OWNER'S MANUAL

Assembly & Operating Instructions

PAICHI

PROFLOW 4500

WPE-PF-4500



N23701 CE

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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Always disconnect the appliance from the supply before assembling, disassembling or cleaning.
Appliances can be used by 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 if they understand the hazards involved.
Children shall not play with the appliance.
Pumps without indication that they are protected against the effect of freezing shall not be left outside during freezing weather conditions

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.Cleaning and user maintenance shall not be carried out by children unless they are aged from 8 years and above and supervised.

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.



Read the instructions carefully and follow the rules for safe operation.

The operator shall take full responsibility for personal injury, pump damage and other property losses caused by violation of safety cautions.

1. Applications

It is applicable to household water supply, equipment support, well water lifting, pipeline pressurization, garden watering, vegetable greenhouse watering, fish farming and poultry raising, etc..

Transfer clean water and other non-corrosive liquids with low viscosity; do not transport inflammable, explosive, gasified liquids and liquids containing solid particles or fibers. The PH of water must between 6.5 and 8.5.

Remark:

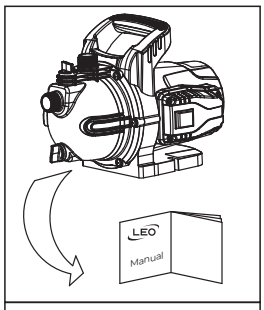
This series of pump could be transformed into automatic water pump, which is realized through external automatic plant that is composed of pressure switch, pressure tank, etc.. Function features of the automatic pump are as follows: when the power is on, turn on the water tap and the pump will start working automatically; when the water tap is turned off, the pump will stop working automatically. If a water tower is used along with the automatic pump, connect to the upper limit switch and the pump will start or

stop working automatically with water level in the water tower.

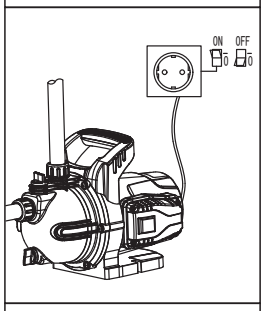
2. Technical

MODEL	WPE-PF-3000	WPE-PF-4500
Rated Power	600 W	1100 W
Max. Head	35 m	46 m
Max. Flow	3.6 m^3/h	4.6 m^3/h
Outlet/Inlet	G1 x G1	G1 x G1
Protection Class	IPX4	IPX4
Operating Limits	Fluid temperature up to 35℃; Ambient temperature up to 40℃	

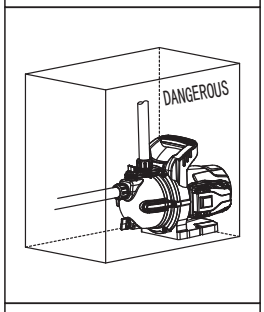
3. Safety Precautions



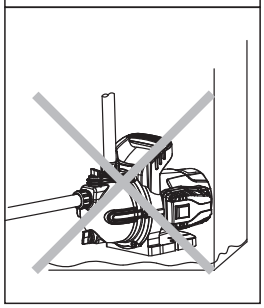
1).To ensure normal and safety operation of the electric pump, read the manual carefully before use.



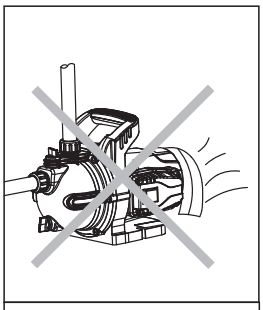
2).The electric pump should have reliable grounding to prevent short circuit; for safety, leakage protection switch should be equipped and be careful no to wet the power plug; socket should be connected in damp - proof area.



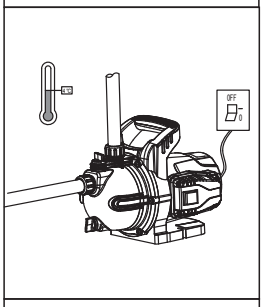
3).Do not touch the electric pump while working; do not wash, swim near working area or let livestock into the water to avoid accidents.



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

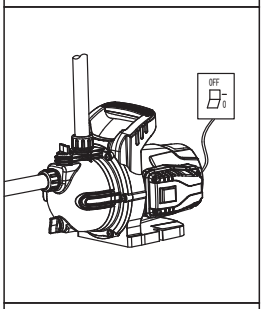


5).Keep the pump in ventilation.



