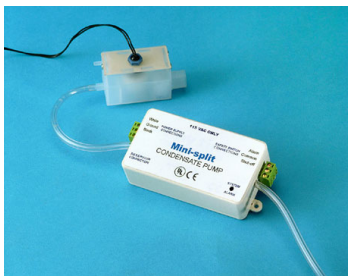


# Mini-Split



I N S T A L L A T I O N  
O P E R A T I O N  
M A I N T E N A N C E



**Hartell Pumps**  
Division of Milton Roy Co.

70 Industrial Drive  
Ivylnd, PA  
18974

Phone: 215-322-0730  
Fax: 215-322-2944  
Web: [www.hartell.com](http://www.hartell.com)  
Email: [info@hartell.com](mailto:info@hartell.com)

## Condensate Removal Pumps From Hartell

### INTRODUCTION

HARTELL condensate pumps are designed to collect and automatically remove the water produced from an air conditioner evaporative coil and/or a gas-condensing furnace. This pump has been carefully engineered to provide long, trouble free service and is of the highest quality workmanship and materials.

These pumps have been thoroughly inspected and tested, then carefully packaged to insure safe delivery and operation. When you receive your pump, examine it carefully to determine that there are no damaged or broken parts. If damage is detected, notify the firm from where the pump was purchased. They will assist with a repair or replacement.

See the precautions listed below before continuing.

#### CAUTION: READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING INSTALLATION

- Pump should only be used with liquids compatible with pump component materials. Do not use to pump flammable or explosive fluids. Do not use in explosive atmospheres.
- This pump is not submersible.
- The pump is designed for grounded installation. To reduce the risk of electrical shock be certain that it is connected to a properly grounded, grounding receptacle, ground fault interruption recommended.
- In any installation where property damage and/or personal injury might result from an inoperative or leaking pump due to power outages, discharge line blockage, or any other reason, a back up system and/or alarm should be used.
- Do not handle pump with wet hands or when standing on a wet or damp surface, or in water.
- Shut off the electrical power at the fuse box before making any connections. All wiring must comply with local codes.

#### ONE YEAR LIMITED WARRANTY

HARTELL Mini Split series condensate pumps are guaranteed to be free from defects in workmanship or materials and to function satisfactorily, when properly installed, for a period of ONE (1) years from date of installation. HARTELL will replace, without charge, any HARTELL product found to be defective upon examination at our factory if returned within the guarantee period, transportation charges prepaid.

This guarantee does not apply if the product has been misapplied or mechanically damaged, HARTELL assumes no liability for resultant damages of any kind arising out of the use of its products.

## INSTALLATION (See Figure 1)

Carefully unpack the pump and select a location.

1. Connect the remote sensor to the drain connection of the air conditioning unit, ensuring it is securely seated and supported. If necessary use double sided sticky tape to attach it to a solid surface.
2. Connect main supply cable to a continuous supply, 115VAC 60Hz or 230VAC 60Hz for 230VAC model.
3. Connect a 3.0 mm ID plastic tube between the sensor head and pump.
4. Connect a 6mm ID plastic to the connector on the output of the pump using the adapter provided.
5. If required connect the safety relay connection to the control circuit of the air conditioning system.
6. Connect a 3.0 mm ID tube (not supplied) to the air vent connection ensuring the end of the tube is higher than the drain pan to minimize overflow.

