



## Installation Instructions

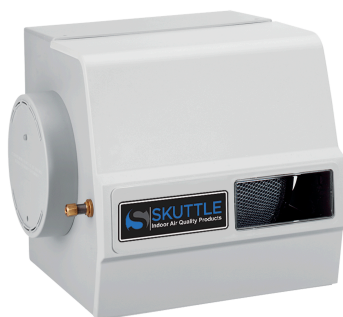
**... for Models  
45, 90 and 190  
Bypass Drum  
Humidifiers**



Model 45



Model 90



Model 190

**Models 45 & 90  
Instructions — page 2**

**Model 190  
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**Contractor: Read  
these instructions  
before installing or  
servicing humidifier.**

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## **Contractor Assistance:**

**Phone:**888-SKUTTLE(758-8853)

**Email:**techservice@skuttle.com

**Web:** [www.skuttle.com](http://www.skuttle.com)



**WARNING:** This bypass drum humidifier must be installed by a qualified heating and air conditioning contractor. Failure to comply could result in serious injury from electrical shock, damage to the humidifier or heating appliance, and/or void all warranties.

## **Additional Alerts and Notifications**

**DANGER!** Do not cut or drill into air conditioning or electrical accessories.

### **CAUTIONS:**

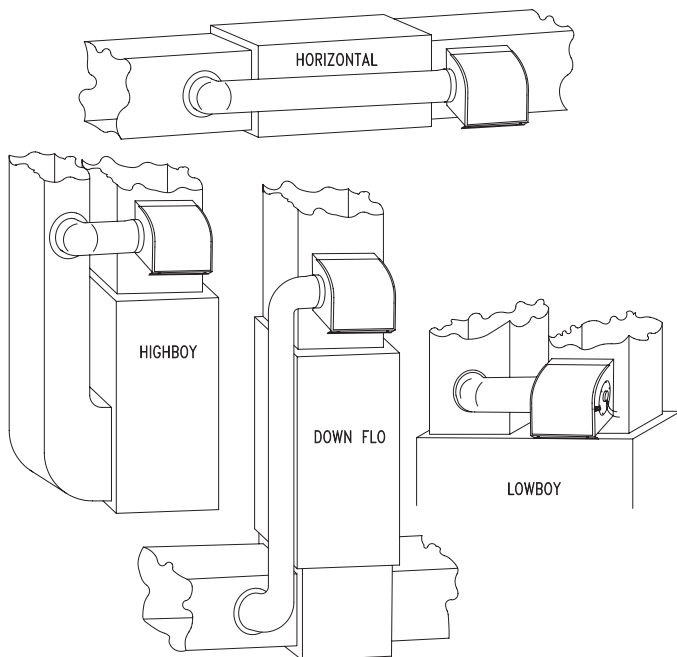
- Do not install this humidifier with plastic water supply tubing. **USE COPPER TUBING ONLY!**
- Do not install this unit where temperatures might exceed 180°F (82.22°C).
- Do not install where freezing temperatures could occur.
- Comply with all local codes, ordinances and regulations pertaining to plumbing and electrical wiring.

### **NOTES:**

- When installing this unit in an area where overflow could result in water damage, install a suitable safety catch pan plumbed to a drain.
- **If the system contains a multi-speed blower motor, it is necessary to isolate the humidifier transformer to prevent premature burnout** caused by the inductive current produced by the motor during high speed operation. This can be accomplished by several different types of wiring and accessories, such as using a pressure sensor or fan sail switch to detect blower operation, and an independent electrical circuit to power the humidifier transformer.
- This humidifier is shipped as a right-hand bypass unit, but easily can be switched to left-hand bypass. When switching bypass sides, be sure to reverse the float valve. **The float valve must be mounted on the same side as the drum motor.**

# Installation Instructions for Models 45 and 90

1. Determine the best location for the humidifier based on the drawings below.

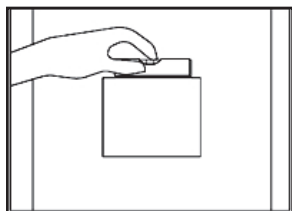


2. Draw a level line on the plenum where you want the top of the humidifier to go. Tape the template (in carton) in position.

