

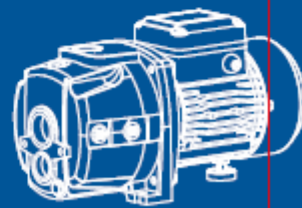


Watering the Life

Jet Pump

Instruction Manual

• EJm • EJWm • EDPm



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 you local government for information regarding the collection systems available.



Before installation, you should carefully read this manual, and pay attention to safety cautions and instructions in this manual.

Manufacturer is neither responsible for nor is reliable for paying compensation for personal injury, pump damage and property losses caused by violation of safety cautions.

1. Application Environment

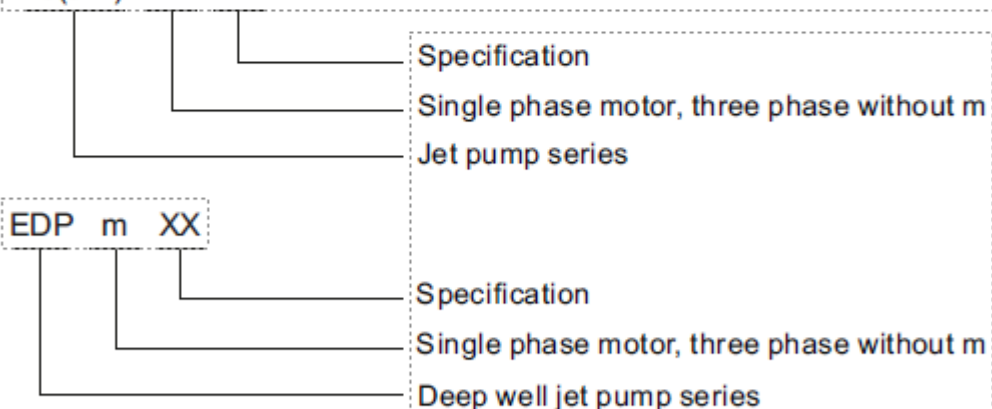
EJm, EJWm series jet pump is a small water supply system. It is applicable to household water supply, well water lifting, pipeline pressurization, agricultural irrigation, vegetable greenhouse watering, garden watering and breeding, etc..

EDPm series deep-well jet pump is applicable to agricultural irrigation, garden watering and spraying, vegetable greenhouse water supply, breeding water supply and drainage, and household automatic water supply occasion such as deep well water lifting, etc..

The liquid transformed is clean, normal temperature, non-corrosive and not containing solid particles or fiber. The PH value should be within 6.5-8.5.

2. Model Description

EJ(JW) m XX



Remarks:

EJm, EJWm, EDPm series jet pump is divided into automatic water pump and nonautomatic water pump. The nonautomatic water pump of EJm, EJWm, EDPm series 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 water pump are as follows: when the power is on, turn on the valve and the pump will start working automatically; when the valve is turned off, the pump will stop working automatically. If a water tower is used along with the automatic water pump, connect to the upper limit switch and the pump will start or stop working automatically with water level in the water tower.

3. Technical Data

Max. Flow: 90L/min

Max. Head: 100m

Output Power: 0.3~2.2kW

Max. Suction: 9 m

Insulation Grade: IPX4

Protection Grade: F

Max. Ambient Temperature: +40°C

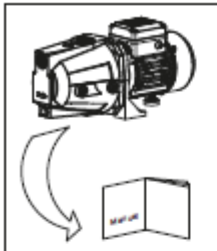
4. Implementation Standards

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

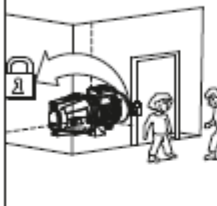
IEC/EN 60335-2-41 Household and similar electrical appliances--safety
Part2-41:Particular requirements for pump.

2006/95/EC Low voltage directive.

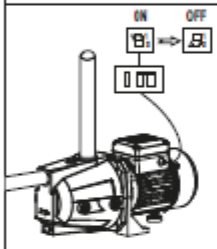
5. Safety Precautions



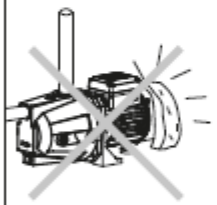
1).To ensure the electric pump working normally and safely, please read the manual carefully before operation.



