Vertical Turbine Pumps

ENGINEERED FOR MUNICIPAL AND INDUSTRIAL APPLICATIONS

GOULDS WATER TECHNOLOGY
a xylem brand

BRVTURBIND R1



BUILT IN THE
USA
ENGINEERED,
ASSEMBLED & TESTED

Engineered Solutions for Demanding Applications

- Commercial/Industrial Water Supply
- Industrial Process Pumps
- Seawater and Raw Water Intake
- Dewatering
- Mining
- Municipal Water Supply
- Booster Systems
- Utility Circulating Water
- Water Treatment
- Package Pump Stations
- Wastewater Plants
- Filter Backwash
- Effluent Transfer
- Plant Water Systems
- Water Reuse Systems
- Offshore Seawater Lift
- Crude Oil Pipeline Boosting
- High Pressure, Light Hydrocarbon
- Onshore/Offshore Fire Protection
- Storage Terminal Transport/Boosting
- Power Generation
- Cooling Tower
- Snow Making
- Condenser Circulating Water Pumps
- HVAC/Chiller
- Cooling Water
- High Rise Building Water
- Water Parks
- Flood Control
- Chemical Process

Choose Goulds Water Technology for service, quality and coverage

Introducing the vertical turbine pumps that maximize uptime, efficiency and flexibility. Goulds Water Technology brings you a century of experience guiding customers with complex applications to reliable, sustainable, productive solutions. Partner with our experts for exceptional pumping equipment to meet your needs and achieve your goals.

Goulds Water Technology pumps bring you superior quality and coverage, backed by the industry's best customer support. Partner with us to choose the right pumping solution for your application.

Industry-leading support

Xylem and our channel partners help you succeed with dedicated engineering and field support teams.

Our superior customer service starts with applications expertise in industries such as oil and gas, mining, manufacturing and municipal water. Work with engineers who average 17 years of vertical turbine experience and understand your challenges.

Outstanding product support from our extensive distributor and service network keeps your system operating at peak efficiency.

Built-in quality

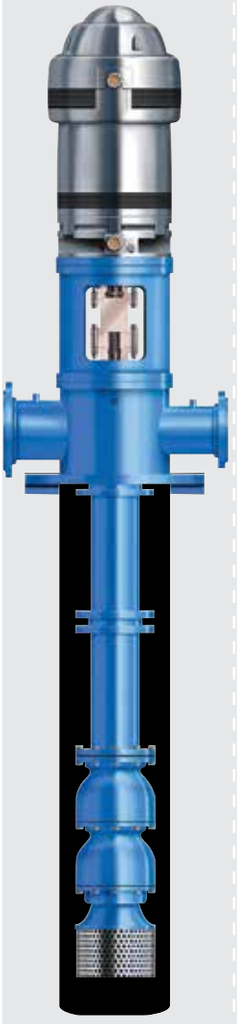
Maximize uptime and reduce maintenance with quality you can rely on. Goulds Water Technology products are built in the USA. Our facilities are ISO 9001 certified and emphasize quality control. Having our own US-based foundry adds a level of quality control that is difficult for other vertical turbine manufacturers to match. Our breadth of immediately available components supports consistently shorter lead times, getting the pump in service quicker.

Superior hydraulic coverage

Get the head and capacity your system requires and save money with vertical turbine pumps that perform at the most efficient point on the curve. Our broad offering covers every flow point in our total portfolio coverage range with a selection that brings you industry-leading efficiency.

