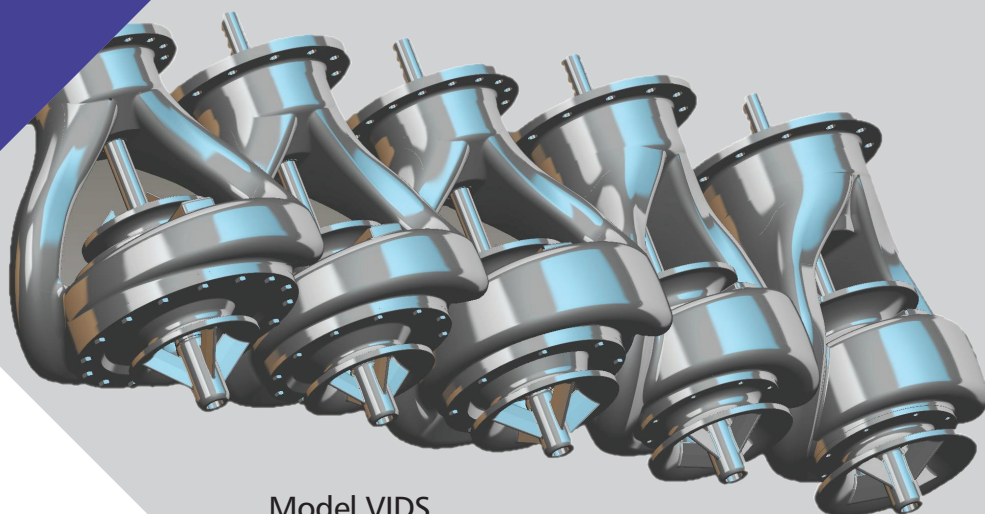


Double Suction Vertical Pumps

Delivering Low-NPSH Performance and
Extended Service Life



Model VIDS

LENNTECH

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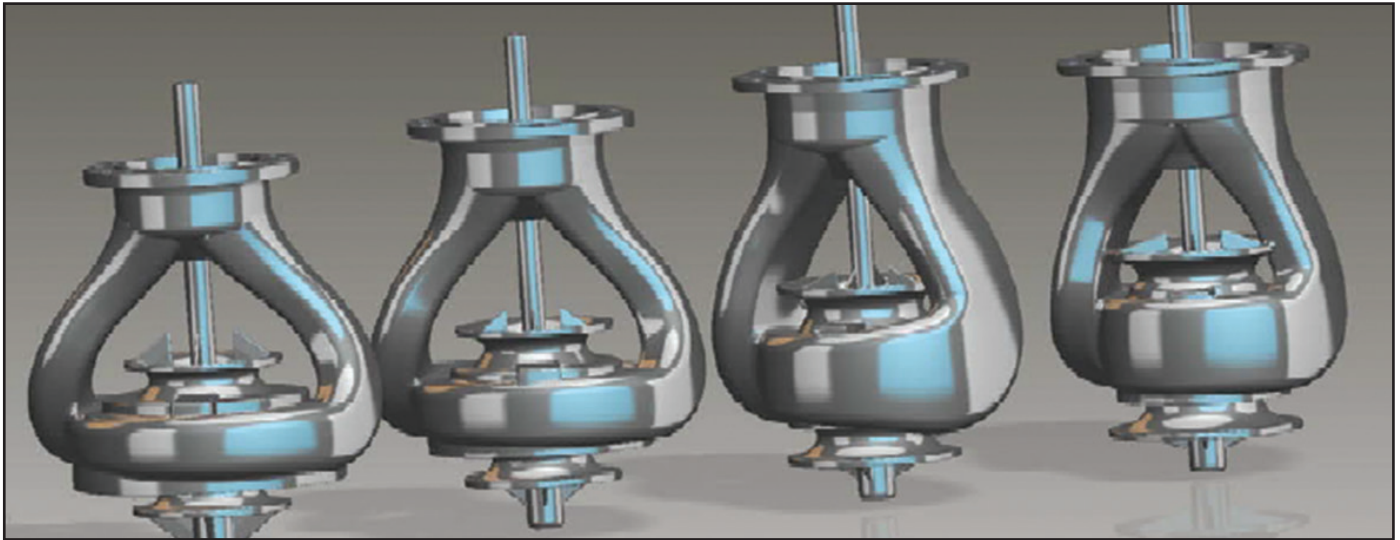
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ITT

ENGINEERED FOR LIFE

Double Suction Verticals. Five Unique Models. One Customer-Focused Company.



