

Installer's Guide



Cased Aluminum "Convertible" Coils

4TXCB003CC3HC**

4TXCC007CC3HC**

4TXCB004CC3HC**

4TXCC008CC3HC**

4TXCC005CC3HC**

4TXCD009CC3HC**

4TXCC006CC3HC**

4TXCD010CC3HC**

** May be "A" or "B"

ALL phases of this installation must comply with NATIONAL, STATE AND LOCAL CODES

IMPORTANT—This Document is **customer property** and is to remain with this unit. Please return to service information pack upon completion of work.

⚠ WARNING

HIGH PRESSURE HAZARD

Contains Refrigerant!

System contains oil and refrigerant under high pressure. Recover refrigerant to relieve pressure before opening the system. See unit nameplate for refrigerant type. Do not use non-approved refrigerants, refrigerant substitutes, or refrigerant additives.

Failure to follow proper procedures or the use of non-approved refrigerants, substitutes, or refrigerant additives could result in death, serious injury, or equipment damage.

A. GENERAL

These coils are designed for use with an upflow, downflow, or horizontal furnace in combination with a heat pump or cooling only outdoor section using **R-410A REFRIGERANT**.

This equipment has been evaluated in accordance with the Code of Federal Regulations, Chapter XX, Part 3280 or the equivalent. "Suitable for Mobile Home use" The height of the Furnace, Coil and discharge duct work must be 7 ft. or less.

Inspection

Check carefully for any shipping damage. This must be reported to and claims made against the transportation company immediately. Check to be sure all major components are in the unit. Any missing parts should be reported to your supplier at once, and replaced with authorized parts only.

B. APPLICATION INFORMATION

1. FURNACE AND COIL

The coil **MUST BE** installed downstream (in the outlet air) of the furnace. The coil apex can face into or away from the direction of the airflow, depending on horizontal left or right application.



Figure 1

These coils fit the 17½", 21", and 24½" width furnaces without any adapters in vertical upflow, downflow, or horizontal left application. **Horizontal right configuration requires changes to the coil before installation (see section D, numbers 5 and 6).**

2. INDOOR UNIT AIRFLOW

Indoor unit must provide the required airflow for the heat pump or cooling combinations approved for these coils.

IMPORTANT: Review your installation requirements. Check the table on the outline drawings and note all dimensions for your coil before beginning the installation.

C. RECOMMENDATION

1. If a coil is part of the total system installation, use the Installer's Guide packaged with the furnaces, and outdoor sections, and comfort control for physically installing those components.
2. It is recommended that the outline drawing be studied and dimensions properly noted and checked against selected installation site. By noting in advance proper clearance allowances for installation and possible future service of the coil.

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CAUTION

Coil is pressurized with 10 to 20 psi nitrogen. Remove the valve core on the pressure tap to release the pressure before un-sweating the tubing caps. If no pressure is released, check for leaks. Re-install valve core after refrigerant lines are brazed to the coil.

D. INSTALLING THE COILS

NOTE: The 4TXC coils are for use with outdoor products using R-410A refrigerant only.

1. UPFLOW GAS FURNACE

- Turn furnace power OFF and remove the flue pipe if necessary.
- Apply gasket material (duct seal field supplied) to ALL mating surfaces between the furnace and the coil case.
- Set the coil case on top of the furnace. Connect the ductwork to the coil case.
- Replace the furnace flue pipe if it has been removed and fasten it securely.
- Turn the furnace power ON.

2. UPFLOW GAS FURNACE - Add-on Cooling

- Turn furnace power OFF and remove the flue pipe if necessary.
- Disconnect and remove a sufficient portion of the supply ductwork to provide clearance for the cased coil.
- Install the cased coil following the Installation Instruction section D-1 of these instructions.
- Reconnect the ductwork to the coil case.
- Replace the furnace flue pipe if it has been removed and fasten it securely.
- Turn the furnace power ON.