Broad product line offers single-source convenience

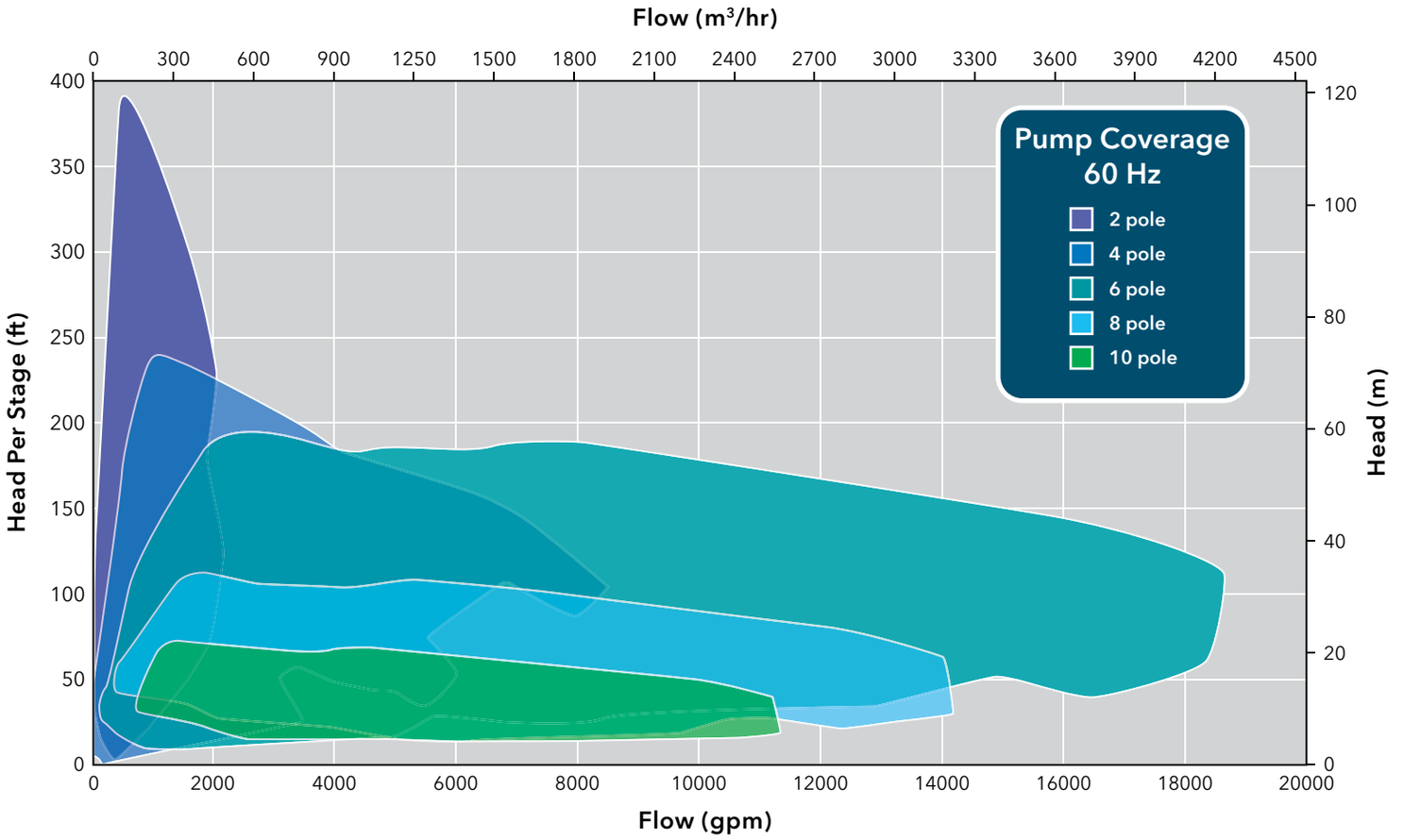
Goulds Water Technology vertical turbines offer models for every application, while utilizing common hydraulic designs for the pump bowl assembly. The vertical turbine can be multi-staged, for tremendous flexibility in pump selection and future system changes.

