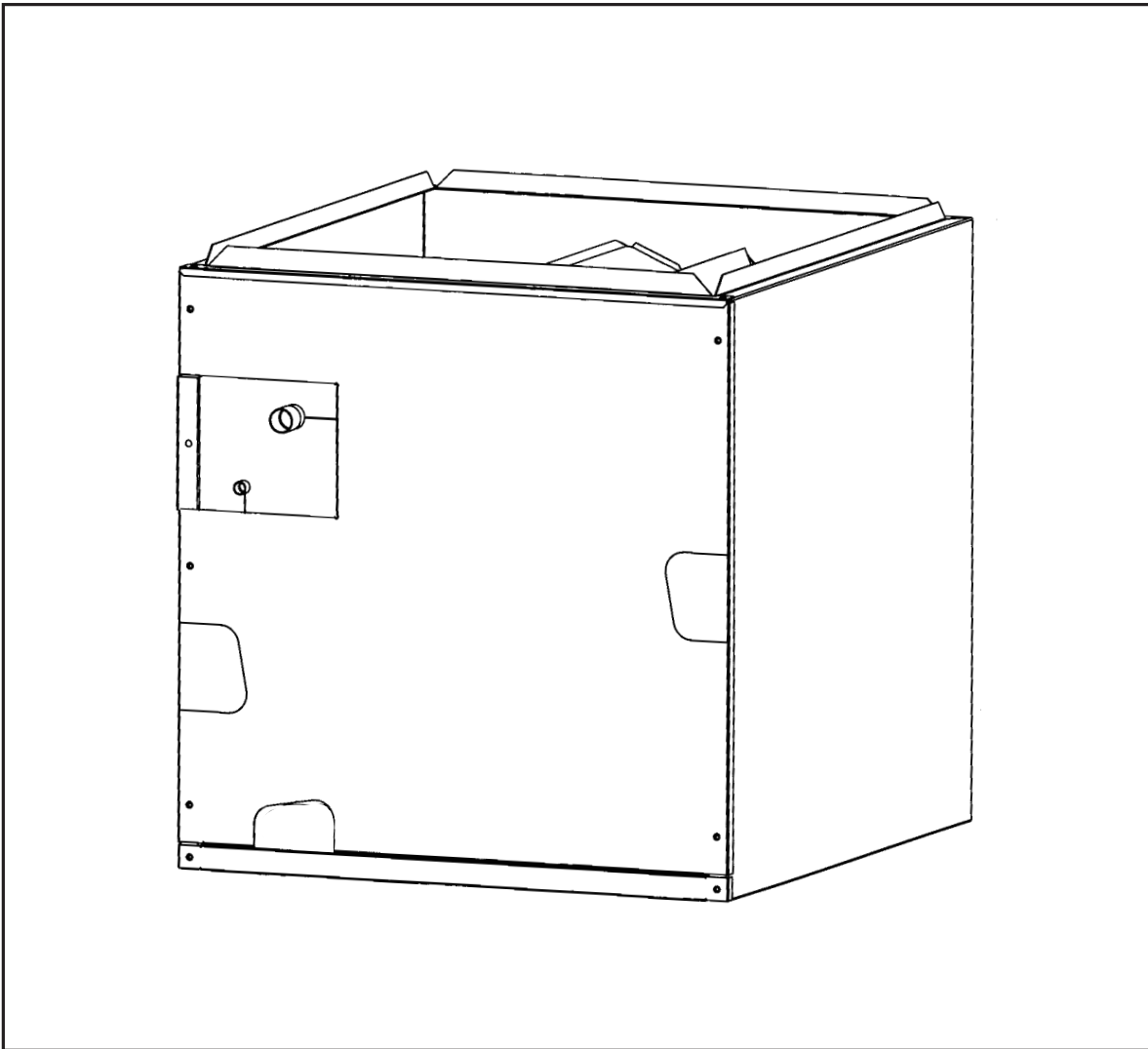


Split System Indoor Coils

Installation Instructions



CAUTION:

Read the Installation Instructions supplied with furnace/air handler and observe all safety requirements outlined in instructions and/or furnace/air handler markings before proceeding with installation of the coil

These instructions are primarily intended to assist qualified individuals experienced in the proper installation of this appliance. Some local and national codes require licensed installation/service personnel for this type of equipment. Read all instructions carefully before starting the installation.