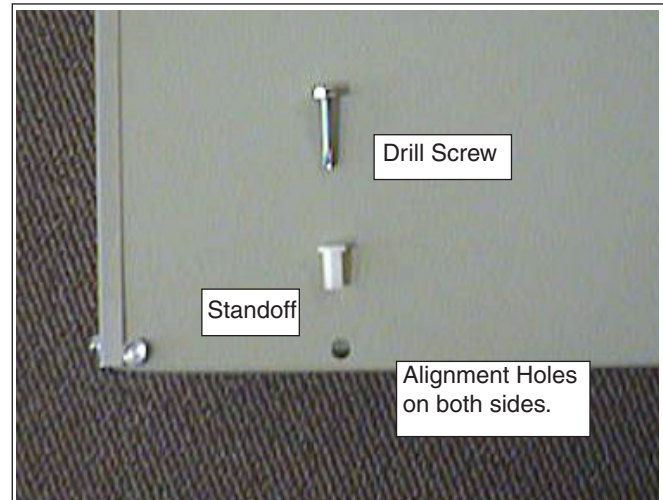
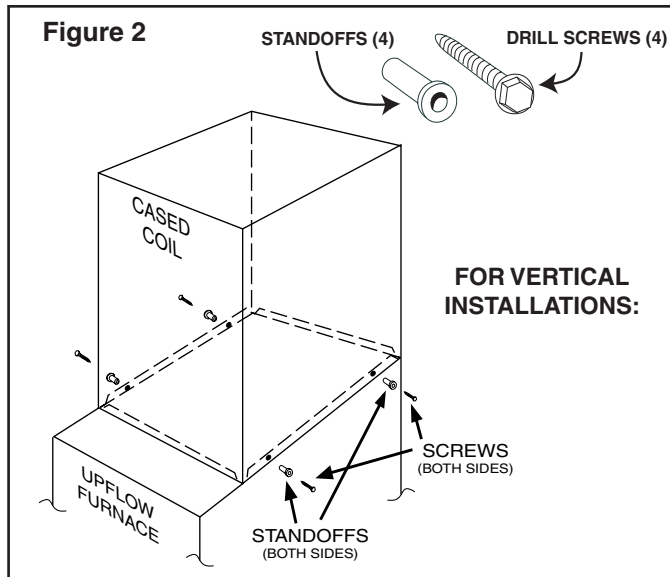


Figure 3

Standoffs and screws (See Figure 2) are included with the cased coils for attachment to the furnace. There are clearance alignment holes near the bottom of the coil wrapper. Drill screws are used to engage the top flanges of the furnace. The standoff is inserted into the cabinet alignment hole (See Figure 3). The drill screws are inserted through the standoffs then screwed into the furnace top flange. The coil is always placed downstream of the furnace airflow. The above instructions apply if the coil is on top of an upflow furnace. The coil and furnace must be fully supported when used in the horizontal. The standoffs and screws are strictly for securing alignment, not for support in horizontal.

3. DOWNFLOW GAS FURNACE

When a coil is used with a downflow furnace, a subbase is not required between the coil case and combustible flooring.

- Place the coil case on the furnace supply air plenum.
- Secure the coil case to the plenum.
- Set the furnace on top of the coil case, making sure that the back side of the discharge opening is snug up against the duct flange at the top rear of the coil case.
- Secure the coil case to the furnace.

4. DOWNFLOW GAS FURNACE -- Add On Cooling

- Turn the furnace power OFF, remove the flue pipe, and disconnect the fuel and power lines.
- Raise the furnace to provide sufficient clearance to mount the coil case beneath it. Modifications will be required to the existing return air ductwork to permit the furnace to be raised.
- Place the coil case on the furnace supply air plenum.
- Secure the coil case to the plenum.
- Set the furnace on top of the coil case, making sure that the back side of the discharge opening is snug up against the duct flange at the top rear of the coil case.
- Reconnect the flue pipe and the fuel and power lines.
- Turn the furnace power ON.

