

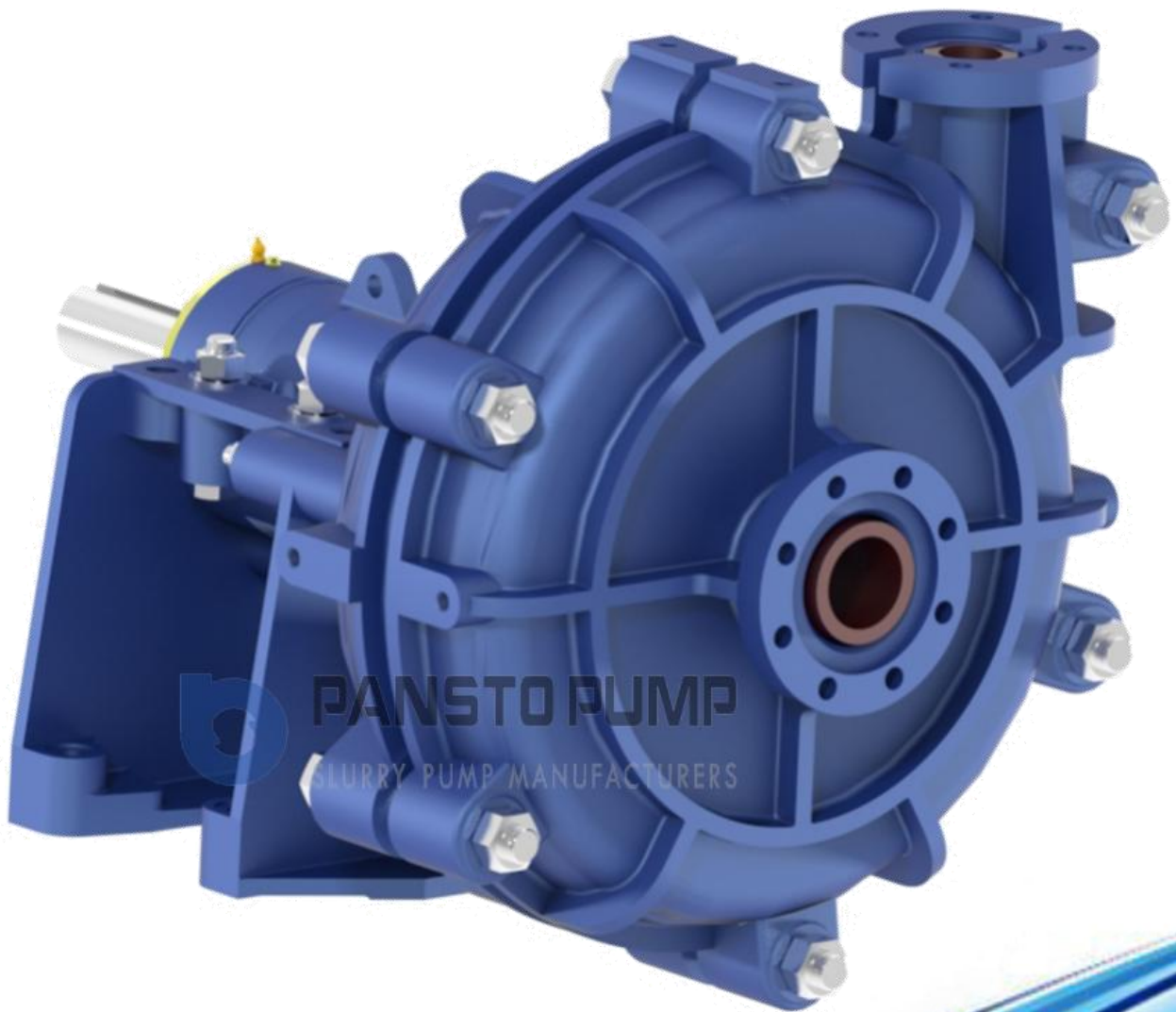


PANSTO PUMP

SLURRY PUMP MANUFACTURER

Pansto

PHH heavy duty
high head horizontal
slurry pumps

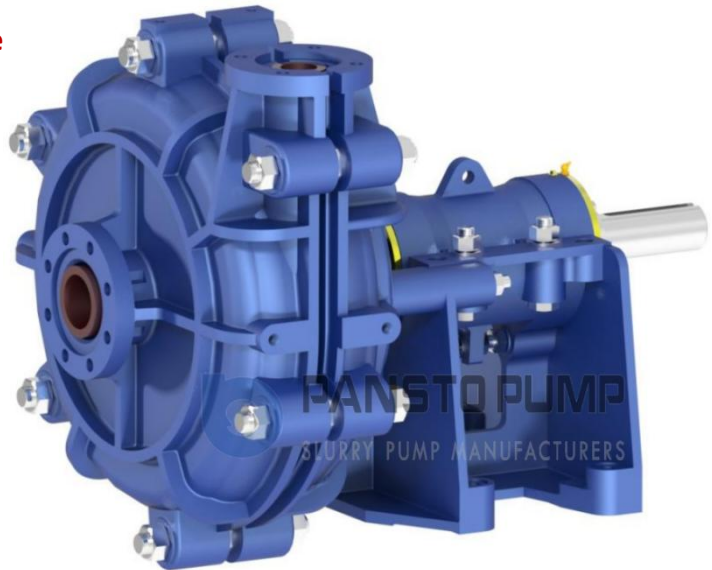


PANSTO PUMP

SLURRY PUMP MANUFACTURERS

Pansto PHH series of slurry pumps are heavy duty horizontal slurry pumps designed for high head applications.

- **Excellent hydraulic performance**
- **Low power consumption**
- **Long wear life**
- **Reliability in operation**
- **Easy to maintain**



The PHH heavy duty high head slurry pumps have outstanding performance in high head applications compared to PH pumps, they are again similar in construction to PH and PL pumps, but features larger impeller diameters than the PH range and incorporates a heavily reinforced casing.

