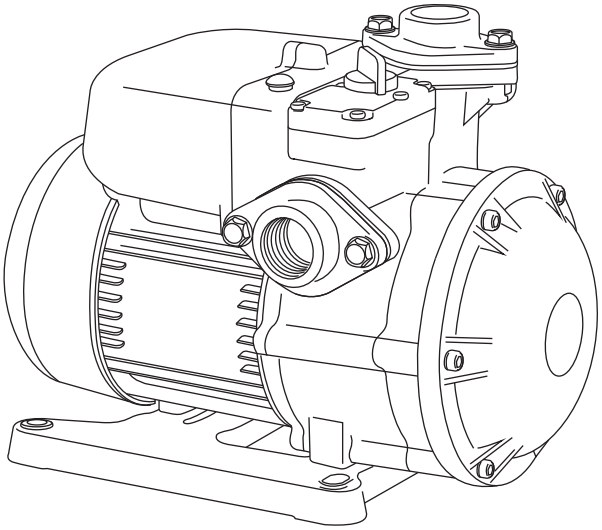
WALRUS PUMP

TS_B Series

Instruction Manual

Multistage Centrifugal Pump



Model : 400B / 800B / 1500B / 2200B / 3700B

To ensure safe and proper use, please read this instruction before operation.

ISO 9001 Certified **WALRUS PUMP CO., LTD.** CE

EC Declaration of Conformity

Manufacturer:

Walrus Pump Co., Ltd.

Address:

No.83-14, Dapiantou, Sanzhi Dist, New Taipei City 252, Taiwan

Declare that the machinery described:

Name : Water Pump

Model : TS_B Series

Conform to the following directive:

2006/42/EC—Machinery directive

2014/35/EU—Low voltage directive

2014/30/EU—EMC (Electromagnetic compatibility) directive

Refer to the following standards:

EN ISO 12100:2010 EN ISO 13857:2008

EN 809:1998+A1:2009

EN 60335-1:2002 EN 60335-2-41:2003

EN 61000-6-2:2005 EN 61000-6-3:2007

R&D department manager: Kao Tien-chuan

Manager: Kao Tien chuan

Please read all instructions carefully before installing your new system, as failures caused by incorrect installation or operation are not covered by the warranty.

I. Applications

The TS_B series are multistage centrifugal pumps suitable for pressure boosting applications such as increasing water pressure from city mains or private water systems. They are also suitable for other applications such as:

- Water circulation
- Liquid transfer
- Irrigation systems
- Lawn sprinkle systems
- Washing systems
- General purpose pumping

The pump casing for TS_B series is made of antibacterial engineering plastics containing silver ions that comply with RoHS specifications.

When positively-charged silver ions meet the negatively-charged microbial cells, silver ions will pierce through the surfaces of bacterial cells, damaging their structure and inhibiting bacterial reproduction.

The silver ions feature applied to the pump casting will provide an excellent bacterial-inhibiting effect and improve the quality of water.

II. Operation Conditions

1. Ambient temperature: Max. 40°C (+104°F)
2. Liquid temperature: 4°C(+39°F) ~ +40°C(104°F)
3. System Pressure : Max. 8.5 kg/cm²
4. Suitable Liquids : Potable water or other clean or non-corrosive liquids.
5. Indoor Use Only

III. Product Features

1. Multistage design provides steady, quiet and vibration-free operation for years of trouble-free service.
2. Close coupled, space saving design provides easy installation.
3. All parts in contact with water are made from corrosion resistant materials.
4. Capable of transferring both plain and salt water.
5. The pump is installed with thermostat protection switch to protect against dry running. The pump will shut off when water temperature exceeds 55°C (130°F). (TS400B /800B only)
6. The motor has a built-in thermal overload to protect against high operating temperatures and over current (Single phase motor only)
7. The pumps will lift water up to 7.6m. with foot valve and pump suction piping filled with water

IV. Installation

1. Choose a site with sold foundation, dry and good ventilation. Please provide accessible space around the pump and leave at least 12"(30cm) clearance between

your motor end to the wall.

