OWNER'S MANUAL

Assembly & Operating Instructions

PAICHI

PROFLOW 5400

WPE-PF-5400



N23701

BIGGER BOYZ TOYZ

Thank you for choosing our equipment. It was carefully engineered to provide excellent performance when properly operated and maintained.

Please read this entire manual before operating the equipment. It instructs you on how to set up, operate, and maintain your equipment safely and easily. Ensure that you and any other persons operating the equipment carefully follow the recommended safety practices at all times, as failure to do so could result in personal injury or property damage.

All information in this manual is relevant to the most recent product information available at the time of printing. Review this manual frequently to familiarise yourself with the equipment, its features, and operation. Please note that this Owner's Manual may cover a range of product specifications for various models. Characteristics and features discussed and/or illustrated in this manual may not be applicable to all models. We reserve the right to change product specifications, designs, and equipment without notice and without incurring obligation.

All the power testing information used to establish the power rating of the engine equipped on this equipment can be found in the engine manufacturer's manual or website. If you encounter any problems or have questions about the equipment, please contact our Customer Support Department.

Throughout this manual, all references to the right and left side of the equipment are observed from the operating position. The engine manufacturer is responsible for all engine-related issues concerning performance, power-rating, specifications, warranty, and service. Refer to the engine manufacturer's Owner's Manual, packed separately with your equipment, for more information.

Customer Support

Before initiating a product return, kindly reach out to our dedicated Customer Support Department at Bigger Boyz Toyz. We are here to assist you.

Phone: 02 4257 4787
Email: bbt@bbta.com.au
Warehouse: Unit 2/3 Delta Place, Albion Park Rail NSW 2527

If you have difficulty assembling the product or have any questions about the controls, operations, or maintenance of the equipment, please don't hesitate to get in touch with our Customer Support Department.

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Débranchez toujours l'appareil avant de le monter, de le démonter ou de le nettoyer.
Les appareils peuvent être utilisés par des personnes ayant des capacités physiques, sensorielles ou mentales réduites ou manquant d'expérience et de connaissances si elles ont reçu des surveillances ou des instructions concernant l'utilisation de l'appareil en toute sécurité et comprennent les dangers encourus.
Les enfants ne doivent pas jouer avec l'appareil.
Les pompes sans indication qu'elles sont protégées contre l'effet du gel ne doivent pas être laissées à l'extérieur par temps de gel.
Cet appareil peut être utilisé par des enfants âgés de 8 ans et plus et des personnes ayant des capacités physiques, sensorielles ou mentales réduites ou manquant d'expérience et de connaissances si elles ont reçu des surveillances ou des instructions concernant l'utilisation de l'appareil en toute sécurité et comprennent les dangers encourus. Le nettoyage et l'entretien ne doivent pas être effectués par des enfants à moins qu'ils ne soient âgés de 8 ans et plus et sous surveillance.

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.
The pump must be supplied a residual current device (RCD) having a rated residual operating current not exceeding 30 mA.



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

1).It is applicable to household water supply, equipment support, pipeline pressurization, garden watering and spraying, vegetable greenhouse watering, breeding, industrial and mining, water supply and drainage of enterprise and high-rise buildings, center air conditioner and centralized heating circulation system, etc..

2).Transfer clean water and other non-corrosive liquids with low viscosity; do not transport inflammable, explosive, gasified liquid and liquids containing solid particles or fibers. The liquid PH value shall be within 6.5-8.5.