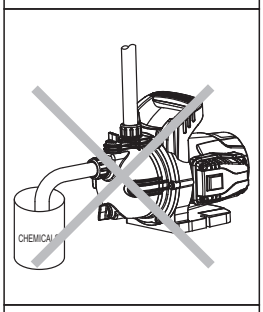
6).In case ambient temperature is lower than 4℃or the pump is not used for a long time, empty liquid the pipeline system to avoid ice cracking of the pump chamber.

Do not keep the pump dry running for a long time.

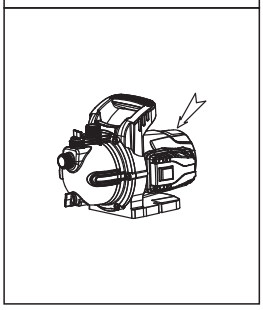


7).The pumped liquid may be hot and under high pressure.

Before moving and demounting the bump, valves in both sides of the bump should be turned off first and then empty liquids in the pump and pipelines so as not to be scalded.



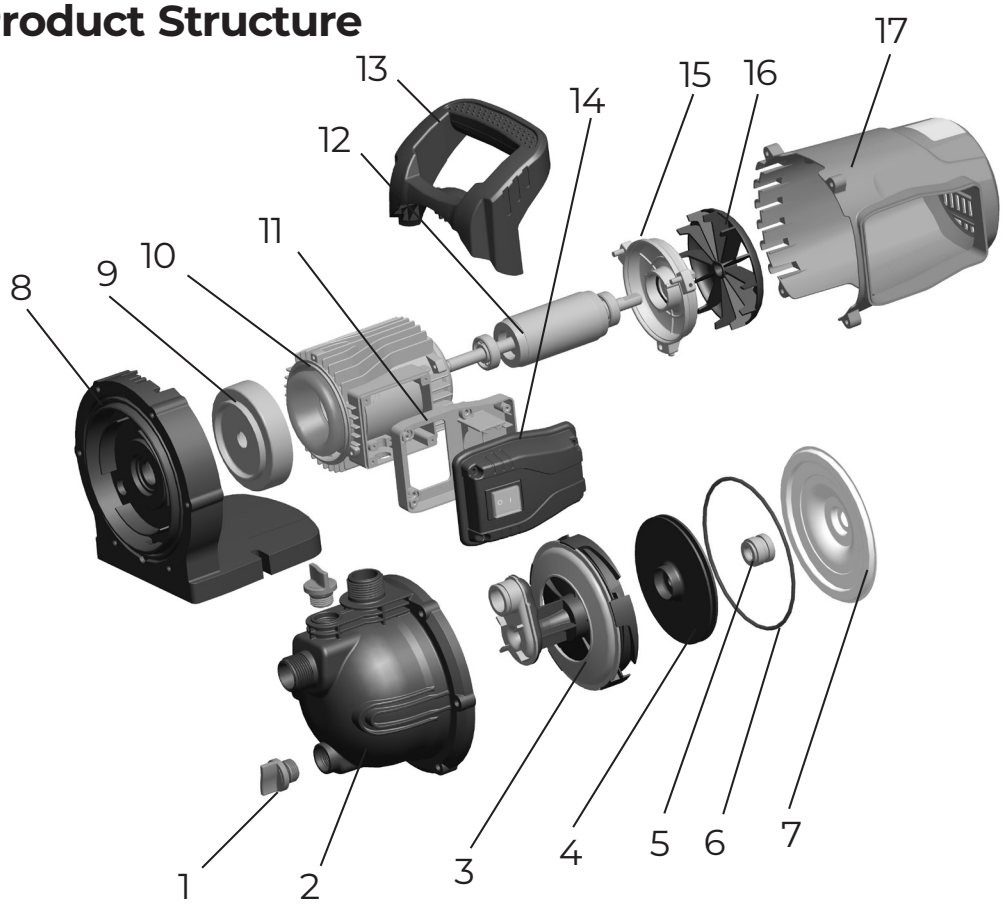
8).Do not transfer any inflammable, explosive or gasified liquids that beyond the stipulation.