The PHH range offer a wide range of world class hard metal wet ends, suitable for low concentration high head or high concentration low abrasive high head slurry applications.

Advantages

High discharge head ---- Higher discharge head than PH range pumps.

Excellent wear-resistant parts --- high-chrome alloy wet end parts.

Heavy duty shaft ---- A large diameter shaft with a short overhang minimizes deflection and vibration.

Heavy duty bearings ---- Heavy duty grease lubricated tapered roller bearings in a sealed cartridge designed for maximum bearing life.

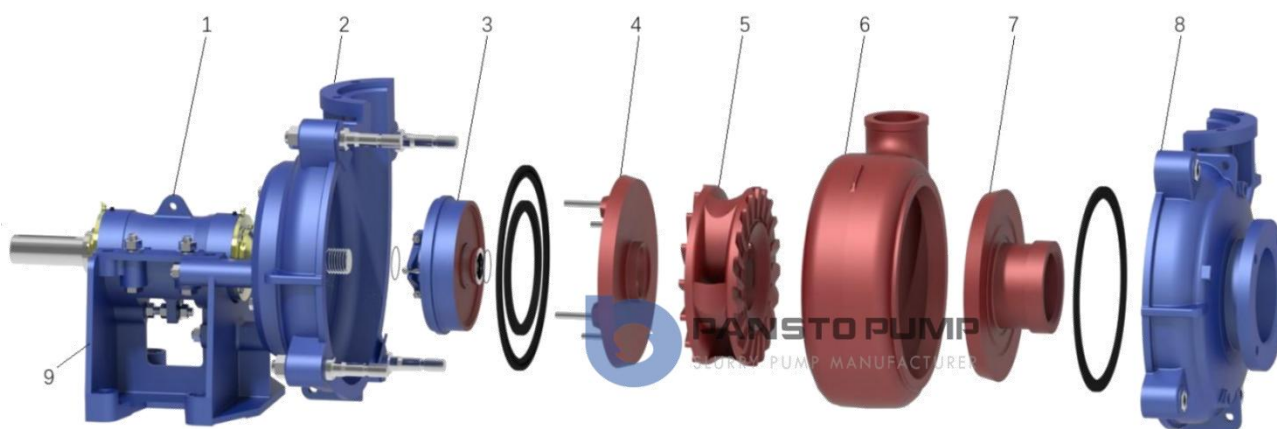
Lowest total cost ---- High hydraulic efficiency, reliability in operation and long wear life.