5. FURNACE IN HORIZONTAL LEFT POSITION

CAUTION

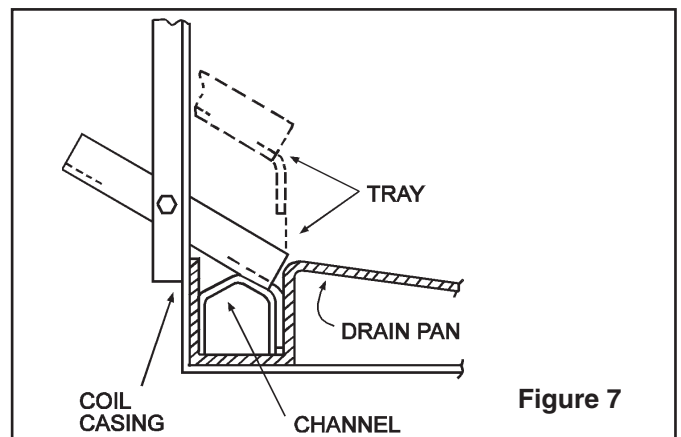
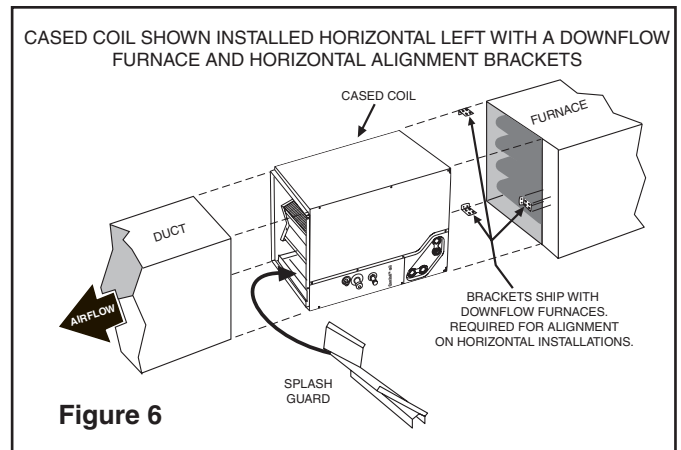
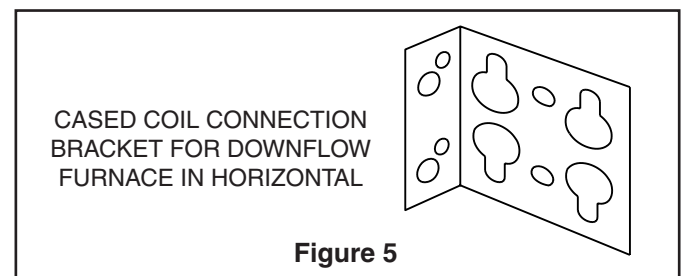
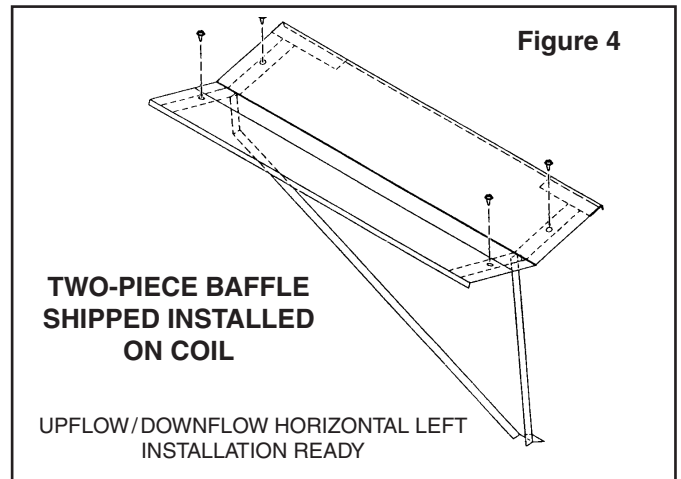
Both the coil and furnace must be fully supported. Do not attempt to suspend the coil using the brackets.

The non-condensing furnaces may be laid on either side for horizontal application.

The condensing downflow/horizontal and upflow/horizontal furnaces may only be rotated onto their left side.

Connection brackets for coil/furnace alignment are included with the furnaces.

- Horizontal left: As shipped, the coil is ready when in the horizontal left configuration.
- In horizontal left, the 47XC coil case is rotated so the apex of the coil is away from the furnace and the auxiliary drain pan is now on the lower side.
- The two piece baffle ships installed on the coil and is required for horizontal left applications. See Figure 4.
- The base of the coil enclosure is placed flush against the downflow/horizontal furnace. Upflow/horizontal condensing furnaces have the coil match the top flange.
- There are three brackets included with the downflow furnace which are used to connect the furnace and coil together. See Figure 5.
- Two brackets are used to attach the rear of the coil and furnace and one bracket is used to attach the front. The rear brackets will use existing screws on the coil enclosure (two on each side at the bottom). Each of the rear brackets will be attached with the wide side of the bracket resting on the top and bottom of the horizontal coil and furnace (see Figure 6). Four additional screws will be used to attach each rear bracket.
- The front bracket is positioned as close to the center as possible with the narrow edge against the coil enclosure and the wide edge against the furnace. Two screws each are driven into the coil enclosure and furnace.
- There is a left guard packaged with the coil. This guard is for horizontal left coil installation only. The guard has a bend which is inserted into the front channel of the horizontal drain pan on the outlet air side of the coil case. The guard is then rotated downward until it rests in the drain pan. One sheet metal screw is driven through the coil case duct flange on the front side and into the splash guard side hole. See Figure 7.



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6. FURNACE IN HORIZONTAL RIGHT POSITION

⚠ CAUTION

Both the coil and furnace must be fully supported. Do not attempt to suspend the coil using only the brackets.

The non-condensing furnaces may be laid on either side for horizontal application.

The condensing downflow/horizontal and upflow/horizontal furnaces may not be rotated onto their right side.

Connection brackets for coil/furnace alignment are included with the furnaces.

