



**SHIJIAZHUANG FIRST PUMP FACTORY CO., LTD.**

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**Brochure For  
FSP&FSPR VERTICAL SLURRY PUMP**

# **FIRST PUMPS**

**Brochure For**

## **FSP&FSPR VERTICAL SLURRY PUMP**

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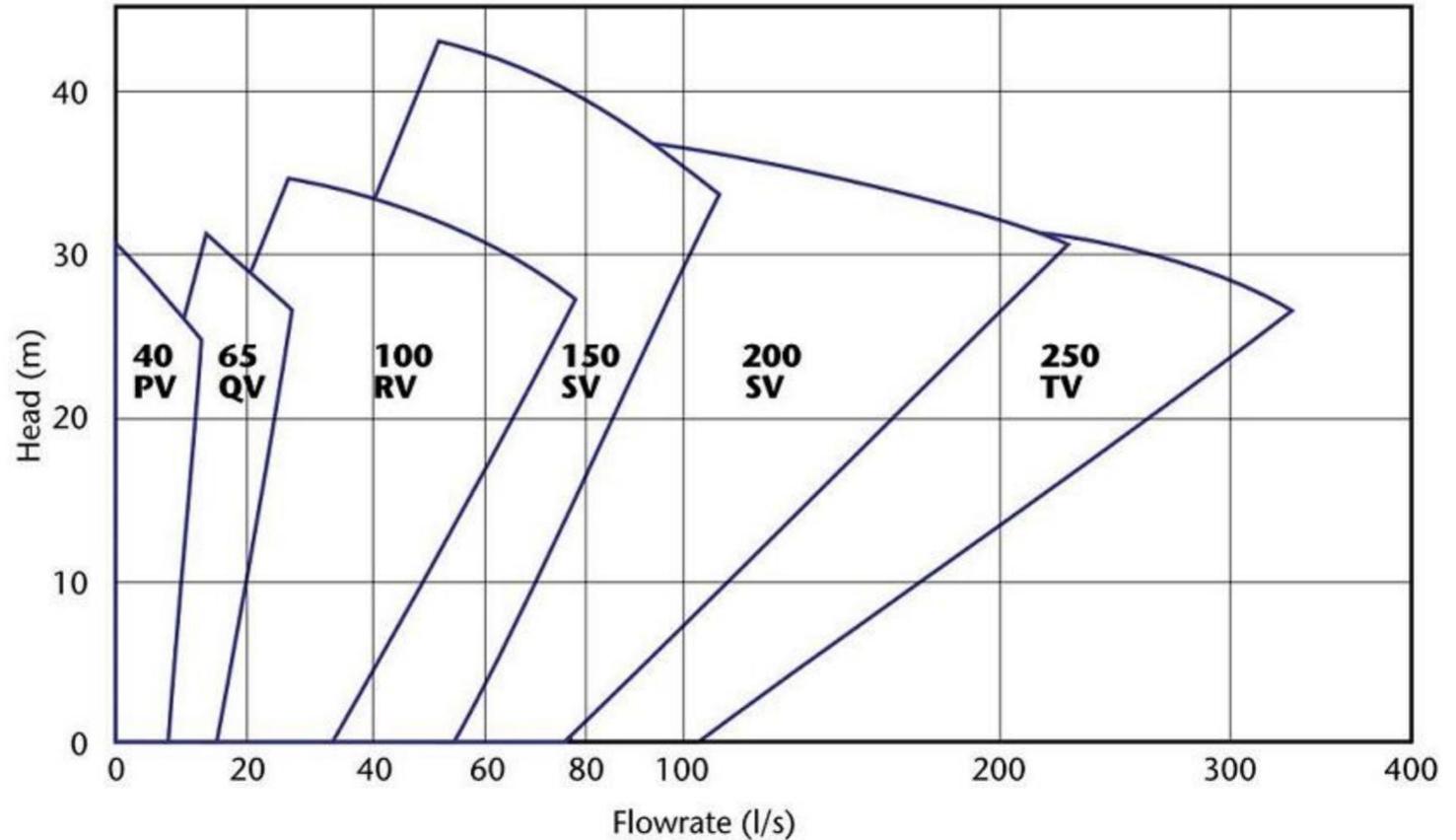


## FSP & FSPR VERTICAL SLURRY PUMP

This type of pump is vertical, centrifugal, cantilever sump pump which is designed for applications requiring greater reliability and durability than conventional vertical process pumps can offer. Fully elastomer lined or hard metal fitted. No submerged bearings or packing. The bearing assembly allows the pump to operate in the “snore” condition without damage to the bearing. High capacity double suction design. Optional recessed impeller and suction agitator available.

