OWNER'S MANUAL

SHALLOW WELL JET PUMP
Model: SGJ SERIES

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WARNING

- Please read the product instruction manual carefully before installation and use.
- The electric pump shall be installed with leakage protection device and reliable grounding before use, and ensure that the installation site is well drained without water accumulation.
- After the electric pump is connected to the power supply, it is strictly prohibited to disassemble the shell and touch the internal parts of the shell.
- It is strictly prohibited to use the pump for a long time in dry running and hot water over 75℃.

This is a safety warning symbol. In this instruction manual, the safety warning symbol indicates important safety information. When you see the symbol, you should be warned of possible injuries, read the information under the symbol carefully, and inform other operators.

WARNING

The factory shall not be responsible or liable for any injury to persons, damage to pumps, or damage to property resulting from failure to comply with the safety warning signs.
1. Please read the Product Instruction Manual carefully before installation and use.
2. The electric pump shall be installed with leakage protection device and reliable grounding before use, and ensure that the installation site is well drained without water accumulation.
3. After the electric pump is connected to the power supply, it is strictly prohibited to disassemble the shell and touch the internal parts of the shell.
4. It is strictly prohibited to use the pump for a long time in dry running and hot water over 75°C.
5. Before servicing the pump, the power supply shall be disconnected and only professional personnel shall be allowed to service the pump.
6. It is strictly prohibited to wash, swim or graze livestock in the water in the work area while the pump is in operation.

CHILD WARNING

- It is strictly prohibited for children, persons lacking legal capacity, or persons with limited capacity to use this product without supervision (e.g., who has not been taught the safe use of theproduct and understands the hazards involved).

CHANGE WARNING

- It is strictly prohibited for the user to change the pump without authorization or to operate the pump beyond its operating conditions.

PRESSURE WARNING

- The pressure of the system in which the pump is installed must be greater than the maximum allowable working pressure of the pump.

WARNING

This manual is the basic information necessary to install, operate, and maintain the pump. Installation must be carried out by qualified personnel in accordance with the installation requirements given in this manual. The manufacturer accepts no liability for failure to install, operate and maintain the pump in accordance with this manual. If the pump is transferred to a third party, this instruction manual is also transferred to the third party.

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1.Application

The jet pump is suitable for occasions such as water intake for family life, water lifting for wells, pipe pressurization, agricultural irrigation, vegetable greenhouse watering, garden watering, and breeding. Some jet pumps are divided into automatic water pumps and non-automatic water pumps. Automatic water pump is to add automatic device (such as pressure switch, pressure tank, pressure controller, etc.) on the basis of ordinary water pump. The feature of this function is that when the power is turned on, open the pipe valve, the pump will automatically start working, otherwise it will stop. If it is used with a water tower and connected with a water level switch, it can automatically work or stop according to the water level in the tower.

2.Operating conditions

2.1 Ambient temperature -15℃ ~ + 40℃
2.2 Liquid temperature 0℃ ~+45℃
2.3 PH value: 6.5~8.5
2.4 The volume ratio of solid impurities in the liquid: < 0.1%, the particle size : < 0.2 mm
2.5 The voltage fluctuation range ± 10% of the rated value
2.6 Enclosure class: IP X4
2.7 Insulation class: F

