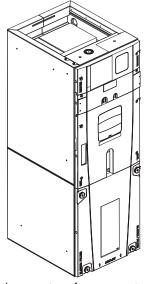


# Installation, Operation, and Maintenance

# Variable Speed Air Handlers Convertible 2 — 5 Ton

5TAMXB02AV21DA 5TAMXC03AV31DA 5TAMXD04AV31DA 5TAMXD05AV41DA 5TAMXD06AV41DA 5TAMXD07AV51DA







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.

### A 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

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.

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 or local distributor.

### **A** WARNING

### SAFETY HAZARD!

This air handler shall only be connected to an outdoor unit suitable for use with refrigerant R-454B.

# **A** 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.

## **A** 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.

### **A** CAUTION

### CORROSION HAZARD!

To prevent shortening its service life, the air handler should not be used during the finishing phases of construction. The low return air temperatures can lead to the formation of condensate. Condensate in the presence of chlorides and fluorides from paint, varnish, stains, adhesives, cleaning compounds, and cement creates a corrosive condition which may cause rapid deterioration of the cabinet and internal components.

## **A WARNING**

### SAFETY HAZARD!

Children should be supervised to ensure that they do not play with the appliance.

## WARNING

#### RISK OF FIRE!

Flammable refrigerant used. To be repaired only by trained service professional. Do not puncture refrigerant tubing.

Dispose of properly in accordance with federal or local regulations. Flammable refrigerant used.

## **A** 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.

### **A** 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 no use nonapproved refrigerants or refrigerant substitutes or refrigerant additives.

### **A** 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.

## **A** WARNING

### **SAFETY HAZARD!**

This appliance is not to be used by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety.

# **A** CAUTION

### **HAZARDOUS VAPORS!**

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

Equipment corrosion damage. To prevent shortening its service life, the air handler should not be used during the finishing phases of construction or remodeling. The low return air temperatures can lead to the formation of condensate. Condensate in the presence of chlorides and fluorides from paint, varnish, stains, adhesives, cleaning compounds, and cement creates a corrosive condition which may cause rapid deterioration of the cabinet and internal components.

### **A** CAUTION

# COIL IS PRESSURIZED!

- Coil is pressurized with approximately 8–12 psi dry air and factory checked for leaks.
- Carefully release the pressure by removing the rubber plug on the liquid line.
- If no pressure is released, check for leaks.

# 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.

Important: Installation of this unit shall be made in accordance with the National Electric Code, NFPA No. 90A and 90B, and any other local codes or utilities requirements.

Important: Air handlers do not require repositioning of the coil, drain pan, or refrigerant sensor for upflow applications. Horizontal left applications require sensor repositioning only. Horizontal right and downflow applications require coil, drain pan, and sensor repositioning. See coil conversion instructions section for details.

Important: The 5TAMX air handlers are only compatible with BAYEA\*\* internal electric heaters.

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.

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

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:** There is no declared maximum altitude for operating the appliance.

**Note:** Charging of the refrigerating system shall be according to the instructions provided by the manufacturer of the outdoor unit.

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

### **Features**

#### Table 1. Standard Features

- MULTI-POSITION UPFLOW, DOWNFLOW, HORIZONTAL LEFT AND HORIZONTAL RIGHT
- PAINTED FINISH ON GALVANIZED STEEL EXTERIOR WITH FULLY INSULATED CABINET THAT MEETS R4.2 VALUE
- STURDY POLYCARBONATE DRAIN PANS
  - These air handlers have factory installed drain pans and are shipped for upflow applications
- 208/230 VAC OPERATION
- VARIABLE-SPEED DIRECT DRIVE BLOWER
- FACTORY INSTALLED R-454B THERMAL EXPANSION VALVE
- ALL ALUMINUM COIL
- BOTTOM RETURN
- MEETS THE MINIMUM LEAKAGE REQUIREMENTS FOR THE FLORIDA AND CALIFORNIA BUILDING CODES

### Table 2. Optional Accessories

- 4,5,8,10,15,20, and 25 KW SINGLE PHASE ELECTRIC HEATERS
  - Circuit breakers available on single phase 4, 5, 8, 10, 15, 20, and 25 KW heaters
  - Lugs available on single phase 4, 5, 8, and 10 KW heaters
  - Lugs available on three phase 10 and 15 KW heaters
- SINGLE POINT POWER ENTRY KIT (for 15 and 20 KW heaters)
- SUPPLY DUCT FLANGE KIT
- DOWNFLOW SUB-BASE KITS TAYBASE185, TAYBASE235, TAYBASE260
- SLIM FIT FILTER BOX KIT BAYSF1185AAA, BAYSF1235AAA, BAYSF1265AAA
- Breaker Seal Kit TEMBRKSEALKT01A
- Downflow Condensate Management Kit BAYTEMDFKT1A
- CleanEffects Whole House Air Cleaners EFD175DLAH000B, EFD215DLAH000B, EFD235DLAH000B
- 120V Unit Conversion Kits BAYAH120KT

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# Information on Servicing

All replacement parts shall be in accordance with the manufacturer's specifications.

# **Prior to Beginning Work**

Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized. For repair to the refrigerating system, the following shall be completed prior to conducting work on the system:

- Work shall be undertaken under a controlled procedure to minimize the risk of a flammable gas or vapor being present while the work is being performed.
- All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided.
- The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants, i.e., non-sparking, adequately sealed or intrinsically safe.
- If any hot work is to be conducted on the refrigerating equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO<sub>2</sub> fire extinguisher adjacent to the charging area.
- No person carrying out work in relation to a refrigerating system which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.
- Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.
- The following checks shall be applied to installations using flammable refrigerants:
  - marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;

 refrigerating pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

# Repairs to Electrical Components

Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed. If in doubt, consult the manufacturer's technical department for assistance.

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment, so all parties are advised.

Initial safety checks shall include:

- that capacitors are discharged; this shall be done in a safe manner to avoid possibility of sparking;
- that no live electrical components and wiring are exposed while charging, recovering or purging the system;
- that there is continuity of earth bonding.

Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

# Detection of Flammable Refrigerants

Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

The following leak detection method is deemed acceptable for all refrigerant systems:

 Electronic leak detectors may be used to detect refrigerant leaks but, in the case of flammable refrigerants, the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall

be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25 % maximum) is confirmed.

Example of leak detection fluids is bubble method.

If a leak is suspected, all naked flames shall be removed/extinguished.

If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak.

# Removal and Evacuation

When breaking into the refrigerant circuit to make repairs - or for any other purpose - conventional procedures shall be used. However, for flammable refrigerants it is important that best practice be followed, since flammability is a consideration. The following procedure shall be adhered to:

- safely remove refrigerant following local and national regulations;
- evacuate;
- purge the circuit with inert gas (optional for A2L);
- evacuate (optional for A2L);
- continuously flush or purge with inert gas when using flame to open circuit;
- and open the circuit.

The refrigerant charge shall be recovered into the correct recovery cylinders if venting is not allowed by local and national codes. For appliances containing flammable refrigerants, the system shall be purged with oxygen-free nitrogen to render the appliance safe for flammable refrigerants.

This process might need to be repeated several times. Compressed air or oxygen shall not be used for purging refrigerant systems.

For appliances containing flammable refrigerants, refrigerants purging shall be achieved by breaking the vacuum in the system with oxygen-free nitrogen and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum (optional for A2L). This process shall be repeated until no refrigerant is within the system (optional for A2L). When the final oxygen-free nitrogen charge is used, the system shall be vented down to atmospheric pressure to enable work to take place.

The outlet for the vacuum pump shall not be close to any potential ignition sources, and ventilation shall be available.

# **Charging Procedures**

In addition to conventional charging procedures, the following requirements shall be followed.

- Ensure that contamination of different refrigerants does not occur when using charging equipment.
   Hoses or lines shall be as short as possible to minimise the amount of refrigerant contained in them.
- Cylinders shall be kept in an appropriate position according to the instructions.
- Ensure that the refrigerating system is earthed prior to charging the system with refrigerant.
- Label the system when charging is complete (if not already).
- Extreme care shall be taken not to overfill the refrigerating system.

Prior to recharging the system, it shall be pressuretested with the appropriate purging gas. The system shall be leak-tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

See installation instructions below for further details.

# Recovery

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.

When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge is available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e., special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.

The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of the flammable refrigerant. If in doubt, the manufacturer should be consulted. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition.

The recovered refrigerant shall be processed according to local legislation in the correct recovery cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.

If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant. The compressor body

shall not be heated by an open flame or other ignition sources to accelerate this process. When oil is drained from a system, it shall be carried out safely.

# **Decommissioning**

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of recovered refrigerant. It is essential that electrical power is available before the task is commenced.

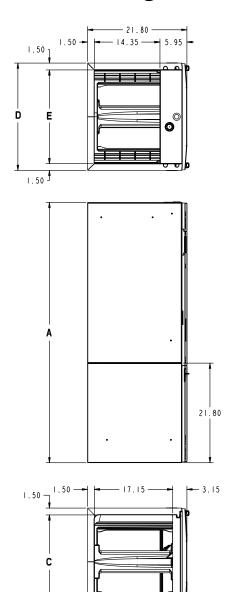
- Become familiar with the equipment and its operation.
- 2. Isolate system electrically.
- 3. Before attempting the procedure, ensure that:
  - a. mechanical handling equipment is available, if required, for handling refrigerant cylinders;
  - all personal protective equipment is available and being used correctly;
  - the recovery process is supervised at all times by a competent person;
  - d. recovery equipment and cylinders conform to the appropriate standards.

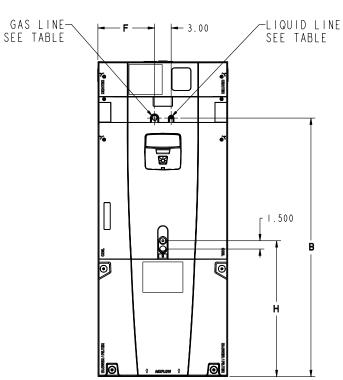
- 4. Pump down refrigerant system, if possible.
- If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
- 6. Make sure that cylinder is situated on the scales before recovery takes place.
- 7. Start the recovery machine and operate in accordance with instructions.
- Do not overfill cylinders (no more than 80 % volume liquid charge).
- 9. Do not exceed the maximum working pressure of the cylinder, even temporarily.
- 10. When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.
- Recovered refrigerant shall not be charged into another refrigerating system unless it has been cleaned and checked.

Equipment shall be labelled stating that it has been decommissioned and emptied of refrigerant. The label shall be dated and signed. For appliances containing flammable refrigerant, ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

# **Outline Drawing**

1.50 ]



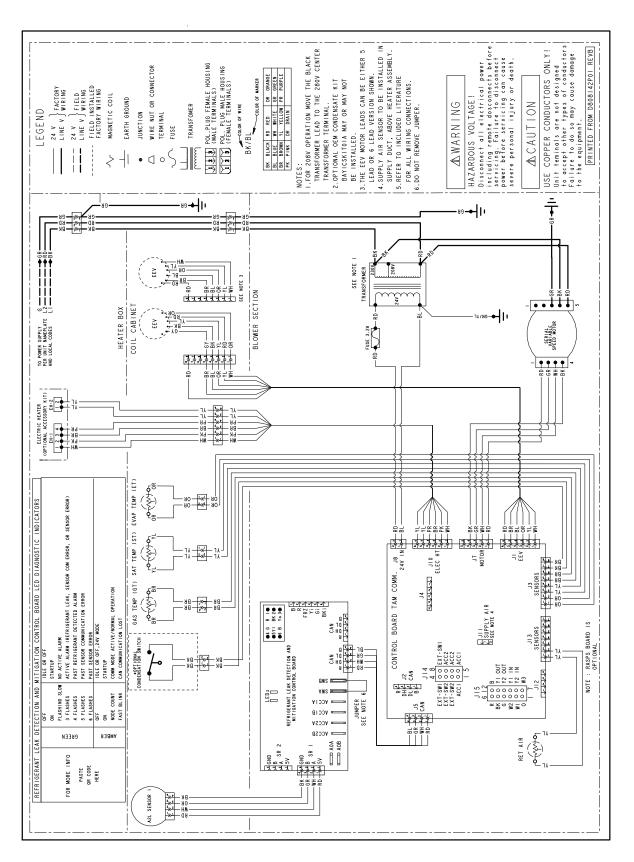


MINIMUM UNI	T CLEARANCE TABLE		
	SERVICE CLEARANCE (RECOMMENDED)		
SIDES	2"		
FRONT	21"		
BACK	0 "		
INLET DUCT			
OUTLET DUCT			

NOTE: THIS UNIT IS APPROVED FOR INSTALLATION CLEARANCES TO COMBUSTIBLE MATERIAL AS STATED ON THE UNIT RATING NAMEPLATE

Model Number	A	В	С	D	E	F	н	FLOW CONTROL	GAS LINE BRAZE	LIQ LINE BRAZE
5TAMXB02AV21DA	49.9	39.6	14.5	17.5	14.5	7.3	24.4	EEV	3/4	3/8
5TAMXC03AV31DA	55.7	45.5	18.4	21.3	18.4	9.2	24.8	EEV	3/4	3/8
5TAMXD04AV31DA	56.9	46.7	20.5	23.5	20.5	10.3	24.2	EEV	7/8	3/8
5TAMXD05AV41DA	56.9	46.7	20.5	23.5	20.5	10.3	24.5	EEV	7/8	3/8
5TAMXD06AV41DA	61.7	51.5	20.5	23.5	20.5	10.3	24.9	EEV	7/8	3/8
5TAMXD07AV51DA	61.7	51.5	20.5	23.5	20.5	10.3	24.9	EEV	7/8	3/8