### FSP & FSPR VERTICAL SLURRY PUMP QUICK SELECTION CHART

Approximate Clear Water Performance - to Be Used for Preliminary Selection Only



## **KEY FEATURES**

- The heavy duty cantilever design makes the FSP/FSPR sump pump ideally suited for heavy continuous handling of abrasive and corrosive liquids and slurries whilst submerged in sumps or pits.
- FSP/FSPR sump pump is without any shaft seal.
- FSP/FSPR sump pump can be run in sufficient suction duties.
- The long life wear of high chrome or elastomer moulded metal wear resistance vent end parts can lower your spare costs.
- The maintained efficiency of FSP/FSPR sump pump can lower your energy cost.
- Robust shafts
- Heavy duty bearing assemblies
- Heavy duty screw thread Impeller attachment
- Through-bolt design throughout
- Replaceable casing components
- No submerged bearings

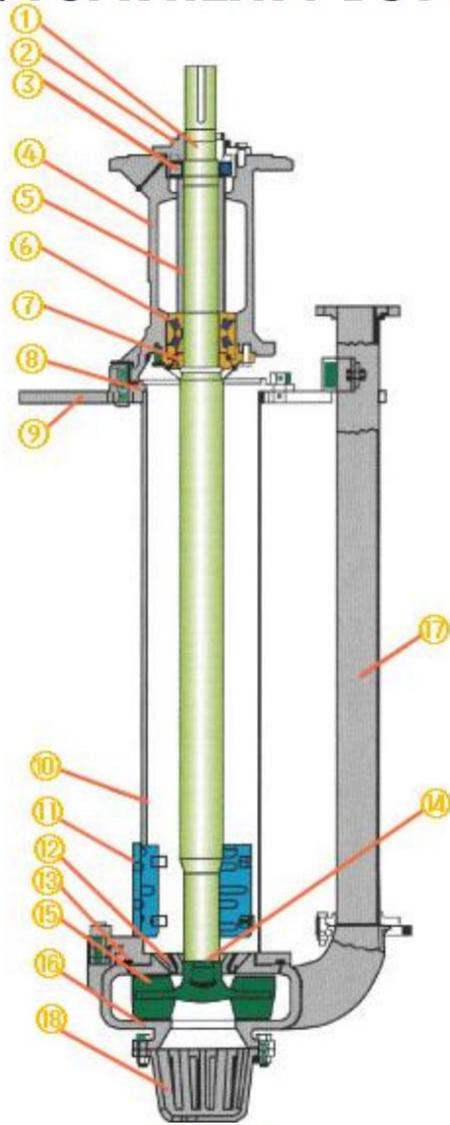
## **TYPICAL APPLICATIONS**

- Minerals Processing
- Coal Preparation
- Chemical Processing
- Effluent Handling
- Sand and Gravel
- and almost every other tank, pit or hole-in-the ground slurry handling situation.

The FSP/FSPR pump design with high chrome Alloy A05 (FSP) or elastomer covered (FSPR) components makes it ideal for:

- abrasive and/or corrosive slurries
- large particle sizes
- high density slurries
- continuous or “snore” operation
- heavy duties demanding cantilever shafts

## THE FSP / FSPR HEAVY DUTY CANTILEVEL SUMP PUMP



TYPE "FSP"

