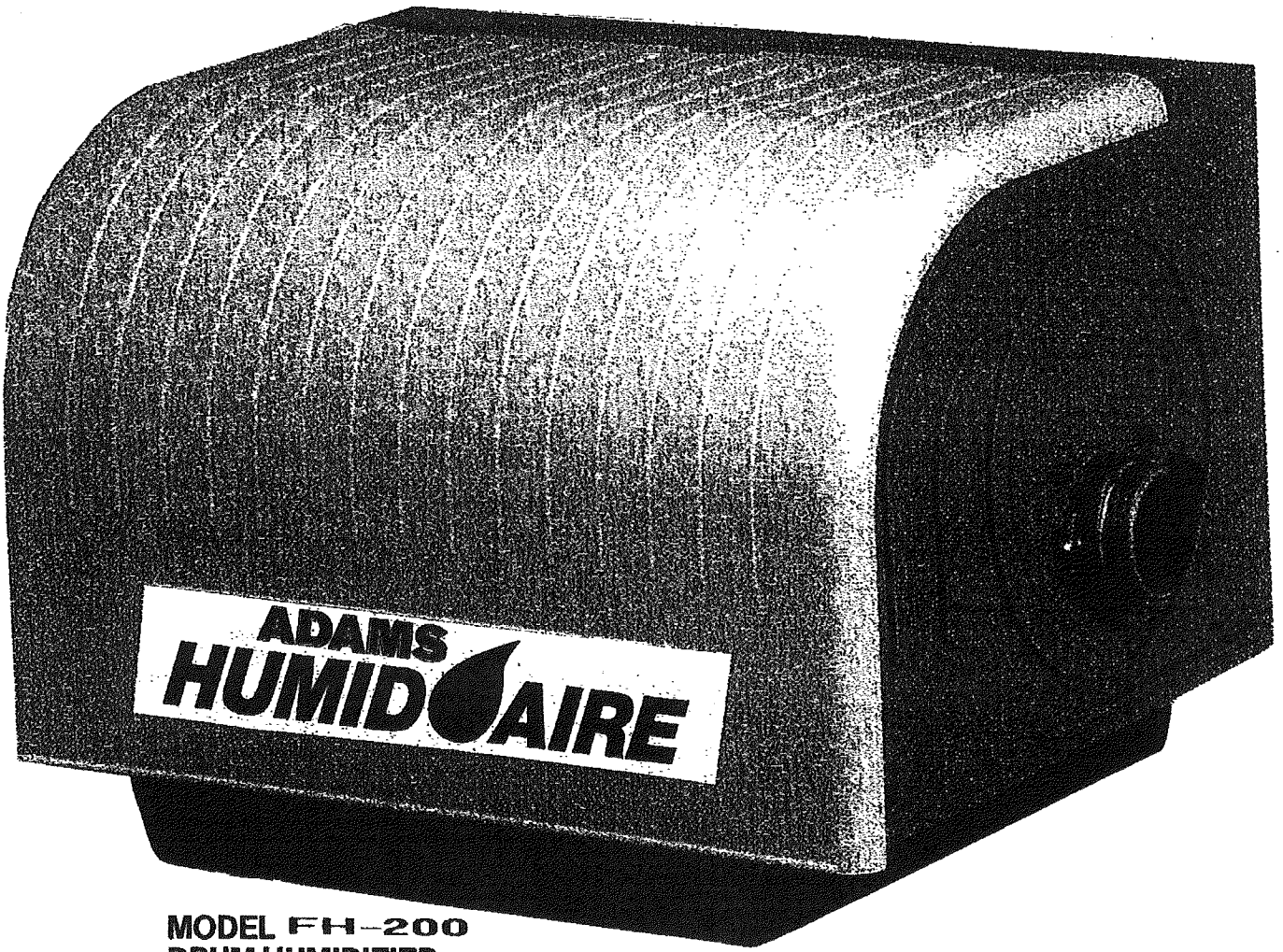
ADAMS

HUMIDAIRE

DRUM TYPE HUMIDIFIER

Designed to give whole house winter comfort.



MODEL FH-200
DRUM HUMIDIFIER

- Evaporative drum.
- Powerful 3-watt motor.
- 20 gallon output capacity per day.
- Plastic housing
- Adjustable float.
- Adjustable humidistat.
- 24-volt system.
- Complete system for most installations.

