

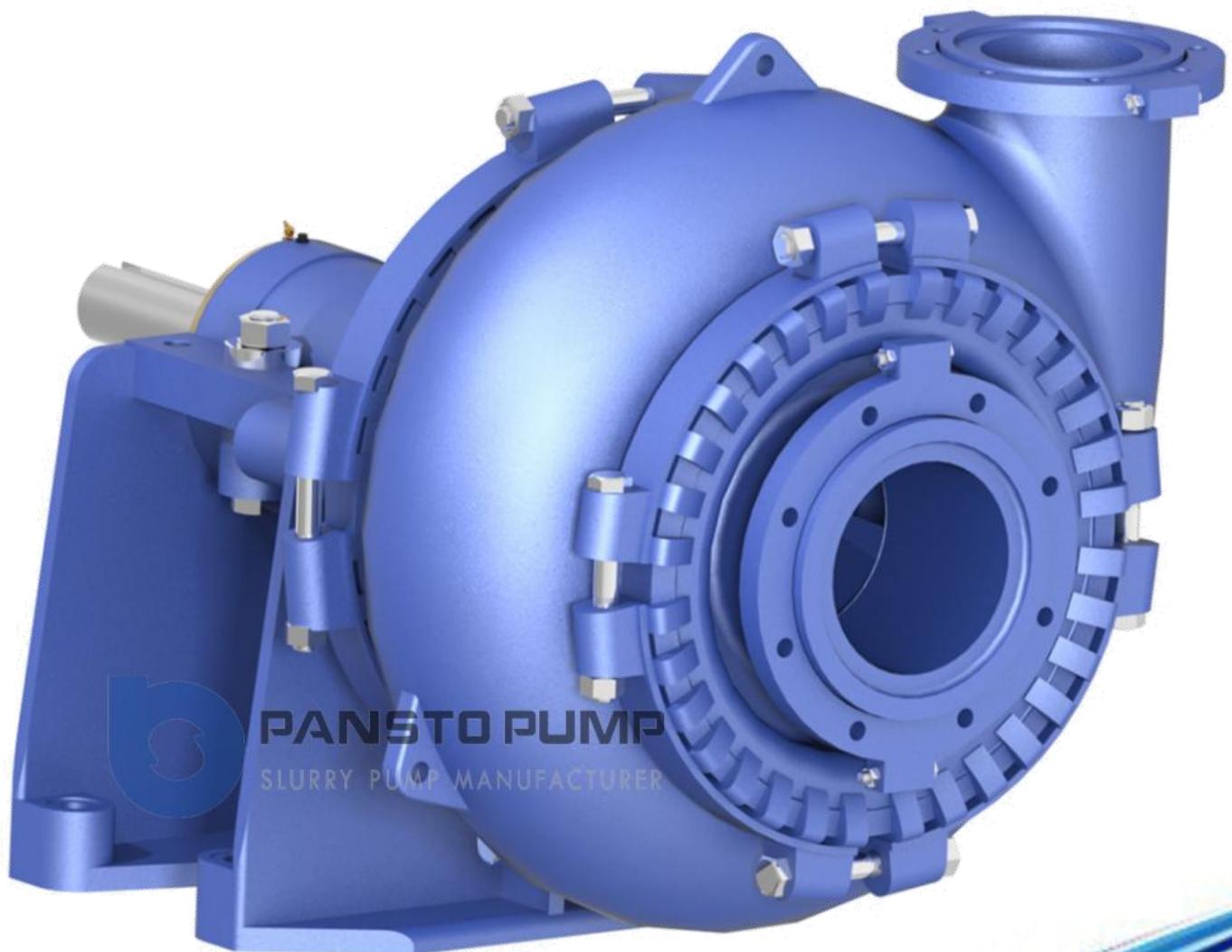


Pansto

PG/PGH

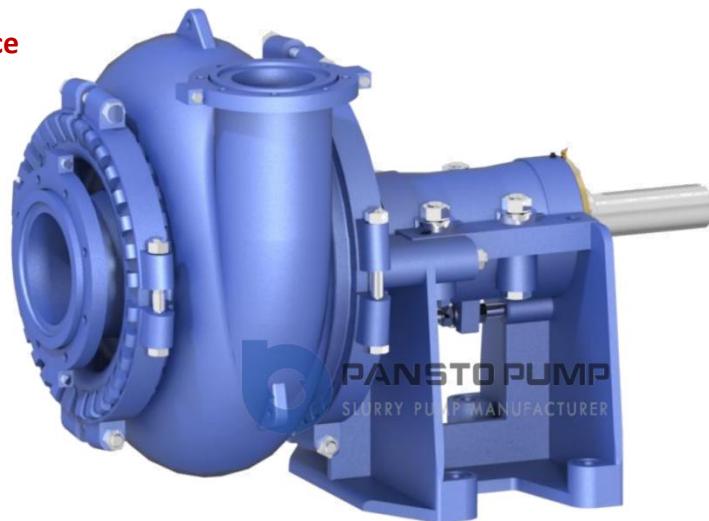
Gravel Pumps

PANSTO PUMP
SLURRY PUMP MANUFACTURER



Pansto PG/PGH series of gravel pumps are horizontal centrifugal slurry pumps designed for handling slurry with larger solid particles such as gravel, sand, etc.

