



EHV/EHH/HEV/HEH

INSTALLATION INSTRUCTIONS

OPERATION AND MAINTENANCE

FOREWORD

The following information is to be used by the installer as a guide. Since each installation is unique unto itself, only general topics are covered. The order in which topics may be presented may not be those required by the actual installation.

This guide does NOT supersede or circumvent any applicable national, state or local code.

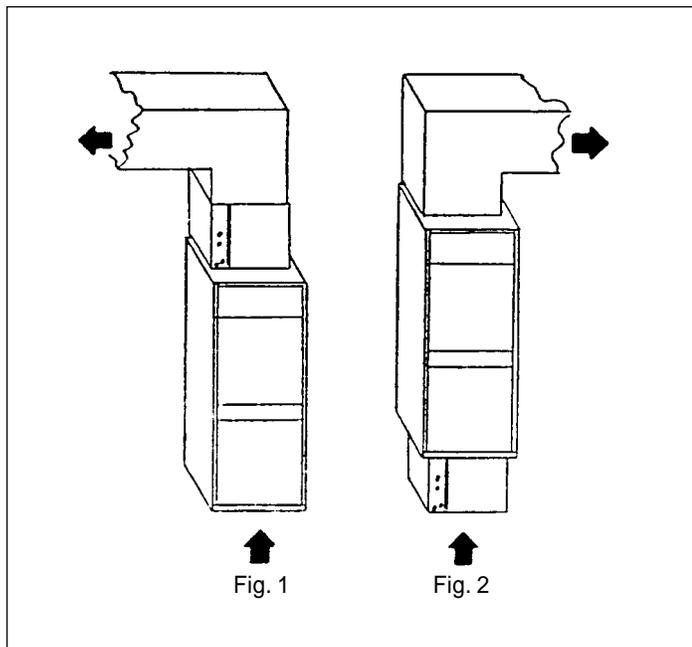
The installation is to be performed only by individuals whose experience meets or exceeds the requirements of the work involved.

The installer MUST read the entire contents of this guide and develop a thorough understanding before beginning.

Due to a continuing program of product research, ICP reserves the right to discontinue or change without notice, any or all specifications or designs without incurring obligations.

INSPECTION

Thoroughly inspect all packages upon receipt. Ensure carton(s) have not been dropped, crushed or punctured. Inspect all contents for damage. If damage is found, immediately file a claim with the delivering carrier.



SAFETY

The installation and/or servicing of comfort conditioning equipment can be hazardous due to system pressures and electrical devices.

ONLY TRAINED/QUALIFIED PERSONNEL SHOULD PERFORM SERVICE AND/OR INSTALLATION

OBSERVE ALL PRECAUTIONS AND WARNINGS IN PRODUCT DATA OR ATTACHED TO UNIT.

Follow all safety codes. Wear eye protection and gloves. Have a fire extinguisher readily available.

DISCONNECT ALL POWER SUPPLIES BEFORE ACCESSING EQUIPMENT.

DISCONNECTING MORE THAN ONE POWER SUPPLY MAY BE REQUIRED TO DE-ENERGIZE SOME EQUIPMENT.

ELECTRIC SHOCK CAN CAUSE DEATH

DESCRIPTION

The ICP model series EHV and HEV indoor coils may be used in the following UP-FLOW applications:

AIR FLOW	FURNACE TYPE	FIG.
BLOW THROUGH	FOSSIL OR ELECTRIC	1
DRAW THROUGH	ELECTRIC ONLY	2

All models are suitable for use with cooling only and heat pump systems using Refrigerant 22.

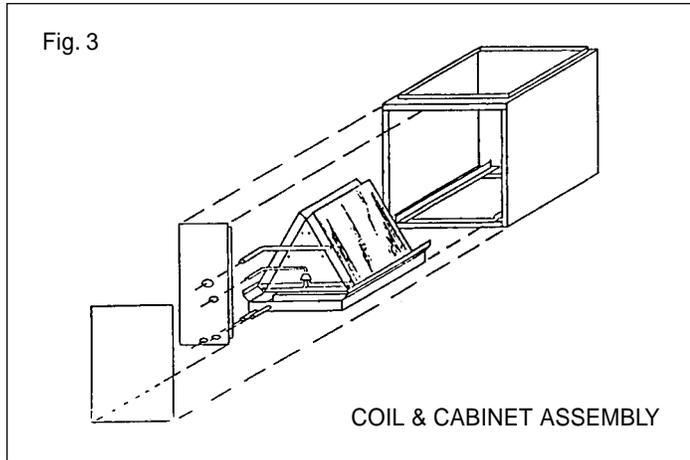
COIL & CABINET

Figure 3 explains the assembly of the coil within the cabinet. Seal tubing and drain line openings with mastic tape to prevent air leakage. Ensure that back of coil assembly drain pan is firmly nested against rear of cabinet to prevent air bypassage.

