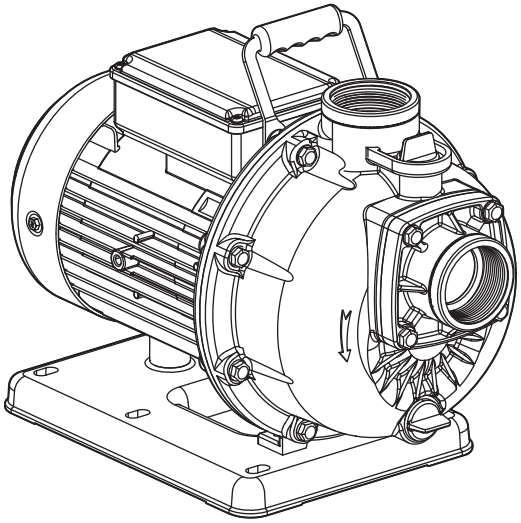
WALRUS PUMP

TPU Series

Instruction Manual

Self-prime Pump



Model : TPU 550 / TPU 1100 / TPU 1500

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

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

TPU Instruction Manual

Before installing your new system, please study all instructions carefully, as the warranty does not cover failures caused by incorrect installation and operation.

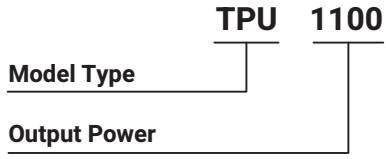
1. Application

1.1 The TPU Series is single-stage centrifugal pump designed for farm or fishery use.

1.2 The pump can not be used to transfer explosive liquids, such as gasoline, diesel oil or similar liquids. It is suitable to carry liquids such as water, coolant, low viscosity or other non-corrosive liquids.

2. Product Code Designation

The pump is named by motor's output power. There are numbers in nameplate.



3. Operating Limits

1. Ambient Temperature: Max. +40°C
2. Liquid Temperature range: +4°C ~ +40°C
3. Enclosure Class: IP54
4. Operating pressure: Max. 3kg/cm²
5. Inlet Pressure: 0 kg/cm²
6. Kinematical Viscosity: 1 cst (mm²/s)
7. Max. Suction depth: 6m
8. Stop and Restarts:

Output power[kW]	times/hour
Below 2.2	250

4. Installation

The pump has hot surface on the motor. It must be installed so that persons cannot accidentally come into contact the hot surface.

4.1 We recommend outlet and inlet should stay the same size as the original. If you marrow the pipe size, it will affect the performance of the pump.

4.2 For convenient replace or maintenance, the outlet side must be installation valve and union, and the inlet side should install union too.

4.3 Please shorten the pipe as possible as well, so that reduce leakage.

4.4 Please install filter at inlet, if there is easily inhale Impurities.

4.5 Install the pump in a well-ventilated and well-drained place.

5. Electrical Connection

5.1 The electrical connection should be carried out in accordance with local regulations. Never make any connections unless the electricity supply has been switched off.

5.2 The electrical hazard warning mark is placed outside the connection box. Be careful.

5.3 The electrical connection should be carried out in accordance with local regulations. The operating voltage and frequency are marked on the nameplate. Please make sure that these data match your job requirement.

5.4 For your safety, please make sure that the wiring is correctly grounded.

5.5 To avoid the possibility of dry running, we strongly recommend installing dry running protection.

5.6 The pumps must be supplied through a Residual Current Device (RCD) with a rated residual operating current not exceeding 30 mA.

5.7 If the supply cord is damaged, it must be replaced by the manufacturer, authorized service agent, or qualified persons in order to avoid causing a hazard.

5.8 This pump appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities or lack of experience and knowledge unless they have been given supervision or instruction concerning use of the pump appliance by a person responsible for their safety.

5.9 Make electrical connection in accordance with connecting diagram located inside the connection box. The motor current must be within the rated amps range indicated on nameplate. Three phase motor requires a magnetic starter for safety.

5.10 For three phase motors, please check the correct direction of rotation of the pump on the motor fan cover. When seen from motor fan cover end, the pump should rotate clockwise.You can reverse the direction of rotation by interchanging any two of the incoming supply wires.

6. Start-Up

Before starting the pump, make sure the following:

6.1 For three phase motors, verify if the rotating direction is correct. It should be clockwise viewing from the motor fan cover end.

6.2 All piping joints are completely tight. Leakage in piping may cause the pump hydraulic loss.

6.3 The pump is filled with liquid.

6.4 The suction filter is not blocked by any foreign objects.

7. Operation and Maintenance



It is dangerous to operate the pump against a closed discharge outlet because it will cause extre-mely high liquid flow temperature and damage the pump in 20 minutes.

7.1 Lubrication

The pumped liquid lubricates the mechanical seal and shaft sleeves.

7.2 Suction Filter

Always keep suction filter clean and make sure it is not blocked by impurities.

7.3 Periodic Checks

To ensure regular operation, please follow the below-checking points:

7.3.1. Check the amount of liquid and operating pressure.

7.3.2. Check there are no leaks on piping joints.

7.3.3. Check the tripping of the motor starter.

7.3.4. Check that all controls are functioning normally.

7.4 When pump is not in use for a period, it should be drained. For start up after long time inactivity please check if the impeller and mechanical seal are free. If they are locked up by sand, rust or something else please clean them up.

7.5 DO NOT use the pump should not be used to transfer toxic or contaminated liquids. Please carefully follow all instructions in the manual as Walrus may refuse to accept the contaminated pump for servicing.

7.6 If the power supply cord is damaged, it must be replaced by an authorized engineer or assembly available from the manufacturer or service agent.

