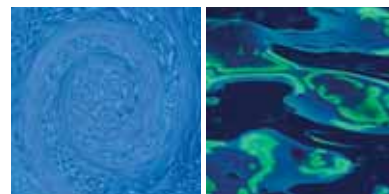


# Single and Multi-Stage Vertical Turbine Pumps

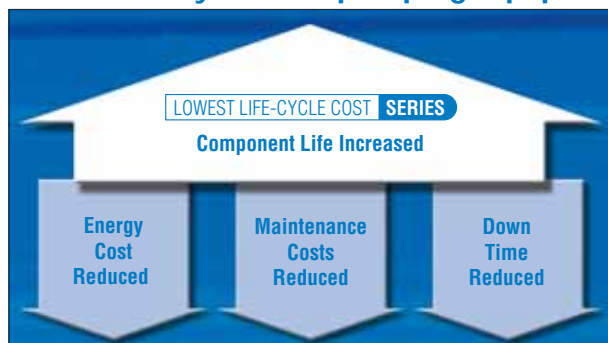


SPP's Lowest Life-cycle Cost Series of Single and Multi-Stage Vertical Turbine pumps have been designed for longevity and incorporate many standard features, which facilitate ease of maintenance.

A spacer coupling between the thrust bearing assembly and seal chamber allows a cartridge mechanical seal to be removed without dismantling the headpiece and removing the driver.

Easily removable keyed muff type couplings connect all shafts, facilitating disassembly of the whole pump unit with minimal risk of damaging expensive component parts.

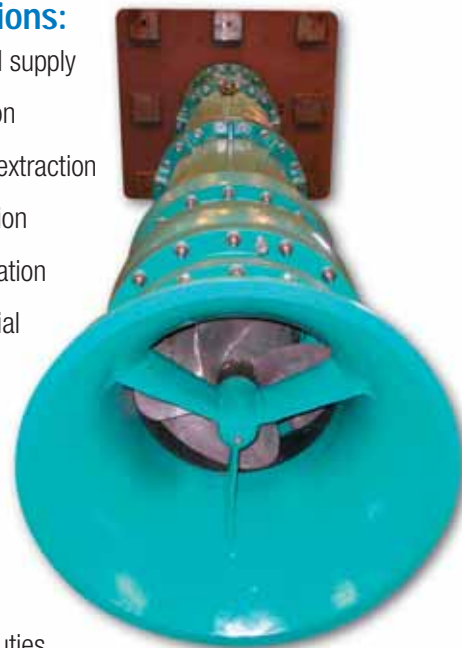
**SPP's LLC Series pumps set the standard for low life cycle cost pumping equipment.**

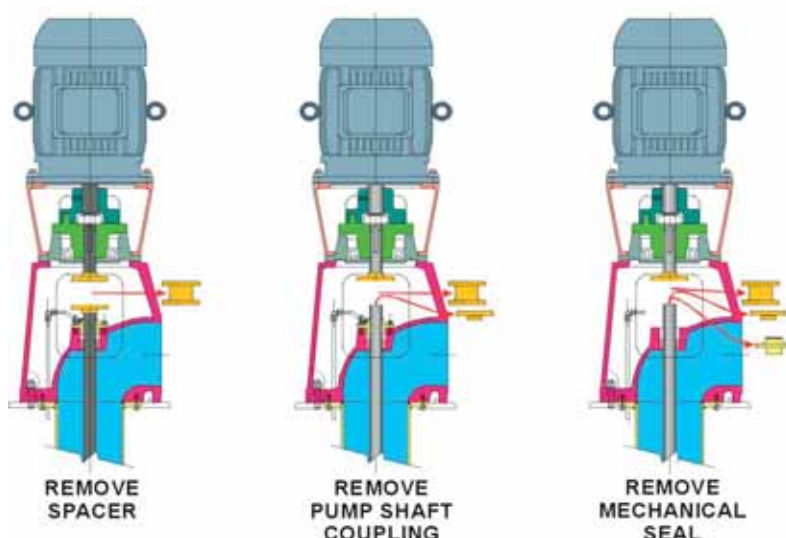


High-grade standard materials of construction and a rugged stiff shaft mechanical design coupled to state of the art hydraulics, offer unrivalled longevity and the lowest cost of ownership.

## Typical Applications:

- Water treatment and supply
- River water extraction
- Borehole deep well extraction
- Drainage and irrigation
- Cooling tower circulation
- Process and industrial utility duties
- Petrochemical utility duties
- Condensation extraction
- Sea water lift
- Power plant utility duties





## Performance and Capacity

<b>Flow Rates:</b>	Up to 4000 m³/hr
<b>Heads:</b>	Up to 200 m
<b>Liquid Temperature:</b>	-10°C - 80°C
<b>Ambient Temperature Range:</b>	-10°C to 45°C
<b>Maximum Solids Content:</b>	2,000 ppm (fines) standard build*

\* Consult SPP for higher solid contents

## Configurations

- Above or below floor discharge options
- Solid shaft electric motor drive utilising pump thrust bearing assembly
- Hollow shaft electric motor drive utilising motor thrust bearing arrangement
- Right Angle Gearbox drive utilising gearbox thrust bearing assembly for engine or turbine driven pumps



Pump on Coleford Test Well

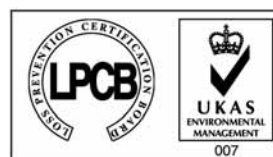
## Standard Materials of Construction

<b>Bellmouth Inlet</b>	Cast iron*
<b>Bowls</b>	Cast iron*
<b>Impellers</b>	Stainless steel
<b>Wear Rings</b>	Cast iron / Zinc free bronze
<b>Shaft</b>	Stainless steel
<b>Shaft Sleeves</b>	Hardened stainless steel
<b>Column Shaft Bearings</b>	Drinking water approved non-metallic bushes
<b>Column Pipes</b>	Carbon steel
<b>Headpieces</b>	Carbon steel
<b>Thrust Bearing Assembly</b>	Anti-friction or Michell type thrust bearings
<b>Strainer</b>	Stainless steel

\* Non-standard material options available, consult SPP for alloy irons, bronzes or stainless and duplex steels



Assessed to ISO 9001:2000  
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