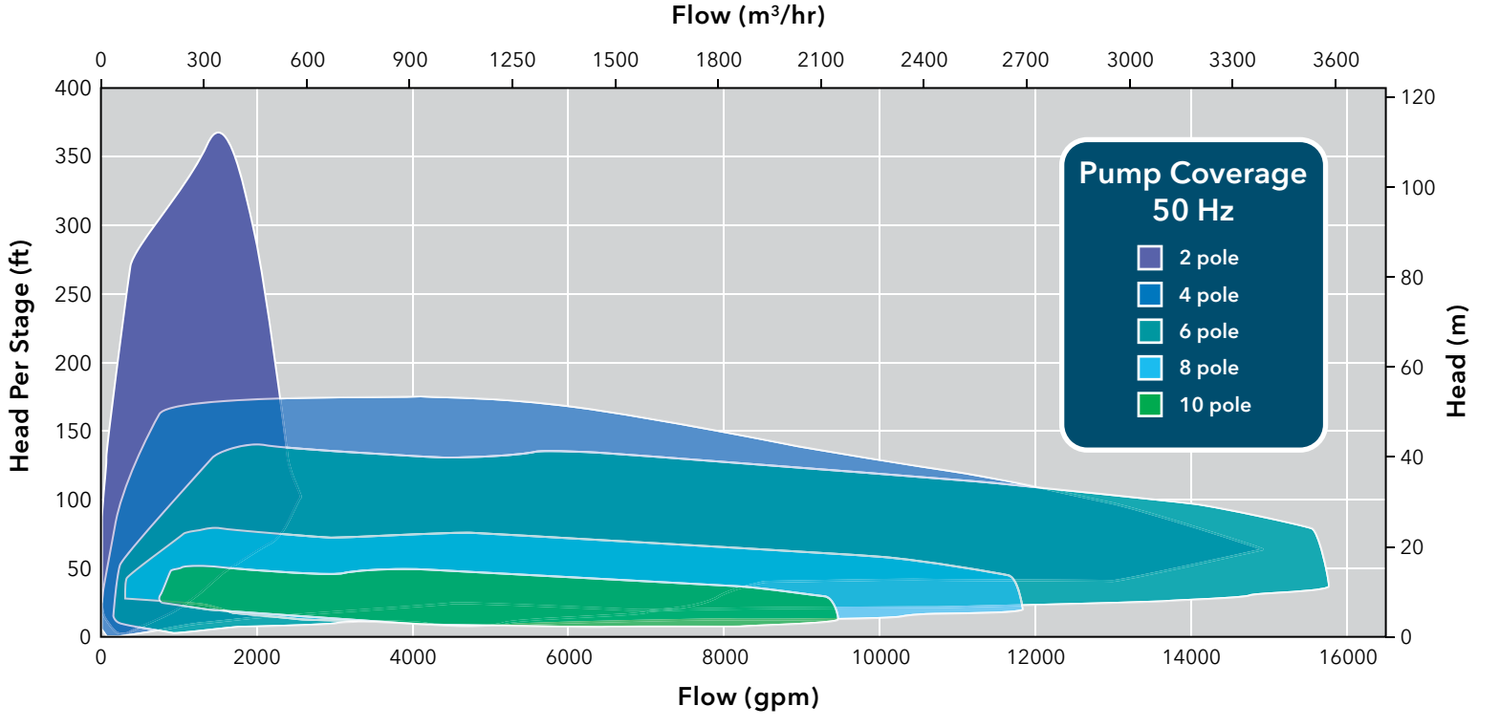
MODEL VIT		MODEL VIC		MODEL VIS	
					
TYPE "F" Head	TYPE "U" Discharge Located Underground	TYPE "T" Suction Inlet Located in the Head	TYPE "L" Suction Inlet Located in the Can	Well Head	Suction Inlet Located in the Can

We can fabricate discharge heads engineered specifically for your application. For projects with lower pressure requirements, choose one of our type DI or CF cast head designs.

Hydraulic coverage and efficiency lead the industry

State-of-the-art pump design addresses a wide range of hydraulic conditions. Our broad portfolio ensures you can find a model that fits your application and delivers maximum energy efficiency.





Options increase flexibility

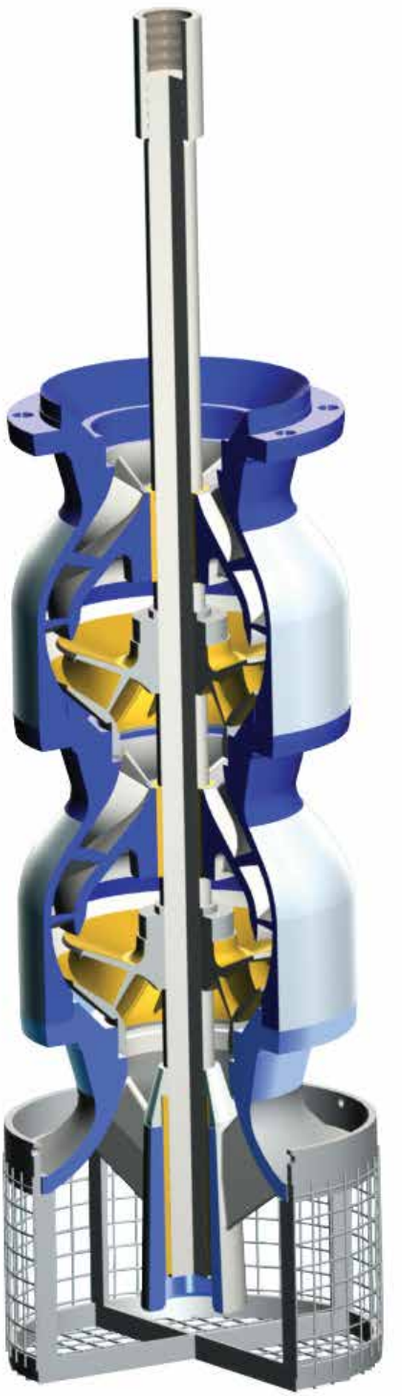
All Goulds Water Technology products reflect advanced engineering and design, for outstanding performance and the lowest total cost of ownership. We can help you choose the options that maximize reliability and efficiency for your system.

