Ozmosis

DC Inverter VFD Stainless Steel Pressure Boosting Pump

Instruction Manual

This product is protected by multiple patents. Reproductions are prohibited by law.

Warning

★ Please carefully read the user's manual before installation and operation.

★ A reliable ground connection is necessary for safe operation.

★ Do not open and touch the pump internals while it is connected to an electrical source.

★ In order to prevent electric shock, please ensure the power switch is "OFF", or remove the plug before maintenance and cleaning.

★ When operating the pump, do not remove or open any of the safety protection devices.

★ In order to avoid over-loading, the pump shall be operated within the scope of prescribed conditions.

Contents

Please read the all the instructions before installation and use the pump.

Installation Instructions

1. Power requirements

1.1 Power supply voltage: Ensure that the correct AC voltage is supplied according to the model. The pump will operate on a wide range of voltages, but, the pressure will be reduced at lower voltages.

1.2 Electrical connection.

1.2.1 Before installation and use, check the pump for damage caused during transport. Inspect the cable and plug, lead wire, etc. for damage. Insulation resistance is greater than 50MΩ.

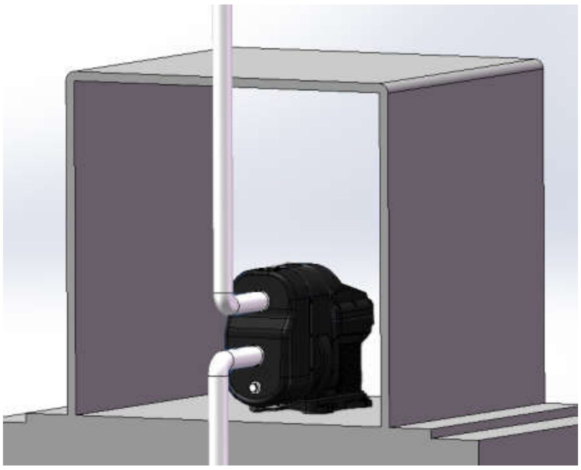
1.2.2 The pump should be installed on a properly grounded and protected circuit. The pump cord must be plugged into a grounded receptacle.

1.2.3 To extend the power cord to reach a receptacle, adhere to the cable length and wire size outlined in the following table.

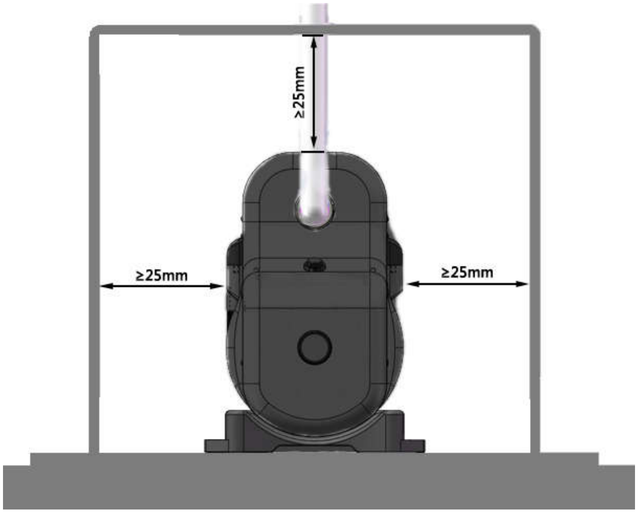
Cable Length	Minimum Wire Size
150' (50m) or less	16 awg (1.5mm²)
150'-600' (50m-200m)	14 awg (2.5mm²)

2. Installation Location and Environment

2.1 The pump cannot be submerged or installed in standing water. If installed outdoors, it needs to have a suitable cover to prevent sun and rain. The pump should not be exposed to freezing conditions.



2.2 Installation should allow for convenient access to inspect and perform maintenance. The location shall be dry and well ventilated. See the following figure for minimum clearances.



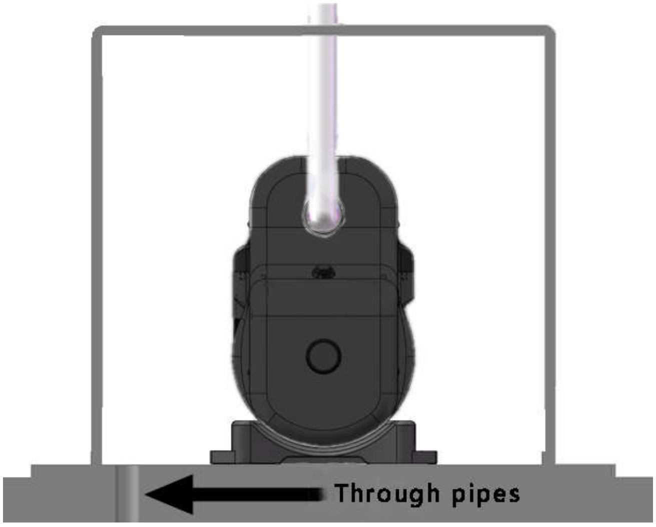
2.3.1 Ambient temperature: 5°F(-15°C) to 105°F (40°C).

2.3.2 Subjecting the pump to freezing temperatures may cause damage to the pump and the pipeline. When not in use, the pump and pipeline should be drained to avoid freezing and rupturing.

To winterize the pump, disconnect it from the power and water supplies. Then open the drain screw as show in the following figure and dump out all the water.

