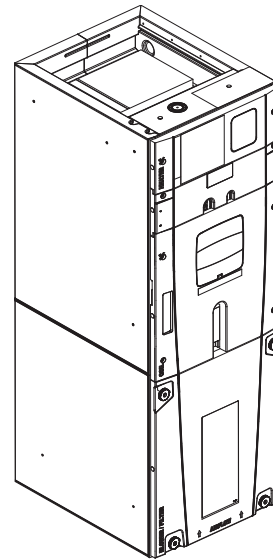


# Installer's Guide

## Variable Speed Air Handlers Convertible 2 — 5 Ton

TAMXB0A24V21DA  
TAMXB0B30V31DA  
TAMXB0C36V31DA  
TAMXB0C42V41DA  
TAMXB0C48V41DA  
TAMXB0C60V51DA



The Diagnostics Mobile App is available by scanning a QR code located inside this unit or by searching for the Link Diagnostics App in your App Store.

**Note:** "Graphics in this document are for representation only. Actual model may differ in appearance."

**Note:** For use with BAYEA series heaters ONLY.

**Note:** This unit can be used in Link Communicating mode or 24 volt mode.

**Note:** Need to use Diagnostics App to configure blower delays and accessories etc., in 24 volt mode.

### SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

# SAFETY SECTION

## AIR HANDLERS

**Important** — This document contains a wiring diagram, a parts list, and service information. This is customer property and is to remain with this unit. Please return to service information pack upon completion of work.

### ⚠ WARNING

#### HAZARDOUS VOLTAGE!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power cannot be inadvertently energized.

### ⚠ CAUTION

#### GROUNDING REQUIRED!

Failure to inspect or use proper service tools may result in equipment damage or personal injury. Reconnect all grounding devices. All parts of this product that are capable of conducting electrical current are grounded. If grounding wires, screws, straps, clips, nuts, or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

### ⚠ WARNING

#### LIVE ELECTRICAL COMPONENTS!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

Follow all electrical safety precautions when exposed to live electrical components. It may be necessary to work with live electrical components during installation, testing, servicing, and troubleshooting of this product.

### ⚠ WARNING

#### PRESSURIZED REFRIGERANT!

Failure to follow this Warning could result in personal injury

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

### ⚠ CAUTION

#### SHARP EDGE HAZARD!

Failure to follow this Caution could result in property damage or personal injury.

Be careful of sharp edges on equipment or any cuts made on sheet metal while installing or servicing.

### ⚠ WARNING

#### WARNING!

This product can expose you to chemicals including lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**Important:** Panel damage can occur with prolonged exposure to POE lubricants. Air handler front panels that come in contact with POE oil must be washed immediately with soapy water.

**Important:** The TAMX air handlers are only compatible with BAYEA\*\* internal electric heaters.

**Note:** Representative illustrations only included in this document. Most illustrations display the upflow configuration.

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# Installer Guide Notes

**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 upon completion of work

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

**See TAMX Service Facts document for information on Airflow Tables and troubleshooting flowcharts.**

**Important:** The 24 volt low voltage wire harness is shipped in the supplied document pack.

**Note:** The manufacturer recommends installing ONLY A.H.R.I. approved, matched indoor and outdoor systems. Some of the benefits of installing approved matched indoor and outdoor split systems are maximum efficiency, optimum performance, and the best overall system reliability.

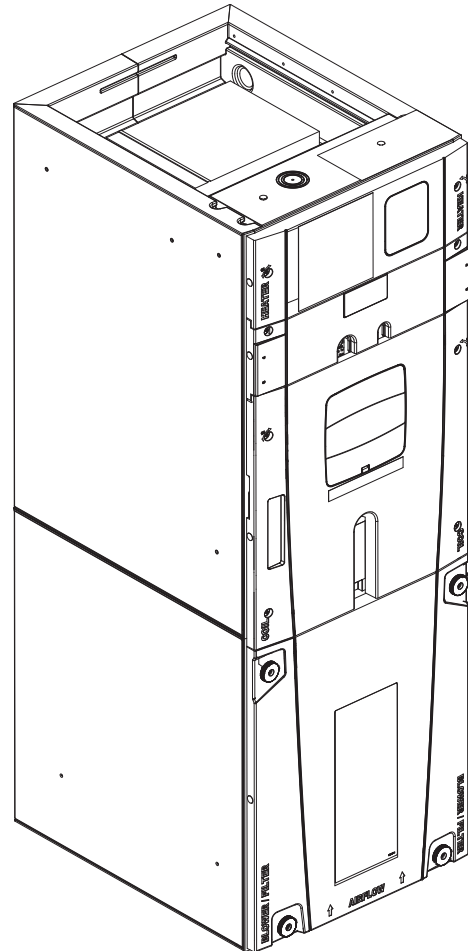
**Note:** Condensation may occur on the surface of the air handler when installed in unconditioned spaces, verify that all electrical and refrigerant line penetrations on the air handler are sealed completely.

The TAMX air handlers will only use the following internal electric heaters:

BAYEAC04BK1	BAYEAC10LG1
BAYEAC04LG1	BAYEAC10LG3
BAYEAC05BK1	BAYEABC15BK1
BAYEAC05LG1	BAYEABC15LG3
BAYEAC08BK1	BAYEABC20BK1
BAYEAC08LG1	BAYEACC25BK1
BAYEAC10BK1	

**Note:** Duct heaters cannot be applied with this air handler.

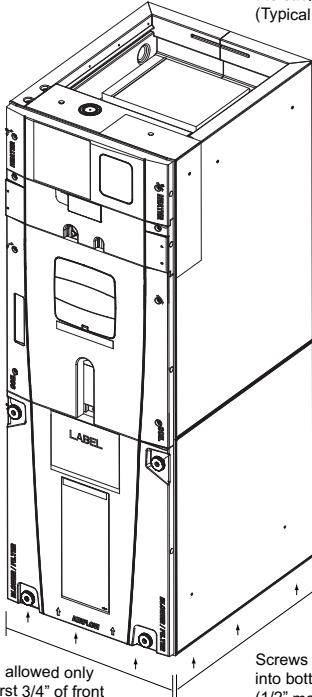
**Note:** The heater size will be automatically configured by installing a resistor in the Electric heat harness located in the electric heat compartment and will be included with the BAYEA heater.



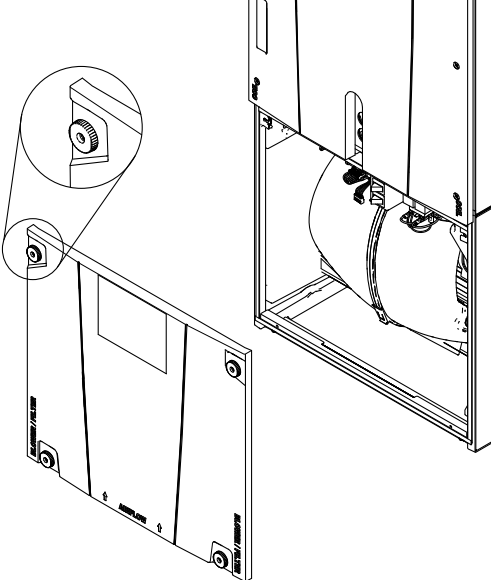


# Unit Design

**Table 1. Cabinet Penetration**

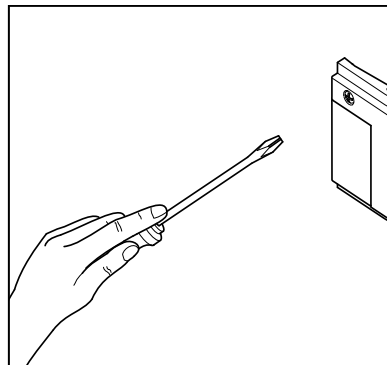
<p><b>Important:</b> Due to the unique design of this unit, which allows the electrical wiring to be routed within the insulation, do not screw, cut, or otherwise puncture the unit cabinet in any location other than the ones illustrated.</p> <p><b>Important:</b> Under no conditions should metal strapping be attached to the unit to be used as support mechanisms for carrying or suspension purposes.</p>	 <p>Screws for flange kit attachment are allowed along the interior of the cabinet (see arrows) (Typical all sides)</p> <p>Screws are allowed up to 3- 3/4" from the top of the cabinet (heater compartment). (Typical both sides)</p> <p>No penetrations allowed. (Typical all sides)</p> <p>Screws, saw cuts, and other penetrations are allowed in the blower section for installation of Side Return Kit. (Typical both sides)</p> <p>Screws allowed only in the first 3/4" of front bottom of unit (in cross member)</p> <p>Screws can be drilled into bottom of unit. (1/2" max. screw length) (Typical all sides)</p>
---	---

**Table 2. Panel Removal**

<p>The unit contains four (4) access panels: Blower/Filter, Coil, Line Set, and Heater.</p> <p>The Blower/Filter panel is removed using 1/4 turn thumb screws.</p> <ol style="list-style-type: none"> <li>1. Turn thumb screws on Blower/Filter panel.</li> <li>2. Pull top of panel out, away from cabinet.</li> <li>3. Lift panel up out of channel.</li> <li>4. Set aside.</li> </ol>	
--	--

The Coil, Line Set, and Heater panels are removed using Phillips head screws.

Removal requires #3 Size Phillips



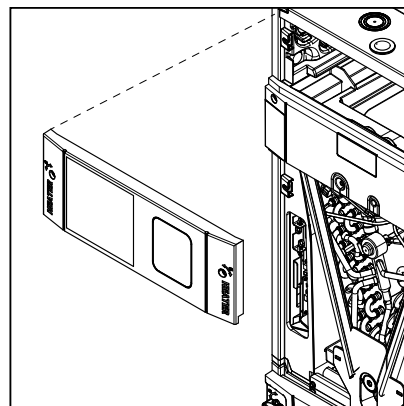
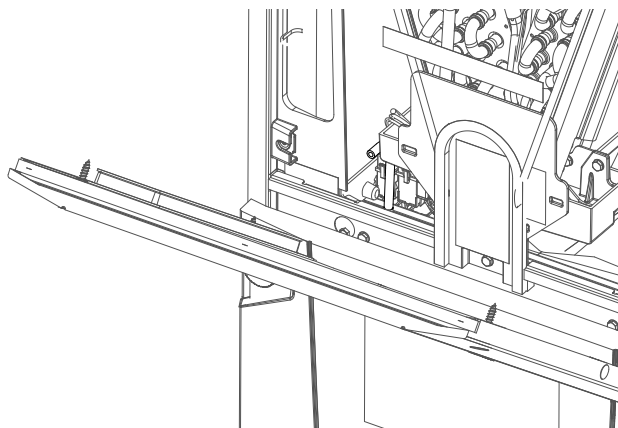
Coil and Heater panels must be removed prior to removing the Line Set panel.

To remove Coil Panel:

1. Turn screws on Coil panel.
2. Rotate bottom of panel away from cabinet.
3. Remove panel from channel.
4. Set aside.

To remove Heater Panel:

1. Turn screws on Heater panel.
2. Pull panel straight out, away from cabinet.
3. Set aside.

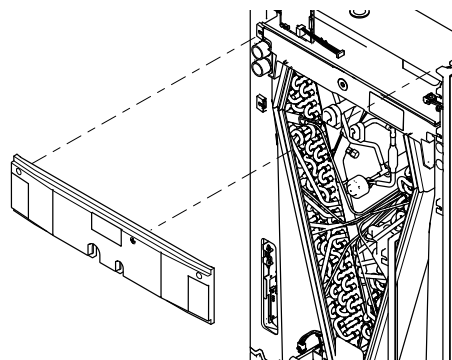


Removal of the Line Set panel is required for all refrigerant line brazing and some condensate line assembly depending on your orientation.

To remove Line Set panel:

1. Remove both Heater and Coil panels.
2. Turn screws on Line Set panel.
3. Pull panel straight out, away from cabinet.
4. Set aside.

**Note:** After replacing all panels, loosen the Line Set panel screws approximately 1/4 — 1/2 turn. This will improve the seal between the Heater Panel and Line Set panel.



# Unit Install Preparation

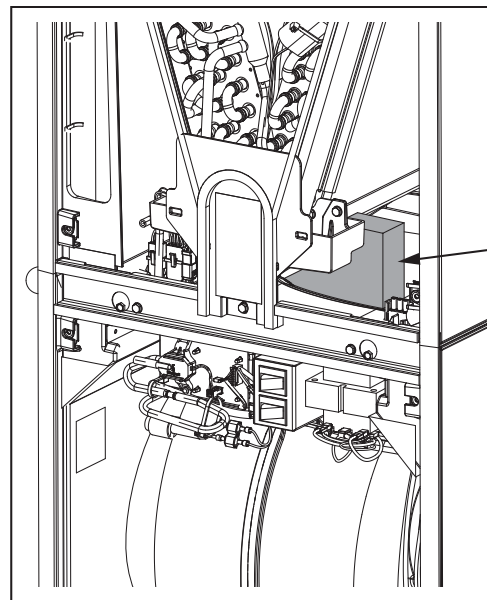
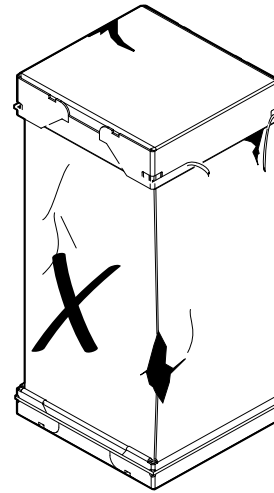
1. Check for damage and report promptly to the carrier any damage found to the unit.

**Note:** If the unit must be transported in a horizontal position, it must be laid on its back (marked "REAR" on carton).

**Note:** After unit is removed from the carton, verify coil is pressurized. Carefully remove the liquid line plug. If no pressure is released, check for leaks.

**Note:** Remove the cardboard from the bottom of the blower. Cut the tie wrap and remove the foam shipping block located at the motor.

**Note:** Remove the ANA foam found between the blower and evaporator coil.



ANA Foam

# Optional Accessories

Accessory Number	Description	Fits Cabinet Size (a)
BAYEAC04BK1	Electric Heater, 4kW, Breaker, 24V Control, 1 Ph	A to C
BAYEAC04LG1	Electric Heater, 4kW, Lugs, 24VControl, 1 Ph	A to C
BAYEAC05BK1	Electric Heater, 5kW, Breaker, 24V Control, 1 Ph	A to C
BAYEAC05LG1	Electric Heater, 5kW, Lugs, 24VControl, 1 Ph	A to C
BAYEAC08BK1	Electric Heater, 8kW, Breaker, 24V Control, 1 Ph	A to C
BAYEAC08LG1	Electric Heater, 8kW, Lugs, 24VControl, 1 Ph	A to C
BAYEAC10BK1	Electric Heater, 10kW, Breaker, 24V Control, 1 Ph	A to C
BAYEAC10LG1	Electric Heater, 10kW, Lugs, 24VControl, 1 Ph	A to C
BAYEABC15BK1	Electric Heater, 15kW, Breaker, 24V Control, 1 Ph	B to C
BAYEABC20BK1	Electric Heater, 20kW, Breaker, 24VControl, 1 Ph	C
BAYEACC25BK1	Electric Heater, 25kW, Breaker, 24V Control, 1 Ph	C
BAYEAC10LG3	Electric Heater, 10kW, Lugs, 24VControl, 3 Ph	A to C
BAYEABC15LG3	Electric Heater, 15kW, Lugs, 24V Control, 3 Ph	B to C
BAYSUPFLGAA	Supply Duct Flange A	A
BAYSUPFLGBA	Supply Duct Flange B	B
BAYSUPFLGCA	Supply Duct Flange C	C
BAYRETF LGAA	Return Duct Flange A	A
BAYRETF LGBA	Return Duct Flange B	B
BAYRETF LGCA	Return Duct Flange C	C
BAYSRKIT100A	Side Return Kit	A to C
BAYFLR1620A	High Velocity Filter Kit, 16" x 20" x 1" (10 filters)	A
BAYFLR2020A	High Velocity Filter Kit, 20" x 20" x 1" (10 filters)	B
BAYFLR2220A	High Velocity Filter Kit, 22" x 20" x 1" (10 filters)	C
TASB175SB (b) (c)	Plenum Stand with integrated sound baffle A	A
TASB215SB	Plenum Stand with integrated sound baffle B	B
TASB235SB	Plenum Stand with integrated sound baffle C	C
MITISRKIT01A	Side Return Kit with 16" x 20" Filter	A to C
BAYFRKIT175	Front Return Kit for 17.5" Cabinet	A
BAYFRKIT210	Front Return Kit for 21.0" Cabinet	B
BAYFRKIT235	Front Return Kit for 23.5" Cabinet	C
TAYBASETAMA	Downflow Sub-Base Kit	A to C
BAYBAFKT175A (d)	Sound Baffle Kit for 17.5" Cabinet	A
BAYBAFKT215A	Sound Baffle Kit for 21.0" Cabinet	B
BAYBAFKT235A	Sound Baffle Kit for 23.5" Cabinet	C
TASSBK175 (e) (f)	Sound Baffle Kit for 17.5" Cabinet	A
TASSBK210	Sound Baffle Kit for 21.0" Cabinet	B
TASSBK235	Sound Baffle Kit for 23.5" Cabinet	C
BAYICSKIT01A	Internal Condensate Switch Kit	A to C
BAYHHKIT001A	Horizontal Hanger Kit	A to C
BAYUVCLK001A	UVC Lights	A to C
BAYLVKIT100A	Low Voltage Conduit Entry Kit	A to C
BAYSPEKT200A	Single Power Entry Kit	A to C
BAYWAAA05SC1AA	Hydronic Coil — 50,000 BTUH — Slide-in	A to A
BAYWABB07SC1AA	Hydronic Coil — 70,000 BTUH — Slide-in	B to B
BAYWACC08SC1AA	Hydronic Coil — 80,000 BTUH — Slide-in	C to C
BAYWACC11SC1AA	Hydronic Coil — 100,000 BTUH — Add on	C to C
BAYWACNTKT05	Relay Kit for use with BAYWAAA05SC1A	A
BAYWACNTKT07	Relay Kit for use with BAYWABB07SC1A	B
BAYWACNTKT08	Relay Kit for use with BAYWACC08SC1A	C
BAYWACNTKT08	Relay Kit for use with BAYWACC11SC1A	C
BAYINSKT175A	Solcoustic® Liner Kit for 17.5" cabinet	A
BAYINSKT215A	Solcoustic® Liner Kit for 21.5" cabinet	B
BAYINSKT235A	Solcoustic® Liner Kit for 23.5" cabinet	C
BAYCNDPIP01A	3/4" PVC Threaded Pipe Kit foam Seal (10 per box)	A to C
BAYAHMIKIT001A	EMI/EFI Air Handler Electronic noise kit for variable speed blower motor	A to C
BAYSENSC360	Supply Air Temperature Sensor	A to C
BAYAHPTKT	Return Air Pressure Transducer	A to C

(a) A Cabinet is 17.5" wide, B Cabinet is 21.5" wide, C Cabinet is 23.5" wide.

