



# CONDENSATE PUMP Installation Instructions For WLH and UNC/UNH Offset Grill Ceiling Mount

Kit installation shall be installed by qualified agency.

## ⚠ WARNING

Electrical shock hazard. Disconnect power to unit before removing access panel. Failure to follow these instructions could result in death or serious injury.

## ⚠ WARNING

Electrical shock hazard. Turn OFF electrical power supply at both indoor and outdoor units.

## ⚠ CAUTION

Laceration, burn hazard. Metal edges and parts may have sharp edges and/or may be hot. Use appropriate personal protection equipment to include safety glasses and gloves when installing or servicing this unit. Failure to follow these instructions could result in minor or moderate injury.

### Required Tools

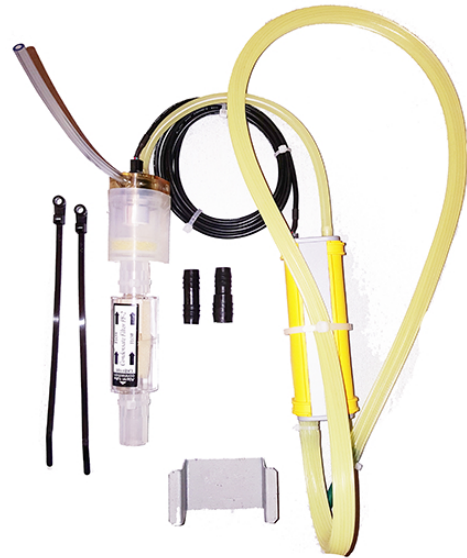
- Tubing cutter/utility knife
- Tape measure

### Field Supplied Material

- ¼" Discharge tubing, length as required

### Kit 55003441 - Contents

240011953	REFCO COMBI PUMP
240011954	REFCO INLINE FILTER
*108000142	SUPT, PLASTIC, COND, PUMP KIT, WLH 09-24
109006545	BRACKET PLASTIC COND, PUMP KIT WLH 09-24
240000062	WIRE TIE, 7.5", WITH MOUNTING HOLE
240011957	INST,REFCO,PUMP,COND,WLH/UNH
* Not Shown	



Illustrations are for location only and may not depict all models.



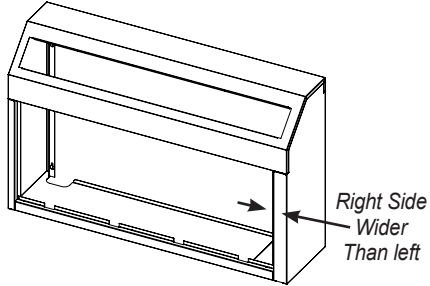
**Manufactured by:**  
ECR International Inc.  
2201 Dwyer Avenue, Utica, NY 13501  
Tel. 800 253 7900  
[www.ecrinternational.com](http://www.ecrinternational.com)

PN 240011957 REV A, [09/29/2017]

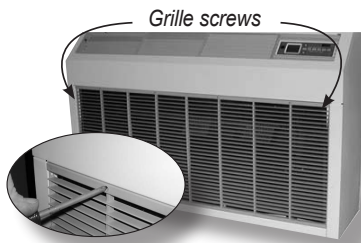
**UNC/UNH Installation**

Install unit per directions listed in Installation, Operation, and Maintenance manual.

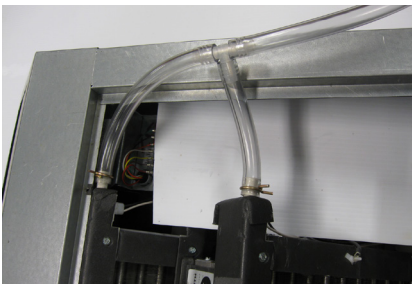
1. Verify power to unit is disconnected before installing pump.
2. Verify unit has offset Grill.