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1. GENERAL INFORMATION

Standard cased coils are designed for upflow/downflow applications or horizontal applications when used in conjunction with our horizontal drain pan kit (See page 5). Accessory kits are not required for factory ready horizontal coils. Coils are equipped with braze type refrigerant connections for easy installation.

Read the installation manual supplied with the outdoor unit for refrigerant line connection procedure, required line sizes, and other information pertaining to the system installation.

1. Make certain that the air delivery of the furnace/air handler is adequate to handle the static pressure drop of the coil, filter, and duct work.
2. Check the orifice size of the coil's expansion device and confirm that it is suitable for application with the intended outdoor unit.
NOTE: Some C4 series coils (R-410A refrigerant) employ a thermostatic expansion valve (TXV) as the metering device (See page 4).

3. Where precise forming of the refrigerant lines is required, a copper tubing bender designed for the size lines used is recommended. Avoid sharp bends and contact of the refrigerant lines with metal surfaces.
4. Refrigerant lines should be wrapped with pressure sensitive neoprene or other suitable material where they pass through the raw edges of holes.
5. Coil must be level for proper condensate drainage.

NOTE: Optional cooling/heating equipment must be properly sized and installed in accordance with the furnace manufacturer's specifications and approved recommendations. "Heating only" furnace air circulators may have to be replaced with multi-speed "Heating/Cooling" blowers to upgrade the air delivery (CFM) when an add-on coil is installed. Refer to Coil Specifications for recommended CFM and allow for pressure drop across the coil and filters.

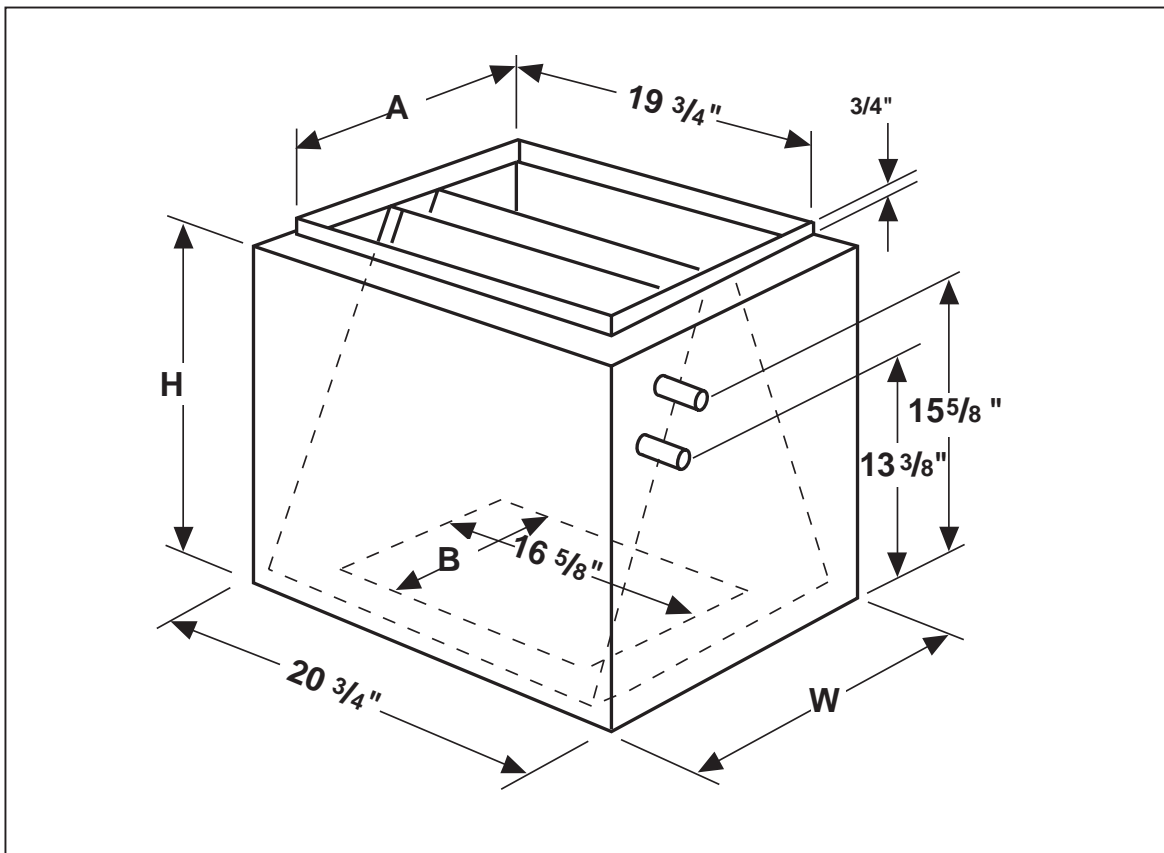


Figure 1.