2. Technical

Max. Flow: 90 L/min

Max. Head: 55m

Input Power: 0.9 ~ 1.3 kW

Max. Suction: 8 m

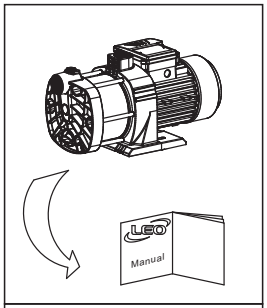
Insulation Class: F

Protection Class: IPX4

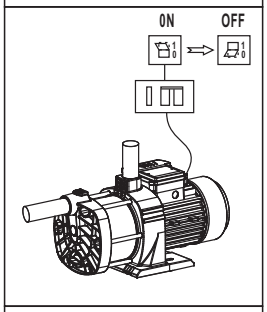
Max. Ambient Temperature: 40℃

Max. Liquid Temperature: 35℃

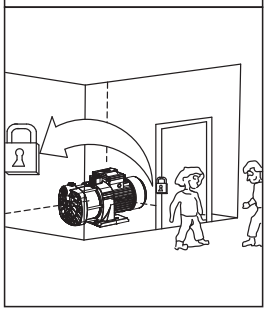
3. Safety Precautions



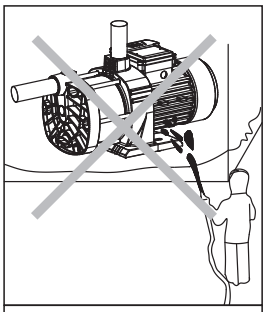
1. To ensure normal and safety operation of the electric pump, read the manual carefully before use.



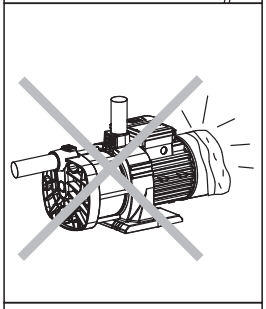
2. To avoid electric shock, make sure the pump is safely grounded and equipped with an earth leakage circuit breaker. Do not get the plug wet and do not use any socket in an area with high humidity.



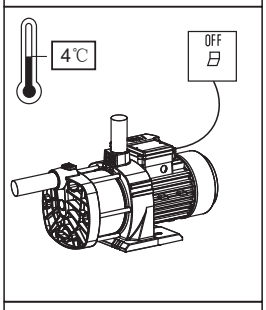
3. Do not touch the electric pump while working; do not wash, swim near working area or let livestock into the water to avoid accidents.



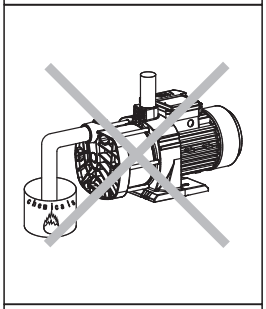
4. Avoid splashing pressured water to the electric pump
Do not immerse the pump in water.



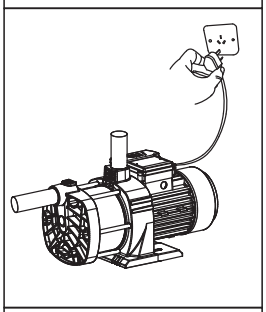
5. Keep the pump in a well-ventilated place.



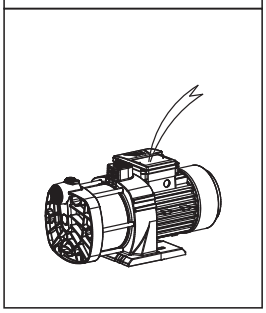
6. If the environment temperature is below 4℃ or after long period of non-use, the liquid inside shall be discharged for freeze and frost protection.



7. Never use the pump to transport inflammable, gasifying or explosive liquid that exceeds the specified liquids in this manual.