- **Excellent hydraulic performance**
- **Wider wet passage**
- **Lower NPSHr**
- **Easy to maintain**
- **Reliability in operation**



The PG gravel pumps are typically used for pumping gravel, dredging or pumping solids too large to be handled by Type PH pumps. The PGH range is again similar in construction to the PG Types, but features larger impeller diameters and heavier casing than the PG range to allow pumping of heads up to 80 meters, typically used in dredging applications where long discharge distances are required.

The PG/PGH pumps have excellent performance of NPSH, therefore, they are also suitable for lower NPSH applications.

Advantages

Maximize Passage Size ----Large flow passage design for passing extremely large particles.

Excellent performance of NPSH ---- Low NPSHr ensures that the pump works properly at a lower inlet pressure.

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 for maximum bearing life.

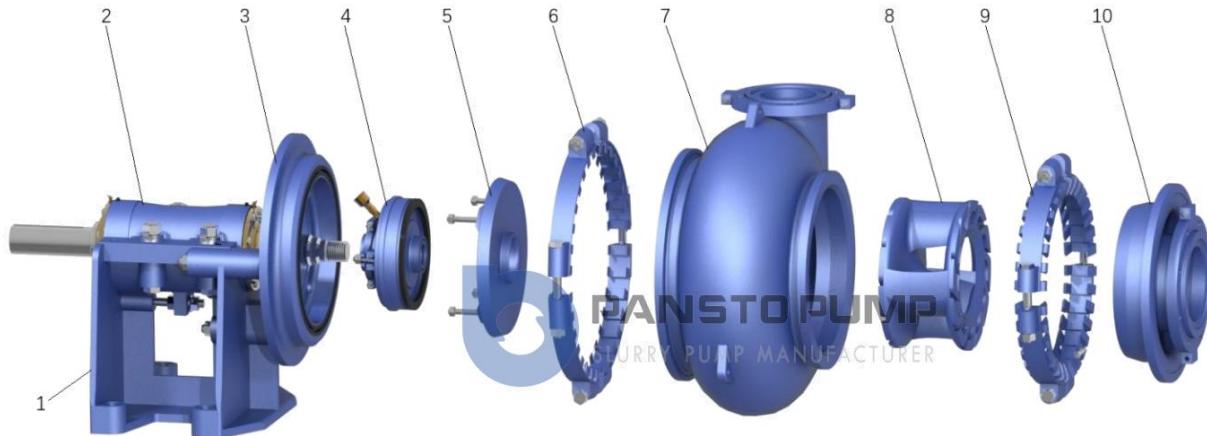
Excellent wear-resistant parts --- high-chrome alloy wet end parts.

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

Arbitrary discharge direction ---- The discharge can be turned at arbitrary 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 PG/PGH pumps

- | | |
|------------------------------|--------------------------------|
| 1 --- Base | 2 --- Bearing assembly |
| 3 --- Adapter plate | 4 --- Shaft seal assembly |
| 5 --- Back liner plate | 6 --- Adapter plate clamp band |
| 7 --- Volute | 8 --- Impeller |
| 9 --- Cover plate clamp band | 10 --- Cover plate |

Note: This is the basic structures of the PG/PGH 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:



