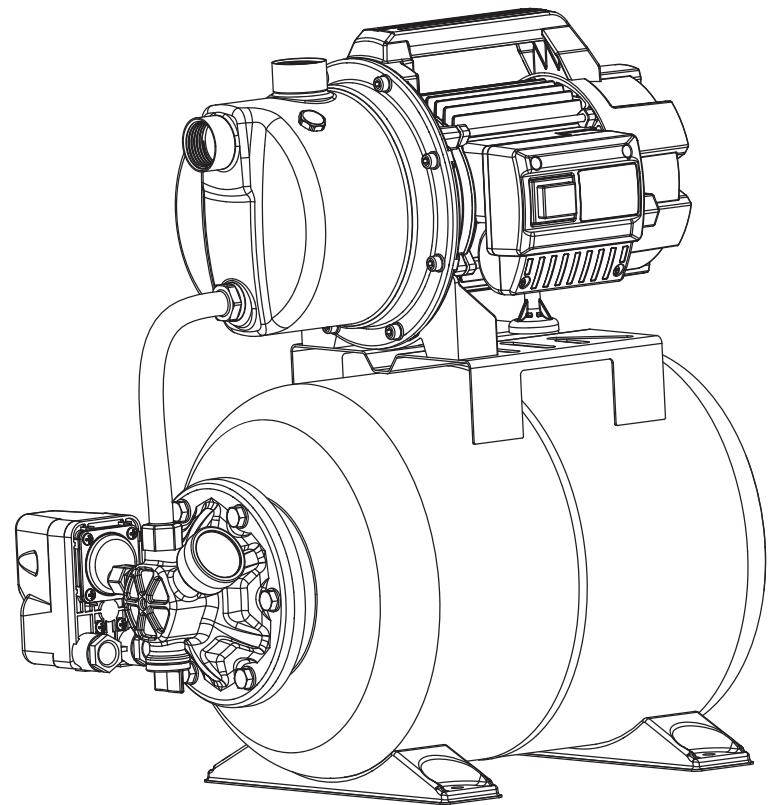




# Instruction Manual

Shallow well Jet Pump With Pressure Tank

MODEL: PGA150SA





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This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

**Attention!**

If the appliance or the supply cord is damaged, it must be repaired by manufacturer, its service agent or qualified person.



**Meaning of crossed -out wheeled dustbin:**

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.

Contact your local government for information regarding the collection systems available.

**8. Technical Data**

| TYPE                      | STAINLESS STEEL JET PUMP |
|---------------------------|--------------------------|
| Model                     | PGA150SA                 |
| Rated Power               | 1.6HP                    |
| Max. Head                 | 164ft                    |
| Max. Flow                 | 1340GPH                  |
| Max. Suction Depth        | 26ft                     |
| Outlet/Inlet              | 1 " * 1 "                |
| Electric Protection Class | IPX4                     |
| Max. liquid temperature   | 95°F (35°C)              |



## 7. Troubleshooting



Check the pump after power cut-off.

