

# **PH-1L / PH-1L-SS**

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## **Condensate Pump Installation Instructions**



Pump House  
Glaisdale Drive East  
Nottingham  
NG8 4LY  
Tel: 0115 900 5858

[sales@pumph.co.uk](mailto:sales@pumph.co.uk)  
[www.pumph.co.uk](http://www.pumph.co.uk)



# PH-1L & PH-1L-SS Installation Instructions

## FEATURES

- Fully automatic operation
- Low noise, ball-bearing motor with thermal protector
- Check valve to prevent back-flow of liquid into the unit
- Compact size
- PH-1L-SS has an overflow safety alarm switch
- Quick release 1/4 turn check valve

## APPLICATION

The PH-1L / PH-1L-SS condensate pump is designed to automatically remove condensate fluid from an air conditioner, evaporator coil and/or an oil or gas condensing boiler. This pump is made from a tough ABS plastic body to resist corrosion and impact.

## SPECIFICATION

|                |                  |              |         |
|----------------|------------------|--------------|---------|
| Model          | PH-1L / PH-1L-SS | Height       | 122 mm  |
| Max Flow       | 270 lph          | Length       | 220 mm  |
| Max Head       | 6 m              | Width        | 134 mm  |
| Tank Capacity  | 1 litres         | Weight       | 1.95 kg |
| Volts          | 230 V / 65 VA    | Cable Length | 1.5 m   |
| Hz             | 50 Hz            |              |         |
| Discharge Size | 1/4" & 3/8"      |              |         |

## INSTALLATION

1. Carefully unpack the unit, check for damage and make sure that all of the required parts are included. The units are thoroughly tested before packaging to ensure safe delivery and operation. If there is any sign of damage due to shipment, return it to the place of purchase for repair or replacement.
2. Choose a mounting location near the air-conditioner or boiler. The pump must be mounted level and the inlet must be below the lowest drain.

## CONNECTING THE PIPING

1. Run flexible tubing or pipe from the condensate drain on the evaporator pan and/or drain from boiler to inlet hole on the pump. This drain line should have a continuous downward slope to allow gravity flow. Cut the end of the line at an angle so the end does not close off on the bottom of the pump's tank.

**Note: If there's an overflow drain from the evaporator pan or from the boiler, it may be necessary to join the overflow and the main drain together before they enter the pump.**

2. Connect the discharge line by hand. A flexible tubing with an internal diameter of 1/4" or 3/8" will be suitable. Extend the discharge line straight up from the pump to the highest point, run the discharge line to a drain with a downward slope.

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## CONNECTING THE PIPING

### OUTLET CONDENSATE CONNECTIONS

Connect 1/4" or 3/8" I.D tubing to the discharge adapter / non return valve. For best results, secure tubing with clamps (not provided) but do not pinch, collapse or otherwise restrict the tubing. The non return valve has a quick release mechanism with a 1/4 turn bayonet type fitting.



### 1/4 TURN NON RETURN VALVE

For best results, the drain should be below or approx. level with the bottom of the pump tank. If it is not possible to slope the line downward, make an inverted "U" trap at the highest point of the discharge line above the pump.

## WIRING

Shut off electrical power at the fuse box before making any wiring connections. All wiring must be done according to local and/or applicable national codes.

1. Main power: Connect the power cord to a constant line voltage source, not a fan or other device that may run intermittently.
2. PH-1L-SS model is fitted with a high level float switch / volt free contact which can be connected so it either: interrupts the power to the equipment or to an alarm circuit. (MAX current 3A)

## TESTING

1. With the unit plugged in and the discharge line in place, pour water into the pump reservoir until the unit activates to verify the unit works properly.

## MAINTENANCE

1. Before attempting to service or remove any component, make sure that the unit is disconnected from the power source.
2. Unfasten the check valve with a wrench. Clean the check valve and verify its operation.
3. Disassemble the cover and water tank from the main plate.
4. Be sure the floats move freely. Clean as necessary.
5. Clean the tank with warm water and mild soap.
6. Check the inlet and outlet piping. Clean as necessary. Be sure there are no kinks in the line that would inhibit flow.
7. After the servicing, assemble the unit by the reverse order.
8. To re-install the check valve, fasten it manually and tighten a half turn further with a wrench.
9. In case of a long-term break, remove water from the hose and the water tank.

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## TROUBLESHOOTING

If the pump does not function properly, refer to the following:

1. Unit does not run:
  - Check the power supply.
  - Check the appliance to see if condensation is actually being generated.
  - Check to make sure the pump float mechanism moves freely and clicks the activation switch when moved up and down.
  - Check the drain line(s) into the pump for obstructions. Note: If these lines are clogged and remain clogged, the appliance may eventually be damaged.
2. Pump makes loud noise when running:
  - Check the tank for debris and clean if necessary. Refer to the maintenance section for cleaning instructions.
3. Unit runs but does not pump liquid out:
  - Check the float to be sure that it is not stuck in the up position.
  - Check the height of the discharge tubing to be sure it does not exceed the allowed head (see specifications)
  - Check the discharge tube for obstructions and clear if needed.
  - Check the valve for obstructions. Refer to the maintenance section for cleaning instructions.
4. Liquid drains back into pump from discharge line:
  - Check valve may have debris in it. Refer to the maintenance section for cleaning instructions.
  - If the discharge line is plumbed so the highest point is less than 1m above the pump, the check valve may allow liquid to drain out of the line. This is normal and will not damage the pump.
5. Liquid leaks from around the check valve
  - Check the proper fit of the cap nut that holds the discharge tube in place.
  - If the check valve is too tight or too loose it may leak around the O-ring. Check that the valve is hand tight, and then tighten an additional 1/2 turn with a wrench.
  - If the O-ring under the check valve is damaged, replace with a new one or purchase a replacement check valve, which includes an O-ring.

## WARRANTY

This pump offers a 1 year warranty. This warranty covers all parts with material or manufacturing faults. The buyer's only remedy is the replacement or repair of the defective parts. In no case can labour costs and any consequential damage be cited as a basis for a complaint. Any returned units must be complete and must be accompanied by a written list of the defects ascertained.

We are unable to accept any liability in case of non-conforming installation or non-compliance with the specifications or maintenance recommendations.

## CONFORMITY



All data contained in these specifications are solely intended to describe the product and do not constitute warranted characteristics in the legal sense. Subject to technical change

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