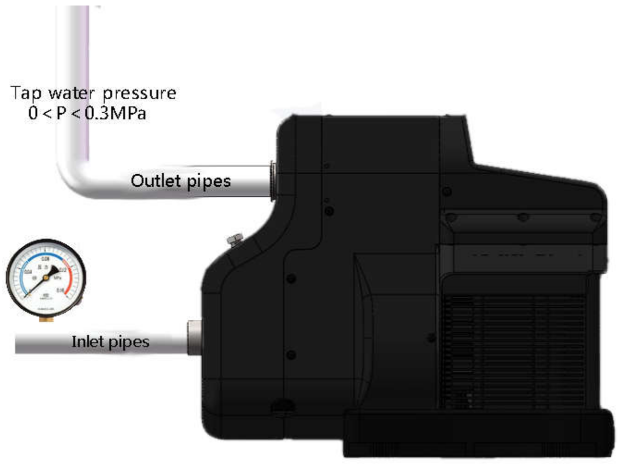
2.4 Do not expose or operate the pump in the presence of flammable materials or an open flame.

2.5 Allow adequate space and drainage around the pump, for proper use, maintenance, and replacement of the pump. When pumps and pipelines fail, leakage can occur which could damage the surroundings (especially when installed on floors above grade, in basements, kitchens, and other places.)



3. Water inlet pressure requirements

3.1 For tap water pressure boosting, the inlet pressure should not exceed 50psi.



4. Water temperature and quality requirements

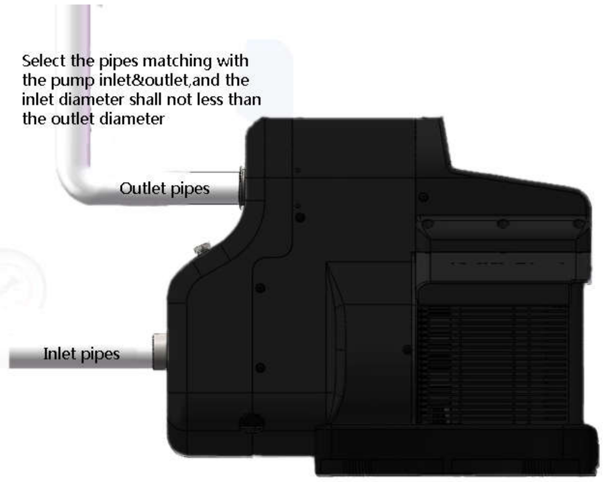
4.1 Range 32°F (0 ℃） - 160°F (70 ℃）.

4.2 The water must be clean, with a volume ratio of solid impurities not more than 0.1%, particle size not more than 0.008" (0.2mm), and the pH must be between 6.5 and 8.5.

Temperature
32°F - 160°F
0°C - 70°C

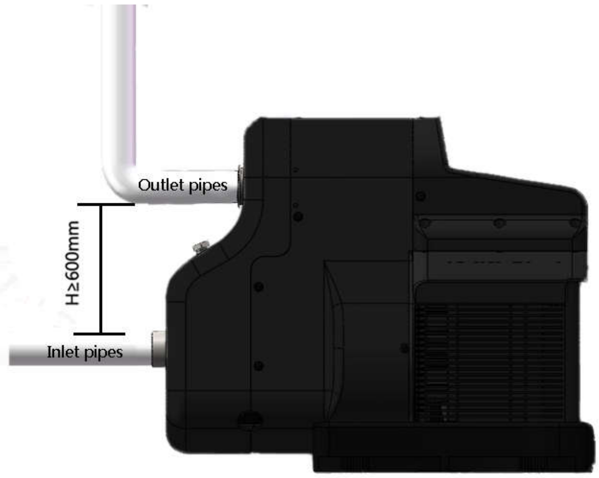
5.Piping requirements

5.1 Inlet and outlet piping should be no less than the inlet and outlet size of the pump which is 1".

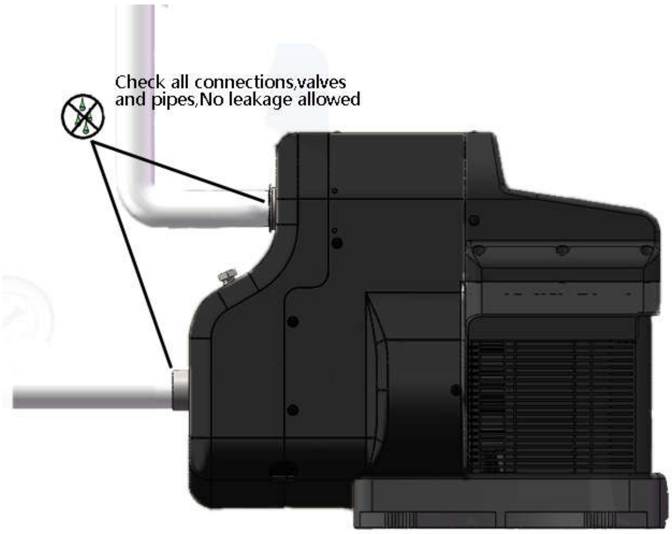


Select the pipes matching with the pump inlet&outlet,and the inlet diameter shall not less than the outlet diameter

5.2 The outlet pipe should remain higher than and extended out to at least the distance of the inlet before turning. The length of the inlet pipe should not exceed the maximum suction range of the pump.

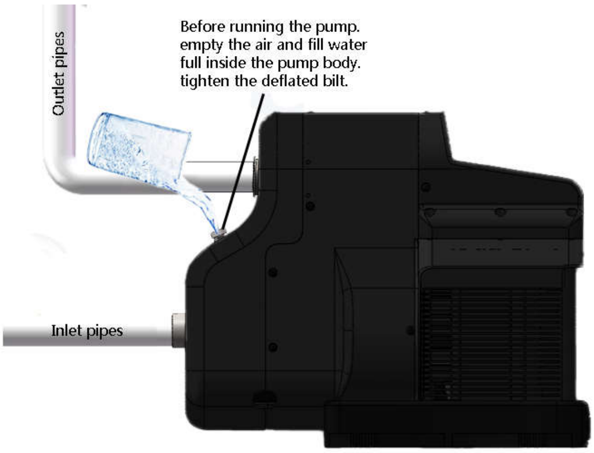


5. 3 Make sure there are no leaks!