# Wiring



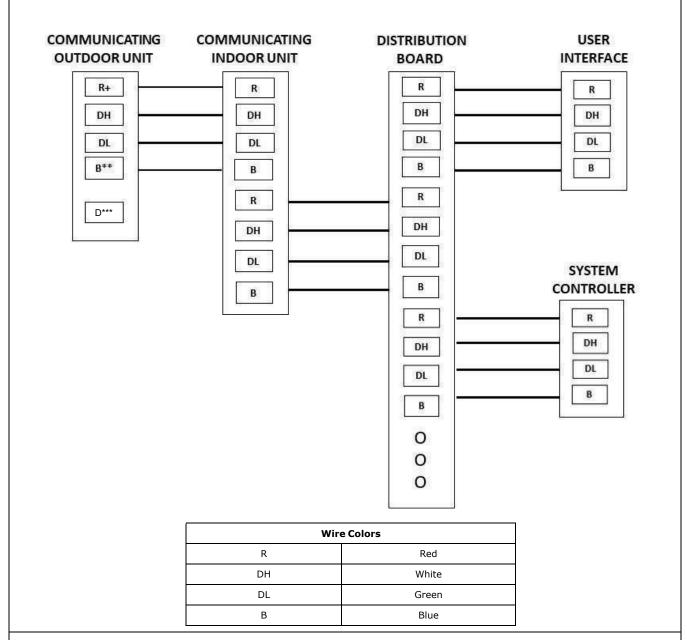
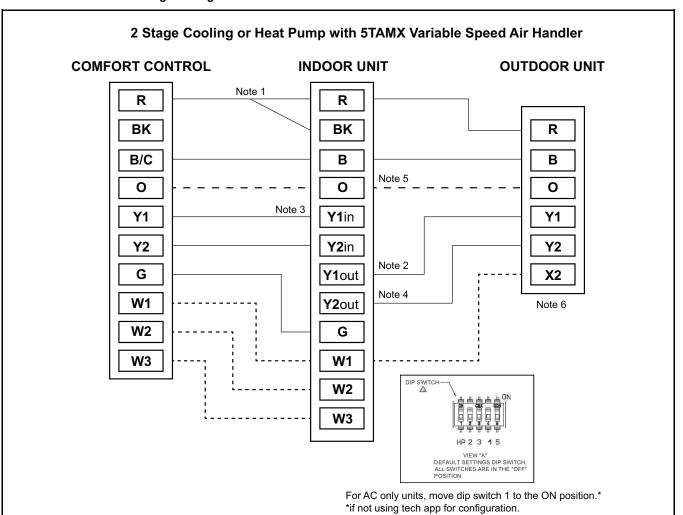


Table 3. Link Communicating Low Voltage Hook-Up Diagrams

#### Note:

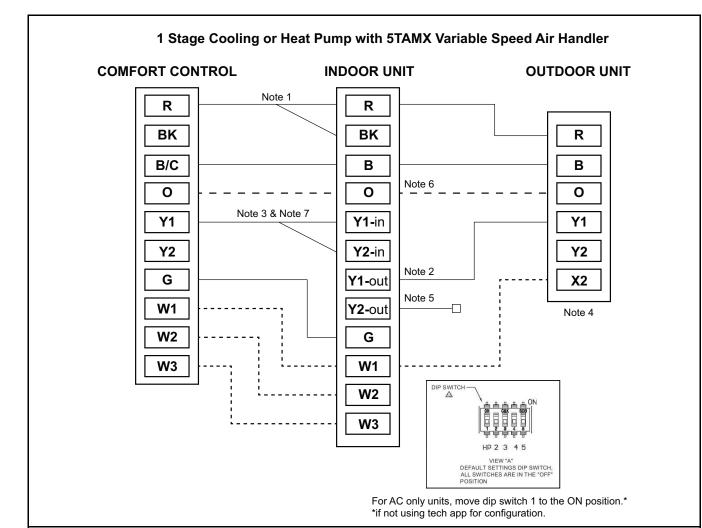
- \* —Accessory terminals are dry contact outputs only.
- + —R connection to the outdoor unit is required only in applications utilizing an outdoor loadshed device or when using SmartCharge.
- \*\* —B connection to the outdoor unit is optional for 2 wire outdoor applications, but is recommended in other applications.
- \*\*\*-DATA (Brown) wire only used in Clii mode.
  - —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.
  - —Drawing is for reference only wiring can be done many different ways.

Table 4. 24 Volt Low Voltage Wiring



#### Notes:

- 1. Separate the BK and R wires when using the BK functionality from the thermostat or a Humidistat.
- 2. Yin and Yout 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. Y2-out connections at outdoor unit only required for two stage units and should be capped off when not in use.
- 5. Only needed for heat pump operation.
- 6. X2 is necessary if not using select Trane or American Standard thermostats.



#### 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.

5TAMX 24 Volt Wire Harness Colors					
R	Red	Y2out	Orange/Red		
В	Blue	G	Green		
0	Orange	ВК	Black		
Y1in	Yellow	W1	White		
Y2in	Yellow/Red	W2	White/Black		
Y1out	Yellow/ Black	W3	White/Red		

# **Refrigerant Leak Detection System**

For all tables contained in this section of the manual, the refrigerant charge is the total system charge which is marked on the system according to the instructions provided by the manufacturer of the outdoor unit.

# **A** WARNING

#### **RISK OF FIRE!**

Flammable refrigerant used. To be repaired only by trained service professional. Do not puncture refrigerant tubing.

Dispose of properly in accordance with federal or local regulations. Flammable refrigerant used.

# **A** WARNING

## **LEAK DETECTION SYSTEM!**

LEAK DETECTION SYSTEM installed. Unit must be powered except for service.

To ensure safety of the building occupants, the air handler is equipped with a refrigerant leak detection system. The system is comprised of a refrigerant sensor and a mitigation control board. The system automatically detects leaks in the indoor coil and initiates actions to mitigate the risk of ignition of the leaked refrigerant, including:

- Turning on the blower of the indoor unit to dilute leaked refrigerant;
- Fully opening any zoning dampers, when applicable;

- Turning off the compressor of the outdoor unit;
- De-energizing potential sources of ignition connected to the system;
- Energizing an audible alarm, if so equipped.

Examples of potential ignition sources that are deenergized include electrostatic air cleaners.

## **A** WARNING

### RISK OF FIRE!

If installing the unit in any other orientation other than upflow, the refrigerant sensor must be relocated. See .

Refrigerant sensors for refrigerant leak detection systems shall only be replaced as specified by the manufacturer.

# **Minimum Conditioned Space**

The installer must verify that the total space conditioned by the system is large enough to safely dilute any leaked refrigerant in the event of a refrigerant leak of the indoor coil.

The minimum space conditioned by the appliance shall be according to Table 5, p. 14. The conditioned space includes any parts of the space connected via an air duct system. The altitude of installation is the altitude above sea level of the site where the equipment is installed.

Table 5. Minimum Space Conditioned by the Appliance

					Altitude (ft)				
	sea level- 2,000	2,001- 4,000	4,001- 6,000	6,001- 8,000	8,001- 10,000	10,001- 12,000	12,001- 14,000	14,001- 15,000	above 15,000
Charge (lb)	Minimum Conditioned Space (ft <sup>2</sup> )								
4	63	66	70	74	79	85	91	94	98
5	79	83	88	93	99	106	113	118	122
6	95	100	105	112	119	127	136	141	147
7	110	116	123	130	138	148	159	165	171
8	126	133	140	149	158	169	181	188	196
9	142	149	158	167	178	190	204	212	220
10	158	166	175	186	198	211	227	235	245
11	173	183	193	205	218	232	249	259	269
12	189	199	211	223	237	254	272	282	294
13	205	216	228	242	257	275	295	306	318
14	221	232	246	260	277	296	318	330	343
15	236	249	263	279	297	317	340	353	367
16	252	266	281	298	317	338	363	377	392
17	268	282	298	316	336	359	386	400	416
18	284	299	316	335	356	380	408	424	440
19	299	315	333	353	376	402	431	447	465
20	315	332	351	372	396	423	454	471	489

# **Airflow Adjustment**

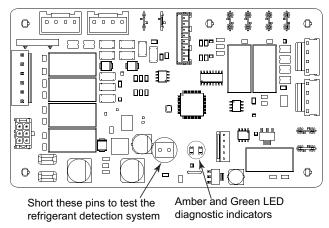
**Note:** All 5TAMX model air handlers have been factory configured to provide sufficient airflow to dilute leaked refrigerant.

# Verification of Mitigation Actions

After installation, the installer must verify that the refrigerant leak detection system actuates all mitigating actions listed above.

The test can be initiated by shorting the two test pins on the header of the mitigation control board inside of the unit. The mitigating actions will continue for approximately 5 minutes. See Figure 1, p. 15 below.

Figure 1. Refrigerant Leak Detection Mitigation Control Board



If any of the mitigating actions are not actuated by the system during the test, please check the following:

 All field wiring connections should be checked against the diagrams in the "," section of this manual.

- The diagnostic indicators on the mitigation control board should be checked against the diagnostic codes given in below.
- Scan the QR code below for more information on field troubleshooting of the refrigerant leak detection system.



Table 6. MCB Diagnostic Code Table

Condition	Green LED
Idle or Off	Off
Startup	On
No Active Alarm	Slow Flash
Active Alarm (Refrigerant Leak, Sensor Communication Error, or Sensor Error)	3 Flash
Past Refrigerant Detected Alarm	4 Flash
Past Sensor Communication Error	5 Flash
Past Sensor Error	6 Flash

**Note:** Amber LED diagnostic indicator should always be "ON".

# **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 t his 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.

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 5TAMX air handlers will only use the following internal electric heaters:

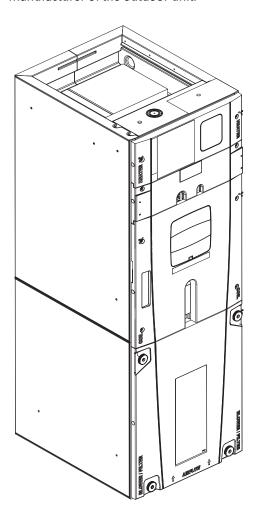
BAYEA(AC/13)04BK1	BAYEA(AC/13)10LG1
BAYEA(AC/13)04LG1	BAYEA(AC/13)10LG3
BAYEA(AC/13)05BK1	BAYEA(BC/23)15BK1
BAYEA(AC/13)05LG1	BAYEA(BC/23)15LG3
BAYEA(AC/13)08BK1	BAYEA(BC/23)20BK1
BAYEA(AC/13)08LG1	BAYEA(CC/33)25BK1
BAYEA(AC/13)10BK1	

**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.

**Note:** There is no declared maximum altitude for operating the appliance.

**Note:** Charging of the refrigerating system shall be according to the instructions provided by the manufacturer of the outdoor unit.

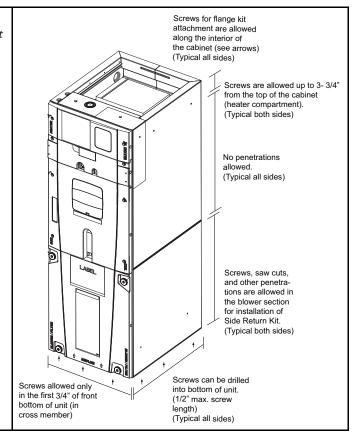


# **Unit Design**

#### **Table 7. Cabinet Penetration**

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.

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



#### Table 8. Panel Removal

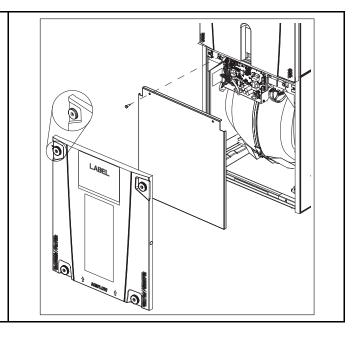
The unit contains four (4) access panels: Blower/Filter, Coil, Line Set, and Heater.

The Blower/Filter panel is removed using thumb screws.

- Turn thumb screws on Blower/Filter panel.
- 2. Pull top of panel out, away from cabinet.
- 3. Lift panel up out of channel.
- 4. Set aside.

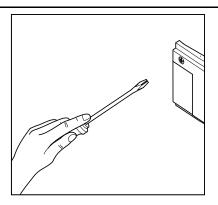
The Block off plate is removed with a 5/16" nut driver.

- 1. Remove the two 5/16" screws at the top of the block off plate.
- 2. Pull top of panel out, away from cabinet.
- 3. Lift panel up and off mounting bosses at the bottom.
- 4. Set aside.



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

Removal requires #3 Size Phillips



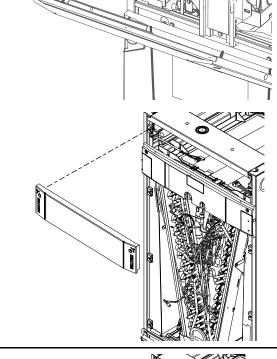
Coil and Heater panels must be removed prior to removing the Line Set panel.  $% \label{eq:line_problem}$ 

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.
- $2. \quad \hbox{Pull panel straight out, away from cabinet}.$
- 3. Set aside.

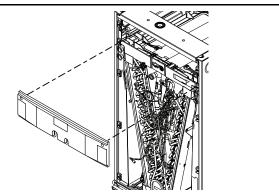


Removal of the Line Set panel is required for all refrigerant line brazing and some condensate line assembly depending on your orientation.

To remove Line Set panel:

- $1. \quad \hbox{Remove both Heater and Coil panels.}$
- 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.



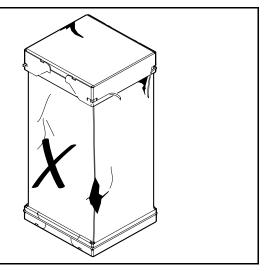
# **Unit Install Preparation**

 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.



