



Hamilton Home Products, Inc.
P.O. Box 12039, Columbus, Ohio 43212
www.HamiltonHomeProducts.com
1-800-879-0123

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS FOR HAMILTON MODEL IOHF

IMPORTANT
**A FLOOR DRAIN IS REQUIRED for proper
installation and operation of this model.**

**READ ENTIRE INSTRUCTIONS
CAREFULLY BEFORE INSTALLING**

SAFETY PRECAUTIONS

- 1) This Humidifier is intended for use on forced air circulation warm air furnaces, as well as multi-fuel furnaces where the temperatures do not exceed 200 degrees Fahrenheit. Excessive temperatures will damage your Humidifier and possibly cause an overflow condition and water damage to your home.
- 2) Do not install a Humidifier where surrounding temperatures may be 32°F or colder. Freezing water will damage your Humidifier and burst the supply pipe, resulting in home damage.
- 3) The installation, wiring and plumbing of the humidifier must comply with local codes, ordinances and regulations.
- 4) Do not cut or drill into any air conditioning or electrical accessories during installation.
- 5) Make sure all water connections are properly installed or water damage could occur.
- 6) Do not allow the Drain Tubing or Water Supply Tubing to touch any heated surface or sharp edges. Make certain the Drain Tubing is placed in a drain so there is no resistance to the flow of the discharged water.
- 7) Below are the recommended settings for your humidity control. Setting your humidistat higher than the listed setting could cause condensation that would damage your home. If excessive moisture appears on windows or walls, reduce humidity setting enough to eliminate condensation. If the situation continues, turn off water valve until condensation is gone.
- 8) **Hamilton assumes no responsibility under warranty if user does not follow stated precautions.**

<u>Outside Temp</u>	<u>Rec. Setting</u>	<u>Outside Temp</u>	<u>Rec. Setting</u>
-20°F	15	+10°F	30
-10°F	20	+20°F	35
0°F	25	Above 20°F	40

TOOLS NEEDED

- | | |
|----------------------------|-------------------------|
| Safety Goggles | Hammer |
| Tin Snips | Small Adjustable Wrench |
| Electric or Hand Drill | Center Punch |
| 1/8" drill bit Screwdriver | Knife |
| Pliers | Straight Edge Ruler |
| Pencil | Level |

OTHER MATERIALS NEEDED

- 6" Galvanized Duct Elbow and Round Pipe (or Metal flex duct)
- Electrical Tape / Wire Nuts



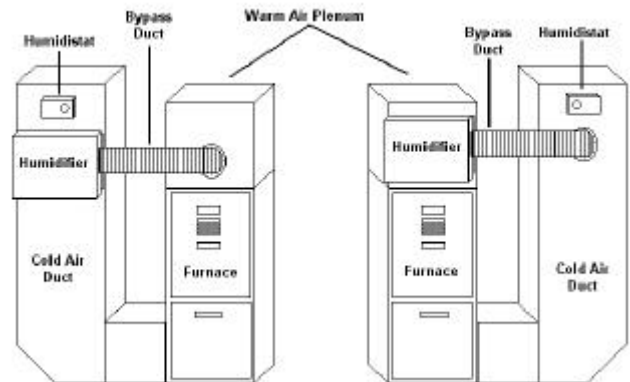
GENERAL INFORMATION

The IOHF Flow- Thru Humidifier is designed to humidify the heated air that your furnace produces based on your selected humidity level for your home. When your furnace blower comes "on", the humidifier is activated and remains "on" until your furnace blower turns "off", or your home reaches its desired humidity level.

When the humidifier is activated, the solenoid valve opens and allows the water supply into the Distribution Tray at the top of the humidifier. The water is then evenly channeled onto the evaporative pad inside the cabinet, where the heated air passes through and becomes humidified. This moist air is then distributed throughout your home by the air circulation of your central heating system. Any unevaporated water from the pad, then flows through the drain tube into a floor drain. This self-cleaning design washes away any minerals left behind and reduces the maintenance on the unit itself.

NOTES:

- 1) Reference the back page for the names and descriptions of each part and component mentioned in the instructions.
- 2) The Humidifier can be installed on either the arm air supply plenum **or** the cold air return plenum.