NOTE:

PROPER DRAINAGE DEPENDS UPON ORIENTATION OF ASSEMBLY!

ALWAYS SHIM ASSEMBLY TO LEVEL OR SLIGHT SLOPE TO THE FRONT TO PROMOTE CONDENSATE FLOW ON ANY INSTALLATION.



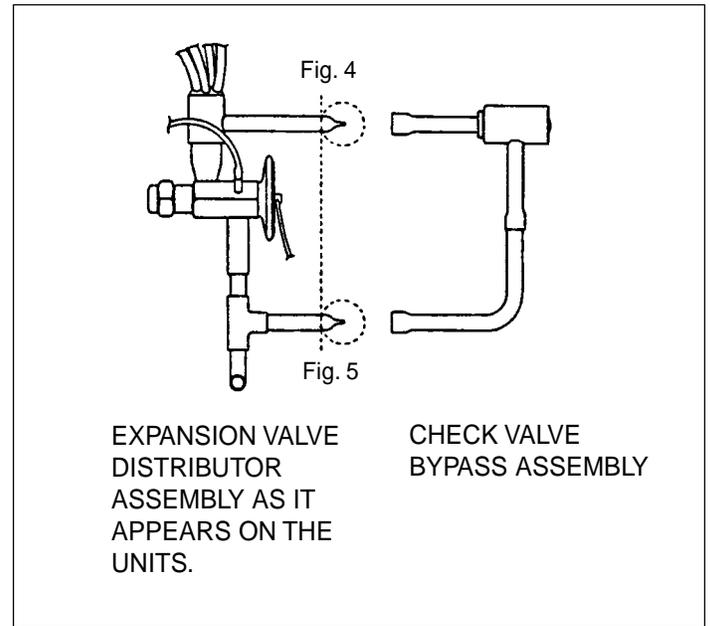
INSTALLATION

REFRIGERANT PIPING

Always use the condensing unit manufacturer's recommended line sizes. The suction line must be insulated for satisfactory operation. Observe all condensing unit manufacturer's recommendations or requirements. Use refrigerant grade copper only. The coil is a dual circuit coil and fittings are included for single circuit applications.

When installed as the indoor coil of a heat pump, a bypass check valve must be used.

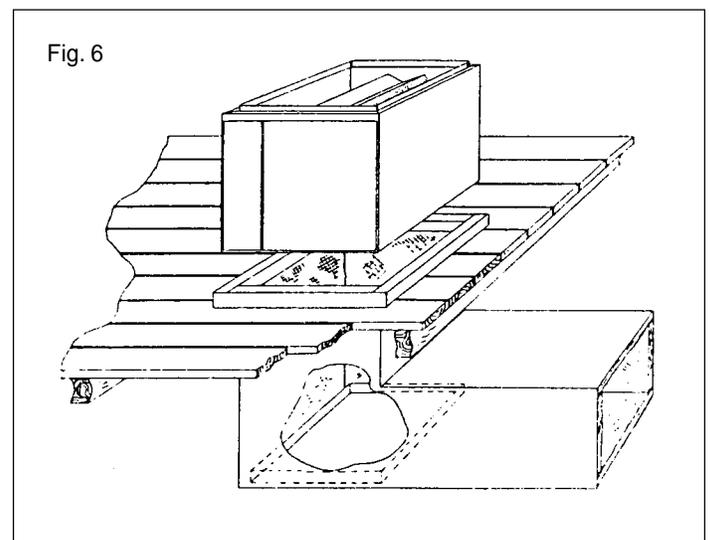
OPTIONAL HEAT PUMP BYPASS ASSEMBLY



INSTALLATION PROCEDURE

1. Cut off the ends of the stub-out tubes near the location of the dotted line (See Figure 4-5).
2. Slip the swaged ends of the bypass kit over the open tube ends where the ends were cut off.
3. Make sure the bypass assembly is in the same position as shown above.
4. Braze the two joints and then check to be sure there are no leaks in the welded joints.

ICP strongly recommends evaporator coil usage in up-flow arrangements only. However, it sometimes becomes necessary for their usage in down-flow applications. Because of condensate blow off, ICP requires installation of an additional drain pan in the bottom of the plenum. Some of those instances will need a condensate pump. ICP's warranty only covers correctly applied applications (See Figure 6).



INSTALLATION

LEAK TEST

Pressurized sealed system and check for leaks.

EVACUATION

Always evacuate (portions of) a system that have been exposed to the atmosphere. Purge line sets before attaching to equipment if suspect of having particulate matter.

DUCTWORK

Ductwork and all connections must comply with any applicable codes and be constructed to industry accepted standards. The use of flexible duct connectors can reduce transmitted sound and vibration.

CONDENSATE CONNECTION

Attached to the base of the coil(s) is(are) an open centered drain pan which collects and directs condensate toward two piping connections.