| Symptom                                                        | Cause                                                                                                                                                                                  | Corrective Action                                                                                                                                           |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The motor can not be started                                   | Single-phase power supply (three-phase electric motor):<br>a. poor connection of the power switch;<br>b. fuse is burned out;<br>c. loose power lead;<br>d. phase failure of the cable. | a. repair switch contact or replace the switch;<br>b. replace the safety fuse;<br>c. check and tighten the power connector;<br>d. repair or replace cables. |
|                                                                | Capacitor is burned out.                                                                                                                                                               | Replace with a same type capacitor (send to the maintenance point for repair).                                                                              |
|                                                                | The rotating shaft and bearing are jammed.                                                                                                                                             | Replace the bearing (send to the maintenance point for repair).                                                                                             |
|                                                                | Impeller is jammed.                                                                                                                                                                    | Turn rotating shaft of the fan blade terminal with screw driver to let it rotate flexibly or demount the pump body to clear sundries.                       |
|                                                                | Stator winding is damaged.                                                                                                                                                             | Replace winding coils (send to the maintenance point for repair).                                                                                           |
| The motor is in operation, but no water is discharged          | Incorrect direction of pump rotation.                                                                                                                                                  | Invert two-phase wirings of the motor (three-phase motor).                                                                                                  |
|                                                                | The pump is not fully filled with water.                                                                                                                                               | Re-fill the pump with water.                                                                                                                                |
|                                                                | The impeller is damaged.                                                                                                                                                               | Replace the impeller (send to the maintenance point for repair).                                                                                            |
|                                                                | Leakage of the suction pipe.                                                                                                                                                           | Check sealing of various joints of the inlet pipelines.                                                                                                     |
|                                                                | Water level is too low.                                                                                                                                                                | Adjust installation height of the pump.                                                                                                                     |
|                                                                | Freeze caused by accumulated water in the pipeline or the chamber.                                                                                                                     | Start up the pump after ice is melted.                                                                                                                      |
|                                                                | Water that is too hot can result in the failure of plastic parts.                                                                                                                      | Replace the damaged parts (send to the maintenance point for repair)                                                                                        |
| Insufficient pressure                                          | Incorrect pump type.                                                                                                                                                                   | Select suitable model.                                                                                                                                      |
|                                                                | The inlet pipeline is too long or with too many bends, or/and pipe diameter is not selected as required.                                                                               | Apply the pipe with the stipulated diameter, and make the inlet pipe short.                                                                                 |
|                                                                | Inlet pipeline, filter screen or pump chamber is blocked by foreign materials.                                                                                                         | Clean pipeline, foot valve or pump chamber, clear foreign materials.                                                                                        |
| Motor works intermittently or the stator winding is burned out | The impeller is jammed or in overload operation for a long time.                                                                                                                       | Clear foreign materials in the pump chamber; operate the pump under the rated flow.                                                                         |
|                                                                | Incorrect grounding, broken cable or the electric pump is struck by lightning.                                                                                                         | Properly grounded, replace the broken cable, and replace winding coils.                                                                                     |



Read the instructions carefully and follow the rules for safe operation.

The operator shall take full responsibility for personal injury, pump damage and other property losses caused by violation of safety cautions.

## 1. Applications

It is applicable to household water supply, equipment support, well water lifting, pipeline pressurization, garden watering, vegetable greenhouse watering, fish farming and poultry raising, etc..

Transfer clean water and other non-corrosive liquids with low viscosity; do not transport inflammable, explosive, gasified liquids and liquids containing solid particles or fibers. The PH of water must between 6.5 and 8.5.

### Remark:

This series of pump could be transformed into automatic water pump, which is realized through external automatic plant that is composed of pressure switch, pressure tank, etc.. Function features of the automatic pump are as follows: when the power is on, turn on the water tap and the pump will start working automatically; when the water tap is turned off, the pump will stop working automatically. If a water tower is used along with the automatic pump, connect to the upper limit switch and the pump will start or stop working automatically with water level in the water tower.

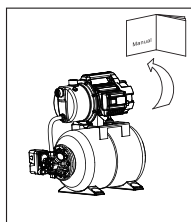
## 2. Implementation Standards

IEC/EN 60335-1 Household and similar electrical appliances--safety Part1: General requirements.

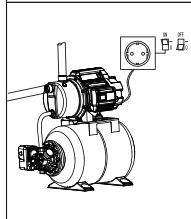
IEC/EN 60335-2-41 Household and similar electrical appliances--safety Part2-41:Particular requirements for pump.

2014/35/EU Low voltage directive

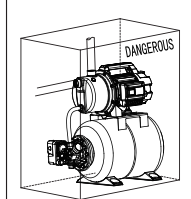
### 3. Safety Precautions



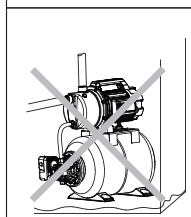
1).To ensure normal and safety operation of the electric pump, read the manual carefully before use.



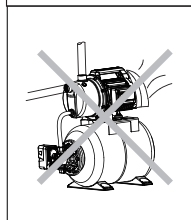
2).The electric pump should have reliable grounding to prevent short circuit; for safety, leakage protection switch should be equipped and be careful not to wet the power plug; socket should be connected in damp - proof area.



3).Do not touch the electric pump while working; do not wash, swim near working area or let livestock into the water to avoid accidents.



4).Avoid splashing pressured water to the electric pump as well as prevent the pump immersed by water.