- 3) The installation instructions are for the 10 HP Humidifier, which comes fully assembled, with the outlet to the **RIGHT**. Conversion so the outlet is to the **LEFT**, can simply be made by inverting the Humidifier, and reversing the positions of the a) Solenoid Valve connection, b) Distribution Tray, c) the Drain Pan and d) Evaporator Pad (so black mark is at top).
- 4) *The initial adjustment period for the desired humidity level in your home can take up to 3 weeks since furniture, drapes, carpeting, houseplants, woodwork etc., will absorb the newly produced moisture as well.*

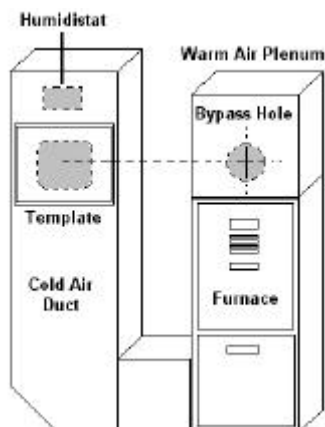
SELECTING THE LOCATION

1) By holding the humidifier against the vertical surface of the warm **OR** cold air plenum, determine the best location for the unit. Be sure to allow adequate clearance to attach the water supply tubing, the drain tubing, and clearance for the humidifier by-pass tubing. (*If mounting Humidifier on cold air return, allow 6" above top of unit for mounting of humidistat*) Securely tape the mounting template provided to the plenum selected. Make sure template is horizontal and LEVEL. Allow at least 3 inches clearance from bottom line on template to any part of furnace jacket or other obstruction.

2) Center punch 4 side mounting holes on template, and drill with 1/8" or smaller drill bit.

WARNING: MAKE SURE YOU ARE NOT CUTTING OR DRILLING INTO ANY AIR CONDITIONING OR ELECTRICAL ACCESSORIES.

3) Cut the plenum opening, using tin snips, by cutting along the solid line in the center section of the template, as indicated.



HUMIDIFIER LOCATION

- 4) Bypass Hole Location. Extend centerline from template on warm air plenum to cold air plenum or vice versa and mark appropriately. This mark will be used in Step 4 of the next section. Slight variances from horizontal will not affect performance of the humidifier.
- 5) Remove template.

INSTALLING THE HUMIDIFIER

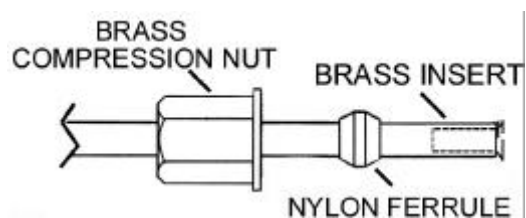
- 1) Start 4 sheet metal screws in side holes. Hang the humidifier on the 4 screws and tighten. **USE CARE NOT TO OVER TIGHTEN SCREWS AND CRACK FRAME.**
- 2) LEVEL the Humidifier, using the built-in bubble level inside the Distribution Tray. Adjust, level, re-tighten screws, if necessary. **CAUTION: THE HUMIDIFIER MUST BE LEVEL FROM SIDE TO SIDE AND FRONT TO BACK TO INSURE WATER EVENLY FLOWS THROUGH THE EVAPORATOR PAD**
- 3) Secure top and bottom of humidifier housing by marking and drilling the 4 holes to the plenum. Attach using sheet metal screws. Check the level and adjust if necessary.

Using starting collar provided, as template, scribe a circle on opposite plenum using centerline marked earlier. Cut the opening and insert tabbed end of collar through hole. Bend tabs over to secure mounting collar.

- 5) Mount a 6" elbow (not provided) to starting collar and determine length of 6" round pipe (not provided) needed to fit between elbow and humidifier. Mount pipe to elbow and humidifier by-pass opening. **NOTE: 6" diameter metal flex duct can be used in place of the 6" elbow and pipe.**
- 6) Drill two (2) 1/8" holes through pipe and mounting ring on humidifier and secure with two (2) 1/4" long sheet metal screws. NOTE: Check damper operation to be sure that screws do not interfere with rotation.
- 7) Secure pipe at elbow connection and plenum connection (or metal flex duct if used instead), with sheet metal screws.