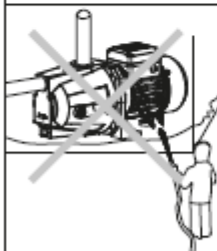
2).Do not touch the electric pump while working; do not wash, swim or let livestock into the water near the working area to avoid accidents.



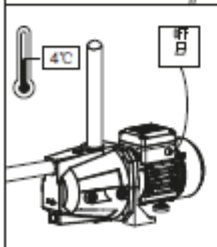
3).The electric pump should be reliable grounded to prevent leakage; for safety, leakage protection switch should be equipped and be careful not to wet the power plug; socket should be connected in damp-proof area.



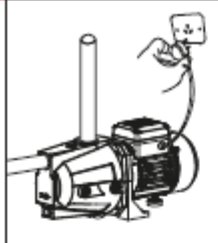
4).Keep the pump in ventilation.



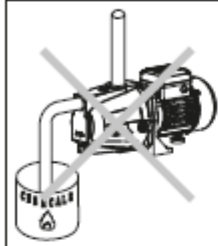
5).Avoid splashing pressured water to the electric pump as well as prevent the pump immersed by water.



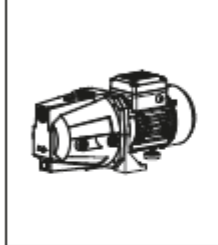
6).When the ambient temperature is lower than 4°C or the pump is not used for a long time, empty the liquid in the pipeline system to avoid ice cracking of the pump chamber. Do not operate the pump for a long time without water in it.



7).Ensure the pump will not be accidentally turned on while installing; if not used for a long time, cut off the power first, and then turn off valves in inlet and outlet of the pump.

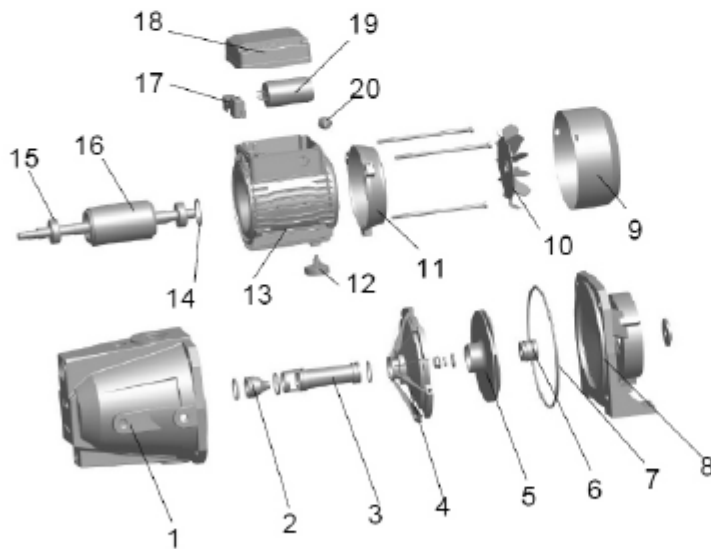


8).Do not transfer any inflammable, explosive or gasified liquids that beyond the stipulation.



9).Power supply should be in accordance with the voltage stated in the nameplate.