2. The Walrus TS pumps are for indoor use only. When used outdoors, the pump should be in an enclosure which is out of direct sunlight, water proof, frost free and has adequate ventilation. Make sure the enclosure is compliant with local regulations.
3. Always mount the pump horizontally on a firm base.
4. Please install the pump as close to water source as possible. The long suction pipes may cause pressure loss.

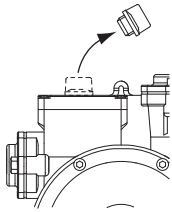
5. Ensure all connections are completely sealed using thread tape only. An air leak on the suction may cause your pump running without discharge flow.
6. Make sure the environment of your pump site free from abrasive liquid, PVC, metal chips or anything else that will damage your equipment.
7. The pump has a built-in check valve; please do not install any other valve on the suction.
8. For best performance use pipes at least the same diameter as the pump's inlet and delivery outlet openings. It is recommended to use metal hose for outlet piping.
9. Do not let your pump run when there is no water available or water temperature is over 40°C (104°F).
10. In general the motor has dual voltage supply and the factory has preset the voltage before shipping. (TS 400/800)
11. For your safety, please hook up a circuit breaker and connect grounding connections to the pump in accordance with local regulations.

V. Operation

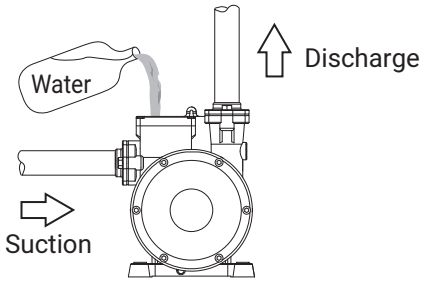
Never run pump when no water is available. When you have successfully installed the pump and fill the chamber with water, please follow the instructions on Fig. 1 to start up the operation.

1. Remove the filling plug and fill the chamber with water and then replace the plug.

a. Remove the filling plug



b. Fill water in chamber



c. Replace the filling plug

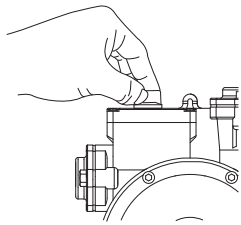


Fig. 1

2. When the pump inlet is lower than the water supply level, please remove the filling plug to let water back flow to the chamber. It can be repeated as many times as necessary till the air is completely released from system. Then, replace your filling plug.
3. For start up of the first operation or after long time inactivity, please place a screwdriver against the shaft at motor end and turn clockwise to see if rotor spins freely. (Fig. 2). If it is, you are free to run the pump.

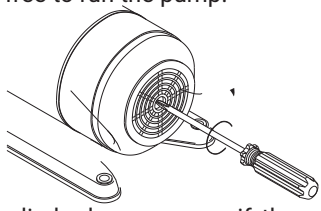


Fig. 2

4. When 3-phase motor is supplied, please ensure if the rotation is correct. You can switch any of the 2 wires to get your desired rotation.
5. When the pump is running normally, please measure the running current with a wattmeter. If it exceeds the rated value on nameplate, please check if your power supply voltage is within ±10%. Please contact your pump supplier if you are not sure how to correct it.

VI. Wiring diagram

WARNING:

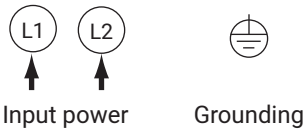
Risk of Electric Shock - This pump is supplied with a grounding conductor and grounding-type attachment plug. To reduce the risk of electric shock, be certain that it is connected only to a properly grounded, grounding-type receptacle".



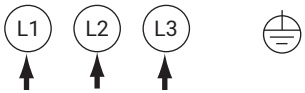
This mark located outside the connection box is a warning for an electrical hazard.

Before operation, please check if the voltage is correct and be sure if the circuit breaker and grounding connectors are all connected in accordance with local regulations.