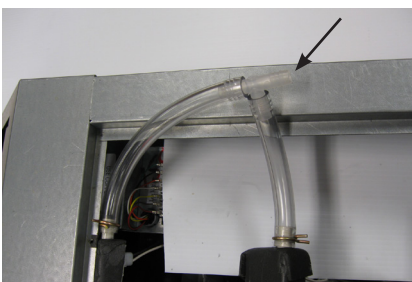
3. Remove return air grille. Remove screws on front of grille. Lift grille off.



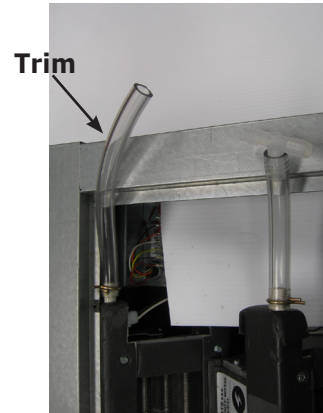
4. Pull tubes out of frame.



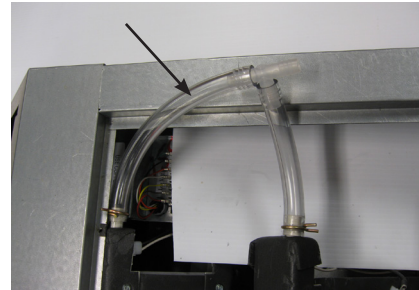
5. Remove Main Drain tube as shown below.



6. Remove tube, shown above from tee, trim to 8".



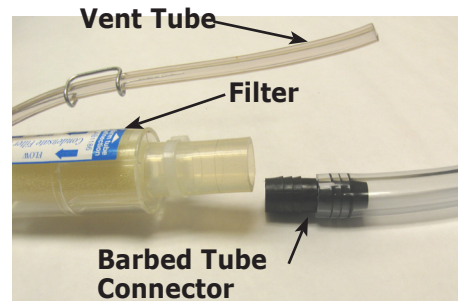
7. Reattach cut tube from Step 6.



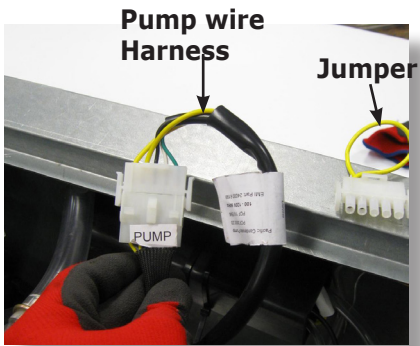
8. Cut main drain tube to 2 1/2" as shown below. Reattach to tee connector.



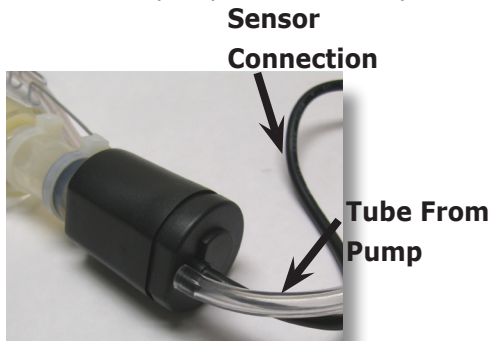
9. Install pump sensor and filter. Use barbed tube connector between main drain hose and filter sensor assembly. Vent tube must face up when mounted as shown below.



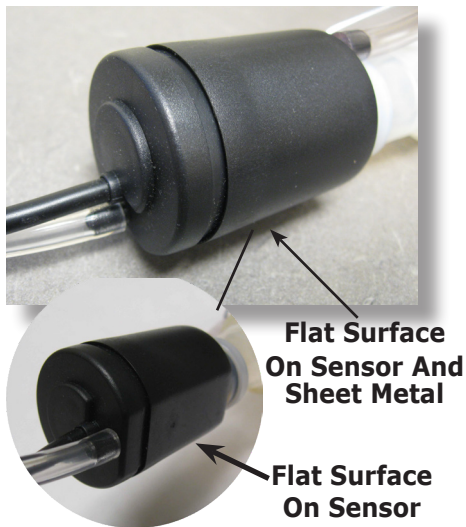
10. Find molex labeled pump as shown. Remove jumper and plug wire harness provided with pump into molex.