The drum contains all the small parts and installation hardware. It is closed by a round metal damper that will be used later in the installation process. Open the drum to remove all the parts, then re-assemble the drum without the damper.

1. Required tooling

Tin snips, **3/32"** drill, pliers, screwdrivers, electric drill, hammer, centre punch, medium sand paper.

2. Typical installations (Please see **Fig. 1**)

There are two frequently encountered types of installations: LOW-BOY furnace and HI-BOY furnace.

3. Humidifier location

How it works: This humidifier uses a motor driven evaporator pad. Warm air is by-passed from the warm air plenum and forced through the evaporator pad while it turns in the water pan. Humid air is drawn back into the return duct.

- It is recommended to install this humidifier on the return duct (cold air).
- Identify the return duct and choose the side which allows the best access for installation and maintenance.
- The humidifier must be installed in such a way that if a leak occurs, the water could not cause any damage to the property.

4. Humidifier reversal (Please see **Fig. 12**)

This humidifier is factory assembled with the air inlet located on the left side. It is reversible, if necessary.
However, if it is suitable as supplied, please go directly to **Step 5 (Installation).**
If side reversal is necessary, please do the following:

- Lift the front of the water pan to disengage it from the sides of the humidifier.
- Remove the two screws located at the top of the humidifier body.
- Open the two sides of the humidifier and remove the water pan.
- Bend the two sides in the opposite direction and finish with the top.
- Put the two screws back in place, taking care to not strip the plastic material.

5. Installing the humidifier (Please see **Fig. 2, 3 and 4**)

- Please refer to the general view of a typical installation.
- Bag **No. 1** contains all the material you need to install the humidifier body.
- Choose the location of the template and make sure that a distance of approximately **14"** between the furthest left vertical line of the humidifier opening and the centre of the air take-off collar can be obtained. This dimension is given for a typical installation.
- Apply the humidifier template **(#1)** on the return duct, level it and then attach it to the duct with adhesive tape.
- Starting from the vertical line of the opening (the one closest to the warm air duct), measure **14"** and mark the centre of the air take-off opening.
- Mark the four screw holes and the four corner holes through the template and pierce the duct with a **3/32"** drill.
- Remove the template and cut a rectangular opening that will correspond to the back opening of the humidifier.
- Take the four **3/4"** screws and screw them approximately half way into the four holes you just drilled in the duct.
- Hook the humidifier on the four screws by passing the screw heads through the key holes at the back of the humidifier, then let the humidifier sit in the slots. The ribs around the humidifier back opening must fit into the rectangular opening in the duct. Check that the humidifier body is levelled from side to side and from back to front. Then fasten the humidifier to the duct with the four screws.
- Fasten the motor to the side of the humidifier. Bag **No. 5** contains the motor and two screws.

6. Installing the air take-off collar (Please see **Fig. 10**)

- Center the air take-off collar on the point previously marked on the warm air duct.
- Hold the collar on the duct and mark the four fastening holes and the inside zone of the collar.
- Drill the four fastening holes (**3/32"** dia) and cut a round opening for the air take-off collar.
- Fasten the air take-off collar to the duct with screw **#1** while making sure that the air shutter is installed between the collar and the air duct.
- Install screws **#2** and **#3.**
- Close the opening to approximately 50%. If you used a longer flexible duct than the one supplied, then the opening should be 75%.
- Open the air shutter to 100% if the flexible duct length exceeds 4 feet.
- Install screw **#4** by piercing the shutter, which will hold it in position.

7. Installing the flexible duct (Please see the general view **Fig. 2**)

- Measure the required duct length so it does not sag. Cut the excess portion.
- Slide the flexible duct on the air take-off collar and secure it by inserting the plastic pins through the vinyl in between two reinforcement wires.
- Repeat this operation at the humidifier side.

8. Installing the automatic valve (Please see Fig. 4)

Bag **No. 2** contains all the material you need to install the automatic valve.

- Remove the little knock-out on the left side to open an oblong hole where the valve has to be installed.
- Install the valve inside the casing and fasten it with the hexagonal plastic nut. The valve body is held in a vertical position by two ribs on the humidifier body.
- Take the float **(B)** and install it behind the valve lever **(F)** with the pivot pin **(E)** fitted in the round hole (Please see **Fig. 5**).
- Insert the screw **(A)** in the kidney-shaped opening through the valve lever **(F)** and the float arm **(B)** and screw it into the nut **(C)** installed in the hexagonal housing of the float arm.
- Partially tighten the screw **(A)**.

