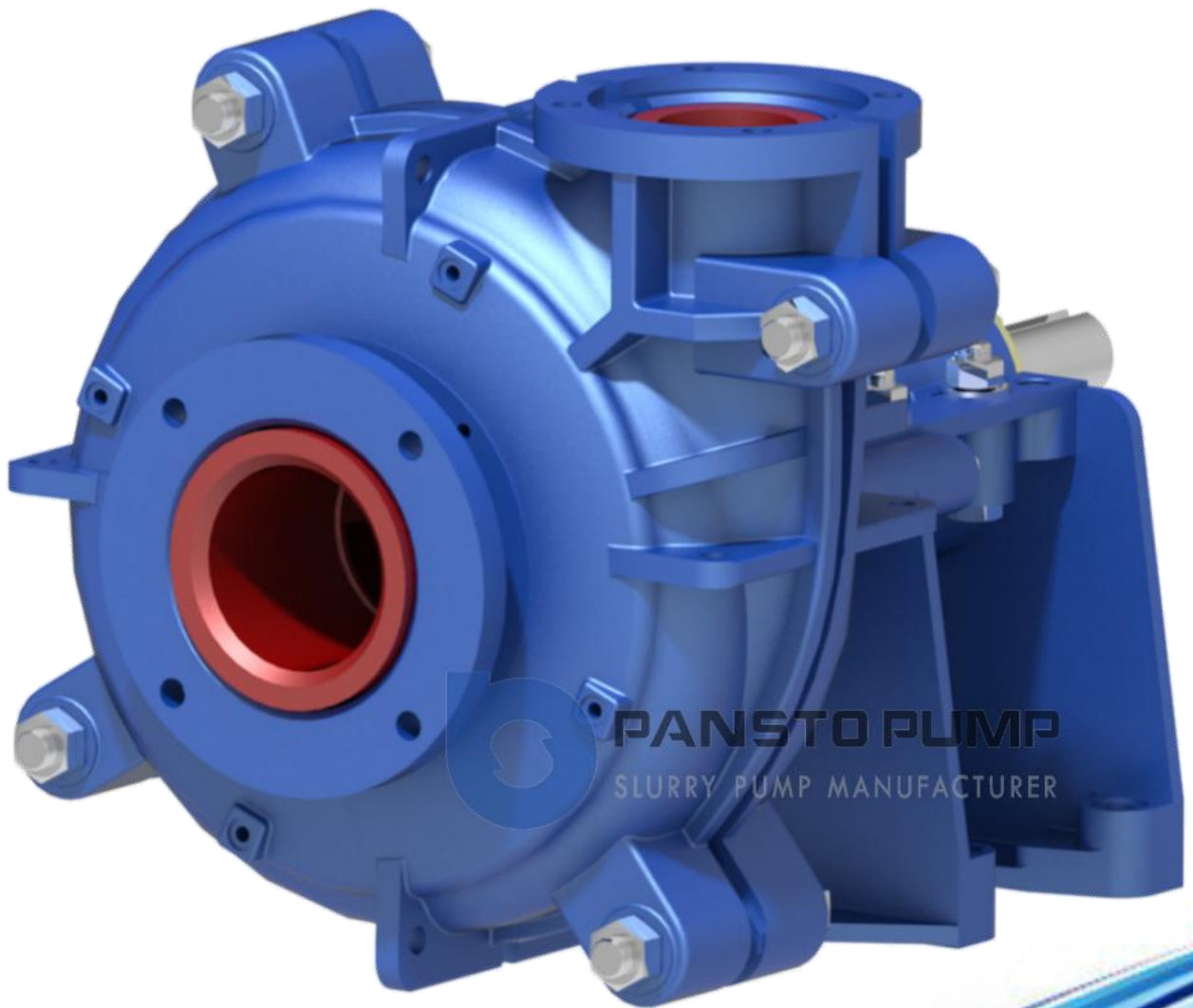




PANSTO PUMP
SLURRY PUMP MANUFACTURER

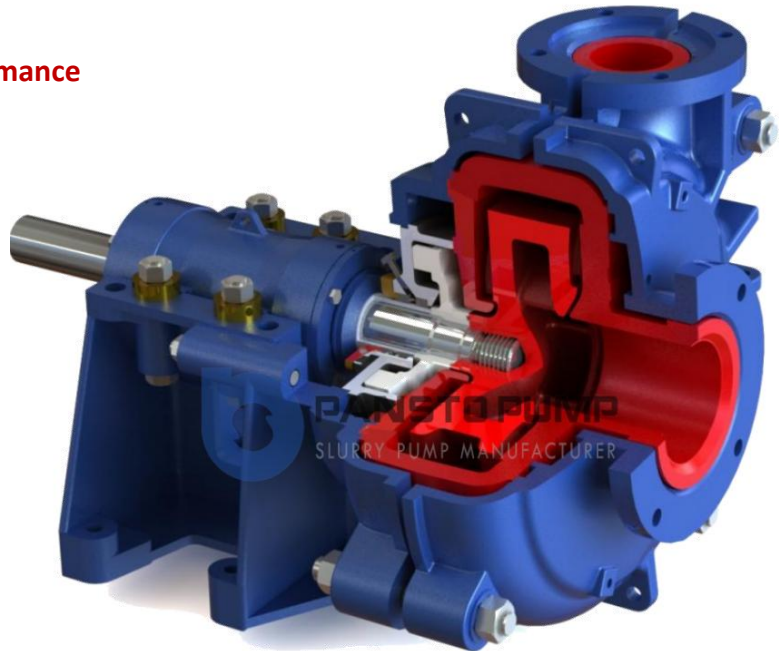
Pansto

PH heavy duty horizontal
slurry pumps



Pansto PH series of slurry pumps are heavy duty horizontal slurry pumps designed to handle strong abrasive and high concentration slurries.

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



The PH slurry pumps have thick wear parts and heavy bracket, generally used for slurries containing high concentrations of erosive solids or where an extremely heavy duty pump is required. They offer a wide range of