Installer's Guide

Customer Property: Contains service information. Please retain.

TXE-IN-2B
18-AD60D2-2

Library	Service Literature
Product Section	Unitary
Product	Split System
Model	TXE
Literature Type	Installer's Guide
Sequence	2B
Date	September 2001
File No.	SV-UN-ACC-TXE-IN-2B 09/01
Supersedes	TXE-IN-2A

Models :

TXE120B500DA

Cased Coils

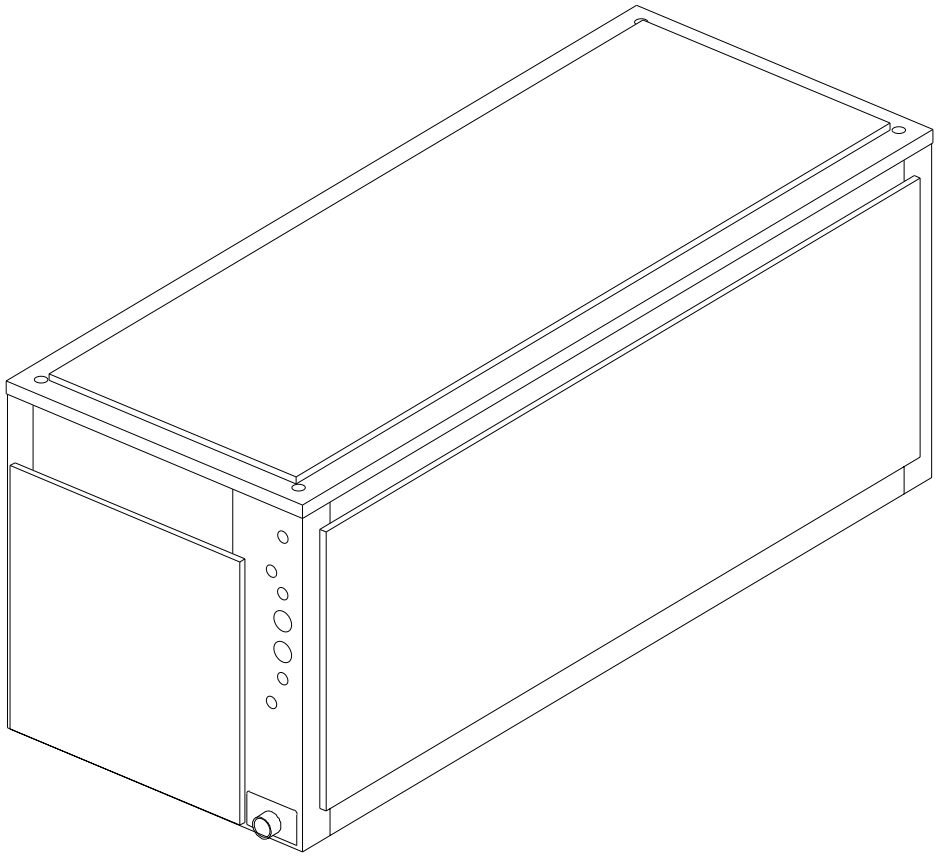
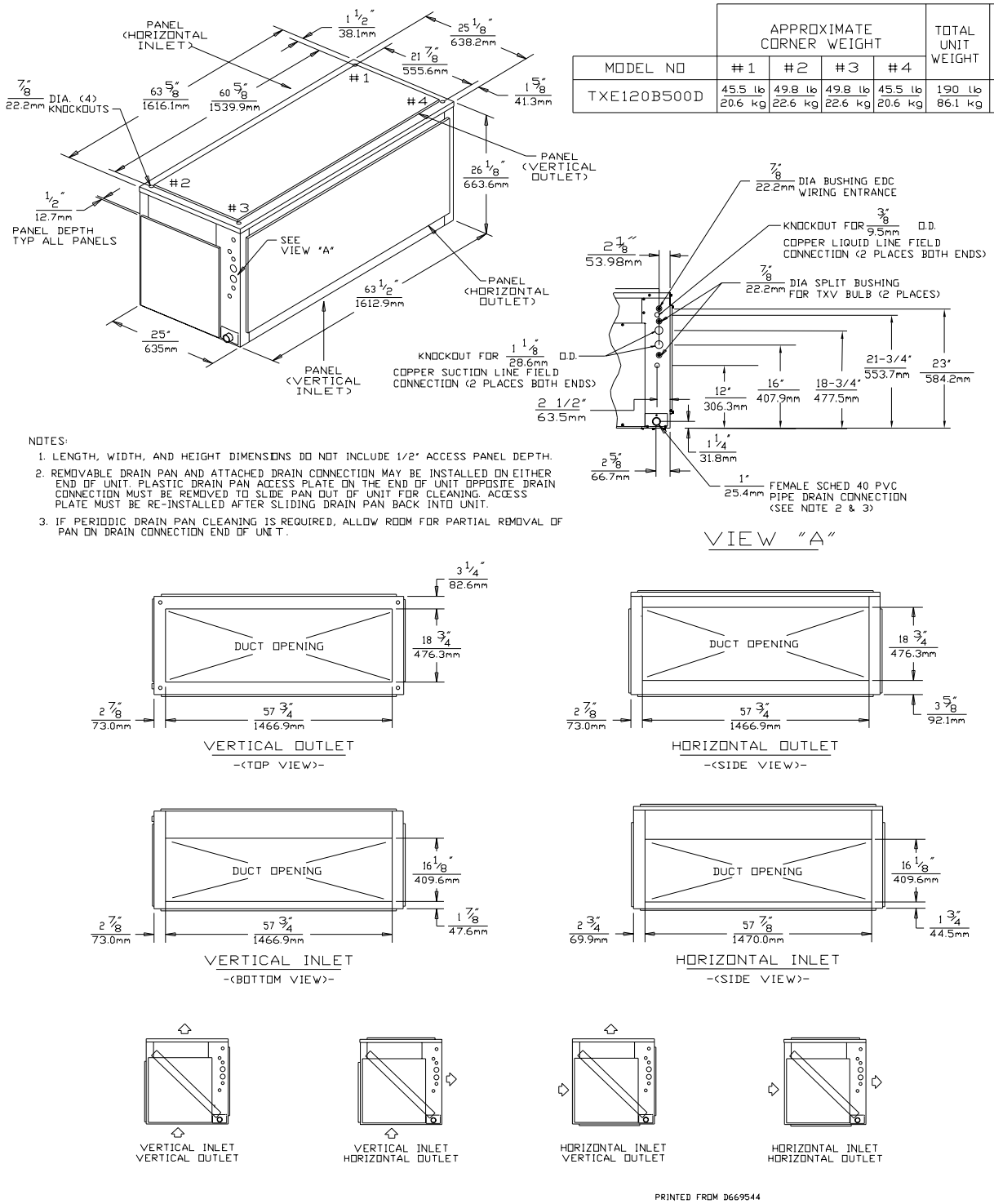