11. Attach tube from pump to sensor body as shown.



12. Set sensor body and filter assembly in unit cavity.  
NOTE: Flat surface must sit on bottom sheet metal in cavity when installed.



13. Place pump inside AC cabinet.



14. Verify sensor discharge tube is not kinked.

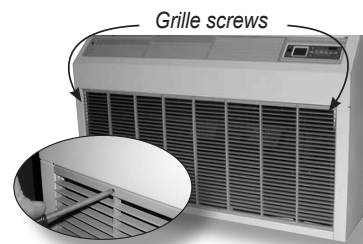
15. TEST

- A. Verify drain tube connections and discharge tube connections are tight, and electrical connections are secure.
- B. Restore power to unit. Switch unit to fan only operation. Slowly pour water into one drain tray. After few seconds, pump will switch on and pump water away.

NOTE: Pump may be noisy until it has been fully primed.

- C. Verify no water leaks are present.

16. Replace grill. Insert grill into opening and screw back in place.



**1. WLH Installation Instructions:**

*Installer Supplied Item:*

1/4" ID Condensate Discharge Tubing, length as required.

Condensate pump assembly fits into the air conditioner tubing duct and will efficiently remove all condensate from the drain tray. Pumps 1.6 GPH of condensate water up to 4 feet vertically and 20 feet horizontally.

Pump may need to hang below the two lower flanges if refrigerant piping is in the way.

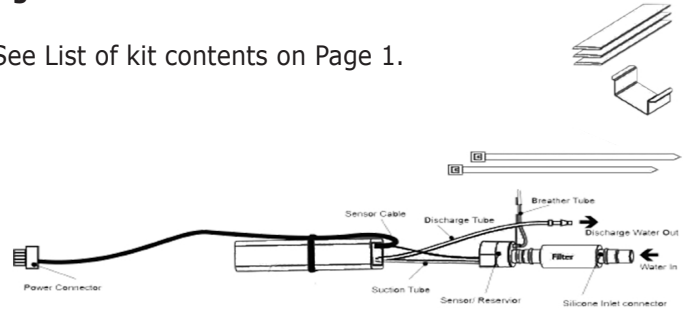
Optional bracket supplied will support pump in this case and ensure bottom panel will fit properly.

**Note:**

When fitting Pump Assembly Into Air Conditioner verify black Sensor/Reservoir has its Breather Tube connection at the top (up into the unit), and its flat base at bottom.

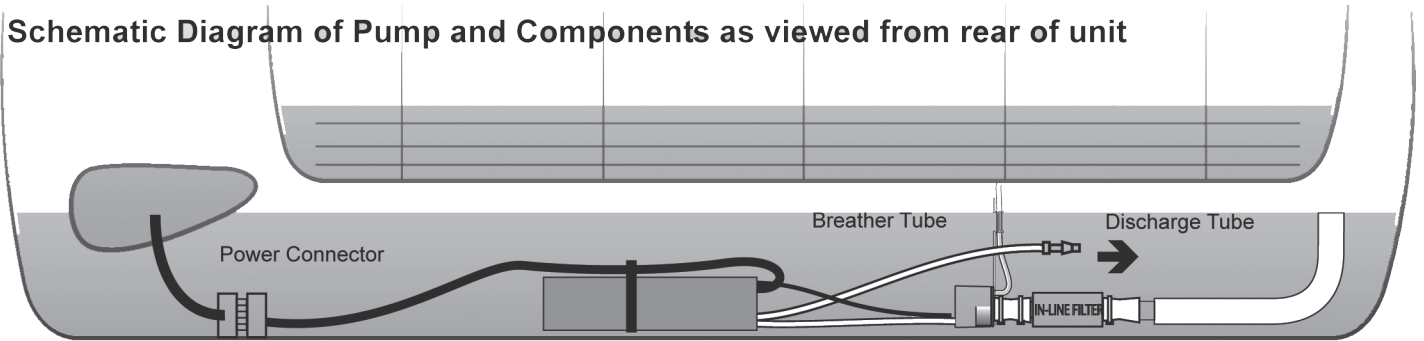
**Figure 1**

See List of kit contents on Page 1.