world class hard metal wet ends (PH) and rubber wet ends (PHJ) for erosive and/or corrosive applications. The PH pumps can be operated in series with multi-stage within permissible pressure.

Advantages

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

Excellent wear-resistant parts --- Interchangeable hard meta and rubber elastomer wet end parts.

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

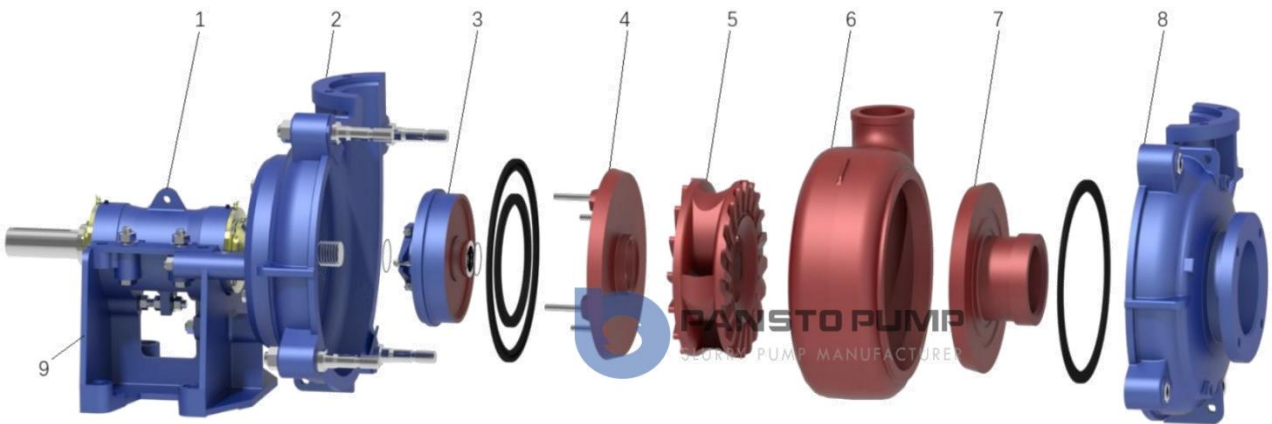
Heavy duty bearings ---- Heavy duty grease lubricated tapered roller bearings in a sealed cartridge designed for maximum bearing life.