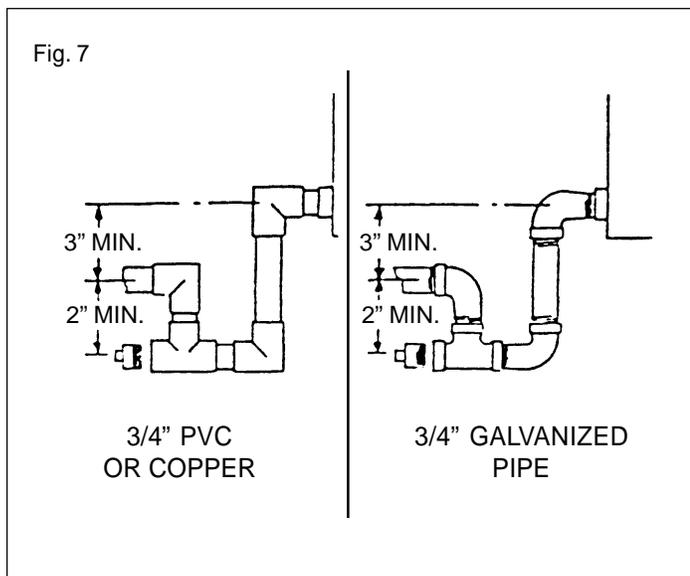
The connection at the base of the pan is the primary drain. Attach a properly sized trap to this drain.

All drain lines must be pitched downward a minimum of 1/4 inch per foot of horizontal run to assure proper flow.

When condensate lines are run in an unconditioned area, insulation may be required to prevent it from sweating.

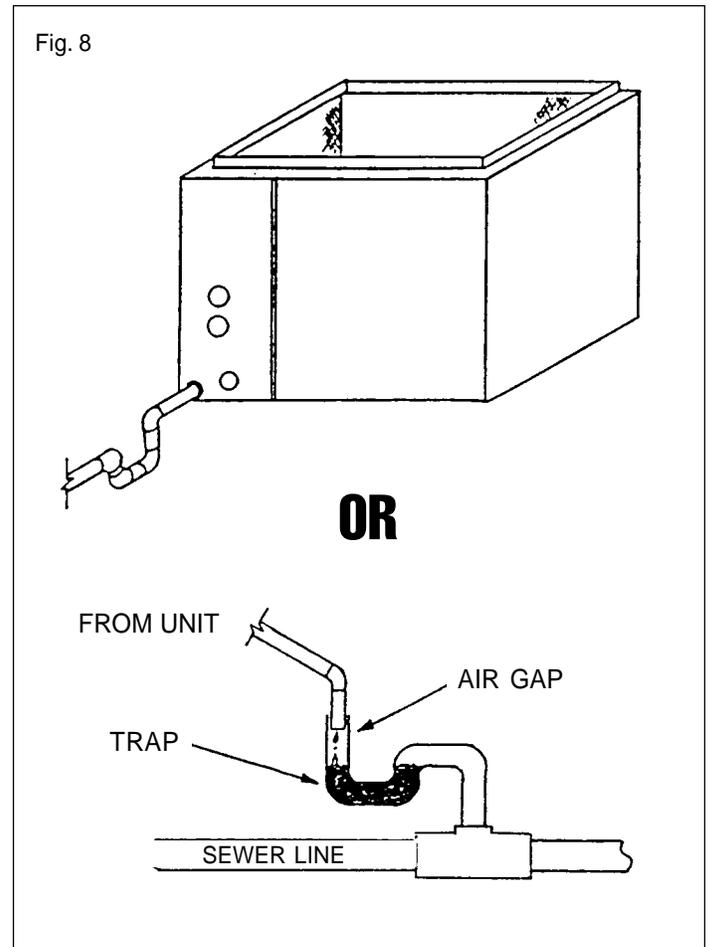
NOTE: FEDERAL HOUSING ADMINISTRATION REQUIRES A SECONDARY DRAIN PAN BE PROVIDED UNDER THE UNIT WHEN IT IS INSTALLED OVER LIVING AREAS. IT IS ADVISED TO PROVIDE THE SAME IN ANY AREA WHERE WATER CAN CAUSE DAMAGE.

Condensate drain must consist of a minimum of 3/4 in. copper tubing or 3/4 in. galvanized iron pipe or PVC-type plastic pipe (Fig. 7). The condensate drain trap must be properly designed to ensure the removal of condensate (incorrect trapping can hold water in pan causing overflow). Be sure drain pitches downward at a slope of one inch every 10 feet.



CAUTION:

If unit is located above an occupied space, or where damage can result from condensate overflow, install a watertight pan of corrosion-resistant metal beneath unit to catch any overflow due to restricted drain lines. A separate 3/4 in. condensate drain must be provided from this added pan (Fig.8).



START-UP

Refer to the condensing unit installation and start-up instructions for system start-up and charging procedures.