9. Installing the pan into the humidifier

- Slide the water pan into the humidifier, between the two plastic rails located at the rear of the unit.
- Slightly open the sides of the humidifier and insert the two side tabs of the water pan into the two rectangular hole in the sides of the humidifier.
- Push the front of the water pan down to snap the two tabs in the sides of the humidifier.

10. Connecting the water supply tubing to the humidifier (Please see Fig. 6)

Please ensure that operations 10, 11 and 12 are completed in sequence.
The plastic tubing **MUST** be kept away from hot surfaces (e.g. the warm air duct or the exhaust vent). Please measure carefully before cutting.
Important: Rough up both ends of the plastic tubing (approx. 1 inch long) with sandpaper in a rotating action.

- Slip the plastic compression nut onto the tubing, then the rubber sleeve, and finally fit one of the brass inserts (1/2" long, supplied with the brass valve) into the end of tubing.
- Push the tubing fully into the valve. Then tighten the plastic compression nut securely by hand, without stripping.

11. Installing the supply valve on a copper pipe (Please see Fig. 13)

A plastic bag contains a brass valve and all the material required to install the supply valve. The water supply is taken from the nearest cold water pipe suitable for the supply valve installation. Shut off the main water valve.
Caution: Please make sure that the piercing needle is completely backed up into the valve body by turning the handle counterclockwise.

- Assemble one side of top clamp to bottom clamp with a screw and a nut.
- Make sure that the rubber gasket is in place over the piercing needle and position the valve assembly on the copper water line.
- Assemble the other side of the top clamp to the bottom clamp with the remaining screw and nut.
- Tighten the two screws so that the valve is firmly attached to the water pipe. The two sides of the clamp must be parallel.
- Turn the valve handle completely clockwise until it stops. This will pierce the copper pipe **and** close the valve.

12. Connecting the water supply tubing to the supply valve (Please see Fig. 6)

- Slip the brass compression nut onto the plastic tubing, then the nylon sleeve with its most tapered end towards the end of tubing.
- Fit the second brass insert (1/2" long, supplied with the brass valve) into the end of tubing.
- Push the tubing fully into the supply valve. Then tighten the brass compression nut with a **small** wrench.
- NOTE: The brass sleeve supplied with the brass valve is to be used only if the plastic tubing is replaced by copper tubing (optional).

13. Installing the drum

- The drum shaft has a flat end that fits into the motor. The opposite end of the shaft snaps into position in the centre of the air collar.

14. Adjusting the water level (Please see Fig. 7)

The water level is adjusted by altering the height of the float.
The maximum water level in the pan is at approximately **3/4"** from the top of the water pan. This is also the optimal level.

- Open the main water valve then the supply valve installed on the water pipe and adjust it to get a moderate water flow.
- Loosen the screw **(A)** and adjust the float in such a way that it closes the automatic valve when the water level reaches **3/4"** from the top of the water pan.
- Tighten the screw **(A)** when achieved.
- Wait until the automatic valve completely closes and check all fittings. If necessary, tighten the compression nuts a little more without stripping.

15. Installing the humidistat (Please see Fig. 1, 2 and 8)

This humidifier is supplied with a duct mounted humidistat. The **RETURN** duct mounting allows a better "sensing" of all the air returned to the furnace without being disturbed by a sudden increase in moisture level (kitchen or bathroom), thus offering superior humidity control.
Bag **No. 4** contains all the material you need to install the humidistat.

- The humidistat should be installed on a flat and vertical surface of the **RETURN** duct at approximately 6 inches from the humidifier top.
- Attach the humidistat template **(#2)** on the duct with adhesive tape.
- Mark and drill the mounting holes and cut an opening for the humidistat.
- Push the two quick connectors on the humidistat terminals **#2** and **#3** and attach the two previously stripped wires to them.
- Check that the metal of the duct neither touches the connections nor cuts the wire insulation.
- Run the control wires through an opening located at the bottom of the front panel.
- Install the humidistat in the opening and fasten it to the duct. The mechanism is exposed in the duct.
- Complete the wiring of the humidistat according to **Fig. 9.**
- Temporarily install the control knob on the humidistat.