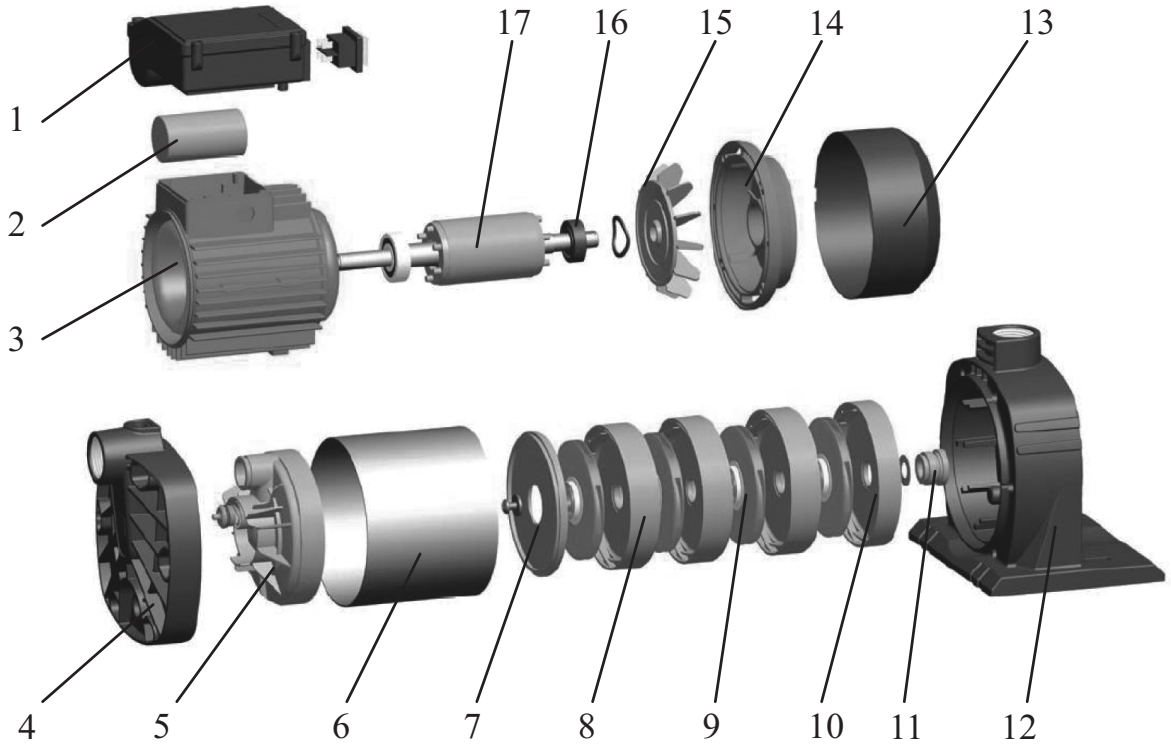


8. Ensure the pump will not be accidently turned on while installing and maintaining; if not used for a long time, cut off the power first and then turn off valves in inlet and outlet of the pump.



9. The power supply should be in accordance with the voltage stated in the nameplate. If the pump is not be used for a long time, empty it completely, wash it with clean water and store it in a dry, well-aired place.