2. COIL SPECIFICATIONS

Coil Model (1) R - 22 Units	C3BA-024C-A	C3BH-024C-A	C3BA-030C-A	C3BH-030C-A	C3BA-036C-A	C3BH-036C-A	C3BA-043C-A	C3BA-030C-B	C3BA-036C-B	C3BH-036C-B	C3BA-042C-B	C3BH-042C-B	C3BA-048C-B	C3BH-048C-B	(6)C3BA-050C-B	C3BA-048C-C	C3BA-060C-C	C3BH-060C-C
Nominal Capacity BTUH (2)	24,000	24,000	30,000	30,000	36,000	36,000	43,000	30,000	36,000	36,000	42,000	42,000	48,000	48,000	48,000	48,000	60,000	60,000
Nominal Airflow	900	900	1100	1100	1200	1200	1400	1100	1350	1350	1500	1500	1500	1500	1500	1500	1800	1800
Installed Orifice Size (3)	0.060	0.060	0.063	0.063	0.067	0.067	0.080	0.063	0.067	0.067	0.075	0.075	0.080	0.080	0.080	0.080	0.093	0.093
Width (in.) W	14 1/4	14 1/4	14 1/4	14 1/4	14 1/4	14 1/4	14 1/4	19 3/4	19 3/4	19 3/4	19 3/4	19 3/4	19 3/4	19 3/4	19 3/4	22 1/2	22 1/2	22 1/2
Height (in.) H	20	20	26	26	20	26	26	20	20	26	20	26	20	26	26	20	26	26
Top F	12 7/8	12 7/8	12 7/8	12 7/8	12 7/8	12 7/8	12 7/8	18 3/8	18 3/8	18 3/8	18 3/8	18 3/8	18 3/8	18 3/8	18 3/8	21 1/8	21 1/8	21 1/8
Connections (in.)																		
Liquid Line	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Suction Line	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	7/8	3/4	7/8	7/8
Horizontal Drain Kit	914633	-	917492	-	917492	-	914634	917492	917492	-	917492	-	917492	-	914634	914633	914634	-
Coil Case Adapter (4)	-	-	-	-	-	-	-	913963	913963	913963	913963	913963	913963	913963	913963	913964	913964	913964

Coil Model (1) (6) R - 410A Units	C4BA-X24C-B	C4BH-X24C-B	C4BA-X36C-B	C4BH-X36C-B	C4BA-X48C-C	C4BH-X48C-C	C4BA-X60C-C	C4BH-X60C-C
Nominal Capacity BTUH (2)	24,000	24,000	36,000	36,000	48,000	48,000	60,000	60,000
Nominal Airflow	900	900	1350	1350	1500	1500	1800	1800
Metering Device	TXV	TXV	TXV	TXV	TXV	TXV	TXV	TXV
Width (in.) W	19 3/4	19 3/4	19 3/4	19 3/4	22 1/2	22 1/2	22 1/2	22 1/2
Height (in.) H	20	26	26	26	29	29	29	29
Top F	18 3/8	18 3/8	18 3/8	18 3/8	21 1/8	21 1/8	21 1/8	21 1/8
Connections (in.)								
Liquid Line	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Suction Line	3/4	3/4	7/8	7/8	7/8	7/8	7/8	7/8
Horizontal Drain Kit	917492	-	914634	-	917188	-	917188	-
Coil Case Adapter (4)	913963	913963	913963	913963	913964	913964	913964	913964

- (1) Refer to sales specification sheets for Listed/Certified combinations of equipment and required accessories.
- (2) Refer to the current ARI Directory for certified ratings of split systems.
- (3) Orifice size is for 10 SEER systems. Additional orifices may be supplied with the coil.
- (4) Allows application of larger coil cases to smaller furnace cabinet.
- (5) This coil is for 4 ton 12 SEER match.
- (6) An X in the model description designates factory installed TXV.

3. COIL INSTALLATION

 **WARNING:**

Electric furnaces may be connected to more than one supply circuit.