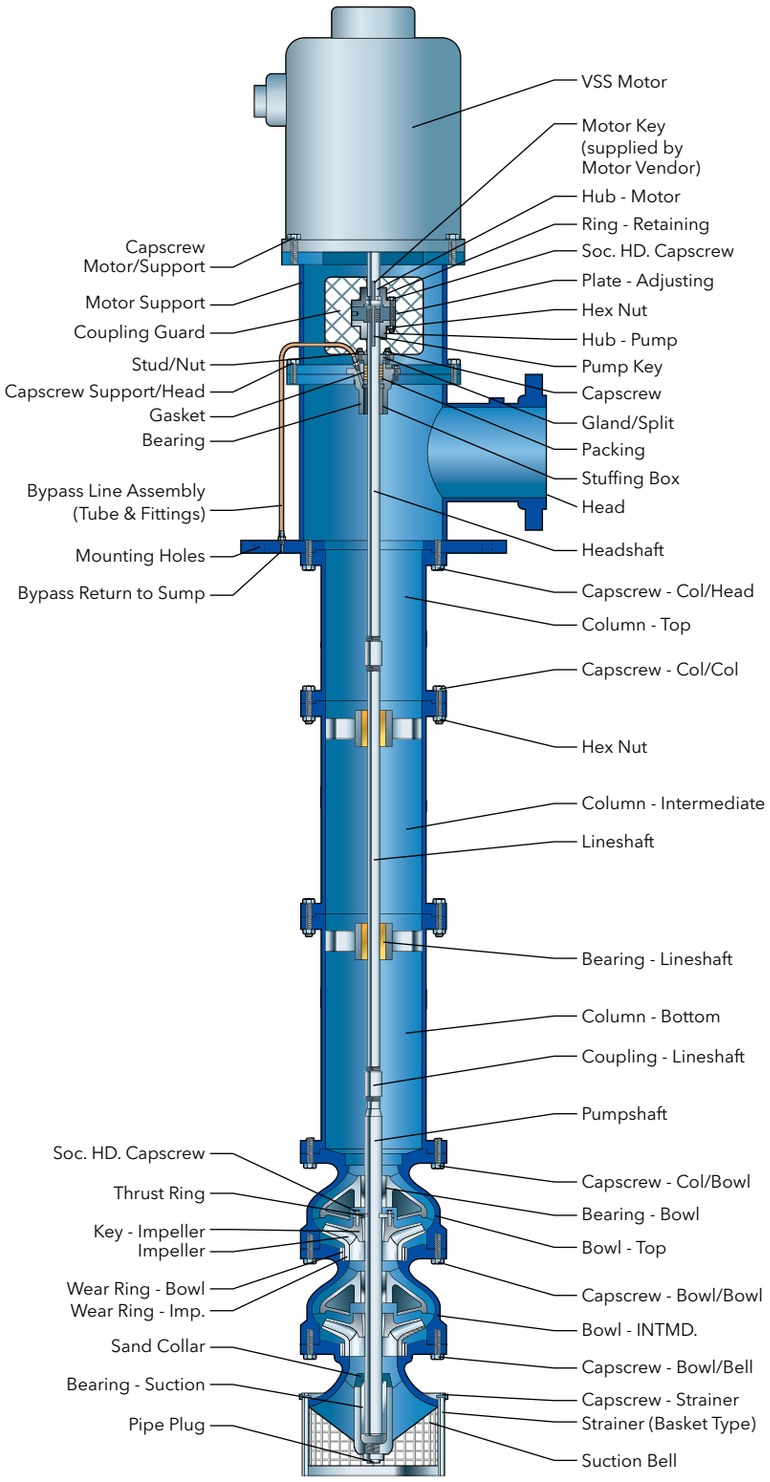
Pump bowl assembly

The bowl assembly is the heart of the vertical turbine pump. The impeller, diffuser and casing are designed to deliver the required head and capacity as efficiently as possible. Pumps with submerged impellers can be started without priming. Because our vertical turbine pumps can be multi-staged, you have maximum flexibility for the initial pump selection and any future system modifications.