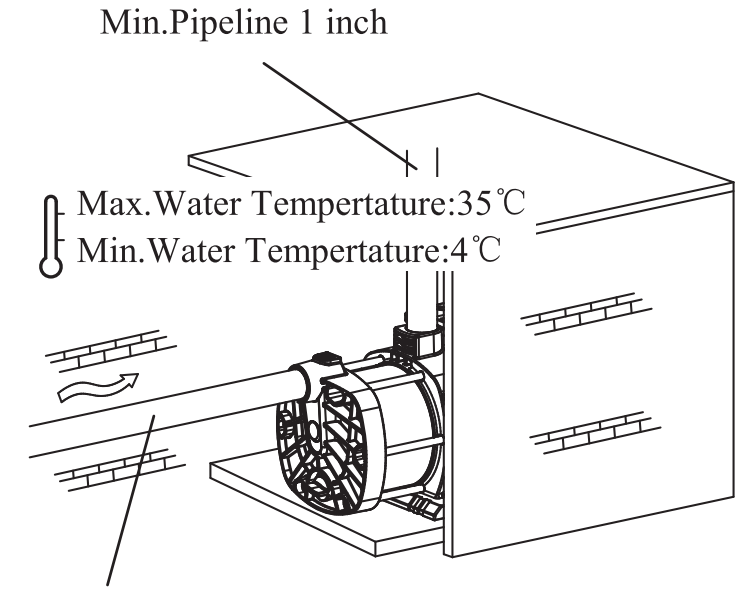
4. Product Structure



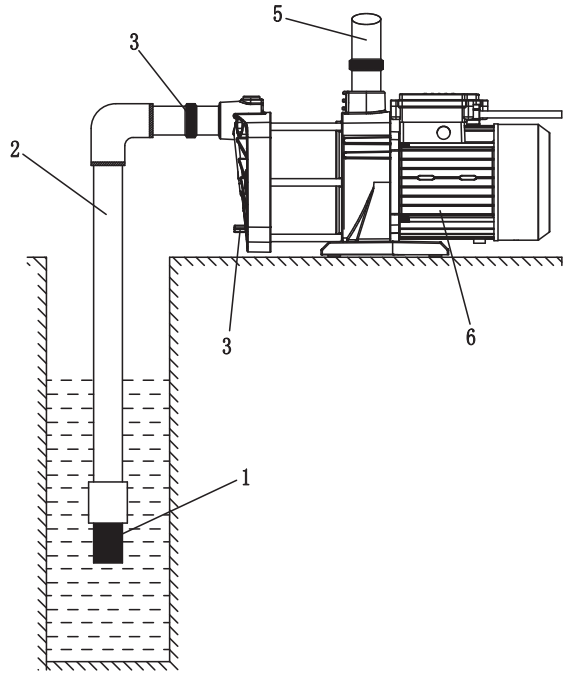
POS.	Part	POS.	Part
1	Terminal box	10	Diffuser
2	Capacitor	11	Mechanical seal
3	Stator	12	Pump support
4	Pump body	13	Fan cover
5	Reflux cover	14	End plate
6	Pump tube	15	Fan
7	Pump cover	16	Ball bearing
8	Drain cover assembly	17	Rotor
9	Impeller		

5. Pipeline Installation

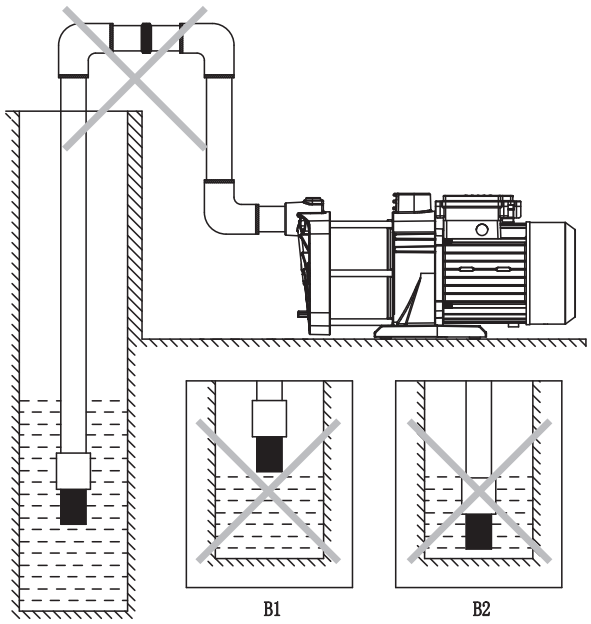
This product shall be installed and maintained by a qualified person who is proficient with this instruction.
The installation and operation must be in accordance with local regulations and the recognized operation criteria.
Install the pipeline properly according to the requirement of this instruction, and protect it from freezing.



1. Make the inlet pipeline as short as possible and keep bends as few as possible during installation. Keep the pump in a dry and well-ventilated place. In condition of outdoor installation outdoor, make sure the pump is properly protected by weather-proof covering.
2. Installation of valves on inlet and outlet pipelines is necessary. The valve installed on inlet pipeline shall be one-way valve.



Correct Installation Diagram A



Incorrect Installation Diagram B

A:

1.Bottom valve 2.Inlet pipe
3.Connector 4.Drain plug
5.Outlet pipe 6.Pump

Notes for inlet pipeline installation:

1 . Do not use soft rubber tube for inlet pipeline during pump installation.

