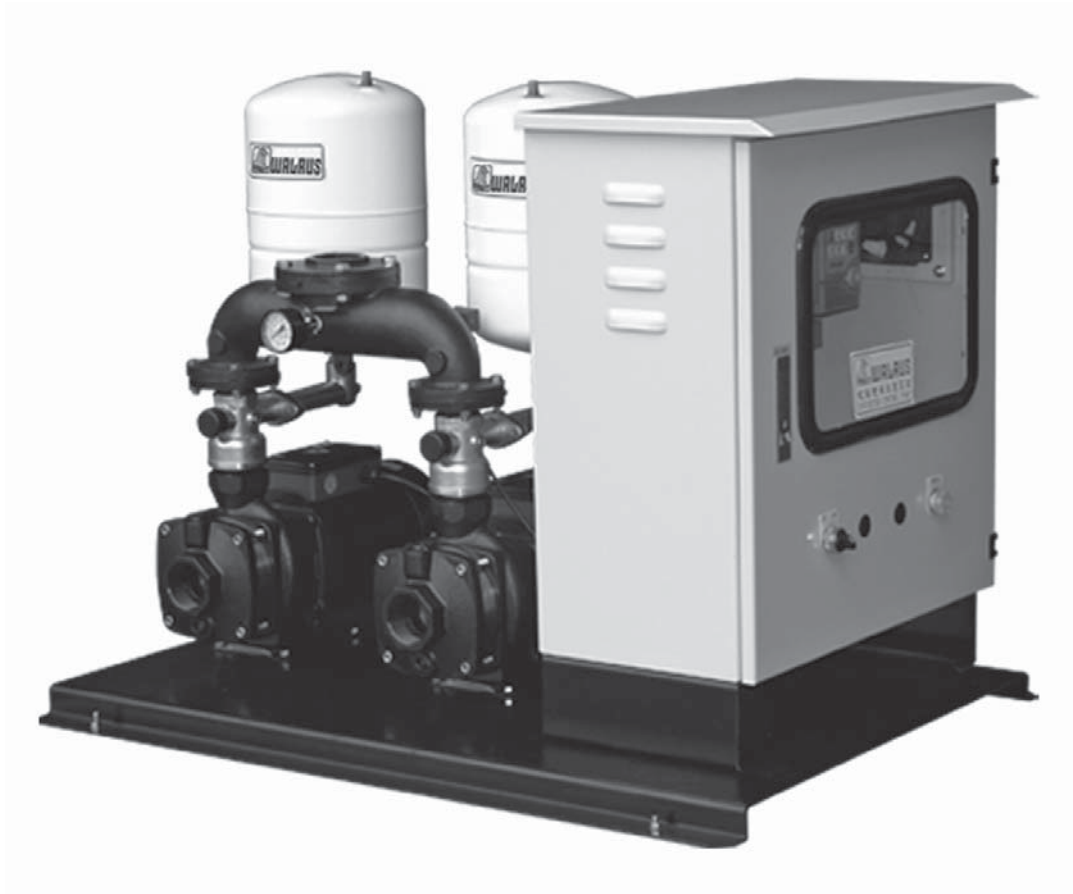




IC Series

*Duplex Booster System
Instruction Manual*



ISO 9001 Certified

Walrus America Inc

Congratulations on your purchase of Walrus IC Series Inverter Control System. Please read all instructions carefully before installing your new systems. The system has been designed and manufactured to give trouble free, reliable operation. Upon receiving, please check the following:

- a. No shipping damage.
- b. Product specs match name plate data (such as pressure, voltage, HP, etc).
- c. All push buttons on control panel function normally.

1. Functions and features

- a. The system provides constant pressure at the pressure set point.
- b. Pump protects from dry-run.
- c. Automatically maintain the set pressure when there is pipeline leak.
- d. Single or parallel unit operation.
- e. Automatically cut-in when there is water demand and cut-off when no water consumes.