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

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

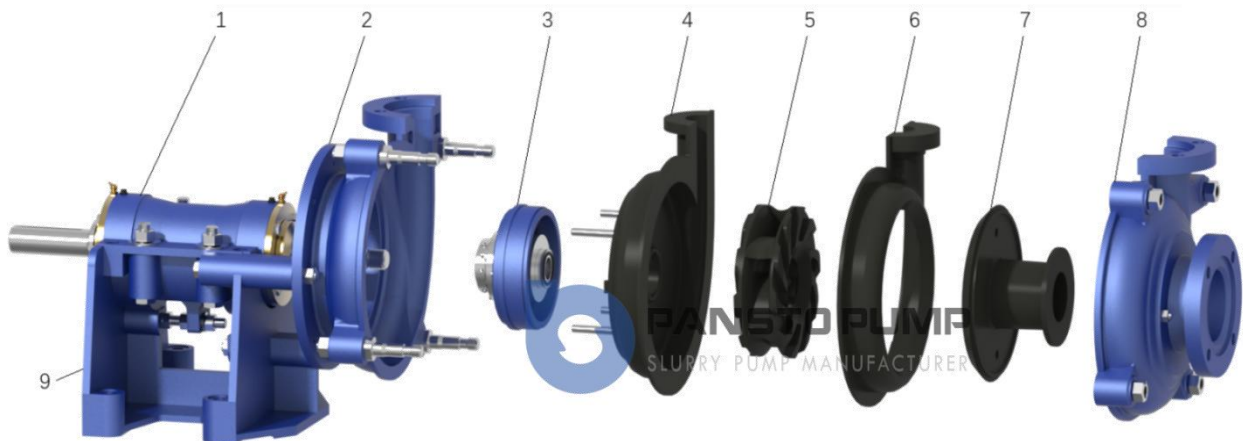
Flexible to arrange---- A variety of motor arrangements are available, such as direct coupled, overhead mounted, side mounted, reverse overhead mounted.

Structure



Exploded view for metal liner (PH 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 |



Exploded view for rubber liner (PHJ pumps)

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

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

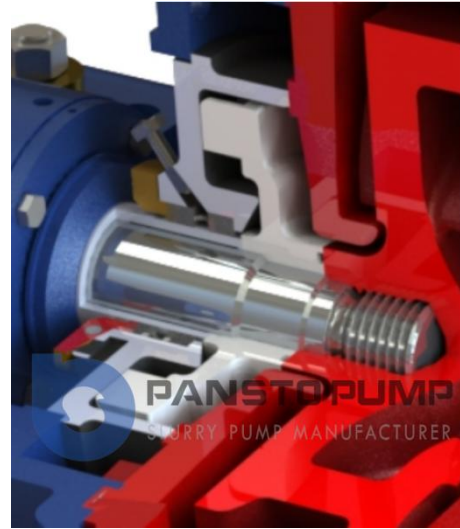
Shaft seal options

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:



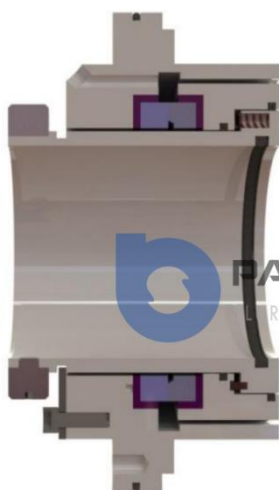
Packing seal

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.

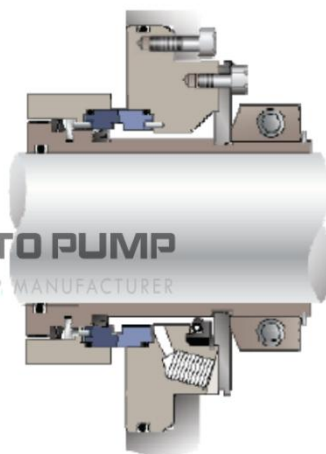


Expeller dynamic seal

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.