BOWL ASSEMBLY FEATURES AND OPTIONS including but not limited to:

- Semi-open or enclosed impellers.
- Dynamically balanced impellers.
- Low NPSH first stage construction available.
- Bowl and/or impeller wear rings.
- Colleted or keyed construction.
- Sleeve-type bearings of carbon, bronze, rubber, Vesconite, steel-backed rubber or phenolic-backed rubber at each stage assure stable operation.
- Hard facing of shaft journals and bearings protects against abrasion and increases interval between maintenance periods.
- Pump shaft made from heavy duty 416SS standard; available in 316SS, 17-4 PH, Monel and other alloys for high strength and corrosion resistance.
- Rifle drilling of bowl shafts available to protect bearing in abrasive services.
- Interior coating on bowls improves efficiency.
- Stages are flanged and bolted together for ease of maintenance. Registered fit assures positive alignment.
- Double bolting available for high pressure applications.
- Sand collar prevents solids from entering the suction bearing.
- Suction bell lets liquid enter impeller eye smoothly and minimizes vortex formation.
- Vortex suppressors for challenging water levels.
- Basket or cone strainer prevents foreign objects from entering the pump.
- Impeller and bowl materials in a variety of cast materials provide reliable service in the most severe applications.
  - Cast Iron
  - Ductile Iron
  - Carbon Steel
  - Nickel Aluminum Bronze
  - 12% Chrome
  - 316 Stainless Steel
  - Duplex Stainless Steel
  - Super Duplex Stainless Steel
  - Alloy 20
  - Silicon Bronze
  - Aluminum Bronze





COLUMN ASSEMBLY OPTIONS including but not limited to:

- Flanged or threaded column pipe.
- Product lubricated, water flush or oil lubricated shafting.
- Threaded or keyed lineshaft couplings.
- Sleeved bearing journals.
- Hardfacing the bearing and/or shaft surface to protect against wear from abrasives in the bearing area.

DISCHARGE HEAD ASSEMBLY OPTIONS including but not limited to:

- Fabricated discharge heads with flange ratings of 150#, 300# or 600#.
- Customizable discharge head configurations (see illustration on page 4).
- Sole plates.
- Mechanical shaft sealing, packed box, water flush, or oil lubricated configurations.
- Seal types (see next page for detail).
- Coupling types (see next page for detail).

DRIVER OPTIONS including but not limited to:

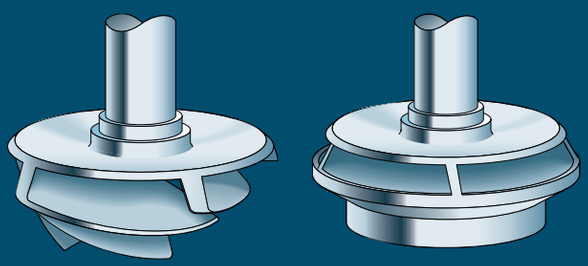
- Electrical motors in Vertical Solid Shaft (VSS) or Vertical Hollow Shaft (VHS) construction.
- RAGDs for engine-driven configurations.

SPECIAL COATINGS

- TNEMEC
- Scotchkote
- Carboline
- Other NSF certified coating available on request

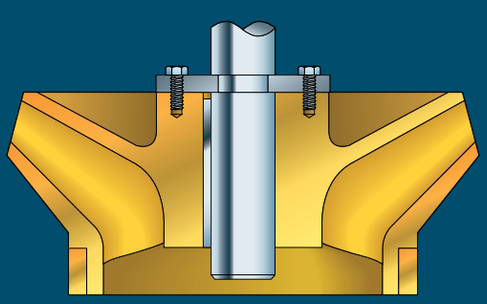
SEMI-OPEN OR ENCLOSED IMPELLERS

Available in alloy construction for a wide range of corrosive/abrasive services.