Check all connections,valves and pipes,No leakage allowed

6. Before turning on the pump for the first time, prime the pump by filling it with water through the priming port (drain port).

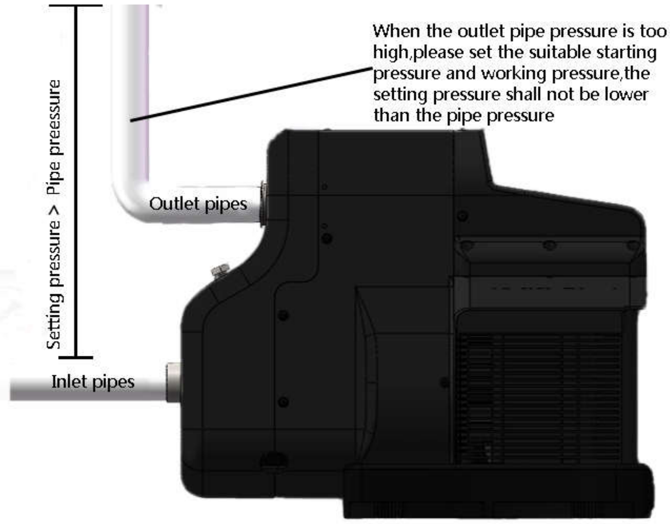


Before running the pump. empty the air and fill water full inside the pump body. tighten the deflated bilt.

7. Pressure setting requirements .

7. 1 The pressure setting should not exceed the pressure rating of the outlet piping.

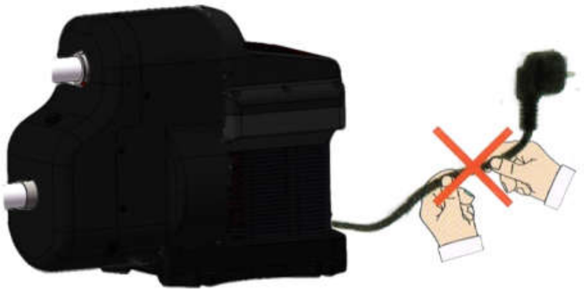
7. 2 The starting pressure value should be set to aproximately 80% of the constant pressure value.



When the outlet pipe pressure is too high,please set the suitable starting pressure and working pressure,the setting pressure shall not be lower than the pipe pressure

8. Additional considerations

8.1 When transporting or installing the pump, be careful not to damage the power cord. Do not carry the pump by the cord and be careful when unplugging it from an electrical outlet to avoid possible shock!



8.2 You must disconnect the power before touching, moving, opening, or modifying the pump or the piping.

Plug reliable ground connevtion is necessary

I. Purpose and scope of application

1. These pumps are self-priming, horizontal, multistage, centrifugal pumps (hereinafter referred to as pumps), featuring high efficiency, low operating noise, mild corrosion resistance, compact structure, beautiful appearance, small size, and light weight.

2. Application

●For pumping low viscosity, neutral, non-explosive liquids, containing no solid particles or fibers liquid. Chemically, corrosive liquid that are not compatible with the material of the pump should not be pumped.

●Air conditioning and cooling liquid circulation.

●Other cooling systems.

●Water treatment (Purification of water).

●Industrial water and cleaning systems.

●Liquid transportation and circulation.

●Hot and cold water.

●Food, beverages, agricultural and other liquid movement.

3. Scope of application:

●Clean water, the volume of solid particles lower than 0.1%,the size less than 0.2mm;

●Liquid temperature: 0℃ < water temperature≤70°C;

●Ambient temperature range: 0°C~40°C;

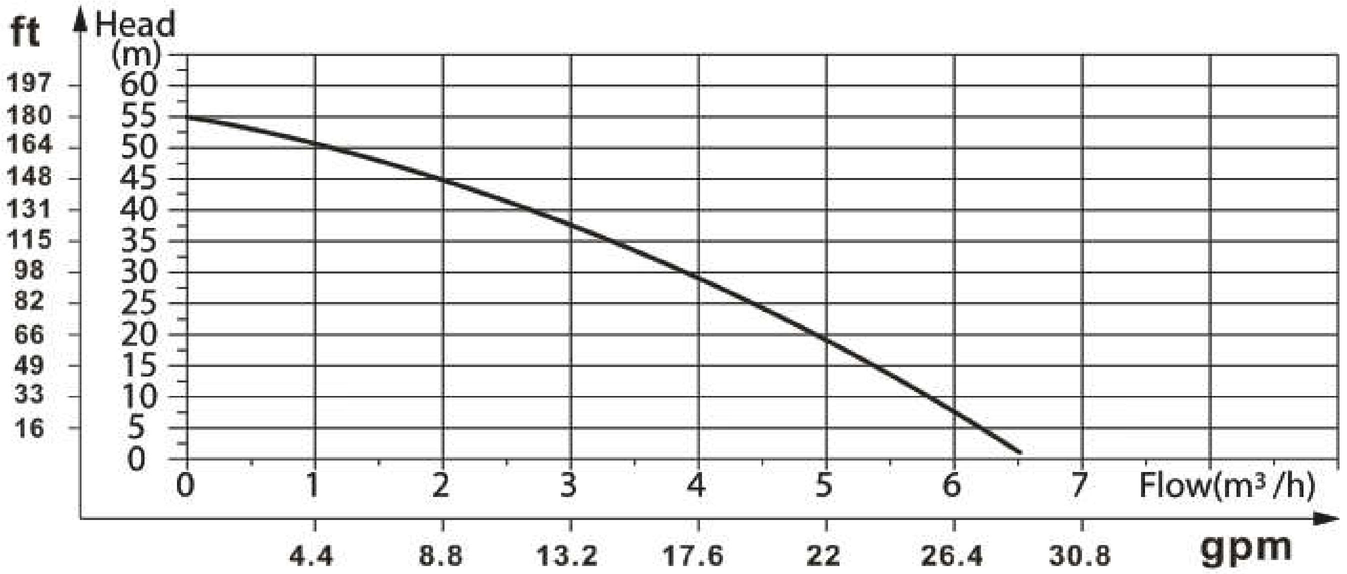
●PH level: 6.5~8.5;