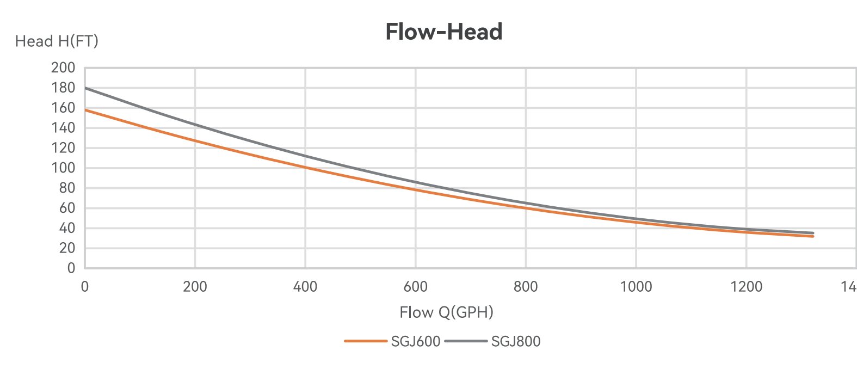
3.Model description

SGJ 800

800 — Specification code
SGJ — Pumdet pump with stainless steel Pump body

4.Product specifications

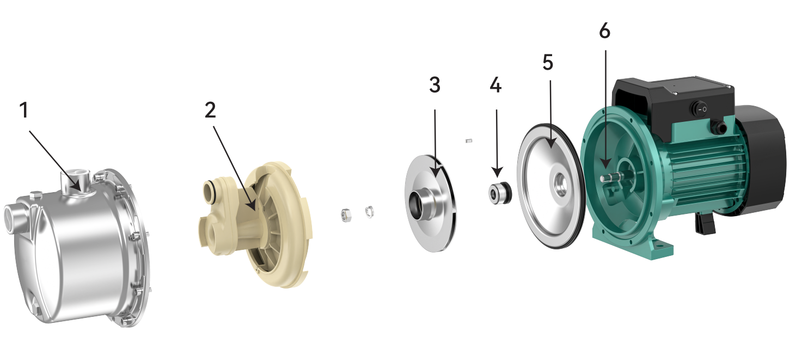
Model	Power		Port	Suction Lift	Max Flow	0	132.1	264.2	396.3	528.3	660.4	792.5	924.6	1056.7	1320.9
	kW	HP		FT	GPH	0	132.1	264.2	396.3	528.3	660.4	792.5	924.6	1056.7	1320.9
SGJ600	0.75	1	NPT1×1	26.2	919.3	157.5	141.1	118.1	98.4	82	70.2	62.3	57.1	42.7	29.5
SGJ800	1.1	1.5	NPT1×1	26.2	1315.6	180.4	157.5	132.9	110.6	90.2	76.4	68.9	60.7	45.9	32.8



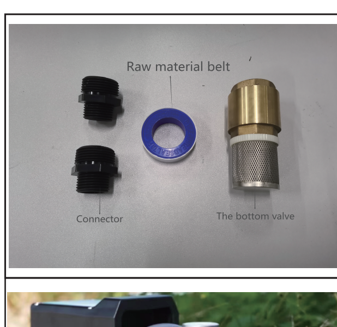
5.Exploded view

1	Pump Body	Stainless Steel AISI304
2	Nozzle	PPO-GF30%
3	Impeller	PPO-GF30%
4	Mechanical Seal	(see table below)
5	Motor Shaft	Stainless Steel AISI304 Welded Shaft
6	Motor	SGJ: Single-phase 110V/60Hz Built-in Thermal Overload Protector

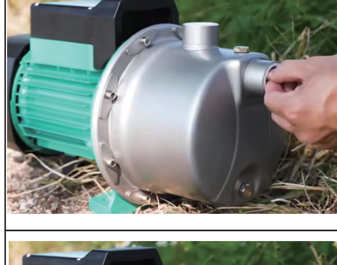
Pump	Seal Model	Shaft Diameter	Material Stationary Ring	Rotating Ring	Rubber
SGJ600	301-14	Φ14mm	Ceramic	Graphite	NBR
SGJ800	301-14	Φ14mm	Ceramic	Graphite	NBR



6.Installation diagrams

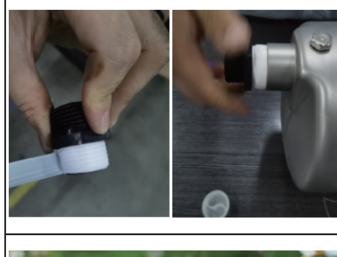


1.Before installation, check whether the contents of the product packaging are complete, as shown in the figure: two connectors, a roll of raw material belt, and a bottom valve. Another need to be equipped with a rigid water inlet pipe and a water outlet pipe



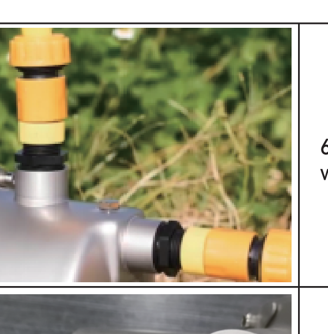
2.Remove the white dust cover from the inlet and outlet