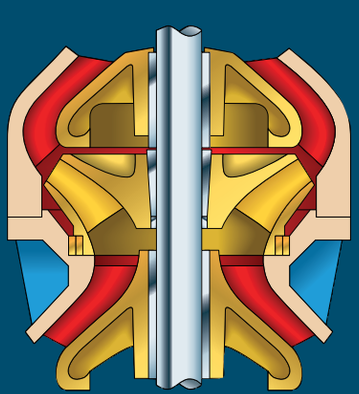
KEYED IMPELLERS

Keyed impellers are standard on 18″ and larger sizes, furnished on all pumps for temperatures above 180°F (82° C). Regardless of size, keyed impellers provide ease of maintenance and positive locking under fluctuating load and temperature conditions.



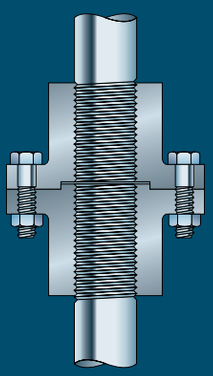
DUAL WEAR RINGS

Economically re-establish initial running clearances and efficiency for enclosed impellers and bowls. Wear rings can be hardfaced for applications where solids are present.



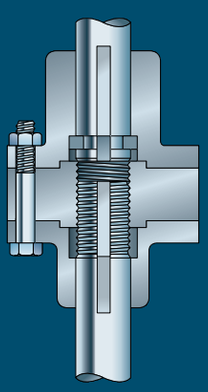
RIGID FLANGED COUPLING (TYPE AR)

To couple pump to vertical hollow shaft driver. Impeller adjustment is performed on adjusting nut located on top of motor.



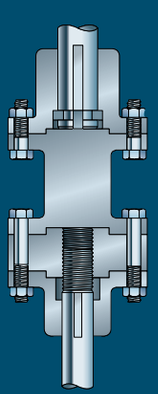
ADJUSTABLE COUPLING (TYPE A)

For vertical solid shaft driver. Impeller adjustment made by using adjustable plate in the coupling.



ADJUSTABLE SPACER COUPLING (TYPE AS)

Same function as type A coupling with addition of spacer. Spacer may be removed for mechanical seal maintenance without disturbing driver.

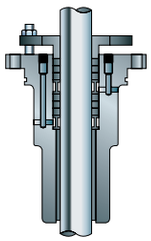


Sealing Flexibility

Choose the sealing options that fit your application requirements.

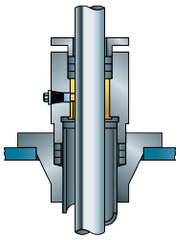
PACKED BOX OPEN LINESHAFT

Most economical sealing method for open lineshaft pumps in relatively low pressure applications. Uses acrylic yarn and graphite packing. Optional shaft sleeve available.



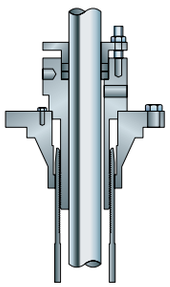
WATER FLUSH ENCLOSED LINESHAFT

Water flush tube connection is supplied when pressurized water is introduced into the enclosing tube for bearing protection on abrasive services.



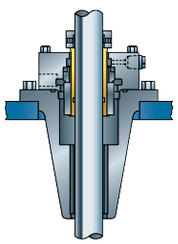
OIL LUBRICATED ENCLOSED LINESHAFT

Oil lubrication is recommended when the water elevation would cause upper lineshaft bearings to run without lubrication during startup. Oil is fed through a tapped opening and moves down the enclosing tube, lubricating the bearings.



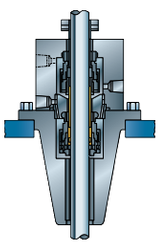
SINGLE SEAL

Popular seal method, for low to medium pressures. Cartridge style makes installation and maintenance easy.