All metal for abrasive duty

- |  |   |
|--|---|
| <p><b>8. Shaft</b><br/>FSP-Steel<br/>SPR - Elastomer covered steel</p> <p><b>9. Upper Bearing Seal</b><br/>Labyrinth, piston rings and grease purge</p> <p><b>10. Upper Bearing</b><br/>Heavy duty grease lubricated parallel roller</p> <p><b>11. Bearing housing</b><br/>Robust heavy duty, SG iron</p> <p><b>12. Bearing Spacer</b><br/>Steel</p> <p><b>13. Lower Bearing</b><br/>Heavy duty grease lubricated double taper roller</p> <p><b>14. Lower Bearing Seal</b><br/>Labyrinth, piston rings and grease purge</p> <p><b>15. Shims</b><br/>Allow vertical adjustment of the impeller in the casing</p> <p><b>16. Mounting plate</b><br/>FSP-Steel<br/>SPR - Elastomer covered steel</p> <p><b>17. Column</b><br/>FSP-Steel<br/>SPR - Elastomer covered steel</p> <p><b>18. Upper strainer</b><br/>SP - Stainless Steel<br/>SPR - Polyurethane</p> | <p><b>1. Back liner</b><br/>SP - High chrome Alloy A05<br/>SPR - Elastomer moulded metal</p> <p><b>2. Back liner seal</b><br/>SP - Elastomer</p> <p><b>3. Impeller thread seal</b><br/>SP - Elastomer</p> <p><b>4. Impeller</b><br/>SP - High chrome Alloy A05<br/>SPR - Elastomer moulded meta</p> <p><b>5. Casing</b><br/>SP - High chrome Alloy A05<br/>SPR - Elastomer moulded meta</p> <p><b>6. Discharge pipe</b><br/>FSP-Steel<br/>SPR - Elastomer covered steel</p> <p><b>7. Lower strainer</b><br/>SP - Polyurethane<br/>SPR - Elastomer moulded metal</p> |
|--|---|

## Types of Pump Suction Inlet



**Standard Type With Strainer**



**Suction Extension Pipe With Strainer**

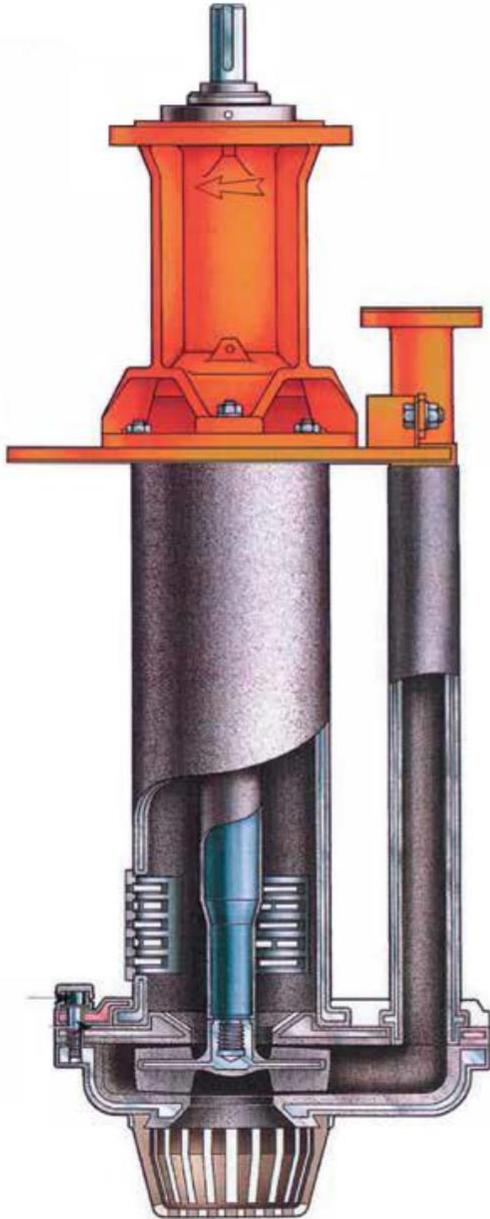


**With Agitator**

FSP/FSPR heavy duty sump pumps are available in various standard lengths to suit common sump depths, for very deep sumps or where high shaft speeds limit the length of the pump, a suction extension pipe can be fitted to the bottom inlet to extend the depth of the pump by up to 2 metres.

Pumping is maintained even when the top inlet is not submerged, thus enabling the level of liquid to be lowered right down to the bottom inlet or the bottom of any suction extension pipe.

To suit special requirements other our pump wet ends can be fitted to the standard our FSP pump dry end.



**Less wear, less corrosion**

Wet components are available in a wide range of alloys and elastomers. Weir Minerals selects the optimum combination of materials for maximum resistance to wear in virtually any industrial application, including those demanding both abrasion and corrosion resistance, and where larger particles or high density slurries are encountered.

- Abrasion resistant A05 alloy.
- Abrasion/corrosion-resistant A49 alloy.
- Corrosion-resistant stainless steels.
- Natural and synthetic elastomers.

**No submerged bearing failures**

The robust cantilever shaft avoids the need for lower submerged bearings which are often the source of premature bearing failure.