Table of Contents

Figure 1

MODEL NO	APPROXIMATE CORNER WEIGHT #1	#2	#3	#4	TOTAL UNIT WEIGHT	TOTAL SHIPPING WEIGHT
TXE120B500D	45.5 lb 20.6 kg	49.8 lb 22.6 kg	49.8 lb 22.6 kg	45.5 lb 20.6 kg	190 lb 86.1 kg	264 lb 119.7 kg



⚠ WARNING: ***UNIT CONTAINS AN HCFC (R-22) REFRIGERANT***

Section 608 Paragraph C of the 1990 Clean Air Act States:

Effective July 1, 1992, it shall be unlawful for any person, in the course of maintaining, servicing, repairing, or disposing of an air conditioning system, to knowingly vent or release any CFC or HCFC refrigerant. Minimal releases (air purges of refrigerant hoses) associated with good faith attempts to recapture or recycle are exempt from the ban on venting.

General

These instructions do not attempt to cover all variations in systems, nor to provide for every possible contingency to be met in connection with installation. Should further information be desired or should particular problems arise which are not sufficiently covered for the purchaser's purpose, the matter should be referred to the manufacturer.

This manual covers installation of the TXE120B500D 10 ton dual circuit, cased coil assembly (cooling only application). This coil incorporates a single slab assembly, improved application flexibility, servicing and maintenance accessibility. Each model may be applied in four return-discharge duct configurations: vertical upflow return and discharge, vertical upflow return and horizontal discharge, horizontal return and discharge, and horizontal return and vertical upflow discharge. The coil may not be applied in any vertical downflow duct configuration. Duct opening and configurations are accomplished in the field by proper placement of access panel assemblies. It is shipped from the factory in the vertical upflow return and discharge configuration.

This model is a direct expansion refrigerant (R22) coil assembly in an insulated sheet metal enclosure. The coil assembly is equipped with two thermal expansion valves (TXV), an evaporator defrost control switch (EDC), a built-in drain pan and a Heat Pump bypass/check valve assembly and filter/rack assembly.

NOTE: Warnings and Cautions appear at appropriate places in this manual. Your personal safety and the proper operation of this equipment require that you follow them carefully. The manufacturer assumes no liability for installations or servicing performed by unqualified personnel.

Inspection

Inspect material carefully for any shipping damage. If damaged, it must be reported to, and claims made against the transportation company. Replace damaged parts with authorized parts only. Check the unit nameplate to confirm that the proper unit was shipped. Available power supply must be compatible with electrical characteristics specified on component nameplates.

The following warning complies with State of California law, Proposition 65.

⚠ WARNING: This product contains fiberglass wool insulation! Fiberglass dust and ceramic fibers are believed by the state of California to cause cancer through inhalation. Glasswool fibers may also cause respiratory, skin, or eye irritation.

Installation Preparations

The final position must be dictated by required service access to coil, weight distribution, and by the locations of refrigerant and condensate drainage connections. All refrigerant piping connections are made inside the cabinet. They may enter the cabinet through factory provided knockouts.

Repositioning Drain Pan

The coil comes with a drain pan that can be installed in either of two positions; this allows for right or left condensate line connection. The drain pan can also be easily removed for periodic cleaning.

IMPORTANT: The coil is shipped with the drain pan connection on the left side (as shown in Figure 2). If the right side connection is required, the drain pan should be repositioned before setting the air handler.

Step 1. (See Figure 3) Remove the access plate at the opposite end of the drain connection. This plate secures and lifts the back end of the drain pan for sloping; it must be removed before the drain pan can be removed. This is done as follows: (A) remove the screw, (B) lift the access plate up, (C) pull the plate out.

Step 2. (See Figure 4) (A) Remove the screw securing the drain pan, (B) lift the pan up, (C) slide the pan out.

Step 3. (Not shown) Install the drain pan into the new position: (A) slide the pan in the opening, (B) lift the pan up, (C) push it in all the way, (D) drop it down over the lip of the opening, (E) secure with screw.

Step 4. (See Figure 5) Install the access plate on opposite end of drain pan: (A) slide the ledge of the access plate under the drain pan, (B) lift the access plate and pan up, (C) push the access plate in, (D) drop the access plate down over the lip of the opening, (E) secure with screw.