You need more. More efficiency. More durability. More flexibility. For Mining, Oil and Gas, Power, and other Industrial needs, we're your one stop for Double Suction Pumps.

Unique Specific Speed Designs. Optimized Results.

- Each Model of the VIDS line (Vertical Industrial Double Suction) will be customized to conform to your project specifications.
- Available in open pit or can configurations.
- Model ZDS
 - Ideal for VS2 pumps in high-head mine dewatering and dirty sump applications.
- Model ADS
 - Perfect for VS2 pumps in medium-head mine water processing and dirty sump usage.
- Model BDS
 - Best choice for VS2 and VS7 pumps for energy and condensate applications.
- Model DDS
 - Select for VS2 pumps in raw water lift and VS7 pumps deployed in oil pipelines.
- Model FDS
 - Designed for VS7 pumps in oil pipeline and electric power station operations.

Advanced Design. Increased Productivity.

The pump. It's a single piece of equipment, but the functionality of this critical component impacts your entire operation. At ITT Goulds Pumps, our job is to design innovative pumps that help make your job easier.

Advantages of double suction pumps include:

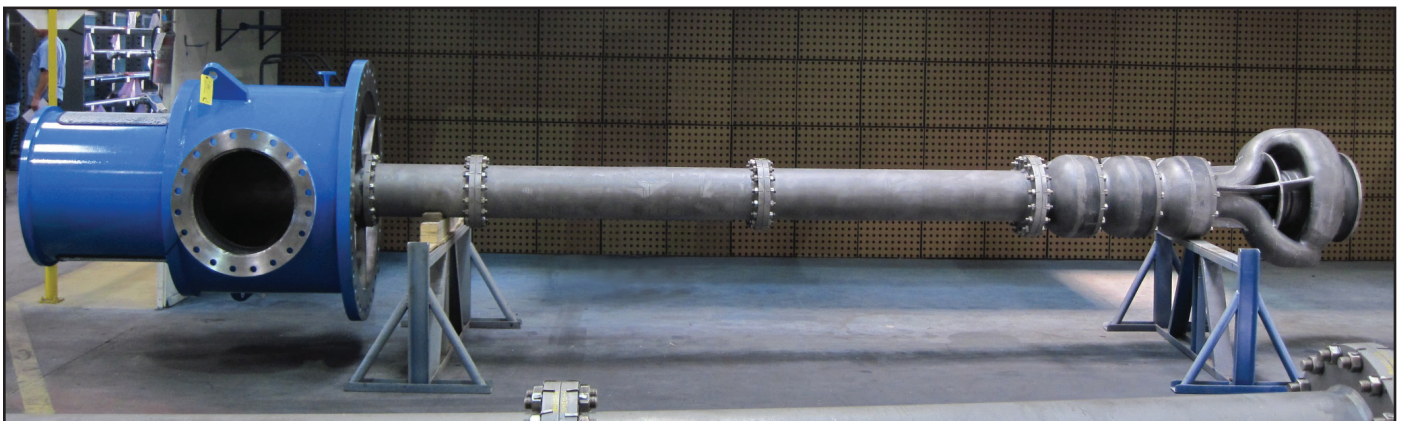
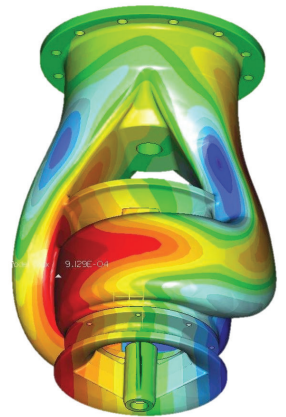
- Goulds Pumps Double Suction impellers reduce NPSH (Net Positive Suction Head) requirements. This means that shorter pump lengths can be manufactured, with easier installation and enhanced field operation. This advantage becomes important in larger pump sizes, particularly in high-speed pumps pumping more than 3,500 gpm at 1,800 rpm.
- Got a dirty job to do with a high concentration of suspended solids?