3.Screw the connector to the water inlet and select the connector that matches the size of the pipe

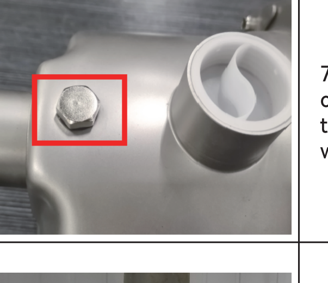


4.If the connector with the water pump and water pipe, the raw material tape can be smoothly wound on the connector, it is recommended to wrap 20 laps (pay attention to the winding direction), and then screw into the water inlet and water pipe

5.Install the water pipe. The water inlet pipe should not use a flexible pipe

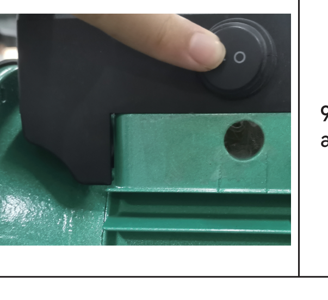


6.Use the same method to connect the pipe to the water outlet



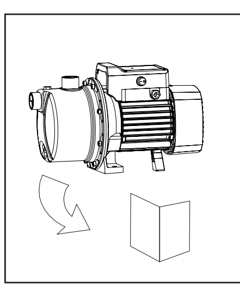
7.Open the injection screw next to the water outlet, fill the pump body with clean water, and then tighten the injection screw(Fill the pump with water before first-time use.)

8.Install the bottom valve at the bottom of the water inlet pipe and put it into the water supply tank (Note: if the suction mode is installed, the bottom valve needs to be installed to prevent the water inside the pump chamber from being sucked dry through the siphon when the pump stops, and the next use needs to be filled with water again to run; If the installation is in reverse mode, add a valve at the water inlet to prevent the water hammer from damaging the pump. Close the valve of the water outlet pipe before closing the valve of the water inlet pipe and the inlet pipe can not use a hose, the inner diameter of the pipe must not be less than inlet diameter)

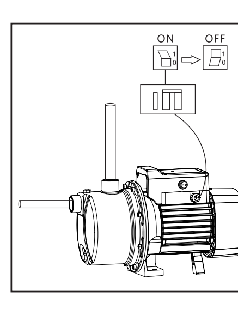


9.Plug into the power supply, turn on the switch and it can be used normally

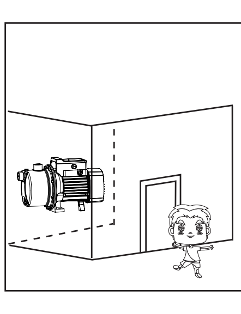
7.Safety precautions



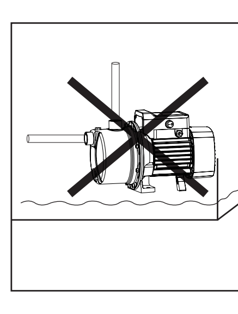
1.Read all of the safety instructions in manual carefully



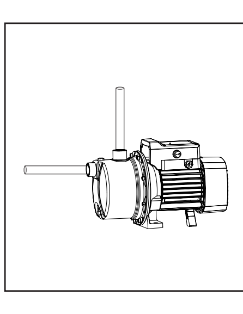
2.The electric pump should be reliably grounded to prevent leakage. And for safety, it should be equipped with a leakage protection switch. Be careful not to wet the power plug, and socket connection should be in the dry area.



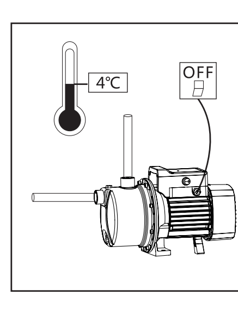
3.During working, it is strictly forbidden to be touched. Do not wash, swim or put the animals into



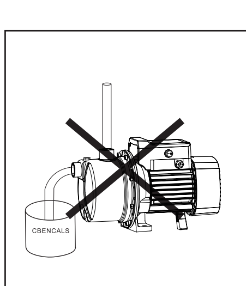
4.Avoid splashing water under pressure and prevent the pump from being submerged.