Single-phase power supply

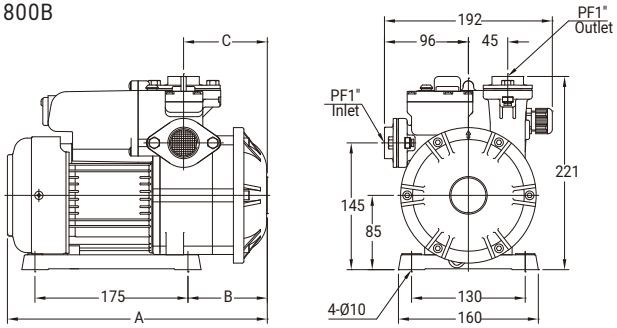


3-phase power supply (check if rotation is correct)

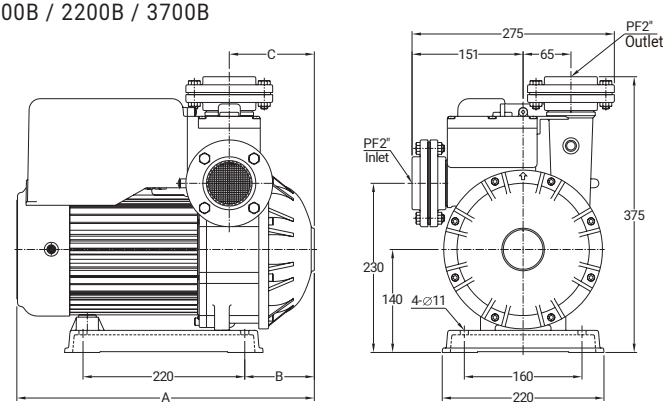


VIII. Dimensions: (mm)

TS400B / 800B



TS1500B / 2200B / 3700B



ModelB	A (mm)	B (mm)	C (mm)
TS400B	297	90	95
TS800B	352	99	104
TS1500B / TS2200B / TS3700B	405	95	116

VIII. Troubleshooting



Before starting work on the pump, make sure that the electricity supply has been switched off and that it cannot be accidentally switched on.

Problem	Cause	Remedy
1. pump does not start	a. No power supply	Connect the electricity supply
	b. Too low/high voltage	Check if supply voltage is within ± 10%
	c. Seized-up pump	Place a screwdriver against the shaft end of the motor to check it the rotor will spin freely, and contact your pump
2. Pump cuts out during operation	a. Seized-up pump	supplier.
	b. Overloaded motor	Same as above Turn off the power supply and restart or
	c. Poor water supply	contact your pump supplier.
	d. Overheating due to excessive water temperature	Check if pump suction inlet is blocked. 1. Wait till water temp. cool down before restarting the pump. 2. For rapid restart, fill cold water to the chamber to quickly cool down the liquid temp.
3. Electric shock	a.Ineffective grounding	Reactivate grounding.
4. Pump runs normal but with very low discharge flow	a. 3-phase motor runs in wrong rotation.	Switch any of the 2 wires from motor terminal to correct rotation.
	b. Poor water supply	check if water supply is adequate and if the suction pipe is blocked.

IX. Maintenance and service

Under normal operating conditions, the pump is maintenance free. It is especially critical, when the ambient temperature reaches 40°C (104°F), to keep your pump site dry and maintain good ventilation. It is always advisable to provide accessible space around the pump.

You may refer to troubleshooting check list to find out a quick solution for your problems. However if the problems are still existed after your attempts or you need other services, please contact your pump supplier. Do not attempt to disassemble the pump as it will void your warranty.

Limited Warranty

Products manufactured by Walrus Pumps Co (Walrus) 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. Walrus' liability under this warranty shall be limited to repairing or replacing at our election, without charge, FOB Walrus' distribution center or authorized service agent. Walrus 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.

This warranty is subject to due compliance by the original purchaser with all directions and conditions set out in the installation and operating instructions. Failure to comply with these instructions, damage or breakdown caused by fair wear and tear, negligence, misuse, incorrect installation, inappropriate chemicals or additives in the water, inadequate protection against freezing, rain or other adverse weather conditions, corrosive or abrasive water, lightning or high voltage spikes or through unauthorized persons attempting repairs are not covered under warranty.

Walrus 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 states 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 not apply. This warranty sets forth specific legal rights and obligations, however, additional rights may exist, which may vary from state to state.

Supersedes all previous publications

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