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

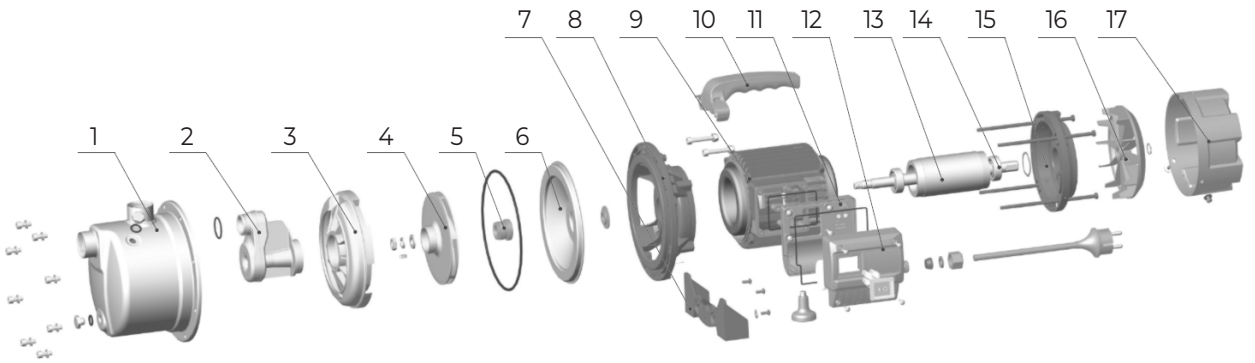
Keep the pump in a dry, well ventilated and cool place under room temperature for long time storage.

4. Product Structure



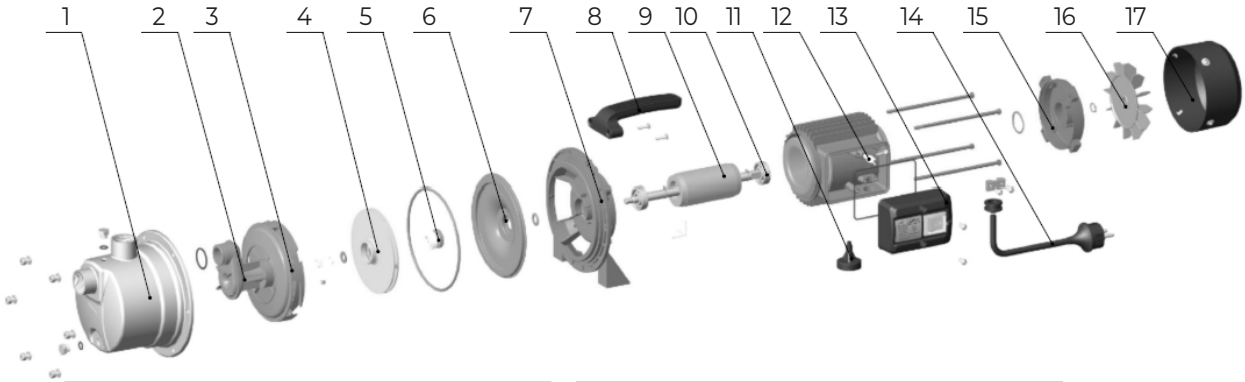
POS.	Part
1	Plug
2	Pump body
3	Diffuser
4	Impeller
5	Mechanical seal
6	O-ring
7	Bracket cover
8	Support
9	Front cover

POS.	Part
10	Motor stator
11	Inside switch cover
12	Rotor
13	Handle
14	Switch cover
15	End plate
16	Fan
17	Motor cover



POS.	Part
1	Pump body
2	Injector
3	Diffuser
4	Impeller
5	Mechanical seal
6	Support cover
7	Bracket
8	Pump support
9	Stator

POS.	Part
10	Handle
11	Terminal box
12	Terminal box cover
13	Rotor
14	Bearing
15	End plate
16	Fan
17	Fan cover



POS.	Part
1	Pump body
2	Injector
3	Diffuser
4	Impeller
5	Mechanical seal
6	Support cover
7	Support cover
8	Handle
9	Rotor