WATER CONNECTION

- 1) **Supply Tube:** Place looped end of Supply Tube into the hole in the top of the Distribution Tray and assemble the straight end to the brass fitting at top of solenoid Valve using copper ferrule and compression nut, and tighten down. **Note: Make sure that the looped end of Supply Tube is directed into the hole in the cover of the Distribution Tray.**
- 2) Tighten down Distribution Tray cover with plastic thumbscrew provided.
- 3) **Saddle Valve:** Select nearest **cold** water pipe. Install self-piercing saddle valve on cold water pipe following the instructions provided on Saddle Valve package.
- 4) **Plastic Water Supply Tubing Connection:** Assemble the plastic water supply tubing, brass tube insert, plastic ferrule and compression nut as shown. (See diagram below) Then, insert this assembled end of tubing directly into saddle valve and tighten down the brass compression nut.



- 5) Assemble the other end of the plastic water supply tubing (again as shown above) and insert directly into the brass fitting at the bottom of the Solenoid Valve. Tighten down brass compression nut.
- 6) Turn water on and check for leaks. Stop leaks by further tightening fittings. Check that all fittings are secured.

DRAIN CONNECTION

- 1) Connect drain hose to the fitting on bottom of drain pan, with clamp provided.
- 2) Run hose to suitable drain such as a floor drain, making sure that the tubing runs continuously downward with no restrictions. Be sure drain hose is not kinked at any point as water could back up and overflow out of the Drain Pan.

ELECTRICAL CONNECTIONS

Note: Please read this section completely before attempting the 120V wiring.

IMPORTANT INFORMATION: Many newer furnaces have I Control Boards with ports for the connection of a Humidifier, simplifying installation. **Check wiring diagram for your furnace to see if it has a control board if the and if the Humidifier ports are 120v or 24v.**

Control Board w/ 1120v Ports: Follow Steps in "LINE" Wiring, except make the wire Connections to the Humidifier ports on the Control Board instead of the Blower Motor.

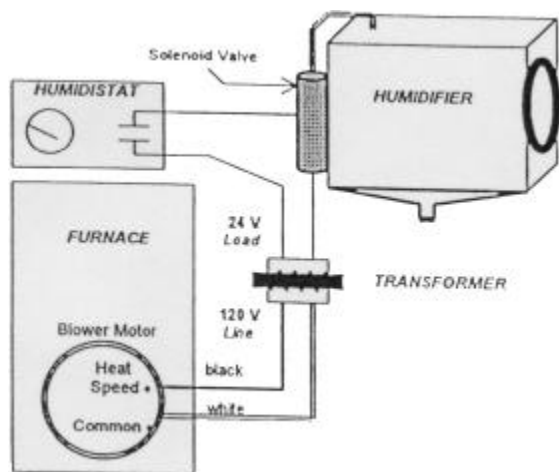
Control Board w/ 24v Ports: Go to directions for "LOAD" wiring, only. The Humidifier Transformer is not needed. Skip "LINE" Wiring section below.

No Control Board: Follow instructions below as written.

CAUTION: Before wiring, turn off all power that supplies the components. All wiring should comply with local, state and national codes.

A) "LINE" WIRING (120v) Furnace Connections

Using the Humidifier Transformer provided, follow the basic 120v wiring directions and the diagram below. The Humidifier Transformer will be wired to the Furnace Blower Motor.



- 1) Locate the Humidifier Transformer. You will note that one side reads "LINE", which is for the 120V wiring, and the other side reads "LOAD", which is for the 24V Wiring.
- 2) Select the best location to mount the transformer on the furnace so 1) the black wire (hot) on the Line side can be connected to the proper furnace blower motor wire, and 2) the white wire (common) can be connected to any furnace common wire. Mount the transformer.
- 3) From the wiring diagram for your furnace, **locate the wire that is HOT, during the HEAT mode of operation.** (In most cases, there will be 3 color-coded wires that control the speeds of high, medium or low).

- 4) Make the wiring connections as described in Step I. Wire nut and wrap each connection with electrical tape to complete the 120V wiring.