6. Product Structure

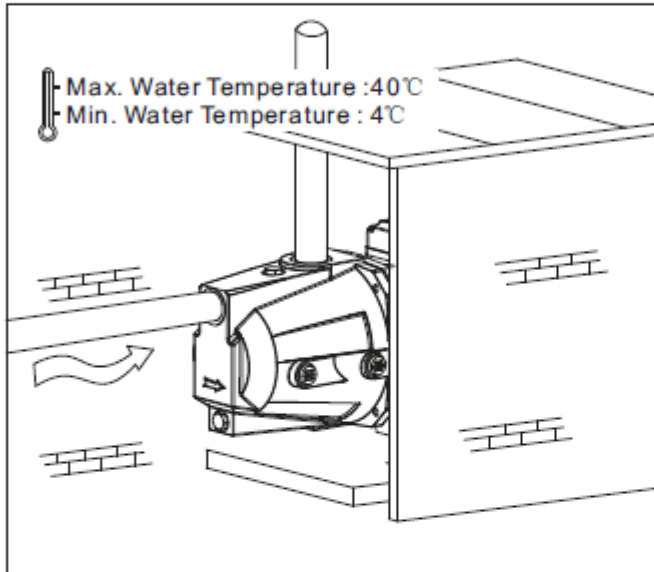


POS.	Part
1	Pump body
2	Nozzle
3	Nozzle
4	Water outlet cover
5	Impeller
6	Mechanical seal
7	O-Sealing ring
8	Bracket
9	Fan cover
10	Fan
11	Rear cover
12	Supporting foot
13	Stator
14	spring washer
15	Bearing
16	Rotor
17	Terminal board
18	cover box
19	Capacitance
20	Outlet nozzle

7. Pipeline Installation



This product should be installed and maintained by person 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 pipes 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.