●Relative humidity:Max85%(RH).

⚠ **When the liquid density and viscosity is greater than water, shaft power will rise, lowering performance and increasing motor demand.**

II、 Technical data

Model	Power Range (W)	Voltage (V)	Frequency (Hz)	Speed range (r/min)	Inlet/outlet pipe thread	Max. head (ft)	Rated head (ft)	Max. flow (gpm)	Rated flow (gpm)	Suction (ft)
OZ-IBP604-II-115	500-1200	115	60	1000-3500	1" / 1″	175	100	26.4	17.6	28
OZ-IBP604-II-230	500-1200	230	60	1000-3500	1" / 1″	175	100	26.4	17.6	28



III. Pump Construction

●OZ-IBP604-II pumps are built with a horizontal pump shaft as an extension of motor shaft, the pump inlet and outlet direction is axial suction, radial discharge.

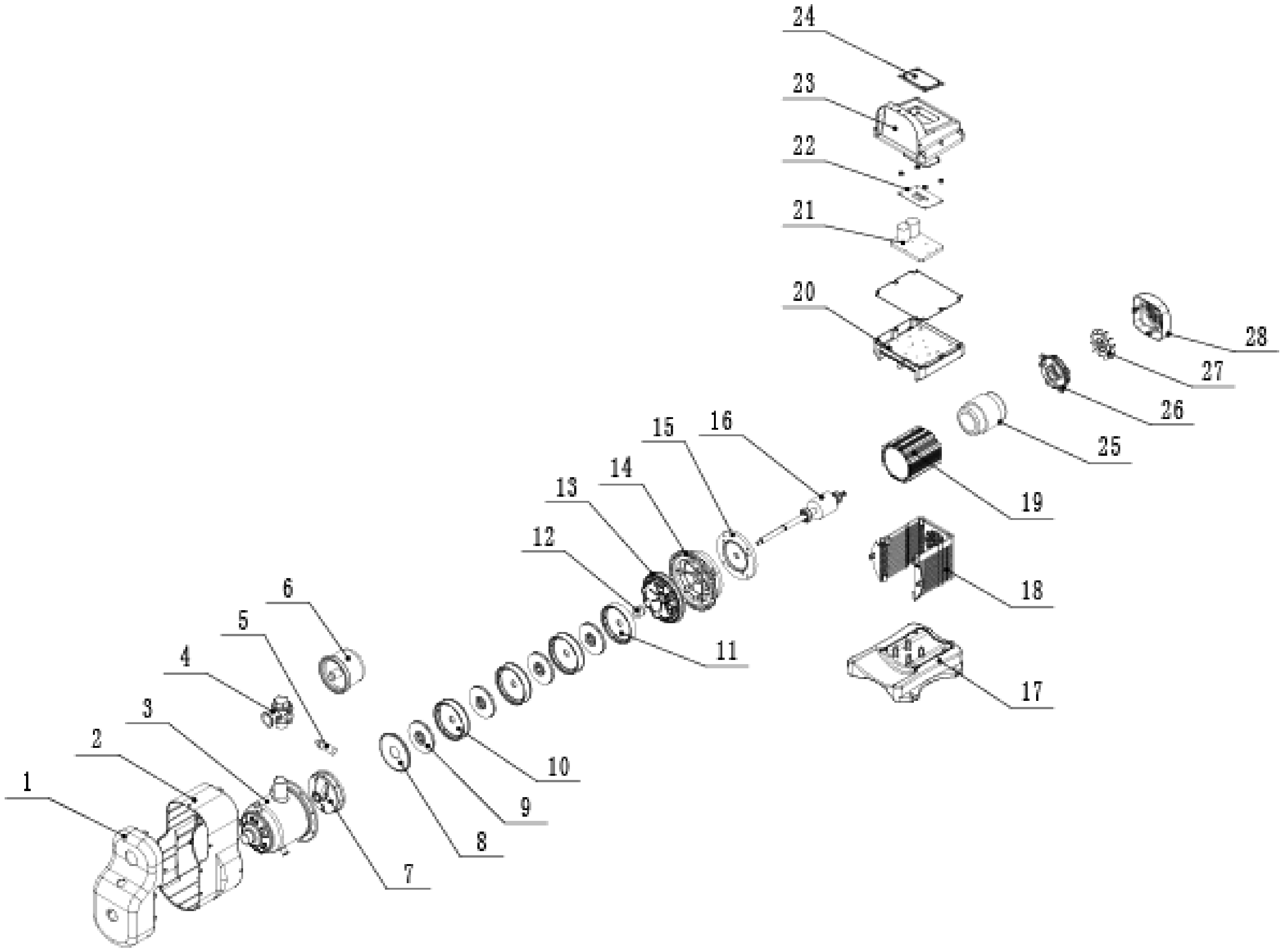
●OZ-IBP604-II cylinder pumps consist of the motor, sealing seat, guide vane, impeller, inlet and outlet part, pump shaft, mechanical seal, and other major components.