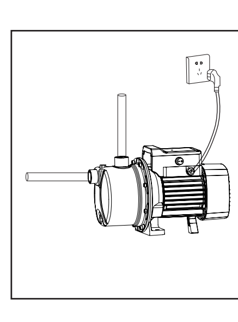
5.Keep the pump ventilated.the water near the working area to prevent accidents.



6.When the ambient temperature is lower than 4℃ , please take antifreeze measures to prevent the pump body from freezing and cracking



7.The pump shall not deliver any flammable, evaporable or explosive liquids beyond the regulations.the water near the working area to prevent accidents.

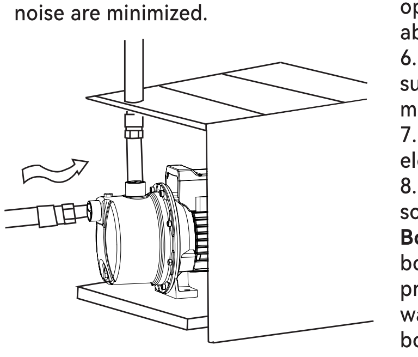


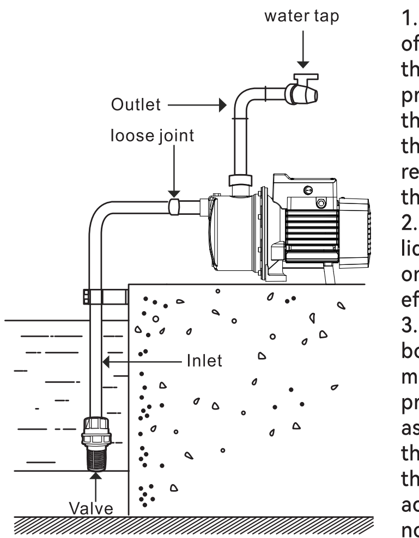
8.During maintenance, the power must be cut off

8.Precautions before installation

Installation location selection
The installation of the pump should keep the inlet pipe as short as possible and make as few turns as possible. The pump should be placed in a ventilated and dry environment. The pump can be installed outdoors, but there must be a suitable cover to prevent wind, rain and freezing.

Precautions for installation of water outlet pipeline
The diameter of the outlet pipe should be at least the same as the diameter of the outlet, so that its pressure drop, high flow rate and noise are minimized.





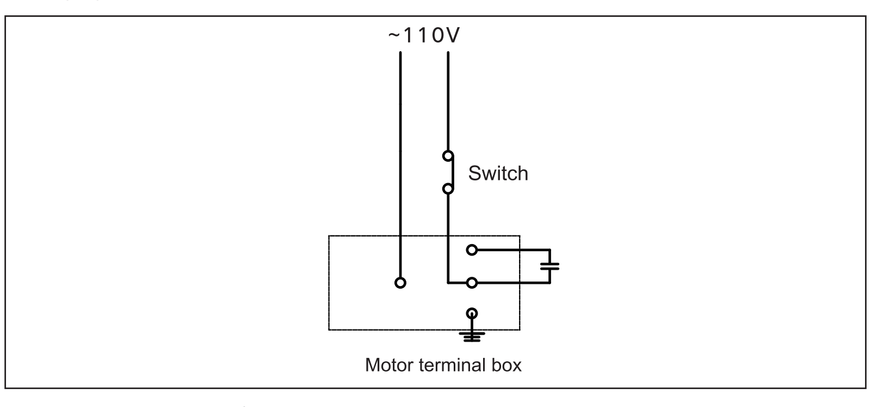
Precautions for installation of water inlet pipe
1. When installing the electric pump, it is forbidden to use overly soft rubber hoses for the water inlet pipe to avoid suction collapse.
2. The bottom valve shall be installed vertically, 30cm above the water bottom, to prevent sediment from being sucked in.
3. All joints of the inlet pipeline must be sealed; minimize elbows, otherwise the pump will fail to draw water.
4. The inner diameter of the water inlet pipe shall be at least equal to that of the pump inlet, to avoid excessive hydraulic loss which would degrade outlet performance.
5. Pay attention to water-level variation during operation; the bottom valve must not be exposed above water.
6. If the inlet pipe length exceeds 10m or the suction lift exceeds 4m, the inlet pipe diameter must be larger than the pump inlet diameter.
7. During pipeline installation, make sure the electric pump is not subjected to pipeline pressure.
8. A valve shall be fitted on the inlet pipe to stop solid particles from entering the electric pump.