# **Optional Accessories**

Accessory Number	Description	Fits Cabinet Size
BAYEA(AC/13)04BK1	Electric Heater, 4kW, Breaker, 24V Control, 1 Ph	17.5" to 23.5"
BAYEA(AC/13)04LG1	Electric Heater, 4kW, Lugs, 24VControl, 1 Ph	17.5" to 23.5"
BAYEA(AC/13)05BK1	Electric Heater, 5kW, Breaker, 24V Control, 1 Ph	17.5" to 23.5"
BAYEA(AC/13)05LG1	Electric Heater, 5kW, Lugs, 24VControl, 1 Ph	17.5" to 23.5"
BAYEA(AC/13)08BK1	Electric Heater, 8kW, Breaker, 24V Control, 1 Ph	17.5" to 23.5"
BAYEA(AC/13)08LG1	Electric Heater, 8kW, Lugs, 24VControl, 1 Ph	17.5" to 23.5"
BAYEA(AC/1310BK1	Electric Heater, 10kW, Breaker, 24V Control, 1 Ph	17.5" to 23.5"
BAYEA(AC/13)10LG1	Electric Heater, 10kW, Lugs, 24VControl, 1 Ph	17.5" to 23.5"
BAYEA(BC/23)15BK1	Electric Heater, 15kW, Breaker, 24V Control, 1 Ph	21.0" to 23.5"
BAYEA(BC/2320BK1	Electric Heater, 20kW, Breaker, 24VControl, 1 Ph	23.5"
BAYEA(CC/33)25BK1	Electric Heater, 25kW, Breaker, 24V Control, 1 Ph	23.5"
BAYEA(AC/13)10LG3	Electric Heater, 20kW, Breaker, 24V Control, 1711	
. , ,	Electric Heater, 15kW, Lugs, 24V Control, 3 Ph	17.5" to 23.5"
BAYEA(BC/23)15LG3		21.0" to 23.5"
BAYSUPFLGAA	Supply Duct Flange 1	17.5"
BAYSUPFLGBA	Supply Duct Flange 2	21.0"
BAYSUPFLGCA	Supply Duct Flange 3	23.5"
BAYRETFLGAA	Return Duct Flange 1	17.5"
BAYRETFLGBA	Return Duct Flange 2	21.0"
BAYRETFLGCA	Return Duct Flange 3	23.5"
BAYSRKIT100A	Side Return Kit	17.5" to 23.5"
BAYFLR1620A	High Velocity Filter Kit, 16" x 20" x 1" (10 filters)	17.5"
BAYFLR2020A	High Velocity Filter Kit, 20" x 20" x 1" (10 filters)	21.0"
BAYFLR2220A	High Velocity Filter Kit, 22" x 20" x 1" (10 filters)	23.5"
TASB175SB (a) (b)	Plenum Stand with integrated sound baffle 1	17.5"
TASB215SB	Plenum Stand with integrated sound baffle 2	21.0"
TASB235SB	Plenum Stand with integrated sound baffle 3	23.5"
MITISRKIT01A	Side Return Kit with 16" x 20" Filter	17.5" to 23.5"
BAYFRKIT175	Front Return Kit for 17.5" Cabinet	17.5"
BAYFRKIT210	Front Return Kit for 21.0" Cabinet	21.0"
BAYFRKIT235	Front Return Kit for 23.5" Cabinet	23.5"
TAYBASETAMA	Downflow Sub-Base Kit	17.5" to 23.5"
BAYBAFKT175A (c)	Sound Baffle Kit for 17.5" Cabinet	17.5"
BAYBAFKT215A	Sound Baffle Kit for 21.0" Cabinet	21.0"
BAYBAFKT235A	Sound Baffle Kit for 23.5" Cabinet	23.5"
TASSBK175 (d) (e)	Sound Baffle Kit for 17.5" Cabinet	17.5"
TASSBK175 (7)	Sound Baffle Kit for 21.0" Cabinet	21.0"
TASSBK235	Sound Baffle Kit for 23.5" Cabinet	23.5"
BAYICSKIT01A	Internal Condensate Switch Kit	17.5" to 23.5"
BAYHHKIT001A	Horizontal Hanger Kit	17.5" to 23.5"
BAYUVCLK001A	UVC Lights	17.5" to 23.5"
BAYLVKIT100A	Low Voltage Conduit Entry Kit	17.5 to 23.5"
	Single Power Entry Kit	
BAYSPEKT200A	Hydronic Coil — 50,000 BTUH — Slide-in	17.5" to 23.5"
BAYWAAA05SC1AA		17.5" to 17.5"
BAYWABB07SC1AA	Hydronic Coil — 70,000 BTUH — Slide-in	21.0" to 21.0"
BAYWACC08SC1AA	Hydronic Coil — 80,000 BTUH — Slide-in	23.5" to 23.5"
BAYWACC11SC1AA	Hydronic Coil — 100,000 BTUH — Add on	23.5" to 23.5"
BAYWACNTKT05	Relay Kit for use with BAYWAAA05SC1A	17.5"
BAYWACNTKT07	Relay Kit for use with BAYWABB07SC1A	21.0"
BAYWACNTKT08	Relay Kit for use with BAYWACC08SC1A	23.5"
BAYWACNTKT11	Relay Kit for use with BAYWACC11SC1A	23.5"
BAYINSKT175A	Solcoustic® Liner Kit for 17.5" cabinet	17.5"
BAYINSKT215A	Solcoustic® Liner Kit for 21.5" cabinet	21.0"
BAYINSKT235A	Solcoustic® Liner Kit for 23.5" cabinet	23.5"
BAYCNDPIP01A	3/4" PVC Threaded Pipe Kit foam Seal (10 per box)	17.5" to 23.5"
BAYSENSC360	Supply Air Temperature Sensor	17.5" to 23.5"

 $<sup>\</sup>ensuremath{^{\text{(a)}}}$  Contact your distributor for information.

<sup>(</sup>b) In open air applications, the plenum stand with sound baffle provides sound reduction.

<sup>(</sup>c) Mounts inside air handler filter channel.

 $<sup>^{\</sup>rm (d)}$   $\,$  In return plenum applications, use TASSBK for sound reduction.

<sup>(</sup>e) Mounts to TASB original plenum stand without integrated baffle.

# **Optional Cabinet Disassembly**

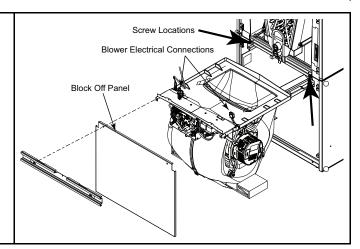
**Note:** If the unit must be transported in a horizontal position, it must be laid on its back (marked "REAR" on carton).

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

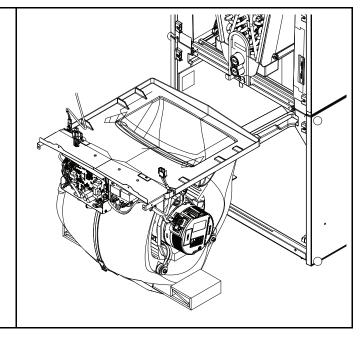
- 1. Remove all four front panels.
- 2. If applicable, remove the two screws on the seal bar and pull the seal bar straight out.
- Remove the two screws on the block off panel and pull the panel straight out.
- 4. Disconnect all wiring connections routed to the blower assembly.

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

If system is installed prior in the horizontal position, remove the refrigerant sensor and clip before sliding blower out. See section **Horizontal Sensor Relocation** on page 28.



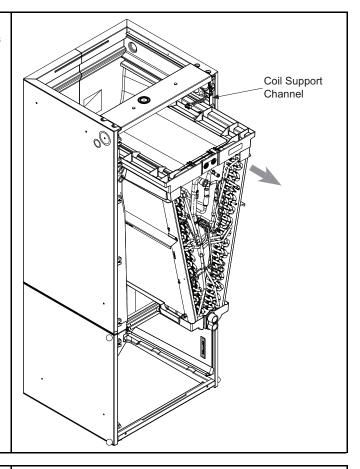
5. Slide Blower assembly out of unit using built-in blower support channels and set aside.



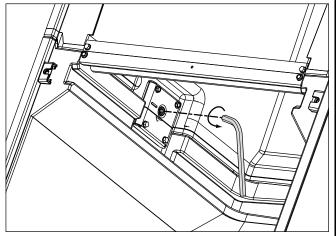
6. Disconnect wires to the EEV motor and sensors. Cut the wire ties on those wire harnesses if necessary and replace after re-installing.

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

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

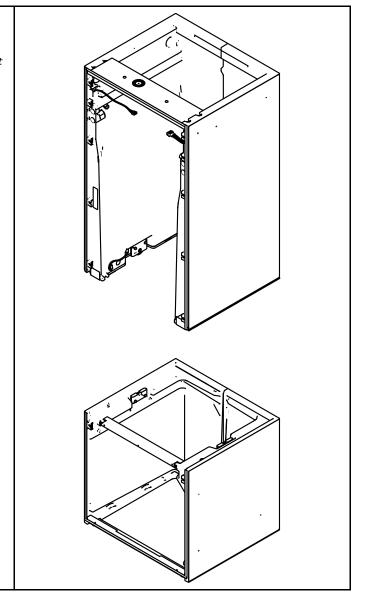


8. Use a 5/16 Allen wrench on the locking mechanism on each side of the bottom half of the cabinet to loosen the locking mechanism. The locks loosen by turning counter-clockwise approximately 3/4 of a turn.

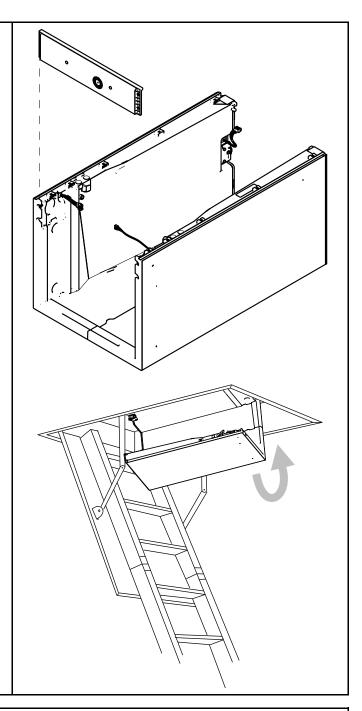


9. Lift the Coil section up and away from the Blower section. Set

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



10. 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.

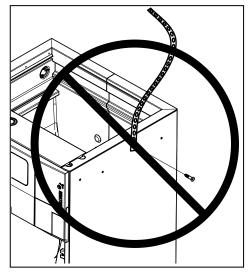


11. Continue preparation by following the proper carrying procedures shown in the next section.

# **Placing Unit at Location**

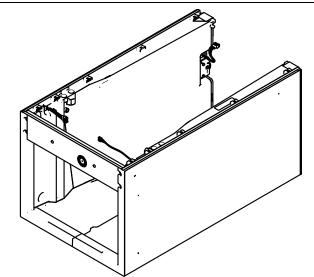
- $1. \quad \hbox{Carry the unit to the installation location} \\$
- Reassembly by reversing the steps listed in Section 4 if disassembly was required. If cut, wire ties that held the sensor wiring must be replaced.

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

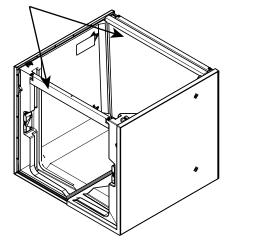


### **Approved Carrying:**

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.







# **Unit Location Considerations**

# **A** WARNING

### **RISK OF FIRE!**

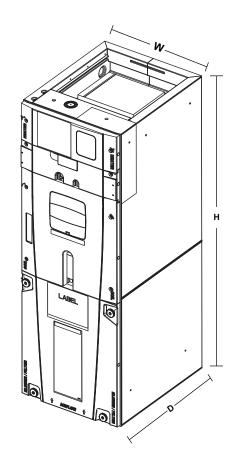
The following requirements apply to the room where the air handler is installed:

- All combustion appliances located in the same room that have continuous pilot lights are equipped with an effective flame arrest.
- All indoor field-made joints of the field piping have been checked for refrigerant leaks after charging using an electronic leak detector calibrated for R-454B having a sensitivity of 5 grams per year or better.
- The room is constructed to ensure that should any refrigerant leak it will not stagnate and create a fire hazard.

Table 9. Unit Dimensions and Weight

MODEL NUMBER	H x W x D (inches)	Coil and Heater Compartment Height * (inches)	Unit Net Weight (pounds)
5TAMXB02AV21DA	49.9 x 17.5 x 21.8	28.1	120
5TAMXC03AV31DA	55.7 x 21.3 x 21.8	33.9	133
5TAMXD04AV31DA	56.9 x 23.5 x 21.8	35.1	143
5TAMXD05AV41EDA	61.7 x 23.5 x 21.8	39.9	174
5TAMXD06AV41DA	61.7 x 23.5 x 21.8	39.9	174
5TAMXD07AV51DA	61.7 x 23.5 x 21.8	39.9	178

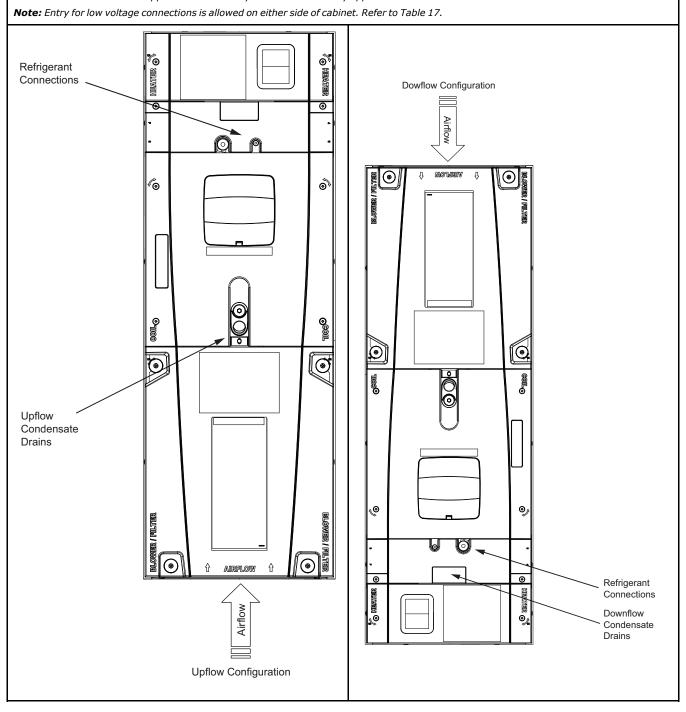
<sup>\*</sup> Blower compartment height is 21.8 inches.

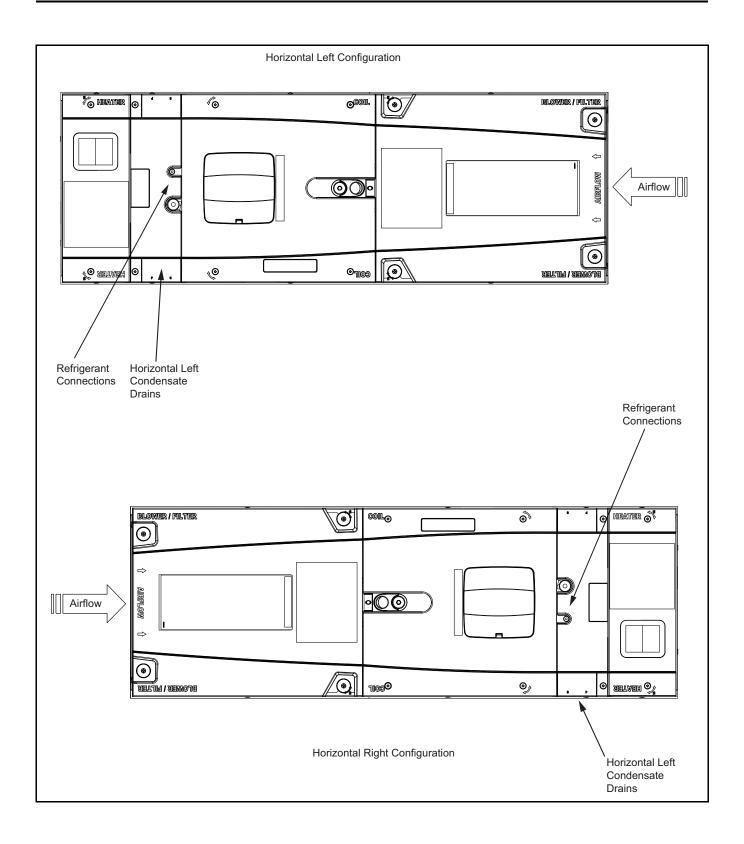


# **Four-Way Conversion**

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 and the A2L sensor accordingly.