16. Installing the transformer (Please see Fig. 9)

This humidifier is equipped with a transformer that can be plugged in to any electric outlet.
Connect the transformer at the end of the twisted wire after finishing the humidistat installation.

17. Humidifier start-up

- Plug the transformer and slowly turn the humidistat control knob to the maximum setting. You should hear a click and the humidifier drum should start turning slowly (1 revolution per minute).
- **THE DRUM CAN ROTATE IN EITHER DIRECTION.**
- Carefully check that both ends of the water supply tubing are firmly held in place by their respective compression fitting.
- Check that the water level in the pan is at the right level and that the float closes the automatic valve completely.
- After peeling off the backing, affix the face plate to the cover of the humidistat and re-install the control knob.
- Set the humidistat to a median value (40 %).
- Make sure that there is no leak before leaving the installation unattended.

18. Adjusting the relative humidity setting

- A relative humidity environment of 40% is recommended. However, you should take the outside temperature in consideration before setting the humidity level. Please refer to the table on the humidistat to help determine the proper level.
- Each adjustment of the humidistat should be followed by a period of 24 hours to allow the general humidity level to stabilize in the house.
- If your house remains unoccupied during the winter season, set the humidistat to 30% to prevent condensation.

19. Humidifier maintenance tips

- Neither stop nor rotate the drum manually. Do not remove the drum when it is rotating as it may cause permanent damage to the motor.
- The evaporator pad should be replaced at least once per heating season.
- Depending on the water quality, the water pan and the float should be cleaned once a month.

20. Summer season

- If the system is used in air conditioning during the summer, reduce the air volume going through the humidifier by closing the air shutter.
- It is advisable to simply shut off the humidifier system.
- Close the water supply valve, empty and clean the water pan, and turn the humidistat knob to the **"OFF"** position.

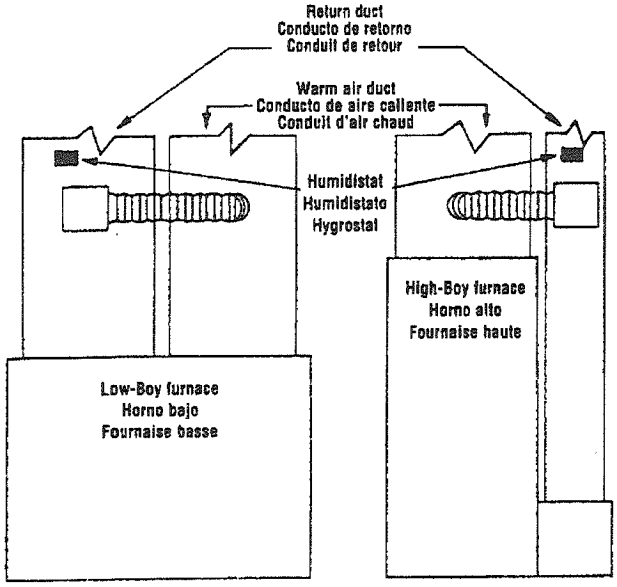
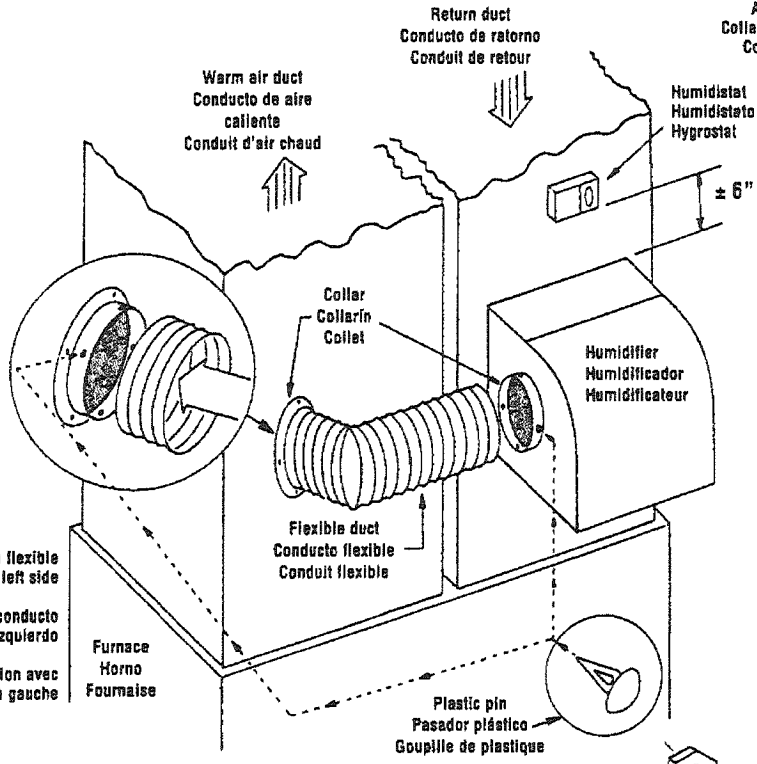