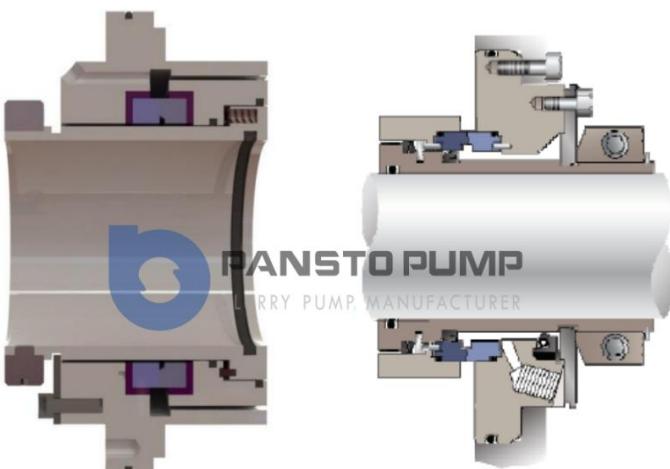
Packing seal

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

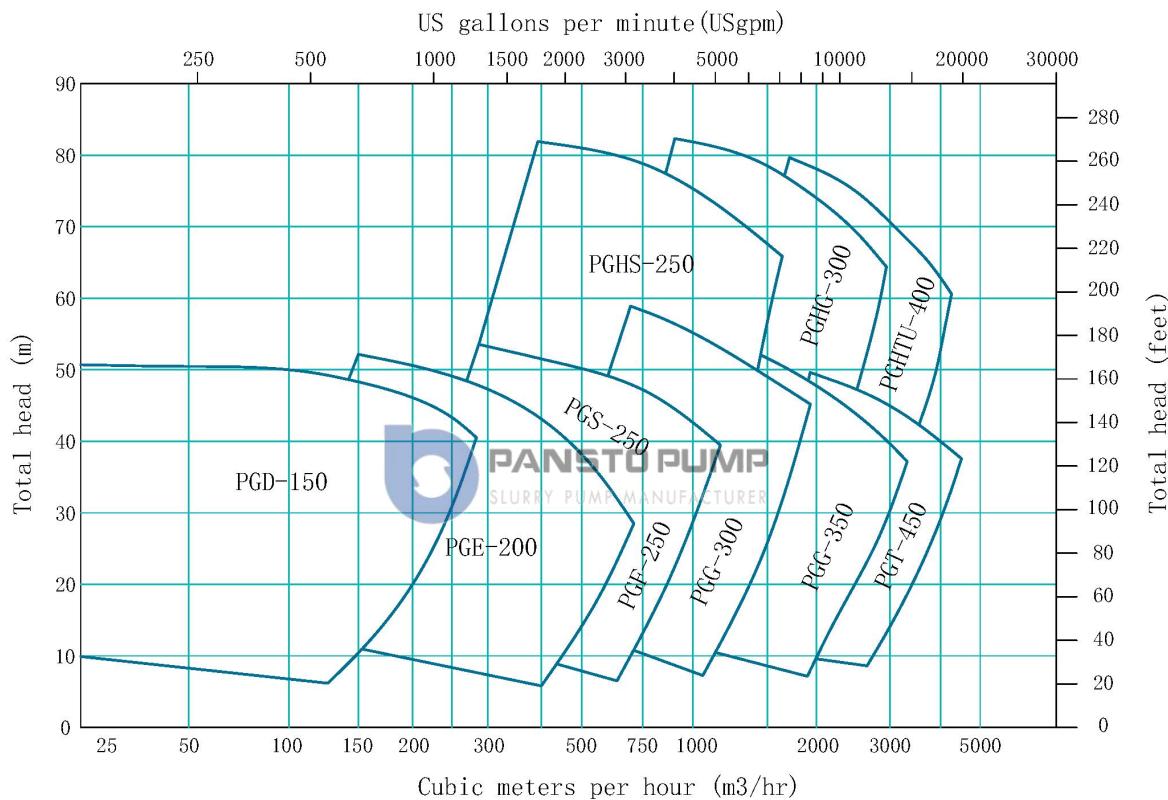
Low pressure flush

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 PG/PGH pumps



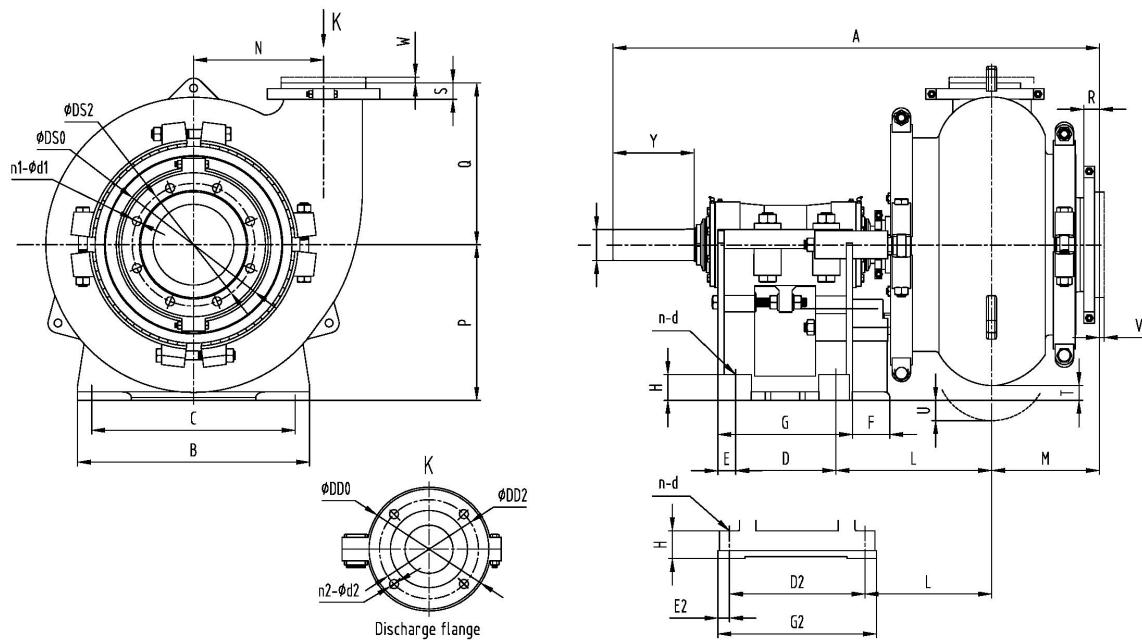
Clear water performance parameters

TYPE	OUTLET DIA. (mm)	SPEED (r/min)	CLEAN WATER PERFORMANCE			MAX. POWER (kw)	IMPELLE R DIA. (mm)	MAX. PARTICLE SIZE (mm)
			CAPACITY (m³/h)	HEAD (m)	MAX EFF. η(%)			
PGD-150	100	600-1400	36-250	7-56	50	60	378	82
PGE-200	150	800-1400	180-540	12-52	60	120	378	127
PGF-250	200	500-1000	180-820	12-56	60	260	533	178
PGS-250	200	500-1000	180-820	12-56	60	560	533	178
PGG-300	250	400-850	360-1200	12-60	65	600	667	220
PGG-350	300	300-700	700-2700	8-70	65	1200	864	241
PGHS-250	200	500-950	750-1300	20-75	72	560	686	180
PGHG-300	250	350-700	1400-2700	10-60	70	600	915	210
PGHTU-400	350	250-500	720-4320	20-70	72	1200	1220	230

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



Outline and installation dimensions



TYPE	Base dimensions													
	A	B	C	D	E	F	G	D2	E2	G2	H	Y	I	n-d
PGD-150	1006	492	432	213	38	75	289	—	—	—	54	164	65	4-Φ22
PGE-200	1286	622	546	257	54	83	365	—	—	—	75	222	80	4-Φ29
PGF-250	1591	857	762	349	45	45	540	—	—	—	98	281	100	4-Φ35
PGS-250	1720	920	760	—	—	—	—	640	70	780	90	280	120	4-Φ35
PGG-300	2010	1207	851	—	—	—	—	749	64	876	152	356	140	4-Φ41
PGG-350	2096	1207	851	—	—	—	—	749	64	876	152	356	140	4-Φ41