Bottom valve use scenario
bottom valve is mainly suitable for the need to prevent the flow of counter-flow situations, such as water supply systems, sewage systems and other bottom valve function
1. Control the direction of liquid flow: the main role of the bottom valve is to ensure that the liquid in the suction pipeline in a one-way flow, so as to prevent the pump stopped work, the water back to the water source in the pipeline. This helps to keep the water pressure in the pipeline stable and reduce the pressure shock when the pump starts, thus extending the service life of the pump.
2. Energy saving: the bottom valve can limit the liquid pump pipe back to the water source, played only in and out of the function, thus achieving the effect of saving water energy loss.
3. Prevent clogging and provide support: the bonnet of the bottom valve is designed with multiple intakes and stiffeners that not only help prevent clogging of the bottom valve, but also act as a support in the pumping line. The function of the bottom valve is simple and effective, through the weight of the valve and liquid pressure to achieve the control of liquid flow, to ensure the normal work of the pump and extend service life

9.Motor connection

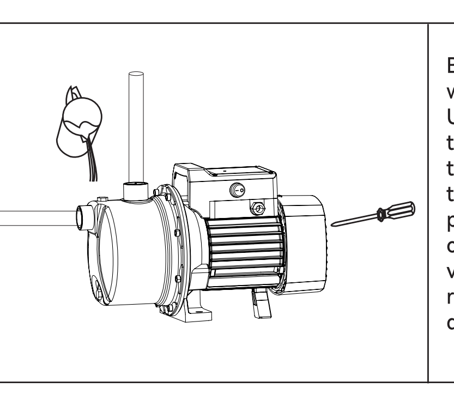
Do not wiring before turning the power off
The electric pump should be grounded to prevent electric leakage, and equipped with a electric leakage protection switch.

9.1 Motor connection and protection should be carried out in accordance with local regulations. The specification of the working voltage is marked on the nameplate, please make sure that the motor matches the power supply.
9.2 If the working area of the pump is far away from the power supply, the power supply transmission wire should be thickened properly, otherwise the normal operation of the electric pump will be affected due to the excessive voltage drop.
9.3 If the pump is used outdoors, the extension cable must be outdoor rubber cable.
9.4 built-in thermal protection coil. The principle of thermal protector is based on the method of combining thermal expansion with inductive load. When the operating current of the electrical equipment exceeds the rated value or occurs a short circuit, a large amount of heat energy will be generated, thus heating up the heat-sensitive element in the induction part of the thermal protector, causing the heat-sensitive element to expand instantaneously and changing the magnitude of magnetic flux, cause the thermal protector to act, cut off the power to protect the electrical equipment from excessive heating damage. The function of the thermal protector is to detect the surface temperature of the electrical equipment. Once the temperature exceeds the set limit, the thermal protector will immediately cut off the power supply of the electrical equipment and protect the electrical equipment from being burned by the high temperature, thus prolonging the service life of electrical equipment



10.Start operation

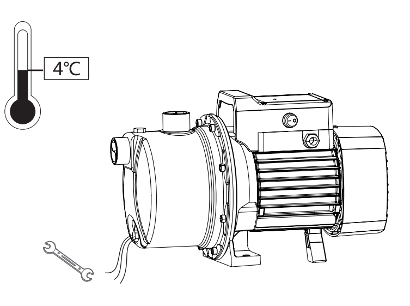
SGJ series pump has self-priming function. As long as the pump body is filled with water before the first use, It is no need to refill the water afterwards.
Note: If it does not drain after starting for more than 5 minutes after the irrigation, turn off the electric pump, refill the water, or check the water inlet pipe for leaks.