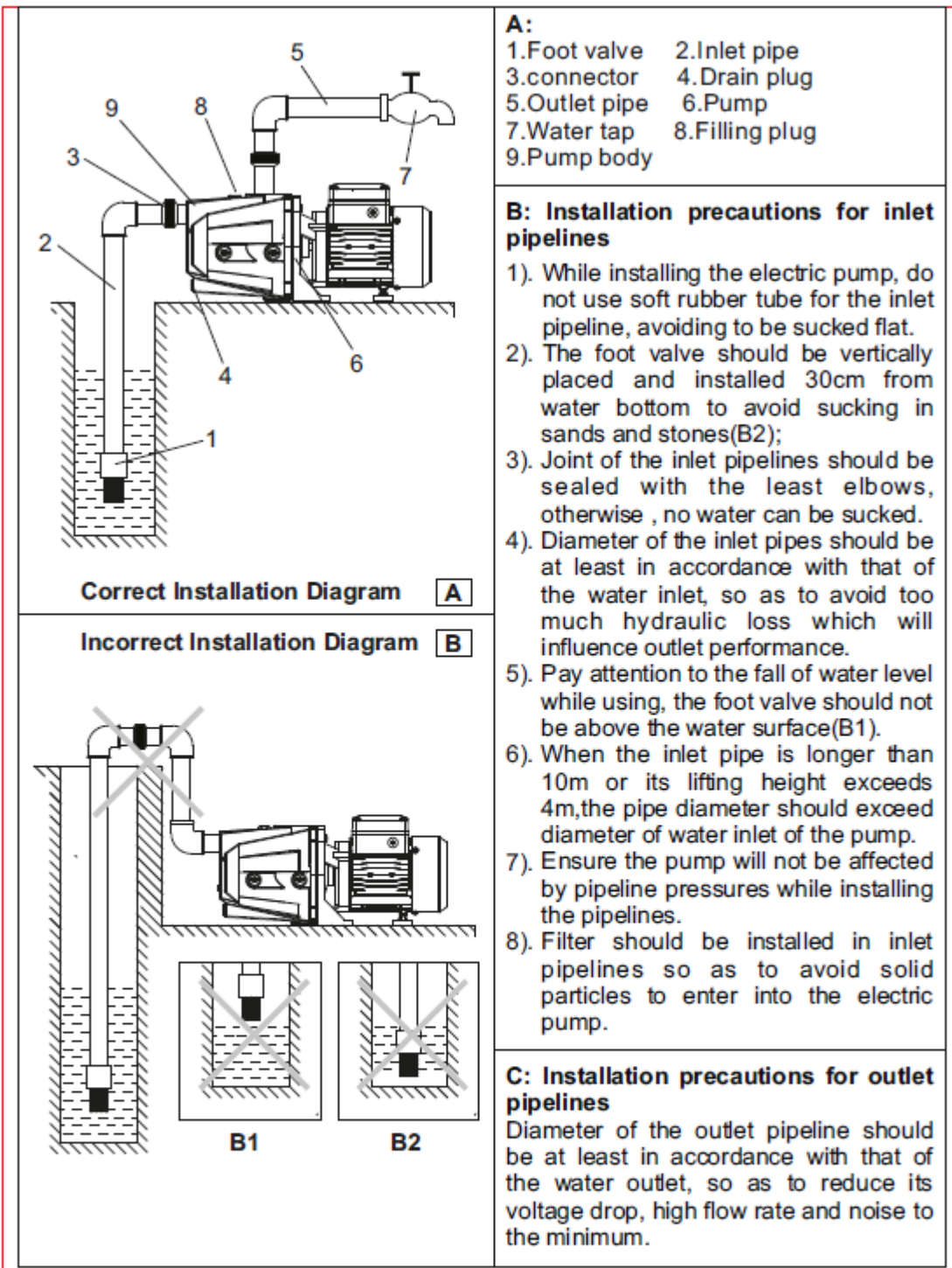


Figure 1 EJ(JW)m xx Pipeline Installation Diagram

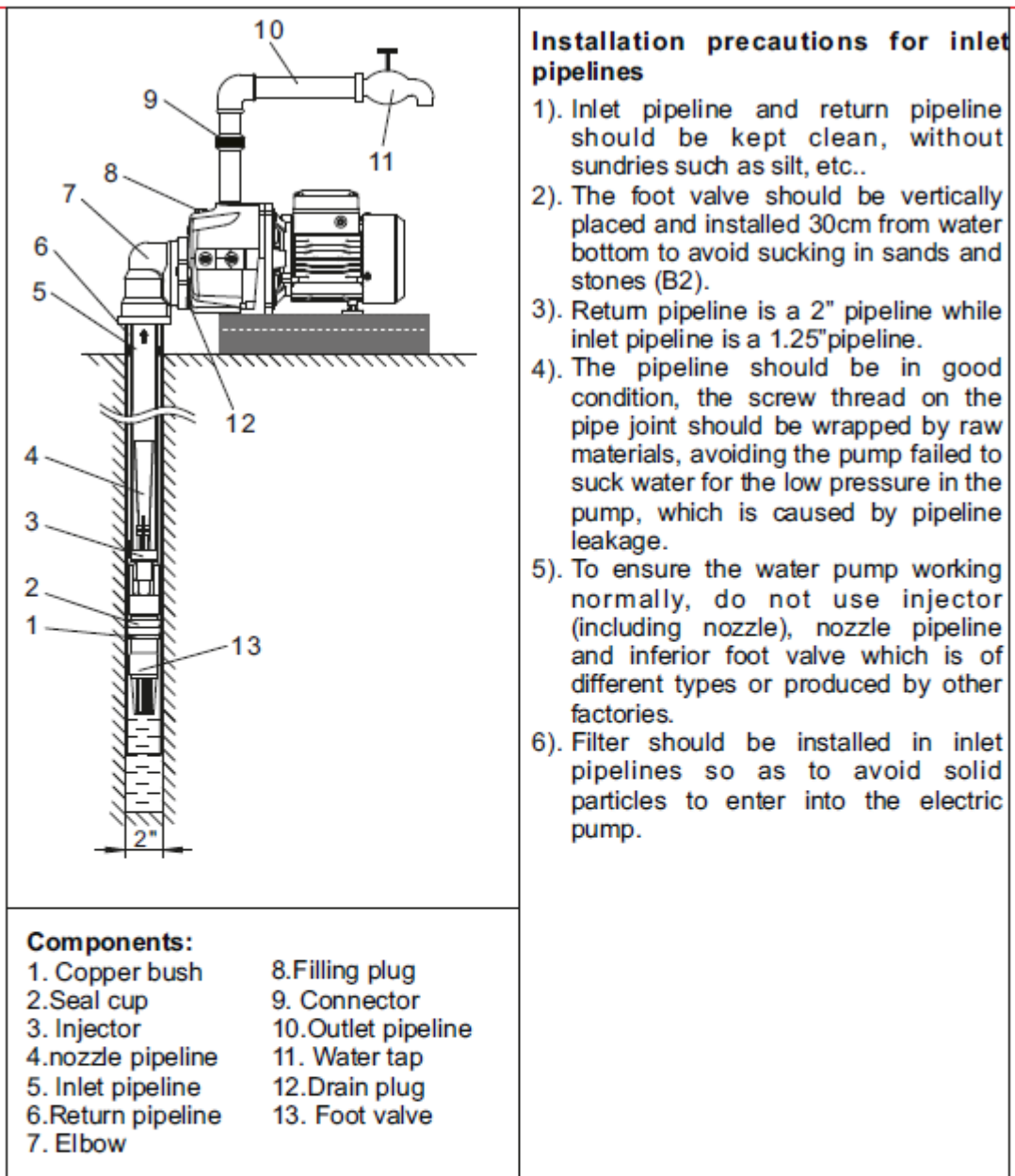


Figure2 EDPm x x/1 Pipeline Installation Diagram

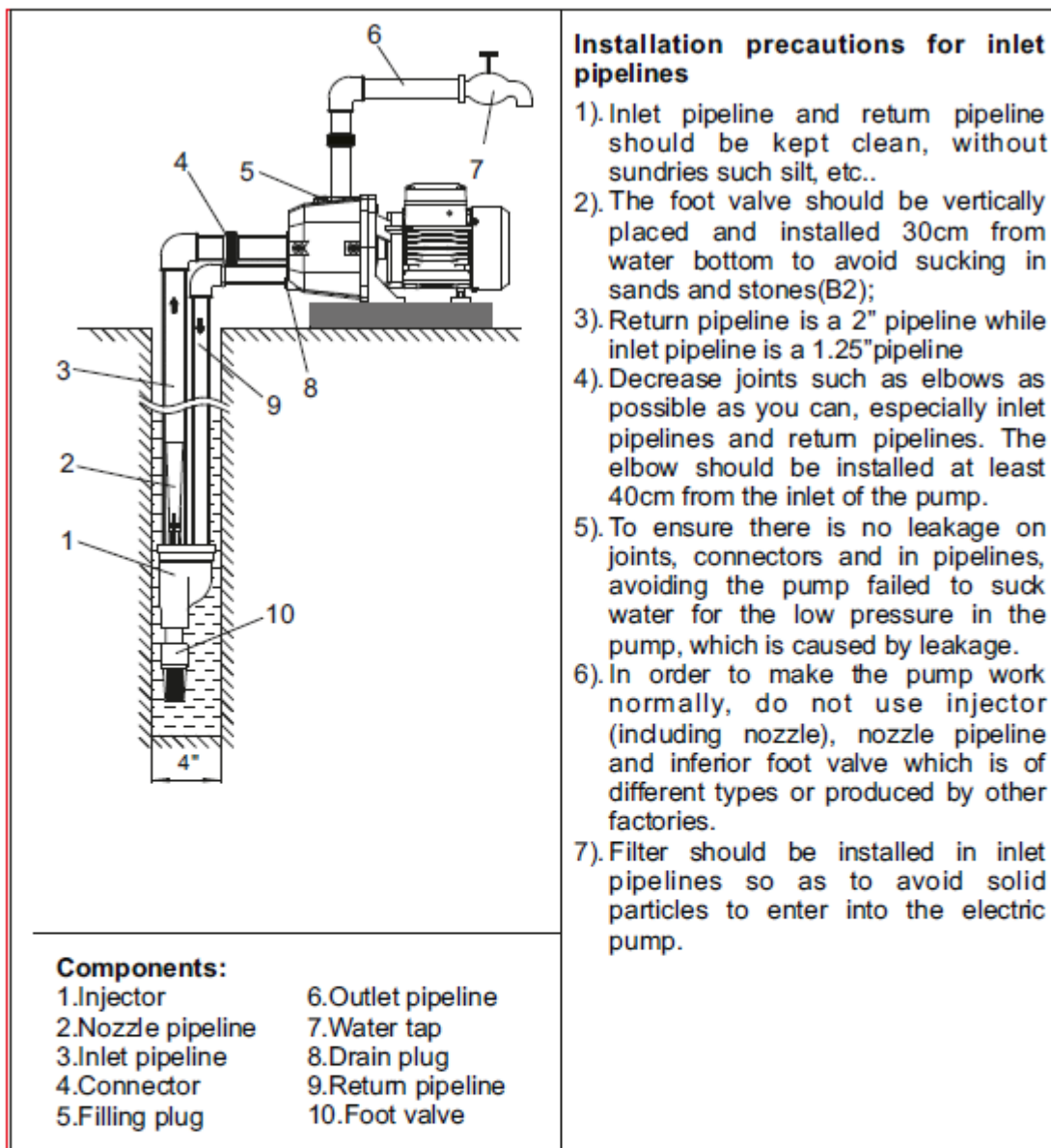


Figure 3 EDPm x x Pipeline Installation Diagram

8. Electrical Connection



Unless the power is off, do not wiring the junction box. The electric pump should be grounded reliably to prevent current leakage with leakage protection switch being equipped.

