

WARMAN®

Centrifugal Slurry Pumps

SP & SPR Heavy Duty Sump Pumps

WEHR
MINERALS



Weir Minerals are specialists in delivering and supporting slurry equipment solutions for global mining and mineral processing, and general industry.

At Weir Minerals we use our specialist slurry knowledge, and experience from around the world, to deliver reliable product and service solutions.

In addition, we have invested heavily in an ongoing programme of research and development focussing on the areas of hydraulic design, materials technology and shaft sealing.

The Warman® SP/SPR heavy duty cantilever sump pump is designed for applications requiring greater reliability and durability than conventional vertical process pumps can offer.

The heavy duty cantilever design makes the Warman® SP/SPR sump pump ideally suited for heavy continuous handling of abrasive and corrosive liquids and slurries whilst submerged in sumps or pits.

Warman® SP/SPR sump pumps offer you:

- **Reliability** - by design.
- **Low spares costs** - from long wear life.
- **Low energy costs** - from maintained efficiency.
- **After sales support** - second to none.

World class manufacturing

Underlying our product capability is our introduction of the latest CAD CAM techniques and the implementation of lean manufacturing principles, keeping Weir Minerals at the forefront of manufacturing technology, delivering direct customer benefits.

Weir Minerals products are manufactured by member companies of the Weir Minerals Division and Licensees in strategic locations around the world.

Worldwide sales and service



Weir Minerals has the geographical presence to service all the major minerals markets around the world.

Our global network ensures that we are close to our customers wherever they base their local operations.

Meeting international standards

The Quality Management Systems of Weir Minerals Australia are accredited to AS/NZS ISO 9001:2008, Environmental Management Systems are accredited to AS/NZS ISO 14001:2004 and Safety Management Systems accredited to AS4801:2001.

The rugged Warman® SP/SPR heavy duty sump pumps are available in a wide range of popular sizes to suit most pumping applications. These pumps are proving their reliability and efficiency worldwide in:

- 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 Warman® SP/SPR pump design with either hard metal (SP) or elastomer covered (SPR) 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



Top Right: SPR pump operating in coal sump application.

Left: One of six Warman® SPR pumps handling waste water.

Warman® SP/SPR 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 Warman® pump wet ends can be fitted to the standard Warman® SP pump dry end.