●The key components of the pump including all parts that come in contact with the pumped liquids - like guide vane, impeller, inlet and outlet part, and pump - are all made from stainless steel material.

●Shaft seal is single-end mechanical seal, grinding block made of the silicon carbide / graphite.

●The basic form of pump and pipe connection is detailed in the following Exploded View Figure.

Exploded View



Exploded View Details:

No	Name	No	Name	No	Name
1	Plastic case 1	11	Outlet guide vane	21	Controller
2	Plastic case 2	12	Mechanical seal	22	Control panel
3	Inlet and outlet body	13	Seal seat	23	Terminal box cover
4	Five-way valve	14	The connection	24	Touching panel
5	Pressure sensor	15	front end cover	25	Stator
6	Pressure tank	16	Rotor	26	Rear end cover
7	inlet body	17	base	27	Fan blade
8	Plate	18	Terminal box seat	28	The wind hood
9	Impeller	19	Barrel	29	
10	Guide vane	20	Terminal box	30	

IV. Installation And Connection

1. Pump installation

- Pump should be installed in a well-ventilated and frost-free location. Allow a minimum of 6 inches (150 mm) distance from the nearest obstacle for adequate air flow around the cooling fan, pump and motor.
- In order to minimize the inlet friction loss, the inlet pipe should be as short as possible.
- Before installing the pump, a check valve shall be installed to prevent fluid back-flow.
- Pump should be secured in a fixed location on the ground or installed on a bracket on the wall. Be careful not to put the weight of the piping system or additional stress on the pump to prevent deformation and leaks.
- Before the pump installation, inlet pipes should be clean. If particulate matter exists in the water supply, it is necessary to install a filter in front of the inlet 0.5 ~ 1 m, to ensure normal pump operation.
- When installing the inlet pipe, avoid air-locks. See the figure below.

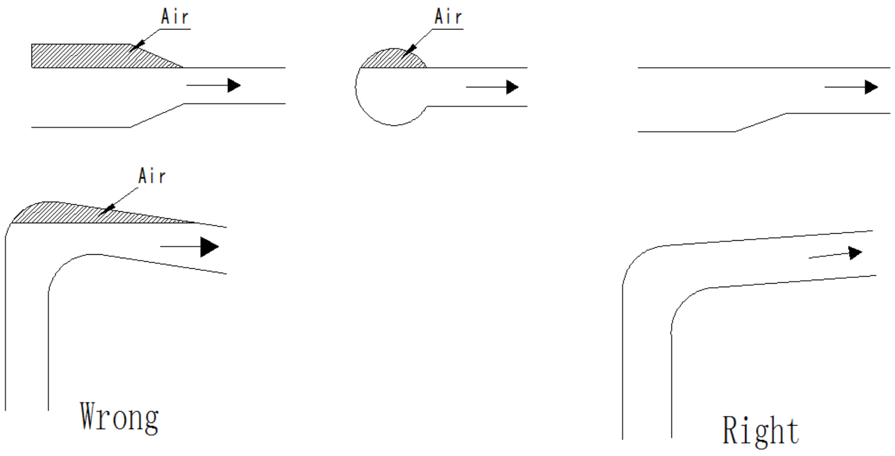


Fig 2

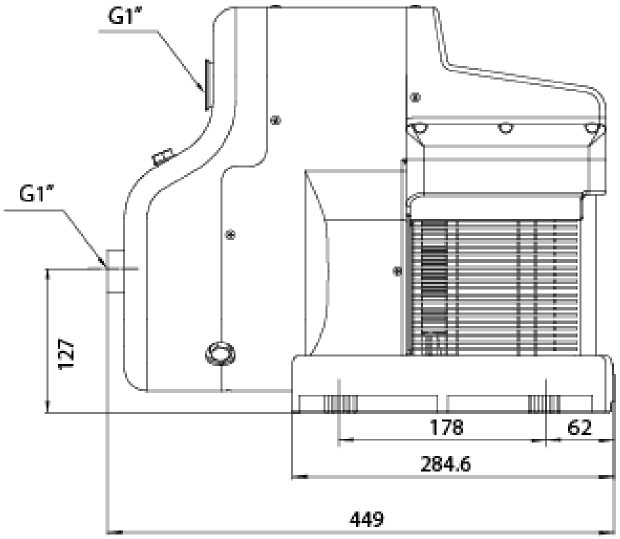
- A pressure gauge is recommended to be installed on the pump outlet to observe and control the operation pressure.
- When the pump is installed above the liquid level (in the range of allowable suction head), a foot valve should be installed at the bottom of the suction pipe, and a priming port on the outlet pipe or use the filling/drain screw hole for filling liquid before start-up.

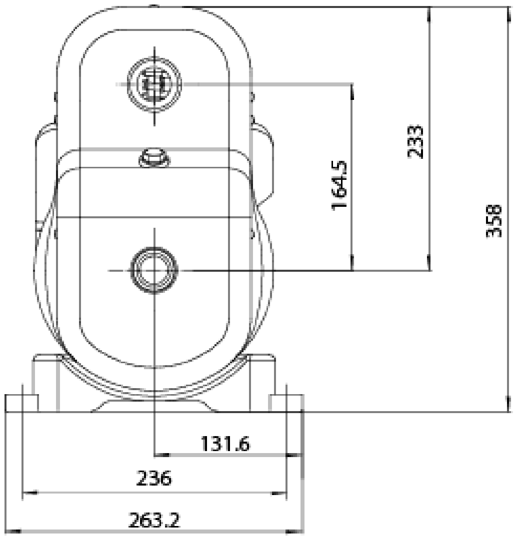
2. Electrical Connection

- The connection of the electrical circuit must be performed by a licensed electrician.
- The motor specifications must match the power supply. The motor lead wires must be connected to the power supply according to the wiring diagram on the terminal box and the motor nameplate.
- The motor must be connected according to state and local codes to a reliable power supply and not subject to phase loss, voltage instability and overload damage. The motor should be grounded.