(b) Contact your distributor for information.

(c) In open air applications, the plenum stand with sound baffle provides sound reduction.

(d) Mounts inside air handler filter channel.

(e) In return plenum applications, use TASSBK for sound reduction.

(f) Mounts to TASB original plenum stand without integrated baffle.

# Optional Cabinet Disassembly

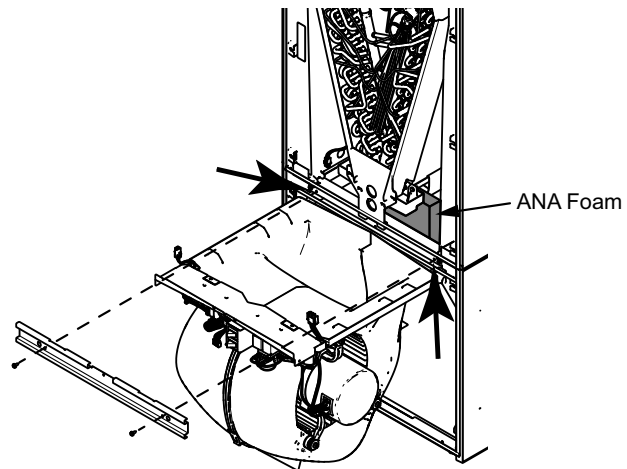
**Note:** If the unit must be transported in a horizontal position, it must be laid on its back (marked "REAR" on carton).

**Note:** To reassemble cabinet, follow the steps in reverse order. Ensure electrical connections are secure and the plug clips are engaged.

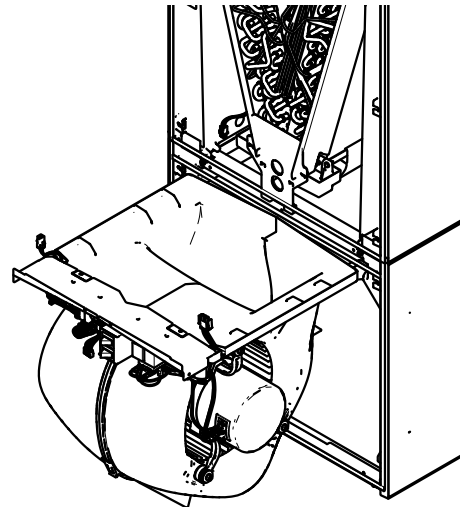
1. Remove all four front panels.
2. Remove the two screws on the seal bar and pull the seal bar straight out.
3. Disconnect all wiring connections routed to the blower assembly.
  - a. Disconnect the air pressure hose.

**Note:** Remove the cardboard from the bottom of the blower. Cut the tie wrap and remove the foam block located at the motor.

**Note:** Remove ANA Foam from under the upflow drainpan.



4. Slide Blower assembly out of unit using built-in blower support channels and set aside.

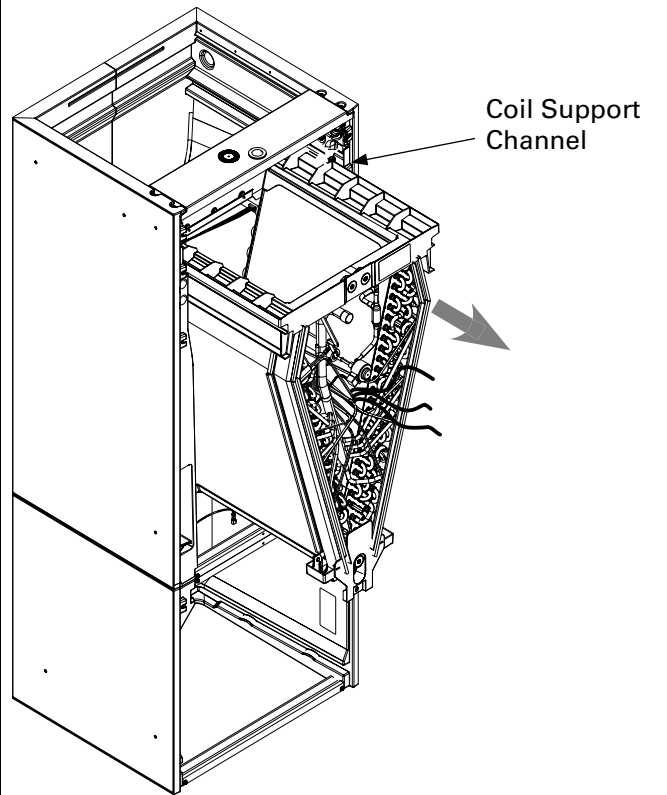


5. Disconnect wires to the EEV motor and sensors. Cut the wire ties on those wire harnesses if necessary and replace after re-installing.

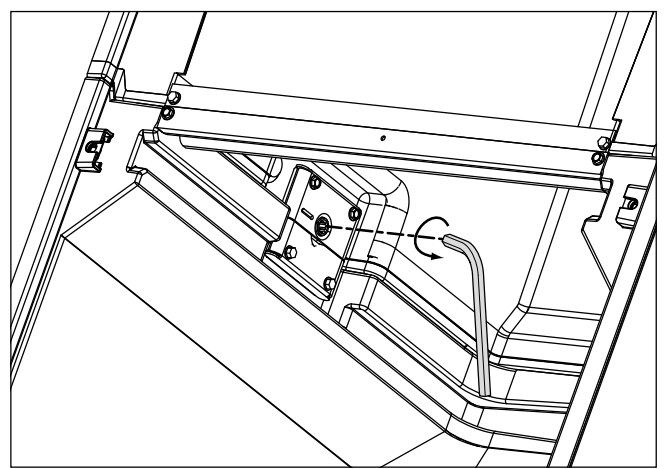
**Note:** If cut, wire ties that held the sensor must be replaced after the coil is placed back into the cabinet.

## Optional Cabinet Disassembly

6. Slide Coil assembly out of unit using built-in coil support channels and set aside

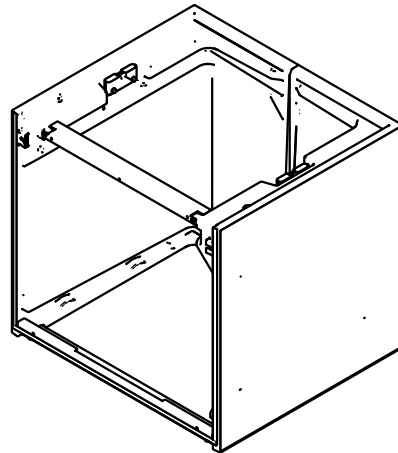
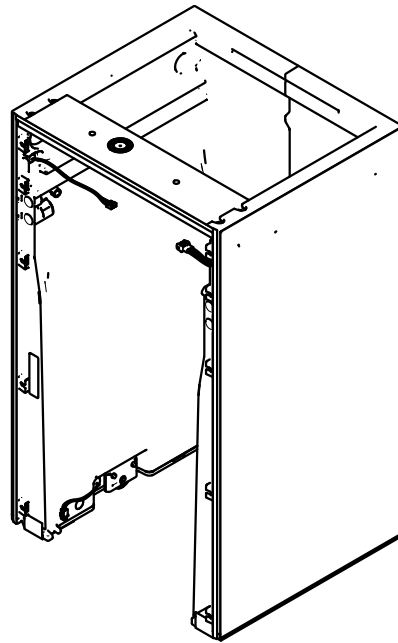


7. Use a 5/16 Allen wrench on the locking mechanism on each side of the bottom half of the cabinet to loosen the locking mechanism. The locks loosen by turning counter-clockwise approximately 3/4 of a turn.

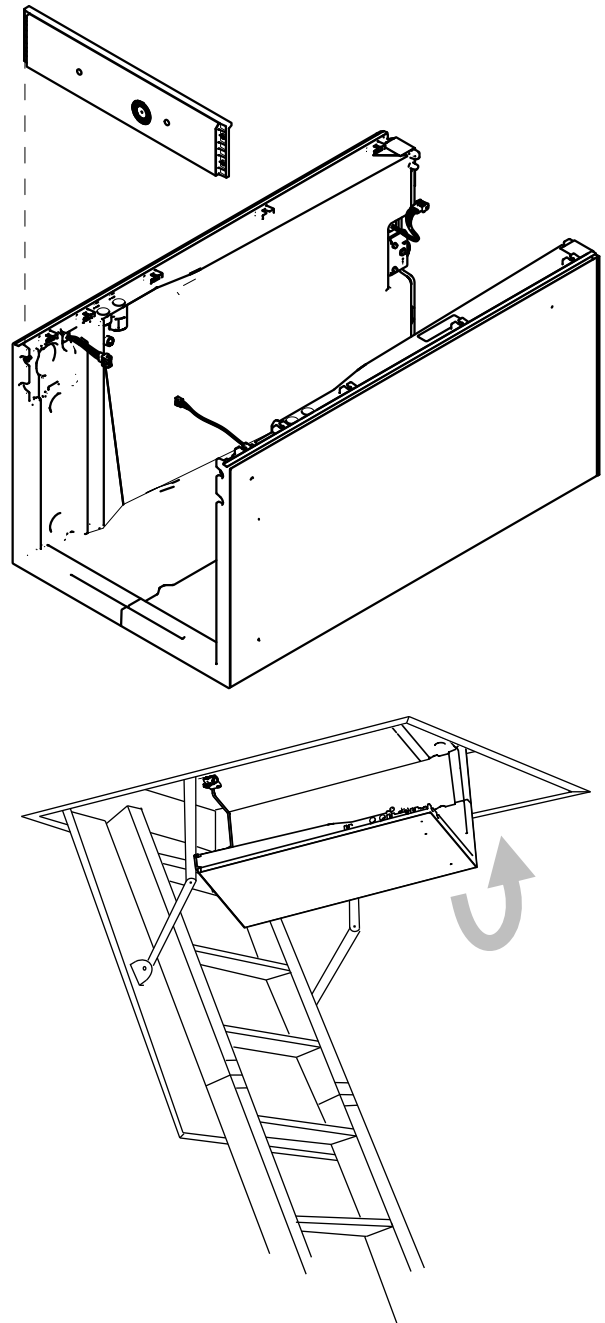


8. Lift the Coil section up and away from the Blower section. Set aside.

**Note:** When separating the two cabinet pieces, make sure the gasket remains intact.



9. For extremely tight spaces where the cabinet needs to be rotated through a small opening, remove the top panel and all cross members. Use a manual driver to avoid stripping screw holes.



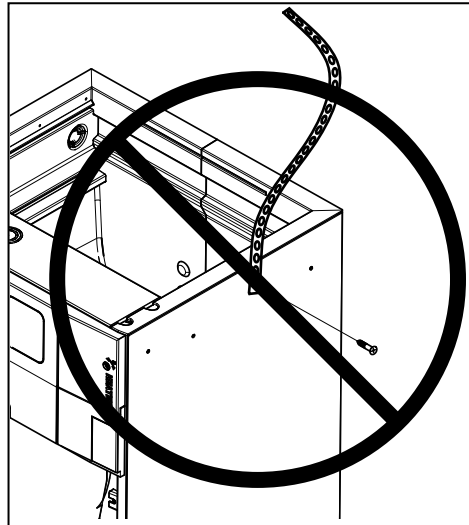
10. Continue preparation by following the proper carrying procedures shown in the next section.



# Placing Unit at Location

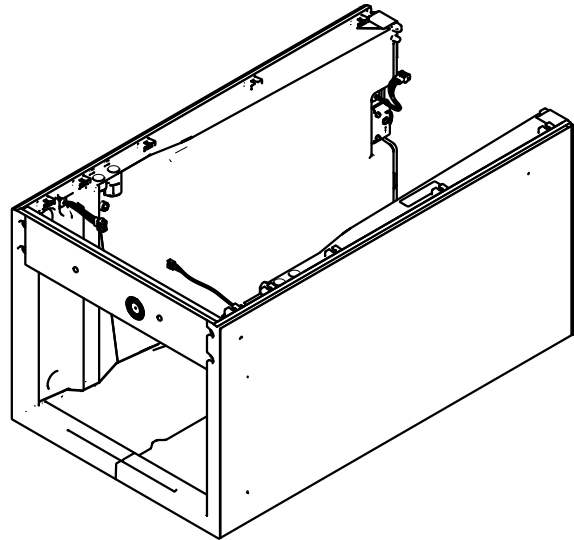
1. Carry the unit to the installation location
2. Reassembly by reversing the steps listed in Section 4 if disassembly was required. If cut, wire ties that held the sensor wiring must be replaced.

**Important:** Under no conditions should metal strapping be attached to the unit to be used as support mechanisms for carrying or suspension purposes.

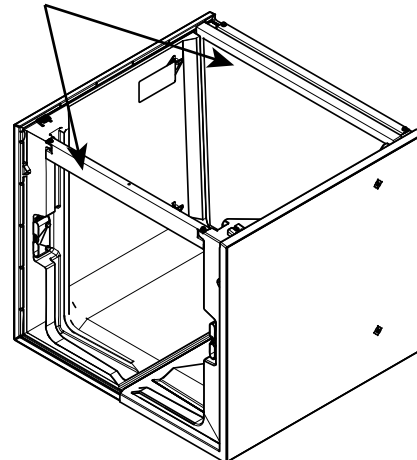


## Approved Carrying:

- Hold by the cross members within the cabinet or unit top plate and use as handles for lifting and carrying the coil and blower sections.



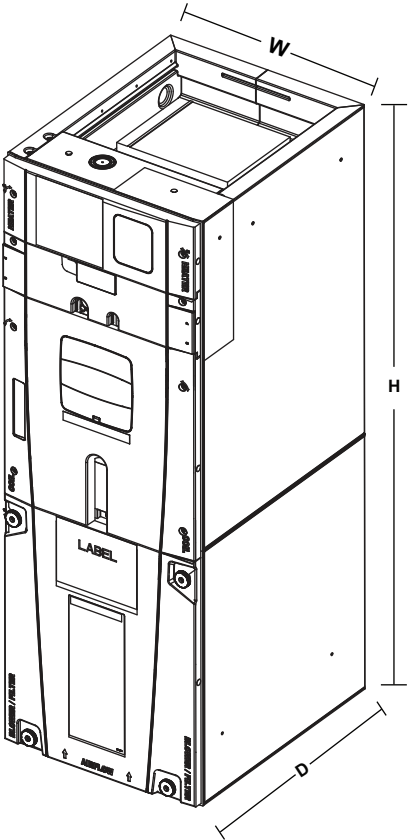
Cross Members



# Unit Location Considerations

**Table 3. Unit Dimensions and Weight**

MODEL NUMBER	H x W x D (inches)	Coil and Heater Compartment Height * (inches)	Unit Net Weight (pounds)
TAMXB0A24V21DA	49.9 x 17.5 x 21.8	28.1	120
TAMXB0B30V31DA	55.7 x 21.3 x 21.8	33.9	133
TAMXB0C36V31DA	56.9 x 23.5 x 21.8	35.1	143
TAMXB0C42V41DA	56.9 x 23.5 x 21.8	35.1	158
TAMXB0C48V41DA	61.7 x 23.5 x 21.8	39.9	174
TAMXB0C60V51DA	61.7 x 23.5 x 21.8	39.9	178
* Blower compartment height is 21.8 inches.			

