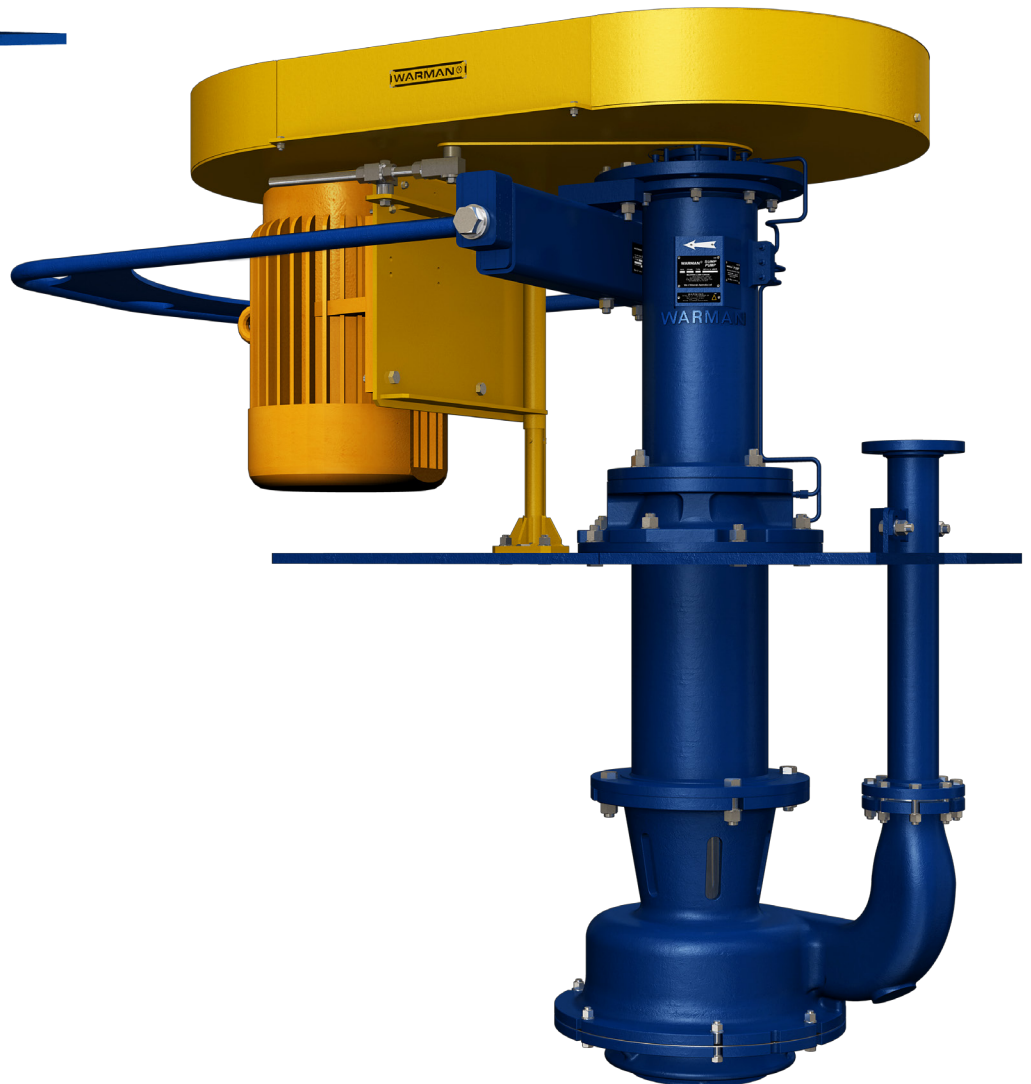


**WEIR**

**Minerals**

**WARMAN® Centrifugal  
Slurry Pumps**

**WBV® Vertical Cantilever  
Slurry Sump Pump Series**



# The Warman® WBV® ultra heavy-duty range of vertical cantilevered slurry pumps sets a new industry benchmark for general sump applications.

**The Warman® WBV® sump pump series provides substantial performance making it one of the lowest total ownership cost pumps of its class.**

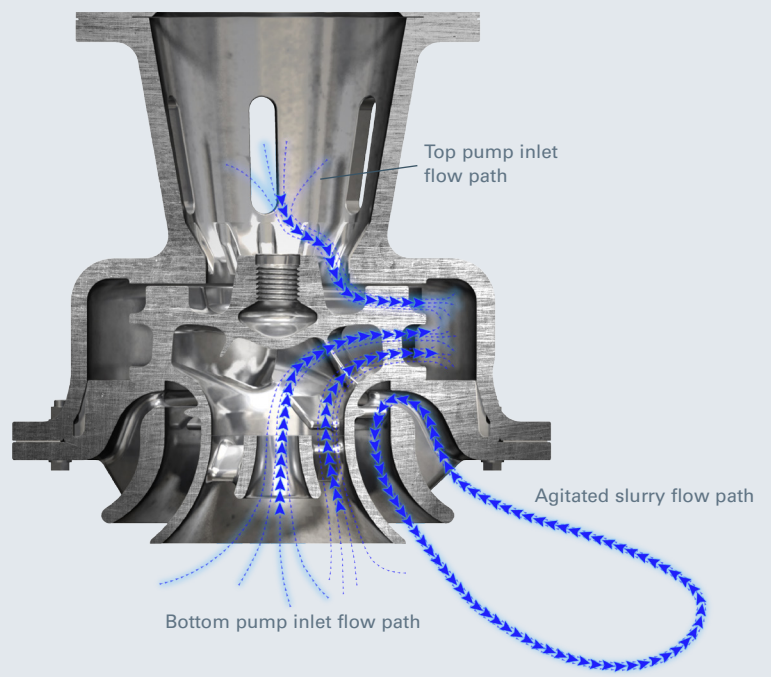
The Warman® WBV® pump offers a clean sump with consistent pump performance in an area of the slurry process that has posed a major concern for years.