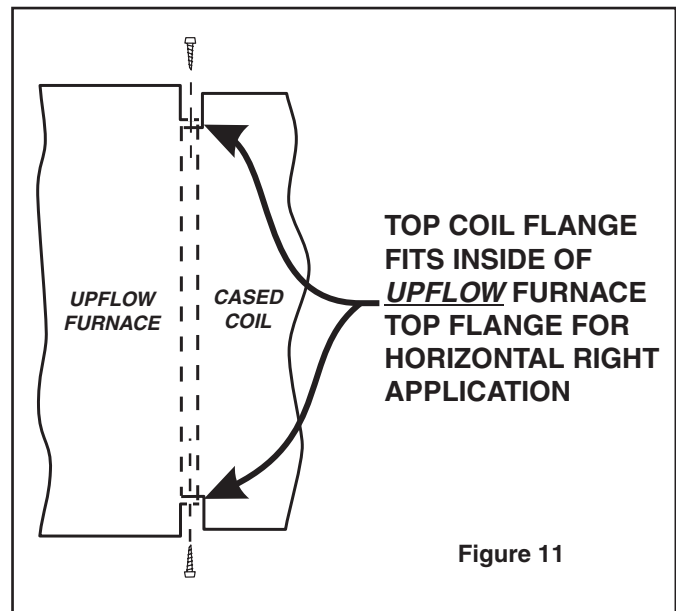
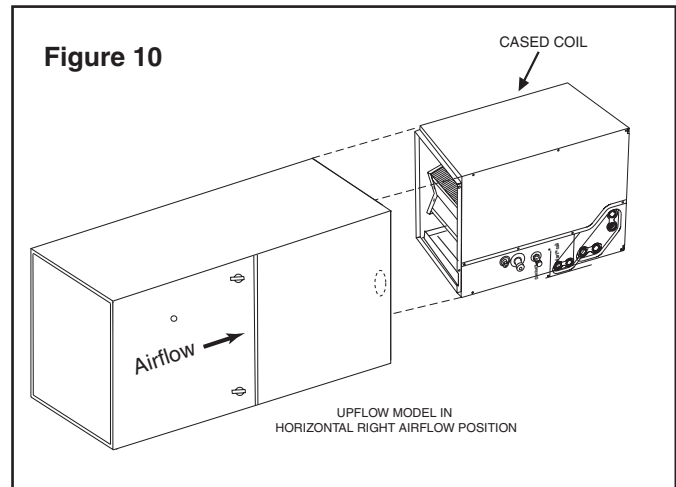
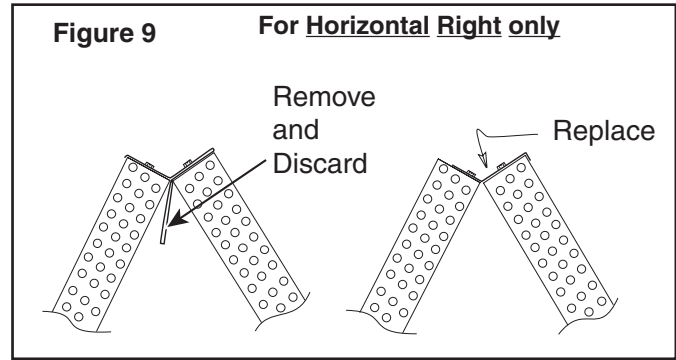
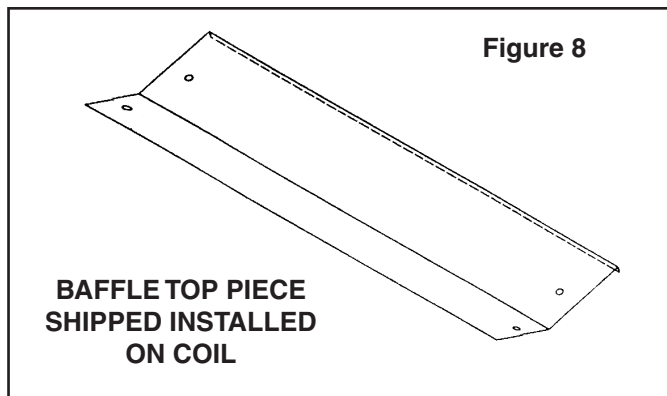
- Horizontal right: For the horizontal right configuration in non-condensing furnaces only, the two-piece factory baffle must be removed and the top baffle replaced for the following models: **4TXCB004, 4TXCC005, 4TXCC006, 4TXCC007, and 4TXCC008.**
- Replacing the factory installed baffle.
 - Remove the factory installed two-piece baffle assembly (see Figure 4) from the apex of the coil by removing the 5/16" hex head screws. Discard the bottom half of the baffle.
 - Replace the top baffle using the screws removed previously (see Figure 8).
 - Figure 9 shows the baffle change necessary for horizontal right application.

IMPORTANT:

The 4TXC cased coil must be placed downstream of the furnace, with the apex of the coil always pointing opposite the direction of the airflow for horizontal right installation. This placement supersedes previous furnace Installer's Guide stating install "with the apex of the coil pointing in the direction of airflow for horizontal application." See Figure 10.

- When the noncondensing Upflow/Horizontal furnace is placed on its right side for right airflow, the furnace top flange meets the cased coil top flange. The coil flange fits inside of the furnace flange. See Figure 11.

There are three holes in the furnace top flange which can be used for pilot holes to connect and align the furnace and coil. There are self drilling screws included which can be used for this connection. Seal all gaps between the furnace and coil.



E. INSTALLING REFRIGERANT LINES

The following steps are to be considered when installing the refrigerant lines:

1. Determine the most practical way to run the lines.
2. Consider types of bends to be made and space limitations.

NOTE: Large diameter tubing sizes will be difficult to bend once it has been shaped.