Materials

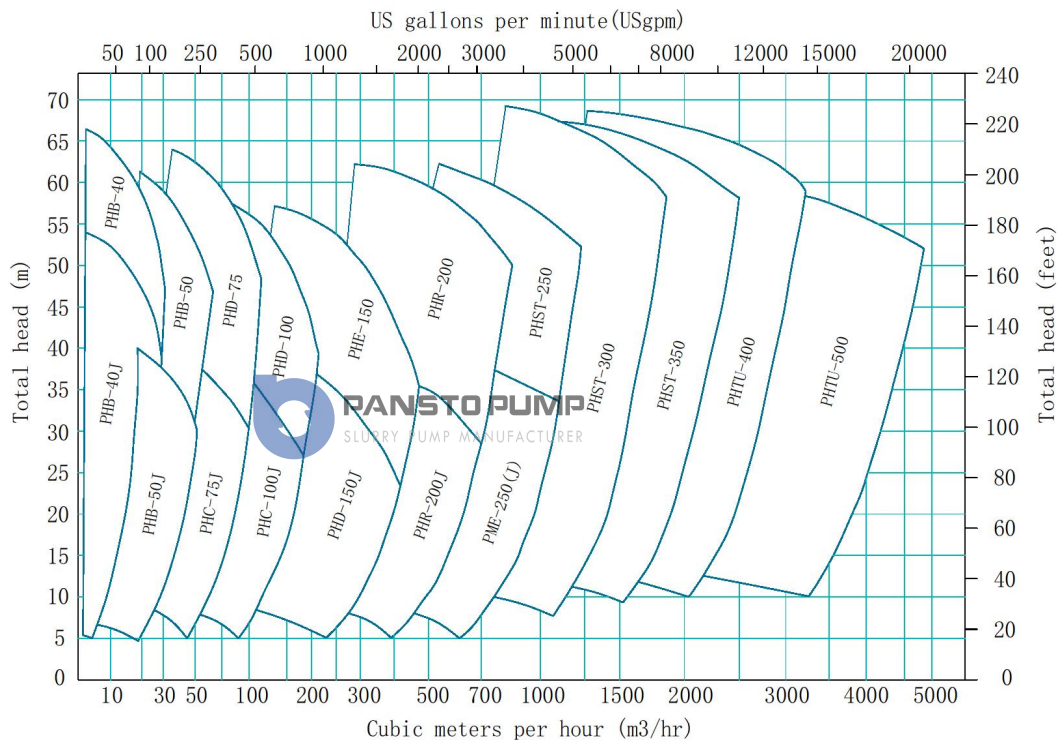
Metal materials for wet end parts

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.

Elastomer materials for wet end parts

Material code	Description	Applications
Natural Rubber PNR08	Standard impeller Rubber	Black medium hardness natural rubber is used for impellers where superior erosive resistance is required in fine particle slurries.
Natural Rubber PNR26	Standard Liner Rubber	Black soft natural rubber is used for impellers where superior erosive resistance is required in fine particle slurries.
Natural Rubber PNR55	Black medium hardness rubber	Black medium hardness rubber with excellent resistance against the environment. general purpose grade for fine to medium slurry applications. good erosion resistance and physical properties.
Polyurethane Elastomer PPE01	Wear Resistant Polyurethane	An erosion resistant material that performs well in elastomer applications, This is attributed to the high tear and tensile strength of Polyurethane.