The combination of agitation and inlet flow inducing features are designed to ensure that solids do not settle and build up in the sump or cause the pump intake to block during normal pump operation.



The design of the patented Warman® WBV® integrated agitation system achieves high performance with low power consumption.

## Slurry flow path around the agitator blades





Warman® WBV® vertical cantilever slurry sump pump

### Patented Agitation Technology

Integrated impeller agitation vanes prevent sump pump blockages. No need for an external system with questionable results and high costs.

### Reduced Downtime

With only three major components, fewer assembled parts make for ease of maintenance and reduced downtime. Pump axial adjustment is done by adding or removing shims on the pump end during assembly, simplifying assembly and adjustment.

### Improved Wear

Highly wear resistant A05 metal parts are used, with extra thickness added to high wear areas to provide long wear life. The casing, with a combination top entry strainer and flange that attaches to the pump column along with a cast discharge bend, minimises parts and reduces the number of joints and overall wear.

### Improved Sealing

The suction cover and casing are sealed by a rubber casing seal which is activated by the internal pump pressure to ensure a consistent positive seal. An o-ring seal protects the impeller and shaft threads from ingress of slurry.

### Damaging Particle Control

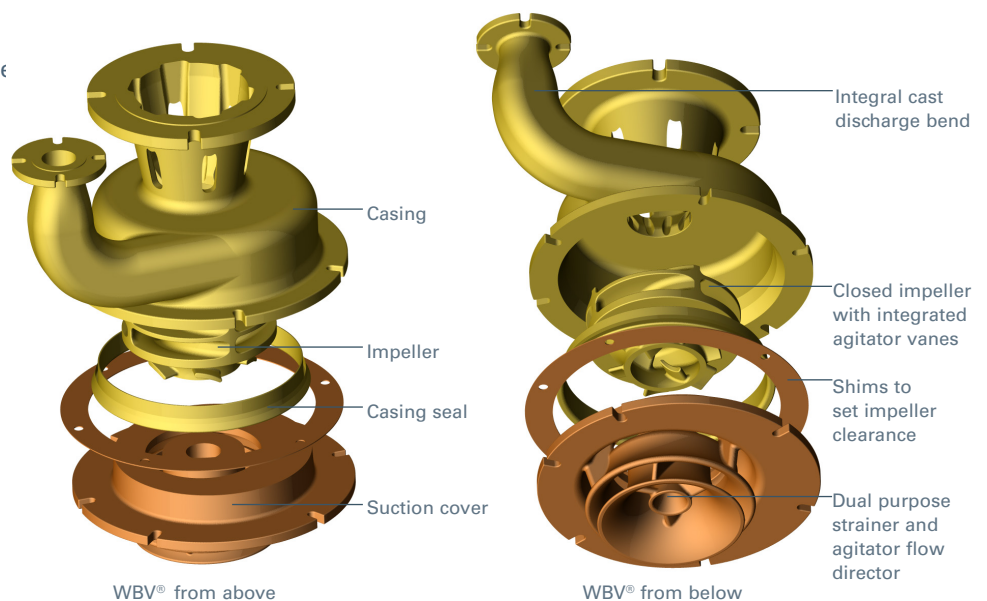
Inlets have strained passageways to limit the particle size that can enter the pump and potentially cause unnecessary damage or blockage. The pump suction cover directs flow from the agitator vanes into the pump inlet to prevent large particles from entering and clogging the impeller.

### Constant Priming and Continuous Pumping

The pump takes suction from both the top and bottom to ensure constant priming and continuous pumping.

### Retrofittable

Warman® WBV® pump wet ends are retrofittable to the Warman® SP sump pump mechanical ends.



WBV® from above

WBV® from below

# Weir Minerals unleashes its newest technology to fight against sump blockage by introducing the all new Warman® WBV® hybrid pump.

## Introducing the Warman® WBV® hybrid sump pump

The Warman® WBV® hybrid pump enables sump pump operators to benefit from the enhanced technical advantages of the WBV® sump pump. The WBV® hybrid unit provides hydraulic sump agitation, which keeps solids in suspension, meaning a sump can be almost completely emptied with minimal settlement, removing the need for mechanical agitation, or other external sump pump clearing solutions.

The new robust, long life hydraulics are available as a complete pump, built onto the trusted Warman® SP mechanical drive end, or as a kit enabling conversion in the field for existing SP pumps.