FIG. 1 Typical installations
Instalaciones típicas
Installations type



Installation with flexible duct on the left side

Instalación con el conducto flexible en el lado izquierdo

Installation avec conduit flexible à gauche

FIG. 2 General view
Vista general
Vue générale

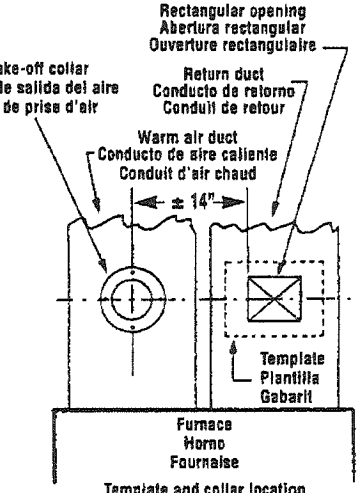
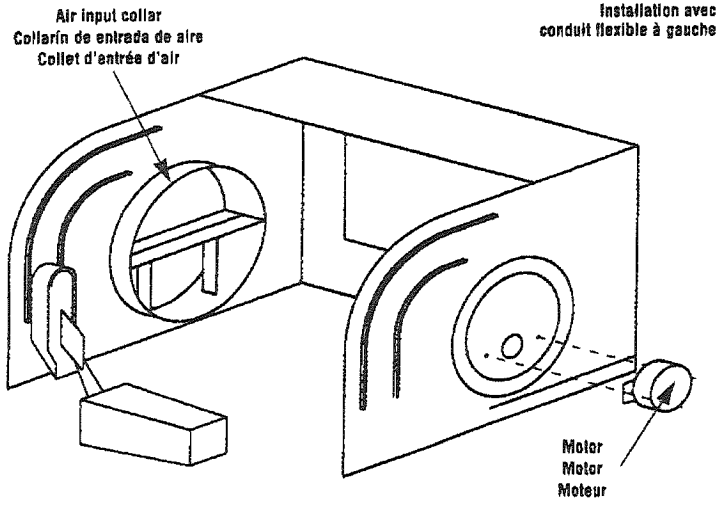


FIG. 3 Template and collar location
Plantilla y lugar del collarín
Gabarit et emplacement du collet



Motor installation and location of the automatic valve
Instalación del motor y lugar de la válvula automática
Installation du moteur et emplacement de la valve automatique

FIG. 4

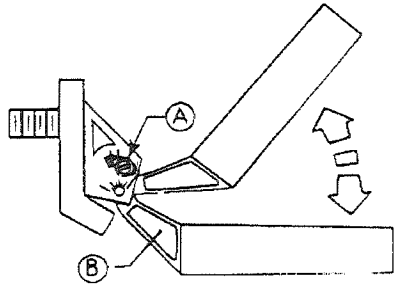


FIG. 7 Float adjustment
Ajuste del flotador
Ajustement du flotteur

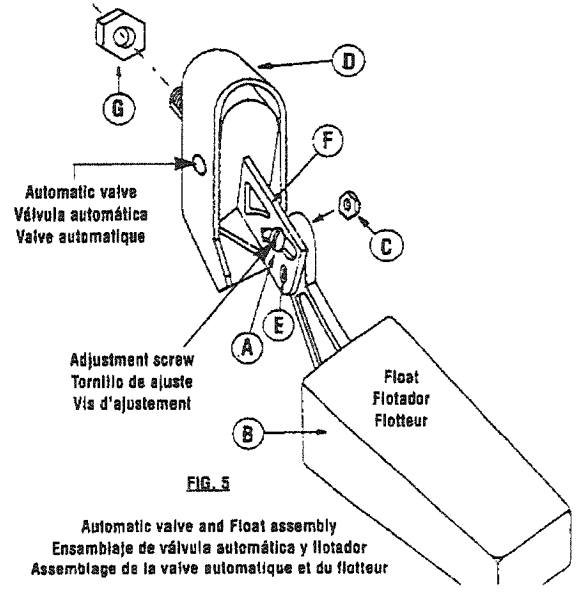


FIG. 5

Automatic valve and Float assembly
Ensambiaje de válvula automática y flotador
Assemblage de la valve automatique et du flotteur