**Figure 2**

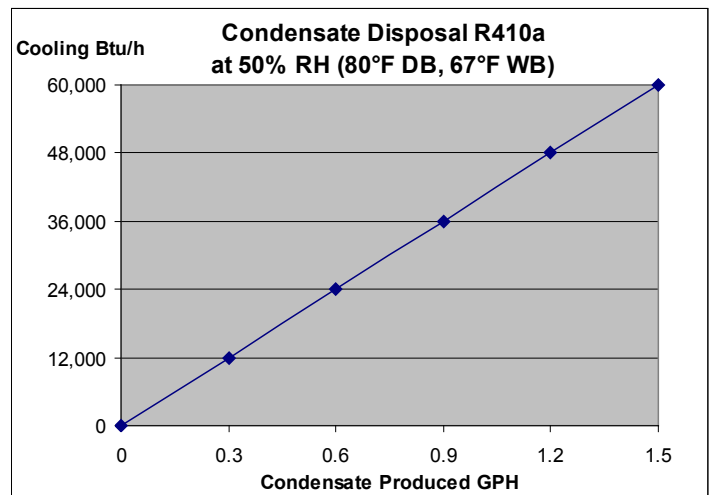
**Schematic Diagram of Pump and Components as viewed from rear of unit**



**2. Before Fitting The Condensate Pump**

How Much Water Will Be Produced?

- The larger the air conditioner, and more humid the conditions, the more water will be produced.
- As a general rule, under indoor conditions of 50% RH (80°F DB and 67°F WB), approximately 0.3 gallons of water will be produced for every 12,000 Bth/h of cooling. Example, at these conditions an air conditioner rated at 36,000 Btu/h will produce 0.9 GPH (0.3 x 3) of water.
- NOTE: example is for 50% RH. Under extreme humidity levels an air conditioner may produce as much as 1 GPH per 12,000 Btu/h of cooling. This should be taken into consideration for pump application. If the pump is flooded cooling may be stopped until the water is cleared from the reservoir.



### 3. How Much Water Can The Pump Remove?

With vertical lift of 4 feet and a horizontal run of 20 feet the pump can efficiently remove up to 1.6 GPH of condensate water from the unit.

Take care all pipe runs are as straight as possible to avoid air-locks in the discharge tubing. Also avoid tight bends or other restrictions that could restrict the flow.

Ensure Breather Tube is fitted vertically above pump.

Do not allow tubing to kink and create an airlock. See Figure 3.

### 4. Operation

- Pump sensor will automatically start the pump when condensate is detected, and stop the pump when condensate has been removed.
- Pump sensor is fitted with high water level alarm that will operate alarm relay if water level rises to abnormal levels. Pump will continue to run until minimum water level is reached and alarm will reset.

### 5. Sensor Installation

- Install pump sensor at any angle between horizontal and vertical. Breather tube inlet is above the condensate inlet. See Figure 5.
- Pump sensor can also be tilted sideways up to 30° from horizontal. See Figure 6.
- Position pump sensor within the equipment below the level of the collection tray.
- Position top of breather tube above highest level condensate may reach.
- See Figure 7 for three typical installations. Horizontal mounting, typical of high wall mounted fan units. Angled, typical of direct mounting to collection tray. Vertical, typical of cassette unit mounting.

