

★ **PRECAUTION BEFORE USING THE PUMP**

1. Connect the earth wire before use.
This enable you to prevent an accident caused by electric shock when the electric insulation is not in order.
For your safety from the danger of electric shock, please be careful not to get power plug stained with water.

★ **CAUTION IN CONNECTING THE EARTH WIRE**

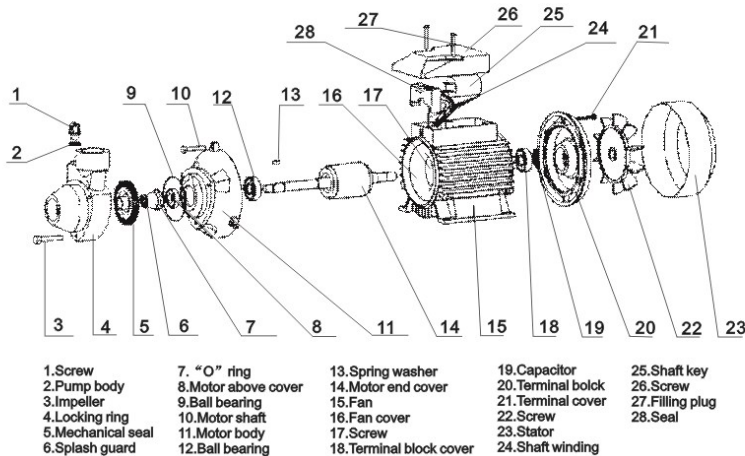
Connect the earth wire after turning off the electric power.

Never connect with gas pipes, other wire it can be the cause of explosion.

2. Avoid operating under the condition of dry running and delivering no water.
For it will shorten the service life of pump and also cause the trouble of motor.
3. Never wrap the motor or the pump head in a blanket or a cloth for preventing freezing in the cold weather.
4. Avoid using the pump under the condition of ambient temperature over 40°C and below 0°C, and also with hot water over 40 °C
For it will shorten the service life of pump.
5. Be careful not to use the pump with other liquids except for water.
When used for solvent such as benzol, acid, in flammable liquids such as gasoline and high-viscous liquid, there is a risk of the fire and it will cause the trouble of the pump and also shorten the service life of it.
6. Avoid using the pump under the condition exposed to the direct rays or rain because it will be the reason of shortening the service life of the pump and also of the danger of electric shock.
7. When this pump is set up in the well, which is to suck in sand above all, sand filter is needed.
For it will prevent the defacement of the impeller in the pump head for a short time, the decline of pressure and the decrease of pumping water.
8. The permitted voltage of this pump is $\pm 10\%$ of the rated voltage. Otherwise it will be the reason of shortening the service life of the pump.

★ **APPEARANCE AND NAME OF PARTS**

The pump consists of:



★ **CHECKING POINTS BEFORE INSTALLATION**

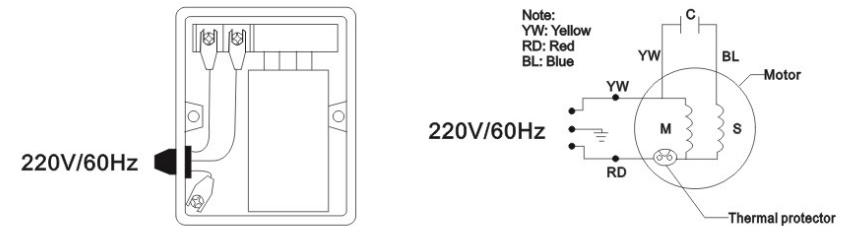
- Install the pump just over the well as possible as you can.
- But when the pump must be installed away from the well because of the circumstances, the maximum distance of the pipe from the well to the pump is limited according to the suction lift.
- Decide the suction lift considering the dry seas.

★ **GUIDE FOR INSTALLATION**

- Concrete the foundation with cement that the pump may not lean or slant even after many years.
- Select the place where the pump can be conveniently checked or repaired after installation.
- Install the stop valve on the dishrag side of the pump and it will be very convenient for checking and repairing the pump.
- Minimise the number of the elbows to prevent the water leaking in the piping or to lessen the resistance of water.

★ **HOW TO OPERATION THE PUMP**

- This pump is self-priming type should be installed foot-valve to the bottom of suction pipe.
- Measure the depth from the ground surface to that of the well. The suction head is standardized at 8 m (max. 9m).
- Be sure to use pipe of standard diameter for normal.
- **CONNECTION METHODS FROM POWER**



• **WHEN THE PUMP IS REUSED AFTER A LONG TIME.**

- There is a possibility for the motor not to be operated in spite of switching on the electric power because of the sticking and solidification of the dirt and filth in the water of the pump head.
- In that case turn off the electric power, and then turn the shaft the back of the motor a few times with driver or something like that, you can operate the pump as usual.

★ **HOW TO START THE PUMP**

- Since this pump has self-priming system, at the start of operation, make priming by the following sequence:
- Remove the plug and pour water into the pump and replace the plug. The air in the suction pipe shall be pulled out with the water.
- Before the power switch on, the water cock of the discharge side should be opened.
- After the power switch on, start priming procedure immediately.
- When the priming is not successful, air may be remained in the suction pipe. Then, to remove air in the suction pipe, pour water and power on and off repeatedly.
- Because the pump has no switch, use power switch on the wall or plug in and out from the receptacle

★ **TOTAL HEAD CAPACITY CURVE**