2). The bottom valve shall be vertically installed with a distance of 30 cm from the water bottom to avoid suction of sediment (B2).

3). All connections of the inlet pipeline must be sealed. To ensure water suction, it's necessary to reduce the quantity of bents of the pipeline.

4). The diameter of inlet pipeline must not be less than that of the pump inlet to avoid big hydraulic loss and small water flow.

5). Pay attention to the water level during operation. The bottom valve shall not be above the water surface (B1);

6). In case the inlet pipeline is more than 10 m in length or over 4 m in hoisting height, the diameter of the inlet pipeline must be bigger than that of the pump inlet.

7). Make sure that the pump is not affected by the pipeline pressure during pipeline installation.

8). It is recommended to install a filter on inlet pipeline to avoid incoming of solid particles to the electric pump.

9). Before first operation, the inlet pipeline must be fully filled with water and installed with a bottom valve.

Note for outlet pipeline installation:

The diameter of the outlet pipeline shall be not less than that of the pump outlet to reduce the pressure drop, high flow rate and noise to the lowest level.

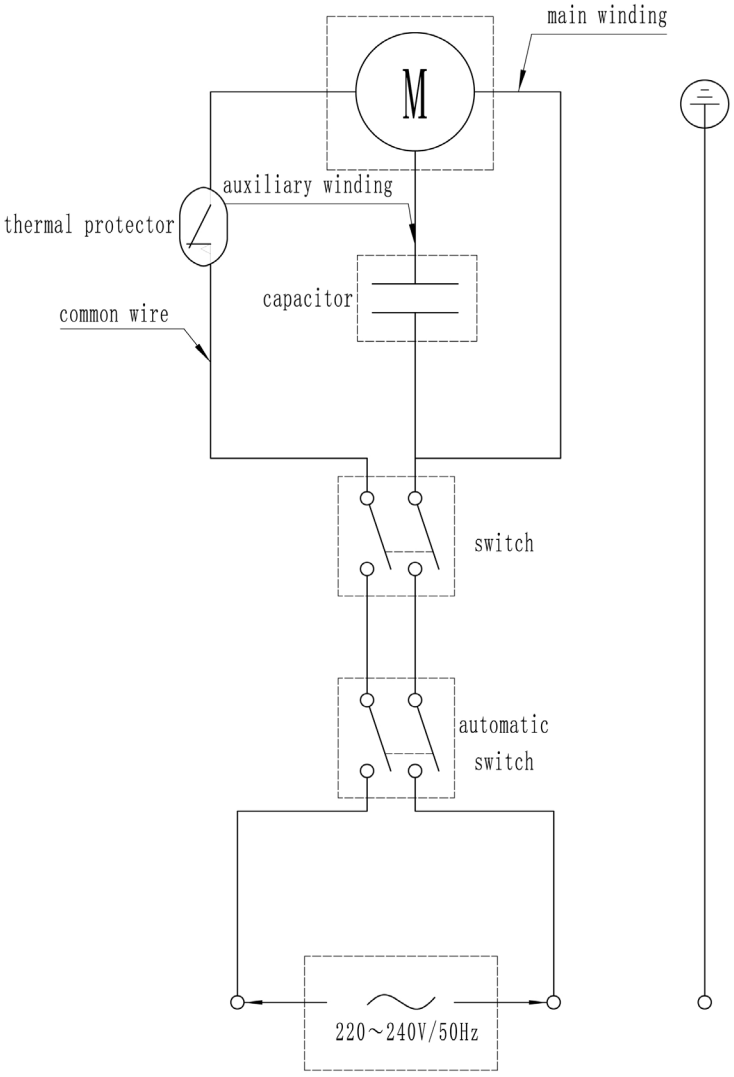
Figure 1 Pump Pipeline Installation Diagram

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6. Electrical Connection

⚠	Make sure that there is no voltage at the line wire terminals before connecting. The electric pump shall be grounded reliably to avoid electric leakage and an earth leakage circuit breaker shall be equipped.