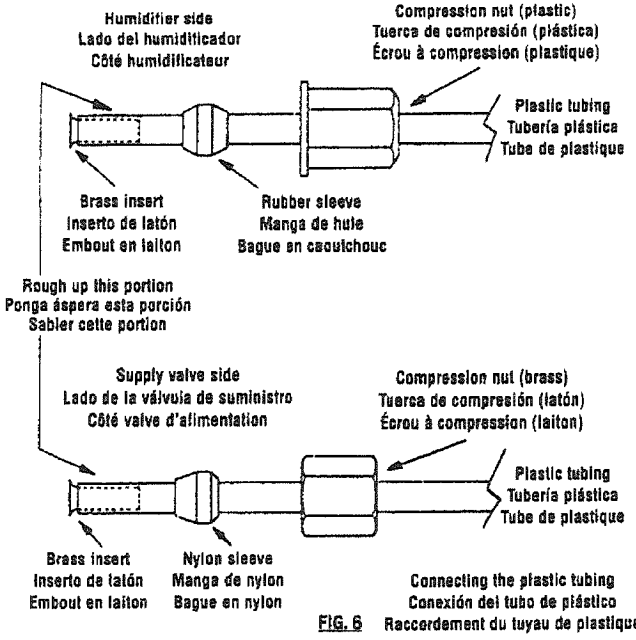
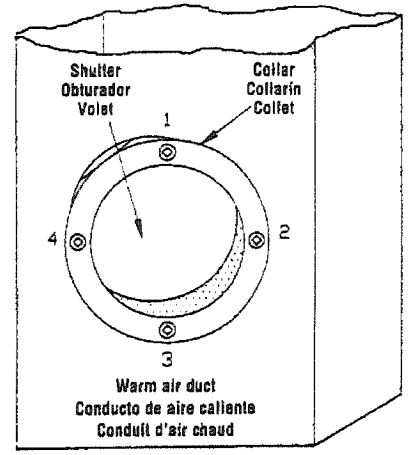
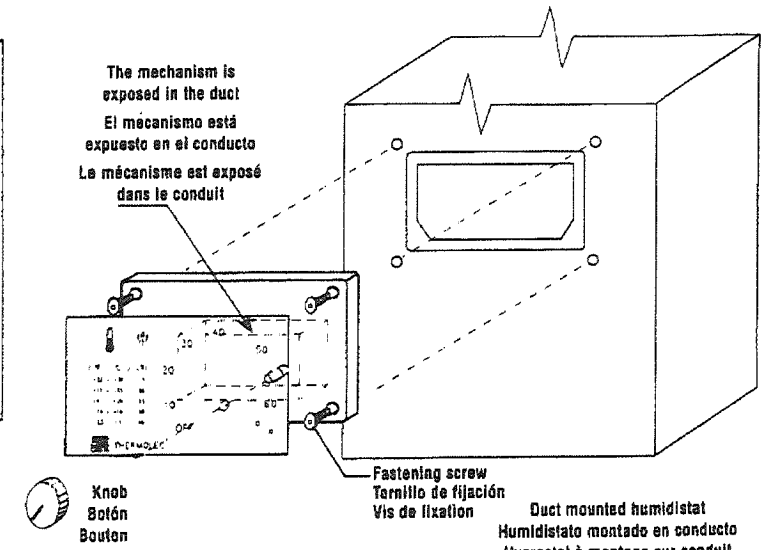


FIG. 6 Connecting the plastic tubing
Conexión del tubo de plástico
Raccordement du tuyau de plastique



Air take-off collar installation
Montaje del collarín de salida de aire
Installation du collet de prise d'air

FIG. 10



Duct mounted humidistat
Humidistato montado en conducto
Hygrostat à montage sur conduit