Figure 2

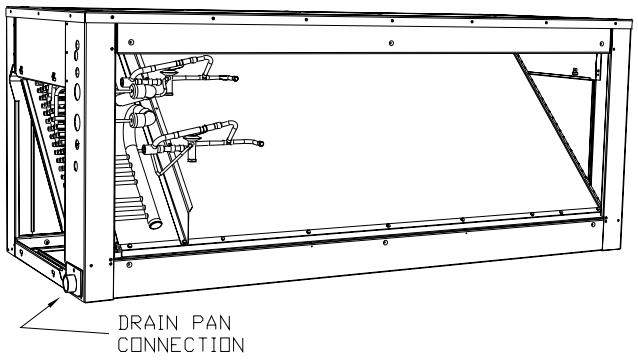


Figure 3

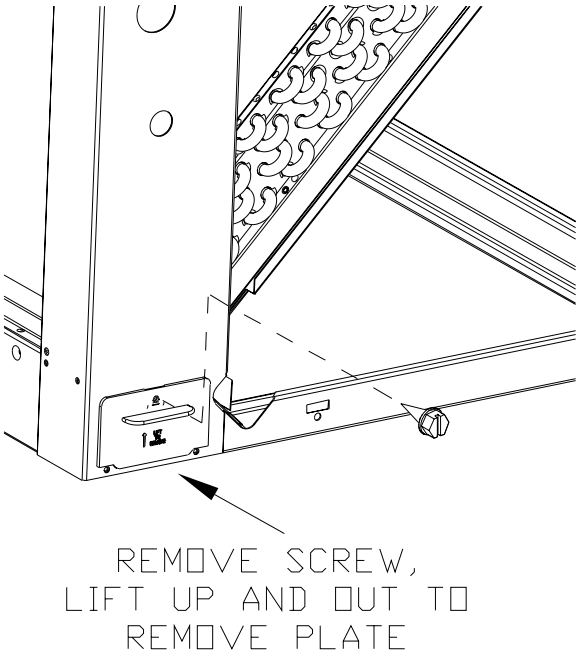


Figure 4

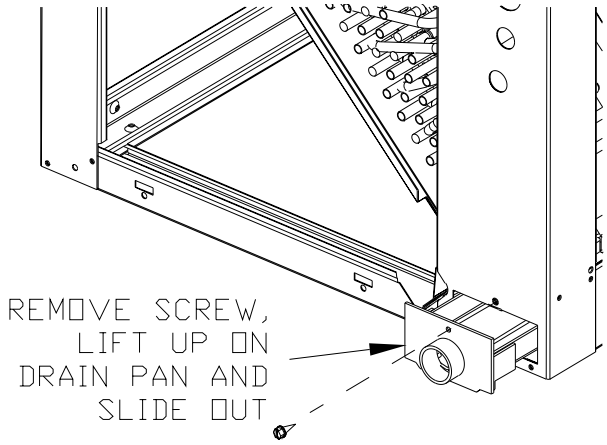
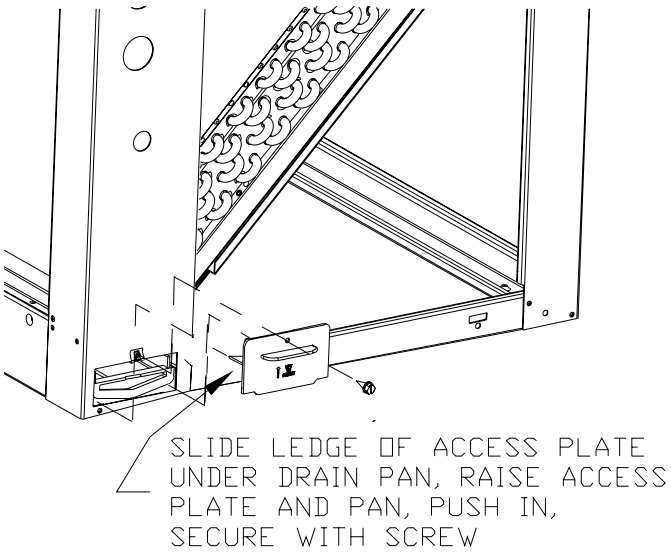


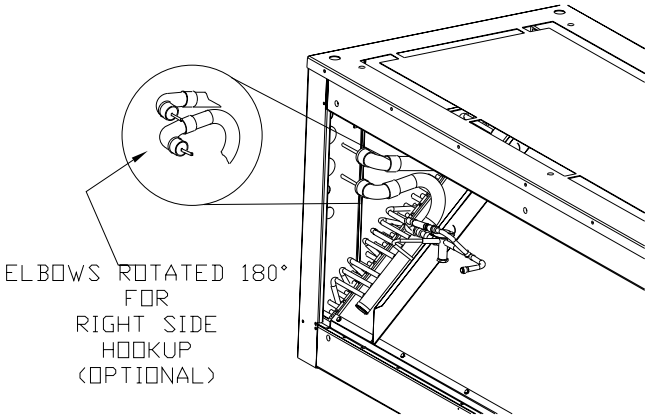
Figure 5



Refrigerant Piping Preparation

The coil is designed so that refrigerant piping can enter from either the right or left hand side. It is shipped with the intent that the refrigerant lines will enter from the left hand side. To convert to right hand entry, unbraze the elbow on the suction line and rotate 180 degrees and re-braze. (See Figure 6)