Upflow Furnace —

1. Disconnect all electrical power to the furnace.
2. If needed, use one of the coil case adapter kits to match the coil to the furnace air discharge opening. Refer to the Coil Specifications Section for proper kit numbers.
3. Install the coil and level it as needed to ensure proper condensate drainage. (See Figure 2)
4. Seal the enclosure as required to minimize air leakage.
5. Connect the refrigerant lines as outlined in the Refrigerant Lines section.

Downflow — These coils may be installed in downflow applications. Installation of the coils in these applications only require that the furnace and coil cabinets are securely mounted together before setting in place. Fossil fuel applications require coil to be placed in the supply air stream only.

Horizontal — Standard coils may also be installed in horizontal applications. Installation of the standard coils in these applications only

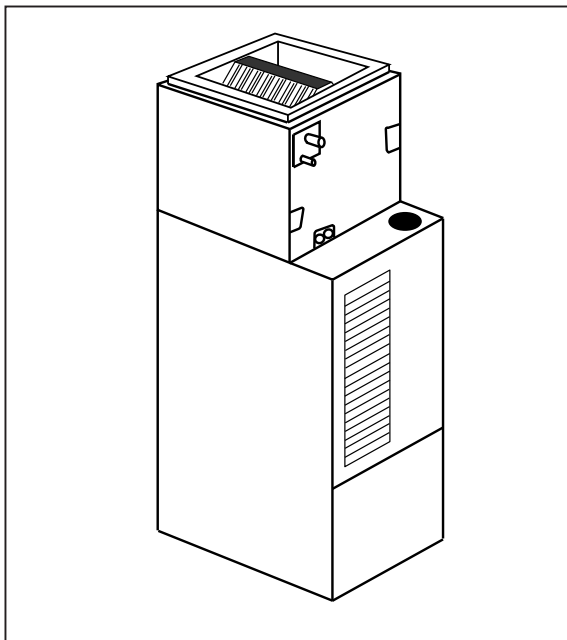


Figure 2. Upflow Furnace Application

require that the furnace and coil cabinets are securely mounted together and that a horizontal drain pan kit be installed. Refer to the Specifications Section for proper kit numbers.

To Configure Horizontal Ready Coils for Horizontal LEFT Installations:

- 1) Remove the coil access door.
- 2) **IMPORTANT:** Remove the plug from one of the threaded holes in the horizontal drain pan. Completely remove the webbing located in the threaded holes of the horizontal drain pan. If webbing is not removed, the drain will not function properly and ceiling damage may occur.
- 3) Insert a plug (from the horizontal drain pan) into the open and unused drain hole in the drain pan at the bottom of the unit to block bypass air.
- 4) Remove the corresponding drain line knockout from the coil access door to allow access to the horizontal drain.
- 5) Replace the door.

NOTE: Install drainpan extension (supplied) on C3BH060 models.

To Configure Horizontal Ready Coils for Horizontal RIGHT Installations:

- 1) Remove the coil access door. Unscrew the line-set tube close-off plate from the front left cabinet rail.
- 2) Slide the coil and drain pan assembly out of the unit.
- 3) **IMPORTANT:** Remove the plug from one of the threaded holes in the horizontal drain pan. Completely remove the webbing located in the threaded holes of the drain pan. If webbing is not removed, the drain will not function properly and ceiling damage may occur.
- 4) Remove the sheet metal hairpin covers (if supplied) from the back of the coil and discard.
- 5) Place the horizontal drain pan on the opposite side of the coil. On units with 2 sets of knockouts, remove the other set of knockouts in the coil spacing plates and insert support rod.
- 6) Insert a plug (from the horizontal drain pan) into the open and unused drain hole in the drain pan at the bottom of the unit to block bypass air.
- 7) Slide the coil and the horizontal drain pan assembly back into the unit. Reattach the tube close off plate.

- 8) Remove the corresponding drain line knockout from the coil access door to allow access to the horizontal drain.
- 9) Replace the door.

Note: All condensate pans have primary and secondary drain connections to meet FHA requirements. If the application is located in or above a living space where damage may result from condensate overflow, a separate 3/4 inch drain must be provided from the secondary drain connection and a secondary drain pan must be installed under the entire unit. Run secondary drain lines to a place where they are noticeable if used.

4. REFRIGERANT LINE CONNECTIONS

NOTE – Move to instruction step #7 when installing a C4 series (R-410A refrigerant) coil with factory installed TXV valve.