Figure 3

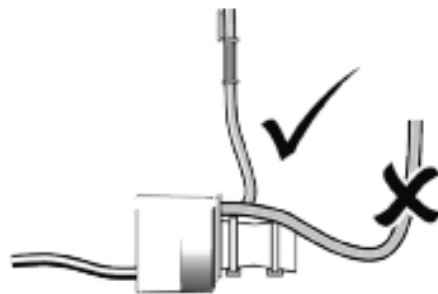


Figure 4

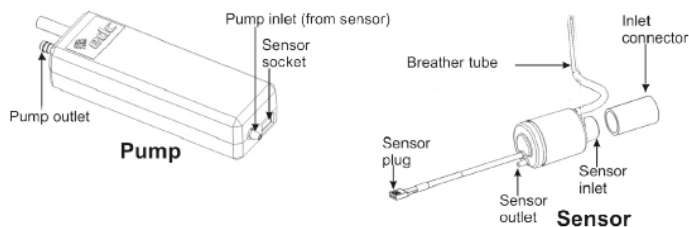


Figure 5

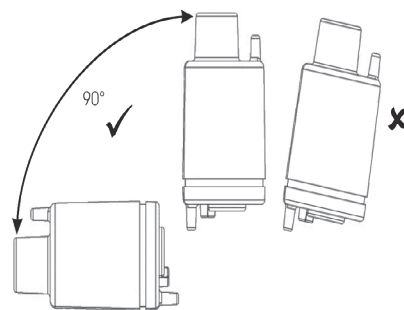


Figure 6

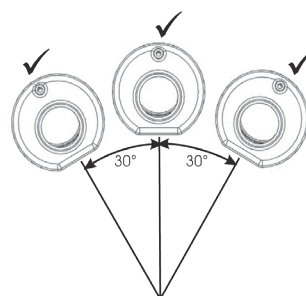
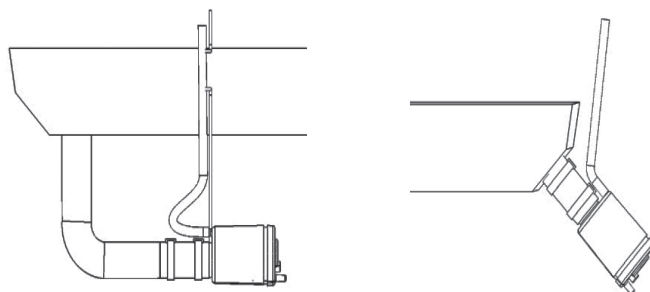


Figure 7



## 6. Install Condensate Assembly

1. Turn off all power to the air conditioner before starting.
2. Remove air conditioner decorative front grille. Remove (3) screws from each plastic end cap. Carefully remove end caps from the unit. See Figures 8 through 11.
3. Remove bottom panel to gain access to pipe and wire chase. See Figures 12 & 13.
4. Straighten condensate pump Breather Tube so it is vertical, with sensor/reservoir sitting flat. See Figure 9.
5. Reach up into the bottom of the air conditioner, extend air conditioner's drain tube as far as it will go along the tubing duct. Take care not to disturb refrigerant piping.
6. Cut existing drain tube so it can be connected to the silicone inlet connector using supplied  $\frac{1}{2}$ " -  $\frac{5}{8}$ " barbed connector, with the inline filter at right hand end. See Figure 14.
7. Fit the  $\frac{1}{2}$ " -  $\frac{5}{8}$ " barbed connector to the existing drain tube. Remove silicone inlet connector from the end of inline filter and fit it onto the  $\frac{5}{8}$ " end of the barbed connector on the drain tube. See Figure 15.
8. Hold the inline filter in your hand. Carefully push the end of silicone inlet connector back onto the inline filter.
9. Push all pump assembly components gently up into the tubing duct from the bottom. Make sure breather tube on the sensor/reservoir goes up as far as possible between the fan housing and back of air conditioner. Be sure to route all tubing and wires, carefully in tubing duct so they will not be pinched or cut when replacing bottom panel and end caps.
10. Fit plastic support cards under pump assembly components as needed. Slide them inside the two lower flanges. Support Condensate Pump with metal bracket if necessary, protects pump, wires and other components while plastic bottom panel is refitted.  
**NOTE:** When placing this bracket or plastic support cards do not block slots in rear flange of back panel. These slots are used to attach bottom panel during re-assembly. See supplied photos. Supplied metal support bracket is required only if condensate pump must hang down below two lower flanges because refrigerant piping is installed that way. See Figures 16.
11. Fit  $\frac{1}{4}$ " installer supplied external water discharge tube to tube connector on 12" discharge tube from the pump.