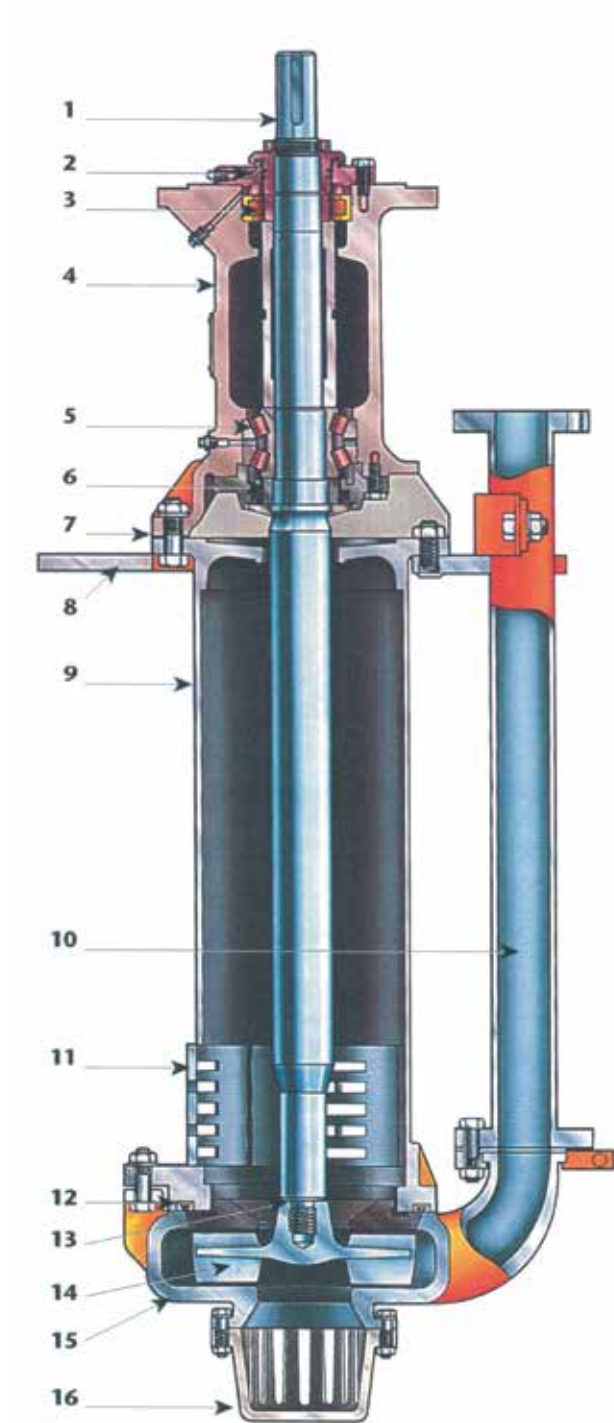


Left and below: The Warman® SPR pump in operation in differing sump environments.

Below: Warman® SPR pump in coal sump application.



The Warman® SP/SPR Heavy Duty Cantilever Sump Pump



Type "SP"

All metal for abrasive duty

1. Shaft

SP - Steel

SPR - Elastomer covered steel

2. Upper bearing seal

Labyrinth, piston rings and grease purge

3. Upper bearing

Heavy duty grease lubricated parallel roller

4. Bearing housing

Robust heavy duty, SG iron

5. Lower bearings

Heavy duty grease lubricated double taper roller

6. Lower bearing seal

Lip Seal and Flinger

7. Shims

Allow vertical adjustment of the impeller in the casing

8. Mounting plate

SP - Steel

SPR - Elastomer covered steel

9. Column

SP - Steel

SPR - Elastomer covered steel

10. Discharge pipe

SP - Steel

SPR - Elastomer covered steel

11. Upper strainer

SP - Stainless Steel

SPR - Polyurethane

12. Back liner seal

SP - Elastomer

13. Impeller thread seal

SP - Elastomer

14. Impeller

SP - UltraChrome® alloy

SPR - Elastomer moulded metal

15. Casing

SP - UltraChrome® alloy

SPR - Elastomer moulded metal

16. Lower strainer

SP - Polyurethane

SPR - Elastomer moulded metal

17. Socket head protectors

SPR - Elastomer moulded

18. Column clamp

SPR - Elastomer moulded metal

Less wear, less corrosion

Wetted 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 Ultrachrome® A05 alloy.
- Abrasion/corrosion-resistant Ultrachrome® 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.

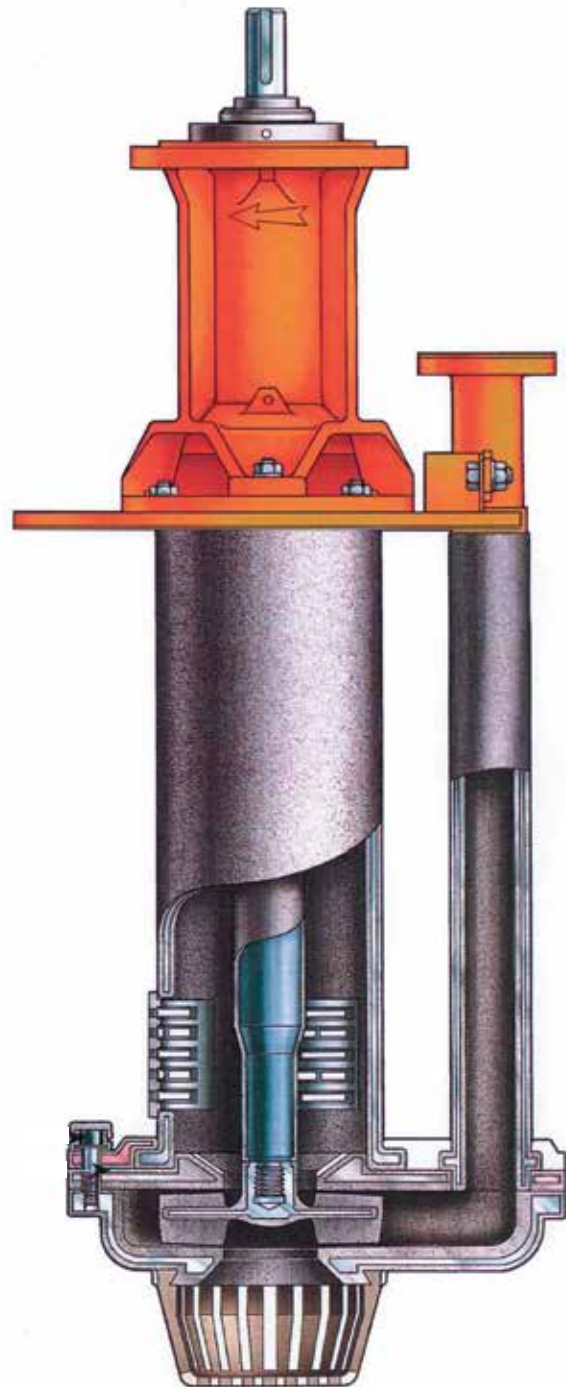
The top and bottom inlet design is ideally suited for “snore” conditions.

