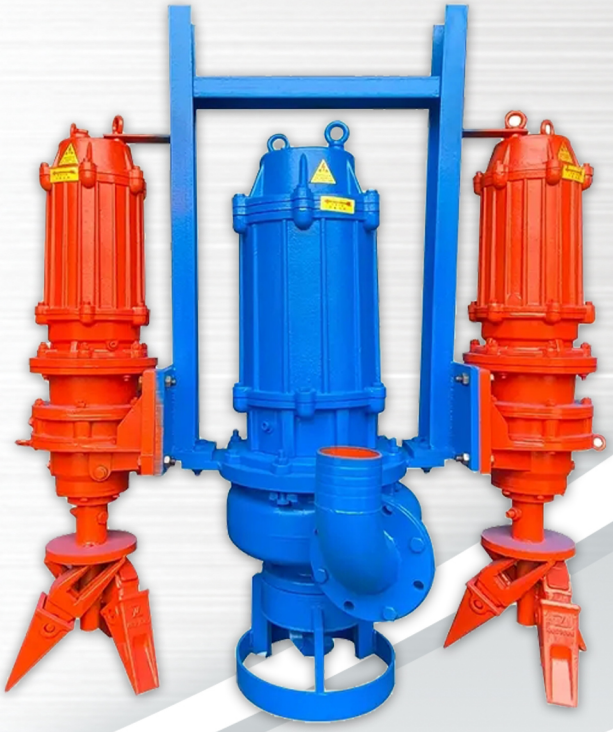
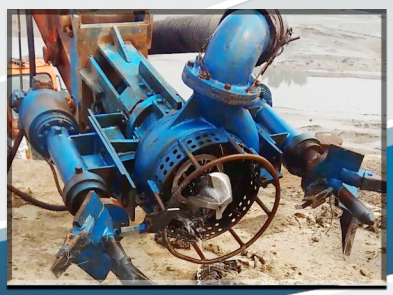
鸿石泵业
HONG STONE PUMP

Diverse Product Range / Technical Support
High-Quality Materials / Global Reach





SHIJIAZHUANG HONGSTONE PUMP TECHNOLOGY CO., LTD.

ZJQ submersible slurry pump is a kind of hydraulic machinery, the motor and the pump of which are coaxially submerged in medium to work. It is suitable for conveying slurry containing abrasive particles such as sand, cinder, and tailings.

- **Wear-resistant and corrosion-resistant**
- **Good passage performance**
- **High efficiency**
- **Specially design submersible motor**
- **Agitator available at the bottom**

ZJQ series submersible slurry pump comprehensively applies the advantages of similar domestic and foreign products and innovates them in terms of structural design and wear-resistant materials. It has the characteristics of high efficiency, energy saving, low vibration, low noise, reliable operation, long service life, and easy maintenance. It can be widely used in metallurgical mineral processing, tailings transportation, hydraulic ash removal in power plants, coal washing and other slurry transportation and urban sewage discharge.

Pumps with an agitator (not easy to settle) are more suitable for transporting slurries with high concentration of heavy media and solid particles.