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

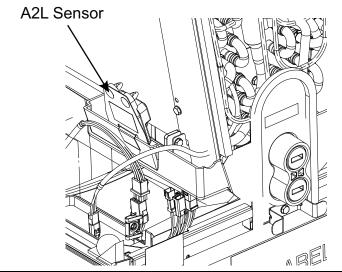




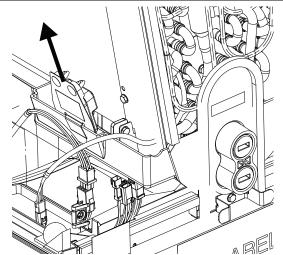
#### **Horizontal Sensor Relocation:**

**Note:** The A2L sensor does not need to be relocated for upflow applications. It comes installed from the factory in the upflow position.

 Remove the coil panel and locate the A2L sensor on the upflow drain pan.

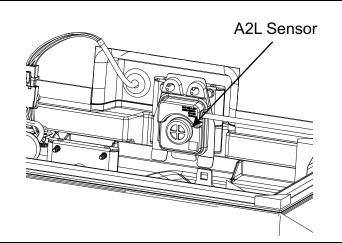


2. Remove the A2L sensor from the drain pan by pulling directly up.

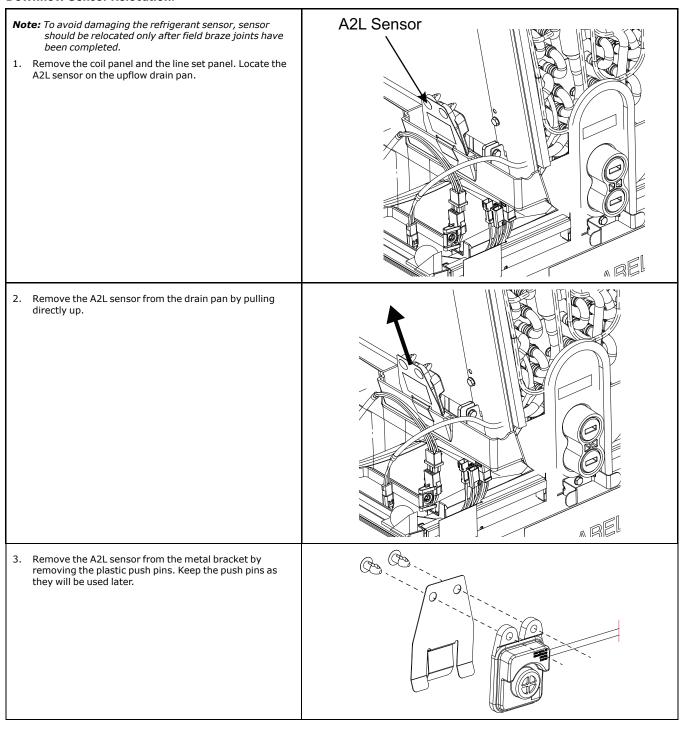


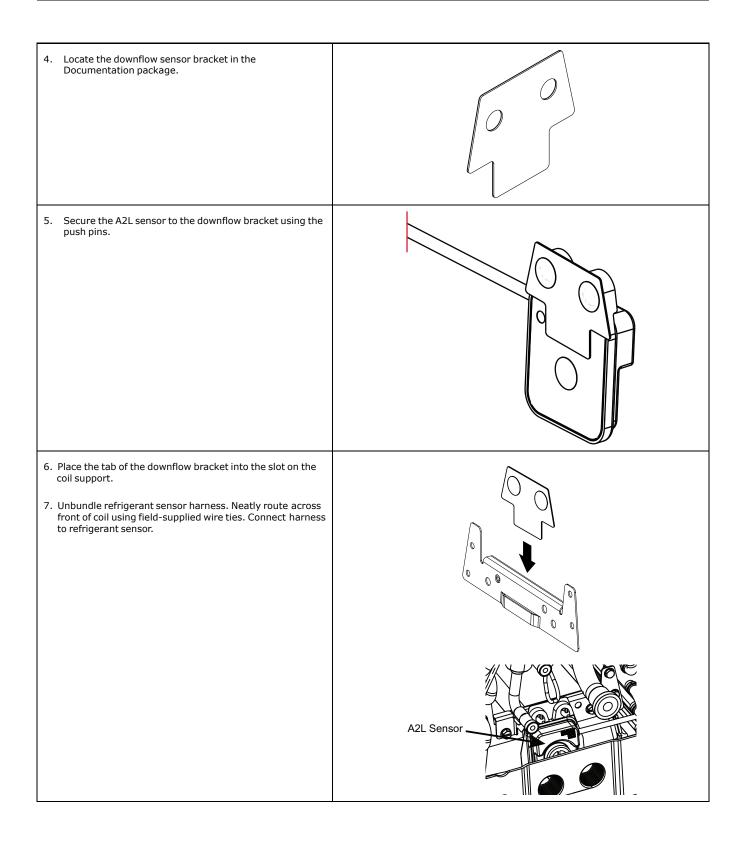
- 3. Clip the sensor onto the blower deck just in front of the
  - For horizontal right applications, clip the sensor on the right side of the unit.
  - For horizontal left applications, clip the sensor on the left side of the unit.

**Note:** If the blower needs to be removed after this point, the A2L sensor will need to be removed and set aside before the blower is removed.



## **Downflow Sensor Relocation:**





# **Ducted and Non-Ducted Return Applications**

Table 10. Non-Ducted Applications

## CAUTION

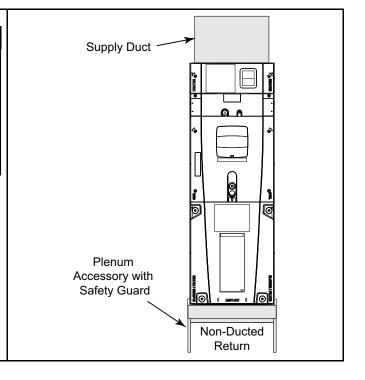
### **HAZARDOUS VAPORS!**

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 nonducted return in the same closet, alcove, or utility room as a fossil fuel device.

#### **Non-Ducted Return Installations:**

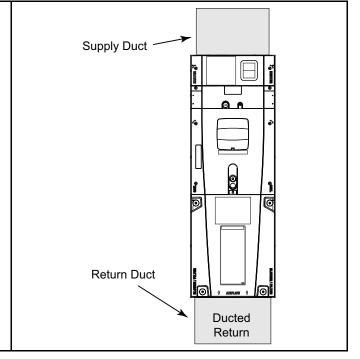
- Installation in a closet, an alcove, or a utility room without a
  return duct requires the use of a plenum accessory kit as it uses
  the area space as a return air plenum. Minimum clearances to
  combustible materials and service access must be observed (see
  outline drawing).
- This area may also 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
- Review local codes to determine limitations if the unit is installed without a return air duct.



### Table 11. Ducted Return Installations.

### Ducted Return Installations:

 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).



# **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."

# **Setting the Unit — Vertical Installation**

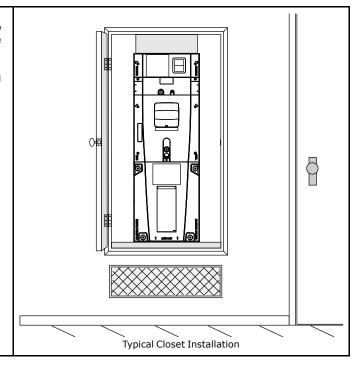
#### Table 12. Considerations

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.

- 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.
- Isolate unit from the foundation using a suitable isolating material.

**Note:** The following sound insulation kits are available to lessen objectionable sound.

BAYINSKT175A for use with 17.5" cabinets BAYINSKT215A for use with 21.5" cabinets BAYINSKT235A for use with 23.5" cabinets



#### Table 13. Upflow Installation

#### TASB Installation

 Install the TASB plenum stand with integrated sound baffle using the TASB instructions.

**Note:** Kit is used for open air applications.

TASB175SB for use with 17.5" cabinets TASB215SB for use with 21.5" cabinets

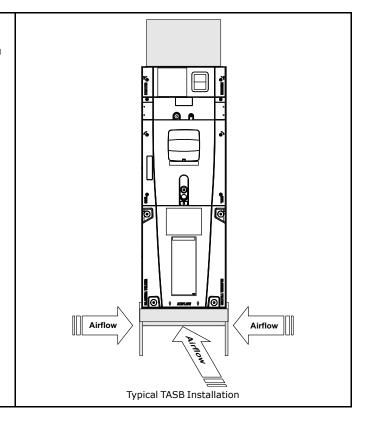
TASB235SB for use with 23.5" cabinets MITISRKIT1620 — Side return kit with  $16" \times 20"$  filter

Contact your distributor for more information.

**Note:** The following sound insulation kits are available to lessen objectionable sound.

BAYINSKT175A for use with 17.5" cabinets BAYINSKT215A for use with 21.5" cabinets

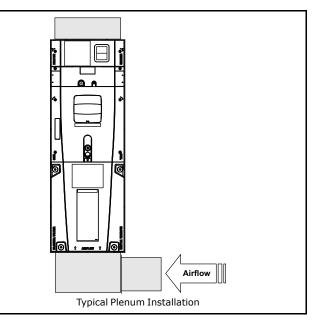
BAYINSKT215A for use with 23.5" cabinets



#### Table 14. Plenum Installation

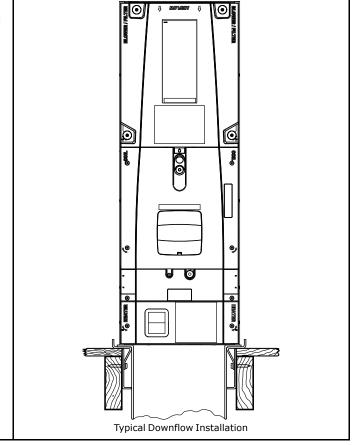
2. Assemble the plenum using the plenum's Installer Guide.

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



#### Table 15. Downflow Installation

- Downflow installation must comply with national, state, and local codes.
- 3. Prepare the location site as appropriate for your application and per national, state, and local code requirements.
- 4. Set the unit in position.



# **Setting the Unit — Horizontal Installations**

#### Table 16. 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.

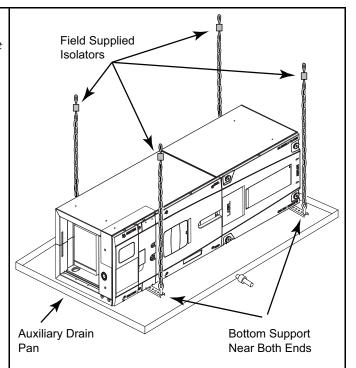
**Important:** Under no conditions should metal strapping be attached to the unit to be used as support mechanisms for carrying or suspension purposes.

- 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.
  - 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 17. 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..

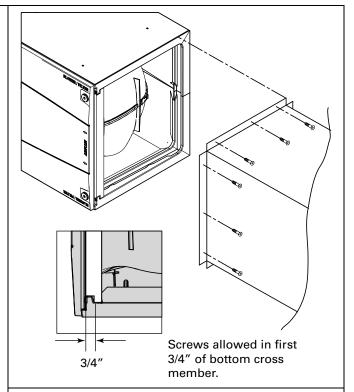
**Important:** On units with sheet metal returns: Return air plenum must be flanged. Sheet metal drill point screws must be 1/2" in length or shorter.

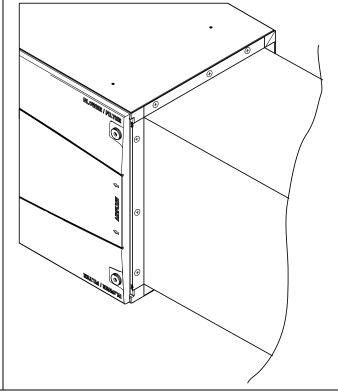
- The supply and return air ducts must be connected to the unit with non flammable duct connectors.
- See the Outline drawing for sizes of the duct connections.
- After the ducts are secured, seal around the supply and return ducts to prevent air leakage.
- Insulate all duct work that will be outside 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 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**

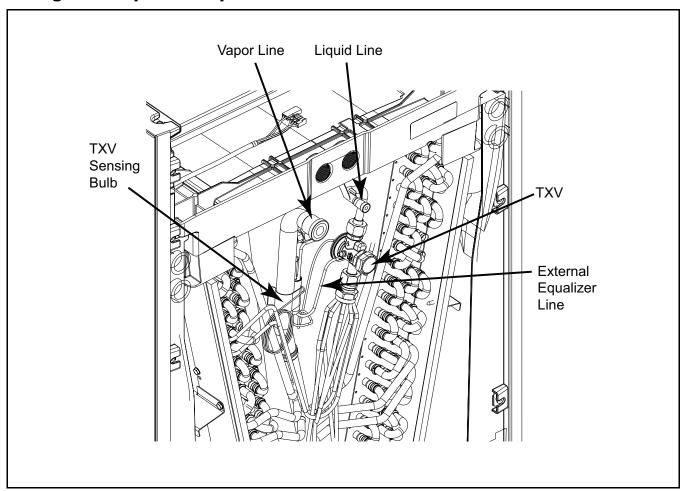
Table 18. Refrigerant Line Connection Sizes

Model	Vapor Line Connection	Liquid Line Connection
5TAMXB02AV21DA	3/4	3/8
5TAMXC03AV31DA	3/4	3/8
5TAMXD04AV31DA	7/8	3/8
5TAMXD05AV41DA	7/8	3/8
5TAMXD06AV41DA	7/8	3/8
5TAMXD07AV51DA	7/8	3/8

#### Notes:

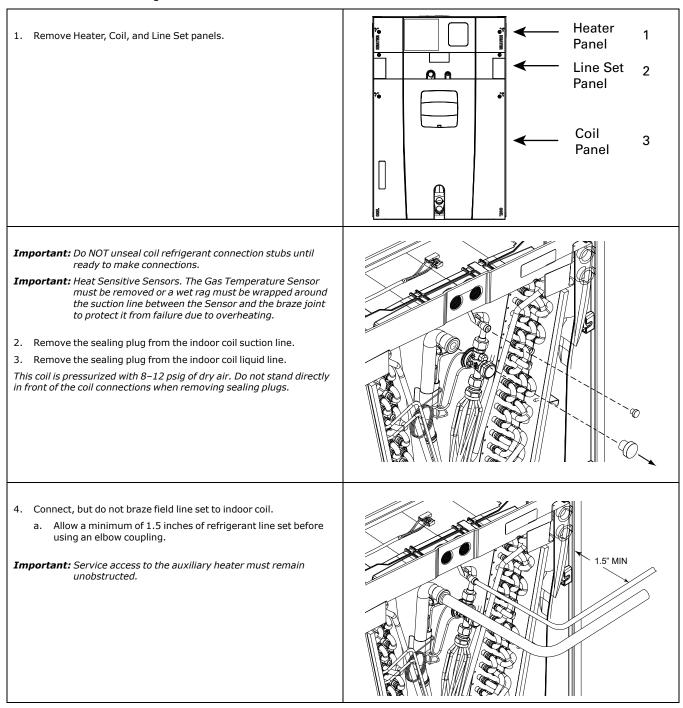
- 1. This table indicates the tubing connection diameters at the indoor coil. A field supplied reducing coupling may be required.
- 2. All AHRI listed systems are tested with 25 feet of refrigeration tubing; the rated tubing diameters are located in the electronic performance data system.
- 3. If the 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 19. Braze the Refrigerant Lines



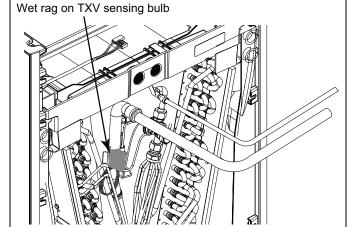
Important: Heat Sensitive Sensor. The temperature Sensor must be removed or a wet rag must be wrapped around the suction line between the Sensor and the braze joint to protect the Sensor from failure due to overheating.

