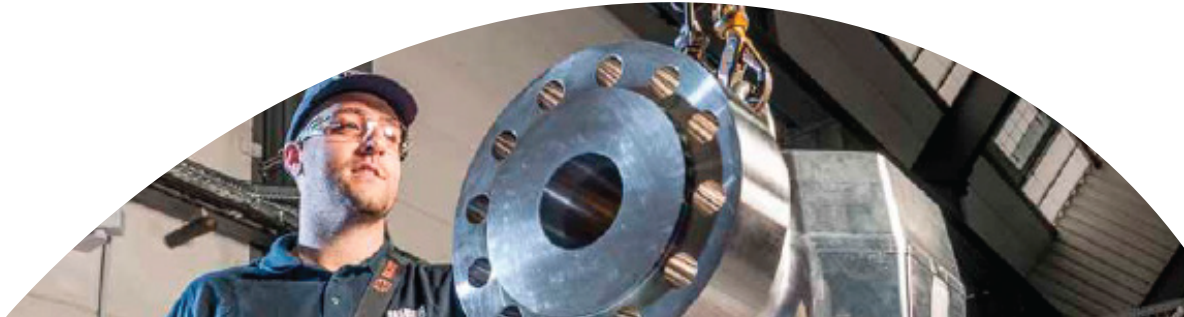


FLOWAY®

PARALLEL SLIDE GATE & GLOBE VALVES



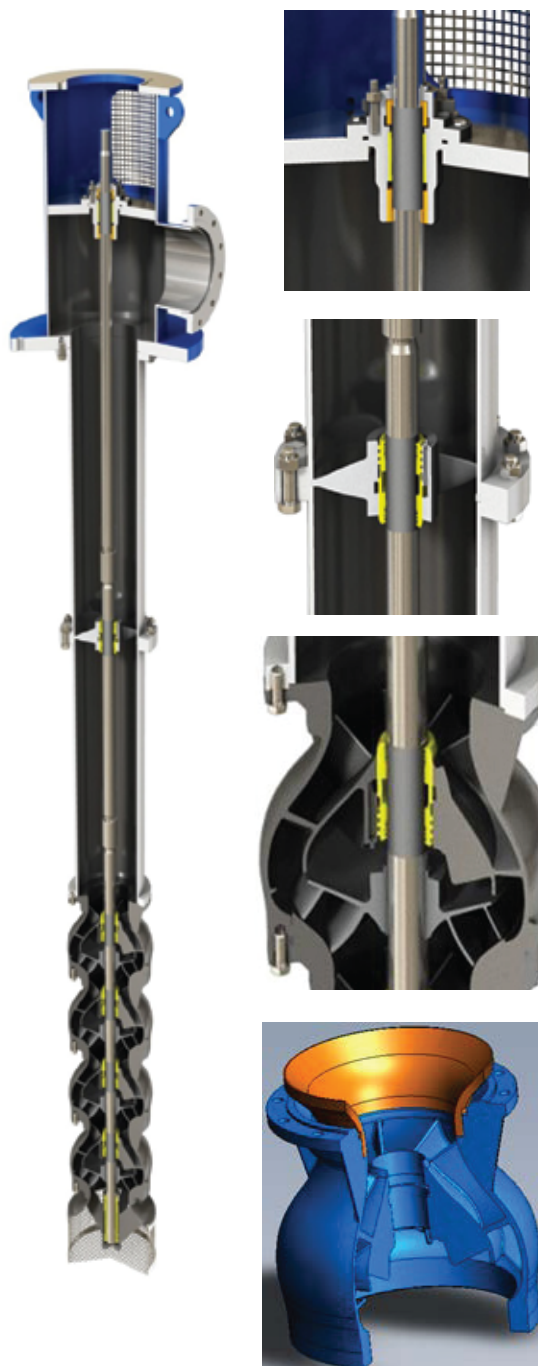
INTRODUCING THE FLOWAY VTSP VERTICAL TURBINE SOLIDS PUMP

The Floway Vertical Turbine Solids Handling Pump is designed to handle suspended solids up to 10% by weight with excursions to 20% by weight, while providing superior abrasion resistance, reducing wear, and extending operating life.

The VTSP includes a patented sealed-for-life bearing which requires no external flush. It also includes a solids handling type mechanical seal with a throat mounted isolation device, which prevents the need for external flushing of the seal faces. Other wear parts and areas such as the impellers and bearing journals, are offered in hardened materials for optimal wear resistance.

These features result in less maintenance downtime, fewer parts requiring replacement, and a lower total cost of ownership.

The Floway Vertical Turbine Solids Pump (VTSP) is specifically designed to handle solids up to 10% by weight, while providing superior abrasion resistance



Sealing

- Mechanical Seal designed for services with suspended solids
- Isolation device to keep solids away from seal
- No leakage. No adjustment required
- No external flush required

Column / Line Shaft

- 416SS or 17-4PH Shafting
- Hard-coated shaft in bearing area
- VTSP bearing assembly
- Threaded or double keyed shaft couplings
- Fabricated Flanged Column Sections

Bowl Assembly

- VTSP bearing assembly
- 316SS collets and 304SS fasteners
- Hard-coated shaft in bearing area
- Iron bowls with abrasion resistant coating
- Hardened stainless steel semi-open impellers
- No wear rings to wear out

VTSP Removable Wear Plate

- Increases bowl wear life
- Prevents premature bowl replacement
- Overall lower maintenance costs
- Replaceable part

Proven durability, longer wear and less maintenance

FLOWAY VTSP - VERTICAL TURBINE SOLIDS PUMP

The VTSP Provides Proven Field Results



Figure 1

A quantity of six 24 inch two-stage 900 HP VTP units (figure 1) were installed on intake structures in a process water application of a reclaimed pond system in a Chilean copper mine. As the concentrator plant's tonnage increased, the fluid began reaching the pond with a high concentration of solids, resulting in premature damage to the previous pump units and a shortened life of roughly 300 hours. The pump failures were also causing operational disruptions as they required frequent maintenance and increased the customer's operating costs.

The drop-in replacement VTSP units were installed, driven by the original motors, and the wear life on the pumps was increased from an average of 300 hours to over 1000 hours. The result was an increase in the MTBF of more than three times.

VTSP SPECIFICATIONS	
Capacity	up to 35,000 usgpm (8,000 m ³ /hr)
Pressure Limit	500 psi (35 bars)
HP Range	up to 2,500 hp (1,850 kw)
Liquid Handled	Various liquids containing suspended solids with pH of 4
Solids Limit	10% by weight, with excursions up to 20% by weight
Particle Size	up to 1 mm
Temperature / SG Limit	up to 175°F (80°C) / 1.2 SG

A quantity of twelve 14 inch cantilever design units were installed in a thickener overflow system of a Chilean copper mine. A change in the process increased the thickener solids concentration, dramatically reducing the life of the existing units. An initial drop in replacement 19 inch VTSP unit (figure 2) has been installed and running for over 6000 hours with no issues. The mine will determine whether to replace the remaining units but is very pleased with the performance of the initial VTSP unit.



Figure 2

TYPICAL APPLICATIONS

(sump, barrel or barge mounted)

- Mine de-watering
- Tailings
- Reclaim water
- Overflow water
- Seepage
- Process water supply
- Waste water feed
- Thickener overflow
- Barrel mounted booster
- Barge mounted pumps
- Water supply (lakes and rivers)



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