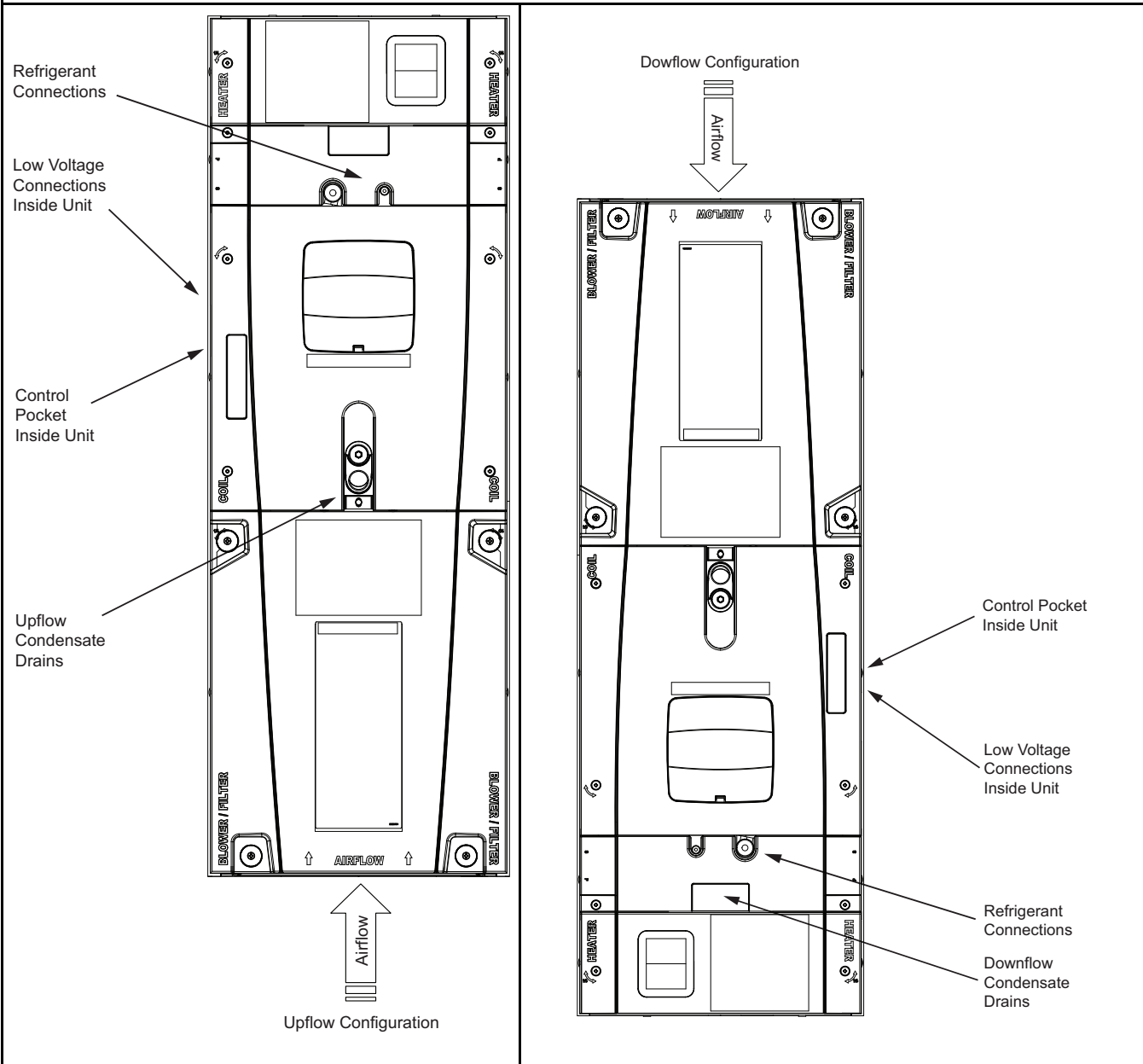


# Four-Way Conversion

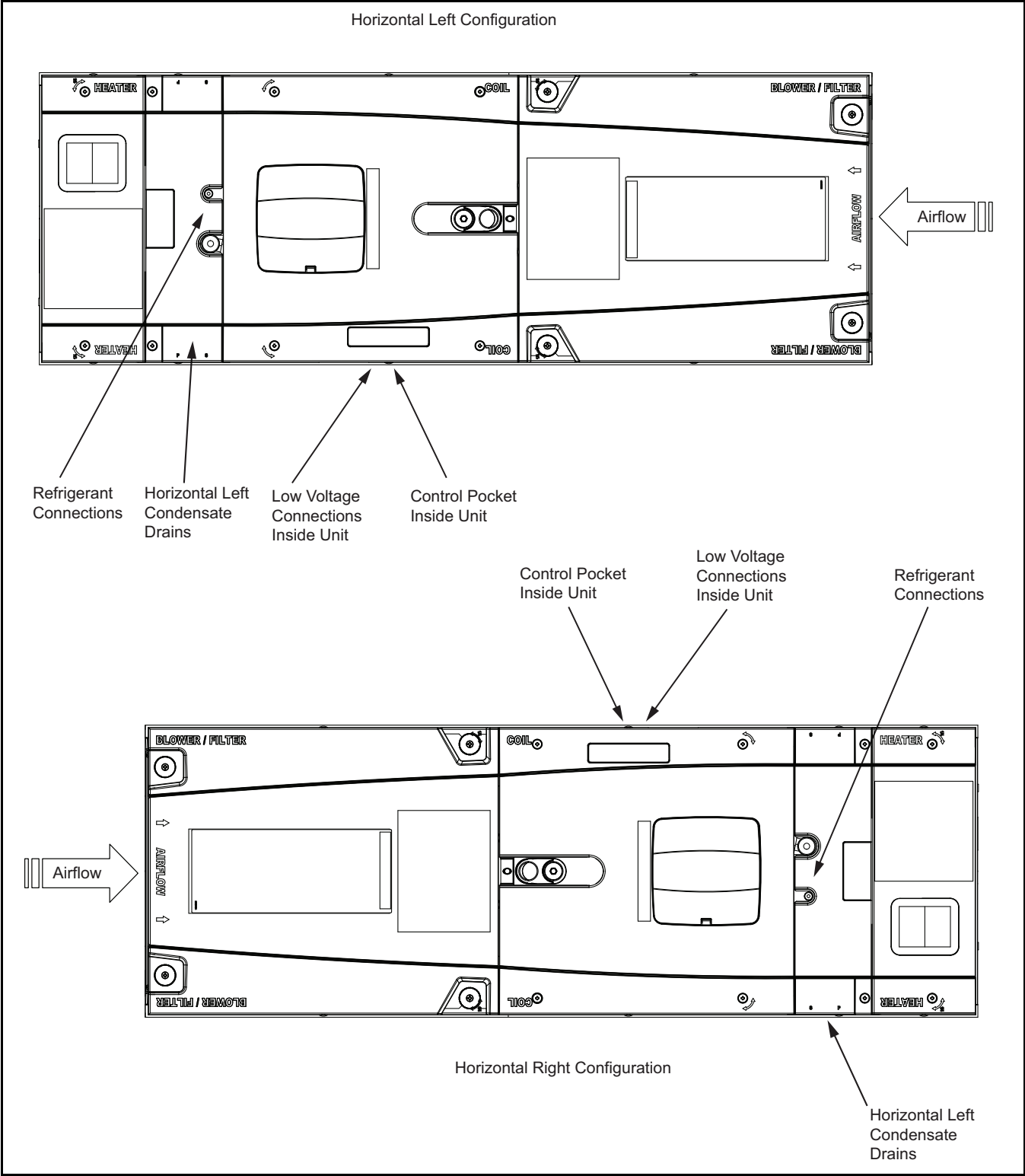
To place the unit in the configuration your application requires (upflow, downflow, horizontal right, or horizontal left), simply turn the unit to that orientation. Remember to adjust the badge accordingly.

**Note:** The air handlers are shipped from the factory suitable for four-way application.

**Note:** Entry for low voltage connections is allowed on either side of cabinet.



Four-Way Conversion



# Ducted and Non-Ducted Return Applications

Table 4. Non-Ducted Applications

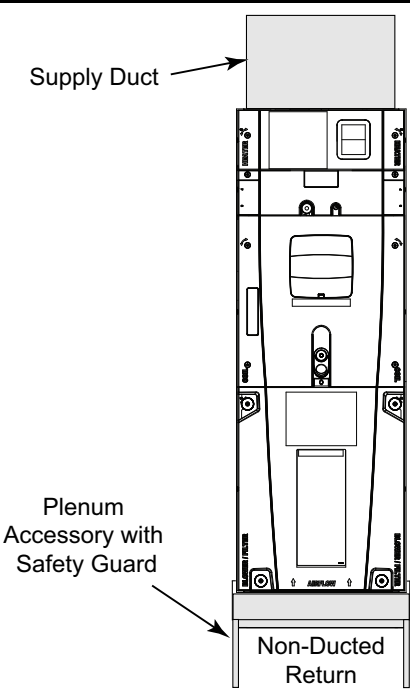
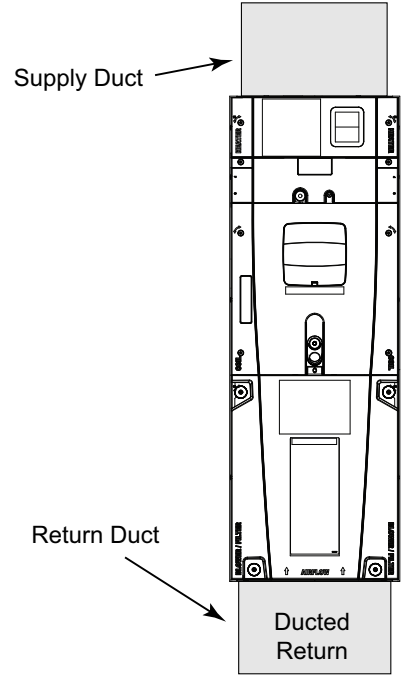
<div data-bbox="152 394 800 441"> <div>⚠ CAUTION</div> </div> <div data-bbox="152 441 800 688"> <p><b>HAZARDOUS VAPORS!</b></p> <p>Failure to follow this Caution could result in property damage or personal injury. Hazardous vapors can be distributed throughout the conditioned space and equipment damage can result. Do not install an air handler with a non-ducted return in the same closet, alcove, or utility room as a fossil fuel device.</p> </div> <div data-bbox="152 714 800 1029"> <p><b>Non-Ducted Return Installations:</b></p> <ul style="list-style-type: none"> <li>Installation in a closet, an alcove, or a utility room without a return duct requires the use of a plenum accessory kit as it uses the area space as a return air plenum. Minimum clearances to combustible materials and service access must be observed (see outline drawing).</li> <li>This area may also be used for other purposes, including an electric hot water heater, but in no case shall a fossil fuel device be installed and/or operated in the same closet, alcove, or utility room.</li> <li>Review local codes to determine limitations if the unit is installed without a return air duct.</li> </ul> </div>	
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Table 5. Ducted Return Installations.

<div data-bbox="152 1142 800 1260"> <p><b>Ducted Return Installations:</b></p> <ul style="list-style-type: none"> <li>Installation in an attic, garage, or crawl space with ducted supply and return air is appropriate. Minimum clearances to combustible materials and service access must be observed (see outline drawing).</li> </ul> </div>	
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# Additional Unit Preparation Considerations

For proper installation the following items must be considered prior to moving the unit to its installation site:

- Pursuant to Florida Building Code 13-610.2A.2.1, this unit meets the criteria for a factory sealed air handler.
- If a side return is needed for your application, the side return **MUST** be prepared prior to moving the air handler to its installation location. See the Side Return Kit #BAYSRKIT100A Installer Guide for detailed instructions, if used.
- When the air handler is located adjacent to the living area, the system should be carefully designed with returns which minimize noise transmission through the return air grill. Although the air handler is designed with large blowers operating at moderate speeds, any blower moving a high volume of air will produce audible noise which could be objectionable when the unit is located very close to a living area. It is often advisable to route the return ducts under the floor through the attic. Such design permits the installation of air return remote from the living area (i.e. central hall).
- Study the unit's outline drawing and dimensions prior to selecting the installation site. Note in advance which electrical conduit entry points and condensate drain holes are to be used, so that proper clearance allowances can be made for installation and future maintenance.
- Installation of the air handler must be made prior to, or at the same time as, the installation of the outdoor unit in order to allow access for refrigerant lines.

- Consider the overall space needed when external accessories are used, additional height and width requirements may exist.
- These units are not approved for outdoor installation.
- These units must be installed in the proper air flow direction.
- Any third-party heater accessories or hydronic coils must be downstream of the unit.

**Note:** *No atomizing style humidifier is allowed in the return plenum with the use of this unit.*

- Excessive bypass air may cause water blow-off, which will adversely affect system operation and air cleaner performance. To verify bypass airflow, follow the Bypass Humidifier Pre-Installation Checkout and Set-Up Procedures available through your local distributor. Ask for publication number 18-CH37D1-\* Steam and Flow-through Fan Power Duct-mounted Humidifiers. Follow the humidifier installation instructions. These should only be installed on the supply air side of the system.

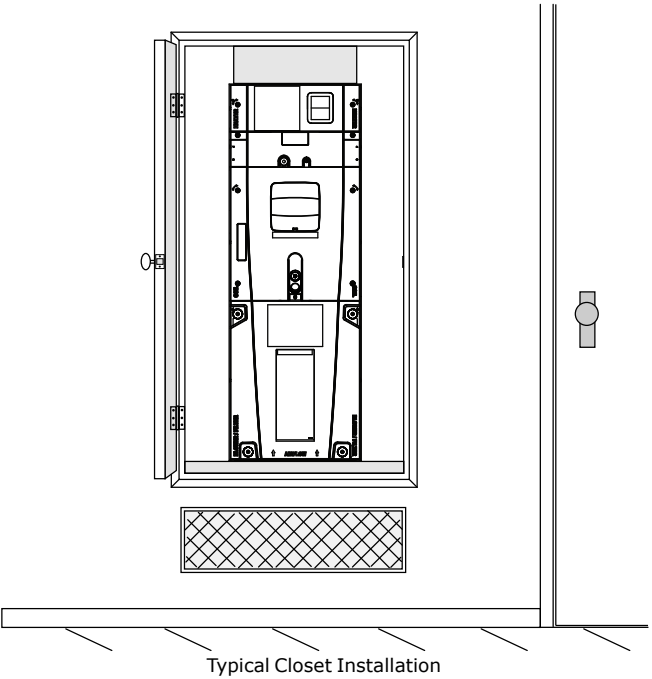
**Note:** *The air handlers have been evaluated in accordance with the Code of Federal Regulations, Chapter XX, Part 3280 or the equivalent. "SUITABLE FOR MOBILE HOME USE."*

**Note:** *This unit is certified to UL 1995. The interior cabinet wall meets the following:*

- UL94-5VA Flame Class Listed
- UL723 Steiner Tunnel Listed for 25/50 Flame/Smoke
- UL746C Listed for Exposure to Ultraviolet Light, Water Exposure and Immersion

# Setting the Unit — Vertical Installation

**Table 6. Considerations**

<p>Provide a minimum height of 14 inches for proper unrestricted airflow below the unit. Allow a minimum of 21 inches clearance in front of the air handler to permit maintenance and removal of filter.</p> <ul style="list-style-type: none"> <li>Position unit on suitable foundation. If a manufacturer approved accessory is not used, a frame strong enough to support the total weight of the unit, accessories, and duct work must be provided.</li> <li>Isolate unit from the foundation using a suitable isolating material.</li> </ul> <p><b>Note:</b> The following sound insulation kits are available to lessen objectionable sound.</p> <p>BAYINSKT175A for use with 17.5" cabinets  BAYINSKT215A for use with 21.5" cabinets  BAYINSKT235A for use with 23.5" cabinets</p>	 <p>Typical Closet Installation</p>
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**Table 7. Upflow Installation**

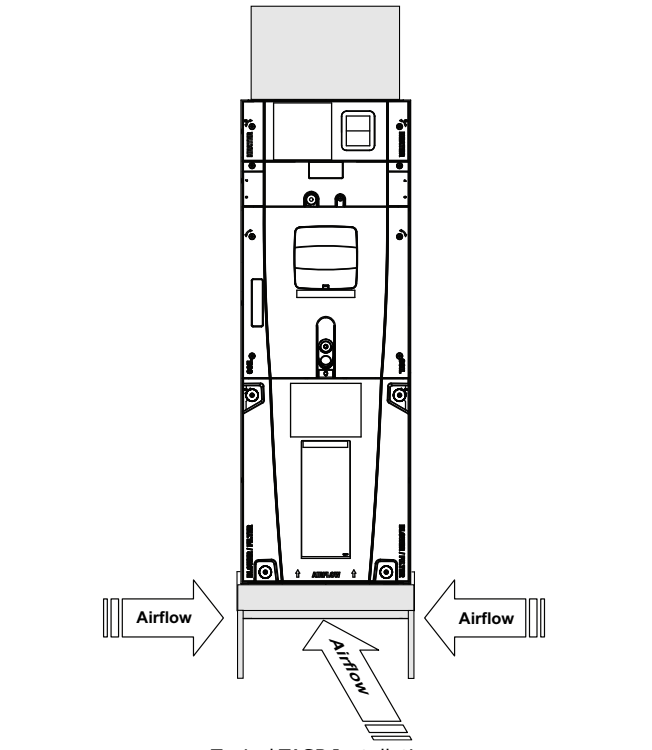
<p><b>TASB Installation</b></p> <p>1. Install the TASB plenum stand with integrated sound baffle using the TASB instructions.</p> <p><b>Note:</b> Kit is used for open air applications.</p> <p>TASB175SB for use with 17.5" cabinets  TASB215SB for use with 21.5" cabinets  TASB235SB for use with 23.5" cabinets  MITISRKIT1620 — Side return kit with 16" x 20" filter</p> <p>Contact your distributor for more information.</p> <p><b>Note:</b> The following sound insulation kits are available to lessen objectionable sound.</p> <p>BAYINSKT175A for use with 17.5" cabinets  BAYINSKT215A for use with 21.5" cabinets  BAYINSKT235A for use with 23.5" cabinets</p>	 <p>Typical TASB Installation</p>
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Table 8. Plenum Installation

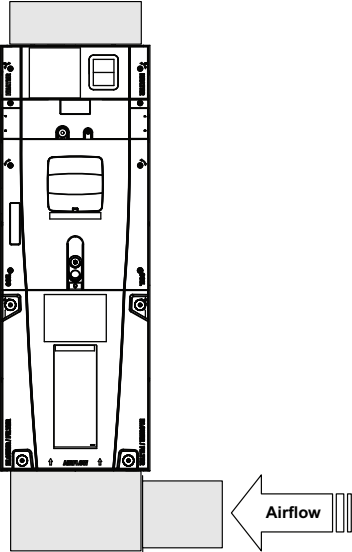
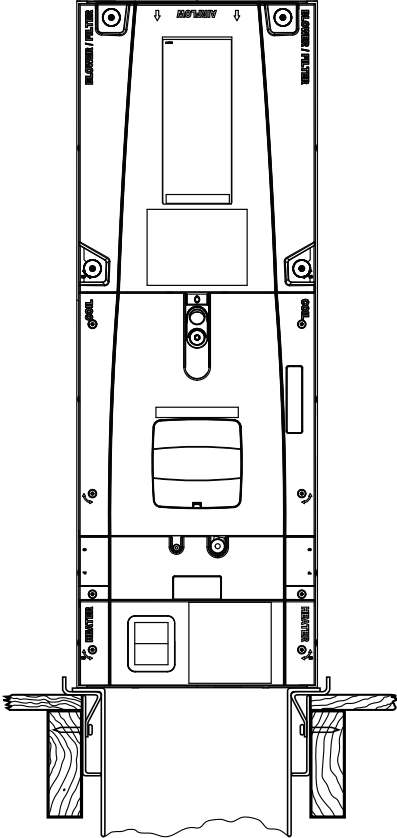
<p>2. Assemble the plenum using the plenum's Installer Guide.</p> <p>On units with sheet metal returns: Return plenum must be flanged. Sheet metal drill point screws must be 1/2" in length or shorter.</p>	 <p>The diagram shows a top-down view of a rectangular plenum assembly. It consists of several rectangular sections connected by ductwork. At the bottom, a large rectangular duct is shown with an arrow pointing to the left, labeled 'Airflow'. Below the diagram, the text 'Typical Plenum Installation' is written.</p> <p>Typical Plenum Installation</p>
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Table 9. Downflow Installation

<ul style="list-style-type: none"><li>Downflow installation must comply with national, state, and local codes.</li></ul> <p>3. Prepare the location site as appropriate for your application and per national, state, and local code requirements.</p> <p>4. Set the unit in position.</p>	 <p>The diagram shows a top-down view of a rectangular plenum assembly. It consists of several rectangular sections connected by ductwork. At the bottom, the plenum is shown being lowered into a wooden frame structure. Below the diagram, the text 'Typical Downflow Installation' is written.</p> <p>Typical Downflow Installation</p>
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# Setting the Unit — Horizontal Installations

**Table 10. Considerations**

**Important:** Due to the unique design of this unit, which allows the electrical wiring to be routed within the insulation, do not screw, cut, or otherwise puncture the unit cabinet in any location other than the ones illustrated in this Installer Guide or in an approved accessory's Installer Guide.