- 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.

**Note:** If system is installed in downflow, refrigerant sensor must be relocated after brazing. See section**Horizontal Sensor Relocation** on page 28.

**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.



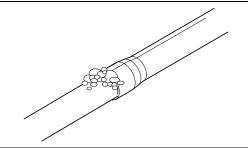
- Using dry nitrogen, pressurize the field piping and indoor coil to the lower of the maximum operating pressures listed on the name plates of the indoor and outdoor units (likely 600 psi).
- The test pressure after removal of the pressure source shall be maintained for at least one (1) hour with no decrease of pressure indicated by the test gauge, with the test gauge resolution not exceeding 30 psi.





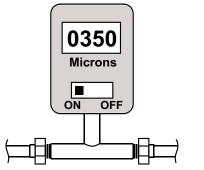
8. Check for leaks by using a soapy solution or bubbles at each brazed location.

**Note:** Remove nitrogen pressure and repair any leaks before continuing.



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

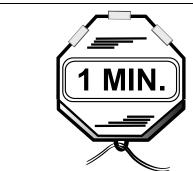
9. Evacuate until the micron gauge reads no higher than 350 microns, then close off the valve to the vacuum pump.



- Observe the micron gauge. Evacuation is complete if the micron gauge does not rise above 500 microns in one (1) minute and 1500 microns in ten (10) minutes.
  - 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.

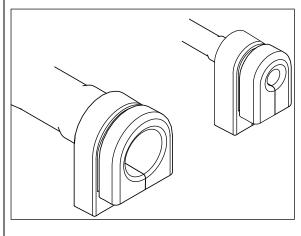
**Note:** Use soapy water to wipe any refrigerant oil off the panels.

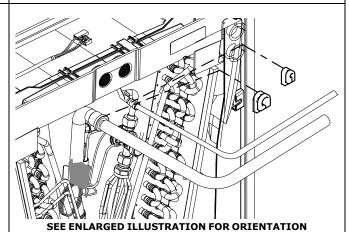


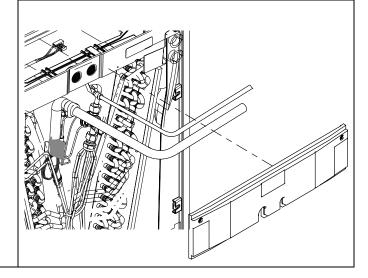
- 11. Replace the Line Set panel.
  - a. Allow time for tubing to cool.
  - b. Install grommets to line set piping in orientation shown.

**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.

- Slide the bottom of the Line Set panel down over the refrigerant lines and grommets. The grommets will seal the line openings.
- $\ \, \text{d.} \ \, \text{Tighten screws on the Line Set panel}.$







## **Condensate Drain Piping**

#### **Condensate Drain Piping Considerations**

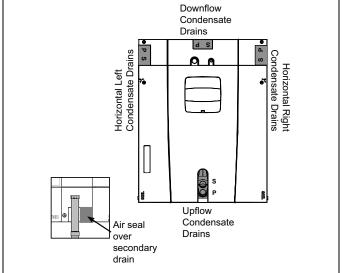
- Condensate drain plumbing must comply with national, state, and local codes.
- Route condensate drain lines away from air handler so they do not interfere with access panels.
- Slope the drain lines downward a minimum of 1/4" per foot, support per local codes.
- Do not use reducing fittings in the 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.

- Select the drain connections that are oriented for your application.
- 2. Prepare the condensate drain connections.
  - From the factory, the unit comes with plugs in both upflow condensate drains and an additional plug in the documentation packet.
  - For upflow applications, remove upflow condensate plug(s) and connect condensate piping.
  - 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.

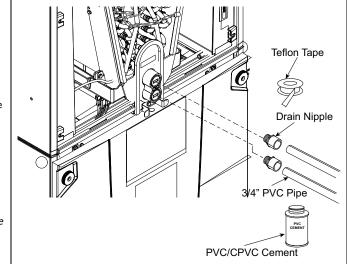


**Note:** A small amount of sealant must be applied around the drain line (s) passing through the panel to prevent air leakage and possible water drips.

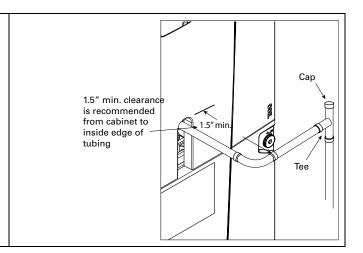
- Dry fit and test clearance for coil panel removal before applying PVC/CPVC cement.
- Use Teflon tape on the air handler drain line connections.
   Do not use pipe joint compound or PVC/CPVC cement on drain nipple.
- Hand tighten the drain pipe.
- For upflow installations, connect 3/4" PVC pipe to the 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.
  - 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.

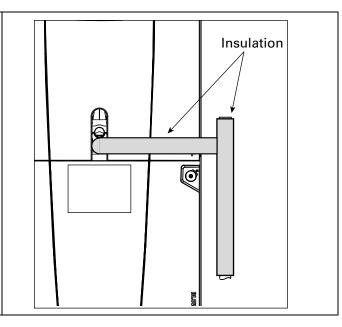


 Install a clean-out tee in the primary drain line for future maintenance. It is recommended that you install a cap on the top of the tee.



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

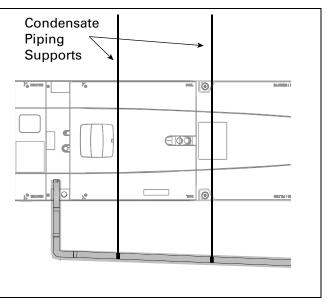
Provide a means of drainage to prevent winter freeze-up of condensate line (Optional depending on climate and application needs).



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.

**Note:** If using downflow or horizontal drain lines, A2L sensor is required to be relocated. refer to Four-Way Conversion section for more details.



## **Electrical** — High Voltage

## Table 20. High Voltage Power Supply

The high voltage power supply must match the equipment nameplate.

Power wiring, including ground wiring must comply with national, sate, and local codes.

Field wiring diagrams for supplementary electric heaters are shipped with the heaters.

To allow disconnection of the air handler from the power supply, a disconnection from the supply mains having a contact separation in all poles must be incorporated into the fixed wiring in accordance with national, state, and local codes.

## **A WARNING**

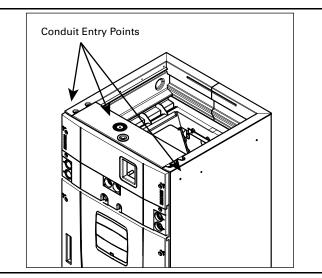
## LIVE ELECTRICAL COMPONENTS!

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.

#### Table 21. Make Electrical Connections

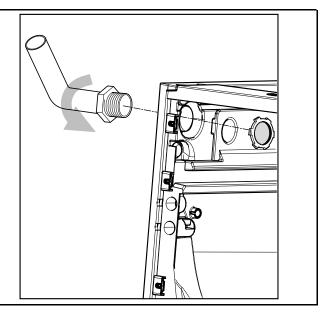
- 1. Route High Voltage wiring to unit.
- 2. Select a conduit entry point. Drill a hole for the desired conduit size up to 1-1/2" diameter. A locating target is identified on these units.
  - Select the entry point you will use to bring in your high voltage wiring.

**Note:** 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.



- 3. Route conduit (if used) to the entry point and connect.
  - a. Use one hand to secure the conduit nut from inside of the heater compartment.
  - b. Connect a field supplied 3/4" or 1-1/2" conduit to conduit nut.

**Note:** Reducing bushings may be required for your application.

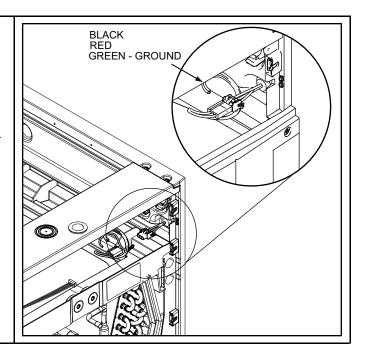


4. If an electric heater <u>IS NOT</u> being installed, remove the pigtail harness from the documentation pack and connect it to the plug on the inside of the Heater Compartment in the cabinet.

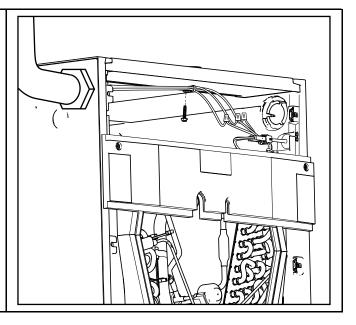
If an electric heater  $\underline{\rm IS}$  being installed, see the Installer's Guide shipped with the electric heater.

**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.

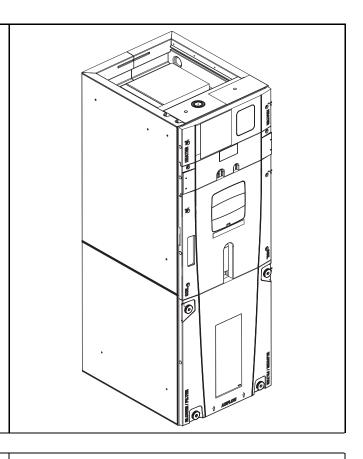


5. If the L1, L2, and ground wires enter the case from the left side, use a field supplied 1/2" — 5/8" maximum length screw and wire tie to hold the wires to the top center of the Heater Compartment.



6. Reinstall all panels before starting the air handler

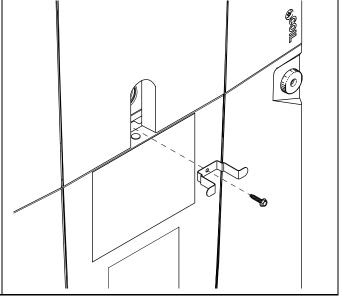
**Note:** After replacing all panels, loosen the Line Set Panel screws approximately 1/4 - 1/2 turn. This will improve the seal between the Heater Panel and Line Set Panel.



- 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

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



## **Electrical** — Low Voltage

5TAMX 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

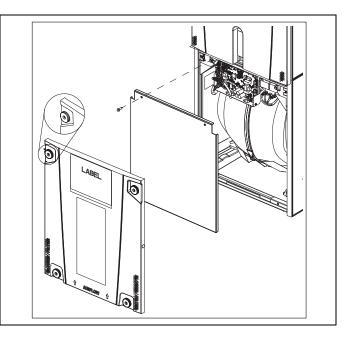
operation is configured from the factory with no defaults for accessories. All configurations for blower delays, accessories etc., need accomplished using the Diagnostic Mobile App.

## Table 22. Low Voltage Maximum Wire Length

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

## Table 23. Low Voltage Hook-up Instructions

- 1. Remove the Blower panels by removing the four fasteners and then pulling away from the cabinet to remove.
- Remove the block off plate by removing the two 5/16" screws at the top and pulling the top out and up off the support bosses at the bottom.

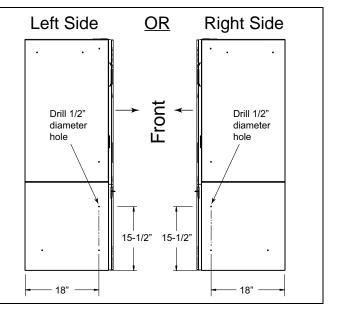


- 3. For low voltage entry, drill a 1/2" diameter hole in side of blower cabinet at location shown on illustration. If needed for additional accessory wiring, a second hole may be drilled 2" below the first. Two 3/8" bushings are supplied in the doc pack.
- 4. Route control wiring to unit and insert low voltage wiring.

**Note:** After the LV wires have been inserted through the new hole, the hole must be sealed.

**Note:** If a side return kit is used, the LV entry must be on the opposite side of the air handler.

**Note:** 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.



**Note:** Strain relief must be provided on the inside of the air handler cabinet for the low voltage wiring. Field supplied thermostat wires may be either wire tied to the control box or routed through the adhesive hook supplied in the doc pack.

5. Remove the external sheathing of the wiring approximately 5".

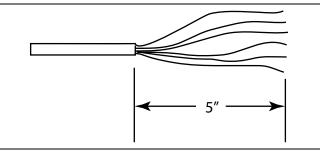
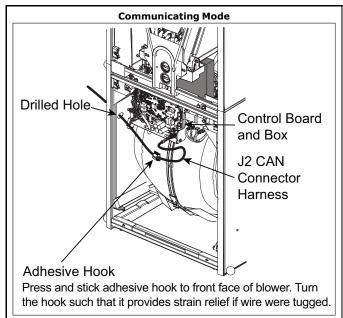
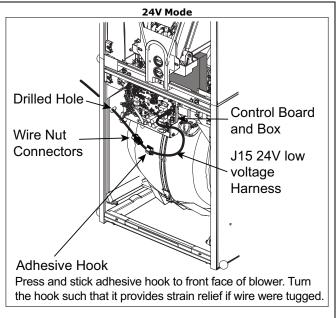
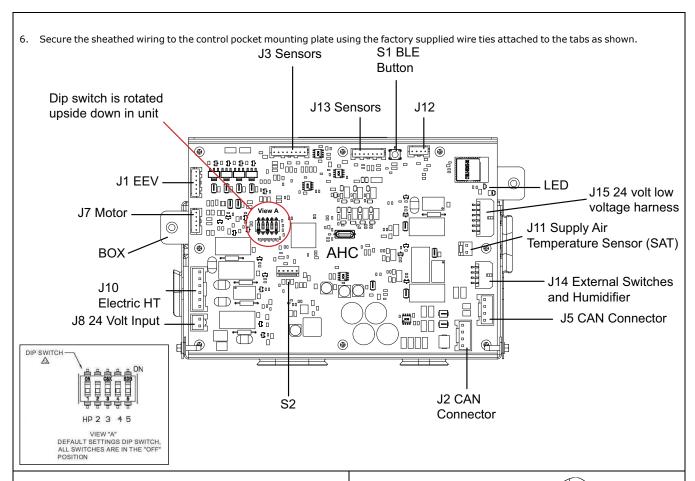


Table 24. Strain Relief for Low-Voltage Wiring Using Adhesive Hook



**Note:** For communicating mode, route the low voltage wiring through cabinet wall before terminating with included color-coded CAN connectors. (The CAN connector will not fit through the 1/2" drilled hole.) Refer to Table 19.