## **Template Dimensions:**

- Model 45 = 7-1/4 in. (18.42 cm) x 5-1/2 in. (13.97 cm)
- Model 90 = 8-3/4 in. (22.23 cm) x 7-1/4 in. (18.42 cm)

**CAUTION:** The template must be level before drilling or cutting.



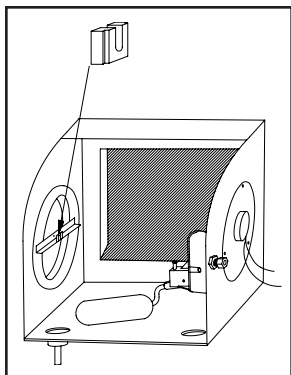
Trace around the template, then remove it. Carefully cut the rectangular opening.

**DANGER!** Do not cut or drill into air conditioning or electrical accessories.

Insert the humidifier cabinet into the opening and **make sure it is level.**

Mark the location of the five mounting holes. Remove the cabinet and drill five 7/64 in. (0.28 cm) mounting holes.

Reinsert the cabinet and secure it with 1/2 in. (1.27 cm) screws.



3. On the inside of the cabinet where the bypass tube will connect, snap the drum shaft bearing in place with the "U" shape of the bearing pointing up.

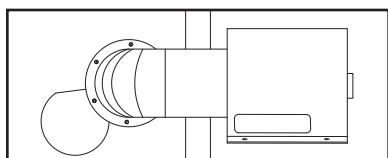
4. Install the collar on the other plenum and connect a bypass tube from the collar to the humidifier with sheet metal screws.

**Model 45 = 5 in. (12.70 cm) collar and bypass tube**

**Model 90 = 6 in. (15.24 cm) collar and bypass tube**

Seal connections with duct tape.

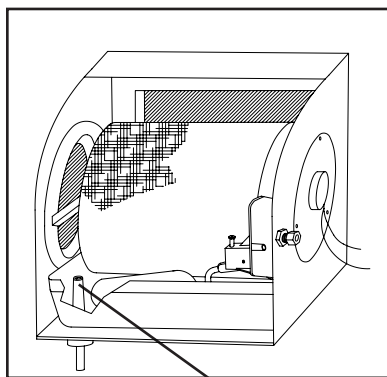
If the furnace has air conditioning, set the duct damper for summer season shutoff.



5. Insert the overflow drain cup fitting in the bottom of the cabinet so that the cup will be toward the front and on the same side as the bypass tubing.

Place the water pan in the unit with the overflow tube over the drain fitting.

Attach 3/8 in (0.95 cm) I.D. tubing to the drain fitting and route continuously downward to a suitable waste drain for overflow protection.



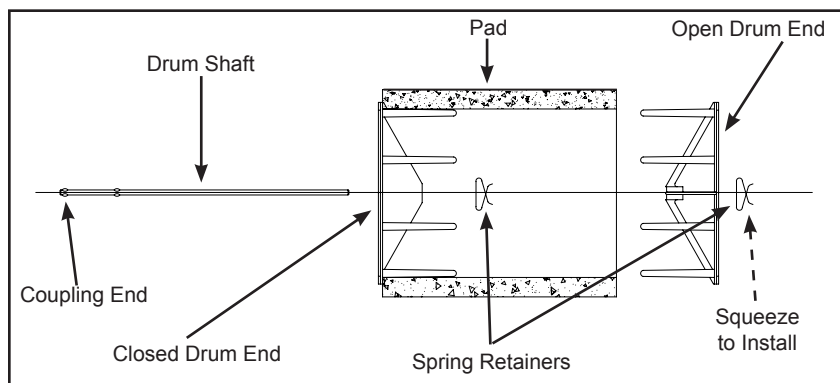
Overflow Tube

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## Models 45 and 90 Installation Instructions (cont'd.)