Goulds Pumps Double Suction pumps are ideal, pumping through those dirty liquids without bearing wear concerns.



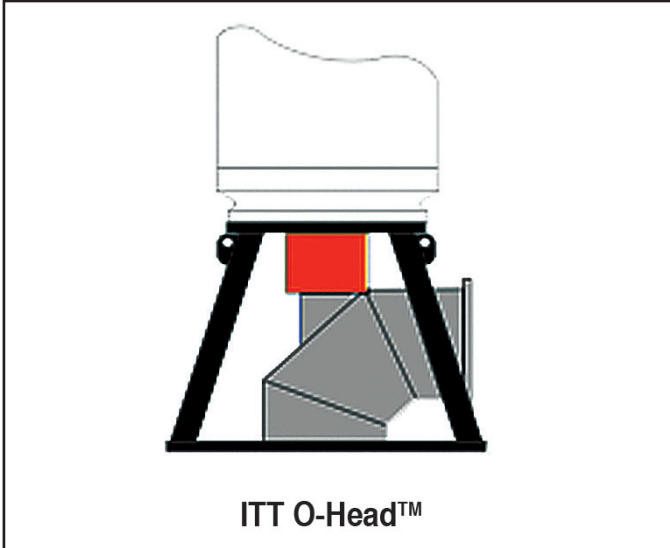
Premium Features Offered As Standard

- Finite Element Analysis of Goulds Pumps' pump structure and patented "O" Head design evaluates the resonance frequency of actual pump conditions. Ensures more reliable field operation.
- Goulds Pumps' integrated pump casing design is easier to fabricate than typical two-piece casing construction. Shorter delivery times mean your pump and project are up and running faster.
- Patented, rotor stabilizing, double volute design minimizes radial loads and prevents premature bearing failure.
- Patented seal technology design facilitates maintenance, preventing premature seal failures from dirty applications.
- Hydraulic, down-thrust loading ensures reliable operation with rotor in tension. Low vibration, low axial thrust extends bearing life.

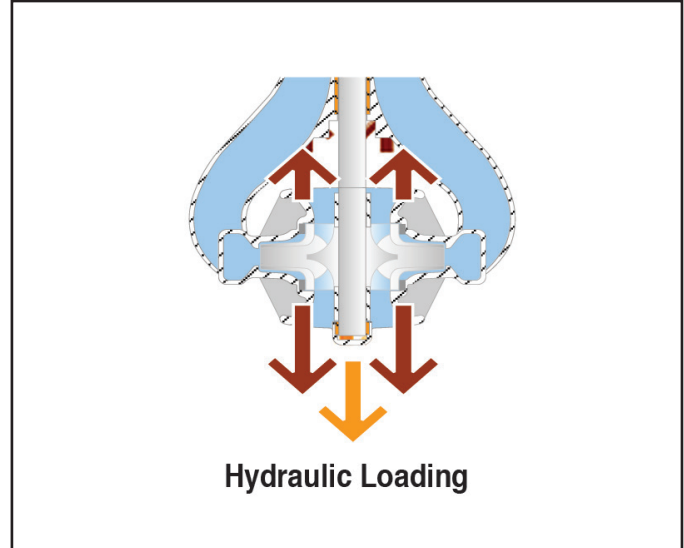


We've Got The Patents. You Get The Advantages.