## 7. Mount Supply Air Temperature Sensor

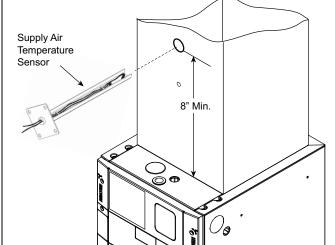
The Supply Air Temperature (SAT) Sensor must be mounted a minimum of  $8^{\prime\prime}$  above the edge of the supply duct (additional distance is preferred when possible). Locate the SAT Sensor in an area of the discharge air duct where less air turbulence is expected. Avoid dead air areas where representative 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 25. Link Communicating Low Voltage Wire Connectors

Link mode uses simple connectors for low voltage connections. These connections are color coded which makes the installation easier and quicker.

	Wire Colors
R	Red
DH	White
DL	Green
В	Blue

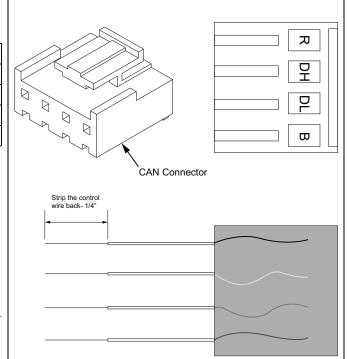
Do the following to make the connections from the actual thermostat wire to the connector.

**Note:** These connectors are necessary at the communicating outdoor unit, communicating indoor unit, distribution board(s), system controller and communicating accessories.

- 1. Strip the Red, White, Green and Blue thermostat wires back 1/4".
- 2. Insert the wires into the connector in the correctly colored locations.
- 3. When you feel it release, allow each wire to slide in further.
- 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.
- Connectors are ONE TIME USE. If a 18 ga. Thermostat wire gets broken off inside of the connector, the connector will need replaced.
- 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.

Connect the CAN connector into the male coupling on the low voltage harness at the Outdoor unit.

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.



Note: For use with 18 ga. solid core thermostat wire.

Note: Note: For connections to the AHC, do not add color-coded connectors to the thermostat wire until after it has been pulled inside the blower compartment. (The CAN connector will not fit through the 1/2" drilled hole.)

#### Table 26. GET THE APP:

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:



#### Table 27. External Switches and Accessories

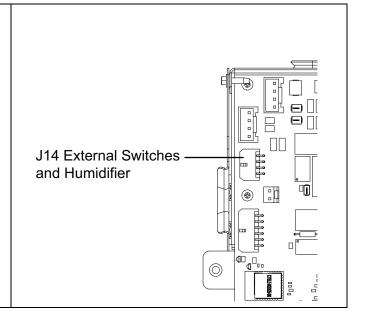
When connecting a humidifier or an external switch to the air handler, locate the harness(es) in the doc pack. The plug on the harness will plug into the AHC control board.

- 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.
- Accessory 1 and 2 are dry contacts and need source voltage provided from either the accessory or internally.

The external switches and accessories can be configured through the Smart Thermostat or the Diagnostics Mobile App.

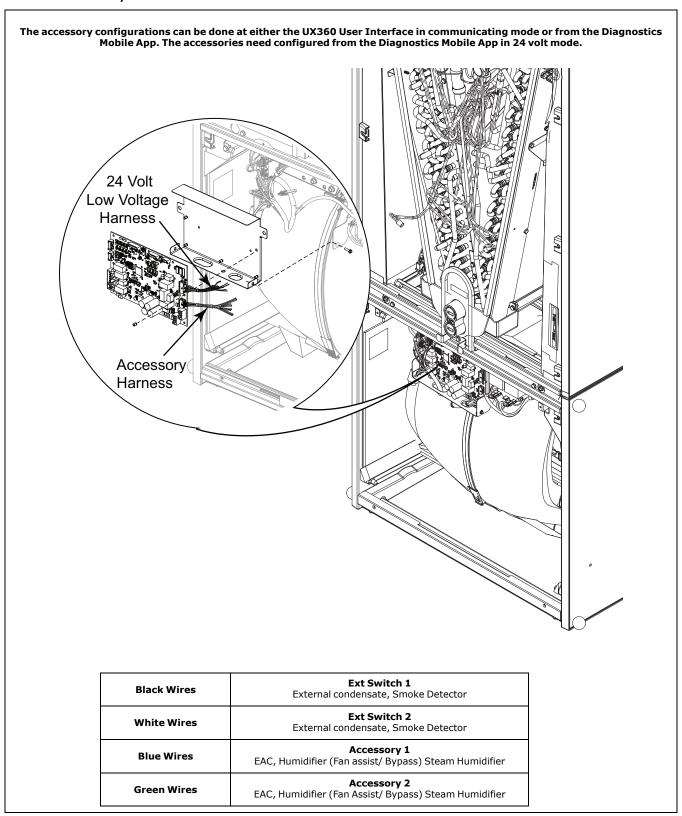
**Note:** Accessories can be configured in the UX360 User Interface or Diagnostics Mobile App in Link communicating mode ONLY.

**Note:** Accessories need configured using the Diagnostics Mobile App in 24 volt mode. There are no defaults in 24 volt mode.



18-GJ96D1-1C-EN 5<sup>-</sup>

Table 28. Accessory Harness Installation



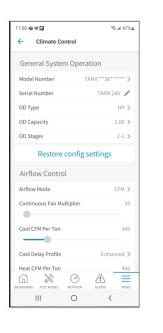
## Replacement AHC configuration – 24 volt mode

Replacement AHC boards need programmed and will not run without configuration **IN 24 Volt Mode**. There are 2 ways to perform the configuration. 1 of the methods is required to get the unit running. Combining 2 or more methods will result in unwanted operation.

- The most complete configuration will be accomplished using the Diagnostics Mobile App. In this app, there are configurations for the model number, blower delays and accessories.
- There is a Button Press method is to configure the size of the Air Handler and is accomplished by pressing the S1 button on the bottom of the control board in a sequence explained in this document.

Only 1 of these methods should be used.

#### Method #1:



## **Button Press AHC Configuration Method: Method #2**

#### Table 29. Configuration for Replacement AHC

Replacement AHC will need to be configured for unit size. Airflow will be set at 400 cfm/ton based on unit size configuration. These configurations can be done through the Diagnostics Mobile App with no manual steps or can be done manually without the Diagnostics Mobile App.

Step	Manual Program Unit Model Size	Red LED Status
1	Hold BLE button for 5 seconds and release.	Red LED will be off.
2	1 Red flash that indicates system is ready to program.	1 Red LED flash alerts user that it is now able to program.
3	If configuration is present, Red LED will flash based on the configuration.	Red LED will be off if no configuration is present.
4	5 quick Red LED flashes.	5 quick Red LED flashes.
5	Start programming by clicking BLE button.	13 press - 5TAMXB02AV21DAA 14 press - 5TAMXC03AV31DAA 15 press - 5TAMXD04AV31DAA 16 press - 5TAMXD05AV41DAA 17 press - 5TAMXD06AV41DAA 18 press - 5TAMXD07AV51DAA
6	After the last button press, Red LED will flash 1 time to acknowledge programming.	Red LED will now flash the number of times you pressed to confirm your configuration. If you programmed the wrong si within 2 seconds, start step 5 over.
7	Red LED will announce successful programming.	Red LED will turn on for 5 seconds announcing the configuration has been stored in NV memory correctly. Red I will be on for only 2 seconds if not stored properly. Programming is complete.

## Replacement AHC configuration — LINK Communicating Mode:

The system controller (SC360) will load important parameters in communicating mode and no interaction is necessary when replacing the AHC. IF the AHC and the System Controller (SC360) need replaced at the same time- contact your local FSR or technical support agent.

## **Product Specifications**

MODEL	5TAMXB02AV21DA	5TAMXC03AV31DA	5TAMXD04AV31DA
RATED VOLTS/PH/HZ.	200 — 230/1/60	200 - 230/1/60	200 - 230/1/60
RATINGS (a)	See O.D. Specifications	See O.D. Specifications	See O.D. Specifications
INDOOR COIL - Type	Plate Fin	Plate Fin	Plate Fin
Rows – F.P.I.	3 – 14	3 - 14	3 - 14
Face Area (sq. ft.)	3.67	5.04	5.50
Tube Size (in.)	3/8	3/8	3/8
Refrigerant Control	EEV	EEV	EEV
Drain Conn. Size (in.)(b)	3/4 NPT	3/4 NPT	3/4 NPT
DUCT CONNECTIONS	See Outline Drawing	See Outline Drawing	See Outline Drawing
INDOOR FAN - Type	Centrifugal	Centrifugal	Centrifugal
Diameter-Width (In.)	11 x 8	11 x 10	11 x 10
No. Used	1	1	1
Drive - No. Speeds	Direct — Variable	Direct – Variable	Direct – Variable
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table
No. Motors – H.P.	1 — 1/2	1 - 1/2	1 - 1/2
Motor Speed RPM	Variable ECM	Variable ECM	Variable ECM
Volts/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60
F.L. Amps	3.0 — 4.1 <sup>(c)</sup>	3.0 – 4.1 <sup>(c)</sup>	3.0 – 4.1 <sup>(c)</sup>
FILTER			
Filter Furnished?	No	No	No
Type Recommended	Throwaway	Throwaway	Throwaway
NoSize-Thickness	$1 - 16 \times 20 - 1$ in.	1 – 20 x 20 – 1 in.	1 – 22 x 20 – 1 in.
REFRIGERANT	R-454B	R-454B	R-454B
Ref. Line Connections	Brazed	Brazed	Brazed
Coupling or Conn. Size-in. Gas	3/4	3/4	7/8
Coupling or Conn. Size-in. Liq.	3/8	3/8	3/8
DIMENSIONS	H x W x D	H x W x D	HxWxD
Crated (In.)	51 x 20 x 24.5	56.8 x 23.5 x 24.5	58 x 25.5 x 24.5
Uncrated	49.9 x 17.5 x 21.8	55.7 x 21.3 x 21.8	56.9 x 23.5 x 21.8
WEIGHT			
Shipping (Lbs.)/Net (Lbs.)	126/116	150/138	157/146

<sup>(</sup>a) These Air Handlers are AHRI certified with various Split System Air Conditioners and Heat Pumps (AHRI STANDARD 210/240).
(b) 3/4" Male Plastic Pipe (Ref.:ASTM 1785–76)
(c) Check motor nameplate for actual FLA.

MODEL	5TAMXD05AV41DA	5TAMXD06AV41DA	5TAMXD07AV51DA
RATED VOLTS/PH/HZ.	200 - 230/1/60	200 - 230/1/60	200 - 230/1/60
RATINGS (a)	See O.D. Specifications	See O.D. Specifications	See O.D. Specifications
INDOOR COIL - Type	Plate Fin	Plate Fin	Plate Fin
Rows – F.P.I.	4 - 14	4 – 14	4 - 14
Face Area (sq. ft.)	5.04	5.96	5.96
Tube Size (in.)	3/8	3/8	3/8
Refrigerant Control	EEV	EEV	EEV
Drain Conn. Size (in.)(b)	3/4 NPT	3/4 NPT	3/4 NPT
DUCT CONNECTIONS	See Outline Drawing	See Outline Drawing	See Outline Drawing
INDOOR FAN - Type	Centrifugal	Centrifugal	Centrifugal
Diameter-Width (In.)	11 x 10	11 x 10	11 x 10
No. Used	1	1	1
Drive — No. Speeds	Direct – Variable	Direct – Variable	Direct – Variable
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table
No. Motors – H.P.	1 - 1/2	1 - 3/4	1 – 1
Motor Speed RPM	Variable ECM	Variable ECM	Variable ECM
Volts/Ph/Hz	208-230/1/60	208-230/1/60	208-230/1/60
F.L. Amps (c)	3.0 — 4.1	5.0 — 6.1	6.4 — 7.5
FILTER			
Filter Furnished?	No	No	No
Type Recommended	Throwaway	Throwaway	Throwaway
NoSize-Thickness	1 – 22 x 20 – 1 in.	1 – 22 x 20 – 1 in.	1 – 22 x 20 – 1 in.
REFRIGERANT	R-454B	R-454B	R-454B
Ref. Line Connections	Brazed	Brazed	Brazed
Coupling or Conn. Size-in. Gas	7/8	7/8	7/8
Coupling or Conn. Size-in. Liq.	3/8	3/8	3/8
DIMENSIONS	H x W x D	H x W x D	HxWxD
Crated (In.)	58 x 25.5 x 24.5	62.8 x 25.5 x 24.5	62.8 x 25.5 x 24.5
Uncrated	56.9 x 23.5 x 21.8	61.7 x 23.5 x 21.8	61.7 x 23.5 x 21.8
WEIGHT			
Shipping (Lbs.)/Net (Lbs.)	162/150	174/162	175/163

<sup>(</sup>a) These Air Handlers are AHRI certified with various Split System Air Conditioners and Heat Pumps (AHRI STANDARD 210/240).

<sup>(</sup>b) 3/4" Male Plastic Pipe (Ref.: ASTM 1785–76)
(c) Check motor nameplate for actual FLA.