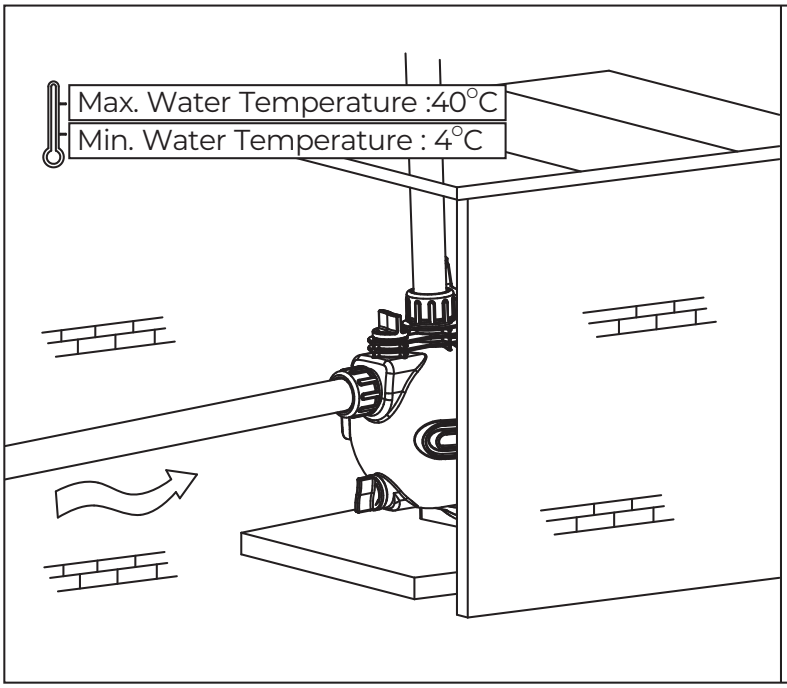
POS.	Part
10	Bearing
11	Bracket
12	Stator
13	Terminal box
14	Cable
15	End plate
16	Fan
17	Fan cover

5. Pipeline Installation

This product should be installed and maintained by personnel who is proficient in this manual and has special qualifications.

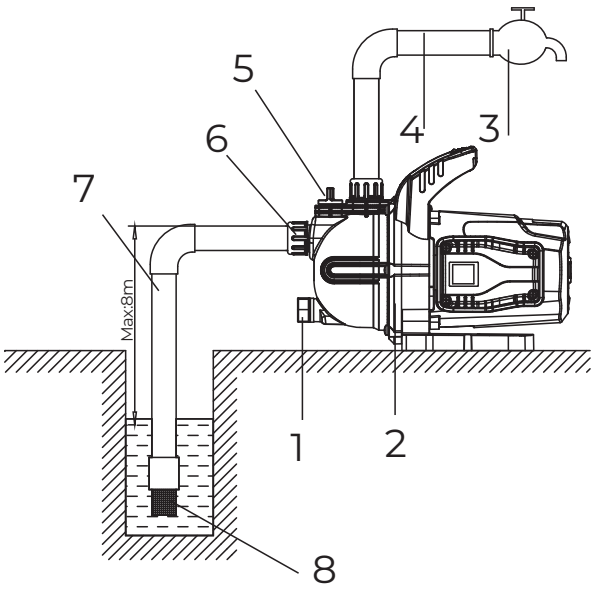
Installation and operation should be in accordance with local regulations and recognized operation standards.

Install pipelines properly as stipulated in the manual and meanwhile conduct frost protection measures for the pipeline.



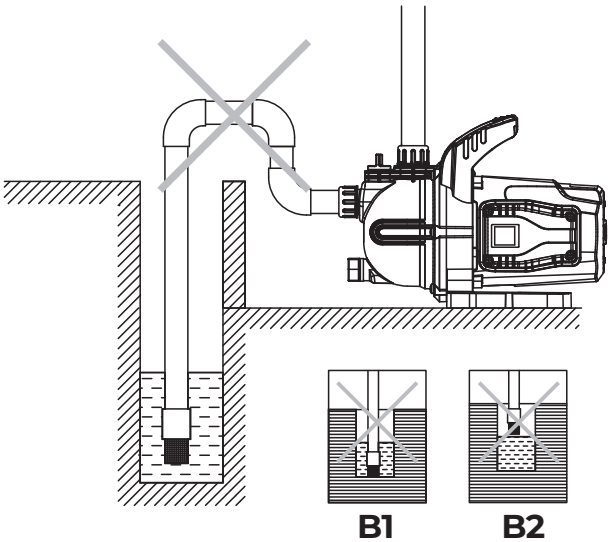
1. For pump installation, the inlet pipe should be as short as possible with the least turnings. The pump should be installed in ventilated and dry environment. It could be installed outside, provided having proper covering to prevent rain and wind.

2. For pipeline use, valves should be installed on inlet and outlet pipelines and the inlet pipeline should be installed with check valve.