- Heavy duty roller bearings, above mounting plate.
- No submerged bearings.
- Labyrinth/flinger bearing protection.
- Rigid, large diameter shaft.

**No shaft sealing problems**

The vertical cantilever design requires no shaft seal. No priming required. The top and bottom inlet design is ideally suited for “snore” conditions.

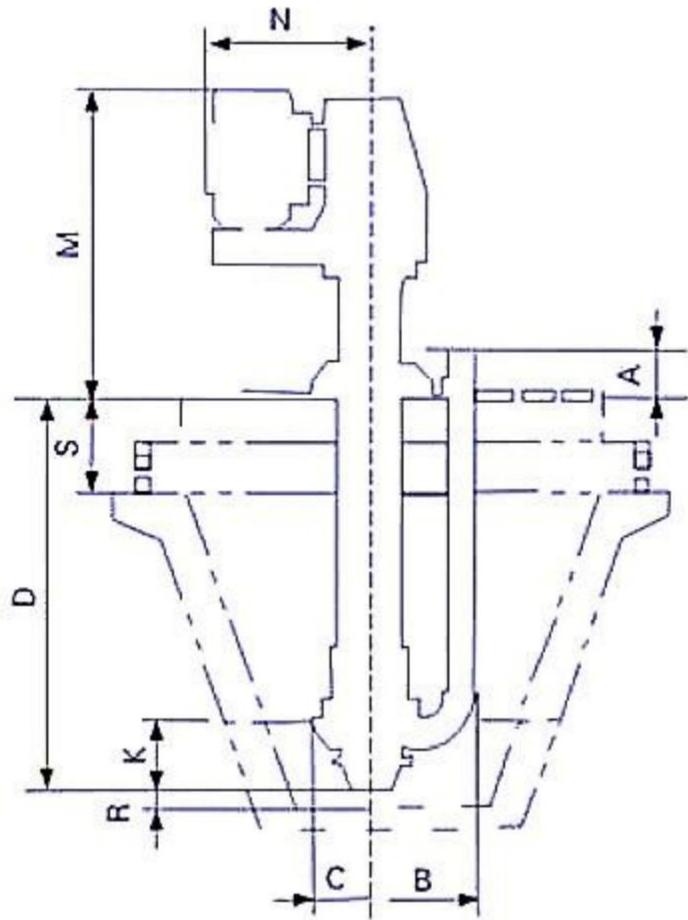
**Less risk of blocking**

The screened inlets and large impeller passages reduce the risk of blockages.

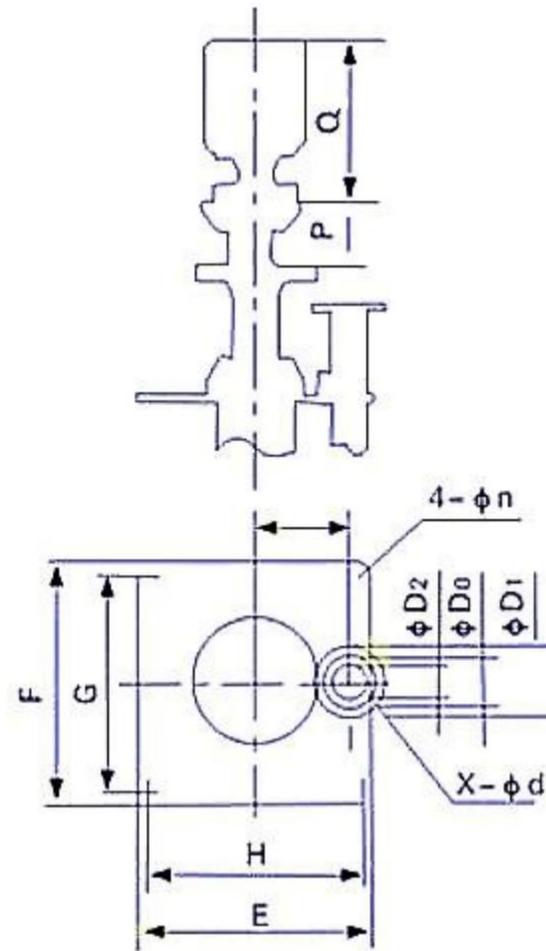
**Zero ancillary water costs**

The vertical cantilever design with no gland or submerged bearings avoids the need for expensive

## FSP & FSPR PUMP DIMENSIONS



Belt Drive



Direct Coupled Drive