Conditions of Use

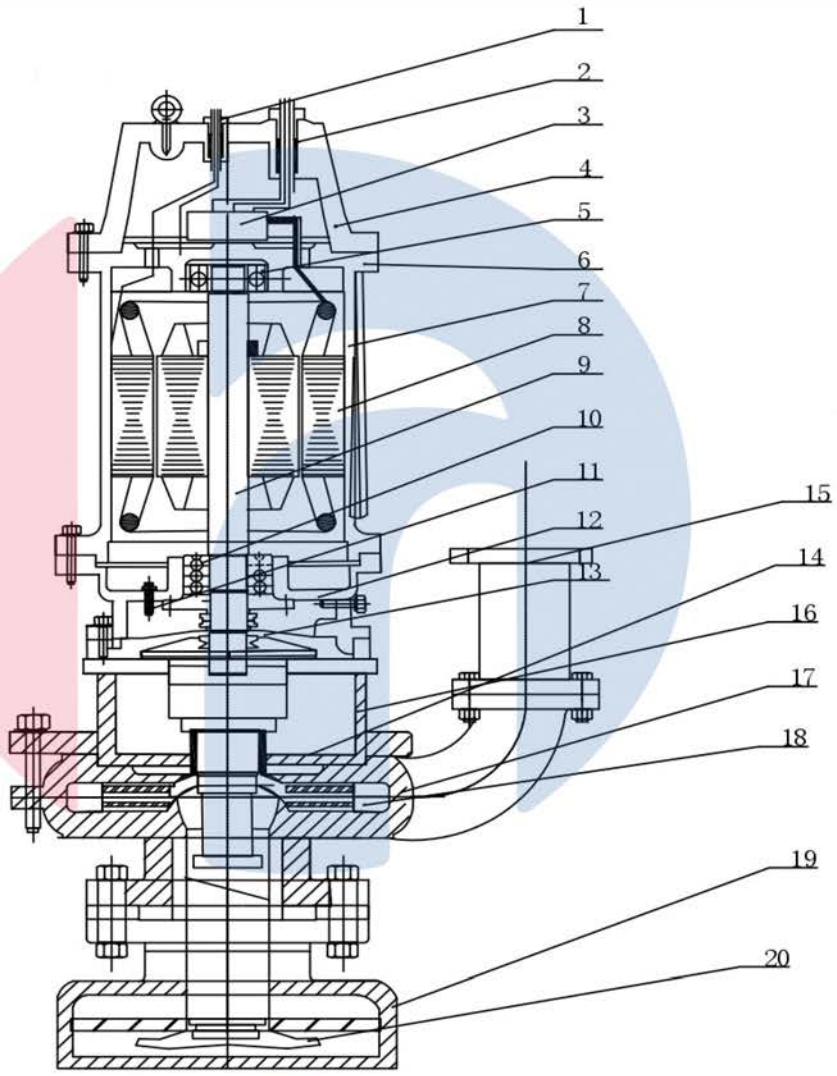
1. Power supply 380V, three-phase, 50HZ (voltage and frequency can be customized according to requirements)

2. The medium temperature generally does not exceed 60°C, the PH value is 4-10, and the medium density is <1300kg/m3;

3. Suitable for medium with strong abrasive solid particles and mildly corrosive sewage slurry;

4. The diameter of the solid in the medium is not larger than 80% of the minimum flow channel size of the pump.

Structure



1 .Signal line
2. Motor wiring
3. Junction box
4. Motor cover
5. Bearings 1 (GCR15)
6. Upper shaft seat
7. Motor shell
8. Stator (Silicon steel sheet)
9. Shaft
10. Bearings 2 (GCR15)
11. Oil and water probe
12. Oil room
13. Mechanical seal (Sis)
14. Guard plate
15. Outlet pipe
16. Bracket
17. Pump body (Cr26)
18. Impeller (Cr26)
19. Base filter
20. Agitator

Technical requirements

1. The water pump complies with the regulations of GB7021-1886 "Forms and Basic Parameters of Centrifugal Submersible Slurry Pumps"
2. All parts of the assembly box must be inspected and qualified
3. Add calcium-sodium grease between the balls when assembling the bearings
4. When the pump is basically assembled but the impeller is not installed, test the pressure of 0.2MPa into the refueling hole and 0.2MPa through the refueling hole and the upper cover at the same time. Each lasts for 3 minutes. There is no air leakage at the shaft end or sealing surface.
5. After the air pressure test, add sufficient N7 mechanical oil to the sealant
6. After assembly, the shaft must rotate flexibly, briskly, and without mechanical friction or noise.
7. The rotation direction of the pump must be consistent with the steering mark
8. The paint of the electric pump should comply with the provisions of Q/HSBJ206 "Specifications for Painting of Electric Pump Products"

Structure description

1. Pump body&impeller

On the basis of experimental tests, the pump body and impeller are carefully selected and matched. The pump body and impeller are made of high-chromium wear-resistant and corrosion-resistant materials. They have good flow resistance, high efficiency, flat power curve, and are not easy to be overloaded. The impeller is accurately balanced and operates smoothly with little vibration.

2. Agitator

The agitator is located at the bottom of the pump. It can stir the sludge settled on the bottom of the water into a turbulent flow and then extract it. It integrates diving, stirring, sand blowing and sand pumping. It has high sand suction efficiency and more thorough desilting.

3. Motor

Specially designed submersible motor, IPX8 protection, F-class insulation allows temperature rise. Under normal temperature rise conditions, the motor insulation has a long life, and the submersible cooling effect is good, the actual temperature rise is low, and the motor insulation life is longer.

4. Motor cooling

The heat generated by the motor is dissipated through the casing. As long as the medium submerges the motor stator casing, it can operate reliably and safely. The more submerged, the more conducive to motor cooling.

5. Shaft seal

The motor shaft seal uses two independent mechanical seals connected in series to form two reliable sealing lines of defense. The first one is in the medium in the pump, and the sealing surface is pressed tighter as the medium pressure increases, effectively preventing water from entering the oil chamber. The second one is in the oil chamber, preventing oil from entering the motor. If the first one fails (its working conditions are worse than the second one), the second one can still prevent oil and water from entering the motor. The bellows-type mechanical seal combined with the innovative structural cavity further greatly improves the reliability of the shaft seal. Under normal use, the trouble-free operating time exceeds 8000 hours.