## Advantages

- Hydraulic sump agitation
- Solids are kept in suspension and the sump can be almost completely emptied with minimal settlement
- Removes the need for mechanical agitation
- Takes the risk out of sump settlement

## Features

The Warman® WBV® hybrid vertical cantilever pump series is a combination of the Warman® WBV® pump and the Warman® SP/SPR vertical sump pump, using the SP drive end with the WBV® wet end and WBV® hybrid column, discharge pipe and mounting plate.

The WBV® wet end offers a clean sump with consistent pump performance in an area of the slurry process that has presented a concern for years. The patented unique combination of agitation and inlet flow inducing features are designed to ensure that solids do not settle and build up or cause the intake to block during pump operation.

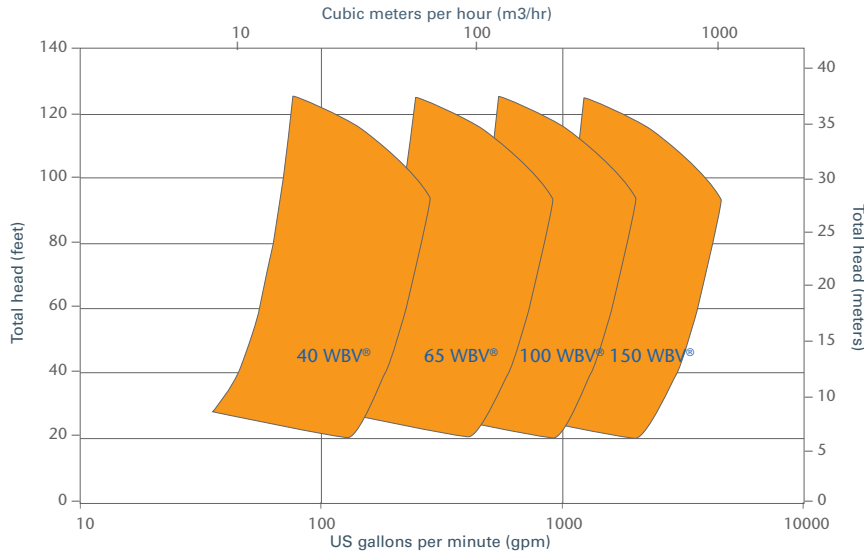
The WBV® hybrid pump can handle arduous sump applications requiring continuous pumping of corrosive slurries or medium which can be highly abrasive.



Warman® WBV® hybrid sump pump

## Warman® WBV® sump pump series — quick selection guide

Approximate clear water performance - to be used for preliminary selection only.



### The Warman® WBV® sump pump series is designed for tough operations, primarily:

- Difficult applications requiring agitation to ensure no solids build up
- Limiting density spikes normally associated with slumping in sumps or fast settling slurries
- Large particle sizes
- High density slurries
- Continuous or “snore” operation
- Abrasive and/or corrosive slurries
- Poor sump design where slumping prevents proper sump pump operation

### Applications

- Minerals processing
- Coal preparation
- Chemical processing
- Effluent handling
- Sand and gravel
- Power generation
- General tank, pit or hole-in-ground slurry applications

### Bearing assembly

Each model pump has two bearing frame options to enable the pump to operate throughout its full speed range and avoid critical speed bands.

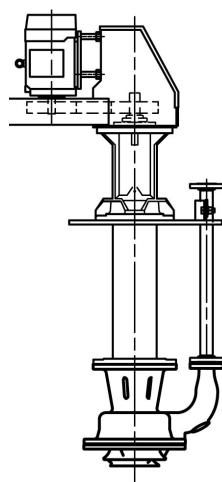
Bearings and labyrinths have a single point greasing design, with the grease block on the side of the frame allowing for easy access and maintenance.

### Pump mounting

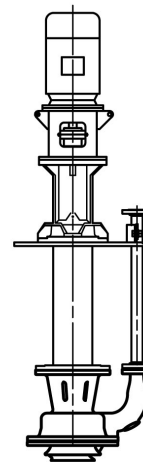
The electric motor is mounted on a pivoting motor plate with a one-point adjustment mechanism for ease of use and for quick and easy belt re-tension.

The motor mounting has an option of being mounted shaft up to maintain a low centre of gravity to minimise pump vibrations and head room required for installation.

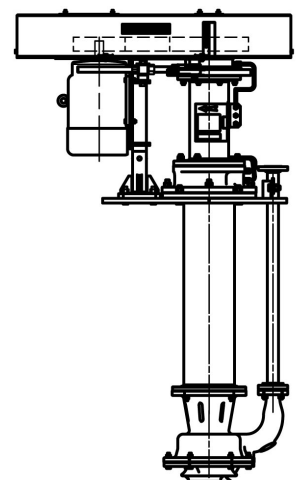
### Drive arrangements



Vee belt drive ('Z') drive  
Motor shaft vertical down



Direct coupled drive



Vee belt drive ('C') drive  
Motor shaft vertical up

To be used for preliminary selection only. Contact your local Weir Minerals sales representative for more information.