NOTE – Before proceeding with the connection of refrigerant lines, confirm that the orifice size meets the requirements outlined in the outdoor unit installation manual. Factory-installed orifice sizes are listed in the Specifications section. If the orifice size is incorrect, it should be replaced, following the steps below:

1. Loosen the orifice/distributor body halves by applying two wrenches and squeezing them together, as shown in Figure 3, to turn the assembly nut counter-clockwise.
2. Continue to unscrew the assembly nut to separate it from the distributor body portion.
3. Insert a light-gauge wire hook between the distributor body and the orifice to lift the orifice out of the body. (See Figure 4) Remove the orifice being careful not to scratch either part.
4. Check the actual size of the new orifice (the size is stamped on the side of the orifice). Do not use pin gauges to measure the orifice diameter.

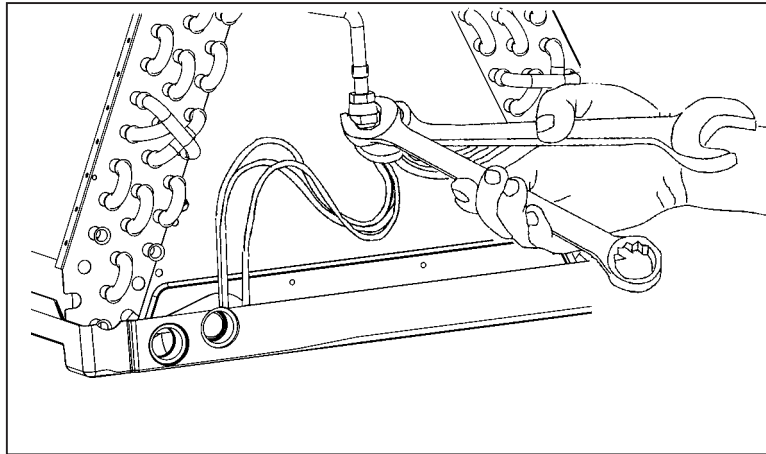


Figure 3. Wrenches on Distributor Body and Assembly Nut

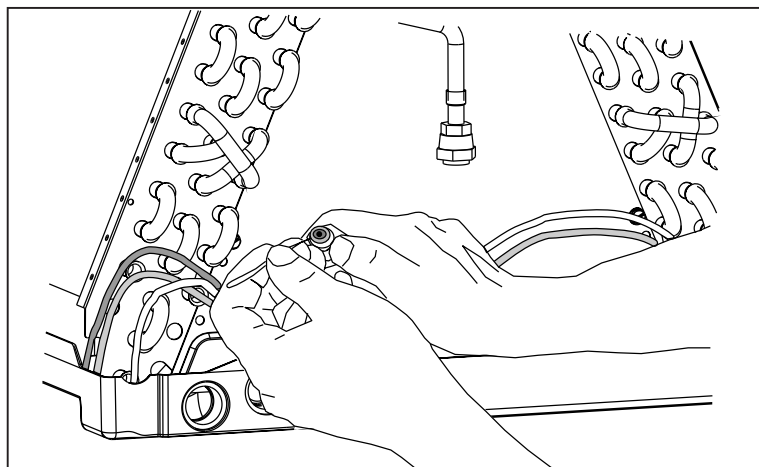


Figure 4. Removal of Orifice

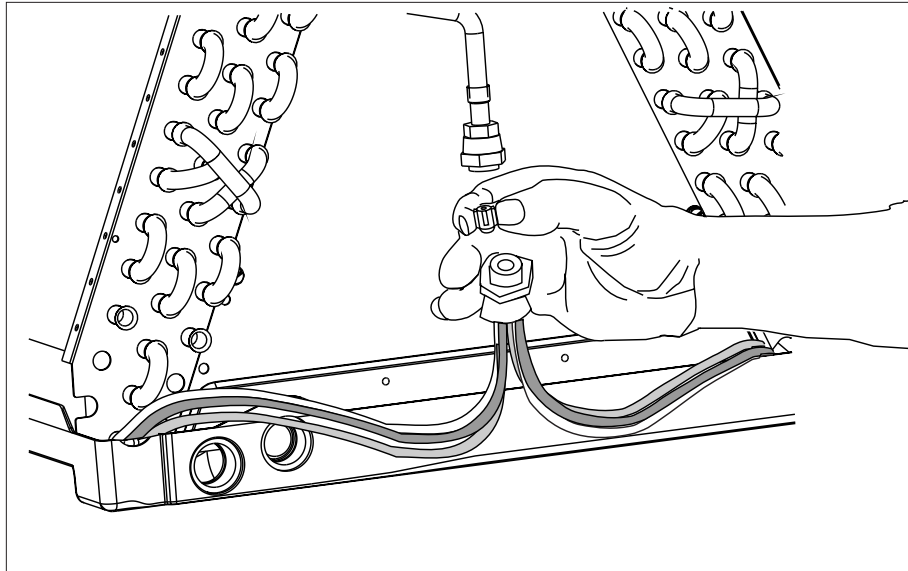


Figure 5. Orifice Insertion in Distributor Body

5. Insert the new orifice in the distributor body **rounded end down** as shown in Figure 5.
6. After installing the orifice in the distributor body, realign the assembly nut to the distributor body. Mark a line along both bodies after hand tightening and then tighten an additional 1/4 turn. **Caution: Do not over-tighten!** The misalignment of the two lines will show how much the nut is tightened. If a torque wrench is used, tighten to 10-12 ft. lbs. or 14-16 Nm.

Line Connections:

7. Remove the protective caps from the coil and refrigerant line set and also remove the hole grommets and tube close-off insulation from around the tubes.
8. Cut the line set tubing to the proper length. Be sure that the tubing has been sized in accordance with the outdoor unit specifications.
9. Inspect both refrigerant lines. The ends of the lines must be round, clean, and free of any burrs.
10. Insert the line set tubes into the coil tube stubs until they bottom out.
11. Braze the individual connections with dry nitrogen flowing through the joints to eliminate internal oxidation and scaling.
NOTE: On C4 (R-410A refrigerant) models which use a TXV, it is recommended to

- wrap a wet rag around the sensing bulb located on the suction line while brazing.
12. Check the assembly for leaks with dry nitrogen.
13. On horizontal applications of C4 (R-410A refrigerant) models with TXV valve, reposition the sensing bulb on the suction line so it is in the 10 o'clock to 2 o'clock position on the suction tube.