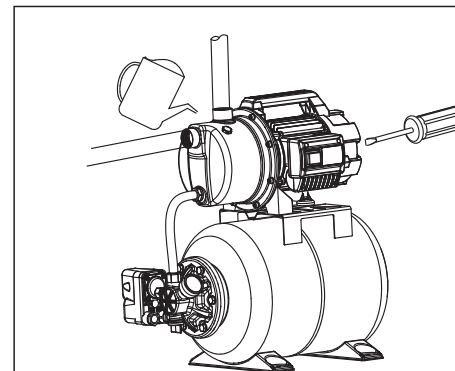


5).Keep the pump in ventilation.

### 6. Start-up and Maintenance



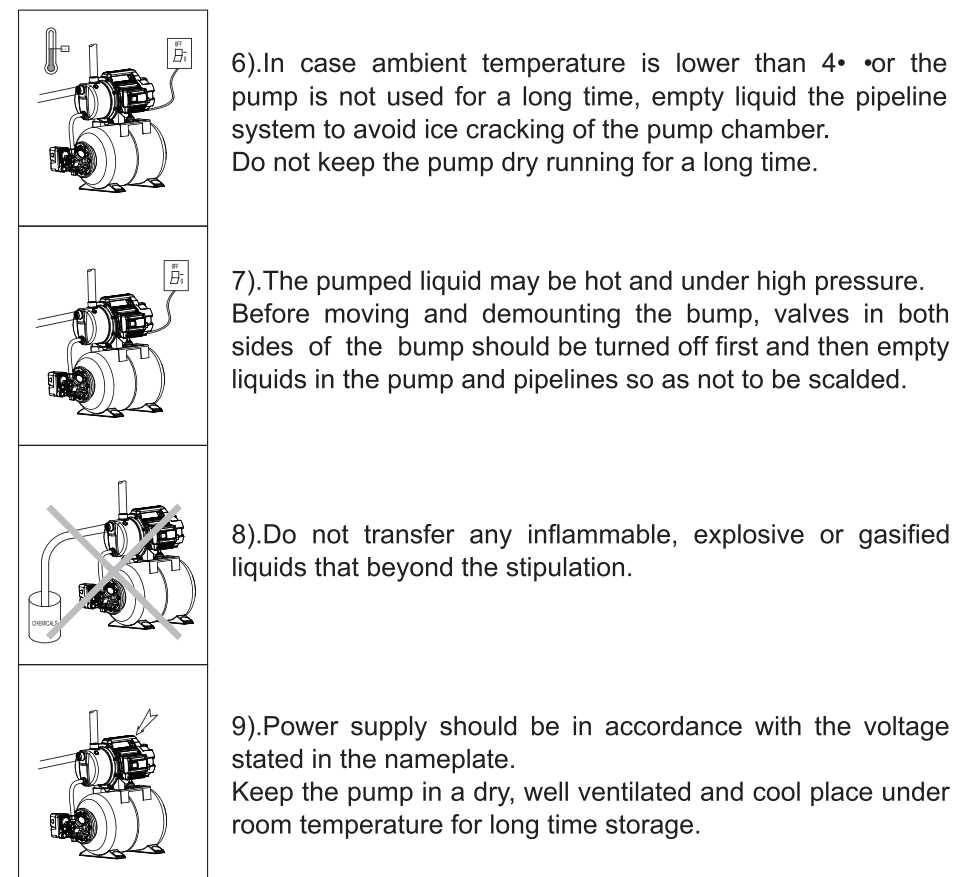
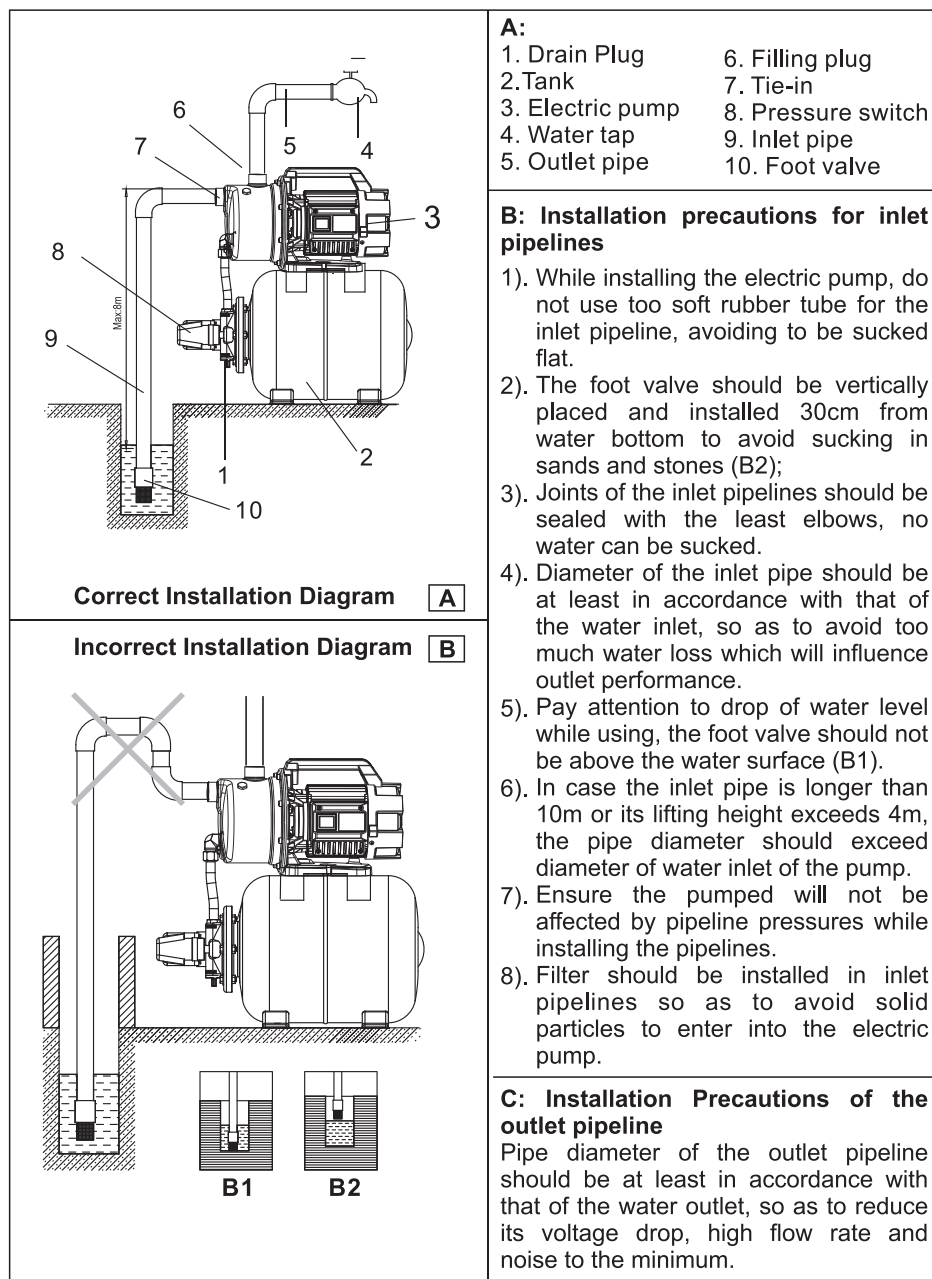
Do not start up the pump before the pump chamber is filled with water.  
Do not touch the electric pump unless its power has been cut off for at least 5 minutes.  
Do not dismount the pump body unless water in the pump chamber is emptied.