Figure 6



IMPORTANT: Access to refrigerant lines is limited in some applications. Therefore, refrigerant lines should be stubbed out and temporarily capped prior to setting the air handler. Protect adjacent surfaces from heat damage, when brazing in and around the air handler.

⚠ CAUTION: These coils are shipped with a dry nitrogen holding charge. Cut the process tube or puncture the cap to bleed off the nitrogen prior to any brazing. Temporarily cap off tubes if the refrigerant line connections are to be made later.

Installations, Limitations and Recommendations

The general location of the cased coil is normally selected by the architect, contractor, and/or buyer. For proper installation, the following items must be considered.

a. All duct work should be properly insulated to prevent condensation and heat loss.

b. Refrigerant gas piping must be insulated.

⚠ CAUTION: Properly insulate all refrigerant gas piping to prevent possible water damage due to condensation and to prevent capacity loss and possible compressor damage.

It is recommended that the outline drawing (Figure 1) be studied and dimensions properly noted and checked against selected installation site. By noting in advance which knockouts are to be used, proper clearance in allowances can be made for installation and possible future service.

Lifting Recommendations

Prior to lifting, the center of gravity should be determined for lifting safety. Because of placement of internal components, the coil weight may be unevenly distributed. Approximate total coil weight and corner weights are given in Table 1.

Table 1
Total Coil Weight and Corner Weights (lbs)

Model	Configuration	Shipping Max.	Net Max.	Corner Weight #1	#2	#3	#4
TXE120B	As shipped	239.0	190.6	45.5	49.8	49.8	45.5

⚠ WARNING: ON-SITE LIFTING EQUIPMENT MUST BE CAPABLE OF LIFTING THE WEIGHT OF THE COIL WITH AN ADEQUATE SAFETY FACTOR. USE OF UNDER-CAPACITY LIFTING DEVICES MAY RESULT IN PERSONAL INJURY OR DEATH AND CAUSE DAMAGE TO THE COIL.

For lifting into an elevated mounting position, run lifting straps or slings under the casing. Use spreader bars to protect it from damage. Test lift to determine proper balance and stability.

⚠ CAUTION: Use spreader bars to prevent straps from damaging the cased coil Install the bars between lifting straps, both underneath and above. This will prevent the straps from crushing the cabinet or damaging the finish.

NOTE: Coils are shipped from the factory in the vertical upflow return and discharge configuration. When other than this configuration is used, use panel(s) removed to cover the top and/or bottom openings.

Coils are shipped with the top section covered with a removable panel or slotted openings around the duct opening. If vertical discharge is to be used, remove the panel and discard or cut the 1/2” taps between slotted openings with fin snips.

Leveling

The coil has a double sloped drain pan. In order to assure proper drainage along the length of the drain pan, it is important to have the unit properly leveled. Be sure the coil is level or slightly sloped in the direction of the condensate connection.

Refrigerant Piping

Installation, brazing, leak testing, and evacuation of refrigerant lines are covered in the installation instructions packaged with the outdoor unit. Read the instructions before beginning installation of refrigerant lines.

You will find two cloth bags attached to the refrigerant tube of the coil that contain two (2) brass clamps (straps) and cork impregnated insulation material approximately 9” long by 4” wide; this is for attaching and insulating the expansion valve bulbs to the suction lines.

On coils that will have refrigerant lines entering the cabinet from the left side, remove the split rubber grommet from the knockout in the end of the air handler. Uncoil the cap tube with the bulb attached at the expansion valve and place the grommet on the cap tube. With the grommet around the tube, push the bulb through the hole and position the grommet back into its original position (repeat for the second bulb). Attach the bulbs approximately 45 degrees off vertical, 10 to 12 inches outside of the air handler.