3. Determine the best starting point for routing the refrigerant tubing --INSIDE OR OUTSIDE THE STRUCTURE.
4. Provide a pull through hole of sufficient size to allow both liquid and gas lines to clear. The location of this hole (if practical) should be just above the wall plate which is resting on the foundation.
5. Be sure the roll of tubing is of sufficient length.
6. Uncoil the tubing - do not kink or dent.
7. Route the tubing making all required bends and properly secure the tubing before making final connections.

NOTE: These lines must be isolated from the structure and the holes must be sealed weather tight after installation.

F. FIELD FABRICATED INTERCONNECTING LINES

The following procedure should be used for connecting tubing to the coil or the outdoor unit.

1. More information concerning the installation of refrigerant lines is covered in the Installers Guide packaged with the outdoor unit. Evacuation, leak testing and brazing procedures are included in those instructions before starting the installation of refrigerant lines.

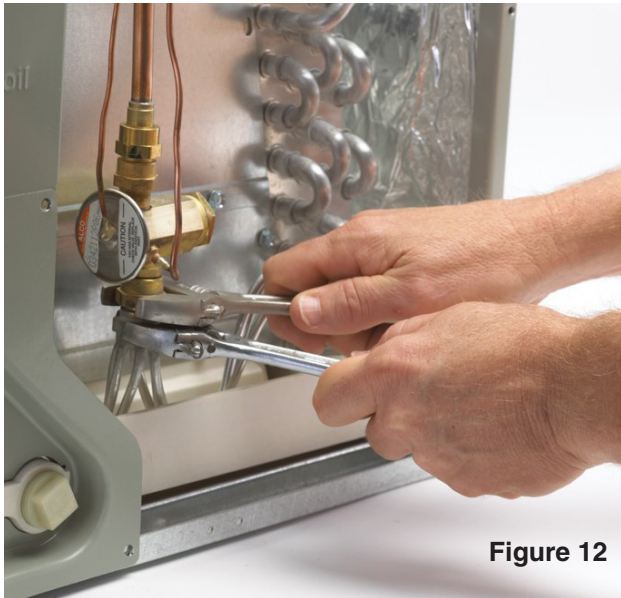


Figure 12

G. BRAZING TO EVAPORATOR SECTION

IMPORTANT: Do not unseal refrigerant tubing until ready to cut and fit refrigerant lines.

There is only a holding charge of dry Nitrogen in the indoor coil, therefore no loss of operating refrigerant charge occurs when the sealing plugs are removed.

NOTE: TXV bulb *MUST* be protected (wrapped with wet rag) or removed, while brazing the tubing. Overheating of the sensing bulb will affect the functional characteristics and performance of the coil.

NOTE: Torque specification for TXV equals 1/6 turn past finger tight. Make sure to backwrench when tightening. See Figure 12.

1. Remove both seals from the indoor coil. The braze caps are soft soldered.
2. Field supplied tubing should be cut squared-off, ensuring the tube is still round and free of burrs at the connecting end. Clean the tubing to prevent contaminants from entering the system.
3. Run the refrigerant tubing into the stub tube sockets of the indoor unit coil.

IMPORTANT: PAINTED AREAS OF THE UNIT MUST BE SHIELDED DURING BRAZING.

4. Braze and evacuate according to indoor and outdoor installation instructions.
5. Flow a small amount of nitrogen through the tubing while brazing.
6. Use good brazing technique to make leakproof joints.
7. Minimize the use of sharp 90° bends.
8. Insulate the suction line and its fittings.
9. Do NOT allow uninsulated lines to come into contact with each other.
10. Upon completion of installation, evacuate the refrigerant lines.

⚠ CAUTION

Do NOT open refrigerant valve at the outdoor unit until the refrigerant lines and coil have been brazed, evacuated, and leak checked. This would cause contamination of the refrigerant or possible discharge of refrigerant to the atmosphere.

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H. LEAK CHECK

1. Using a manifold gauge, connect an external supply of dry nitrogen to the gauge port on the liquid line.
2. Pressurize the connecting lines and indoor coil to 150 PSIG maximum.
3. Leak check brazed line connections using soap bubbles. Repair leaks (if any) after relieving pressure.
4. Evacuate and charge the system per the instructions packaged with the outdoor unit.