**Important:** Make certain that the unit has been installed in a level position to ensure proper draining.

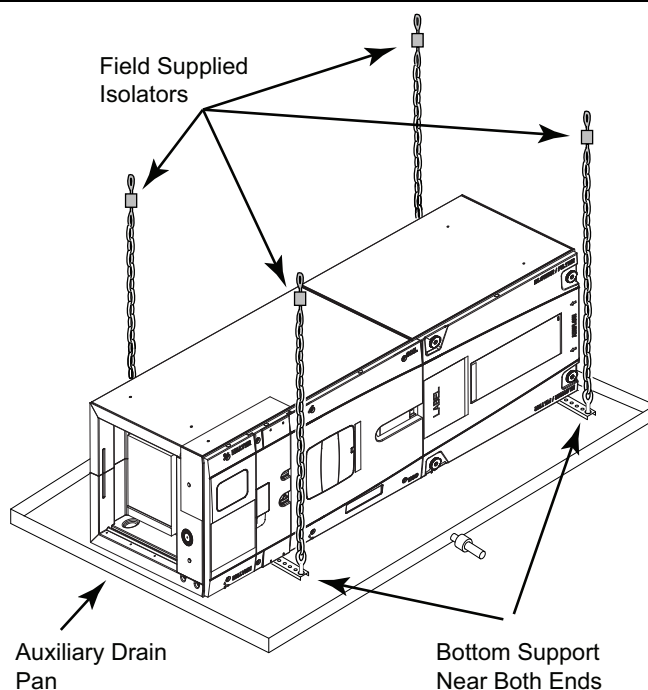
**Important:** Under no conditions should metal strapping be attached to the unit to be used as support mechanisms for carrying or suspension purposes.

1. Support the unit from the bottom (near both ends). The service access must remain unobstructed.
  - a. Approved bottom support methods are rail, u-channels (Unistrut®), or other load bearing materials.
  - b. The unit must be isolated carefully to prevent sound transmission. Field supplied vibration isolators are recommended.

**Important:** The unit can only be supported from the bottom unless using kit BAYHHKIT001A. Do not drill or screw supports into any area of the cabinet.

**Note:** Do not allow the unit to be used as strain relief.

2. Install an auxiliary drain pan under the horizontal air handler to prevent possible damage to ceilings.
  - a. Isolate the auxiliary drain pan from the unit and from the structure.
  - b. Connect the auxiliary drain pan to a separate drain line and terminate according to local codes.



**Note:** BAYHHKIT001A Hanging Bracket Kit may be ordered separately.

**Important:** The BAYHHKIT001A may not be used if the cabinet has been altered per Installer Guide 18-GJ58D1-1

# Connecting the Duct work

**Table 11. Duct Connection Considerations**

**Important:** Due to the unique design of this unit, which allows the electrical wiring to be routed within the insulation, do not screw, cut, or otherwise puncture the unit cabinet in any location other than the ones illustrated in this Installer Guide or in an approved accessory's Installer Guide.

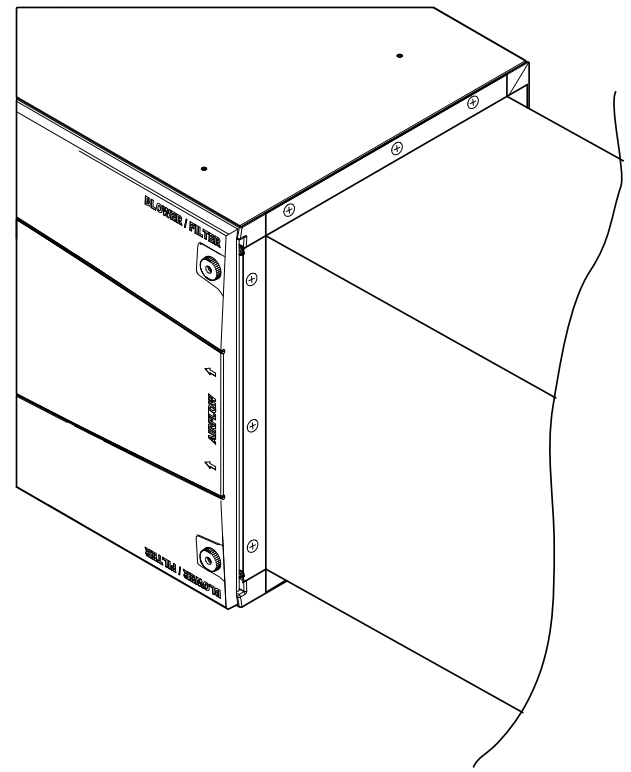
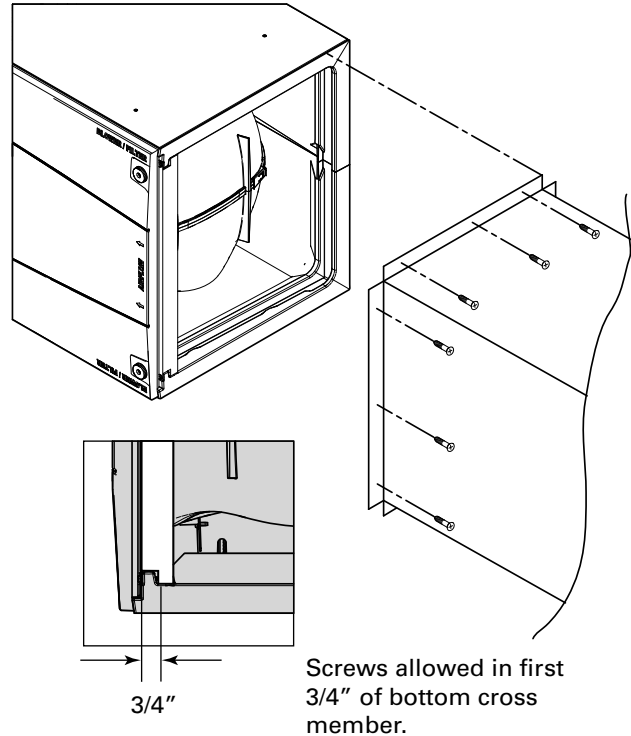
**Important:** Under no conditions should metal strapping be attached to the unit to be used as support mechanisms for carrying or suspension purposes..

**Important:** On units with sheet metal returns: Return air plenum must be flanged. Sheet metal drill point screws must be 1/2" in length or shorter.

- The supply and return air ducts must be connected to the unit with non flammable duct connectors.
- See the Outline drawing for sizes of the duct connections.
- After the ducts are secured, seal around the supply and return ducts to prevent air leakage.
- Insulate all duct work that will be outside of conditioned spaces.
- Convertible Duct Flange Kits are available to connect the supply plenum or for mounting on the discharge opening to provide a "flush fit" for 1–1/2" duct board applications.
- If front or rear return is required, the air handler must be elevated — placed on a pedestal or plenum and duct must be connected to this pedestal or plenum.
- If side return is required, the Side Return Kit # BAYSRKIT100A accessory must be used. A remote filter will be required.
- To ensure maximum efficiency and system performance, the existing supply and return duct system static pressures must not exceed the total available static pressure of the air handler. Reference ACCA Manual D, Manual S and Manual RS along with the air handler Product Data and Service Facts for additional information.

**Note:** Side return is not approved without Side Return Kit # BAYSRKIT100. More than one Side Return Kit may be necessary depending on the application. Refer to the Installation Guide in BAYSRKIT100 for approved duct connections, sizing, number, transitions, and accessory application.

**Note:** Duct work must be supported as appropriate. See National and local codes for guidelines. Do not depend on the unit to support duct work.



# Refrigerant Line

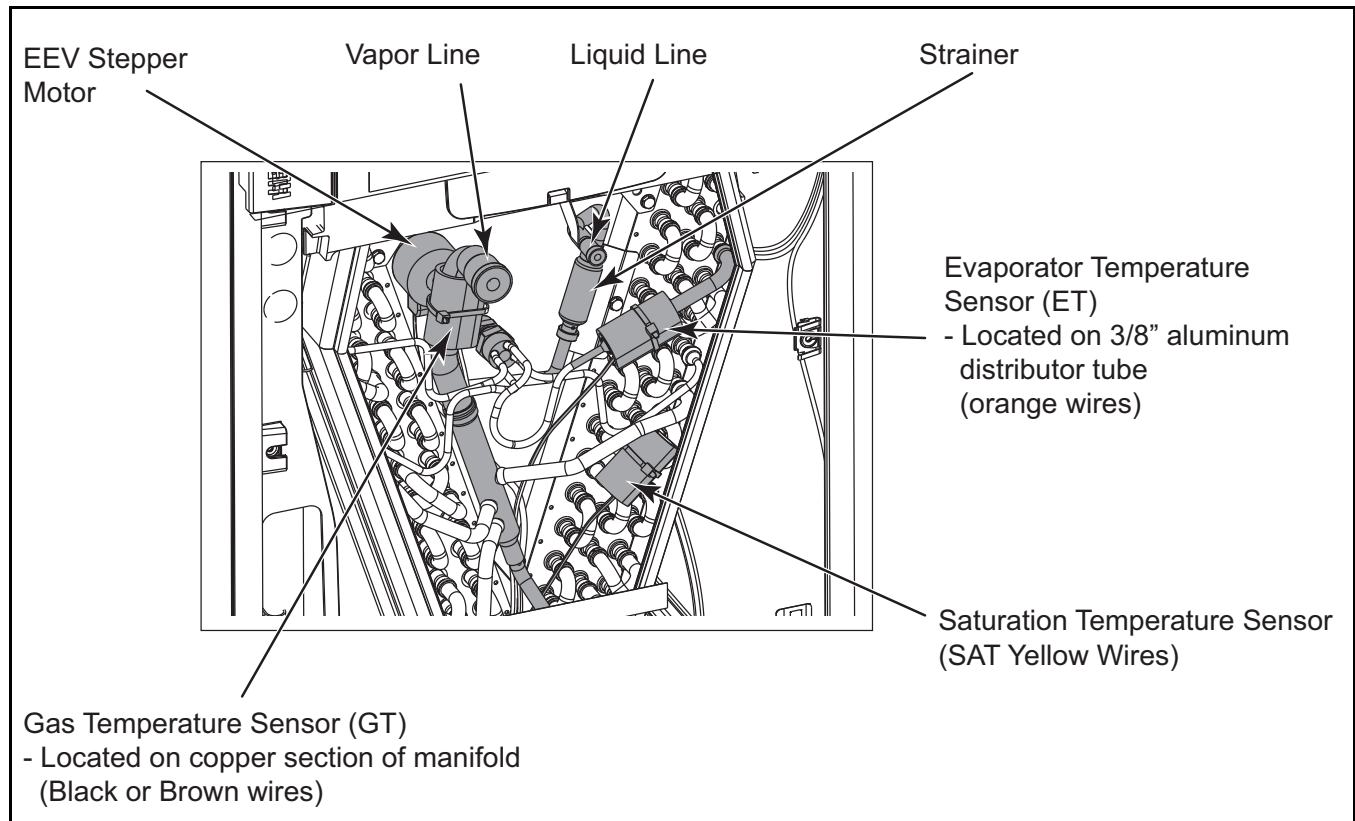
**Table 12. Refrigerant Line Connection Sizes**

Model	Vapor Line Connection	Liquid Line Connection
TAMXB0A24V21DA	3/4	3/8
TAMXB0B30V31DA	3/4	3/8
TAMXB0C36V31DA	7/8	3/8
TAMXB0C42V41DA	7/8	3/8
TAMXB0C48V41DA	7/8	3/8
TAMXB0C60V51DA	7/8	3/8

**Notes:**

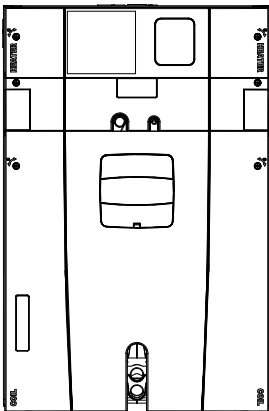
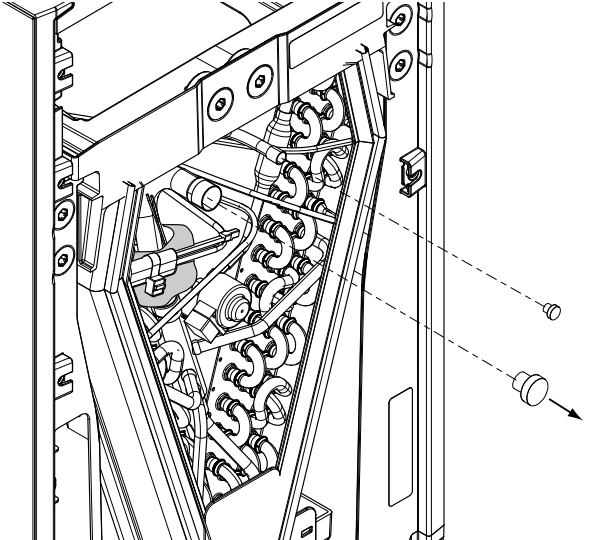
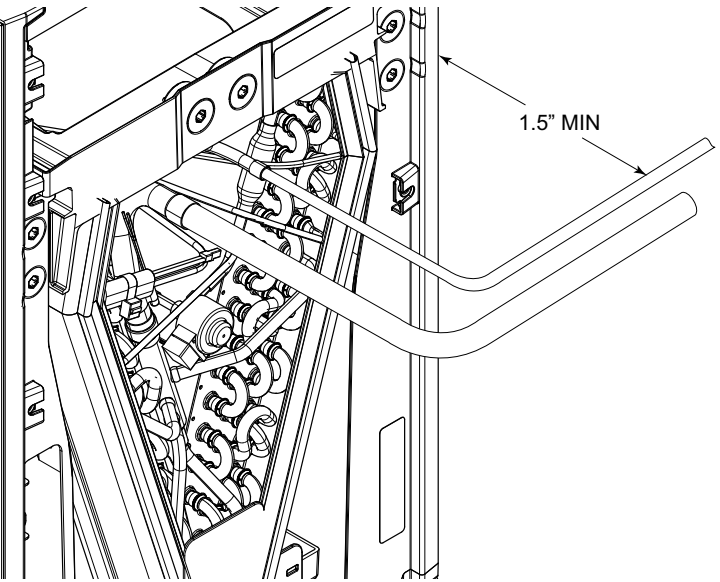
1. This table indicates the tubing connection diameters at the indoor coil. A field supplied reducing coupling may be required.
2. All AHRI listed systems are tested with 25 feet of refrigeration tubing; the rated tubing diameters are located in the electronic performance data system.
3. If the refrigeration lines exceed 60 feet in linear length and/or if alternate size refrigeration tubing is present at the job, please consult SS-APG006-EN or 32-3312\*\* (latest version)

## Refrigerant System Layout



# Refrigerant Line Brazing

**Table 13. Braze the Refrigerant Lines**

<p>1. Remove Heater, Coil, and Line Set panels.</p>	 <p>Heater Panel 1</p> <p>Line Set Panel 2</p> <p>Coil Panel 3</p>
<p><b>Important:</b> Do NOT unseal coil refrigerant connection stubs until ready to make connections.</p> <p><b>Important:</b> Heat Sensitive Sensors. The Gas Temperature Sensor must be removed or a wet rag must be wrapped around the suction line between the Sensor and the braze joint to protect it from failure due to overheating.</p> <p>2. Remove the sealing plug from the indoor coil suction line.</p> <p>3. Remove the sealing plug from the indoor coil liquid line.</p> <p><i>This coil is pressurized with 8–12 psig of dry air. Do not stand directly in front of the coil connections when removing sealing plugs.</i></p>	
<p>4. Connect, but do not braze field line set to indoor coil.</p> <p>a. Allow a minimum of 1.5 inches of refrigerant line set before using an elbow coupling.</p> <p><b>Important:</b> Service access to the auxiliary heater must remain unobstructed.</p>	 <p>1.5" MIN</p>

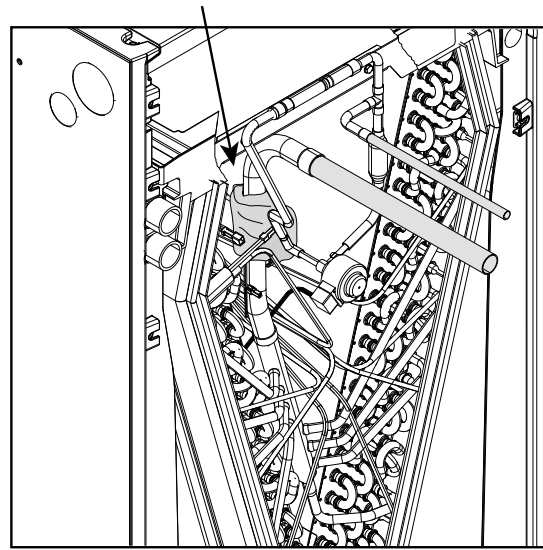
**Important:** Heat Sensitive Sensor. The temperature Sensor must be removed or a wet rag must be wrapped around the suction line between the Sensor and the braze joint to protect the Sensor from failure due to overheating.