8. Noise Level

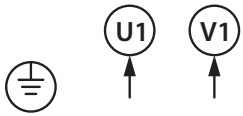
Motor	dB(A)
TPU 550	75
TPU 1100	75
TPU 1500	78

The above drawing shows the noise level while the pump operated with a closed outlet.

The tolerance of noise level is ±3dB(A).

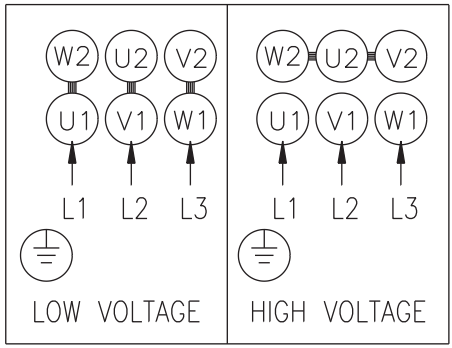
9. Wiring Diagram

Single Phase



200-240V

Three Phase



10.Voltages Code

Code	Hz	Low Voltage	High Voltage
9V	50	200-230 V	342-380 V
	60	220-240 V	380-440 V

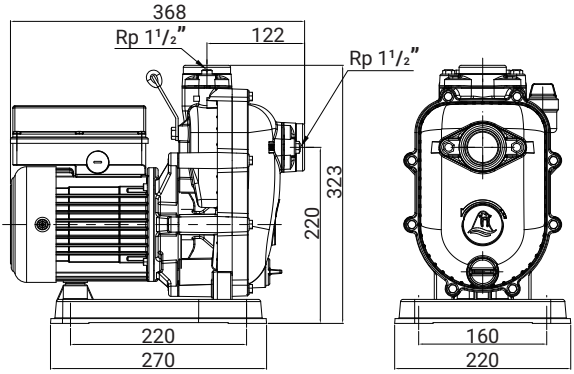
11. Fault Finding

Make sure to disconnect the power before attempting to diagnose any fault.

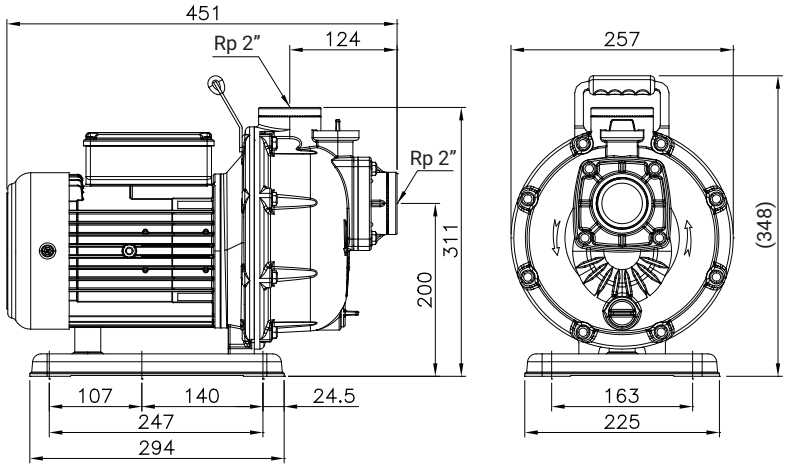
Fault	Cause	Remedy
1. Motor does not run start.	Supply failure.	Connect the electricity supply.
	Fuses are blown.	Replace fuses.
	Motor starter overload has tripped out.	Reactivate the motor protection.
	Thermal protection has tripped out.	Reactivate the thermal protection.
	Main contacts in motor starter are not making contact or the coil is faulty.	Replace contacts or magnetic coil.
	Control circuit is defective.	Repair the control circuit.
	Motor is defective.	Replace the motor.
2. Motor starter overload trips out immedia tely when supply is switched on.	One fuse / automatic circuit breaker is blown.	Cut in the fuse.
	Contacts in motor starter overload are faulty.	Replace motor starter contacts.
	Cable connection is loose or faulty.	Fasten or replace the cable connection.
	Motor winding is defective.	Replace the motor.
	Pump mechanically blocked.	Remove the mechanical blocking of the pump.
	Overload setting is too low.	Set the motor starter correctly.
	One fuse / automatic circuit breaker is blown.	Cut in the fuse.
3. Motor starter overload trips out occasionally.	Overload setting is too low.	Set the motor starter correctly.
	Low voltage at peak times.	Check the electricity supply.
4. Motor starter has not tripped out but the pump does not run.	Supply failure.	Connect the electricity supply.
	Fuses are blown.	Replace fuses.
	Thermal protection has tripped out.	Reactivate the thermal protection.
	Main contacts in motor starter are not making contact or the coil is faulty.	Replace contacts or magnetic coil.
5. Pump runs but gives no liquid or pump capacity is not constant.	Liquid level in tank too low.	Increase the liquid level.
	Pump draws in air.	Check the suction conditions.
6. Leakage in shaft seal.	Shaft seal is defective.	Replace the shaft seal.
7. Noise.	Cavitation occurs in the pump.	Check the suction conditions.
	Pump does not rotate freely (frictional resistance) because of incorrect pump shaft position.	Adjust the pump shaft.

12. Dimensions

TPU 550



TPU 1100 / 1500



13. Performance

Model	TPU 550		TPU 1100		TPU 1500	
Frequency (Hz)	50	60	50	60	50	60
Max. pumping depth	6		6		6	
Max head (m)	10.5	15.5	15	23	18	28
Max flow (L/min)	250	304	400	490	411	510
Pole	2		2		2	
Output power (P2)	0.55kW		1.1kW		1.5kW	
Inlet / Outlet	1.5"		2"		2"	

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