Electrical connection and protection should be conducted according to local regulation. Specification of working voltage is marked on the nameplate, please ensure the motor is in accordance with power supply.

If the working area of the electric pump is too far from the power supply, power transmission lines should be of a heavier gauge, otherwise the electric pump cannot work normally because the voltage drop is too dramatic.

If the electric pump is used outdoor, extended lines should apply rubber cables for outdoor use.

Check rotation of the motor (three-phase motor)

Check whether operation of the electric pump is normal, rotation is correct, which could be observed from the fan blade terminal, e.g. clockwise rotation means correct direction. If the rotation is incorrect, cut off power and exchange the two power leads.

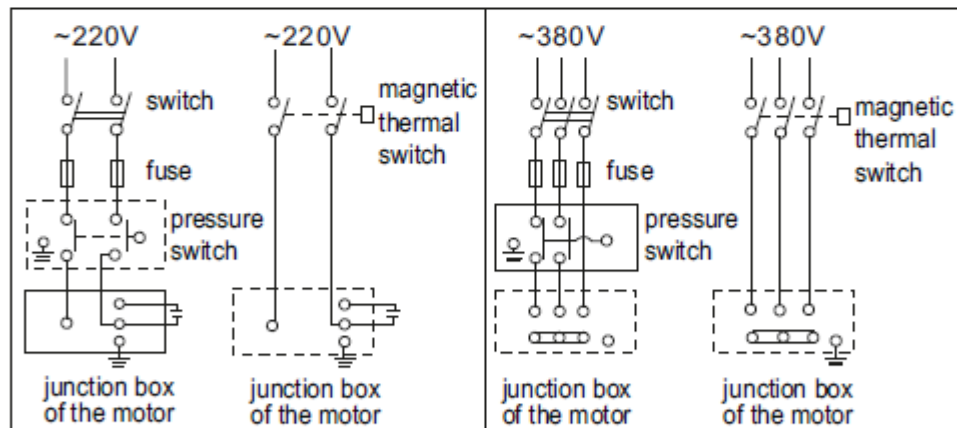


Figure 4 Electrical Connection Diagram

9. Automatic Device

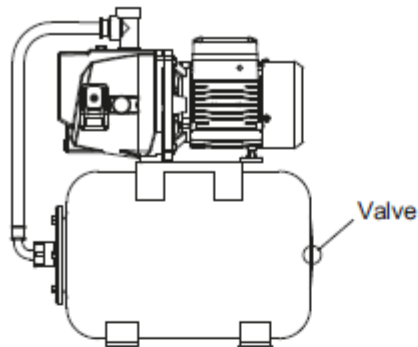


Figure 5 Automatic Device Diagram

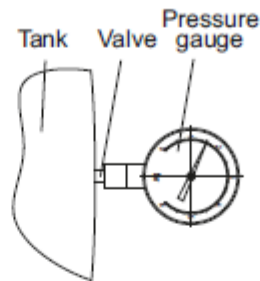


Figure 6

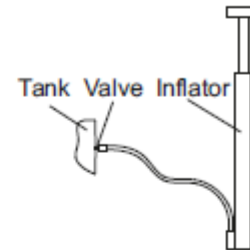


Figure 7

Once using the pump, check the tank pressure regularly according to figure 4. If the tank pressure is lower than 1.2bar, fill air to the tank with inflator or other air charging devices like figure 5. Pressure in the tank can not exceed 1.6 bar, and the ideal pressure is between 1.4 to 1.6 bar.