Multiple shaft seals available ---- Packing seal, expeller dynamic seal, mechanical seal.

Variable discharge direction ---- The discharge can be turned at eight directions.

Flexible to arrange ---- A variety of motor arrangements are available, such as direct coupled, overhead mounted, side mounted, reverse overhead mounted.

Structure



Exploded view for metal liner (PHH pumps)

- | | | |
|-----------------------------|----------------|------------------------|
| 1. Bearing assembly | 2. Frame Plate | 3. Shaft seal assembly |
| 4. Frame Plate liner Insert | 5. Impeller | 6. Volute Liner |
| 7. Throat bush | 8. Cover | 9. Base |

Note: This is the basic structures of the PHH slurry pumps, there would be some differences up to varied pump size.

Materials for wet end parts

Name	Material description	Hardness	Applications
BTMCr27	27% Cr Erosion Resistant White Iron	≥56HRC	It is a wear resistant white iron that offers excellent performance under erosive conditions.
BTMCr28	28% Cr, Low C, High Cr, White Iron	≥45HRC	It is particularly suitable for FGD and other corrosive applications, where the pH is less than 4.
BTMCr33	33% Cr, Erosion & Corrosion Alloy, High Cr, Low C	≥35HRC	It can transport oxygenated slurry with PH not be less than 1 such as phosphoric acid duties and other corrosive applications.

Contact us for other special material options.

Shaft seal options

The shaft seal is one of the most important mechanical elements in centrifugal slurry pump and the correct type of seal must be carefully selected to suit each individual pump system. There are three commonly used shaft sealing options:



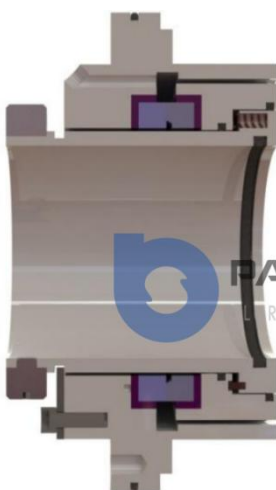
Packing seal

The soft, packed gland seal is the most commonly used seal in slurry applications. Clean water at a certain pressure being injected into the packing through the lantern, preventing leakage from casing. Simple structure, easy maintenance, low cost.

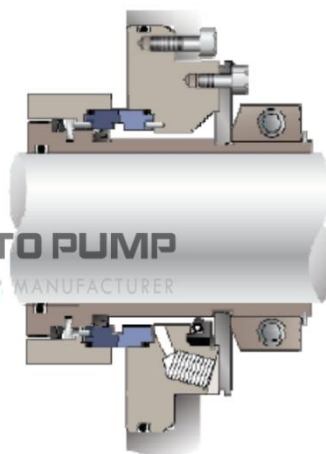


Expeller dynamic seal

The expeller acts as a turbine to reduce the pressure of the slurry attempting to escape around the back of the impeller. A secondary seal, grease lubricated packing or rubber lip seal stops leakage when the pump is not running. No gland water is needed.