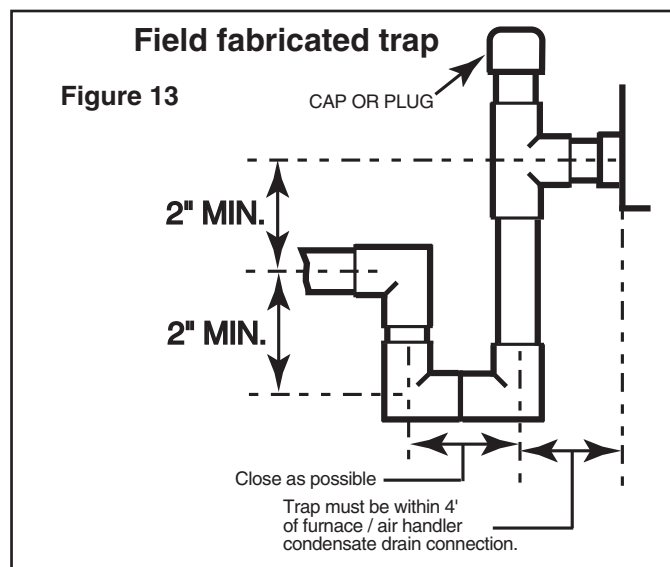
I. CONDENSATE DRAIN PIPING

Condensate drain connections are located in the drain pan at the bottom of the coil/enclosure assembly. The female threaded fitting protrudes outside of the enclosure for external connection.

1. The drain hole in the drain pan must be cleared of all insulation.
2. Insulate the drain line to prevent sweating and dripping.

It is always recommended that an auxiliary drain pan be installed under a horizontally installed evaporator coil or 90% gas furnace. Connect the auxiliary drain line to a separate drain line (no trap is needed in this line).

IMPORTANT: Plug all drain line connection(s) not used. Do NOT use heat or torch near drain fittings.



J. INSPECTING THE COIL

The two piece door (3-piece on 24.5" wide models) allows removal of the outer casing doors without interference from refrigerant or condensate lines. Once the outer doors are removed the split inner coil panels can be moved to easily allow inspection of the inside of the coil. The coil can be removed to the outside where it can be washed with a water hose. See Service Guide UN-SVG001A-EN for details.

The foil covered insulation on the 4TXC coils should be wiped down and residual dirt and dust should be vacuumed up to maintain good air quality. See Figure 14.

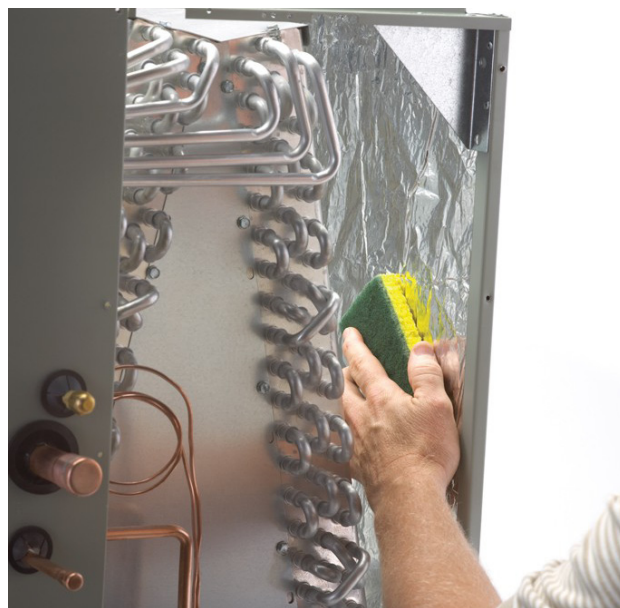


Figure 14

K. DUCT CONNECTIONS

The supply and return air duct should be connected to the unit with a flame retardant duct connectors. Duct flange connections are provided at both supply and discharge openings of the coil.