Quick selection chart for PH pumps



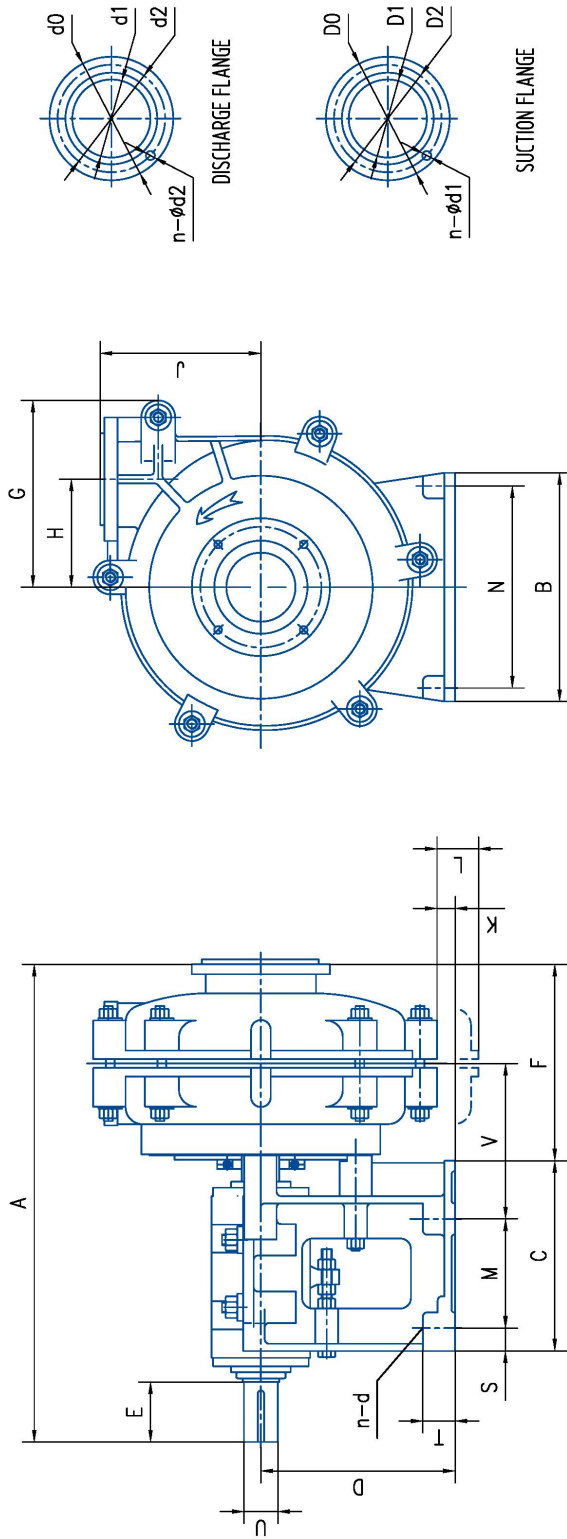
Note: Approximate clear water performance - to be used for preliminary selection only.

Clear water performance parameters

TYPE	MAX. POWER (kW)	MATERIAL		CLEAR WATER PERFORMANCE					
		LINER	IMPELLER	CAPACITY		HEAD (m)	SPEED (r/min)	MAX.Eff. (%)	(NPSH)r (m)
				(m ³ /h)	(L/s)				
PHB-40	15	metal	metal	12.6~28.8	3.5~8	6~68	1200~3800	40	2~4
PHB-40J	15	rubber	rubber	10.8~25.2	3~7	7~52	1400~3400	35	
PHB-50	15	metal	metal	34.2~72	9~20	6~58	1200~3200	45	3.5~8
PHB-50J	15	rubber	rubber	25.2~54	7~15	5.5~41	1000~2600	50	2.5~5
PHC-75	30	metal	metal	39.6~86.4	11~24	12~64	1300~2700	55	4~6
PHC-75J	30	rubber	rubber	36~75.6	10~21	13~39	1300~2100		2~4
PHC-100	30	metal	metal	86.4~198	24~55	9~52	1000~2200	71	4~6
PHD-100	60								
PHC-100J	30	rubber	rubber	79.2~180	22~50	5~34.5	800~1800	59	3~5
PHD-100J	60								
PHD-150	60	metal	metal	162~360	45~100	12~56	800~1550	68	5~8
PHE-150	120								
PHD-150J	60	rubber	rubber	144~324	40~90	12~45	800~1350	65	3~5
PHE-150J	120								
PHE-200	120	metal	metal	360~828	100~230	10~61	500~1140	72	2~9
PHR-200	300								
PHE-200J	120	rubber	rubber	324~720	90~200	7~49	400~1000	65	5~10
PHR-200J	300								
PME-250	120	metal	metal	666~1440	185~400	14~60	600~1100	73	4~10
PMR-250	300								
PHF-250	260	metal	metal	612~1368	170~380	11~61	400~850	71	4~10
PHST-250	560								
PHF-250J	260	rubber	rubber	540~1188	150~330	12~50	400~750	75	4~12
PHST-250J	560								
PHST-250	560	metal	metal	936~1980	260~550	7~68	300~800	80	3~8
PHST-250J		rubber	rubber	720~1620	200~450	7~45	300~650	80	2.5~7.5
PHST-350	560	metal	metal	1260~2772	350~770	13~63	300~600	77	3~10
PHST-350J		rubber	rubber	1152~2520	320~700	13~44	300~500	79	3~8
PHTU-400	1200	metal	metal	1368~3060	380~850	11~63	250~550	79	4~10
PHTU-500	1200	metal	metal	2520~5400	700~1500	13~57	200~400	85	5~10