⚠ **Before removing the motor terminal box cover and removing the pump, make sure that the power supply has been cut off!**

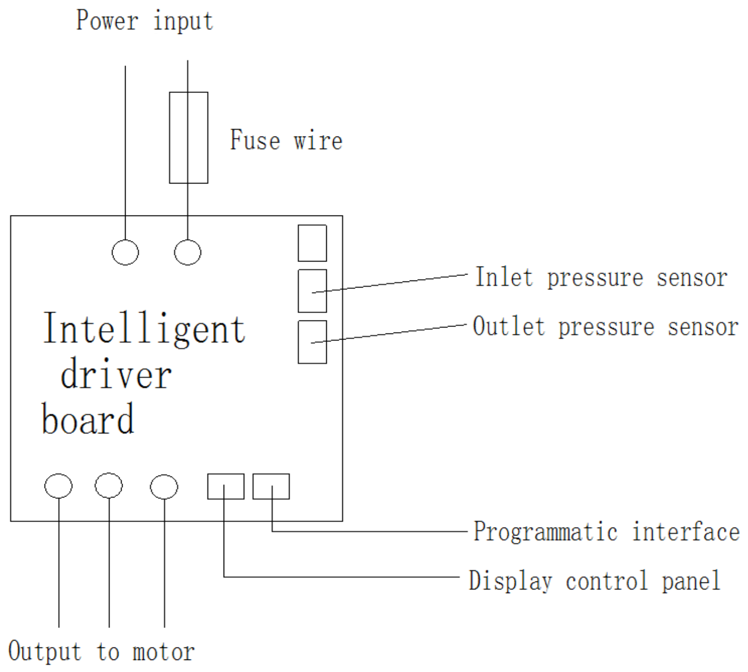
3、Installation size(mm)





V. Appliance Connection

⚠ To avoid possible shock and death, do not make electrical connections until the power has been disconnected. The pump should be wired to a reliable grounded circuit with matching protection. Electrical connections should be according to the working voltage marked on the nameplate. Ensure the power supply matches the motor power on the nameplate. If installing the pump far away from power supply, please use a properly sized extension cord or other approved wiring or circuit, otherwise a voltage drop will affect the pump performance. If the pump is operated outdoors, an approved out-door rated extension cord with proper insulation should be used.



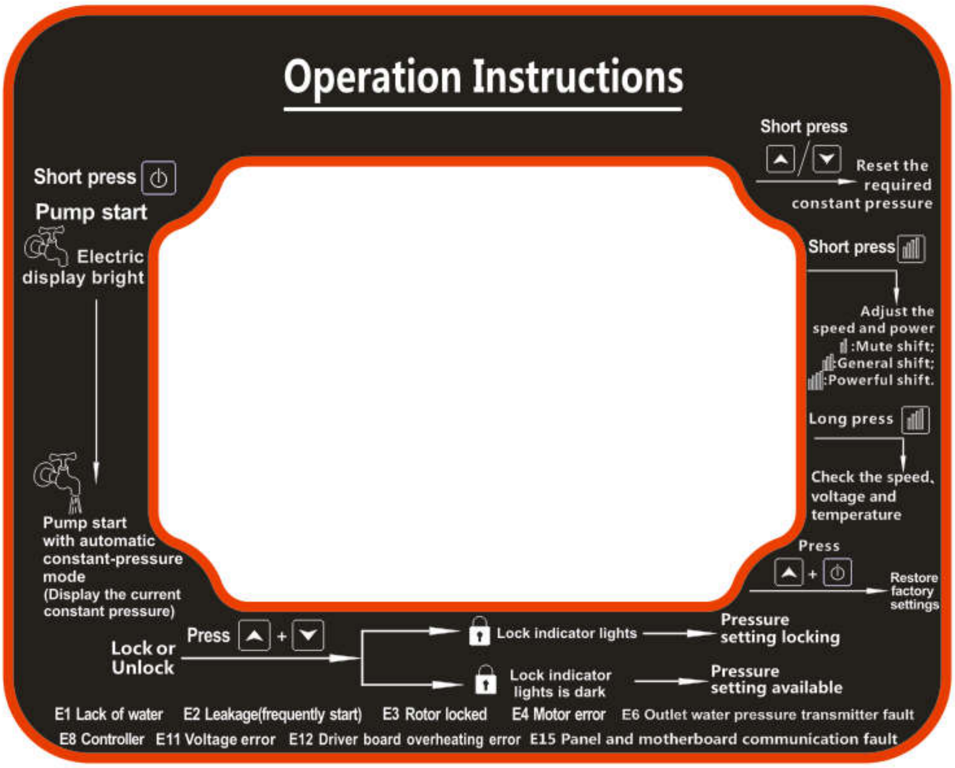
Intelligent pump electrical schematic diagram

(Because of products constantly updated, please in kind prevail)

Power wire length Model	0~50m	Fuse A	50~100m	Fuse A	100~150m	Fuse A
OZ-IBP604-II-115 OZ-IBP604-II-230	1.5mm^2	10	2 mm^2	15	2.5 mm^2	18

VI. Control Panel Operation Instructions

● Oulet water pressure transmitter fault	Temperature protecion
Leakage	Wifi
Lack of water	Stalls
Voltage protection	Mute



VII. Pump Features

1、 High efficiency, energy saving, intelligent, constant pressure and frequency conversion; Water flow and pressure control; Manual and automatic control; Water shortage, overload, and locked-rotor protection;

2、 Motor soft start and soft stop, effectively protecting and improving the service life of the motor.