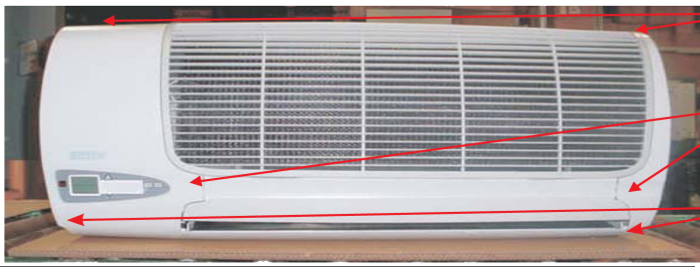
## 7. Electrical Wiring

Plug electrical connector from pump into connector on air conditioner marked "Condensate Pump". Ensure connection is firmly in place and secure.

## Test

- A. Check drain tube, discharge tube and electrical connections are tight.
- B. Remove air filter from front coil.
- C. Switch power on to air conditioner and pump. Slowly pour water into front drain tray through coil fins. After a few seconds, pump will switch on and pump water away. Pump may be noisy until fully primed.
- D. Wait a minute or two, check there are no water leaks from under the air conditioner.
- E. Verify there are no leaks.
- F. Reassemble cabinet. Place tabs of bottom panel into slots in back panel (sheet metal). Ensure wires and tubing are not pinched.
- G. Finish mounting bottom panel. Replace all screws except two, one on each end. Carefully replace end caps, three screws each, refit air filter and decorative front grille.

Figure 8



Top

There Are Three Screws Holding Each End Cap In Place

Up Through Bottom Cover

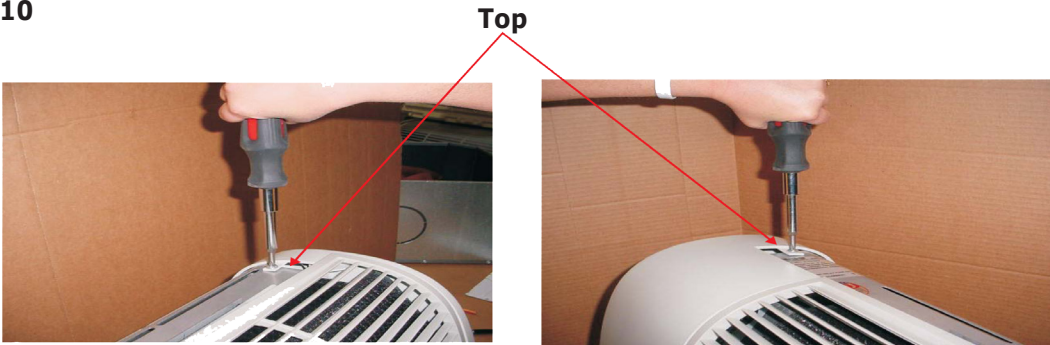
Figure 9



Up Through Bottom Cover

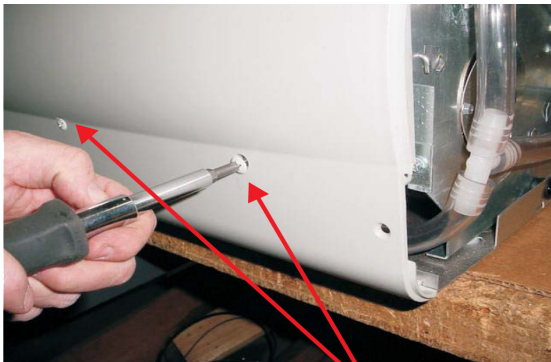
Up Through Bottom Cover (Typical)