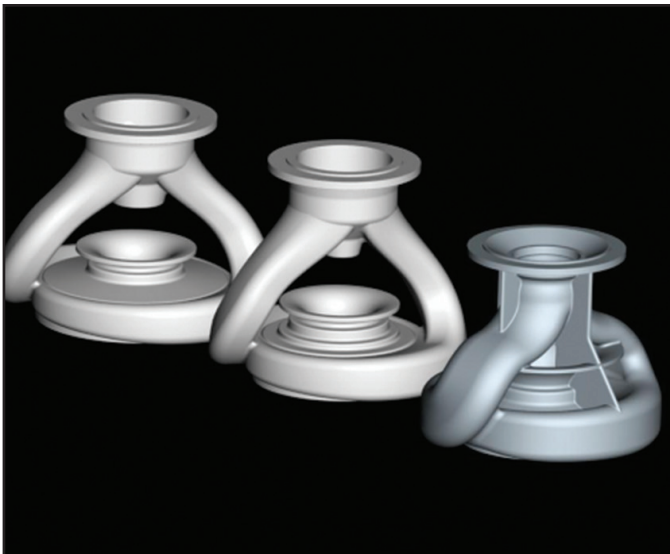
Patented O-Head Design



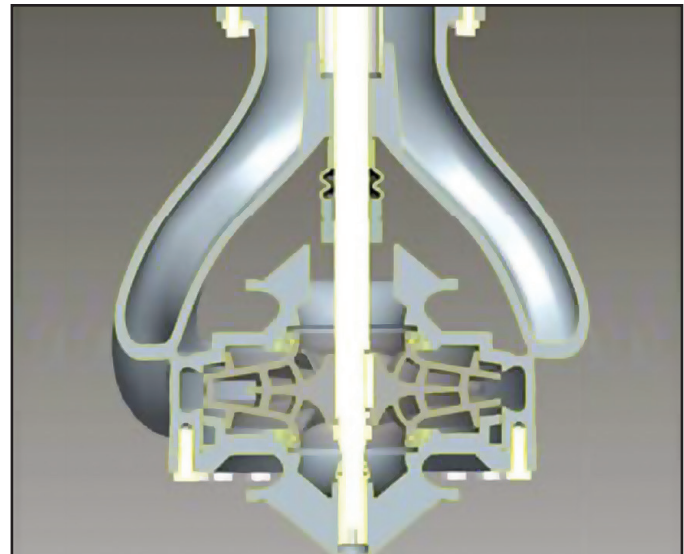
Patented Rotor Stabilizing Design



3D Solids Model Engineering



Patented Casing Seal Design



Goulds Pumps is proud of our world class Research and Development team, which has been responsible for revolutionary advances in pump technology. Our patented features and unique processes provide significant customer benefits.

- Superior operation for extended lifecycles
- Highly desirable, low NPSH performance
- Comprehensive product range of hydraulic fits
- Capable of processing high levels of suspended solids

More Solid Reasons To Go With ITT Goulds Pumps.

Of all ITT Goulds Pumps' innovations, our solids handling capabilities are among the most valuable. If your pump will be installed in an environment with a high concentration of solid particulates, read on.

A Separate Solution for Solids Handling

- Our single-stage VS-2 pumps can process liquids with concentrations of total suspended solids up to 10,000 ppm.
- How can we handle these rocky problems? Goulds Pumps protects all the sensitive bearings by completely isolating them from high pressure pumpage and contaminants inside the enclosing tubes.