5. Braze refrigerant line connections.
  - a. Pull back the insulation before brazing the suction line.
  - b. Wrap the Gas Temperature Sensor (GT) with a wet rag.
  - c. Braze the refrigerant line connections.

**Important:** Care must be taken during brazing to avoid damage to unit components and wiring.

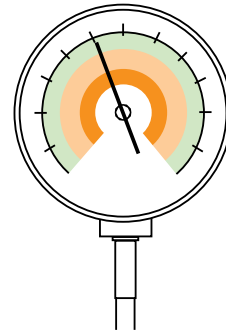
**Note:** The suction line must be insulated prior to brazing the line set to the air handler stubs.

Wet Rag on Gas Temperature Sensor (GT)

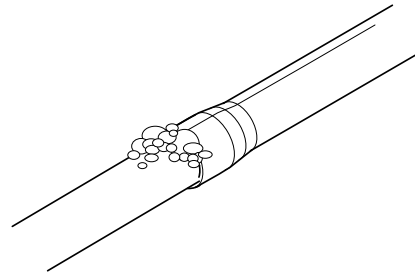


6. Pressurize the refrigerant lines and evaporator coil to 150 PSIG using dry nitrogen.

150 PSIG

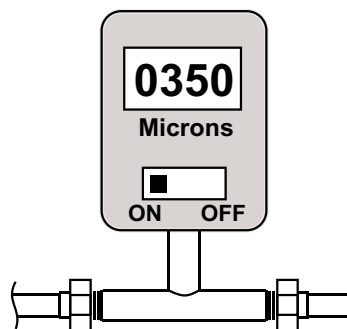


7. Check for leaks by using a soapy solution or bubbles at each brazed location.



**Important:** Do not open the service valves until the refrigerant lines and indoor coil leak check and evacuation are complete.

8. Evacuate until the micron gauge reads no higher than 350 microns, then close off the valve to the vacuum pump.



9. Observe the micron gauge. Evacuation is complete if the micron gauge does not rise above 500 microns in one (1) minute.
  - a. Once evacuation is complete blank off the vacuum pump and micron gauge, and close the valves on the manifold gauge set.

**Note:** Charge system using Outdoor unit's Installer Guide or Service Facts.

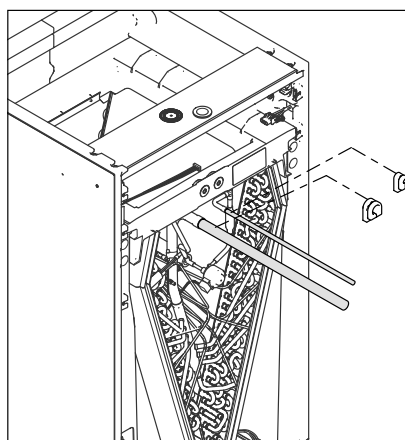
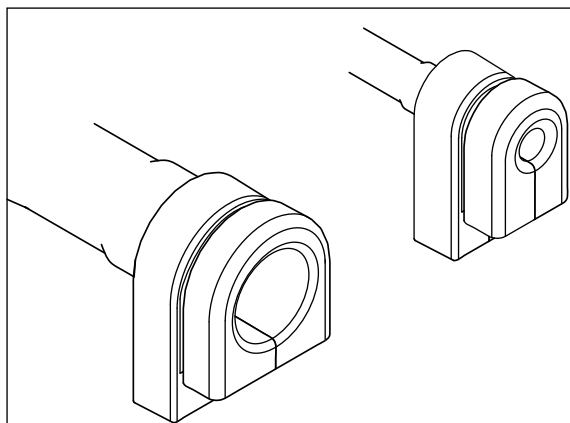
**Note:** Use soapy water to wipe any refrigerant oil off the panels.



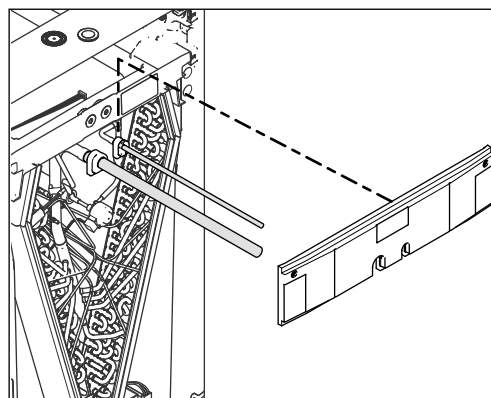
10. Replace the Line Set panel.
  - a. Allow time for tubing to cool.
  - b. Install grommets to line set piping in orientation shown.

**Note:** A slight amount of dish soap can be used to aid in the installation of the grommets. Remove any excess from the tubing and grommet after the grommet is installed.

- c. Slide the bottom of the Line Set panel down over the refrigerant lines and grommets. The grommets will seal the line openings.
  - d. Tighten screws on the Line Set panel.



**SEE ENLARGED ILLUSTRATION FOR ORIENTATION**



# Condensate Drain Piping

## Condensate Drain Piping Considerations

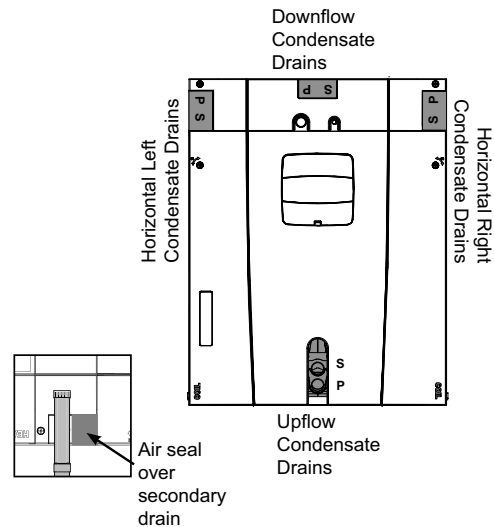
- Condensate drain plumbing must comply with national, state, and local codes.
- Route condensate drain lines away from air handler so they do not interfere with access panels.
- Slope the drain lines downward a minimum of 1/4" per foot, support per local codes.
- Do not use reducing fittings in the condensate drain lines.
- Do not connect the drain line to a closed drain system.
- Do not use a torch or flame near the plastic drain pan coupling.
- A P-trap is not required for proper drainage due to the positive pressure of the air handler; however, it is recommended to prevent efficiency loss of conditioned air.

## Connect Condensate Drain Piping

**Note:** Downflow and horizontal orientations require the Coil panel to be removed in order to make the drain connections.

**Note:** Make certain that the unit has been installed in a level position to allow for proper draining.

1. Select the drain connections that are oriented for your application.
2. Prepare the condensate drain connections.
  - a. From the factory, the unit comes with plugs in both upflow condensate drains and an additional plug in the documentation packet.
  - b. For upflow applications, remove upflow condensate plug(s) and connect condensate piping.
  - c. For all other applications, do not remove upflow condensate plugs. Remove the cover from the needed condensate drain connections and connect condensate piping.
  - d. If the secondary condensate opening is not used, plug the condensate opening with the fitting supplied in the documentation pack. Use scissors to cut the air seal in half and re-install over the unused opening.

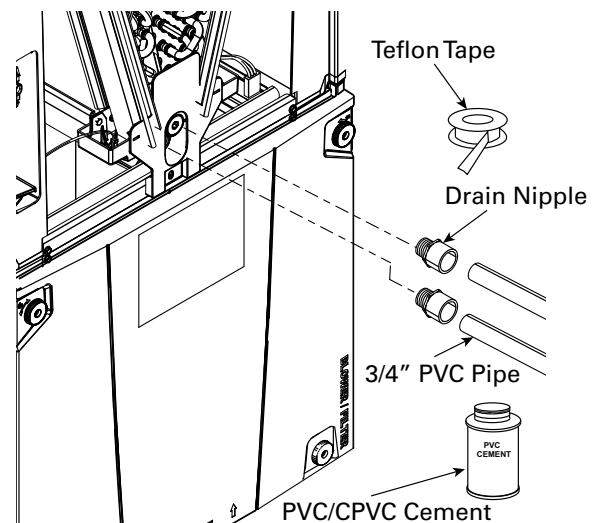


**Note:** A small amount of sealant must be applied around the drain line (s) passing through the panel to prevent air leakage and possible water drips.

- **Dry fit and test clearance for coil panel removal before applying PVC/CPVC cement.**
- **Use Teflon tape on the air handler drain line connections. Do not use pipe joint compound or PVC/CPVC cement on drain nipple.**
- Hand tighten the drain pipe.
- 3. For upflow installations, connect 3/4" PVC pipe to the threaded drain nipple with PVC/CPVC cement. 3" minimum clearance to the condensate piping is needed for coil panel removal. Thread the assembly into the primary drain connection (repeat for the secondary drain connection if used).
  - a. Remove panel and insert the 3/4" nipples.
  - b. Reinstall the panel.
  - c. Connect the condensate lines to the nipples.

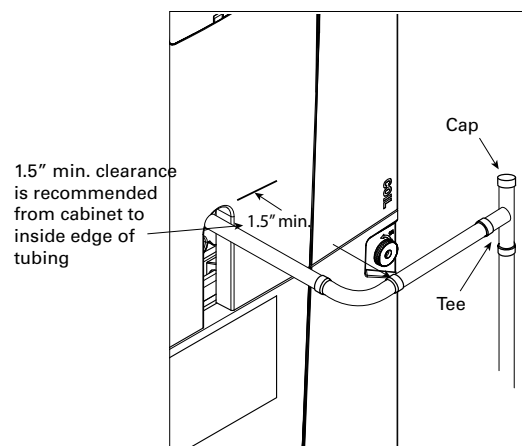
**Important:** For Horizontal and Downflow installations, the following order must be observed:

**Note:** A small amount of sealant must be applied around the drain line (s) passing through the panel to prevent air leakage and possible water drips.



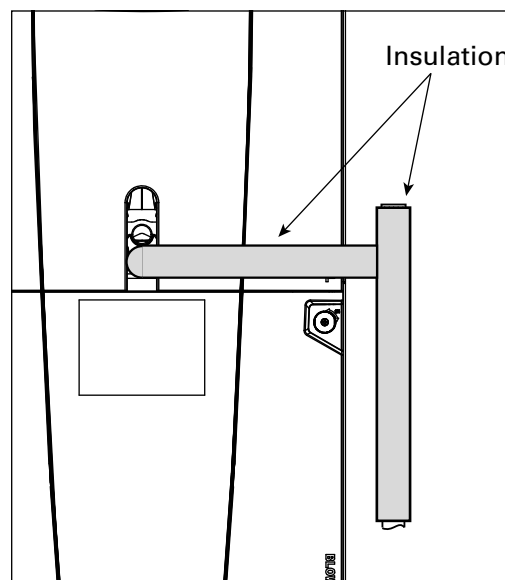
## Condensate Drain Piping

4. Install a clean-out tee in the primary drain line for future maintenance. It is recommended that you install a cap on the top of the tee.



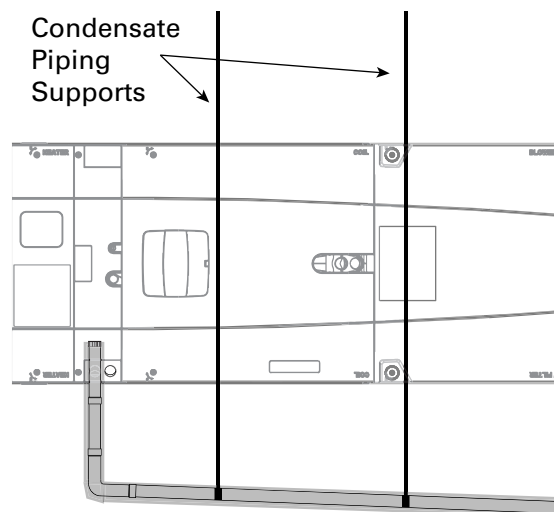
5. Insulate the primary drain line to prevent sweating where dew point temperatures may be met. (Optional depending on climate and application needs.)

Provide a means of drainage to prevent winter freeze-up of condensate line (Optional depending on climate and application needs).



6. Support the condensate piping outside the unit per local codes for proper drainage and to prevent sagging.

Allow 1/4" of downward slope for each foot of pipe.



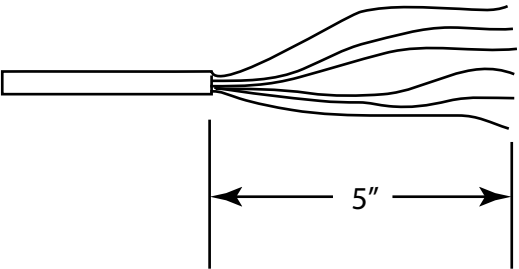
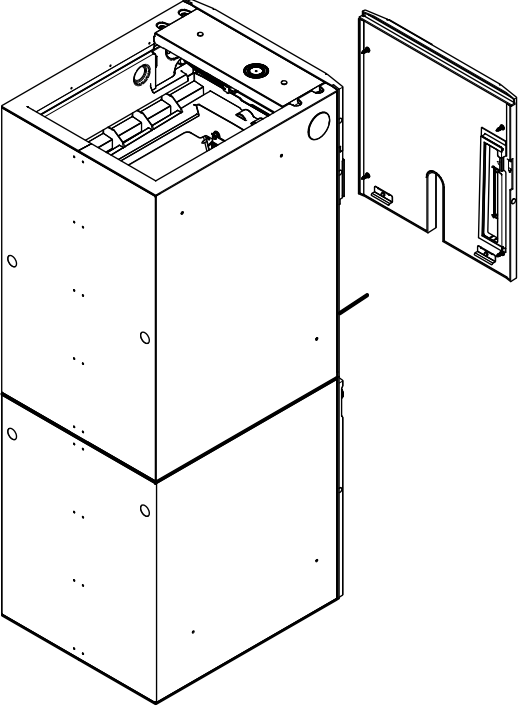


# Electrical — Low Voltage

TAMX can be used in either Link Communicating mode or 24 volt mode. In Link Communicating mode, all configurations are made by using the configuration menu in the User Interface (UX360) or from the Diagnostic Mobile App. In 24 volt mode, basic

operation is configured from the factory with no defaults for accessories. All configurations for blower delays, accessories etc., need accomplished using the Diagnostic Mobile App.

**Table 14. Low Voltage Hook-up Instructions**

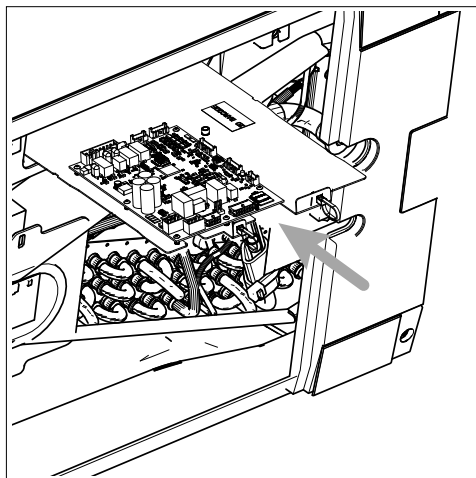
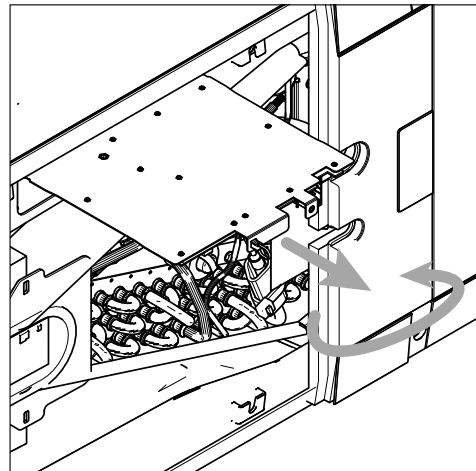
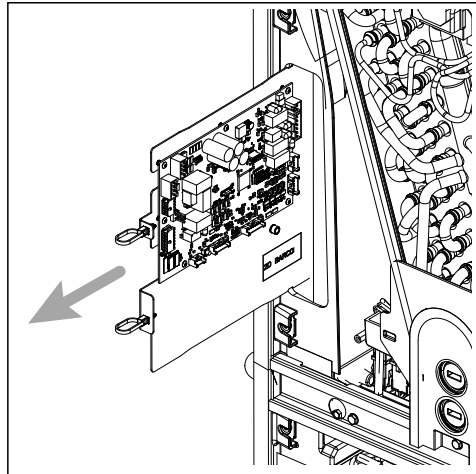
<p><b>Note:</b> Strain relief must be provided on the inside of the air handler cabinet for the low voltage wiring. Field supplied thermostat wired may be wire tied as a bundle to the existing strain relieved low voltage pigtail leads in the air handler unit.</p> <p>1. Route control wiring to unit. Remove the external sheathing of the wiring approximately 5".</p> <p><b>Note:</b> Optional Low Voltage Conduit Entry Kit number BAYLVKIT100A is available.</p>	
<p>2. Remove Coil panel by turning the Phillips head door fasteners, rotating the door away from the cabinet.</p>	

3. Remove the control board from the control pocket by sliding the control pocket mounting plate out until the first stop is reached.
4. After installing the 18 gauge thermostat wire into the CAN connector, plug the connector onto the AHC board in either the J2 or J5 location, the outdoor control wiring will plug into the other header on the AHC.