14. Replace the tube close-off insulation.

5. COMPLETING THE INSTALLATION

Condensate Drain:

CAUTION:

The indoor coil must be checked to ensure a level installation. Failure to do so may result in improper condensate disposal, causing structural damage, premature equipment failure, or possible personal injury.

1. The coil condensate pan is furnished with 3/4" NPSC drain connections. Use a PVC or similar material fitting to attach the drain line to the pan. The fitting should be hand tightened only. **Overtightening may crack the drain pan and cause a condensate leak.**

2. Connect the drain line and run to a suitable drain avoiding sharp bends and pinching of the line. Install a condensate trap and prime with water.
3. During the system checkout, inspect the drain line and connections to verify proper condensate disposal.

Air Filter — Air filters are not provided as an integral part of this coil, however, a filter must be installed upstream of the coil and inspected frequently. When the filter becomes clogged with dust or lint, it should be replaced (disposable type) or cleaned (washable type). The filter should be inspected and replaced or cleaned at least twice during the year, generally at the start of each heating and cooling season.

Close-Off Plates and Panels — Install the necessary air close-off plates around the refrigerant lines and drain line where required. Reinstall all inner and outer panels of the coil case and furnace that were previously removed to install the indoor coil.

Refrigerant Charging — These cased indoor coils are not factory charged with refrigerant.

It will be necessary to evacuate the indoor coil and line set prior to charging. Refer to the outdoor unit installation manual for detailed charges and instructions.

6. MAINTENANCE AND SERVICE

WARNING:

Ensure that all electrical power to the furnace and outdoor (condensing) unit is off before performing any maintenance or service on the system.

To ensure optimum performance and to minimize possible equipment failure, the following periodic maintenance should be performed on this equipment:

1. The air filter installed with the system should be checked and cleaned or replaced twice per year.
2. Check the coil, drain pan, and condensate drain line for cleanliness at the start of each heating and cooling season. Clean as needed.

CAUTION:

Do not operate the system without having a suitable filter in place in the return air duct system. Always replace the filter with the same size and type.

**INSTALLER: PLEASE LEAVE THESE
INSTALLATION INSTRUCTIONS WITH
THE HOMEOWNER**



708360B



708360B (Replaces 708360A)