PGHS-250	1774	920	760	—	—	—	—	640	70	780	90	280	120	4-Φ35
PGHG-300	2062	1219	851	—	—	—	—	749	64	876	152	356	140	4-Φ41
PGHTU-400	2367	1460	1200	—	—	—	—	860	95	1050	150	350	150	4-Φ79

TYPE	Wet end dimensions										Joint ring		Suction flange			Discharge flange		
	L	M	N	P	Q	R	S	T	U	V	W	DS0	DS2	n1-d1	DD0	DD2	n2-d2	
PGD-150	330	203	260	330	343	33	32	16	—	8	5	305	260	8-Φ19	254	210	4-Φ19	
PGE-200	392	295	352	457	405	29	29	54	—	6	8	368	324	8-Φ19	305	260	8-Φ19	
PGF-250	487	330	416	610	533	48	41	60	—	8	6	457	406	8-Φ22	368	324	8-Φ19	
PGS-250	378	330	416	450	533	48	41	—	102	8	6	457	406	8-Φ22	368	324	8-Φ19	
PGG-300	473	368	522	851	665	48	49	238	—	10	8	527	470	12-Φ22	457	406	8-Φ22	
PGG-350	502	424	610	851	787	48	48	121	—	8	10	552	495	8-Φ22	527	470	12-Φ22	
PGHS-250	455	330	475	450	620	48	42	—	206	8	6	457	406	8-Φ22	368	324	8-Φ19	
PGHG-300	496	400	605	851	800	60	60	40	—	10	8	533	476	8-Φ29	483	432	8-Φ25	
PGHTU-400	649	448	765	900	1008	72	82	—	120	8	10	650	600	12-Φ28	600	540	12-Φ28	

Note: All sizes are in millimeters.

Application cases

Typical applications

- Sand excavation
- Dredge
- Shield tunnel
- Mineral Processing Plants
- Iron and steel plant
- Coal washery
- Alumina
- Municipal engineering
- Other larger solid particles or lower NPSHa applications



PG pumps in tunnel engineering, China



PG pumps in Municipal engineering,
China

PG pumps in Sand excavation,
Southeast Asia





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