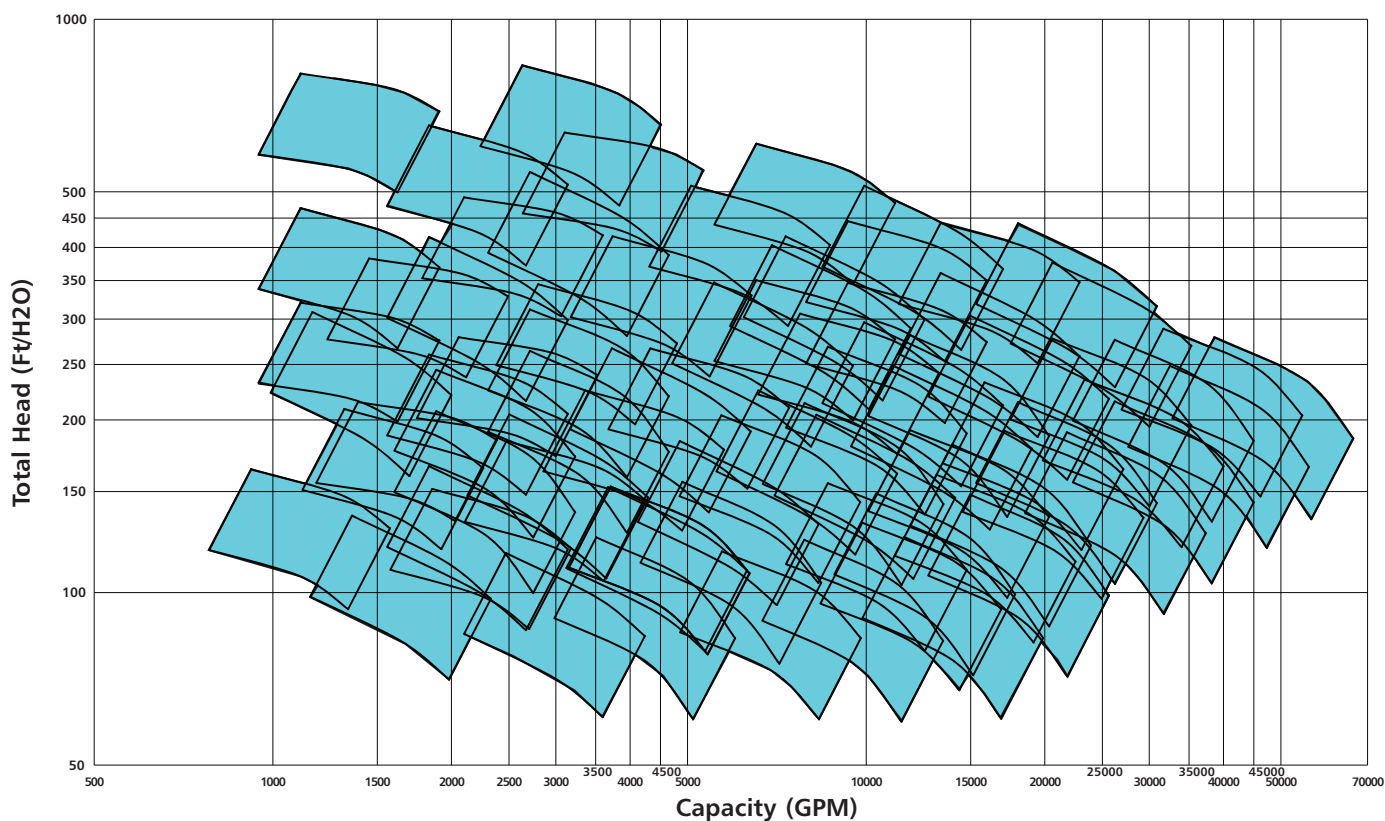
Helping You Gain Your Bearings

- Bearing life is also extended by an ingenious new sealing arrangement between the liquid in the suction intake and the bearings in the enclosing tube. The

oil lubricates both the bearings and the seal facings at the bottom of the enclosing tube. But the oil is fully isolated from dirty water in the pumpage using a bellow-type rotating mechanism.

- Mechanics of our patented sealing mechanism are deceptively simple. Unlike typical commercial seals, we use a self-adjusting close-axial clearance between the stationary and rotating faces for a firmer seal. As wear occurs, the bellow portion of the seal expands, moving the stationary face to the rotating face position.
- By protecting our bearings from abrasion and wear, we can utilize less costly bearing and shaft materials instead of hard faced coatings.

Double Suction Hydraulic Coverage Chart



The Versatile Vertical: On Water, Land and Underground.

No matter who you are, or why you need a vertical pump, you've come to the right place. Goulds Pumps will custom craft a high-performance piece of equipment that is optimized for your project application.