B) "LOAD" WIRING (24V) Refer to previous diagram Humidistat, Solenoid, and Transformer Connections

- 1) **Humidistat:** To complete the 24V wiring, the duct Humidistat must first be mounted. The Humidistat must be located on the return (cold) air plenum AND upstream of the Humidifier or by-pass on a flat vertical surface of the return air plenum or duct. It should not be closer than 6" to the Humidifier or by-pass. **Do not install the Humidistat on the Supply {HOT} air plenum.** Follow installation instructions found in Humidistat package.
- 2) Connect a piece of the Low Voltage wire provided, from the LOAD side of transformer (*or 24V Humidifier port on Control Board if applicable*) to either Solenoid Valve wire. Connect another piece of wire from the other Solenoid Valve wire to the Humidistat. (Refer back to wiring diagram)
- 3) Lastly, connect a piece of the Low Voltage wire from the LOAD side of the transformer (*or 24V common port on the Control Board if applicable*) directly to the Humidistat.

OPERATING THE HUMIDIFIER

- 1) When furnace blower is "OFF", solenoid should be closed.
- 2) With the furnace blower turned "ON", the solenoid valve should be open, if Humidistat setting is **ON** (i.e. 20,30 etc.) 3) Flow of water should fall directly into Distribution Tray.
- 4) The orifice in the solenoid valve will limit the flow of water to the Distribution Tray to approximately 3 1/2 gallons per hour, at a line pressure of 60 PSI.
- 5) Let Humidifier run long enough to be sure that the unit drains properly into floor drain without overflow. Overflow conditions are usually caused by water not flowing freely out of the drain tube. Verify downward slope and no trap or kink in the drain tubing. Make sure again that all connections are secure and there are no leaks.
- 7) Damper is suggested to be on "HIGH" when Humidifier is used during the winter months, with the Humidistat set at the recommended settings. Should water blow off of evaporator pad, gradually close damper until the condition is corrected. Set Damper to "LOW" position during the summer months and Humidistat set to 'OFF'. **WARNING: Do NOT set Humidity Control too high. Use recommended settings shown on Humidistat nameplate.**

MAINTENANCE INSTRUCTIONS

- 1) Shut off power and water supplying this equipment.
- 2) Remove bottom Drain Pan and slide Evaporator Pad down and out.
- 3) Wipe any loose sediment from the water tray (make certain no particles are allowed to plug the drain hole).
- 4) Slide new Evaporator Pad up and in through the bottom and re-connect the Drain Pan to the Humidifier housing
- 5) Evaporator pad should be replaced at least once a year.

REPLACEMENT PARTS FOR 10-HF

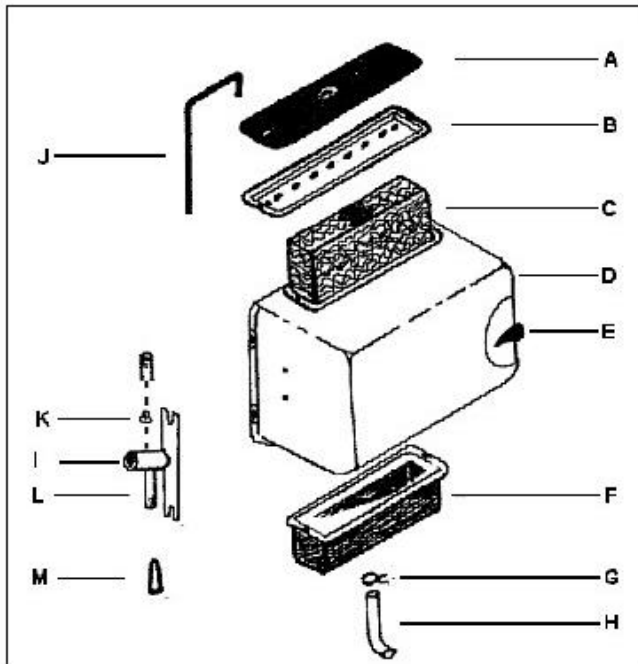
MODEL 10HF Humidifier

Limited One-Year Product Warranty

This limited one-year warranty covers this Hamilton Humidifier as designated on the return portion of the warranty registration card, excluding wiring, plumbing, and installation.