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 gland or bearing flushing water.



Type “SPR”

Wetted parts 100% elastomer protected for corrosive/abrasive duty

Information software and quick selection chart

Product Information Software

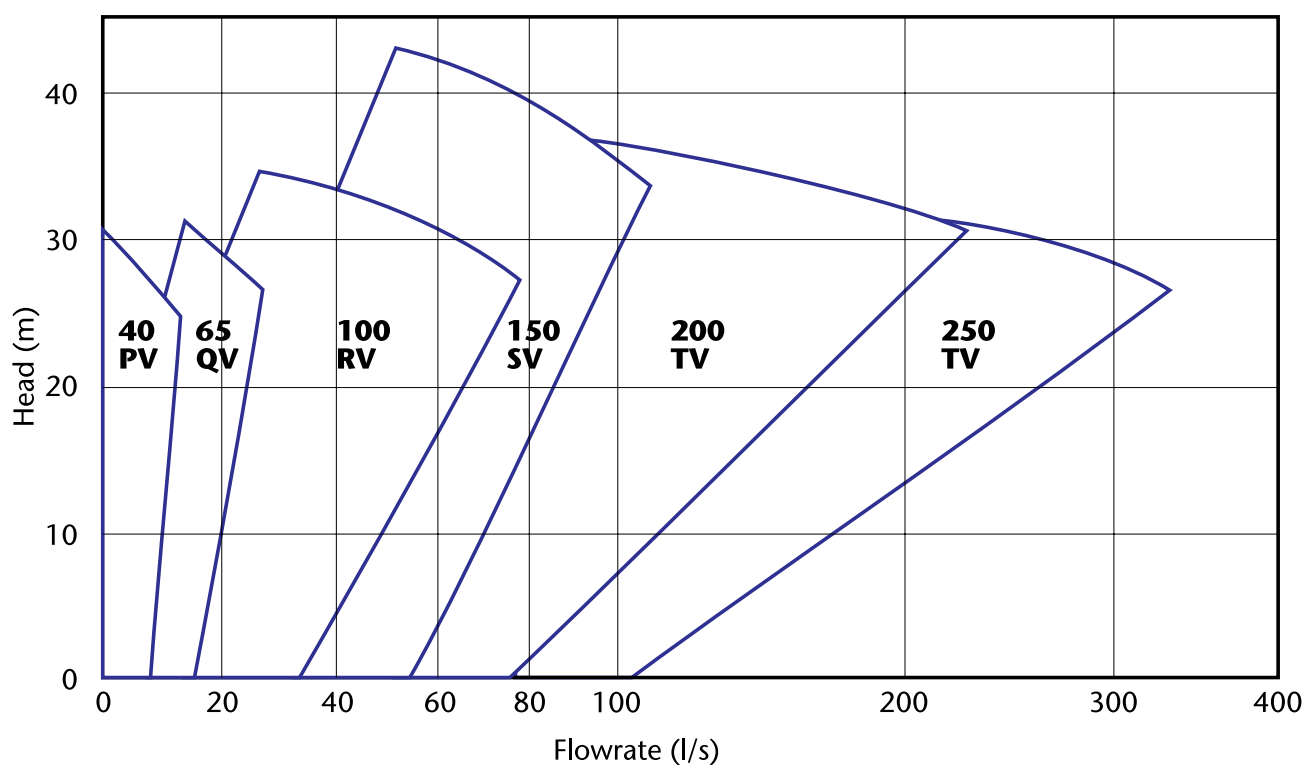
Weir Minerals product information software is available for download from the Weir Minerals website or on CD from your local sales office.