Oil and Gas

- Crude oil distillation and recovery
- Oil pipeline transport across wide areas
- Transfer loading and unloading, where low NPSH is critical
- Water and CO₂ injection for oil recovery



Power

- Nuclear service, one of our most longstanding, respected applications
- Cooling water (main and intermediate circulation, blow-downs)
- Condensate extraction with fluctuating loads
- Heater drain for tight controls



Industrial

- Steel Mill cooling, quench process and water services
- Descaling calorifiers, boilers, cooling circuits and heating systems
- Fire protection for NFPA services
- Secondary effluent circulation in industrial processing
- API process services for medium and high pressure applications
- Flood control water transport in storm conditions

Mining

- Dewatering and water supply for all excavation types
- Acid leaching and extractions from ore deposits

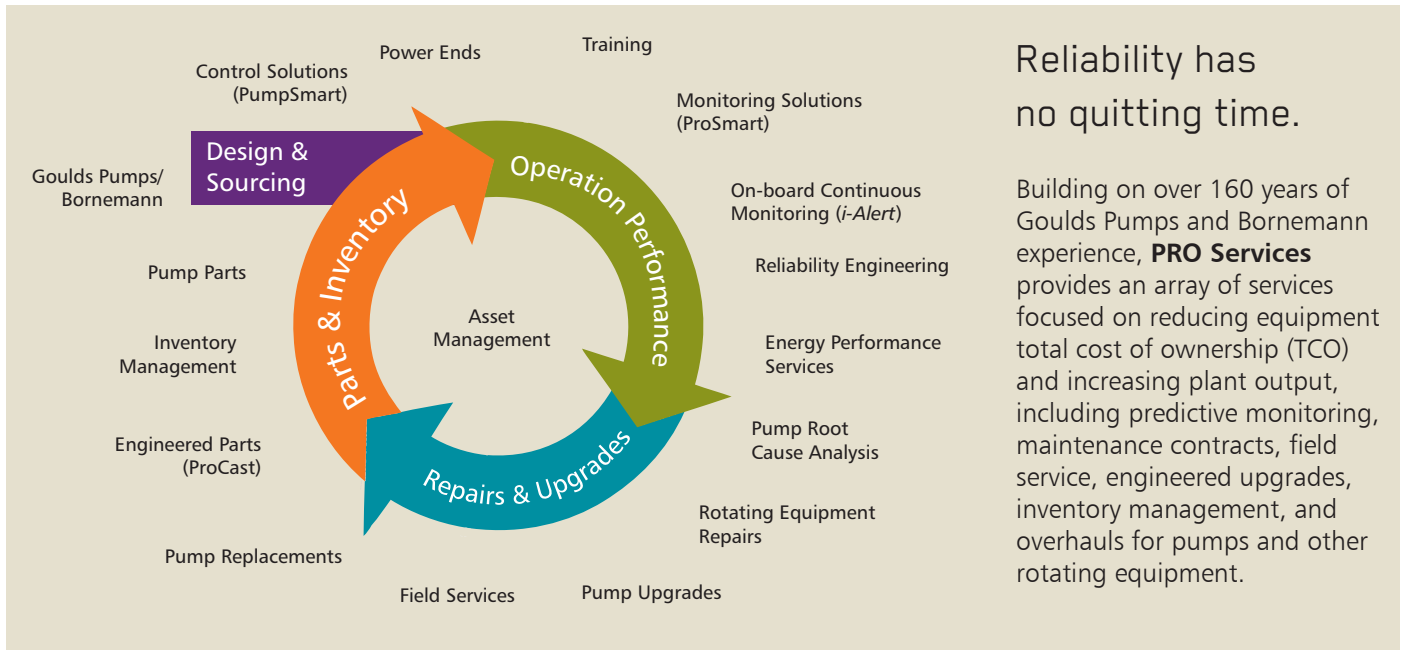
Sea Water

- Desalination of water with high particle concentrations
- Sea water intake involving impingement and entrainment

Water

- Raw water intake plagued by contaminants
- Water supply and distribution to meet competing demands