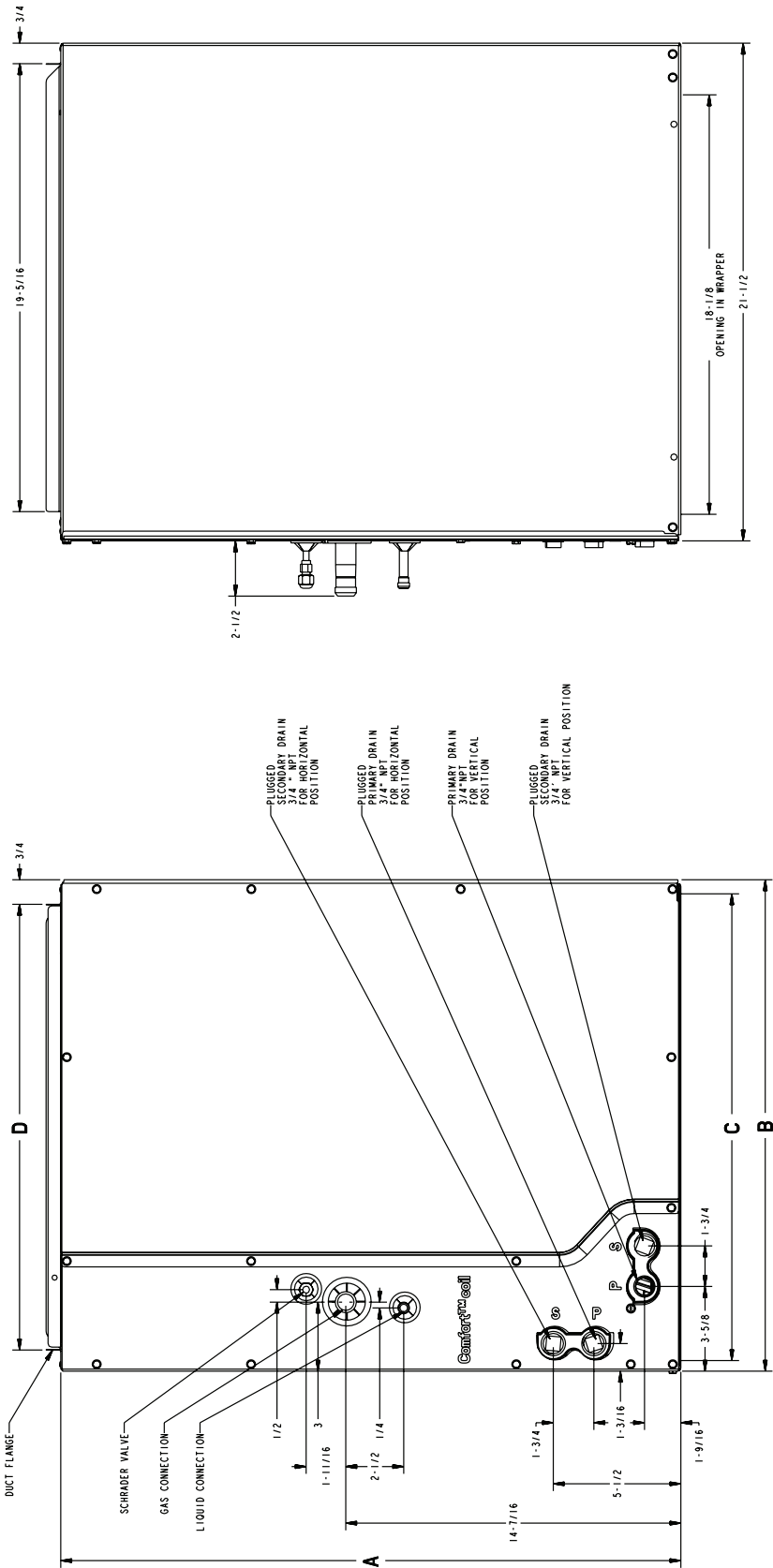
L. OPERATIONAL AND CHECKOUT PROCEDURES

"Operational Procedure" for the system installation can be found in the outdoor unit Installer Guide and will be compatible with this coil

PRESSURE DROP CHARACTERISTICS FOR COOLING AND HEAT PUMP COILS								
AIRFLOW (CFM) VS. PRESSURE DROP								
PRESSURE DROP (INCHES OF WATER COLUMN)								
Model	.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4
4TXCB003CC3HC**	510	715	875	1005	1125	1230	1325	1415
4TXCB004CC3HC**	465	685	865	1015	1155	1280	1395	1505
4TXCC005CC3HC**	550	820	1030	1210	1375	1525	1665	1795
4TXCC006CC3HC**	460	715	930	1115	1290	1450	1600	1740
4TXCC007CC3HC**	550	820	1030	1210	1375	1525	1665	1795
4TXCC008CC3HC**	680	965	1190	1375	1540	1685	1820	1950
4TXCD009CC3HC**	670	1000	1250	1470	1670	1850	2020	2180
4TXCD010CC3HC**	670	1000	1250	1470	1670	1850	2020	2180
** May be "A" or "B"								

Outline Drawing for 4TXCB003CC3HC**, 4TXCB004CC3HC**, 4TXCC005CC3HC**,
4TXCC006CC3HC**, 4TXCC007CC3HC**, 4TXCC008CC3HC**