Move the valve to the same side as the motor (if necessary).  
Insert the valve hole plug in the double "D" hole on the opposite side from the valve.

6. Assemble the drum and evaporator pad as shown below. Install by inserting the drum shaft into the motor, coupling end first, then snapping it into the bearing end. (See Step #3.)



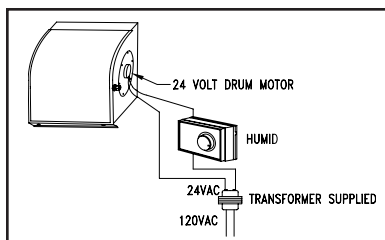
7. Using the instructions on the valve bag, install the saddle valve on the nearest cold water pipe. Connect **copper tubing**, flush it, and route it to the humidifier.

**WARNING:** Avoid contact with hot surfaces and sharp edges.

**NOTE:** For correct float valve and water tubing installation, see the float valve instruction card, located either on the humidifier water valve or in the parts bag.

8. Turn water on at the saddle valve and adjust the water level to 1-3/8 in. (3.49 cm) deep by turning the adjustment screw on the valve clockwise (↻) to lower and counterclockwise (↺) to raise.

9. **DANGER!** To avoid shock or electrocution, **TURN OFF ELECTRICAL POWER.** Mount the transformer and wire the 120 volt side. Wire the drum motor, transformer and humidistat as shown.



**NOTE:** The preferred power source for this unit is one that is independent of the furnace blower operation.

- 10 Install the universal duct- or wall-mount humidistat. (Refer to instructions supplied in the parts bag.)

- 11 Check the humidifier for proper operation.

Turn on the water at the valve which leads directly to the humidifier.

Set the water level to 1-3/8 in. (3.49 cm). Turn the valve adjustment screw clockwise (↻) to lower the water level; turn it counterclockwise (↺) to raise the water level.

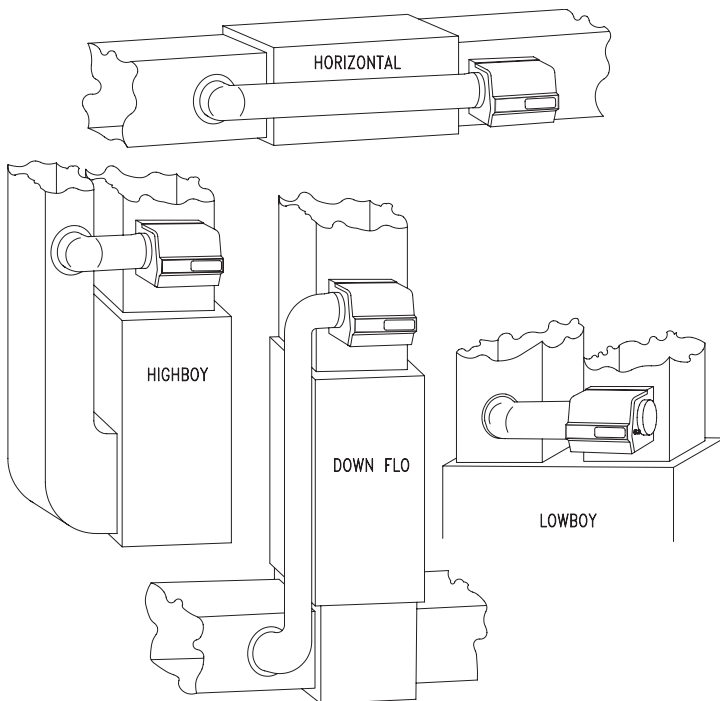
Turn the humidistat to its highest setting and observe the humidifier evaporator pad. If it does not rotate, turn the furnace blower on by setting the thermostat higher. This should cause the humidifier evaporator pad to rotate.