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

Outline and installation dimensions



TYPE	A	B	C	D	U	E	F	G	H	J	K	L	M	N	V	T	S	n-φd	SUCTION FLANGE			DISCHARGE FLANGE				
																			D0	D1	D2	n-d1	d0	d1	d2	n-d2
PHB-400(J)	583	295	248	197	28	79	206	181	98	171	46	—	143	254	181	38	24	4-φ14	152	38	114	4-φ16	165	25	127	4-φ16
PHB-500(J)	592	295	248	197	28	79	217	205	114	184	33	—	143	254	184	38	24	4-φ14	184	51	146	4-φ19	165	38	127	4-φ19
PHC-75(J)	768	406	311	254	42	121	281	238	138	210	71	—	175	356	233	48	32	4-φ19	216	76	178	4-φ19	184	51	146	4-φ19
PHC-100(J)	843	406	311	254	42	121	354	292	149	262	24	—	175	356	270	48	32	4-φ19	279	102	235	4-φ22	229	76	191	4-φ22
PHD-100(J)	943	492	364	330	65	164	353	292	149	262	100	—	213	432	279	64	38	4-φ22	279	102	235	4-φ22	229	76	191	4-φ22
PHD-150(J)	1021	492	364	330	65	164	421	406	229	338	11	—	213	432	318	64	38	4-φ22	337	152	292	4-φ22	279	102	235	4-φ22
PHD-150(J)	1178	622	448	457	80	222	433	406	229	338	138	—	257	546	351	76	54	4-φ29	337	152	292	4-φ22	279	102	235	4-φ22
PHE-200(J)	1302	622	448	457	80	222	557	551	318	460	—	62	257	546	402	76	54	4-φ29	406	203	356	8-φ22	368	152	324	8-φ21
PHR-200(J)	1360	680	590	350	85	215	—	511	318	460	—	170	490	560	312	70	50	4-φ28	406	203	356	8-φ22	368	152	324	8-φ22
PME-250(J)	1337	622	448	457	80	222	584	613	381	470	—	83	257	546	403	76	54	4-φ29	502	254	445	8-φ29	432	203	375	8-φ29
PMR-250(J)	1395	680	590	350	85	215	—	613	381	470	—	190	490	560	314	70	50	4-φ28	502	254	445	8-φ29	432	203	375	8-φ29
PHST-250(J)	1748	1150	780	650	120	280	692	673	419	635	27	—	620	900	439	125	80	4-φ48	502	305	445	8-φ29	432	203	375	8-φ29
PHST-300(J)	1816	1150	780	650	120	280	762	755	464	674	—	65	620	900	461	125	80	4-φ48	527	305	470	8-φ25	527	254	470	12-φ25
PHST-350(J)	1873	1150	780	650	120	280	812	937	629	832	—	224	620	900	486	125	80	4-φ48	585	356	521	12-φ25	552	305	495	12-φ25
PHTU-400	2320	1460	1050	900	150	350	953	1048	660	889	—	84	860	1200	597	150	95	4-φ79	705	406	641	12-φ35	673	356	610	12-φ29
PHTU-500	2475	1460	1050	900	150	350	1100	1420	940	1230	—	420	860	1200	615	150	95	4-φ79	900	508	800	12-φ42	900	460	800	12-φ42

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



PH pumps are used in iron mine, Russia



PH pumps are used in Power plant, China

PH pumps are used in Copper Concentration Plant, Africa





PANSTO PUMP
SLURRY PUMP MANUFACTURER

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