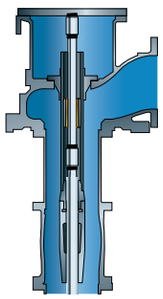
DUAL SEALS

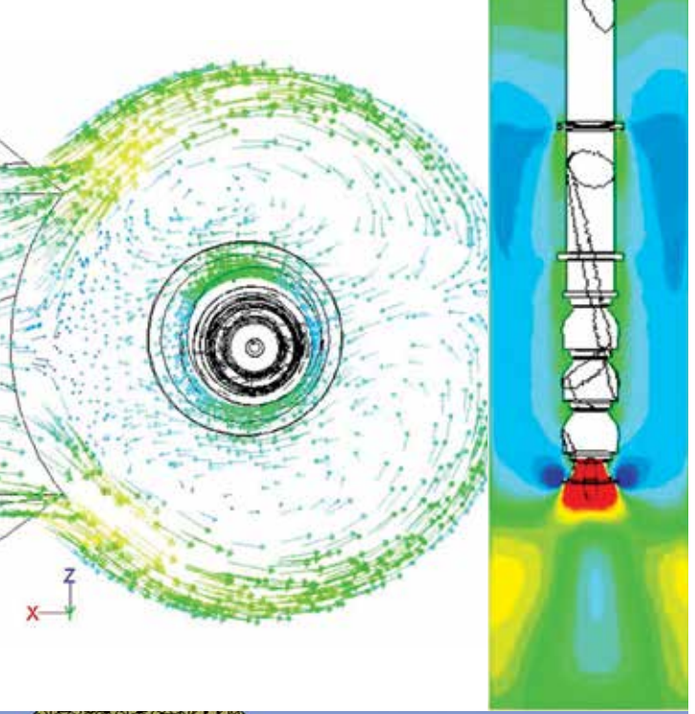
Two seals mounted in-line. Chamber between seals can be filled with a buffer liquid and may be fitted with a pressure-sensitive annunciator for safety.

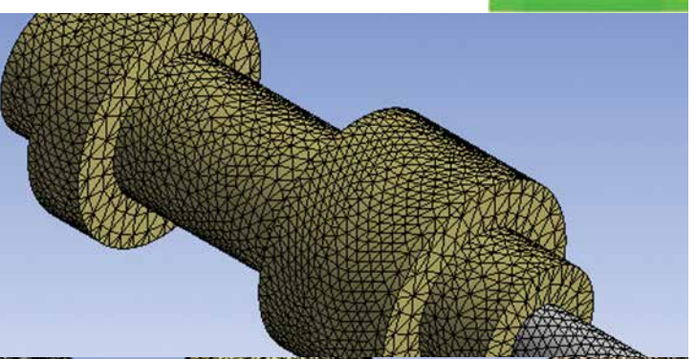


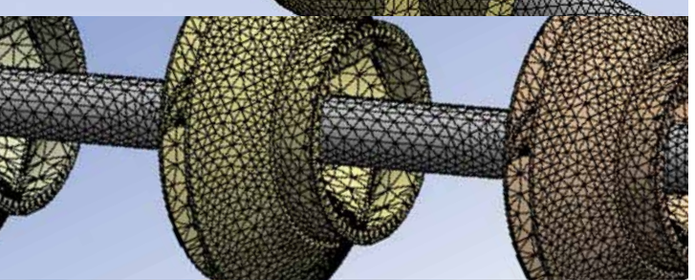
AUTO SEAL

A true packless, seal-less vertical turbine pump. Designed for those critical applications that must limit vapor losses.









Advanced engineering assures superior performance

Goulds Water Technology vertical turbine pumps are engineered for top efficiency and reliability. Our design, testing and analysis capabilities use the latest advances:

- Computational fluid dynamics to create a turbine that delivers optimum performance.
- Finite element analysis to identify and mitigate potential stress points.
- Computer-aided design to support consistent precision casting and close tolerances.
- Testing capabilities include NPSH, hydraulic performance, and hydrostatic testing. Witness testing and virtual witness testing available.

Strong relationships help meet your challenges

Meet any pumping challenge with start-to-finish expertise from Goulds Water Technology.

- Online and mobile sizing and selection tools for ease and convenience.
- Carefully monitored suppliers who meet Goulds Water Technology standards.
- Relationship-oriented distributors with customer-specific insights.

Aftermarket services add value

See for yourself how easy it is to do business with Goulds Water Technology through the whole life-cycle of your pumps. And discover the vertical turbine pumps that deliver the lowest total cost of ownership. With each purchase you get much more than a pump:

- Maximum uptime and flexibility, starting with engineering in the USA and assembly near your location.
- Factory-trained and authorized field service worldwide for prompt technical assistance.
- Rebowl competitor products with our bowl assembly for upgraded efficiency.
- Retrofits for our vertical turbine pumps as well as any other manufacturer's, for cost-effective performance.
- Full warranty to assure your satisfaction.

Call today to discuss your application—and learn more about our industry-leading vertical turbine pumps.

Refer to factory for listing of NSF listed configurations.

xylem
Let's Solve Water

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