6. Oil room

The oil chamber is a barrier that prevents the medium from entering the motor from the pump shaft and prevents the medium from penetrating into the electrode. If the first mechanical seal leaks, the medium buffered by the oil chamber cannot directly enter the motor. At the same time, it lubricates and cools the friction surfaces of the two independent mechanical seals to make the mechanical seal work more reliably. In addition, it can also take away the heat of the lower bearing and some heat of the motor.

7. Bearings

The lower double row angular contact bearing has strong load-bearing capacity, and together with the upper deep groove bearing, it forms a reliable support for the motor water pump shaft. It has a large load-bearing margin for the radial, axial force and other forces generated when the sewage pump is working, ensuring the pump operates smoothly and has a long service life.

Structure description

8. Cables and seals

1) The cable is a heavy-duty rubber-sheathed flexible cable that is resistant to sewage. The cable core cross-section is designed for long-term reliable operation at an ambient temperature of 40°C and at full load power of the motor. If the sewage pump is working, the motor is under non-full load power or the environment is below 40°C operation, the service life will be longer.

2) There is a seal between the cable rubber sleeve and the motor gland to prevent media from penetrating into the motor cavity from the interface between the cable and the motor cover.

3) There is rubber vulcanization between the cable sheath and the wire core. Once the rubber sheath is scratched, it can still effectively prevent the medium from entering the motor from the cable sheath.

9. Motor shell

The casing, upper end cover, gland, etc. form the motor casing. The joints and fits of each part have reliable static seals. Each unit has undergone strict hydraulic pressure test inspection to ensure no leakage.

10. Safety protection inside the pump (functions through special electric control cabinet)

1) Oil-water probe: Installed in the oil chamber, it detects the leakage of the first mechanical seal (in the medium). When the leakage medium reaches the oil chamber and reaches a certain proportion, an alarm signal is sent.

2) Float switch: Installed in the motor cavity, it detects the leakage of the second seal. When oil (oil-water mixture) enters the motor, the float switch will send out an alarm signal and stop the pump.

3) Thermal sensor: installed in the motor stator winding. If the motor is overloaded for a long time and the motor winding temperature (or motor winding heat due to other reasons) reaches a certain value, an alarm signal will be sent and the pump will stop.

11. External control system

The supporting special electric control cabinet can process various signals in the pump to realize functions such as control, protection, audible and visual alarms, and various automated controls of single pumps and multiple pumps. When users prepare their own electric control cabinets, they should contact our company's professional electric control cabinet team to guide users in installing protection controllers in their own electric control cabinets.

12. Optional

Forced cooling system. A metal sleeve is installed on the motor housing to introduce cooling water circulation to achieve forced cooling.

13. Performance curve and main parameters

The actual portion of the performance curve represents the recommended operating range of the pump. The shaft power of the pump increases as the flow rate increases. If the pump flow rate exceeds the rated flow limit, the shaft power will exceed the rated power of the motor. When the medium temperature is high or the motor is not sufficiently cooled, the motor cannot work for a long time. If the flow rate is less than the rated flow limit, the shaft power of the pump is much lower than the rated power of the motor, and the efficiency of the unit is very low. It is very uneconomical to use the pump under such working conditions.