Correct Installation Diagram A

Incorrect Installation Diagram B



A:

1. Drain Plug
2. Electric pump
3. Water tap
4. Outlet pipe
5. Filling plug
6. Tie-in
7. Inlet pipe
8. Foot valve

B: Installation precautions for inlet pipelines

1). While installing the electric pump, do not use too soft rubber tube for the inlet pipeline, avoiding to be sucked flat.

2). The foot valve should be vertically placed and installed 30cm from water bottom to avoid sucking in sands and stones (B2);

3). Joints of the inlet pipelines should be sealed with the least elbows, no water can be sucked.

4). Diameter of the inlet pipe should be at least in accordance with that of the water inlet, so as to avoid too much water loss which will influence outlet performance.

5). Pay attention to drop of water level while using, the foot valve should not be above the water surface (B1).

6). In case the inlet pipe is longer than 10m or its lifting height exceeds 4m, the pipe diameter should exceed diameter of water inlet of the pump.

7). Ensure the pumped will not be affected by pipeline pressures while installing the pipelines.

8). Filter should be installed in inlet pipelines so as to avoid solid particles to enter into the electric pump.

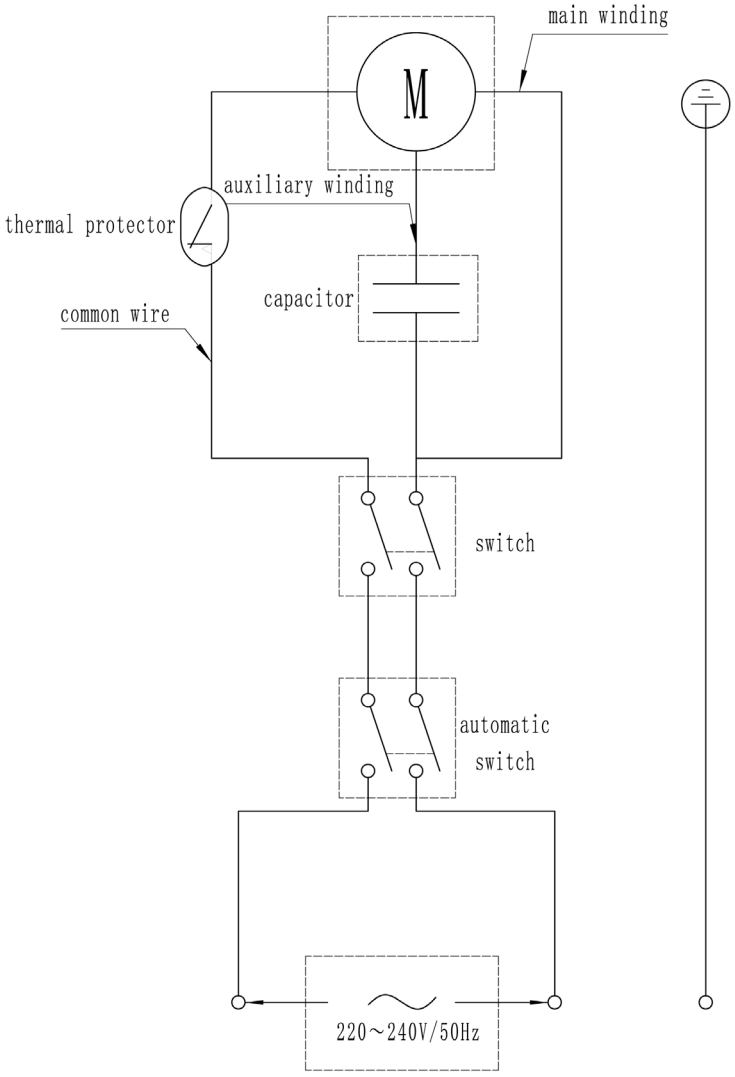
C: Installation Precautions of the outlet pipeline

Pipe diameter of the outlet pipeline should be at least in accordance with that of the water outlet, so as to reduce its voltage drop, high flow rate and noise to the minimum.

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.