The Weir Minerals Catalogue wsCAT was developed by the Pump Technology Centre and is an integrated browser of two modules:

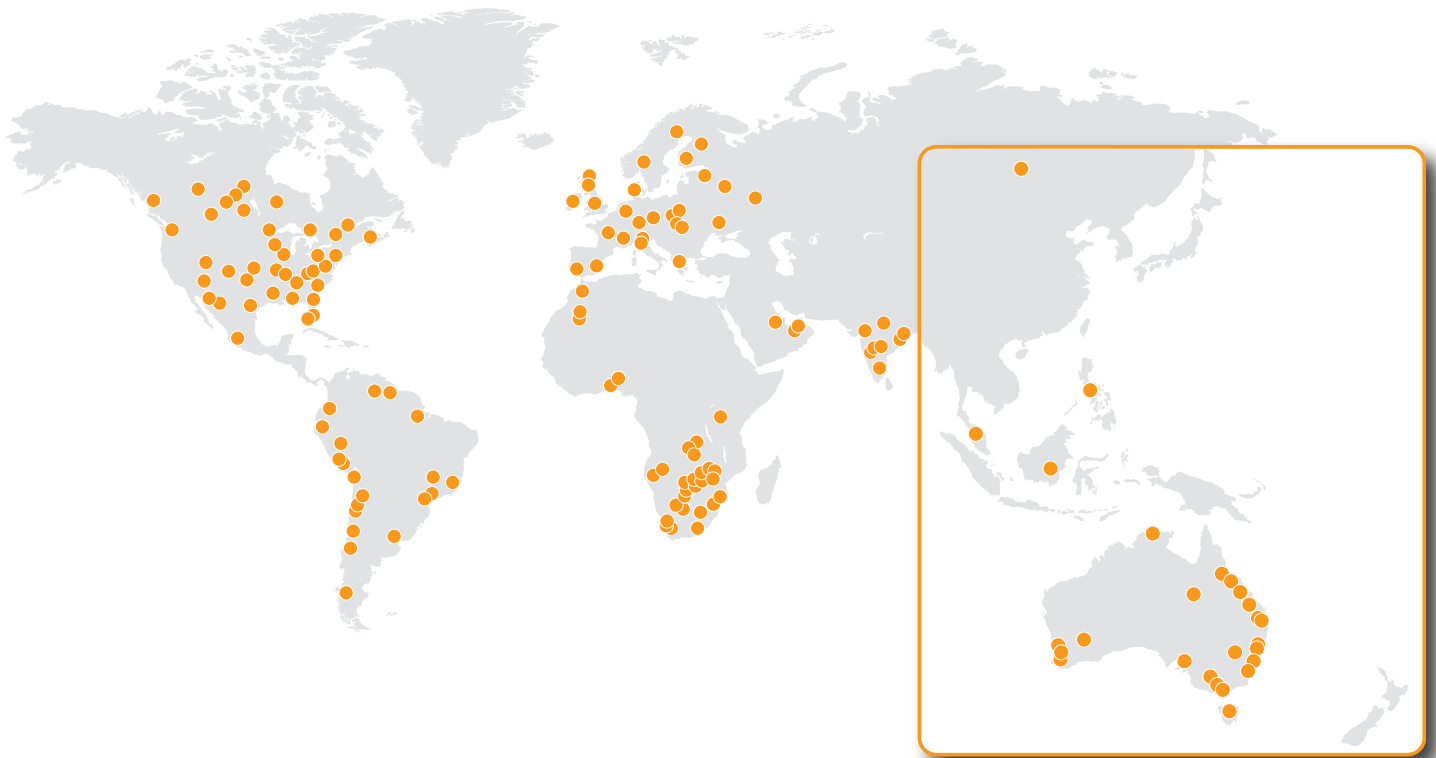
- 1. Pump performance curves:** which are downloadable and unlocked by obtaining a key obtained via email from your local sales office, and
- 2. Technical reference :** which, due to file size, is only available on the CD version. The technical reference information includes application data, drawings, engineering data, marketing data and operation and maintenance manuals.

Warman® SP & SPR Heavy Duty Sump Pumps - Quick Selection Chart

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







WARMAN®
Centrifugal Slurry Pumps

GEHO®
PD Slurry Pumps

LINATEX®
Rubber Products

ENDURON®
Comminution Equipment

KHD*
High Pressure Grinding Rolls

VULCO®
Wear Resistant Linings

CAVEX®
Hydrocyclones

FLOWAY® PUMPS
Vertical Turbine Pumps

ISOGATE®
Slurry Valves

MULTIFLO®
Mine Dewatering Solutions

HAZLETON®
Specialty Slurry Pumps

LEWIS® PUMPS
Vertical Chemical Pumps

ASPIR™
Centrifuges

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SERVICES™**

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