** May be "A" or "B" (All dimensions are in inches)



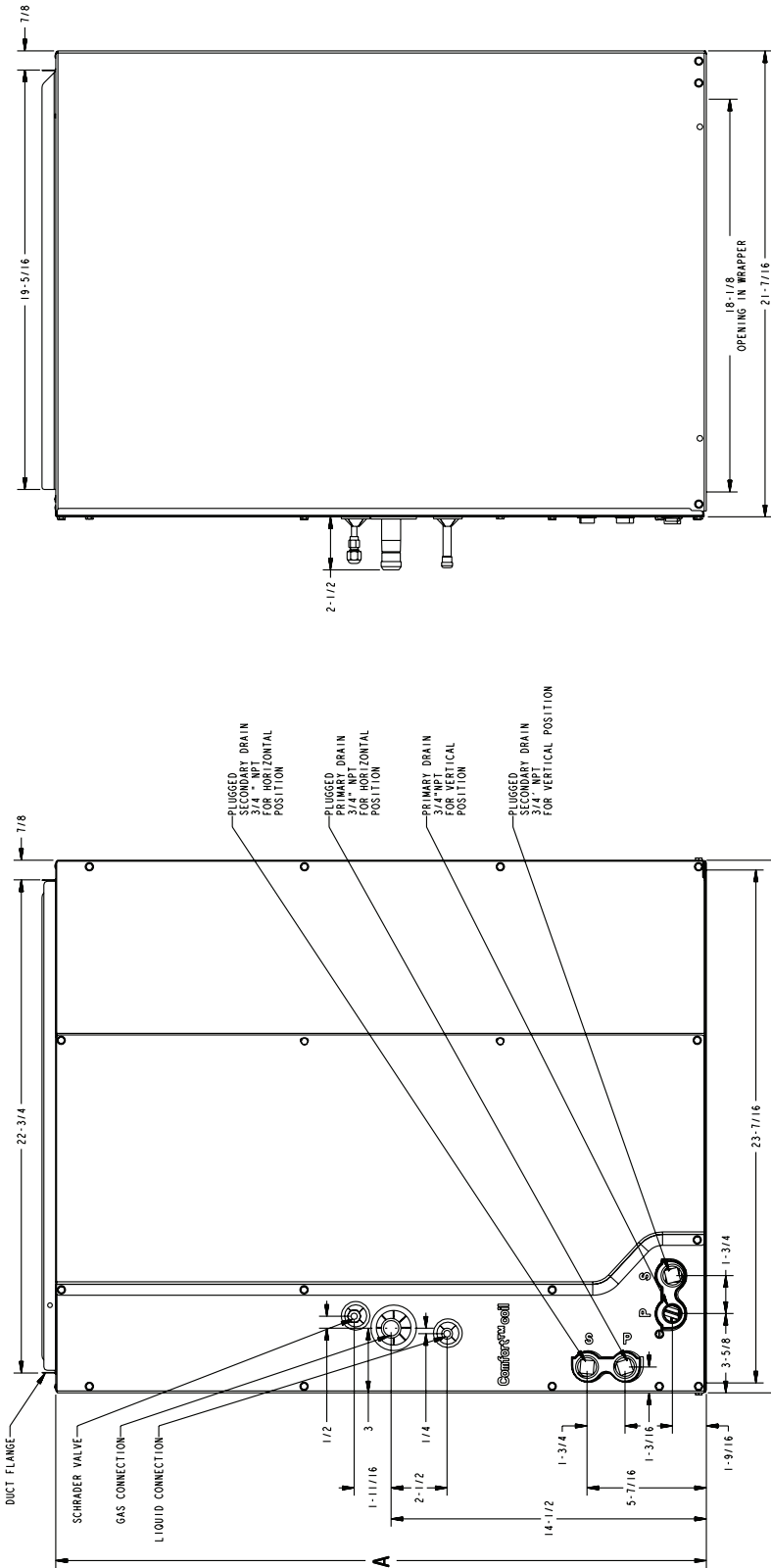
MODEL	4TXCB003CC3HC**	4TXCB004CC3HC**	4TXCC006CC3HC**	4TXCC007CC3HC**	4TXCC008CC3HC**
WEIGHT (LBS)	45	49	48	51	65
REFRIGERANT CONTROL	TXV (NON-BLEED)				
HEIGHT "A" (IN)	22-5/8	26-7/8	22-5/8	26-7/8	30-1/16
OVERALL WIDTH "B" (IN)	17-1/2	17-1/2	21	21	21
OPENING WIDTH "C" (IN)	16-1/2	16-1/2	20	20	20
TOP OPENING "D"	15-3/4	15-3/4	19-1/4	19-1/4	19-1/4
GAS CONNECTION	5/8 BRAZE	3/4 BRAZE	5/8 BRAZE	3/4 BRAZE	3/4 BRAZE
LIQUID CONNECTION	3/8 BRAZE				
MATCHED FURNACE WIDTH (NO ADAPTER REQUIRED)	17-1/2		21		
DRAIN PAN	PLASTIC				
MAY BE "A" OR "B"					

** MAY BE "A" OR "B"

From Dwg. D343414Rev3

Outline Drawing for 4TXCD009CC3HC** and 4TXCD010CC3HC**

** May be "A" or "B" (All dimensions are in inches)



MODEL	4TXCD009CC3HC** 4TXCD010CC3HC**
WEIGHT (LBS)	68
REFRIGERANT CONTROL	TXV (NON-BLEED)
HEIGHT "A" (IN)	30-1/16
GAS CONNECTION	3/4 BRAZE
LIQUID CONNECTION	3/8 BRAZE
MATCHED FURNACE WIDTH (NO ADAPTER REQUIRED)	24-1/2
DRAIN PAN	PLASTIC

** MAY BE "A" OR "B"

From Dwg. D343415Rev0

Trane
6200 Troupp Highway
Tyler, TX 75707

For more information contact
your local dealer (distributor)

Literature Order Number	18-AH44D1-4
File Number	18-AH44D1-4
Supersedes	18-AH44D1-3
Date	06/11

Since the manufacturer has a policy of continuous product and product data improvement, it reserves the right to change design and specifications without notice.