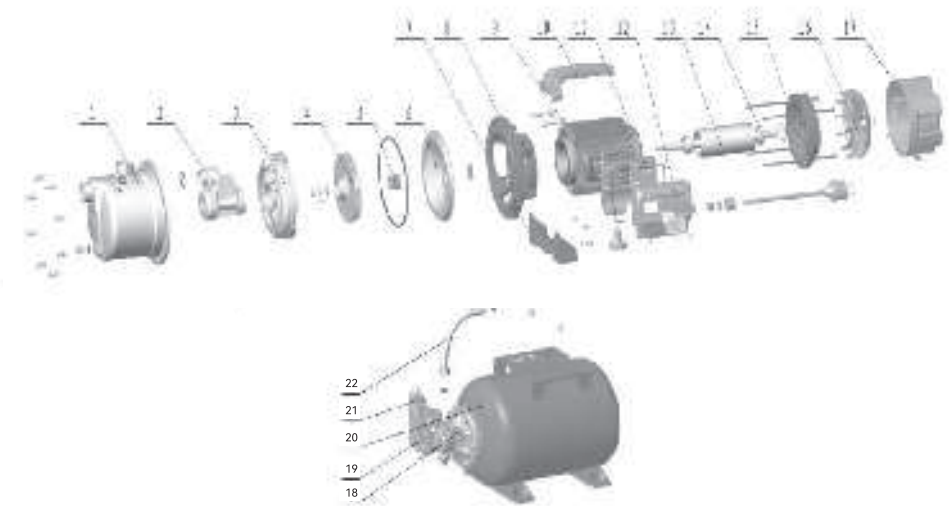
Rotate the fan blade before start-up, check whether the pump rotation is flexible and then unscrew the water-filling plug, fill the pump chamber with clean water from the water injection hole, then tighten the plug screw after the air has been completely discharged. Set the valve in a smaller flow in start-up and adjust to the required flow after water discharging (working range is displayed on the nameplate).