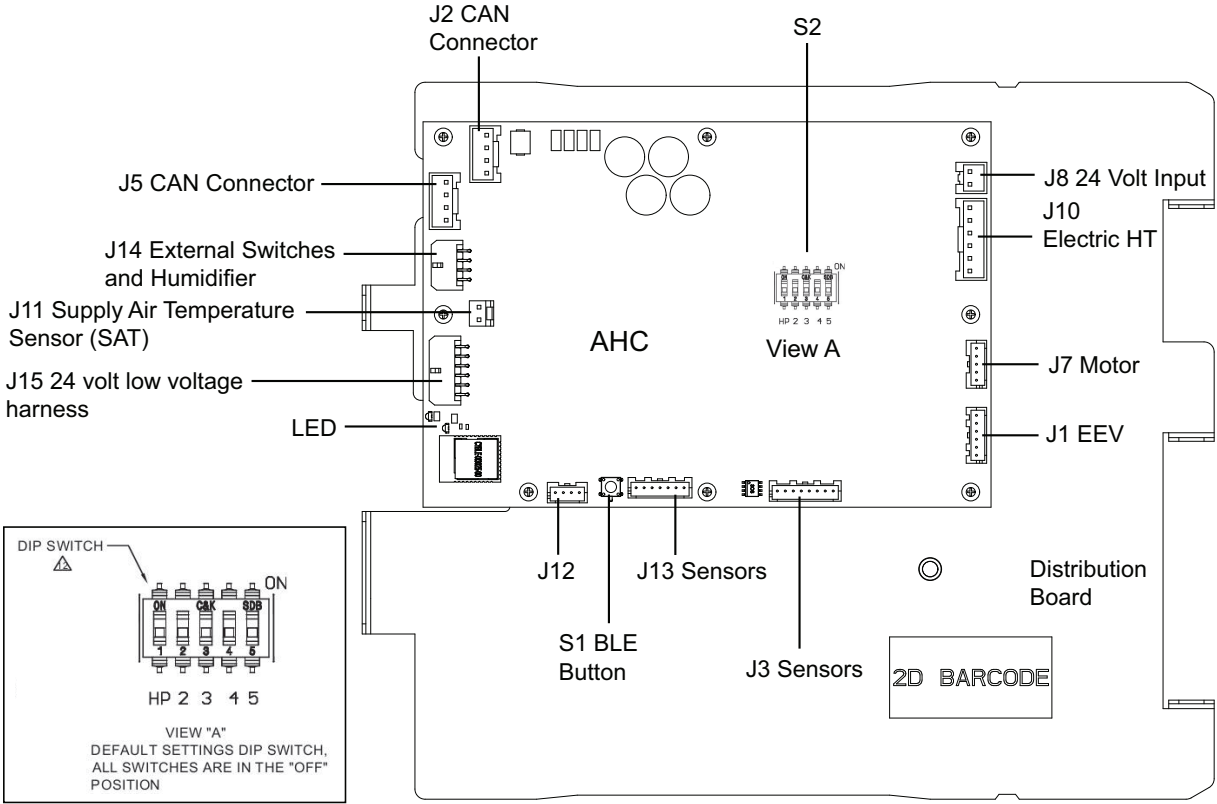
### For Horizontal Right Installations Only

5. Remove the control board completely from the control pocket. Rotate the control board 180 degrees. Place the control board 2–3 inches back into the control pocket.
6. Make connections per hookup diagrams.

**Important:** After wires have been connected or service performed, the control board **MUST** be rotated back to the original orientation before inserting into cabinet control pocket.



7. Secure the sheathed wiring to the control pocket mounting plate using the factory supplied wire ties attached to the tabs as shown.



**8. Mount Supply Air Temperature Sensor**

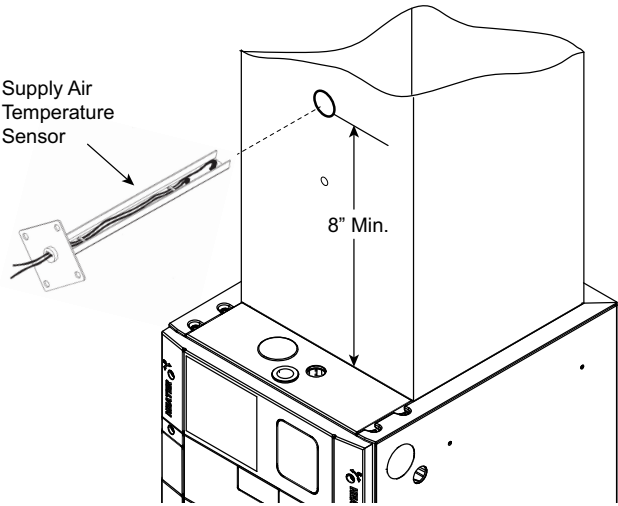
The Supply Air Temperature (SAT) Sensor must be mounted a minimum of 8" above the edge of the supply duct (additional distance is preferred when possible). Locate the SAT Sensor in an area of the discharge air duct where less air turbulence is expected. Avoid dead air areas where representative discharge air temperatures may not exist.

The plug on the SAT Sensor harness plugs directly onto the AHC Board. Refer to the figure in Step 7, Table 14.

**Note:** Supply Air Temp Sensor (SAT) is used in Link Communicating mode and is optional in 24 volt mode.

**Note:** Supply Air Temp Sensor (SAT) ships with SC360 System Controller.

**Note:** Supply Air Sensor kit is BAYSENSC360.



**Table 15. Low Voltage Maximum Wire Length**

The Low Voltage Maximum Wire Length table defines the size and combined total maximum length of the low voltage wiring from the outdoor unit, to the indoor unit, and to the thermostat.  <b>Note:</b> The use of color coded low voltage wire is recommended to simplify connections between the outdoor unit, the control, and the indoor unit.	Control Wire — Communicating	
	WIRE SIZE	MAX. WIRE LENGTH
	18 AWG	500 FT. Combined
	Control Wire — 24 Volt	
	WIRE SIZE	MAX. WIRE LENGTH
	18 AWG	100 FT. Combined

Table 16. Link Communicating Low Voltage Wire Connectors

<p>Link mode uses simple connectors for low voltage connections. These connections are color coded which makes the installation easier and quicker.</p>											
<table><tr><th colspan="2">Wire Colors</th></tr><tr><td>R</td><td>Red</td></tr><tr><td>DH</td><td>White</td></tr><tr><td>DL</td><td>Green</td></tr><tr><td>B</td><td>Blue</td></tr></table>		Wire Colors		R	Red	DH	White	DL	Green	B	Blue
Wire Colors											
R	Red										
DH	White										
DL	Green										
B	Blue										
<p>Do the following to make the connections from the actual thermostat wire to the connector.</p> <p><b>Note:</b> These connectors are necessary at the communicating outdoor unit, communicating indoor unit, distribution board(s), system controller and communicating accessories.</p> <ol style="list-style-type: none"><li>Strip the Red, White, Green and Blue thermostat wires back 1/4".</li><li>Insert the wires into the connector in the correctly colored locations.</li><li><b>When you feel it release, allow each wire to slide in further.</b></li><li>Pull back on the wires individually and slightly and check if the wires are seated properly. If each wire does not pull out for all four wires, the connection is complete.</li><li>Connectors are ONE TIME USE. If a 18 ga. Thermostat wire gets broken off inside of the connector, the connector will need replaced.</li><li>Wire colors are for illustration purposes only. If using a different color, ensure it lands at the correct terminal throughout all of the communicating control wiring.</li></ol> <p>Connect the CAN connector into the male coupling on the low voltage harness at the Outdoor unit.</p> <p>This air handler has two dedicated CAN Connector headers on the Air Handler Control (AHC) board. In Link communicating mode, both of them are in the communicating loop. It does not matter which one goes to the thermostat, System Controller, distribution board, outdoor unit or any other Link accessory.</p>											
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Table 17. Link Communicating Low Voltage Hook-Up Diagrams

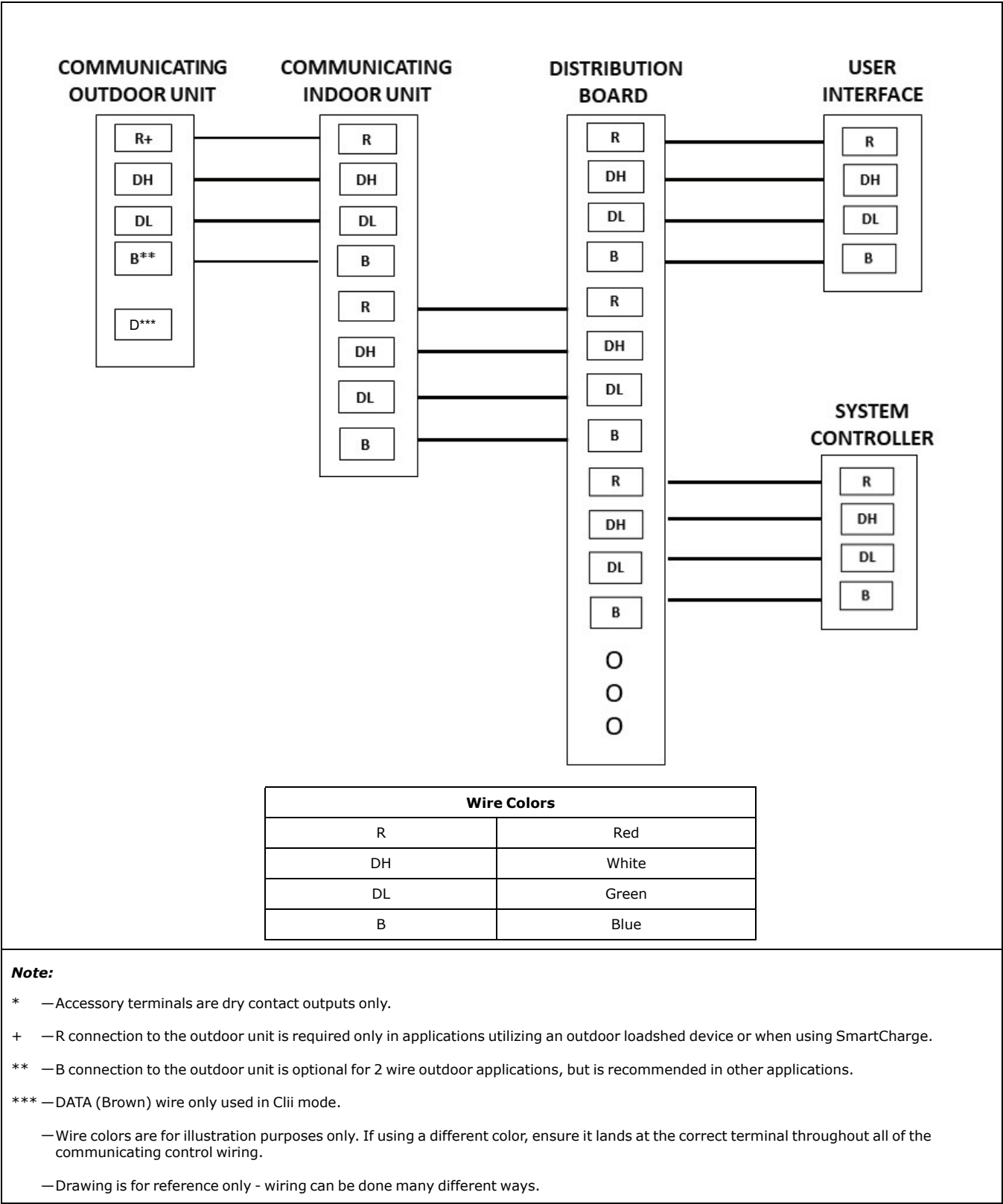
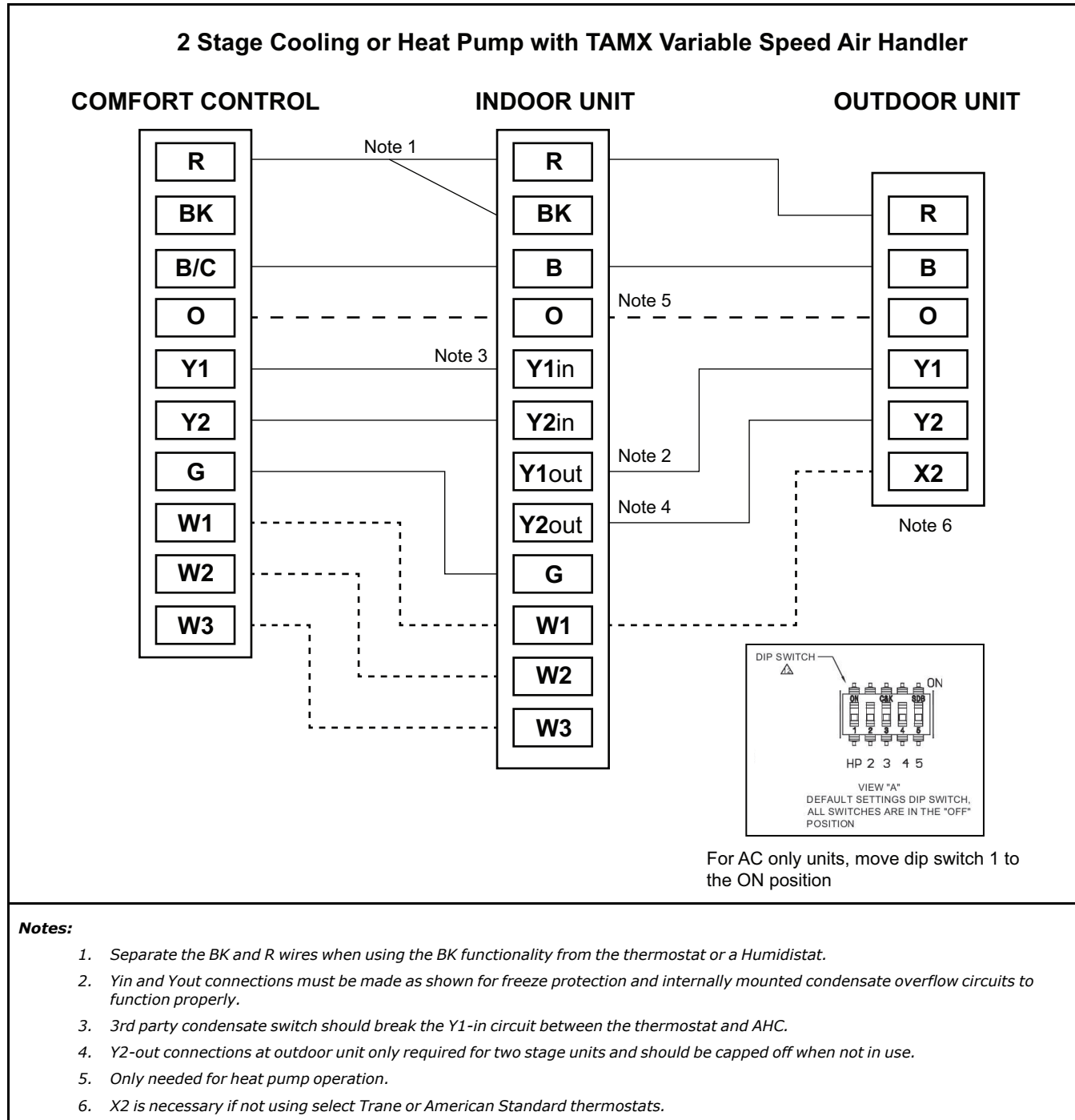


Table 18. 24 Volt Low Voltage Wiring

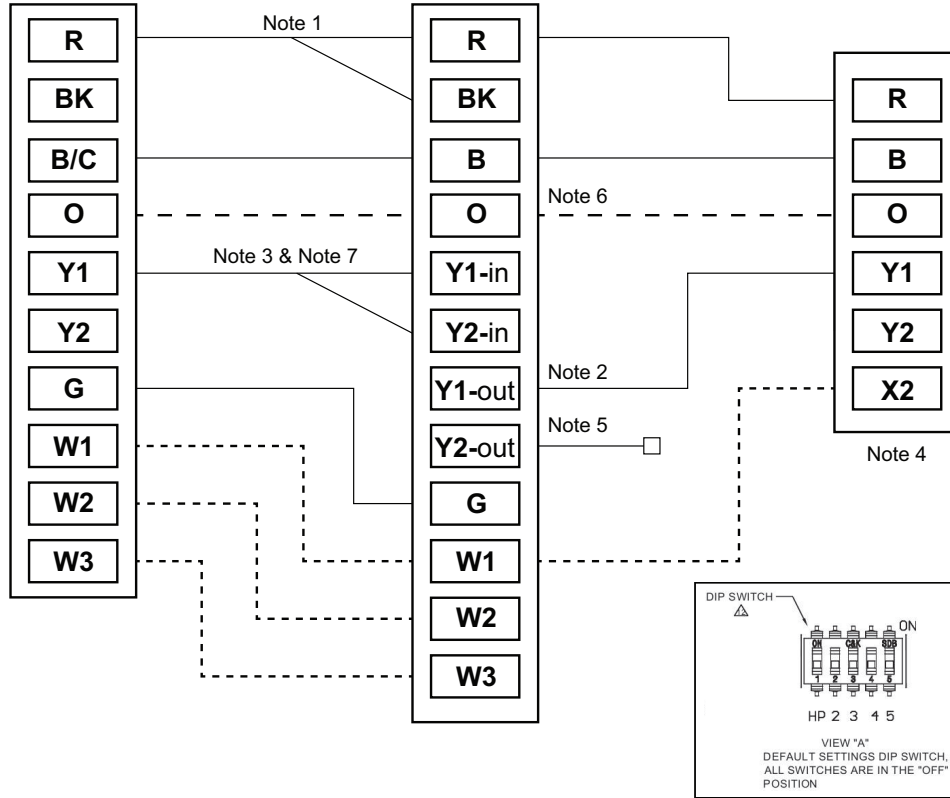


# 1 Stage Cooling or Heat Pump with TAMX Variable Speed Air Handler

## COMFORT CONTROL

## INDOOR UNIT

## OUTDOOR UNIT



For AC only units, move dip switch 1 to the ON position

### Notes:

1. Separate the BK and R wires when using the BK functionality from the thermostat or a Humidistat.
2. Y-in and Y-out connections must be made as shown for freeze protection and internally mounted condensate overflow circuits to function properly.
3. 3rd party condensate switch should break the Y1-in circuit between the thermostat and AHC.
4. X2 is necessary if not using select Trane or American Standard thermostats.
5. For single speed operation, use Y1-out and cap off Y2-out wire.
6. Only needed for heat pump operation.
7. For single stage outdoor operation, must connect Y1-in and Y2-in for full airflow.