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7. Automatic Device

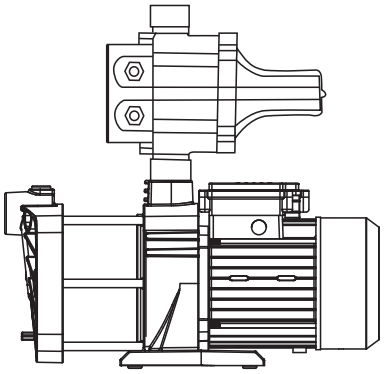


Figure 3 Automatic Device Diagram

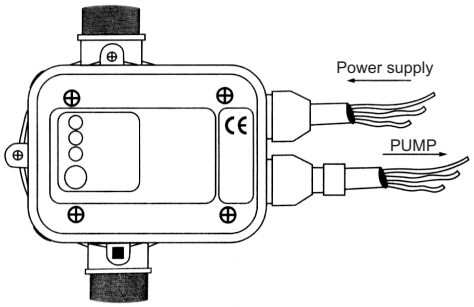
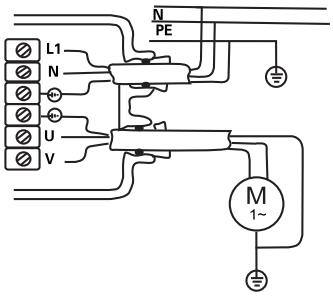
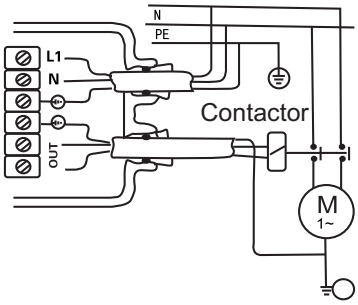


Figure 4



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.

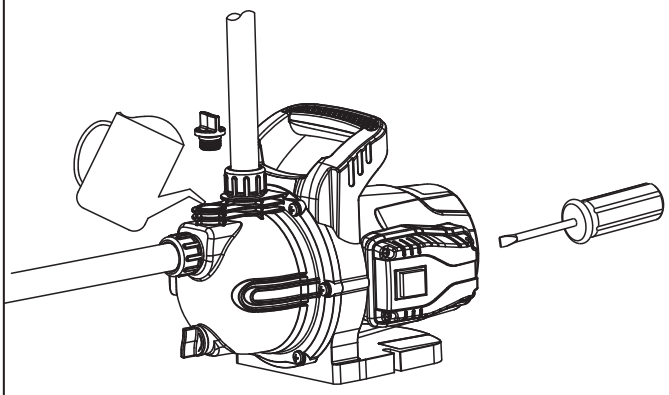
STARTING
Upon the unit is connected to the power supply , the button “Power On” becomes green and the button “Pump On” becomes yellow. The pump is ready for operation.
The pump keeps running for a few seconds to charge pressure in the pipe system till the required pressure is reached. In case the pressure 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.

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

Attention:

1). The pump chamber should be filled with water before first use and water refilling is unnecessary in the future.

2). 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.

3). In case of any frost and ice damages, please open the drain plug to empty water in the pump chamber. When start up the pump again, open the drain plug, fill water and tighten it and then the pump is usable.

4). 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.

5). In case the pump is halted for a long time, start it up again according to above diagram.

6). In summer or when the ambient temperature is high, pay attention to ventilation, avoid dew on electrical parts which will result in electrical faults.

7). In case the motor is hot or abnormal, cut off the power immediately and check faults according to the following table.

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).
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.
	Water that is too hot can result in the failure of plastic parts.	Replace the damaged parts (send to the maintenance point for repair)
Insufficient pressure	Incorrect pump type.	Select suitable model.
	The inlet pipeline is too long or with too many bends, or/and 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 foreign materials.
Motor works intermittently or the stator winding is burned out	The impeller is jammed or in overload operation for a long time.	Clear foreign materials in the pump chamber; operate the pump under the rated flow.
	Incorrect grounding, broken cable or the electric pump is struck by lightning.	Properly grounded, replace the broken cable , and replace winding coils.