#### Attention:

- 1). The pump chamber should be filled with water before first use and water refilling is unnecessary in the future.
- 2). In case no water is discharged after being started for more than 5 minutes with water filled, turn off the electric pump, re-fill water or check whether the inlet pipeline has leakages.
- 3). In case of any frost and ice damages, please open the drain plug to empty water in the pump chamber. When start up the pump again, open the drain plug, fill water and tighten it and then the pump is usable.  
In case not use for a long time, water in the pump should be emptied.
- 4). The pump body, impeller and support should be cleaned and coated with anticorrosive oil before they are put in a ventilated and dry place for use.
- 5). In case the pump is halted for a long time, start it up again according to above diagram.
- 6). In summer or when the ambient temperature is high, pay attention to ventilation, avoid dew on electrical parts which will result in electrical faults.
- 7). In case the motor is hot or abnormal, cut off the power immediately and check faults according to the following table



4. Product Structure



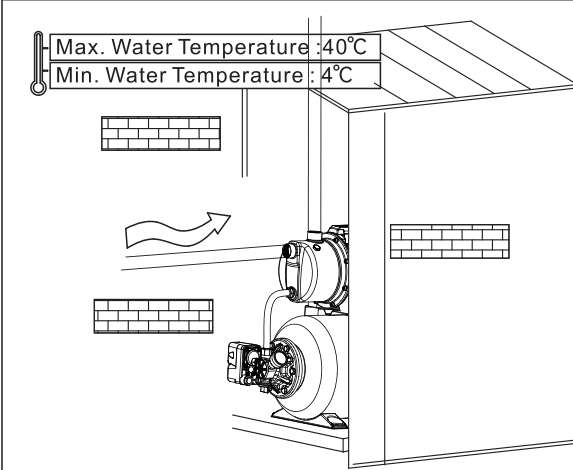
| POS. | Part            |
|------|-----------------|
| 1    | Pump body       |
| 2    | Injector        |
| 3    | Diffuser        |
| 4    | Impeller        |
| 5    | Mechanical seal |
| 6    | Support cover   |
| 7    | Bracket         |
| 8    | Pump support    |
| 9    | Stator          |
| 10   | Handle          |
| 11   | Terminal box    |

| POS. | Part               |
|------|--------------------|
| 12   | Terminal box cover |
| 13   | Rotor              |
| 14   | Bearing            |
| 15   | End plate          |
| 16   | Fan                |
| 17   | Fan cover          |
| 18   | Pressure Gauge     |
| 19   | Pressure Switch    |
| 20   | Pressure Tank      |
| 21   | Cable              |
| 22   | Flexible Hose      |

5. Pipeline Installation



This product should be installed and maintained by personnel who is proficient in this manual and has special qualifications. Installation and operation should be in accordance with local regulations and recognized operation standards. Install pipelines properly as stipulated in the manual and meanwhile conduct frost protection measures for the pipeline.



1. For pump installation, the inlet pipe should be as short as possible with the least turnings. The pump should be installed in ventilated and dry environment. It could be installed outside, provided having proper covering to prevent rain and wind.
2. For pipeline use, valves should be installed on inlet and outlet pipelines and the inlet pipeline should be installed with check valve.