3、 Auto-starts functions: After a long time without use, the pump will run for a few seconds (approximately every 12 hours) to prevent the impeller form becoming jammed.

4、 The touch panel shows any error codes. If two or more errors happened at the same time, the codes will be showed alternating every 2 seconds. Pease take action according to the codes below:

E1: Lack of water E2: Leakage (frequent starts) E3: Rotor locked E4: Motor error
E6: Outlet sensor E7: Flow switch E8: Controller E11: Voltage error
E12: Driver board overheating E17: Panel and motherboard communication fault

Pressure setting recommendation:

Amount of pressurization floors	1	2	3	4	5	6
Starting pressure(kg/cm²)	1.5	1.5	1.5	1.5	1.8	2.1
Stabilized pressure(kg/cm²)	2.5	2.5	2.5	2.5	2.8	3.1

VIII、Start, operation and maintenance

⚠ **Dry running of the pump without liquid inside will damage the mechanical seal and slide bearing and VOID THE WARRANTY.**

1、 The pump must be fully filled with water (or other approved liquid) to start.

●A check valve or other back flow prevention device is required to fill the piping system. Close the pump outlet valve, open the vent screw on pump head, slowly open the inlet valve until the water flows steady out the vent plug screw, then tighten the vent plug screw.

●If the liquid level is below the pump, the pump must be with liquid prior to start-up. Before starting the pump, all air must be removed so that both the inlet and the pump are filled with liquid.

2、 Check the rotation direction

Turn off the power supply and observe the rotation direction. (Reference fan) The correct direction of rotation should be counter-clockwise looking from the motor side .

3、 Before starting the pump check the following:

●Check to be certain the pump is firmly fixed in it's location.
●Make sure the pump is completely filled with water.
●Make sure the voltage is correct.
●Make sure the rotation direction is correct.
●Be sure all pipes are tightly connected and the piping is properly supplied with liquid.
●Be sure any inlet valves are fully open.
●The outlet valve should be slowly opened after the pump is started.
●If you have installed a pressure gauge, check for it's proper function.

4、 Pump Control and Operation

●Pump should not be started frequently, No more than 100 times per hour;
●Refer to the performance curve for the range. If the flow is too little it can cause the pump to over-heat. If the flow is too much it can cause the motor to over-load. Etc.

●Note if there are changes to the noise produced by the pump. Changes in volume or pitch may indicate a problem. Stop the pump and check it immediately.

5、 Anti-freezing measures

The pump can be used in low temperatures when water that has anti-freeze added according to the manufacturers recommendations is used. The right amount of anti-freeze must be used to avoid freezing and damage to the pump. If used without anti-freeze, the pump should be shut down and drained if there is a risk of possible frost.

6、 Regularly check the following:

●Working and operating pressure?
●Possible leakage?
●Motor overheating?
●Remove and clean/replace all filters;
●Motor overload disconnect;
●Frequency of start-up and stops;
●Operational controls;
●If you find a fault, please refer to "Common Errors and Trouble Shooting";
●When pump is not in use for a long time, it should be cleaned and stored properly.
●The pump should be protected from corrosion and damage while in storage.

IX、Common Errors And Trouble Shooting

Before removing the motor terminal box cover and removing the pump, make sure that the power supply has been cut off

Fault phenomenon	Cause analysis	Method	Remark
Motor can't start	a) Power source error	a) Check the power source	
	b) The fuse is broken	b) Replace the fuse	
	c) Motor overheating protection (Display E13)	c) After cooling it should automatically start	
	d) Motor damaged	d) Consulting service provider or manufacturer for replacement.	
	e) Water pressure is higher than the starting pressure	e) Pump automatically starts when the pressure drops to the starting pressure.	
	f) Driver error	f) Consulting service provider or manufacturer for replacement.	
	g) Motor lead plug is not inserted or lead is loose (Display E4)	g) Re-connect the lead-wire to the motor	
	h) Low-water fault (Display E1)	h) Every 30 minutes the pump will try to restart. When the the pump is primed, it will resume normal operation.	
	i) Inlet pressure sensor is damaged (Display E5) or plug is not inserted	i) Replace the inlet pressure sensor or re-insert the plug into the receptacle again.	
	j)Outlet pressure sensor is damaged (Display E6) or plug is not inserted	j) Replace the sensor or re-pinsert the plug.	
	k) Over-voltage motor protection. (Display E6)	k) Adjust the voltage within the pump range of use, then restart the pump.	
	l) Motor stall (display E3)	l) Check whether the pump has a foreign material stuck in the pump body.	
	m) Drive error (Display E8)	m) Long press the set button to switch between Manual/Auto. If the error persists, replace or repair the drive.	
	n) Drive board overheat error (Display E12)	n) The pump will stop and automatically troubleshoot after cooling	
Pump water uneven	a) The inlet pipe is too small	a) Increase the inlet pipe	
	b) At the pump inlet, there is not enough water	b) Improve the supply system to increase water	
	c) Liquid level is too low	c) Try to raise the liquid level.	
	d) Inlet pressure is too low compared to water temperature, friction loss and flow.	d) Improve the supply system. Try to increase the inlet pressure.	
	e) Impurities are clogging the piping system.	e) Check and clean piping.	