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

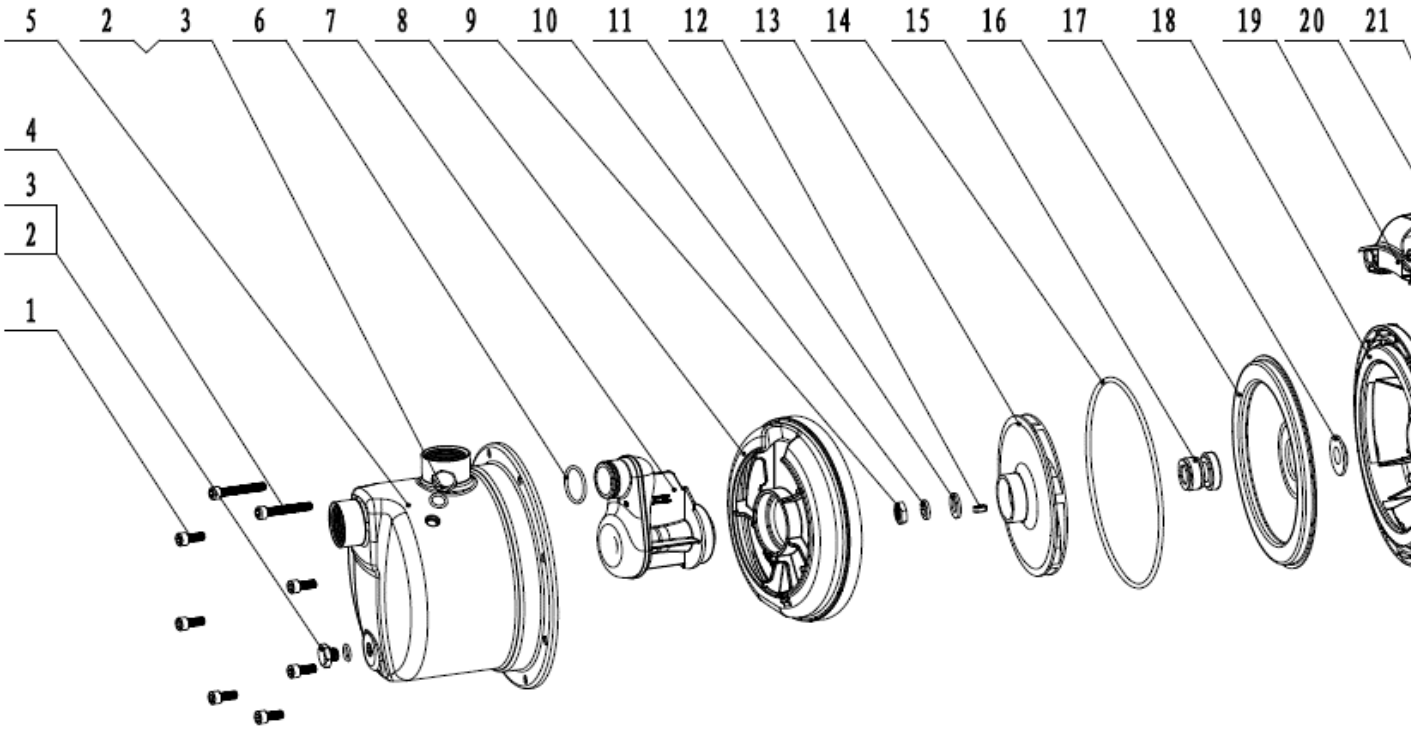
Australian Consumer Law: Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or 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.