Hamilton Home Products, Inc. warrants that all new Hamilton Humidifiers are free from defects in material and workmanship under normal, non-commercial use and service. Hamilton will remedy any such defects as they appear within 12 months from the date of original installation as evidenced by receipt of the warranty registration card, subject to the terms and conditions of this limited one-year warranty stated below:

A	H-7503	COVER/ DISTRIBUTION TRAY
B	H-7501	DISTRIBUTION TRAY
C	EPO36	REPLACEMENT PAD
D	H-7500	HOUSING
E	H-7514	SELECTOR/ DAMPER
F	H-7502	DRAIN PAN
G	H-3094	CLAMP TUBE
H	H-7515	DRAIN TUBE
I	H-7506	SOLENOID VALVE 24V
Optional	H-7505	SOLENOID VALVE 115V
J	H-7510	1/4" SUPPLY TUBING x 10'
K	H-7509	ORIFICE (40-120 PSI)
Optional	H-7516	ORIFICE (20-40 PSI)
L	H-7507	INLET FITTING
M	H-7508	STRAINER INLET (000-1319-051)
Not Shown	H-7511	CHANNEL PAD (2 REQ.)
Not Shown	H-7520	LOCK DOWN SCREW COVER
Not Shown	H-7519	PARTS BAG
Not Shown	H-2030/161	1/4" COMPRESSION NUT
Not Shown	H-850-24	HUMIDISTAT
Not Shown	AT20-120	TRANSFORMER



CONGRATULATIONS

We, the employees at Hamilton thank you for your recent purchase of a Hamilton Humidifier. With a little care, it will provide you with years of comfort. If you have any questions about installing, servicing, or obtaining parts for your Hamilton Humidifier, call us at: **1-800-879-0123**

Visit us at: www.HamiltonHomeProducts.com

- 1) This limited one-year warranty is granted by Hamilton Home Products, Inc. PO Box 12039, Columbus, Ohio 43212
- 2) This warranty shall extend only to any non-commercial owner who has purchased this residential product other than purpose of resale.
- 3) The completion and return of the warranty registration card is a condition precedent to warranty coverage and performance. Warranty is not valid unless this card is completed and mailed to the factory within 15 days of equipment installation.
- 4) All components are covered by this limited warranty except expendable items. This warranty only applies if the unit is properly installed and operating according to the manufacturer's instructions provided with this product.
- 5) If within the warranty period any Hamilton product requires service, Hamilton will not pay shipping charges or, or labor charges to remove or replace such defective parts or components. If the part or component is found by inspection to contain such defective material or workmanship, it will be either repaired or exchanged, free of charge, at Hamilton's option, and returned freight collect.
- 6) In order to obtain the benefits of this limited one-year warranty, the owner must notify the seller of any defects within 30 days of discovery. If after reasonable time you have not received a satisfactory response, notify in writing, Hamilton Home Products, Inc. PO Box 12309, Columbus, Ohio 43212. HAMILTON WILL RECEIVE, FREIGHT PREPAID, ONLY REMOVABLE PARTS OR COMPONENTS OF SUCH DEFECTIVE PRODUCTS.
- 7) This limited one-year warranty does not apply to any part or component that is damaged in transit or handling; has been subject to abuse, neglect or accident; has not been installed, operated and serviced according to Hamilton's instructions; has been operated beyond factory rated capacity; altered in any such way that its performance is affected. There is no warranty due to neglect, alteration, or ordinary wear and tear. Hamilton's liability is limited to replacement of defective parts or components and does not include payment of the cost of labor charges to remove or replace such defective components or parts.
- 8) Hamilton will not be responsible for loss of use of any product: loss of time, inconvenience, or any other indirect, incidental, or consequential damages with respect to person or property, whether caused directly or indirectly by the product, a result of breach of contract, neglect or otherwise. **Some states do not allow the exclusion or limitation of incidental or consequential damages, so the limitation of exclusion in the preceding sentence may not apply to you.**
- 9) THIS WARRANTY GIVS YOU SPECIFIC RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VERY, FROM STATE TO STATE.
- 10) Any warranty work will be performed within a reasonable time, usually within 120 days after notice of defect and delivery to Hamilton's factory, subject to delays beyond the manufacturer's control.
- 11) Any warranty by Hamilton of merchantability, fitness for use or any other warranty (expressed, implied, or statutory), representation or guarantee other than what is set forth herein shall expire at the expiration date of this limited one-year warranty. **Some states do not allow limitation on how long an implied warranty lasts, so the limitation in the preceding sentence may not apply to you.**
- 12) Hamilton reserves the right to make changes in the design and material of its products without incurring any obligation to incorporate such changes in the units completed on the effective date of such change.

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