Submersible Grinder Pump

INSTALLATION AND OPERATING INSTRUCTIONS

Introduction

Please read carefully and reserve the instruction manual before attempting to assemble, install, operate and maintain the pump.
If there are and trouble, failure and inexperienced in the pump. please keep the original condition and contact the qualified electrician or dealer nearby immediately to check the electric or drainpipe line are normal or not.
Please send it back to the factory, if the pump is failure.
And to protect yourself and the pump's life please don't dismantle the pump.
Or it may result in personal injury and / or property damage!

Important Instructions During Installing And Use

1. Avoid pulling the cable when lift or moves the pump or its equipment.
   Please use the handle of the pump, or it may be electric leakage.
2. Avoid hit the pump and put it carefully when moving.
3. During the installation, please stable the pump, to prevent the damage from shaking and inclining when using the pump.
4. Install the self-acting circuit breaker, prevent the pump from the electric shock duo to weak nonconductor.
5. Voltage confirmation :
   <1>Single-phase : 100V ~ 240V
   <2>Three-phase : 200V ~ 480V
   <3>Make sure the voltage is the same to the nameplate stated whenoperating the pump.
6. Pump must run under the rating voltage, the tolerance must be within+10%.
7. Make sure the use of the ground terminal. The color of ground terminal is green.
8. Frequency confirmation :
   Make sure the frequency is consistent with the frequency shown in the nameplate.
9. Cable extension :
   Pay attention to the cable size and length if the pump need to extend the cable.
   Or the improper cable may cause low the voltage, difficult to start the motor and reduce the pump's life.
   Avoid putting the cable's terminal into the water, to prevent electric shock.
10. Direction of operation confirmation :
    <1>Single-phase : The fixed direction is set before delivery.
    <2>Three-phase : If the pump operates in reverse, rewire either two of 3-prongs.
    If the pump operates in reverse rotation, it result in vibrating hugely, high electric current, strange sound, reduce the flow and even the motor be burn out.
11. Make sure that it is normal to start or run the motor. When the motor can't be start and lock, check the pump whether the fan is rust.
12. The pump should be located and rest on the solid, level foundation.
    Do not place the pump directly on clay, earth, gravel or sandy surface.
    The surfaces contain small stones, gravel, sand, etc, that may clog damager the pump and cause the failure.
13. Draining pipe must match with the pump. Caliber of pipe is smaller than the one of pump, it will cause head loss hugely and less flow.
14. During the pump operation, water can not lower than the pump casing
    The motor of pump is lack of water-cooling; the temperature will be increasing easily, and cause the motor damage.

15. Does not use pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc.
Do not use in a flammable and / or explosive atmosphere.
Personal injury and / or property damage could result.

There is supposed to a normal sound when pump is operating, no matter what kind of the pump is. If you find any head, electric current, vibration and sound is different from the usual condition, maybe it is a sign that the pump will be breakdown.

Please check with the troubleshooting list immediately to find out the potential defect's possibilities.

Important Instructions After Use

Operate the pump under the clear water and clear the filter then put and keep the pump in dry place after use.

Otherwise, if the pump is place into the water and unused for a long time, it will result in rust and reduce its life.

Warranty

1. We guarantee that the spare part is always available.

2. There is something wrong in the pump at the first use.
Contact the dealer or us immediately.

3. You don't have any guarantee if the pump damage in the operator uses improper or other nature disasters.

4. Warranty period and scope is described in the warranty note.

Important Instructions During Operating

1. Turn on the power.
Make sure the water runs smoothly through the garden hose straight it and no kinks or obstructions.

2. Pay attention to the draining condition and the volume meets the requests.

3. Payattention to the unusual vibration and noise when operating the pump.

4. Avoid operating the pump below the watermark.
The motor will be damage or failure due to lack water cooling and high temperature.

Maintenance

Always disconnect the pump from power source before handling inspection or maintenance.

1. Remove debris from pump:
After use, always run the pump through clean water to flush out the buildup debris internally.
The buildup debris may jam the pump during the next start-up and cause serious damage.

2. Insulation resistance:
Check it on monthly basis.
Use a Megger to measure the insulation resistance between ground and each phase of the motor.
The Megger reading should be more than 10mega ohms.
Replace the pump if the reading is below 10mega ohms.

3. Bearing seal and lubrication oil:
The bearing life is about 5000 – 6000 hours when pumping clean water.
However, when the lubrication oil is turbid and contains air bubble, it is time to replace lubrication oil and bearing seal.
Recommend checking lubrication oil every 6 months.