FIG. 8

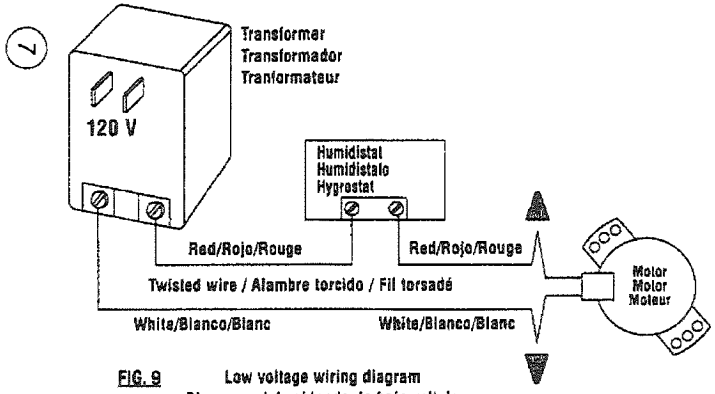
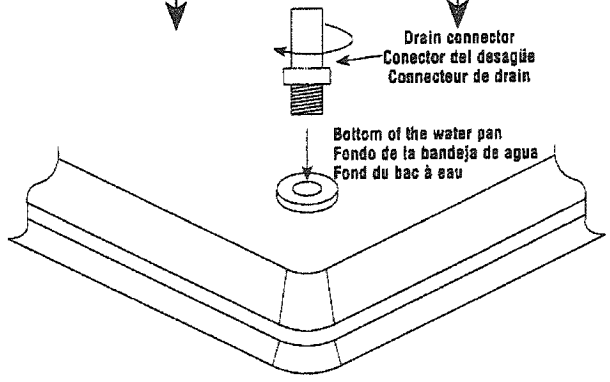


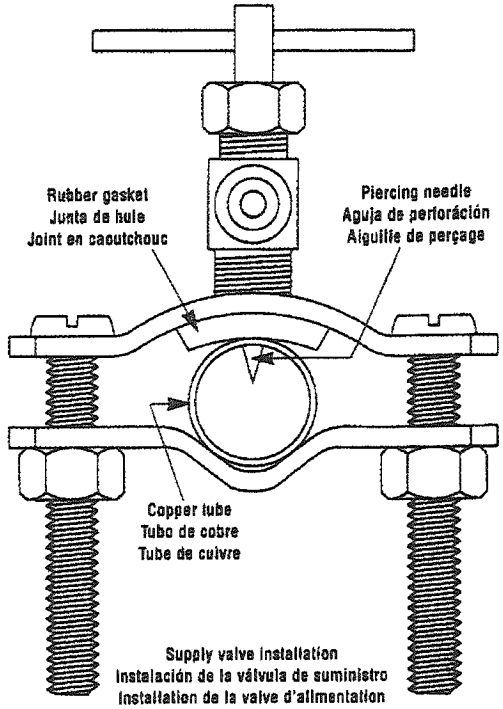
FIG. 9 Low voltage wiring diagram
Diagrama del cableado de bajo voltaje
Schéma de cablage basse tension

For self cleaning model only
Para el modelo que se limpia solo solamente
Pour le modèle autonettoyant seulement



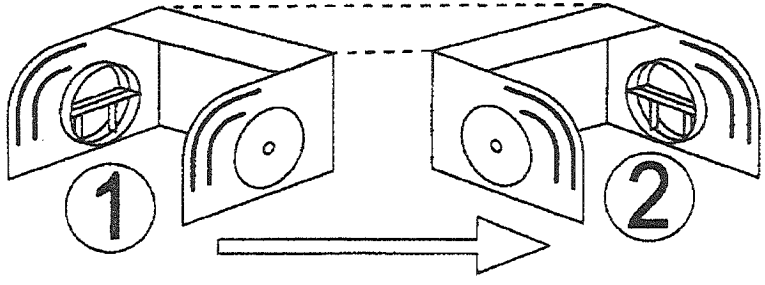
Assembling the drain connector
Ensamble del conector de desagüe
Assemblage du connecteur de drain