2. Installation

2.1 Installation site

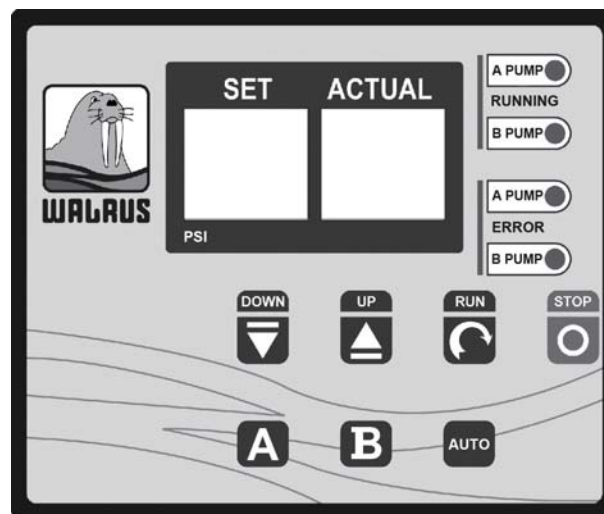
- a. Choose a site dry and with good ventilation. The ambient temperature is at 36°F-104°F.
- b. Recommend to install inside. If you have to install outside, please provide a pump house with water proof and frost free to protect from weather
- c. No vibration and unusual electrical surge.
- d. Easy access for maintenance.

2.2 Cautions of installation

- a. Avoid suck in any solid particle; especially bounding glue or chips from pipe work.
- b. Please hook up with NFB (No Fuse Breaker) to protect motor and control panel.
- c. It has to be properly grounded to avoid electrical shock.

- d. Make sure the power supply is correctly connected at 1-phase 230V, 3-phase 230V or 3-phase 460V.
- e. Never run pump dry; and keep the pumped liquid below 104°F. Make sure your system is always connected to an adequate, reliable source of clean water.

3. Inverter Control Panel



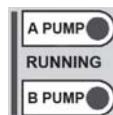
3-1 Status indicators

.SET

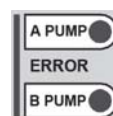
The number in the screen indicates the set pressure.

.ACTUAL

The number in the screen indicates the actual operating pressure.



Both lights on to indicate two pumps are both running. One light on to indicate either Pump A or Pump B is running.



Both lights on to indicate both pumps malfunction. One light on to indicate either Pump A or Pump B is malfunction.

3-2 Functional buttons



Press to reduce pressure (00-99).



Press to increase pressure (00-99).



Press to turn on the pump



Press to force the pump to stop. Under normal operation, the pump will stop automatically when the tap is closed. It is also the function memory key.



Press to operate Pump A only.



Press to operate Pump B only.



Press to run the pumps automatically. Depended on the load, the system will run both pumps simultaneously when the load is heavy and it will run only one pump with the decrease of load.

4. Control Box Panel



4-1 - Status indicator

Green light indicates the power is turn on.

4-2 - On - Off switch

Turn on and off of the pump.

5. Start Up the Pump

5-1. Connect the power and the green light on control box panel will turn on.

5-2. Check if the voltage and wiring are correct before you switch on the pump. The voltage should be kept at + - 10% of the rated voltage on the nameplate

5.3 Priming

Do not start the pump until it has been primed. Follow the following priming instruction:

5.3.1 Booster systems and systems where the liquid level on the suction side is above the pump inlet:

5.3.1.1 Close the isolating valves either side of the pump.

5.3.1.2 Remove the priming plug, fig. 1.

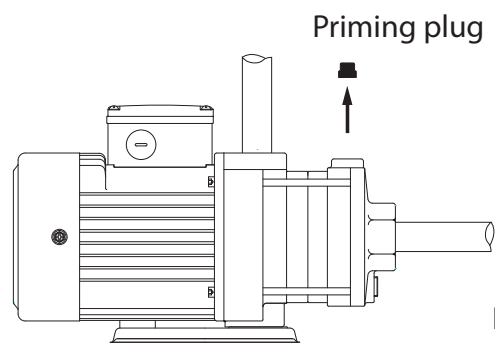


Fig. 1

5.3.1.3 Slowly open the suction valve and keep it open until a steady stream of liquid runs out the priming port.

5.3.1.4 Close the valve, replace the priming plug and tighten it.

5.3.1.5 Open the suction valve.

5.3.1.6 Turn ON to start the pump. The pump will operate at the auto mode.

5.3.1.7 Make sure the motor runs the same direction as the rotating direction sticker (on the motor fan cover).

5.3.1.8 Slowly open the discharge valve until it is fully open.

5.3.2 Pumping from tanks and wells where the liquid level on the suction side is below the pump inlet:

5.3.2.1 Close the discharge isolating valve.

5.3.2.2 Remove the priming plug, fig. 2.

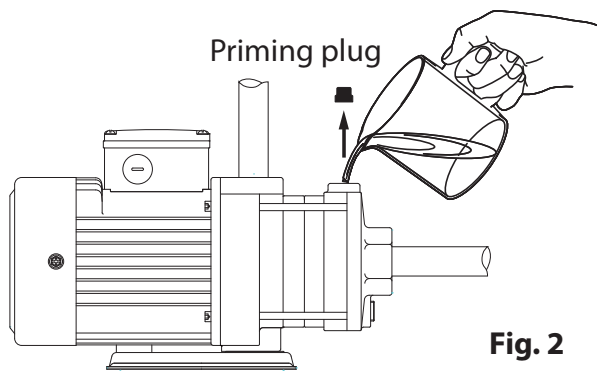


Fig. 2

5.3.2.3 Pour water through the priming port. Make sure that the suction pipe and pump are completely filled with liquid and vented.

5.3.2.4 Replace the priming plug and tighten it.

5.3.2.5 Turn ON to start the pump. The pump will operate at the auto mode.

5.3.2.6 Make sure the motor runs the same direction as the rotating direction sticker (on the motor fan cover).

5.3.2.7 Slowly open the discharge valve until it is fully open.

5.4 If there is no discharge flow after a few minutes, please turn off the pump and repeat the Process of 5.3 Turn the pump on and off several times until it is working normally.

6. Adjustment

6-1. Pressure adjustment.

. When you to start up the pump, the SET pressure indicates the factory default pressure. It is also the max. constant pressure the pump will work. It can be set lower by pressing

▼ until the SET screen shows the number you desire, and then press STOP to memorize the new setting.

. You can not increase the SET pressure unless you have positive incoming pressure from your water source. For example, you have 10 psi incoming pressure and the default pressure is 50 psi, you can adjust the SET pressure up to 60 psi as max. Make sure your positive incoming pressure is very stable because the pump performance will be affected once your incoming pressure is fluctuated.

. To increase SET pressure, please press ▲ to the number you desire, and then press STOP to memorize the new setting.

6-2. Select to run Pump A or Pump B only

. For maintenance or repair, it can be set to run only one pump.

. Press Pump A or B.

. Press STOP to memorize the new setting.

. Press RUN to start the system.

6-3. Set back to AUTO mode

. Only necessary after the system is set to run at Pump A or B.

. Press AUTO.

. Press STOP to memorize it.

. Press RUN to start the system.

6-4. For other adjustment, please contact us for more information.

Remarks:

. After finishing any adjustment of the above, please be sure to press STOP to default the new setting. If you do not press STOP, the pump will resume the previous setting when the power turns off.

. The pump is protected against dry run. when pump is run dry. the indicator will display “□”.

The default is set to stop for 10 minutes and the pump will attempt to run 2 minutes and stop for 10 minutes. The stop-and-run cycle will be continued until the water supply is normal. It is highly recommended to shut off the pump when the water supply has problem as continue to run the pump dry will cause serious damage.

7. Trouble Shooting

7.1 For pump and motor:

(Before proceeding any action, please switch off the power.)

Cause	Remedy
7.1.1 Motor does not run.	<ul style="list-style-type: none"> a. Check if voltage is correct. b. Check if water supply is adequate. c. Check if rotor spins freely. d. If the problem is unsolved, please contact our distributor or us.
7.1.2 Motor keeps running when no water is consumed.	<ul style="list-style-type: none"> a. Check if faucet is completely shut off. b. Check if there is any leak in the system. c. Check if check valve function normally. d. Check if water supply is adequate.

7.2 For controller:

Display	Description	Remedy
AF	Error signal of inverter	Check if connection from controller to inverter is good.
□	Error of dry run or power being shut off	<ul style="list-style-type: none"> 1. Check if the water supply is adequate; otherwise, please switch off the power. 2. Check if connection of the transducer is good. 3. Check if the pump is in dry run protection mode. The default is to stop for 10 minutes and the pump will attempt to run 2 minutes and stop for 10 minutes. The stop-and-run cycle will continue until the water supply is normal. When the pump is for sure in dry run, it is required to STOP it and turn off the power.

7.3 For inverter:

Display	Description	cause of problem
PF01	Power failure 1	Power failure during acceleration.
PF02	Power failure 2	Power failure during constant frequency.
PF03	Power failure 3	Power failure during deceleration (stopping).
PF04	Power failure 4	Power failure during stand-by.

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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