The electrical connection shall be carried out according to the local regulations. Check that the pump operates within the specified range on the nameplate. Connect up the pump (making sure that there is an efficient grounding circuit) according to the diagram on the nameplate on the motor. The correct direction of rotation for three-phase motors is clockwise, looking at the pump from the motor fan side. If this is not the case, invert two of the phases.



7. Automatic Device

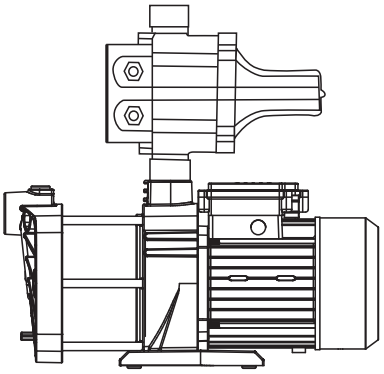


Figure 3 Automatic Device Diagram

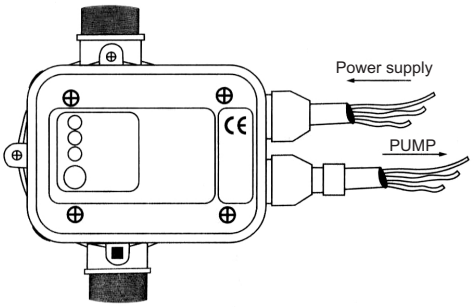
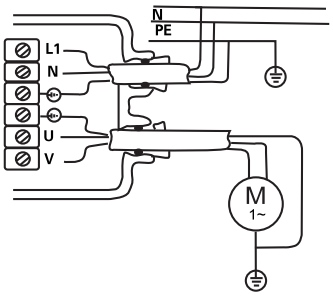
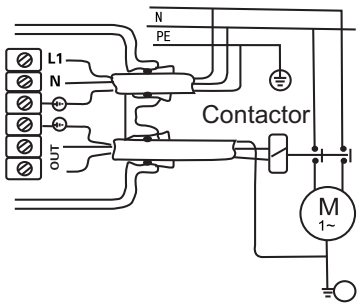


Figure 4



For single phase 220 V/110 V.
Power up to 1.1 kW.



For single phase 220 V/110 V
with contactor.
Power above 1.1 kW.

Specifications of the
contactor : 220 V/110 V,
With minimum power of 4 kW
(5.5 HP).

Follow the wire diagrams box to make correct connections.
Incorrect connections may damage the circuit board. The outer diameter of the 3-core cable shall be between 6 mm and 9 mm. o ensure the water tightness of the control box, all screws and bolts must be tightened.

STARTING
Upon the unit is connected to the power supply , the button “Power On” becomes green and the button “Pump On” becomes yellow. The pump is ready for operation.
The pump keeps running for a few seconds to charge pressure in the pipe system till the required pressure is reached. In case the pressure cannot be reached, the button “Failure” will becomes red in a few seconds. Open the tap and keep the button “Reset” pressed till the “Failure” light goes out.
The pump will be shut down by the unit when the max pressure is reached inside the pump in condition the button “Reset” is released and the tap is closed.

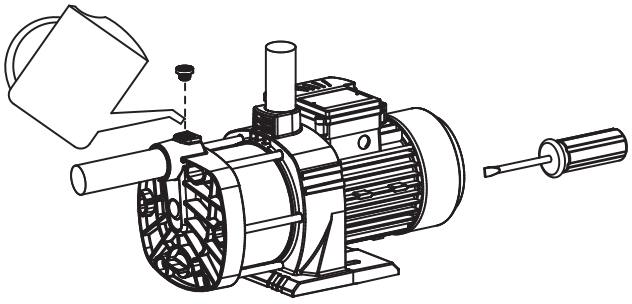
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FUNCTION
The unit is programmed to control all pump operations automatically.
Some malfunctions can be detected by the unit, such as insufficient water supply and blocked inlet.
In this case the button “Failure” becomes red and the pump is stopped by the unit to avoid pump damage caused by dry running.
Restart the unit by pressing the button ”Reset” after the malfunction is fixed.