Before starting, turn the fan to check whether the pump rotates flexibly. Unscrew the water injection screw, fill the pump body with clean water from the water injection hole, and then tighten the water injection screw after purging the air. The valve should be closed a little when starting, and the valve should be adjusted to the required flow rate after the water is discharged.

11.Cleaning and maintenance

Do not touch the pump unless the power has been cut off for at least 5 minutes.
Do not remove the pump body unless the water in the pump body has been drained.



If there is any risk of frost or freezing damage, open the drain plug to drain the water in the pump cavity. But when you need to start the pump again, you must open the water injection plug before starting, fill it with water, and tighten the water injection plug before use.

12.Attention

12.1 If the pump is not used for a long time, drain the accumulated water in the pump, clean the pump body, impeller, and bracket, apply anti-rust oil, and put it in a dry and ventilated place.
12.2 If the electric pump is not running or the ambient temperature is lower than 4℃, the liquid in the pipeline and the pump body should be drained to avoid freezing and cracking of the pump body.
12.3 In summer or when the ambient temperature is high, please pay attention to ventilation to prevent dew from the electrical parts and cause electrical failure.
12.4 If you find that the motor is hot or abnormal, please cut off the power immediately and check the fault according to the table below.

13.Troubleshooting

Please turn off the power before maintaining

Failures	Cause	Treatment
The motor cannot start	The motor voltage is too low: 1. The power supply voltage is low; 2. The cross section of the power supply line is small; 3. The power supply line is too long;	1. Adjust the voltage to the rated requirements; 2. Use a power cable with a larger cross-section; 3. Move closer to the location of the power connection;
	Single-phase power supply (three-phase motor): 1. Poor contact of power switch; 2. Fuse blown; 3. Power cord is loose; 4. Phase failure of cable;	1. Repair the switch contacts or replace the switch; 2. Replace the fuse; 3. Check and tighten the power connector; 4. Repair or replace the cable;
	Cable voltage drop is too large: 1. Line is too large; 2. Cable cross section is too small;	1. Cut off the extra cable; 2. Use a cable with larger cross-section;
	Capacitor damaged	Replace the capacitor of the same capacity (send to after service center)
	The shaft and bearing are stuck	Replace the bearing (send to afterservice center)
	Impeller stuck	Use a screwdriver to turn the shaft at the fan end to make it rotate flexibly or remove the pump body to clean debris.
	Stator winding burned out	Replace coil (send to after-service center)
Motor is running but no water	Pump rotation direction is wrong	Change the wiring of two phases of motor (three-phase motor)
	Pump is not full of water	Refill the pump with water
	Impeller is broken	Replace the impeller (send to maintenance point for repair)
Motor is running but no water	Water level is lower than the valve	Replace the impeller (send to maintenance point for repair)
	Suction pipe leak	Check the sealing of each joint of the suction and inlet pipes
	Water level is too low, below the limit suction of the pump	Adjust the installation height of the water pump or choose a suitable water pump
	Water accumulation in piping or pump cavity causes icing	Turn on after the ice has melted
Insufficient pressure	Incorrect pump option	Choose suitable water pump
	The inlet pipe is too long, or there are too many turns, the diameter of the inlet pipe is not selected as required	Select the specified pipe diameter to make the inlet pipe design shorter
	Foreign objects block the inlet pipe, filter or pump cavity	Clean pipes, bottom valves or pump cavity to remove debris
	Motor voltage is too low. The wire is too long	Check the voltage at the end of the motor and lengthen the wire cross section
Pump vibration	Pump is not fixed on the base	Tighten the anchor bolt
	Foreign objects in the pipeline or pump cavity	Check, clean pipeline and pump
Motor works intermittently or the stator winding burns out	Motor is overload for a long time	Install a valve at the water outlet to reduce the amount of water
	Impeller stuck or overloaded for a long time	Clear the debris in the pump cavity and make the pump work at the rated flow rate as much as possible
	The grounding is wrong or the cable is damaged, pump is struck by find the cause, replace the winding coil	Find the cause, replace the winding coil
Water leakage at the bracket	Impurity wear mechanical seal	Clean or replace the mechanical seal