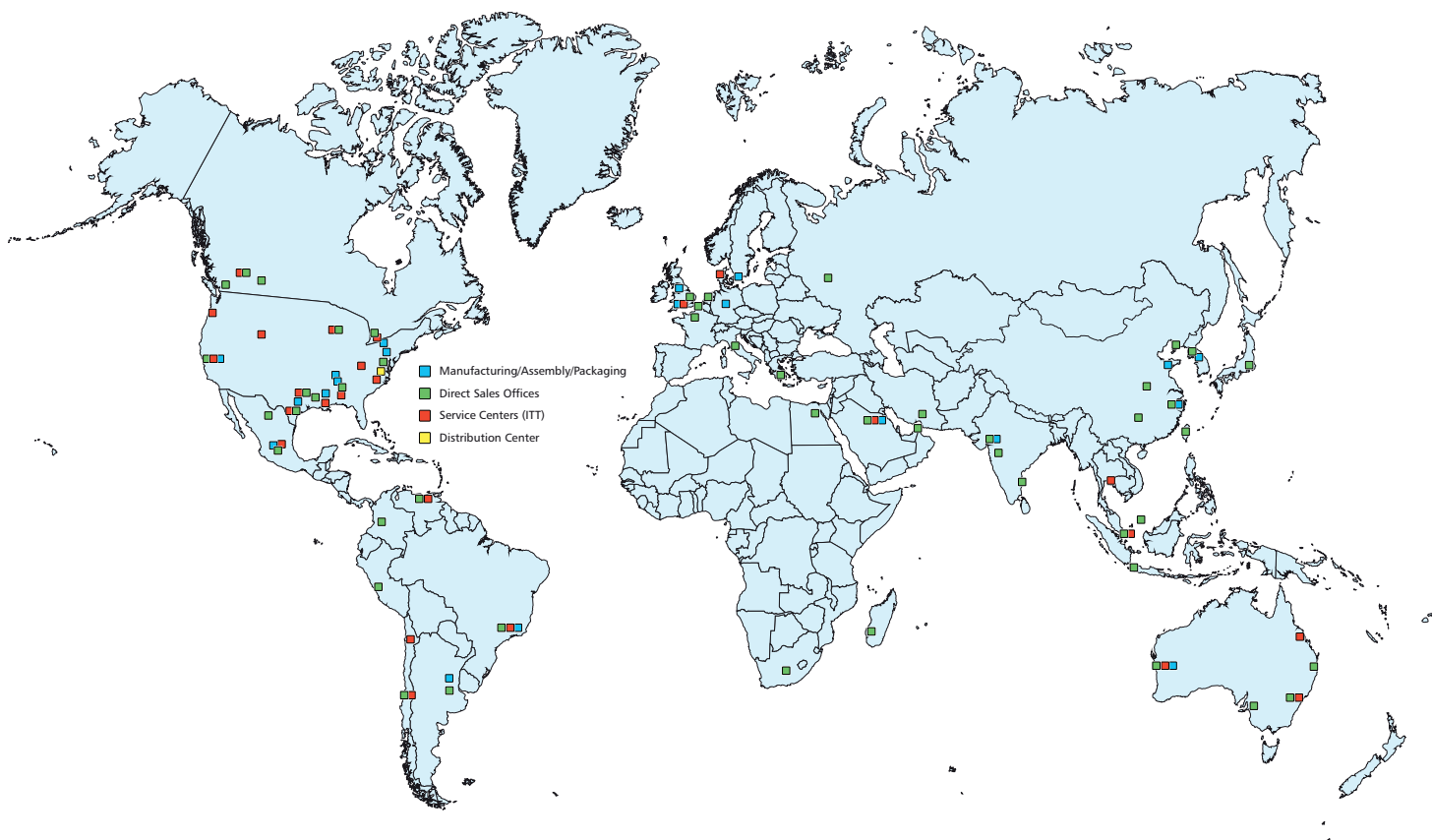
Instrumentation

- i-Alert monitors temperature and vibration

Installations



Wherever you are, we're there too.



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Your Total Solution For Equipment Life Cycle Optimization