FIG. 11



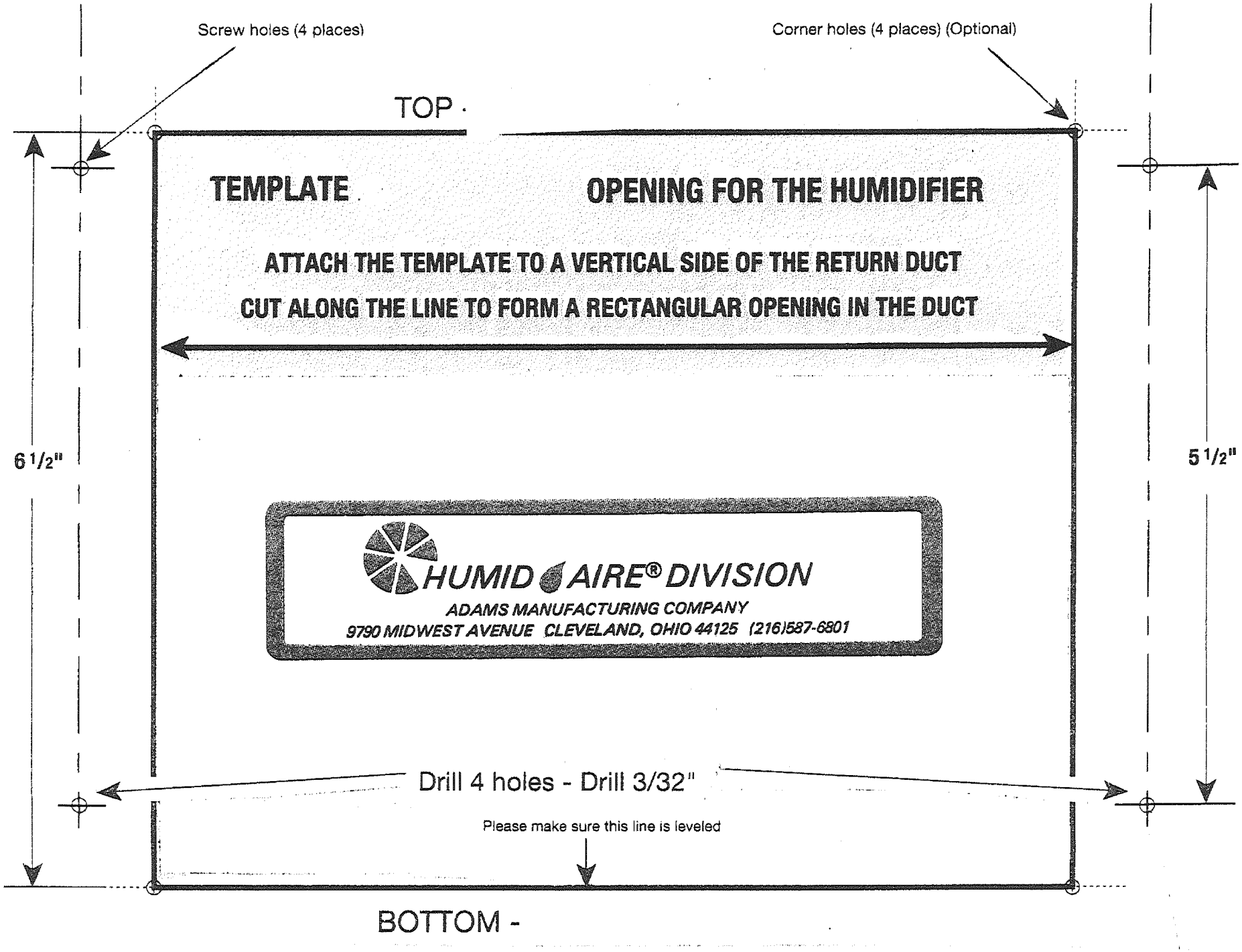
Supply valve installation
Instalación de la válvula de suministro
Installation de la valve d'alimentation

FIG. 13



Reversal of the humidifier body
Inversión de la caja del humidificador
Inversion du boîtier de l'humidificateur

FIG. 12


Screw holes (4 places)
Corner holes (4 places) (Optional)
TOP
TEMPLATE
OPENING FOR THE HUMIDIFIER
ATTACH THE TEMPLATE TO A VERTICAL SIDE OF THE RETURN DUCT
CUT ALONG THE LINE TO FORM A RECTANGULAR OPENING IN THE DUCT
6 1/2"
5 1/2"
HUMID AIRE® DIVISION
ADAMS MANUFACTURING COMPANY
9790 MIDWEST AVENUE CLEVELAND, OHIO 44125 (216)587-6801
Drill 4 holes - Drill 3/32"
Please make sure this line is leveled
BOTTOM