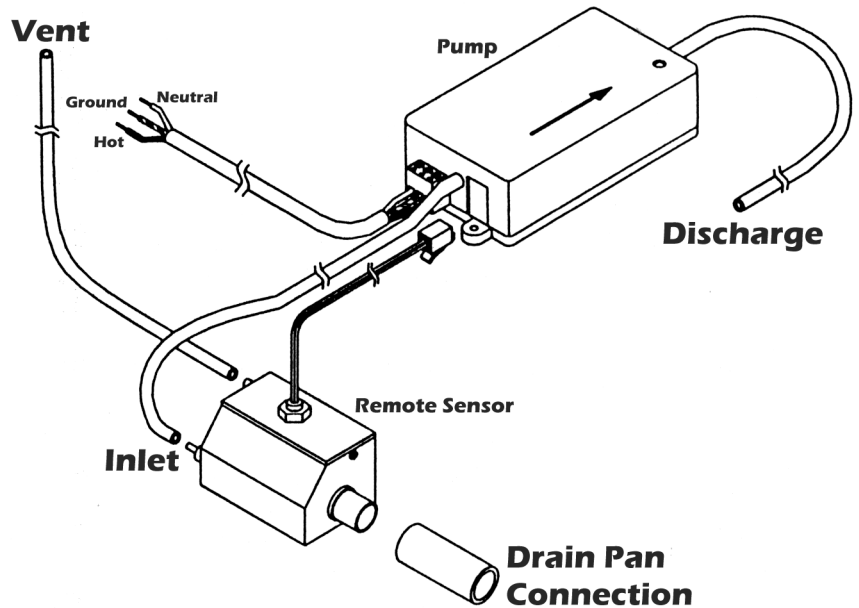


Figure 1

ELECTRICAL CONNECTIONS—review precautions on previous page

LINE VOLTAGE—Connect power cord to the proper voltage as indicated on the pump nameplate. Connect only to a source of constant power, not an intermittent source such as a fan or limit control circuit.

LOW VOLTAGE—AUXILIARY SAFETY SWITCH—Connect the terminals of auxiliary safety switch to the thermostat control circuit of the air conditioner/furnace. This will disrupt the thermostat demand in a high water condition. (Figure 2)

**CAUTION** –Thermostat demand disruption should not be utilized if cooling or heating requirements are a necessity. An alarm system should be used with the auxiliary switch instead.

TESTING—Apply power to the pump. The green LED indicator should blink ON FOR 10 SECONDS, and OFF FOR 1 SECOND. This indicates the electronics are functioning properly. Slowly pour water into the drain pan until the pump turns on. NOTE: DO NOT OVER FILL THE PAN. The pumps should remove the water from the reservoir / sensor. Repeat the process until the discharge tube is completely full to ensure the horizontal run is not too long. To test the safety and overload protection circuits, place a length of tubing from the pump discharge to the drain pan to allow the pump to run continuously. After the pump has run continuously for 2 minutes the LED will begin flashing on and off every second and the safety relay is activated. If the pump runs continuously for approximately 10 additional minutes, the overload circuit is activated and the pump will shut down. To reset the safety and overload circuit, shut off the power to the pump, reconnect the discharge tube and turn power supply to the pump back on.

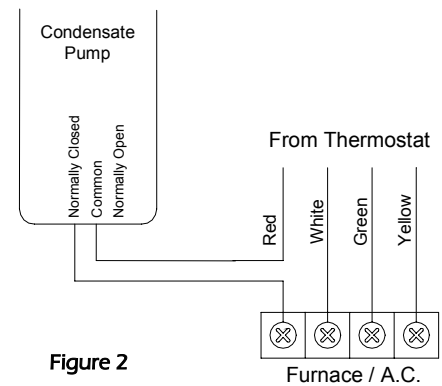


Figure 2

## OPERATION

After proper installation, the operation of the HARTELL condensate pump is automatic. Water is collected in the remote sensor and pumped out when the float raises to a pre-set point. As the water level goes down the float turns off the pump at another pre-set point. Under most circumstances the pump requires little maintenance for efficient operation. If a problem occurs, please refer to the maintenance instructions below.

This pump is only suitable for air conditioning equipment up to 25,000 BTU's. The maximum horizontal run is 30 feet. Max lift is 13 feet. Max suction 6.5 feet. A typical flow rate is 1.3 gallons per hour at 13 foot lift.