Fault phenomenon	Possible Cause	Method	Remark
The pump is running but the water flow or pressure is too low.	a) Pump rotation direction is wrong	a) Check the motor rotation direction (From the motor side should be counterclockwise rotation)	
	b) Inlet pipe, filter, bottom valve or pump body is clogged	b) Clean the pipe, bottom valve, filter or pump body to remove debris	
	c) Low motor voltage or the wire is too long	c) Check the motor end part voltage, increase the wire cross section	
	d) Incorrect pump model selection	d) Select the suitable model	
	e) Significant impeller wear	e) Replace the impeller	
	f) Mechanical seal leaking	f) Clean or replace mechanical seals	
	g) Outlet pipe leaking	g) Check and repair the outlet piping	
The motor running but no water	a) Pump body is not full filled with water	a) Open the vent screw, allow the air in pump chamber and inlet pipe to escape.	
	b) Impeller damaged by debris	b) Replace the impeller	
	c) Water level is lower than the inlet piping foot valve	c) Adjust the inlet pipe to immerse the foot valve into the water	
	d) Suction pipe air leakage - Vacuum	d) Check the inlet pipe and all connections and replace or reseal the leak(s).	
	e) The inlet pipe is clogged	e) Check and clean.	
	f) Foot valve or check valve in the closed position	f) Check it or replace faulty valves	
Pump has abnormal vibration and noise	a) Inlet pipe leak	a) Replace the damaged water inlet pipe	
	b) The inlet pipe is too small or partially clogged	b) Increase the size of inlet, or repair the inlet line	
	c) The inlet pipe or pump has air inside	c) Fill again with water and remove the air	
	d) The mechanical part(s) of the pump are worn	d) Check and repair the pump	
	e) Pump vibrates during operation	e) Sturdy the base, tighten mounting bolts	
Pump Starts Frequently	a) Water flow is too little.	a) Increase in water flow	
	b) Leak in the outlet piping system, toilet flapper/faucet leaks (Display E2)	b) Check the outlet plumbing system. Repair or replace leaking toilet flappers/faucets.	

X. Warranty & Important items

1. The contents of this instruction manual are subject to change without prior notice.
2. The pump is warranted to be free of manufacturer's defects for 18 months from the manufacturing date or up to one year from documented non-commercial installation and within 18 months of manufacturing.
3. Negligence or intentional misuse of the pump will void all warranties.
4. Normal wearable items and items damaged from water supply quality issues will not be covered by the warranty.
5. If the pump is found to be defective, it will be repaired or replaced at the discretion of the manufacturer. Labor and installation supplies are not warranted.

Packing List

Factory No.：

Packing Dimension：530×320×425mm

G.W./N.W.：15/13kg

No	Name	No	Unit	Quantity	Remark
1	DC Inverter VFD Stainless Steel Pressure Boosting Pump	OZ-IBP604-II-115 OZ-IBP604-II-230	pc	1	Inner
2	Pressure Tank	1L	pc	1	On pump
3	Foot Valve		pc	1	Inner
4	Instructions		pc	1	Inner

Ozmosis

EZ BLACK STAINLESS STEEL BOOSTER PUMP

Congratulations! You have purchased one of the finest Stainless Steel Booster Pump available! In the unlikely event of a problem due to defects in material and workmanship, we proudly warranty our EZ Black Booster Pump to the original owner, at the original installation location, when installed within recommended parameters from the date of original installation as follows:

For a period of 18 MONTHS: For the entire EZ Black Pump from the time of purchase. If registered, from the time of installation.

ALL PUMPS MUST BE REGISTERED AT THE TIME OF INSTALLATION BY GOING TO: www.coastalwaterfilters.com/product-registration and filling out the required information.

Any part found defective within the terms of this warranty will be repaired or replaced by the dealer at the manufacturer's discretion. You pay only freight from our factory and local dealer charges. To obtain local warranty service, contact your original dealer. If original dealer is unknown, contact Coastal Water Filters for authorized service dealer in your area. If no authorized dealer is located in your area, please obtain a Return Merchandise Authorization (RMA) by contacting customer service at
+1-239-398-7651 and then ship the defective part or component freight prepaid to:

Coastal Water Filters,
Inc. 435 23rd St. NW
Naples, Florida 34120

Coastal Water Filters, at its discretion, will repair or replace the part or component at its expense and return part freight collect.

Our product performance specifications are furnished with each pump. The above provisions of the warranty are valid as long as the pump is connected in compliance with local plumbing codes and in an equivalent manner and condition of the original installation and is owned by the original owner. We do not know the characteristics of your water supply or the purpose for which you are purchasing this pump. Please understand that the quality of water supplies may vary seasonally or over a period of time, and that your water usage rate may vary as well.

This warranty does not cover damages due to accident, fire, flood, freezing, or any other Act of God. CWF is not responsible for damages due to change in water conditions, misapplication, misuse, neglect, vacuum, oxidizing agents, alteration, or lack of maintenance. No responsibility is assumed for loss of use of the pump, inconvenience, loss or damage to real or personal property or any incidental or consequential damages. Furthermore, we assume no liability and extend no warranties, express or implied, for the use of this product with a non-potable water source.

To the extent permitted by law, CWF disclaims all implied warranties, including without limitation warranties of merchantability and fitness for particular purpose; to the extent required by law, any such implied warranties are limited in duration to the aforementioned period specified above.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

NOTES

Ozmosis

Ozmosis EZ Black Pump

MODEL #:__________________

SERIAL #:__________________

INVOICE#:__________________

HP:________VOLT:___________

DATE:________________________

COASTAL WATER FILTERS
WHOLESALE ONLY

Ozmosis

Manufactured by:
Coastal Water Filters, Inc
435 23rd St. NW
Naples, FL 34120
Phone: 239-398-0967
E-mail: info@coastalwaterfilters.com

MEMBER
Water Quality ASSOCIATION

Member

Proud Member