Your Total Solution For Equipment Life Cycle Optimization



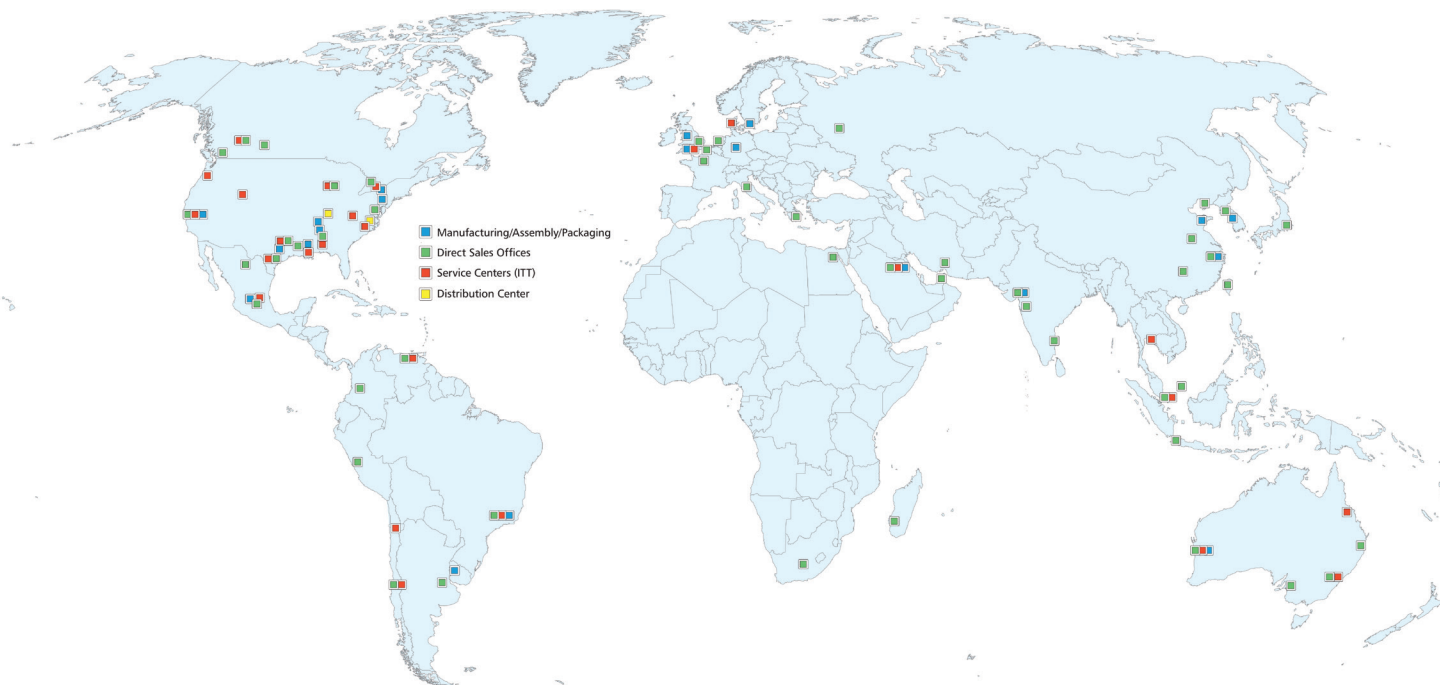
PRO Services provides OEM parts for Goulds Pumps, Bornemann Pumps, AC, Morris, Goynes, CB, HVC, UXN and ROV in a timely manner to meet end user requirements. Significant levels of inventory and quick response capability provide the necessary programs to meet all repair needs.

PRO Services provides programs of reliability services, energy assessments, asset management and training. These can be deployed as stand-alone or integrated solutions, tailored to the needs of your company.

PRO Services provides an array of repair and upgrade services to extend equipment life. PRO Services helps customers develop effective maintenance and asset management programs to lower maintenance costs, improve uptime, reduce inventory costs and extend equipment life.

Visit our website at
www.lenntech.com

Wherever you are,
we're there too.



ITT's family of industrial brands:



We started as a fledgling wooden pump business in 1848 and have evolved into one of the largest and most respected pump providers to industry partners across the globe. More than 160 years later, Goulds Pumps is a thriving brand of ITT Corporation. Goulds Pumps Vertical Products Operations offers state of the art, custom equipment to the Oil and Gas, Power, Mining, Chemical, and Industrial sectors on six continents.



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