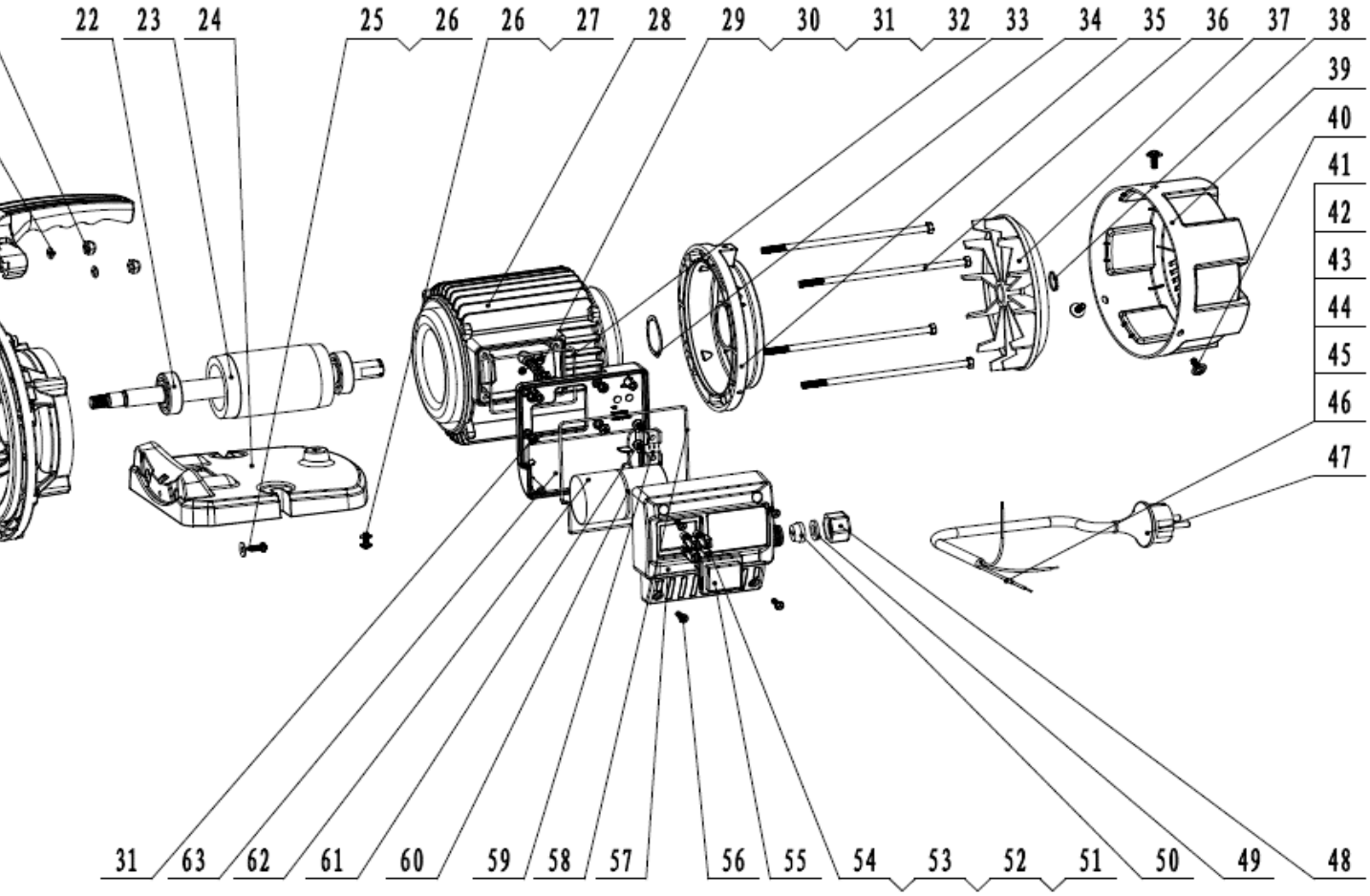
Phone: 02 4257 4787
Email: bbt@bbta.com.au
Warehouse: Unit 2/3 Delta Place, Albion Park Rail NSW 2527

PARTS LIST



NO	PART	MATERIAL
1	Screw	A2-70(304)
2	Water injection screw	HPb59-1
3	0-ring	NBR
4	Screw	A2-70(304)
5	Pump body	304
6	0-ring	NBR
7	Injector	PPO-GF30
8	Diffuser	PPO-GF30
9	Hexangular nut	A2-035 (304)
10	Spring washer	304
11	Washer	200HV (304)
12	Shaft key	304
13	Impeller	PPO-GF30
14	0-ring	NBR
15	Mechancial seal	B6V2P1F1F1
16	Bracket cover	304
17	Rubber washer	NBR
18	Motor flange	ADC12

NO	PART	MATERIAL
19	Handle	PP-GF30
20	Washer	200HV (201)
21	Nut	
22	Deep groove ball bearing	
23	Rotor	
24	Bottom plate	PP-GF30
25	Washer	200HV (304)
26	Screw	A1-50(201)
27	Washer	200HV (201)
28	Stator	
29	Circular naked terminal	
30	Fixing washer	65Mn
31	Screw	20H(304)
32	Spring washer	65Mn
33	Seal	EPDM
34	Wave spring	65Mn
35	End plate	ADC12
36	Hexangular bolt	



NO	PART	MATERIAL
37	Fan	PP-TD10
38	Circlips for shaft	65Mn
39	Fan cover	PP-TD10
40	Screw	A2-70(304)
41	Line	
42	Insulated flexible pipe	
43	Terminal lug	
44	Heat shrinkable tube	
45	Cable	
46	Clamp wire cap	
47	Flame proof block	PP-GF30
48	Nut	ABS
49	Seal	PP
50	Seal ring	NBR

NO	PART	MATERIAL
51	Plug Jacket	
52	Insert spring	H62
53	Insert spring	H62
54	Plug Jacket	
55	Waterproof switch	
56	Screw	20H(201)
57	Switch box cover	ABS
58	Seal	EPDM
59	Cable clip	PC+ABS
60	0-ring	EPDM
61	Screw	ML20Mn
62	Capacitor	
63	Switch box	ABS

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