## **Air Flow Performance Tables**

		STAMXB02AV21DA		IRFLOW PI	AIRFLOW PERFORMANCE		CONSTANT CFM MODE / CONSTANT TORQUE MODE	M MODE / C	ONSTAN	TTORQUE	MODE			
OUTDOOR MULTIPLIER	COOLING	AIRFLOW	EXTERNA	AL STATIC PR	NAL STATIC PRESSURE (Constant CFM / Constant Torque)	nstant CFM /	Constant	HEATING AIRFLOW	AIRFLOW		EXTERNAL STATIC PRESSURE	STATIC PRE	SSURE	
(LONS)	SETTING	POWER	0.1	0.3	0.5	0.7	6.0	SETTING	POWER	0.1	0.3	0.5	0.7	6.0
	290 CFM/ton	CFM Watts	407 / 546 22 / 40	430 / 403 51 / 48	398 / NA 77 / NA	347 / NA 103 / NA	255 / NA 133 / NA	290 CFM/ton	CFM Watts	416 22	426 49	401 76	330 101	291 134
i	350 CFM/ton	CFM Watts	534 / 630 39 / 57	549 / 531 71 / 68	542/360 103/73	509 / NA 132 / NA	445 / NA 156/ NA	350 CFM/ton	CFM	532 37	550 69	542 101	507	434
1.5 tons	400 CFM/ton	CFM		633 / 617 90 / 86	632 /501 125 / 96			400 CFM/ton	CFM	660 67	089	679	658	614
	450 CEM /top	CFM		_ \	707 /602	688 / 478	<b>\</b>	450 CEM/top	CFM	069	710	709	690	651
	290	CFM		_	607/470	583 / 208	_	290	CFM	593	613	809	582	527
	CFM/ton	Watts	54/68	85 / 81	119/90	150 / 94	175 / 138	CFM/ton	Watts	48	82	116	147	172
+	SSU CFM/ton	Watts	79/98	/33 / / 1 / 118 / 114	733/632 157/127	192 / 136	_ \	SSU CFM/ton	Watts	75	115	153	/16 189	6/9 218
7 COUS	400 † CFM/ton	CFM Watts	810 / 868 108 / 128	827 / 811 152 / 146	827 /740 194 / 161	813 / 652	782 / 543	400 (a) CFM/ton	CFM Watts	862	881 168	884 213	874 254	849
	450 CEM /top	CFM	903/954	918 / 902	920 /839	909 / 764	<b>\</b>	450 CEM/top	CFM	899	917	921	912	889
	290	CFM	741/820	757 / 759	757 / 681		705 / 452	290	CFM	738	757	758	742	707
	CFM/ton	Watts	86/110	126 / 127	166 /141	202 / 152	232 / 159	CFM/ton	Watts	81	122	162	198	229
	350 CFM/ton	CFM Watts	880 / 947 134 / 162	896 / 895 182 / 181	896 / 832 226 /198	885 / 757 267 / 211	859 / 665 302 / 221	350 CFM/ton	CFM Watts	876 127	895 174	898 220	888 261	864 297
2.5 tons	400	CFM	6301/966	1011/	1014/954	Ī	282 / 802	400	CFM	1064	1083	1089	1084	1066
	CFM/ton	Watts	188/220	241/240	291 / 257	3	375 / 280	CFM/ton	Watts	215	272	326	375	418
	450	MH	1120/	1135/	1137/	1129/	1108/946	450	O EM	1115	1133	1130	1133	1116
	CFM/ton	Watts	1180 260 / 297	1134 319 / 317	1081 373 /334	1019 422 / 347	463 / 355	CFM/ton	Watts	244	304	360	410	453
	290 CFM/ton	CFM	875 / 943	891 / 891	892 / 891	880 / 751	854 / 659 300 / 218	290 CFM/ton	CFM	871	890	894	883	859
	350	OEM	1045/	1060/	1063/			350	OEM ME	1040	1058	1064	1050	1041
	CFM/ton	Watts	1106 215 / 248	1059 270 / 268	1004 321 / 285	369 / 299	409 / 308	CFM/ton	Watts	202	257	310	358	401
3 tons	400 CFM/ton	CFM Watts	1200/ 1257 3157,357	1212 / 1211 276 / 374	1212 / 1159 132 / 200	1200 / 1099 180 / 103	1129/ 1030 181/100	400 CFM/ton	CFM Watts	1291 368	1302	1300	1220 478	1138 470
	L	,	1358/	1333/	452/390	1177 /	1095/	C L	i	L		0		0
	430 CFM/ton	Watts	1403 447 / 484	1359 482 / 502	1308 472 / 517	1251 466 / 527	1187 460 / 531	430 CFM/ton	Watts	422	483	1286 476	468	462
† Factory Setting	tina						Torque n	Torque mode will reduce airflow when static is above approximately 0.3" water	uce airflow	when static i	s above ap	proximate	ly 0.3" wa	ter
Status LED w	Status LED will blink once per 100 CFM requested lower	per 100 CFM		in torque mo	i. In torque mode, actual airflow may be	flow may be	•	column. All heating modes default to Constant CFM.	ault to Con	stant CFM.				
					40,000		• Cooling	Cooling airflow values are with wet coil, no filter	s are with w	et coil, no fili	ter	ı	ı	
				SIAMXB	02AV21DA	MINIMUM	5 I AMKBUZAV 21 DA MINIMUM Heating Airtiow Settings	TIOW Settin	sbı					
MODEL NO.	BAYEA(13/AC)04BK1 BAYEA(13/AC)04LG1 BAYEA(13/AC)05BK1 BAYEA(13/AC)05LG1	AC)04BK1 AC)04LG1 AC)05BK1 AC)05LG1	BAYEA(13/A BAYEA(13/A	.3/AC)08BK1 .3/AC)08LG1	BAYEA(13/AC) 10BK1 BAYEA(13/AC) 10LG1		BAYEA(13/AC) 10LG3	BAYEA(23/BC) 15BK1		BAYEA(23/BC) 15LG3		BAYEA(23/BC) 20BK1	BAYEA(33/CC) 25BK1	3/CC)
5TAMXB02AV21- DA	638/713	713	006/6E9	006	675/900		600/713	ı		ı		_	1	

(a) Factory heating default setting is 430 CFM/ton

WITHOUT HEAT PUMP / WITH HP — SEE AIR HANDLER NAMEPLATE FOR APPROVED COMBINATIONS

		STAMXC	<b>STAMXC03AV31DA AI</b>		RFLOW PERFORMANCE		STANT CFM I	MODE / CO	CONSTANT CFM MODE / CONSTANT TORQUE MODE	ROUE MC	DE			
	COOLING	AIRFLOW	EXTERNAL !	STATIC PRESS	URE (Constar	EXTERNAL STATIC PRESSURE (Constant CFM / Constant Torque)	ant Torque)	HEATING	AIRFLOW		<b>EXTERNAL STATIC PRESSURE</b>	ATIC PRE	SSURE	
MULITULEK (TONS)	SETTING	POWER	0.1	6.0	0.5	0.7	6.0	AIRFLOW	POWER	0.1	0.3	0.5	0.7	6.0
1-1/	290 CFM/ton	CFM Watts	492 / 581 22 / 30	442 / 397 45 / 41	408 / NA 71/ NA	353 / NA 98 / NA	221 / NA 129 / NA	290 CFM/ton	CFM Watts	485 21	437	393 69	349 97	300 130
	350 CEM /+on	CFM		553/515	527 / NA 87 / NA	493 / NA	472 / NA	350 CEM/ton	CFM	574 20		517	489	457
. 1.5 tons	400	Valls	50 / 40	633 / 598	612 / 403	_	563 / NA	400	VALLS	643			583	140 559
	CFM/ton	Watts		70 / 65	102/72	_	167 / NA	CFM/ton	Watts	37	67			165
	450	CFM		708/673	691/510	678 / NA	656 / NA	450	CFM	602				649
	Crim/ton 290	Watts	47 / 60	63///	580/360	568 / NA	169/ NA 542/ NA	CrM/ton	Watts	45		-	ł	186
	CFM/ton	Watts	36/47	66/62	98 / 88			CFM/ton	Watts	35	64		339 127	160
	320	CFM	734 / 815	730 / 698	717 / 541		684 / NA	350	CFM	731				229
7 tons †	CFM/ton	Watts	51/ 64	87 / 82	124/91	_	197 / NA	CFM/ton	Watts	49				193
	400 † CFM/ton	CFM Watts	822 / 898 66 / 81	824 / 792 107 / 101	817 / 657 149 / 112	811/NA 191/NA	797 / NA 231 / NA	400 (a) CFM/ton	CFM Watts	817 63	815	811	801 186	788 226
	450	CFM	910 / 982	916/884	916/763	914/610	904 / NA	450	CFM	905				895
	CFM/ton	Watts	85 / 102	131/123	178/136	226 / 140	270 / NA	CFM/ton	Watts	80				263
	290 CFM/ton	CFM Watts	755 / 860	753 / 749	742 / 606	732/397	712 / NA 205 / NA	290 CEM/ton	CFM Watte	753		735		706
	350	CFM		893 / 887	891 / 767	888 / 614	876 / NA	350	CFM	881		H	t	868
C	CFM/ton	Watts		125/124	170/137	217 / 141	260 / NA	CFM/ton	Watts	75	120			253
2.5 tolls	400	CFM	1	1010/1003		1018/765	1008 / NA	400	CFM	686				1000
	CFM/ton	Watts		160/158	213/173	266 / 179	315 / NA	CFM/ton	Watts	100	$\dashv$	$\dashv$	257	306
	450	CFM	1212	1135/1126	┈;		1134/NA	450	C EM	1104				1128
	CFM/ton	Watts	1/6	205 / 201		325 / 227	3/6/NA	CFM/ton	Watts	133				366
	CFM/ton	Watto	883 / 981 79 / 101	124 / 122	169 / 136	214 / 140	870/NA 257/NA	CFM/ton	Watte	7/8	118		208	252
	350	CFM	10	1059 / 1051	$\overline{}$		1059 / NA	350	CFM	1034	ł	1058	t	1053
3 +0 00	CFM/ton	Watts	150	177 / 174	233/190	288 / 197	339 / NA	CFM/ton	Watts	112				330
SI 03 0	400	CFM	1190 / 1304			_ `	1201 / 886	400	CFM	1177				1198
	CFM/ton	Watts	170/203	238 / 231	304 / 251	364 / 261	414 / 261	CFM/ton	Watts	15/	+	+	┪	403
	CFM/ton	Watts	241 / 282	318/311		441/345	472 / 345	CFM/ton	Watts	221	299	369		472
							Torque mo	ode will reduc	Torque mode will reduce airflow when static is above approximately 0.35" water	static is a	above approxi	imately 0.	35" water	
† Factory Setting	Setting						column.							
Status LEC	Status LED will blink once per 100 CFM requested. In torque mode, actual airflow may be lower.	oer 100 CFM r	equested. In t	orque mode, a	ctual airflow		<ul><li>All heating</li><li>Cooling ai</li></ul>	g modes defa rflow values a	All heating modes default to Constant CFM. Cooling airflow values are with wet coil, no filter	t CFM. oil, no filte	_			
				STAMXC	<b>STAMXC03AV31DA</b>	Minimum	<b>Heating Airflow Settings</b>	w Settings						
	BAYEA(13/AC)04BK1		BAYEA(13/AC)	BAYEA(13/AC)		C C C C C C C C C C C C C C C C C C C								ĺ
MODEL NO.	BAYEA(13/AC)04LG1 BAYEA(13/AC)05BK1 BAYEA(13/AC)05LG1		U8BK1 BAYEA(13/AC) 08LG1	10BK1 BAYEA(13/AC) 10LG1		BAYEA(13/AC) 10LG3	BAYEA(23,	/BC)15BK1 B	BAYEA(23/BC)15BK1 BAYEA(23/BC)15LG3		BAYEA(23/BC) 20BK1		BAYEA(33/CC) 25BK1	<u> </u>
5TAMX- C03AV31DA	723/808		723/1020	765/1020	020	808/089	/92/	765/1063	850/1105		-		-	
				WITHOUT	HEAT PUMP /	WITHOUT HEAT PUMP / WITH HP — SEE AIR HANDLER NAMEPLATE	E AIR HANDLE	R NAMEPLAT	Е			-		

(a) Factory heating default setting is 430 CFM/ton

	u)	STAMXD04	<b>STAMXD04AV31DA AIRFL</b>		OW PERFORMANCE		INT CFM MOL	JE / CONST	CONSTANT CFM MODE / CONSTANT TORQUE MODE	IE MODE				
OUTDOOR	COOLING	AIRFLOW	EXTERNAL STA		URE (Consta	TIC PRESSURE (Constant CFM / Constant Torque)	ant Torque)	HEATING	AIRFLOW		EXTERNAL STATIC PRESSURE	<b>FATIC PRES</b>	SURE	
MULITER (TONS)	SETTING	POWER	0.1		0.5	0.7	6.0	AIRFLOW SETTING	POWER	0.1	0.3			6.0
	290 CFM/ton	CFM Watts	605 / 747 31 / 48	573 / 565 59 / 58	553 / 306 88 / 62	548 / NA 120 / NA	546 / NA 153 / NA	290 CFM/ton	CFM Watts	606 31	574 58	557 5 87 1	551 5. 119 1.	549 152
	370 CEM/+on	CFM Watte	755/880			738/367	735 / NA	350 CEM/top	CFM Watte	720	705			691 187
2 tons	400	CFM	810/929	804 / 797		<b>N</b>	802 / 231	400	CFM	810	Н	H		802
	CFM/ton	Watts	58/80				216 / 120	CFM/ton	Watts	56	+	4	+	214
	450 CFM/ton	CFM Watts	900/1011 75/98	900 / 893	902 / 764 162 / 129	905 / 624 207 / 136	906 / 462 251 / 140	450 CFM/ton	CFM Watts	900 22			204 2	307 248
	290	CFM	742 / 891	729 / 752	722 / 592	_	720 / NA	290	CFM	742	┝		H	720
	CFM/ton	Watts	48/72	82/87	118/96		193 / NA	CFM/ton	Watts	46	┪	+	╂	191
L	3/0 CFM/ton	CrM Watts	922 / 1055 80/ 109	923 / 942 124 / 128	927/820 170/142	930 / 690 215 / 150	931 / 546 260 / 154	350 CFM/ton	CFM Watts	//8 99				239
2.5 tons	400 CFM/ton	CFM Watts	989/1118	995 / 1012		1008/779		400 CFM/ton	CFM	06 686	995	1000 10 188 2		1008 285
	450	CFM	1103/1228	1117 / 1131	_	1137/		450	CFM	1102	H	H	H	138
	CFM/ton	Watts	125/162	. 🔨		294 /		CFM/ton	Watts	119				340
	290 CFM/ton	CFM Watts	872 / 1009 70 / 97	871 / 890	871/761	874 / 620	874 / 457 240 / 139	290 CFM/ton	CFM Watts	871 67				875
	370 +	CFM	1089/1214	1102/	_	1121/	_	350	CFM	1033	┢			061
3 tons †	CFM/ton	Watts	121/157	176,	232 /	_	<u> </u>	CFM/ton	Watts	101	+	+	+	307
	400 CFM/ton	Watts	11/5/1298 147/188	-	1208/110/ 270/231	1215 / 1006 329 / 244	1211 / 899 382 / 251	400 (a) CFM/ton	CFM Watts	11/1				376
	450	CFM	1329 / 1447	1353 / 1361	1366/	<u> </u>		450	CFM	1324				1347
	CFM/ton	Watts		2/6/2/9				CFM/ton	Watts	192	+	+	-	448
	290 CFM/ton	Watts	1002/1131 $98/130$	1009 / 1026 147 / 152	198/167	1023 / 79 / 248 / 177	1024 / 6/1 296 / 182	290 CFM/ton	CFM Watts	997 92			-	293
	370	CFM	` `	\ `	\ `	\	_ \	350	CFM	1196				234
3.5 tons	CFIM/ton	Watts	1202/1700	249 / 252		ľ	1200 / 1126	CFIM/ton	Watts	1270	1404	1/15 3	ľ	387
	400 CFM/ton	Watts	1383 / 1499 227 / 278	1407 / 1414 303 / 305	1416 / 1325 372 / 325	1406/ 431/		400 CFM/ton	CFM Watts	1379 214			_	1390 473
	450 CFM/ton	CFM Watts	1579 / 1669 326 / 375	1583 / 1587 402 / 402	1567 / 1502 464 / 423	1474 / 1413 475 / 437	1357 / 1320 468 / 444	450 CFM/ton	CFM Watts	1499 268	1508 342	1586 15 460 4		1390 472
							• Torque mo	ode will reduc	Torque mode will reduce airflow when static is above approximately 0.35" water	static is	above approx	imately 0.3	5" water	
† Factory Setting	etting						All heating	g modes defa	All heating modes default to Constant CFM.	t CFM.				
Status LED	Status LED will blink once per 100 CFM requested. In torque mode, actual airflow may be lower.	er 100 CFM r	equested. In t	orque mode, a	actual airflow	may be lower.	• BAY	BAYEA(13/AC)08BK1	į					
							BATE	BAYEA(13/AC)USLG1	BAYEA(13/AC)08LG1	-i	<u>+</u>			
				FTAMYD	OAAV31DA	ETAMYD04AV31DA Minimim Heating Airflow Settings	Osting Airfle	W Settings	מבא מו ב אורוו אי	בר כסוו, ווס	ווורפו			
	DAVEA/13/AC	ŀ	(0 4) (1) 4 1)	יייייייים -	(00)		Cating Annua	w Setting		-				
MODEL NO.	BAYEA(13/AC)04BK1 BAYEA(13/AC)04LG1 BAYEA(13/AC)05BK1		BAYEA(13/AC) 08BK1 BAYEA(13/AC)	BAYEA(13/AC) 10BK1 BAYEA(13/AC)		BAYEA(13/AC) 10LG3	BAYEA(23/BC)15BK1		BAYEA(23/BC)15LG3		BAYEA(23/BC) 20BK1		BAYEA(33/CC)25BK1	BK1
)	BAYEA(13/AC)		08LG1	10LG1										
5TAMX- D04AV31DA	876/979		876/1236	927/1236	336	824/979	927/1288	88	1030/1339		1236/1442		1	
				WITHOUT	WITHOUT HEAT PUMP / WITH HP	1	SEE AIR HANDLER NAMEPLATE	R NAMEPLAT	E					