High pressure flush



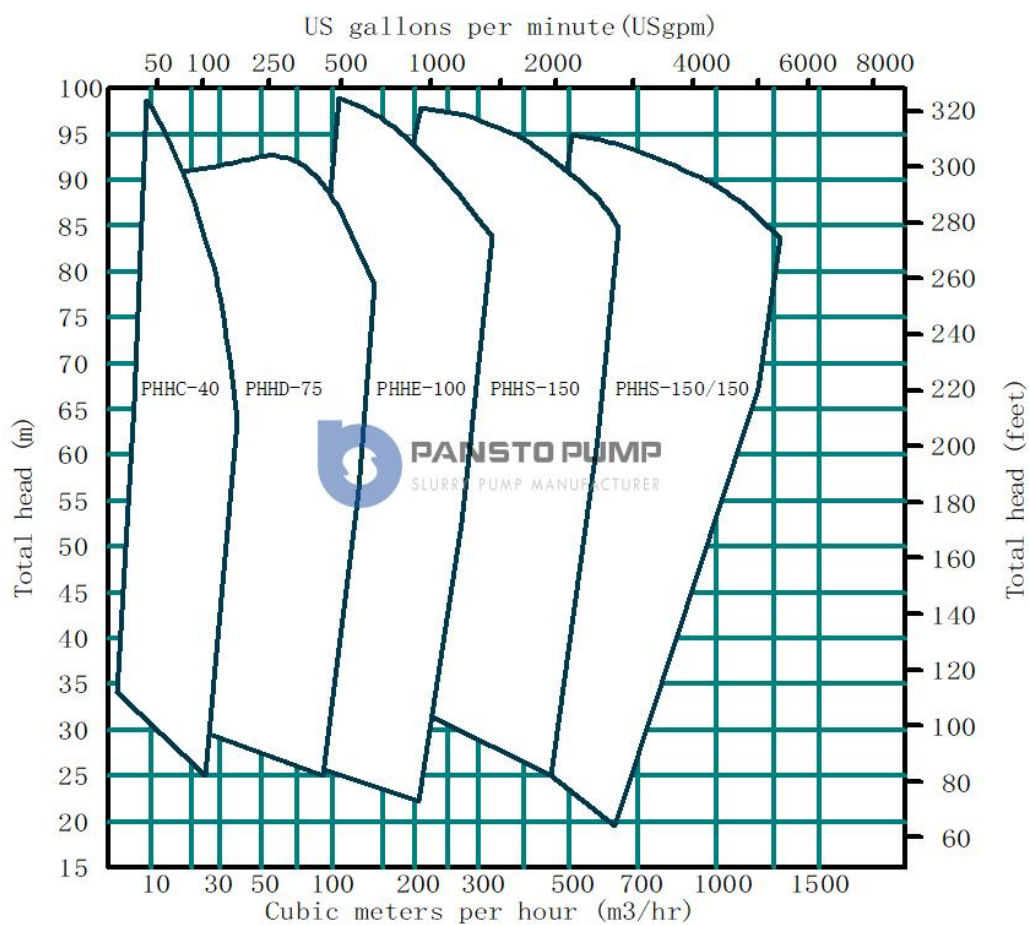
Low pressure flush

Mechanical seal

The mechanical seal consists of a stationary and a rotating face pressed together under mechanical and hydraulic pressure to prevent leakage. It has best seal effect, used for zero leakage conditions. Low pressure flush mechanical seal do not dilute the product. High cost .

Contact us for other special shaft sealing options.