**NOTE:** Wiring the humidifier to operate either independently of or in conjunction with the furnace blower is up to the installer's discretion. On installations where the unit is closely sized (i.e., the cubic footage of the home is at or near the humidifier's peak volume capacity), independent operation allows the unit to operate throughout the full blower cycle, thereby eliminating the lag time involved in starting the humidifier.

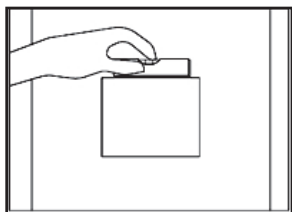
12. Reset the thermostat and humidistat to their correct positions for automatic operation.

# Installation Instructions for Model 190

1. Determine the best location for the humidifier based on the drawings below.



2. Draw a level line on the plenum where you want the top of the humidifier to go. Tape the template (in carton) in position. **The Model 190 template is 8-3/4 in. (22.23 cm) x 7-1/4 in. (18.42 cm).**



**CAUTION:** The template must be level before drilling or cutting.

Trace around the template, then remove it. Carefully cut the rectangular opening.

**DANGER!** Do not cut or drill into air conditioning or electrical accessories.

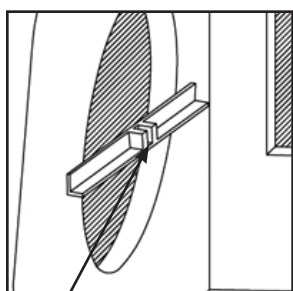
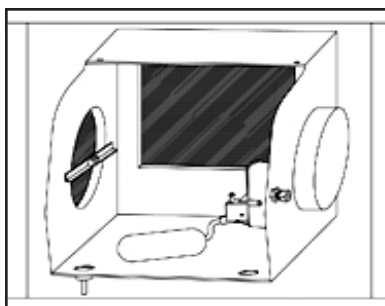


3. Position the cabinet in the opening, making sure it is horizontally and vertically level. Mark the location of the five mounting holes.

Remove the cabinet and drill five 7/64 in. (0.28 cm) mounting holes.

Partially screw 1 in (2.54 cm) sheet metal screws into the top holes. Place the cabinet over the screws and tighten.

Secure the cabinet at the bottom with two 1/2 in. (1.27 cm) screws.



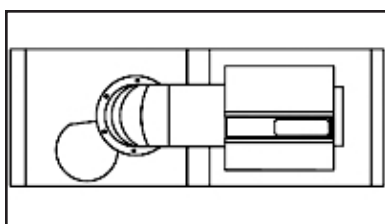
↑ U Bracket

4. On the inside of the cabinet where the bypass tube will connect, snap the bearing bracket in place with the “U” shape of the bracket pointing up. On the opposite side, snap the motor plate in place, making sure the motor coupling is toward the top.

Install the motor cover by placing the lead wires through the hole in the bottom and snap the cover in place.

5. Install the 6 in. (15.24 cm) collar on the other plenum and connect the 6 in. (15.24 cm) bypass tubing from the collar to the humidifier with sheet metal screws.

Seal connections with duct tape. If the furnace has air conditioning, install the duct damper for summer season shutoff.

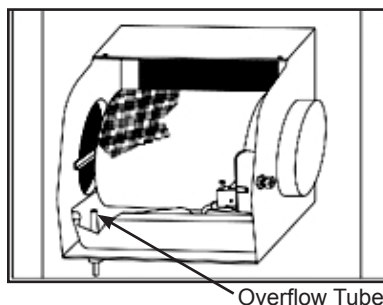


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## Model 190 Installation Instructions (cont'd.)

6. Insert the overflow drain cup fitting in the bottom of the cabinet so that the cup will be toward the front and on the same side as the bypass tubing.