## MAINTENANCE

In normal applications, this pump requires no scheduled maintenance for efficient operation. If a problem develops, the following guidelines can help to return the pump to service.

**PUMP DOES NOT RUN**

- Check to see that the power to the system (air conditioner and/or furnace) is on to allow production of condensate.
- Check that the pump is plugged in and the circuit is active (i.e. fuse or breaker not blown).
- Check the level of water in the remote sensor; the remote sensor must be full to activate the pump.
- If there is a proper amount of water in the remote sensor, the float may be stuck due to dirt or algae formation. (Flush the remote sensor with warm water and a mild soap or detergent). See note below.
- Inspect the filter in the remote sensor. Clean or replace as needed.
- Make sure remote sensor is upright, and vertical. The black wire should exit on the top of the remote sensor.

**PUMP RUNS WITH NO DISCHARGE**

- Inspect the discharge tubing for its full length to make sure it is clear; make sure the tubing end is not plugged.
- Inspect the filter in the remote sensor. Clean or replace as needed.
- Make sure the check valve is not clogged. (If clogged, UNPLUG THE PUMP, remove the fitting and clean with mild soap or detergent). See note below.
- Pump is not able to keep up with condensate production. Is A/C unit rated for greater than 25,000 BTU's. Also see NOTE 2.

**PUMP IS IN ALARM STATE**

- Check to see if water is being drawn up to the pump. Make sure remote sensor is upright, and vertical. The black wire should exit on the top of the remote sensor.
- The vent connection on the remote sensor needs to be higher than the inlet connection.
- Pump is not able to keep up with condensate production. Is A/C unit rated for greater than 25,000 BTU's. Also see NOTE 2.
- Inspect the filter in the remote sensor. Clean or replace as needed.
- Once problem is corrected reset the pump circuit by removing power and reconnecting power.

**PUMP IS NOISY**

- It's normal for the pump to be noisy when first turned on. Once water is drawn up to the pump it will operate quietly.
- Check to see if water is being drawn up to the pump. Make sure remote sensor is upright, and vertical. The black wire should exit on the top of the remote sensor.
- Inspect the filter in the remote sensor. Clean or replace as needed.
- The vent connection on the remote sensor needs to be higher than the inlet connection.

NOTE 1: In case of extreme algae formation, UNPLUG THE PUMP, and fill the remote sensor with a commercially available algaecide. Follow directions for destroying the algae. After the proper waiting period DUMP the algaecide out of the remote sensor. Rinse with water, repeat if necessary. Be careful not to clog the filter when starting the pump after this thorough cleaning.

NOTE 2: Due to some AC manufacturers using standard components across their range of equipment. Drain pans in some ceiling suspended equipment are oversized and can hold up to 5 gallons of water before the remote sensor operates. This can cause the fail-safe or overload circuit to operate at peak times. To overcome this problem we recommend that when installing the indoor unit you lower the rear of the unit by 1/2 inch to allow the condensate to fall under gravity towards the rear of the drain pan where the sensor is normally located (see Figure 3)

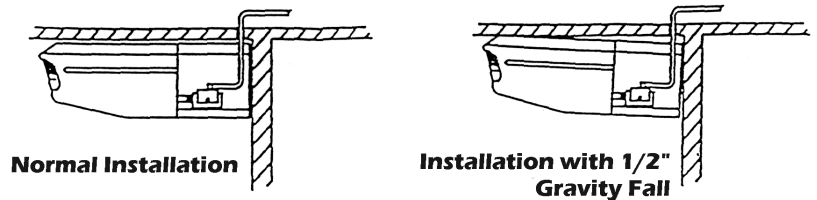


Figure 3

Keep these sheets with the pump. They may be valuable if service is needed under the terms of the warranty.

Model # \_\_\_\_\_ Date of installation: \_\_\_\_\_  
 Installer: \_\_\_\_\_ Date Code: \_\_\_\_\_  
 Dealer: \_\_\_\_\_