NOTE
Before first operation, the inlet pipeline must be fully filled with water and installed with a bottom valve.(Figure 1)

8. Start-up and Maintenance

⚠	Do not switch on the pump if the pump chamber is not fully filled with water. Do not touch the electric pump unless the power of pump is cut off for over 5 minutes. Do not remove the pump bonnet unless the water in pump chamber is completely drained.

	Stir the fan with a screwdriver to check if the pump rotates flexibly before startup. Remove the filling plug and prime the pump chamber fully with clean water, then screw the filling plug. Keep the valve wide opened during startup. When the pump runs normally, adjust the valve to the required flow (The range of flow and head is shown on the nameplate).

Note:

1 .) If no water can be pumped in 5 minutes after the pump is filled with water and started up, turn off and refill the pump, or check the leakage of inlet pipelines, then restart the pump.

2). For frost and freeze protection, remove the discharge plug on the air tank and drain the water in the pump chamber completely. Before restart the pump, it's necessary to remove the filling plug, fill the pump fully with water, and then screw the filling plug.

3). In case of no use for a long time, discharge the water in the pump chamber and store the pump in a dry, well-ventilated place.

4). If the ambient temperature is high, make sure the pump works in a well-ventilated place to avoid electrical faults caused by dew on electrical parts.

5). In case of overheat or abnormal operation of the pump motor, cut off the power supply immediately, and check the faults according to the following form.