Figure 10



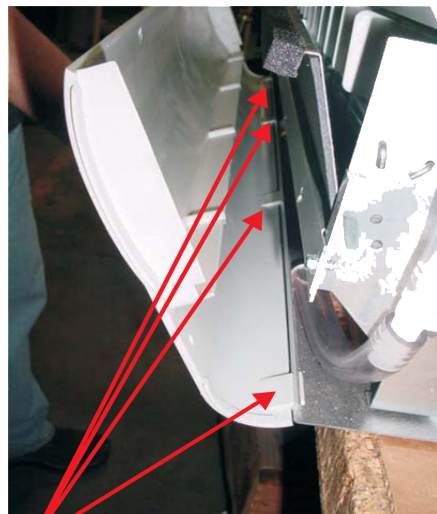
Top

Figure 11



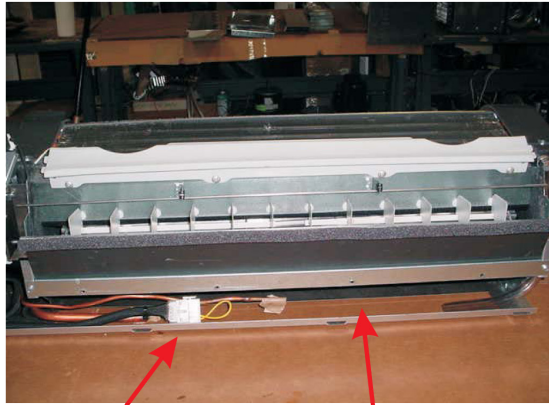
Remove Screws Holding Bottom Panel (Typ)

Figure 12



Tabs Match Up With Slots In Back Panel

Figure 13



Pump, Sensor And Filter Mount Here

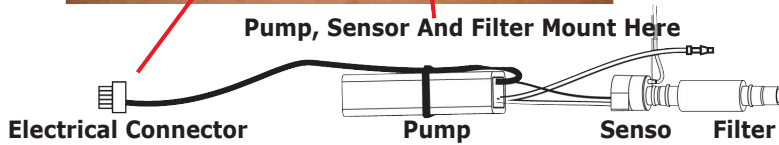
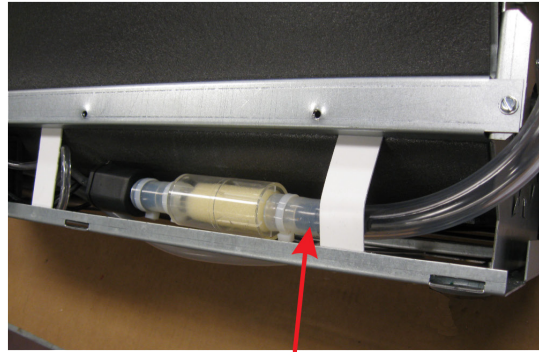


Figure 14



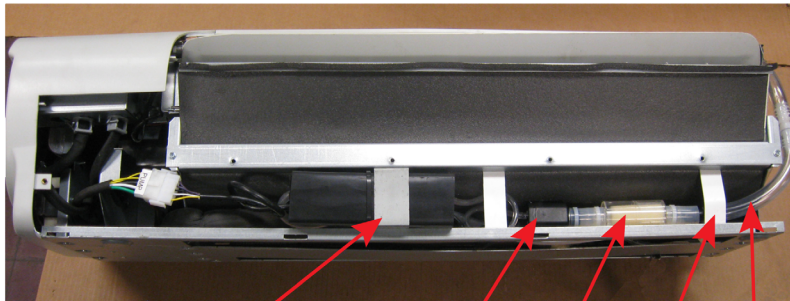
1/2" x 5/8" Tube Connector



Figure 15



Figure 16 -Unit where refrigerant piping prevents placing the condensate pump completely above the two lower flanges.



Sensor/ Reservoir  
 In-Line Filter  
 Plastic Support Card  
 Unit Condensate Drain Line



If refrigerant piping prevents inserting condensate pump fully into the piping chase use a sheet metal bracket to hold the pump section to the two lower flanges.



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All specifications subject to change without notice.  
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