Upper Bearing		
HP	0.5~3.0HP	3.0HP~7.5HP
Phase	Single&Three	Three
Lubricating oil type	2AS	2AS
Lower Bearing		
HP	0.5~3.0HP	3.0HP~7.5HP
Phase	Single&Three	Three
Lubricating oil type	2AS.L605	L542(High temp grease)
Note		* 3.0hp for 2”discharge

4. Storage:
Run pump through clean water to flush out the buildup debris.
Check if lubrication grease is in good condition, impeller is clean and insulation resistance is with in the specs before storing.
It should be stored indoors in a clean, dry temperature-stable environment.

Optional Accessory

Motor overload protector
Pump is equipped with overload protector that will trip off the motor when it is overheated due to low voltage, clogged impeller, dry run and other abnormal conditions.

Warning
Electrical Precautions

Always disconnect the pump from its power source and unplugged before handling any service.
Wear insulated protective shoes and do not stand in water.
When it is necessary to remove the pump under flooded condition, it must be carried out by a qualified and licensed electrician.

Warning

Submersible pumps contain oils which becomes pressurized and hot under operating conditions.
Allow 2-1/2 hours after disconnecting before attempting service.

Troubleshooting List

Symptom	Possible Cause(s)	Corrective Action
Pump will not start or run after connecting the power	Cable broken	Replace cable
	Cable connected badly	Connect complete
	Motor copper damaged	Rewire
	Protector executed	Check the action causes the reason
	Defective protector	Replace overbad protector
	Fuse broken	Replace fuse
The pump hums,but it does work.	3-phase pump is phase shortage due to 1-phase connected badly.	Connect completely
	Switch is connected badly in the 3-phase motor.	Adjust the contacted parts
	Cable is broken.	Replace
	Broken fuse	Replace
	Outlet of the cable is connected badly.	Connect complete
	Copper of motor is broke.	Rewire
	Defective bearing.	Replace
	Defective capacitor of 1-phase pump.	Replace
	Defective switch of 1-phase pump.	Replace
	Defective impeller	Remove the impeller, clean it
	Low voltage	Adjust power and voltage
	Capacitor inefficient	Change bigger capacitor
Operation stops suddenly	Low voltage	Adjust the power,voltage
	Capacitor inefficient	Replace bigger capacitor
	Voltage is not balance in 3-phase pump.	Adjust power
	Defective protector	Replace
	Defective motor copper	Rewire
	Viscosity of the liquid is too gluey.	Contact to the manufacturer
	The ratio of mixed liquid is to much.	Contact to the manufacturer
	Temperature of the liquid is too high.	Contact to the manufacturer
	3-phase motor operates in reverse rotation.	Exchange either 2 prongs of 3 prongs
Pump operates but delivers little or no water	Over-head cause little water.	Replace suitable pump
	Head over-loss	Replace suitable pump
	3-phase motor operates in reverse rotation.	Exchange either 2 prongs of 3 prongs
	Outlet blocked	Straight the hose, let it flow smoothly
	Impeller worn out	Replace impeller
	Filter clogged	Clear the filter
Vibration hugely	Impeller worn out	Replace impeller
	Reverse rotation	Exchange either 2 prongs of 3 prongs
	Defective bearing	Replace bearing
	Too much air inhaled in the pump	Check the installation condition of pump
Electric leakage when contacting the pump	Bad isolation and electric leakage.	Stop use and maintain

Limited Warranty:

Products are warranted to the first user only to be free of defects in material and workmanship for a period of 12 months from date of installation, but no more than 24 months from date of shipment. Products liability under this warranty shall be limited to repairing or replacing at our election, without charge.
We will not be liable for any cost of removal, installation, transportation or any other charges that may arise in connection with warranty claim.

The warranty period commences on the date of original purchase of the equipment.
Proof of purchase and installation date, failure date, and supporting installation data must be provided when claiming repairs under warranty.

We will not be liable for any incidental or consequential damages, losses, or expenses, arising from installation, use, or any other causes.
There are no express or implied warranties, including merchantability or fitness for a particular purpose, which extend beyond those warranties described or referred to above.

Certain countries do not permit the exclusion or limitation of incidental or consequential damages or the placing of limitations on the duration of an implied warranty, therefore, the limitations or exclusions herein may notapply.
This warranty sets forth specific legal rights and obligations, however, additional rights may exist, which may vary from countries to countries

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