On coils that will have refrigerant lines entering the casing from the right side, the bulbs should be attached to the suction tubes inside the casing, in the same manner as above, approximately 10” from the right end of the unit.

After attaching to the suction lines, either inside or outside of the cabinet, wrap the cork impregnated insulation around the bulbs and suction tubes. Refrigerant piping should then be insulated.

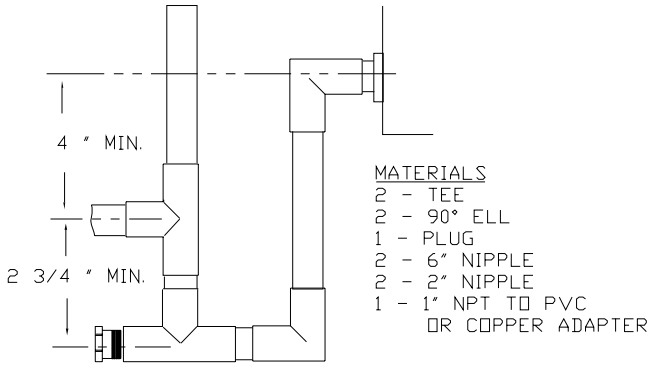
IMPORTANT: Ensure that the refrigerant lines passing through the cabinet are not resting on sharp sheet metal edges.

Condensate Piping

The drain pan condensate connection is a female slip type for 1” Schedule 40 PVC pipe. Use PVC cement and tubing/fittings as required (field supplied) to construct a trap. A union or flexible tubing and clamps may be installed if the drain pan is to be removed periodically for cleaning.

IMPORTANT: When air handler is installed in the vertical position and close proximity trapping of condensate is required, use of a subbase accessory to raise the air handler for clearance of the drain trap is recommended. For a typical drain trap assembly, see Figure 7

Figure 7



Auxiliary Drain Pan

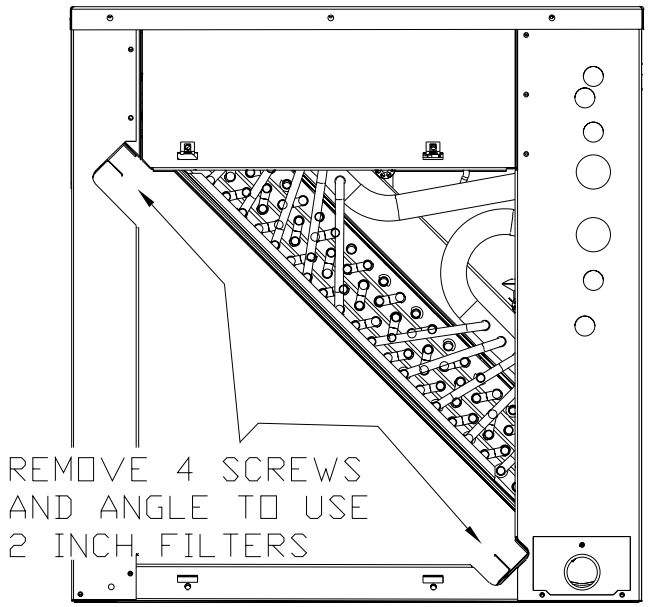
A field fabricated auxiliary drain pan should be used under the coil when it is installed above ceilings or in other locations where condensate overflow may cause damage. This drain pan will eliminate any excess condensation due to extreme humidity or an obstructed drain in the primary drain pan. Drain lines from this pan must be installed, but should not be connected to the primary drain line from the coil.

Filters

Cased coils are shipped with a filter/rack assembly, but no filters. To install filters, remove access panel (either end) and slide filters in. Replace panels. See Figure 8.

To convert from a 1” filter rack to a 2” filter rack, remove both end access panels. Remove two (2) screws and the L-shaped angles from both the top and bottom of the filter track to increase the width of the filter opening. (See Figure 8).

Figure 8



Duct Connections

Use standard installation practices for installing the duct work. Return duct should be sized to the same dimensions as the return inlet of the coil casing.