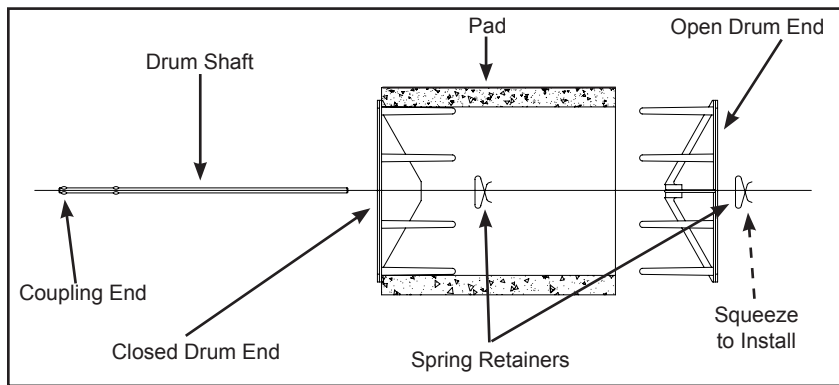
Place the water pan in the unit with the overflow tube over the drain fitting.



Attach 3/8 in. (0.95 cm) I.D. tubing to the drain fitting and route continuously downward to a suitable waste drain for overflow protection.

Move the valve to the same side as the motor (if necessary). Insert the valve hole plug in the double "D" hole on the opposite side from the valve.

7. Assemble the drum and evaporator pad as shown below. Install by inserting the drum shaft into the motor, coupling end first, then snapping it into the bearing end. (See Step #4.)



8. Using the instructions on the valve bag, install the saddle valve on the nearest cold water pipe. Connect **copper tubing**, flush it, and route it to the humidifier.

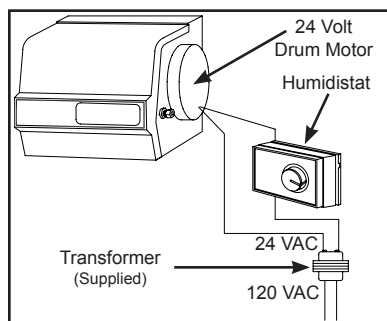
**WARNING:** Avoid contact with hot surfaces and sharp edges.

**NOTE:** For correct float valve and water tubing installation, see the float valve instruction card, located either on the humidifier water valve or in the parts bag.

9. Turn water on at the saddle valve and adjust the water level to 1-3/8 in. (3.49 cm) deep by turning the adjustment screw on the valve clockwise (↻) to lower and counterclockwise (↺) to raise.

10. **DANGER!** To avoid shock or electrocution, **TURN OFF ELECTRICAL POWER.** Mount the transformer and wire the 120 volt side. Wire the drum motor, transformer and humidistat as shown.

**NOTE:** The preferred power source for this unit is one that is independent of the furnace blower operation.



11. Install the universal duct- or wall-mount humidistat. (Refer to instructions supplied in the parts bag.)
12. Check the humidifier for proper operation.

Turn on the water at the valve which leads directly to the humidifier.

Set the water level to 1-3/8 in. (3.49 cm). Turn the valve adjustment screw clockwise (↻) to lower the water level; turn it counterclockwise (↺) to raise the water level.

Turn the humidistat to its highest setting and observe the humidifier evaporator pad. If it does not rotate, turn the furnace blower on by setting the thermostat higher. This should cause the humidifier evaporator pad to rotate.

**NOTE:** Wiring the humidifier to operate either independently of or in conjunction with the furnace blower is up to the installer's discretion. On installations where the unit is closely sized (i.e.,

NOTE continued on page 10 ►►►

## Model 190 Installation Instructions (cont'd.)

the cubic footage of the home is at or near the humidifier's peak volume capacity), independent operation allows the unit to operate throughout the full blower cycle, thereby eliminating the lag time involved in starting the humidifier.

13. Reset the thermostat and humidistat to their correct positions for automatic operation.



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### **Technical Support**

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