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ZG(H) Series Sand, Gravel and Slurry Pump



The ZG(H) series **gravel pump** is designed for continuously handling the most difficult higher abrasive slurries which contain too big solids to be pumped by a common pump. The **Horizontal Centrifugal Gravel Pump** is suitable for delivering slurries in mining, explosive sludge in metal melting, dredging and so on. Single casing with exceeded passage and lowered NPSHr makes **gravel slurry pumps** as a best selection for dredging, delivering sludge I mining plant.

Gravel Pump Range:

Parameter

Caliber	40-200mm
Maximum flow quantity	5600m ³ /h

Maximum head	78m
Speed	200-3800r/min
Power	15-1200kw

For details, please refer to the bottom clear water performance table.

Gravel	Pump Typical		Application:
(1)	Coarse		Sand
(2)		Dredging	
(3)	Fine		Tailings
(4)		Coal	
(5)		Sugar	
(6)	Paper	&	Pulp
(7)	Mineral Sands		

Gravel Pump Features

1. The ZG(H) Series Gravel Pump is also called hopper dredging pump, **it is a single suction mud pump that allows mud to be drawn only from one suction side. The single-stage horizontal cantilever pump adopts a single impeller structure and is widely used in industries such as dredging, mining and mineral processing.**

2. A typical feature of such a hopper dredging pump **is its integral housing. Other desirable features include high channel and wear resistant wet end sections made of high chrome.**

3. Shaft seal selection: packing gland seal,centrifugal seal, mechanical seal.

4. The discharge outlets have 8 positions spaced at 45 degrees and can be selected to meet installation and application requirements.

Gravel Pump Advantages

1. Optimized slurry pump system layout simplifies maintenance operation, ensures long service life, and suit the pump for heavy duty tasks of pumping slurries with large solids.

2. One-piece case and wear-resistant hydraulic parts are easy to replace and repair.
3. Wide flow passage allows a large volume of slurry to pass. The sand and **gravel slurry pumps** are specially designed to handle high-abrasion applications that ordinary pumps can't even attempt.
4. The **gravel slurry pump** head is fixed to the mounting base by a few bolts. Users can adjust the clearance between the impeller and suction liner from underneath a bearing pedestal.
5. Shaft seal options: packing gland seal, centrifugal seal, and mechanical seal. Users can easily replace one type of seal with another in order suit the specific pumping application.

Hydraulic

Modeling

The wet end parts are cast from hard metal or polyurethane. Even when the dredging pumps are severely worn, they maintain good hydraulic performance. This helps the sand pump to achieve optimum pumping efficiency levels. The 3-bladed impeller increases the **centrifugal gravel pump's** ability to pass through the slurry.

Shaft

Seals

Packing

Seal

As one of the most commonly used seals for rotating shafts, the gland seals can be placed in a low or full flush arrangement that uses flushing water to prevent media from escaping from the **centrifugal gravel pump** casing. This seal is suitable for almost all pumping applications. In the case of corrosive solids or high temperatures, polytetrafluoroethylene or aramid fibers are used as the sealing material. In order to further improve the wear resistance of the shaft, a ceramic coated bushing will be used.

Centrifugal

Seal-Expeller

The combination of impeller and ejector creates a seal that prevents leakage. This seal, together with the seal or lip seal used as a closure seal, can handle the sealing requirements of applications where full flush seals are not possible

due to lack of water on site, or allow seal water to enter the **hopper dredging pump** chamber to dilute the slurry.

Installation Types of hopper dredging pump

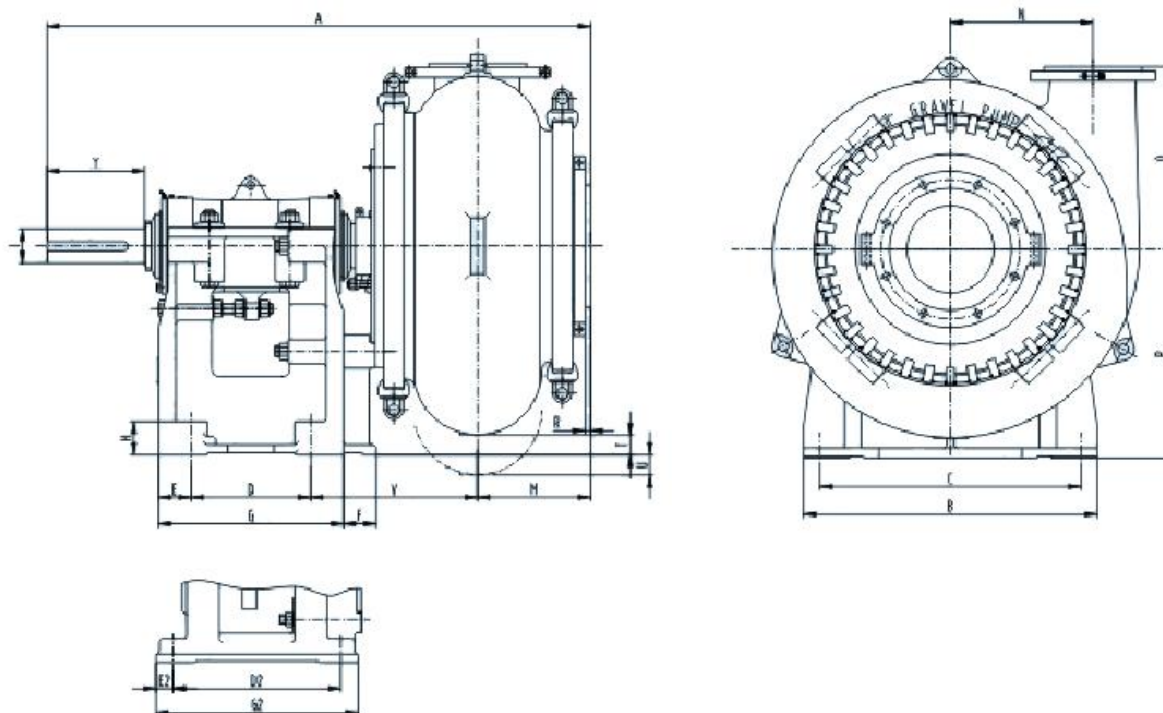
DC Type: The output shaft of a motor is directly connected to the input shaft of a pump via a pump coupler. This type of connection is suitable for applications where the speed of the sand and gravel pump is the same as that of the motor.