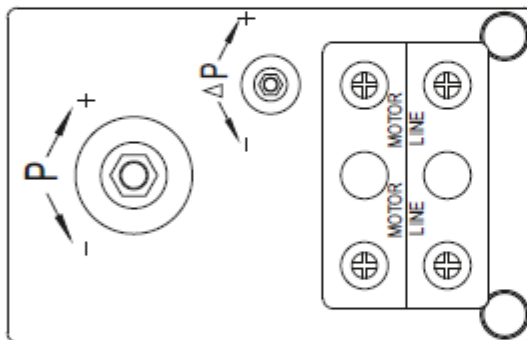


Figure 8 Pressure Switch Connection Diagram

- 1). While using the automatic pump, in case it still operates after turning off the water tap, lower down power cut-off pressure of the pressure switch, namely, rotate the variable screw nut "P" in "-" direction to acquire lower cut-in pressure.
- 2). In case the pump is often enabled when the water tap is turned off (sometimes it is turned on and sometimes it is turned off), check whether pipeline and the foot valve have leakages, eliminate timely if any.
- 3). In case the pressure switch is alternately turned on or turned off (frequent start) after turning on the water tap, increase power cut-off pressure of the pressure switch, namely, rotate the variable screw nut "P" in "+" direction to acquire higher cut-in pressure.

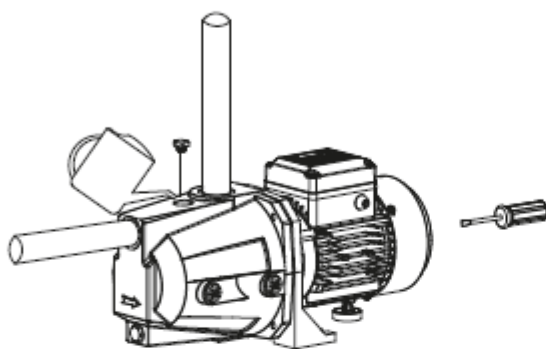
10. Start-up and Maintenance



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 dismantle 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 filling plug, fill the pump chamber with clean water from the water injection hole, then tighten the plug screw after gas has been completely discharged. Set the valve in a smaller flow in start-up and adjust to the required flow after pump working normally (working range is displayed on the nameplate).

Figure 9 Water Injection Diagram

EJm, EJWm, EDPm series jet pump owns the function of self-priming. The pump chamber should be filled water before first use and water refilling is unnecessary in the future (the premise of no pipeline leakage).

Attention:

- 1). 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.
- 2). In case of any frost and ice damages, please open the drain plug to empty water in the pump chamber, avoiding frost crack of the pump body. When start up the pump again, open the filling plug before starting up, fill water and tighten it and then the pump is usable.
- 3). In case not use for a long time, water in the pump should be emptied. 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.
- 4). In case the pump is halted for a long time, start it up again according to figure1, figure2, figure3,after filling the pump chamber with water like figure 9.

- 5). In summer or when the ambient temperature is high, pay attention to ventilation, avoid dew on electrical parts which will result in electrical faults.
- 6). In case the motor is hot or abnormal, cut off the power immediately and check faults according to the following table.

11. Common Faults and 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): a. poor connection of the power switch; b. fuse is burned out; c. loose power lead; d. phase failure of the cable	a. repair switch contact or replace the switch; b. replace the safety fuse; c. check and tighten the power connector; 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).
	Pipe pressure above the setting pressure of pressure switch (automatic pump).	Increase power cut-off pressure of the pressure switch, namely, rotate the variable screw nut in "+" direction one or two round, or change with more suitable product.
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).

Symptom	Cause	Corrective Action
The motor is in operation, but no water is discharged	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.
Insufficient pressure	Incorrect pump type.	Select suitable pump.
	The inlet pipeline is too long or with too many bends, 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 sundries.
The pump vibrates.	The pump is not fixed in the base.	Tighten the foundation bolt.
	There is sundries in the pipeline or pump chamber.	Check and clean the pipeline and pump body.
	The base is not enough stable.	Fix the pump on the stable base.
Motor works intermittently or the stator winding is burned out	The motor is in the overload operation for a long time.	Install the valve in outlet ,reduce the water yield.
	The impeller is jammed or overload operation for a long time.	Clear sundries in the pump chamber; operate the pump under the rated flow as much as possible.
	Incorrect grounding, broken cable or the electric pump is hit by lightning.	Seek for the reason, and replace winding coils.
leakage of mechanical seal	The mechanical seal is worn and torn by impurities.	Clear or replace the mechanical seal.
Pressure switch do not work or start-stop too frequently	Pressure is too low inside the tank.	Check the pressure, and adjust it between 1.4-1.6bar
	Pressure is too high inside the tank.	