Quick selection chart for PHH pumps

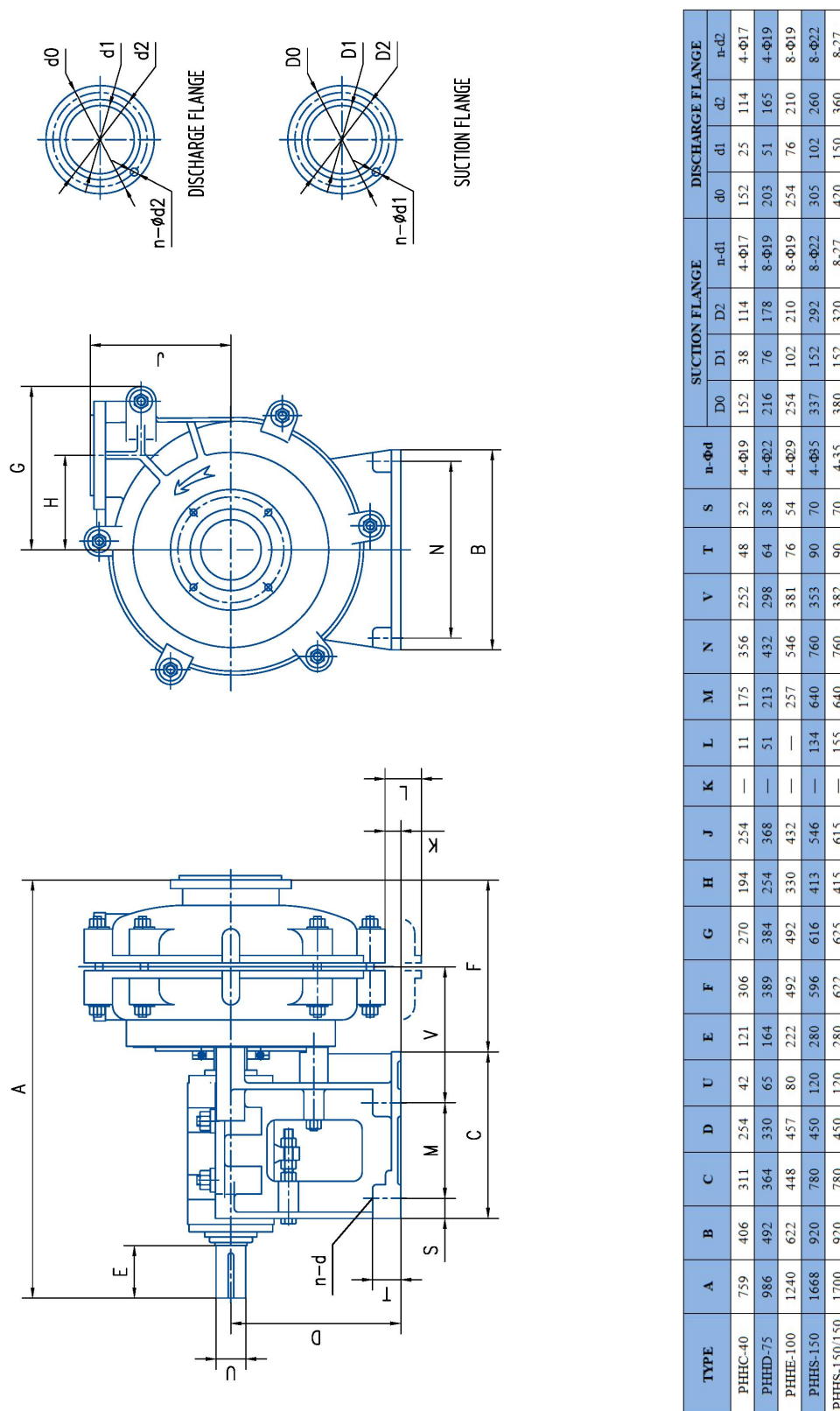


Clear water performance parameters

TYPE	MAX. POWER (kw)	CLEAR WATER PERFORMANCE						IMPELLER	
		CAPACITY Q		HEAD H (m)	SPEED n (r/min)	MAX. EFF η (%)	NPSHr (m)	NO. OF VANES	IMPEL. DIA. (mm)
		(m³/h)	(L/S)						
PHHC-40	30	16.2-34.2	4.5-9.5	25-95	1400-2200	20	2-5.5	5	330
PHHD-75	60	68.4-136.8	19-38	25-87	850-1400	47	3-7.5	5	457
PHHE-100	120	126-252	35-70	20-97	600-1400	50	2-5	5	508
PHHS-150	560	324-720	90-200	30-97	600-1000	64	3-8	5	711
PHHS-150/150	560	468-1008	130-280	20-94	500-1000	65	4-12	5	711

Note: Approximate clear water performance and to be used for preliminary selection only.

Outline and installation dimensions



Note: All sizes are in millimeters.

Application cases

Typical applications

- Mining and mineral processing
- Mining duty abrasive slurries
- Cyclone feed
- Mine refuse and tailings
- Coal washery
- Iron and steel plant
- Power plant ash
- FGD and Lime slurry
- Environmental protection
- Sand excavation
- Alumina
- Fertilizer
- Chemical industry
- Municipal engineering



PHH pumps ready for delivery to customer's site



PANSTO PUMP
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Shijiazhuang Pansto pump Industry Co., Ltd.

Add: Shijiazhuang Equipment Manufacturing Base, Hebei Province, China

E-mail: sales@panstopump.com

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WhatsApp: +86 15732149758



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