### TAMX 24 Volt Wire Harness Colors

R	Red	Y2out	Orange/Red
B	Blue	G	Green
O	Orange	BK	Black
Y1in	Yellow	W1	White
Y2in	Yellow/Red	W2	White/Black
Y1out	Yellow/ Black	W3	White/Red

Table 19. GET THE APP:

<p>The Diagnostics Mobile App can be found in your device App Store when searching for Trane Diagnostics or American Standard Diagnostics. A QR code can be scanned which sends you directly to the location:</p>	
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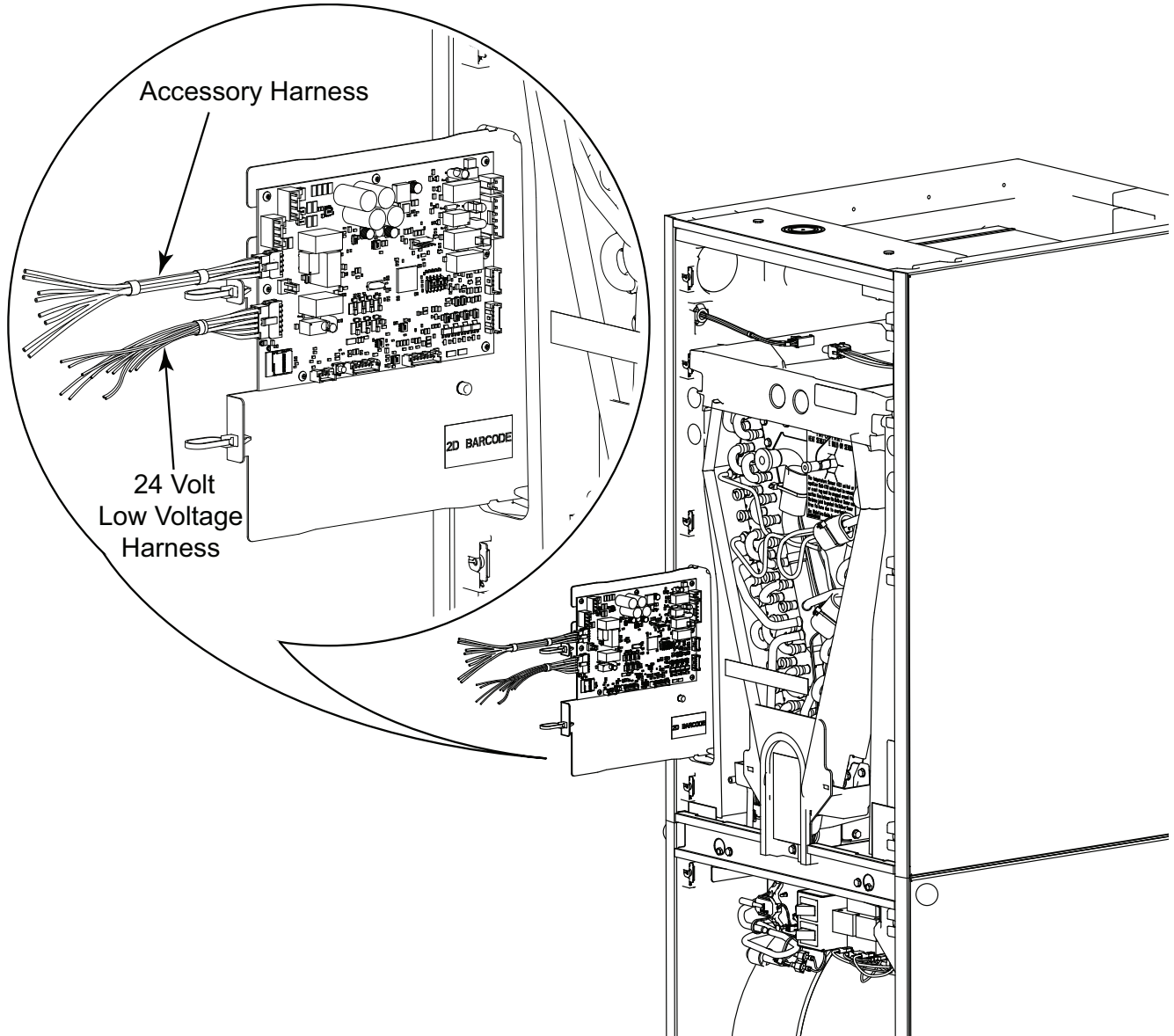
Table 20. External Switches and Accessories

<p>When connecting a humidifier or an external switch to the air handler, locate the harness(es) in the doc pack. The plug on the harness will plug into the AHC control board.</p> <ul style="list-style-type: none"><li>• External switch 1 and 2 do have 24 volts AC source voltage and are to be connected to Normally Closed (NC) contacts on the external device.</li><li>• Accessory 1 and 2 are dry contacts and need source voltage provided from either the accessory or internally.</li></ul> <p>The external switches and accessories can be configured through the Smart Thermostat or the Diagnostics Mobile App.</p> <p><b>Note:</b> Accessories can be configured in the UX360 User Interface or Diagnostics Mobile App in Link communicating mode ONLY.</p> <p><b>Note:</b> Accessories need configured using the Diagnostics Mobile App in 24 volt mode. There are no defaults in 24 volt mode.</p>	
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Table 21. Accessory Harness Installation

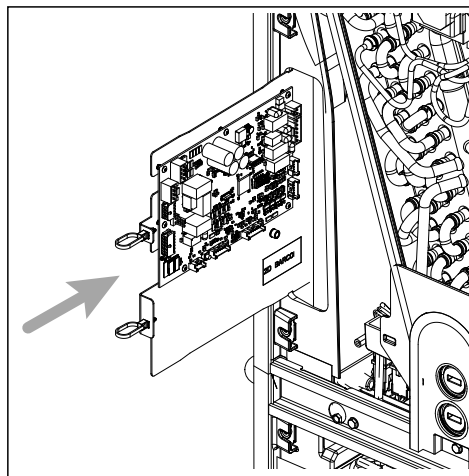
The accessory configurations can be done at either the UX360 User Interface in communicating mode or from the Diagnostics Mobile App. The accessories need configured from the Diagnostics Mobile App in 24 volt mode.



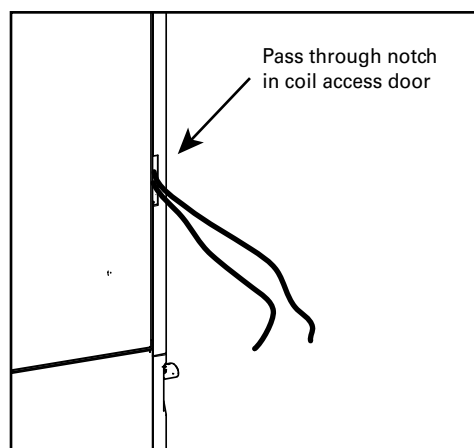
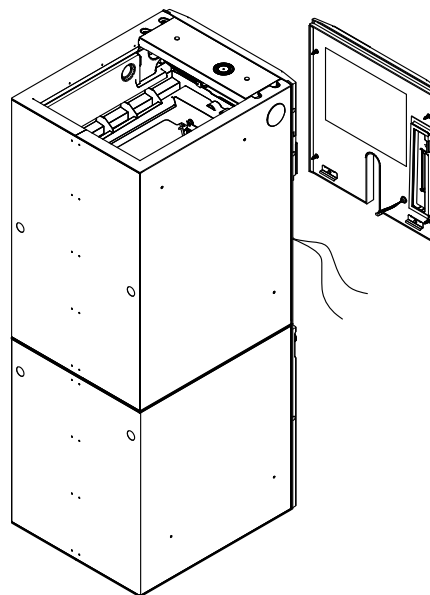
<b>Black Wires</b>	<b>Ext Switch 1</b> External condensate, Smoke Detector
<b>White Wires</b>	<b>Ext Switch 2</b> External condensate, Smoke Detector
<b>Blue Wires</b>	<b>Accessory 1</b> EAC, Humidifier (Fan assist/ Bypass) Steam Humidifier
<b>Green Wires</b>	<b>Accessory 2</b> EAC, Humidifier (Fan Assist/ Bypass) Steam Humidifier

# Control Panel Reinstallation

1. Slide control plate assembly into the control pocket until fully seated. The control plate should be flush with the outer edge of the unit.



2. Replace coil panel making sure that the wires are located within the wire pass-through provided in the panel.

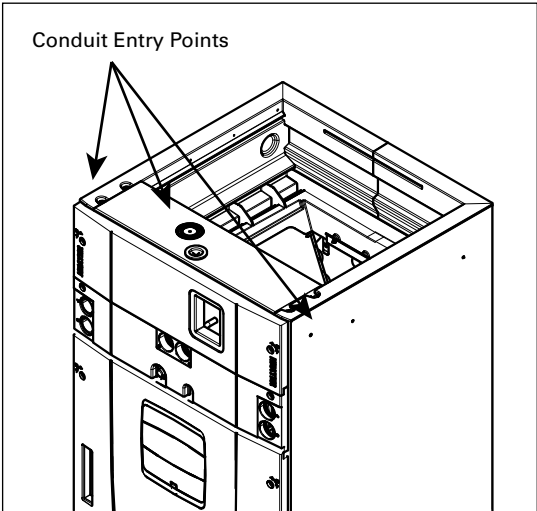
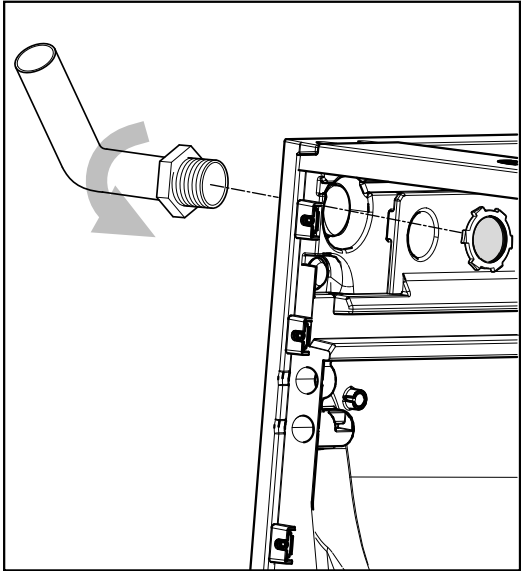


# Electrical — High Voltage

**Table 22. High Voltage Power Supply**

<p>The high voltage power supply must match the equipment nameplate.</p> <p>Power wiring, including ground wiring must comply with national, state, and local codes.</p> <p>Field wiring diagrams for supplementary electric heaters are shipped with the heaters.</p>	<div style="background-color: black; color: white; text-align: center; padding: 5px;"><b>⚠ WARNING</b></div> <div style="background-color: #f0f0f0; padding: 10px;"> <p><b>LIVE ELECTRICAL COMPONENTS!</b></p> <p>Failure to follow this Warning could result in property damage, severe personal injury, or death. Follow all electrical safety precautions when exposed to live electrical components. It may be necessary to work with live electrical components during installation, testing, servicing, and troubleshooting of this product.</p> </div>
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**Table 23. Make Electrical Connections**

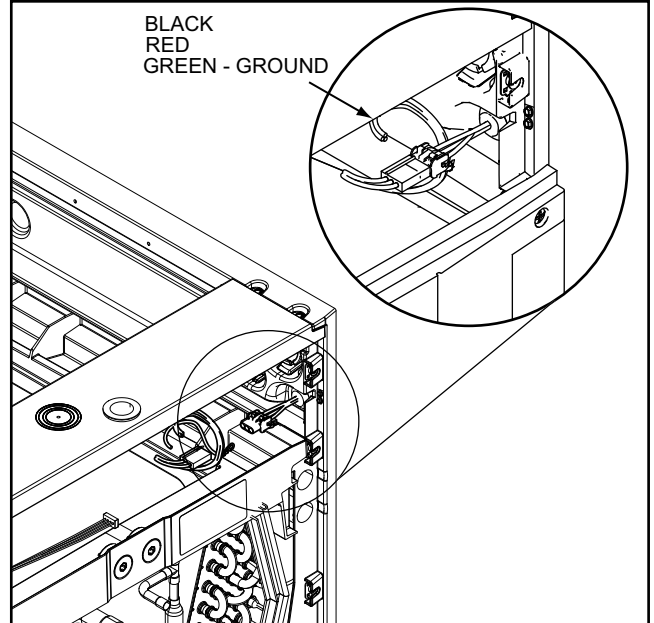
<ol style="list-style-type: none"> <li>1. Route High Voltage wiring to unit.</li> <li>2. Select a conduit entry point. Drill a hole for the desired conduit size up to 1-1/2" diameter. A locating target is identified on these units. <ol style="list-style-type: none"> <li>a. Select the entry point you will use to bring in your high voltage wiring.</li> </ol> </li> </ol> <p><b>Note:</b> When drilling access through cabinet do not drill into any internal components. Remove internal components before drilling through cabinet, if possible. Damage to the air handler or heater could result.</p>	 <p style="text-align: center;">Conduit Entry Points</p>
<ol style="list-style-type: none"> <li>3. Route conduit (if used) to the entry point and connect. <ol style="list-style-type: none"> <li>a. Use one hand to secure the conduit nut from inside of the heater compartment.</li> <li>b. Connect a field supplied 3/4" or 1-1/2" conduit to conduit nut.</li> </ol> </li> </ol> <p><b>Note:</b> Reducing bushings may be required for your application.</p>	

4. If an electric heater IS NOT being installed, remove the pigtail harness from the documentation pack and connect it to the plug on the inside of the Heater Compartment in the cabinet.

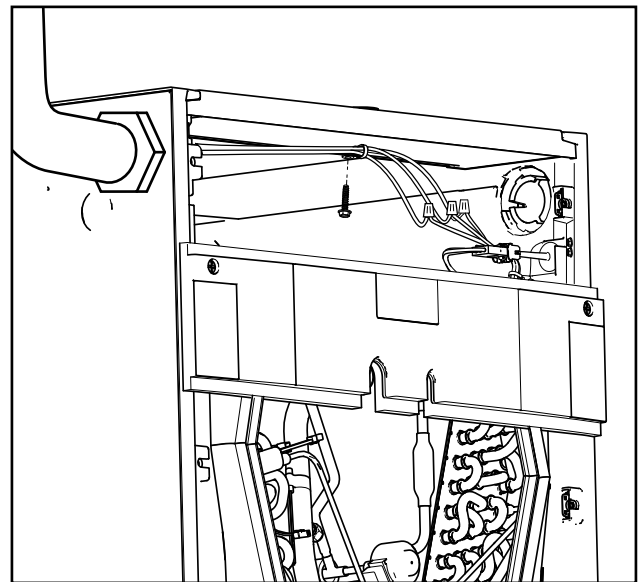
If an electric heater IS being installed, see the Installer's Guide shipped with the electric heater.

**Note:** The heater size will be automatically configured by installing a resistor in the Electric heat harness located in the electric heat compartment and will be included with the BAYEA heater.

Connect L1, L2, and ground wiring to pigtail harness in Heater Compartment using wire nuts. The incoming ground wiring will mate up with the green wire shown in the illustration.

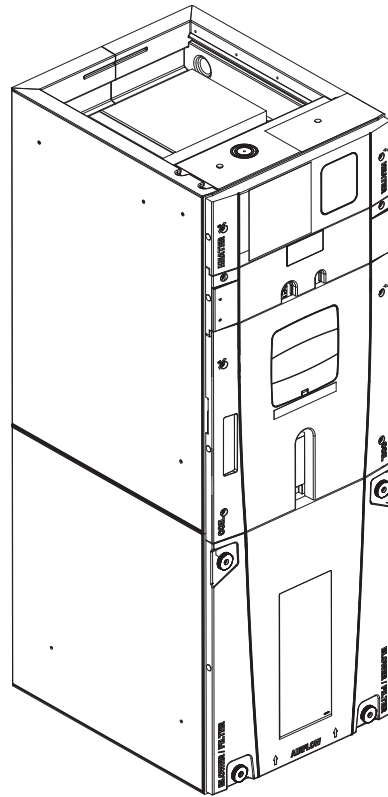


5. If the L1, L2, and ground wires enter the case from the left side, use a field supplied 1/2" — 5/8" maximum length screw and wire tie to hold the wires to the top center of the Heater Compartment.



6. Reinstall all panels before starting the air handler

**Note:** After replacing all panels, loosen the Line Set Panel screws approximately 1/4 — 1/2 turn. This will improve the seal between the Heater Panel and Line Set Panel.