CV Type: The pump is driven by a belt connected to the crankshaft of the engine. This way of connection allows for saving space, easy installation, and fast adjustment of pumping speed. The motor is fixed to the motor support frame which is located on the bearing pedestal above the pump.

ZV Type: Another type of belt drive that allows easy adjustment of pumping speed. The motor is directly fixed to the bearing pedestal. This way of installation is suitable for motors with larger horsepower than is possible with CV type of installation. Due to the installation of motor onto the bearing pedestal, this method helps save installation space.

CR Type: This type of belt drive makes it easier to adjust pumping speed. The installation allows both the motor and **heavy duty dredge pump** to be fixed to the ground. The motor is installed to the side of the sand and gravel pump. This installation method is suitable for large-power motors.

Model	Maximum motor power (KW)	Clear water performance					
		Flow quantity Q(m³/h)	Head H(m)	Speed n(r/min)	Efficiency η%	net positive suction head NPSH(m)	Minimum dimension of flow section (mm)
6/4D-ZG	60	300	45	1400	58	4	82
8/6E-ZG	120	500	37	1400	60	3.5	127
10/8F-ZG	260	950	43	1000	65	8	178
10/8S-ZG	560	950	43	1000	65	8	178
12/10G-ZG	600	1530	52	850	65	9	220
14/12G-ZG	600	1700	65	700	73	5	241
18/16T-ZG	1200	3300	40	500	72	6.3	254
20/18H-ZG	1400	4300	39	400	66	8	330
24/20H-ZG	1400	5600	57	400	70	7	380
8/6S-ZGH	560	880	78	1100	71	4.8	140
10/8S-ZGH	560	1300	70	950	72	5	180
12/10G-ZGH	600	2220	67	700	73	8.2	210
16/14TU-ZGH	1200	3050	59	500	72	6.5	230



Model	A	B	C	D	E	F	G	E2	D2	G2	H	V	Y	I	M	N	P	Q	R	T	U	Suction flange				Discharge flange				The anchor hole	Weight (Kg)	
																						O.D	I.D	HOLES	P.C.D	O.D	I.D	HOLES	P.C.D			
6/4D-ZG	1006	492	432	213	38	75	289	/	/	/	54	330	164	65	203	260	330	343	33	16	/	/	305	152	8-ø19	260	254	102	4-ø19	210	4-ø22	460
8/6E-ZG	1286	622	546	257	54	83	365	/	/	/	75	392	222	80	295	352	457	405	29	54	/	/	368	203	8-ø19	324	305	152	8-ø19	260	4-ø29	1120
10/8F-ZG	1591	857	762	349	45	45	540	/	/	/	98	487	281	100	330	416	610	533	48	60	/	/	457	254	8-ø22	406	368	203	8-ø19	324	4-ø35	2250
10/8S-ZG	1720	920	760	/	/	/	/	70	640	780	90	378	280	120	330	416	450	533	48	/	102	457	254	8-ø22	406	368	203	8-ø19	324	4-ø35	2285	
12/10G-ZG	2010	1207	851	/	/	/	/	64	749	876	152	473	356	140	368	522	851	665	48	238	/	527	305	12-ø22	470	457	254	8-ø22	406	4-ø41	4450	
14/12G-ZG	2096	1207	851	/	/	/	/	64	749	876	152	502	356	140	424	610	851	787	48	121	/	552	356	8-ø22	495	527	305	12-ø22	470	4-ø41	5400	
18/16T-ZG	2320	1150	900	/	/	/	/	80	880	1041	125	607	350	150	431	692	650	914	58	/	274	705	457	16-ø25	641	640	406	12-ø25	584	4-ø48	11370	
10/8S-ZGH	1774	920	760	/	/	/	/	70	640	780	90	455	280	120	330	475	450	620	48	/	206	457	254	8-ø22	406	368	203	8-ø19	324	4-ø35	3188	
12/10G-ZGH	2062	1219	851	/	/	/	/	64	749	876	152	496	356	140	400	605	851	800	60	40	/	533	305	8-ø29	476	483	254	8-ø25	432	4-ø41	4638	
16/14TU-ZGH	2367	1460	1200	/	/	/	/	95	860	1050	150	649	350	150	448	765	900	1008	72	/	120	650	405	12-ø28	600	600	356	12-ø28	540	4-ø79	12247	

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