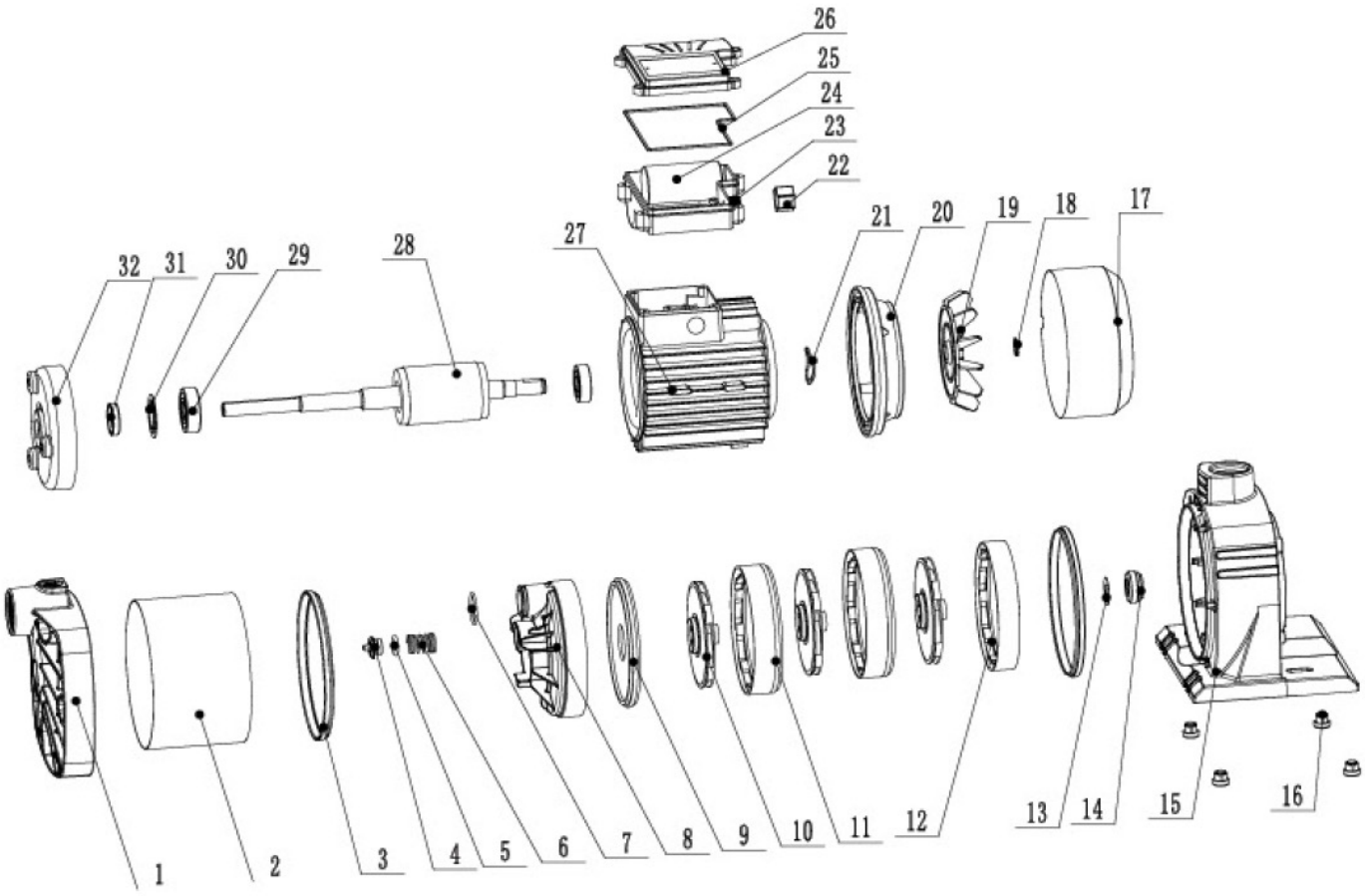
9. Troubleshooting



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).
	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.

PARTS LIST



NO	PART	MATERIAL
1	Pump body	PP-GF30
2	Pump barrel	304
3	Seal washer	NBR
4	Return valve	PPO·GF30
5	O-ring	NBR
6	Spring	304
7	O-ring	NBR
8	Return cover	PPO-GF30
9	Pump cover	PPO-GF30
10	Impeller	PPO-GF30
11	Drain cover	PPO-GF30
12	Diffuser	PPO-GF30
13	Flat washer	304
14	Mechanical seal	
15	Support	
16	Rubber brace	NBR

NO	PART	MATERIAL
17	Fan cover	08F
18	Elastic retaining ring for shaft	65Mn
19	Fan	PP-GF15
20	Rear cover	ZL102
21	Waveform spring	202
22	Cover box nut	PA6-CF25
23	Cover box	ABS
24	Capacitor	
25	Cover box sealing ring	NBR
26	Capacitor box	ABS
27	Stator	
28	Rotor	
29	Bearing	
30	Adjusting gasket	ST12 Galvanized
31	Water proof gland	
32	Front end cover	ZL102

WARRANTY

This product comes with a 2-year parts warranty for all items used for domestic purposes from the date of purchase. For products used for commercial purposes, the warranty period is 3 months.

Warranty coverage does not include damage caused by normal wear and tear, accidents, misuse, lack of maintenance, neglect, natural disasters, or other external causes. Additionally, damage caused by operating the equipment in a manner outside the described instructions will not be covered. The warranty is considered void if the item has been modified, altered, or tampered with by a person, excluding standard periodic maintenance.

The warranty does not cover consumables such as tyres, blades, belts, brakes, chains, clutches, bearings, and pull starts.

Misuse or Abuse: We do not offer a warranty on items damaged due to misuse, abuse, or infrequent servicing. No refund or exchange will be provided in such instances. Please check each item description for further warranty details, as some specific components of power equipment are not covered. Warranties do not cover issues arising from lack of oil in engines or improper oil-fuel mixtures where required

Australian Consumer Law: Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if they fail to be of acceptable quality and the failure does not amount to a major failure.

Customer Support

For further assistance, kindly reach out to our dedicated Customer Support Department at Bigger Boyz Toyz. We are here to assist you.

Phone: 02 4257 4787
Email: bbt@bbta.com.au
Warehouse: Unit 2/3 Delta Place, Albion Park Rail NSW 2527

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