Clear water performance parameters

No.	Model No.	Capacity Q(m³/h)	Head H(m)	Power P(Kw)	Speed N(r/min)
1	50ZJQ30-60-11	30	50	11	2900
2	50ZJQ25-15-4	25	15	4	1450
3	80ZJQ40-12-4	40	12	4	1450
4	80ZJQ45-15-5.5	45	15	5.5	1450
5	80ZJQ70-12-5.5	70	12	5.5	1450
6	50ZJQ25-30-7.5	25	30	7.5	1450
7	80ZJQ30-30-7.5	30	30	7.5	1450
8	80ZJQ80-15-7.5	80	15	7.5	1450
9	80ZJQ50-20-7.5	50	20	7.5	1450
10	100ZJQ100-12-7.5	100	12	7.5	1450
11	80ZJQ80-20-11	80	20	11	1450
12	80ZJQ50-30-11	50	30	11	1450
13	100ZJQ90-17-11	90	17	11	1450
14	80ZJQ40-35-15	40	35	15	1450
15	100ZJQ100-20-15	100	20	15	1450
16	100ZJQ120-16-15	120	16	15	1450
17	100ZJQ150-20-18.5	150	20	18.5	1450
18	150ZJQ200-12-18.5	200	12	18.5	1450
19	100ZJQ150-25-22	150	25	22	1450
20	100ZJQ100-40-22	100	40	22	1450
21	100ZJQ120-35-22	120	35	22	1450
22	80ZJQ80-45-22	80	45	22	1450
23	80ZJQ50-50-22	50	50	22	1450
24	50ZJQ40-52-22	40	52	22	1450
25	150ZJQ180-22-22	180	22	22	1450
26	150ZJQ250-15-22	250	15	22	1450
27	150ZJQ200-22-22	200	22	22	1450
28	150ZJQ250-18-22	250	18	22	1450
29	100ZJQ120-25-22	120	25	22	1450
30	100ZJQ150-38-30	150	38	30	1450
31	150ZJQ300-15-30	300	15	30	1450
32	150ZJQ250-22-30	250	22	30	1450
33	150ZJQ350-22-37	350	22	37	1450
34	150ZJQ300-25-37	300	25	37	1450
35	150ZJQ200-35-37	200	35	37	1450
36	100ZJQ80-60-37	80	60	37	1450
37	100ZJQ100-50-37	100	50	37	1450
38	100ZJQ100-60-45	100	60	45	1450
39	100ZJQ120-50-45	120	50	45	1450
40	100ZJQ100-70-45	100	70	45	1450
41	150ZJQ250-40-45	250	40	45	1450

42	100ZJQ220-45-55	220	45	55	1450
43	100ZJQ140-60-55	140	60	55	1450
44	200ZJQ450-25-55	450	25	55	1450
45	100ZJQ170-70-75	170	70	75	1450
46	200ZJQ500-25-75	500	25	75	1450
47	100ZJQ230-60-75	230	60	75	1450
48	200ZJQ500-30-90	500	30	90	1450
49	200ZJQ450-35-90	450	35	90	1450
50	100ZJQ200-70-90	200	70	90	1450
51	100ZJQ200-80-110	200	80	110	1450
52	100ZJQ330-78-132	330	78	330	1450
53	100ZJQ300-95-132	300	95	132	1450
54	50ZJQ47-40-37	47	40	37	980
55	50ZJQ75-38-37	75	38	37	980
56	80ZJQ50-48-37	50	48	37	980
57	80ZJQ100-47-45	100	47	45	980
58	100ZJQ234-19-37	234	19	37	980
59	100ZJQ170-96-160	170	96	160	980
60	100ZJQ290-95-185	290	95	185	980
61	100ZJQ370-92-220	370	92	220	980
62	150ZJQ229-46-75	229	46	75	980
63	150ZJQ432-44-90	432	44	90	980
64	150ZJQ639-40-110	639	40	110	980
65	150ZJQ229-46-130	229	46	130	980
66	150ZJQ432-44-132	432	44	132	980
67	150ZJQ635-40-155	635	40	155	980
68	200ZJQ396-50-185	396	50	185	980
69	200ZJQ792-46-215	792	46	215	980
70	200ZJQ1188-39-240	1188	39	240	980
71	100ZJQ214-20-37	214	20	37	980
72	80ZJQ121-46-37	121	46	37	980
73	80ZJQ160-43-45	160	43	45	980
74	100ZJQ183-35-37	183	35	37	980
75	100ZJQ219-34-37	219	34	37	980
76	100ZJQ199-42-45	199	42	45	980
77	100ZJQ238-40-55	238	40	55	980
78	150ZJQ298-25-37	298	25	37	980
79	150ZJQ364-24-45	364	24	45	980
80	150ZJQ221-40-55	221	40	55	980
81	150ZJQ365-37-75	365	37	75	980
82	150ZJQ442-35-75	442	35	37	980
83	150ZJQ230-43-55	230	43	55	980
84	150ZJQ380-40-75	380	40	75	980

85	150ZJQ460-38-75	460	38	75	980
86	150ZJQ248-53-90	248	53	90	980
87	150ZJQ431-51-110	431	51	110	980
88	150ZJQ504-49-110	504	49	110	980
89	150ZJQ190-56-90	190	56	90	980
90	150ZJQ268-61-110	268	61	110	980
91	150ZJQ458-56-132	158	56	132	980
92	150ZJQ596-51-160	596	51	160	980
93	150ZJQ260-59-90	260	59	90	980
94	150ZJQ454-56-132	454	56	132	980
95	150ZJQ532-55-132	532	55	132	980
96	150ZJQ270-63-110	270	63	110	980