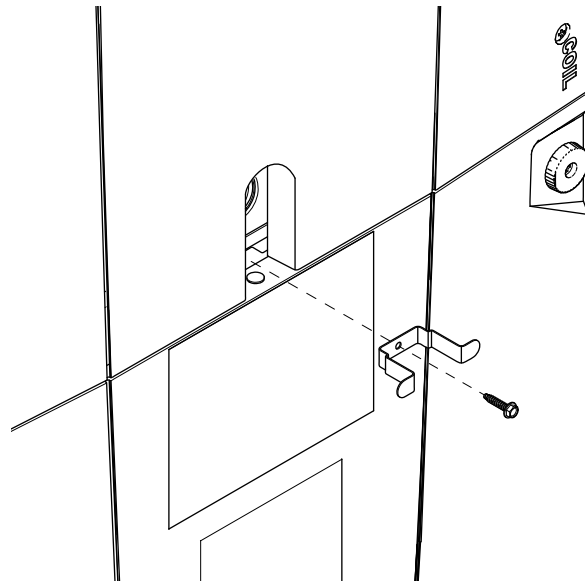


7. Remove screw and coil bracket from documentation packet.

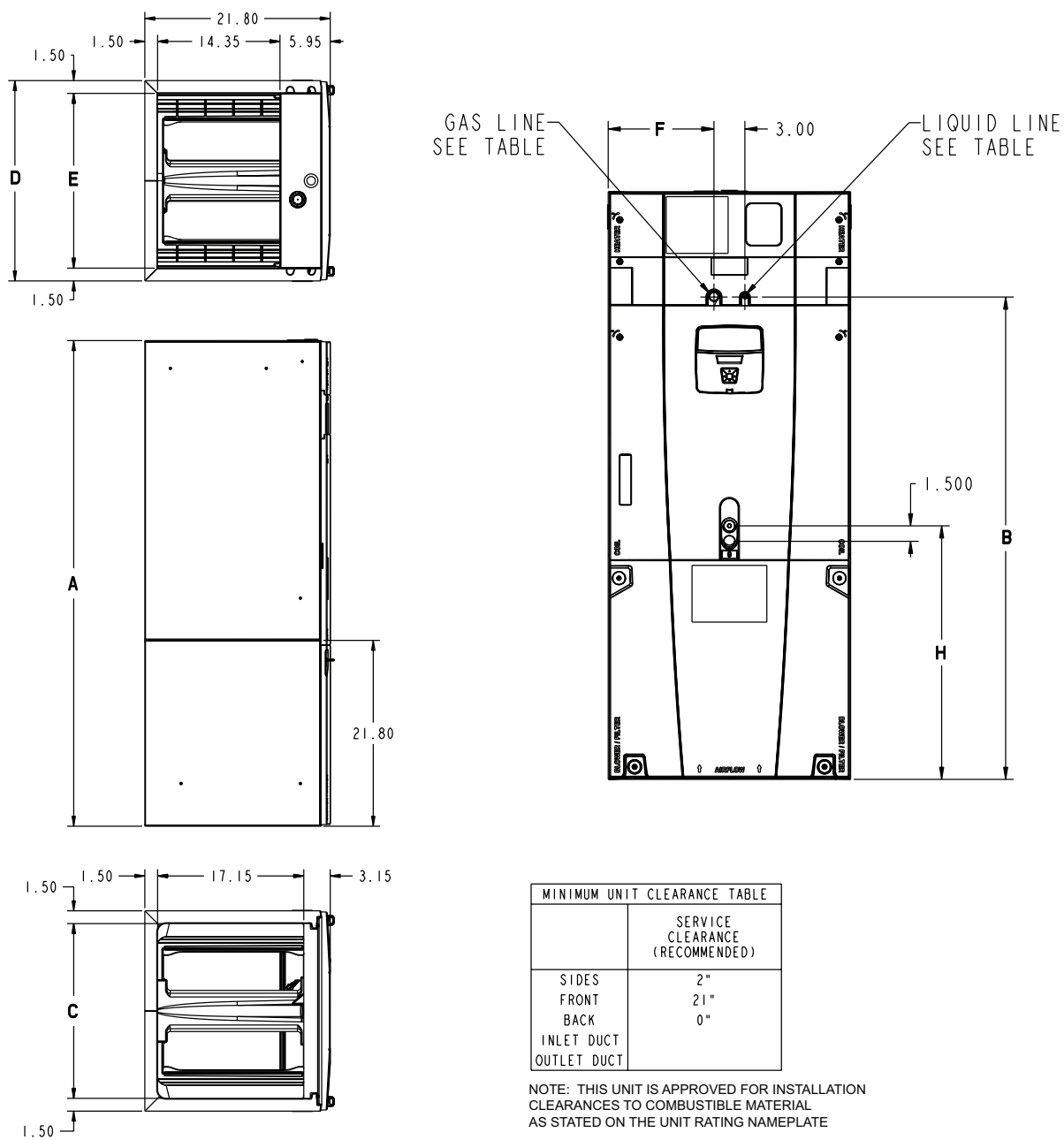
8. Place the coil panel bracket into position and use screw to secure the coil panel bracket and seal plate to the support bar.

**Important:** The Coil Seal Plate and screw secure the coil in the center of the air handler. Failure to follow these steps can prevent the Coil Panel from being easily replaced on the unit.

**Important:** The Blower Panel may be removed if needed to help align the new screw with the seal plate and crossmember.



# Outline Drawing



Model Number	A	B	C	D	E	F	H	FLOW CONTROL	GAS LINE BRAZE	LIQ LINE BRAZE
TAMXB0A24H21DA	49.9	39.6	14.5	17.5	14.5	7.3	24.4	EEV	3/4	3/8
TAMXB0B30H31DA	55.7	45.5	18.4	21.3	18.4	9.2	24.8	EEV	3/4	3/8
TAMXB0C36H31DA	56.9	46.7	20.5	23.5	20.5	10.3	24.2	EEV	7/8	3/8
TAMXB0C42H41DA	56.9	46.7	20.5	23.5	20.5	10.3	24.5	EEV	7/8	3/8
TAMXB0C48H41DA	61.7	51.5	20.5	23.5	20.5	10.3	24.9	EEV	7/8	3/8
TAMXB0C60H51DA	61.7	51.5	20.5	23.5	20.5	10.3	24.9	EEV	7/8	3/8

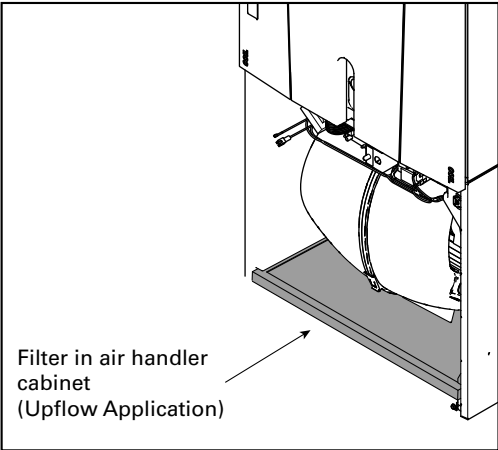
# Filters

**Table 24. Filter Considerations**

- A filter must be installed within the system.
- A filter channel is provided in the unit at the bottom of the Blower/ Filter compartment.
- For customer ease of filter maintenance, it is recommended that a properly sized remote filter grill(s) be installed for units that are difficult to access. Airflow should not exceed the maximum rated velocity of the filter being used.

**Table 25. Filter Sizes**

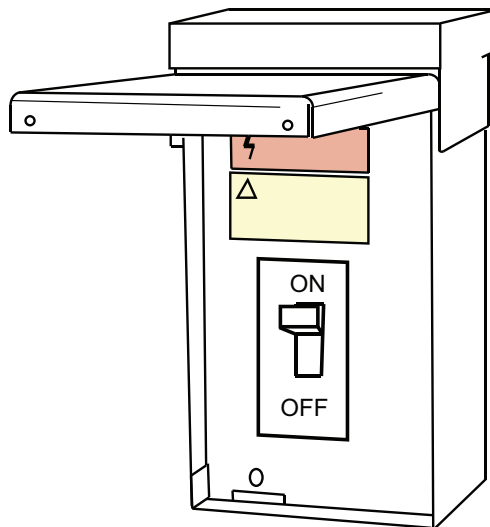
Cabinet Size *	A	B	C
Filter Size	16 x 20	20 x 20	22 x 20
* Cabinet size is indicated by the 7th digit in model number.			



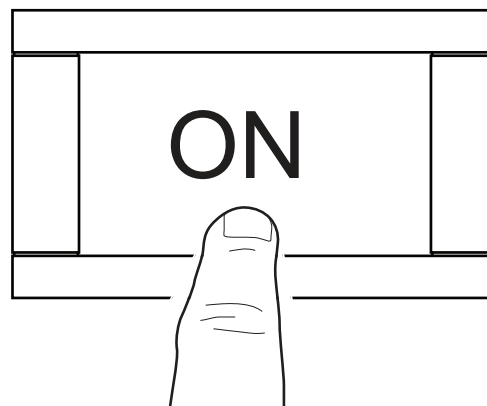
# System Start Up

1. Make sure all panels are securely in place and that all wiring has been properly dressed and secured.

2. Turn on electrical power disconnect(s) to apply power to the indoor and outdoor units.



3. Set the system thermostat to ON.





## System Charge Adjustments

System Matched with:	Indoor Unit Model No.	Outdoor Unit Model No.	Subcooling
Single Compressor 2-Stage HP	TAMXB0B30V31DA	4A6H6024E/G, 4TWX6024E/G 4A6H7024, 4TWX8024	9°
	TAMXB0C36V31DA	4A6H6036E/G, 4TWX6036E/G 4A6H7036, 4TWX8036	10°
	TAMXB0C48V41DA	4A6H6048E/G, 4TWX6048E/G 4A6H7048, 4TWX8048	8°
Single Compressor 2-Stage AC	TAMXB0B30V31DA	4A7A6024E/G, 4TTX6024E/G 4A7A7024, 4TTX8024	8°
	TAMXB0C36V31DA	4A7A6036E/G, 4TTX6036E/G 4A7A7036, 4TTX8036	8°
	TAMXB0C48V41DA	4A7A6048E/G, 4TTX6048E/G 4A7A7048, 4TTX8048	8°
<b>Notes:</b> <ol style="list-style-type: none"> <li>Variable Speed outdoor units must be charged per the outdoor unit instructions.</li> <li>All other matches must be charged per the nameplate charging instructions.</li> </ol>			

# Sequence of Operation

**TAMX** can be used in either Link Communicating mode or 24 volt mode. In Link Communicating mode, all configurations are made by using the configuration menu in the User Interface (UX360) or from the Diagnostic Mobile App. In 24 volt mode, basic operation is configured from the factory with no defaults for accessories. All configurations for blower delays, accessories etc., need accomplished using the Diagnostic Mobile App.

## Abbreviations

- AHC = Air Handler Control
- EEV = Electronic Expansion Valve

**Note:** When in communicating mode, the system controller (SC360) controls indoor airflow and EEV starting position.

**Note:** Use variable speed outdoor Sequence of Operation in conjunction with the TAMX Sequence of Operation.

The installing and servicing technician should have an understanding of the sequence of operation to be able to properly setup and diagnose functions of the air handler.

**See unit, electric heat, and field wiring diagrams for additional information.**

### Continuous Fan

**Important:** If the indoor air exceeds 60% relative humidity or simply feels uncomfortably humid, it is recommended that the indoor fan only be used in the AUTO mode.

1. When a fan request is received from the thermostat, the AHC sends a command to the serial communicating blower motor to run. Airflow can be adjusted through the thermostat.
2. Humidity Control – When enabled at the thermostat, this feature will disable any blower off delays and disable continuous fan mode when the humidity is above the dehumidification set point. This will help prevent coil condensation from being evaporated back into the air stream.

### Cooling Mode

1. When a request for 1st stage cooling is received, the AHC sends a command to the serial communicating blower motor to run at 1st stage cooling airflow. (Delay profiles found in the UX360 User Interface or Diagnostics Mobile App may change blower motor timing and actual airflow demand)
2. The AHC will receive input from the two temperature sensors and start to control 1st stage superheat.

3. When a request for 2nd stage cooling is received, the AHC sends a command to the serial communicating blower motor to run at 100 % cooling airflow.
4. The AHC will now control superheat for 2nd stage.
5. When a request for cooling is removed, the AHC will turn off the blower motor after any user selected fan-off delays have expired.

**Note:** Delay profiles found in the UX360 User Interface or Diagnostics Mobile App may change blower motor timing and actual airflow demand.

### Heat pump (compressor only)

1. When a request for 1st stage heat is received, the AHC sends a command to the serial communicating blower motor to run at 1st stage heating airflow.
2. The AHC will drive the EEV to the heating position and refrigerant will flow in the reverse cycle.
3. When a request for 2nd stage mechanical heat is received, the AHC sends a command to the serial communicating blower motor to run at 100 % heating airflow.
4. When a request for heat pump is removed, the AHC will turn off the blower motor after any user selected fan-off delays have expired.

**Note:** Delay profiles found in the UX360 User Interface or Diagnostics Mobile App may change blower motor timing and actual airflow demand.

### Electric Heat

1. When a request for electric heat is received, the AHC will energize the on board 24 volt relays per the amount of heat requested from the thermostat and the size of the heater installed.
2. The AHC sends a command to the serial communicating blower motor to run proper airflow and close the blower interlock relay on the AHC.

### Hydronic Heat

1. When a request for hydronic heat is received, the AHC will energize the on board W1 relay.
2. The AHC sends a command to the serial communicating blower motor to run at the requested CFM.

### Defrost

1. The OD unit will initiate defrost and send a message to the AHC.
2. The AHC will communicate to the EEV that the OD is in defrost and the EEV will start to control the correct superheat.
3. Electric or hydronic heat will be energized to help temper the air.

### Freeze Protection

1. The AHC control has the ability to sense when the indoor coil is beginning to ice. If this event should occur, the AHC will send a message to de-energize the OD unit.
2. The indoor blower motor will continue running to aid in defrosting the coil.
3. After 5 minutes, the OD will be turned back on.

**TAMX** has the ability to use the Diagnostics Mobile App to access internal features. The Diagnostics Mobile App connects to the unit through a Bluetooth Low Energy (BLE) connection using an onboard radio which talks to a app that is loaded to the technician's smart phone or tablet device.

The Diagnostics Mobile App can be found in the device app store when searching Trane Diagnostic or American Standard Diagnostics or by scanning a QR code that is located on the inside of the blower door.

### 24 volt mode:

Diagnostics Mobile App is available to read fault codes and to monitor live internal operation. Diagnostics Mobile App is necessary to configure accessories and external switches. If you choose to configure blower delays or to change CFM/ton etc., this will need done from the Diagnostics Mobile App.

Replacement Air Handler Control boards are generic and need to be configured. The Diagnostics Mobile App is the easiest way to accomplish this by simply choosing the model number of your unit in the configuration menu. The unit will then run with the correct blower speeds and EEV control etc. As a backup- there is a button press method for programming the unit size. This information is included in this units Service Facts and in the Installation Guide for the replacement Air Handler Control board. For 2 stage outdoor units, 1st stage airflow will be 70% of maximum airflow. Unit comes defaulted for HP operations and can be changed to AC by moving dipswitch #1 from OFF to ON. All other adjustments/ configurations need completed using the configuration menu in the Diagnostics Mobile App.

The BLE Radio will be on continuously until 24 hours after the user setup wizard has been completed inside the Diagnostics Mobile App. To turn the radio back on, simply push the S1 switch 1 time and is located on the bottom of the AHC. It will stay on for 24 hours and then automatically turn off.

### Link Communicating Mode:

The BLE radio on the Air Handler Control board is 1 of 3 radios in the complete system and is used as an access point for the Diagnostics Mobile App. The Diagnostics Mobile App will continually monitor which radio provides the best signal strength and automatically switch to that stronger signal live. In communicating mode, the Diagnostics Mobile App Monitor Menu will show complete system operation. Diagnostics Mobile App can be used to configure accessories and external switches as well as run test modes, read active and historical faults and configure several unit parameters.

# Checkout Procedures

The final phase of the installation is the system Checkout Procedures. The following list represents the most common items covered in a Checkout Procedure. Confirm all requirements in this document have been met.

<ul style="list-style-type: none"><li><input type="checkbox"/> All wiring connections are tight and properly secured.</li><li><input type="checkbox"/> Voltage and running current are within limits.</li><li><input type="checkbox"/> Heater size resistor installed in the electric heat harness if used.</li><li><input type="checkbox"/> All refrigerant lines (internal and external to equipment) are isolated, secure, and not in direct contact with each other or structure.</li><li><input type="checkbox"/> All braze connections have been checked for leaks. A vacuum of 350 microns provides confirmation that the refrigeration system is leak free and dry.</li><li><input type="checkbox"/> Final unit inspection to confirm factory tubing has not shifted during shipment. Adjust tubing if necessary so tubes do not rub against each other or any component when unit runs.</li><li><input type="checkbox"/> Ductwork is sealed and insulated.</li><li><input type="checkbox"/> All drain lines are clear with joints properly sealed. Pour water into drain pan to confirm proper drainage.</li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> Supply registers and return grilles are open, unobstructed, and air filter is installed.</li><li><input type="checkbox"/> Indoor blower and outdoor fan are operating smoothly and without obstruction.</li><li><input type="checkbox"/> Indoor blower motor set on correct speed setting to deliver required CFM.</li><li><input type="checkbox"/> Cover panels are in place and properly tightened.</li><li><input type="checkbox"/> For gas heating systems, manifold pressure has been checked and all gas line connections are tight and leak free.</li><li><input type="checkbox"/> For gas heating systems, flue gas is properly vented.</li><li><input type="checkbox"/> System functions safely and properly in all modes.</li><li><input type="checkbox"/> Owner has been instructed on use of system and given manual.</li></ul>
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This product may be covered by one or more of the following patents and their foreign equivalents: 5621888, 5901156, 6208263, 6353376, and 6448901. Other patents are pending. Made under license.

# Notices

## FCC Notice

Contains FCC ID: WAP3025

*This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.*

*This equipment has been tested and found to comply with the limits for Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.*

- *Reorient or relocate the receiving antenna*
- *Increase the separation between the equipment and receiver*
- *Connect the equipment into an outlet on a circuit different from that to which the receiver is connected*
- *Consult the dealer or an experienced radio/TV technician for help*

*Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

## IC Notice

Contains IC ID: 7922A-3025

*This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.*

*Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*





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