(a) Factory heating default setting is 420 CFM/ton

	u)	STAMXD	STAMXD05AV41DA AI		RFLOW PERFORMANCE		TANT CFM	MODE / COI	CONSTANT CFM MODE / CONSTANT TORQUE MODE	RQUE MO	DE			
OUTDOOR		AIRFLOW	EXTERNAL STA	STATIC PRESSI	JRE (Constai	ATIC PRESSURE (Constant CFM / Constant Torque)	int Torque)	HEATING	AIRFLOW		<b>EXTERNAL STATIC PRESSURE</b>	TATIC PRE	SSURE	
MULITPLIEK (TONS)	SETTING PO	POWER	0.1	0.3	0.5	0.7	6.0	AIRFLOW SETTING	POWER	0.1	0.3	0.5		6.0
	290 CFM/ton V	CFM Watts	747 / 905 48 / 77	743 / 764 87 / 94	742 / 591 127 / 102	741/342 168/106	739 / NA 207 / NA	290 CFM/ton	CFM Watts	744 51	741 90	740 130	738	734 209
	370 CFM/ton V	CFM Watts	937/1072 80/118	942/956		947 / 655	944 / 458	350 CFM/ton	CFM	889 76	892 123	894 169		890 259
2.5 tons		CFM Watts	1006/1136 95/138	1014 / 1027 148 / 159		_ \	1019 / 586	400 CFM/ton	CFM	1006	Н	H		1016 308
		CFM	1122/1247	1135/1146		1146		450	CFM	1124				1140
	CFM/ton V	Watts	125/176	185/200	245 / 216	303 / 224	357/223	CFM/ton	Watts	136	+	+	H	366
	nc	Watts		116/125	. ~	209/	254 / 143	CFM/ton	Watts	75				257
	370 SEM/fon V	CFM Watts	1108/1233	1120/1132	1128 / 1019 240 / 210	1131 / 893	350 / 217	350 CFM/ton	CFM Waffs	1053 115	1062 171	1067	1069 1 280	1066
3 tons	H	CFM	1316	1208/1220	· \			400	CFM	1196	Н	Н	Н	1212
	CFM/ton V	Watts	147/204	212/229	1271 / 1270	33//255	393 / 256	CFM/ton	Watts	13/7	+		ł	403
	nc	Watts	200 / 272	275/300		413/	1552 / 1001 469 / 334	430 CFM/ton	Watts	134/ 220	295		430	1342 480
	290 CEM/ton V	CFM	1020 / 1149	1028/1041	1034 / 919	1037 / 779	308 / 182	290 CFM/ton	CFM	1020			_	1031 315
		CFM	1408	1304/1317	_	1315/		350	CFM	1220				1236
3.5 tons †	uc	(0			\	384/	-	CFM/ton	Watts	169	236		362	417
	CFM/ton V	CFM Watts	1395/1514 221/299	1413/142/ 300/328	1421 / 1334 374 / 348	1415/1233	1369 / 1124 480 / 364	400 <sup>†</sup> CFM/ton	CFM	1440 244				1355 475
		CFM	1584/1687			1474/		450	CFM	1589	1592	1545		1315
	on	"	313/405		\	477/		CFM/ton	Watts	347	428	474		463
	CFM/ton V	CFM Watts	1156 / 1302 135 / 197	1169 / 1205 197 / 222	11/8 / 1098 259 / 239	1181 / 981 319 / 248	11/4/848 383/249	290 CFM/ton	CFM Watts	115/ 147	209	271	330	383
	370 CEM/ton V	CFM	1487 / 1618 288 / 359	1500 / 1534	1496 / 1445 441 / 411	1445 / 1350	1319/1248	350 CFM/ton	CFM	1400 244	1416			1335 475
4 tons		CFM	1616/1728			_	1301 / 1301	400	Valls	1615	1615	1545	1431	1313
	on	Watts	363/433	43/	. ~	472/		CFM/ton	Watts	363	444		_	462
	450 CFM/ton V	CFM Watts	1711 / 1711 432 / 432	1621 / 1621 456 / 456	1514 / 1514 465 / 465	1393 / 1393   3 460 / 460	1273 / 1273 453 / 453	450 CFM/ton	CFM Watts	1716 430	1629 453	1528 462	1411 1 458	1297 452
• † Factory Setting	†ina					•	• Torque mo	ode will reduc	Torque mode will reduce airflow when static is above approximately 0.35" water column.	static is a	bove approx	kimately 0.	.35" water	
	Status LED will blink once per 100 CFM requested. In torque mode, actual airflow may be lower.	LOO CFM re	:quested. In tα	orque mode, a	ctual airflow	may be lower.	All heating Cooling air	g modes defai rflow values a	All heating modes default to Constant CFM. Cooling airflow values are with wet coil, no filter	: CFM. il, no filter				
				STAMXD(	05AV41DA	<b>STAMXD05AV41DA Minimum Heating Airflow Settings</b>	ating Airflo	w Settings						
MODEL NO.	BAYEA(13/AC) 04BK1 BAYEA(13/AC) 04LG1	BAYE	BAYEA(13/AC) 08BK1	BAYEA(13/AC)10BK1		BAYEA(13/AC)10LG3 BAYEA(23/BC)15BK1	G3 BAYEA(23	/BC)15BK1	BAYEA(23/BC)		BAYEA(23/BC)		BAYEA(33/CC)25BK1	25BK1
	BAYEA(13/AC) 05BK1 BAYEA(13/AC) 05LG1	BAYEA(1	BAYEA(13/AC)08LG1	BAYEA(13/AC					15LG3		20BK1			
5TAMXD05AV41- DA	978/1093	97	978/1380	1035/1380	180	920/1093	1035	1035/1438	1150/1495		1380/1610		I	
				WITHOUT	1EAT PUMP /	WITHOUT HEAT PUMP / WITH HP — SEE AIR HANDLER NAMEPLATE	E AIR HANDLE	R NAMEPLATI		1				

		STAMXD	<b>STAMXD06AV41DA AIRFLOW PERFORMANCE</b>	IRFLOW PER	REORMANCE		INT CFM MOI	DE / CONST,	CONSTANT CFM MODE / CONSTANT TORQUE MODE	MODE				
OUTDOOR	COOLING	AIRFLOW	EXTERNAL ST	STATIC PRESS	URE (Constar	ATIC PRESSURE (Constant CFM / Constant Torque)	int Torque)	HEATING	AIRFLOW	EX	<b>EXTERNAL STATIC PRESSURE</b>	TATIC PRI	ESSURE	
MULITPLIEK (TONS)	AIRFLOW	POWER	0.1	6.0	0.5	0.7	6.0	AIRFLOW SETTING	POWER	0.1	0.3 0		0.7	6.0
	290	CFM	894 / 1018	<u> </u>		886 / 622	871/445	290	CFM	893	8 006	8 863	8 83	864
•	CFM/ton	Watts	69/91	114/		195 / 137		CFM/ton	Watts	72	4	4	4	30
	350 CEM/ton	CFM Wettr	106//1180	10/3/10/8	10/2/9/2	1065 / 859	1053 / 738	350 CEM/ton	CFM Watts	1068	$\frac{1073}{164} = \frac{10}{2}$	1070 1	1062   10 257   2	1049 205
3 tons	400	Valls	1205/1314	. I		1208/	<u> </u>	400	Walls	1207	ľ	ŀ	,	196
	CFM/ton	Watts	145/176	. \	. ~	309 /		CFM/ton	Watts	154	_		_	359
	450	CFM	1343 / 1451	_	_	_		450	CFM	1344	1352 13	+	-	344
	CFM/ton	Watts		_		_		CFM/ton	Watts	206				436
	290	CFM	1034/1149	_	_	_		290	CFM	1034		_	3 1	.014
	CFM/ton	Watts	98 / 123	~	_	$\overline{}$		CFM/ton	Watts	103	$\dashv$	4		281
	350	CFM	1228/1336	<u> </u>	<u> </u>	<u> </u>	1224 / 955	350	CFM	1229	10			.220
3.5 tons	CFM/ton	Watts	152/185	\	_	\	<u> </u>	CFM/ton	Watts	162	Ŧ.	+	Ţ	371
	400	Z Z	1389/1498	╮`	<u> </u>	\ `		400	Z :	1392	_		_	394
	CFIM/ton	Watts	212/253 1559/1660	1570 / 1502	<u> </u>	_	455/336	CFM/ton	Watts	977	+	+	,	465
	CFM/ton	Watto	290 / 343	367 / 377	439/404	15/5/1454	563 / 432	CFM/ton	Watte	310	386 4	15/0 I:	15/4 L:	1,567
	290	Valls	1168/1798	_		.	1160 / 905	290	Valls	1168	ł	ļ.,	~	1157
	CFM/ton	Watts	133 / 170	_	` \	293 /	• •	CFM/ton	Watts	141			_	341
	350 +	CFM	1389/1517	1399 / 1436	_	1		350	CFM	1392	1400 14		Ë	1394
+	CFM/ton	Watts	212 / 262		_	402/	455/346	CFM/ton	Watts	226				465
- 2101	400	CFM			/	1600/		+ 004	CFM	1586		-	Ī	1591
	CFM/ton	Watts	303 / 370		$\overline{}$	\	_	CFM/ton	Watts	325			538 5	595
	450	CFM			/	/	1698/1625	450	CFM	1794	_		_	2991
	CFM/ton	Watts	429 / 511	_	$\overline{}$	663/	<u> </u>	CFM/ton	Watts	459				655
	290	CFM	<u> </u>	╲ .	╮ .	1309 /	╮ .	290	CFM	1302				1301
	CFM/ton	Watts		<u> </u>	<u> </u>	<u> </u>	$\overline{}$	CFM/ton	Watts	189	252 3	┥	355 4	403
	350 CEM /+02	CFM	1558 / 1688	15/0/1613	15/5/1535	15/5/1455	1568/13/3	350 CEM /+on	CFM Watt	1557	_	1575 1:	_	.569
4.5 tons**	400	Walls		_				ADD ADD	Walls	1780	ľ	ł	ľ	701
	CFM/ton	Watts		. ~	594 / 573	. ~	` `	CFM/ton	Watts	428	_	_		629
	450	CFM		_	_			450	CFM	2018		~		0991
	CFM/ton	Watts	605 / 605	. 🔪	. 🔨	_	. ~	CFM/ton	Watts	605				628
<ul> <li>† Factory Setting</li> </ul>	ting						• If the air h	andler is appli	If the air handler is applied in downflow or horizontal configurations, the airflow	or horizor	ital configu	urations,	, the airflo	wc
<ul> <li>** Not an actual OD size</li> </ul>	ual OD size						off	י בערפפת 2000	CI FI. AIIIOW abo	2002		מוכפתור	י אמנים ה	<u> </u>
Status LED with	ill blink once pe	er 100 CFM re	Status LED will blink once per 100 CFM requested. In torque mode, actual airflow may be lower.	que mode, act	ual airflow ma	y be lower.	<ul><li>All heating</li></ul>	nodes defau	<ul><li>All heating modes default to Constant CFM.</li></ul>	Έ				
Iordue mode	will reduce air	now wnen sta	iorque mode wiii reduce airriow when static is above approximately 0.4  water column.	roximately 0.4	+ water colum	III.	<ul> <li>Cooling air</li> </ul>	rflow values ar	Cooling airflow values are with wet coil, no filter	no filter				
				STAMXD0	SAV41DA M	TAMXD06AV41DA Minimum Heating Airflow Settings	ing Airflow S	Settings						
	BAYEA(13/AC)04BK1	'AC)04BK1	BAYEA(13/AC)	BAY										
MODEL NO.	BAYEA(13/AC)04LG1	AC)04LG1	08BK1			BAYEA(13/AC)	BAYEA(23/E	3C)15BK1 BA	BAYEA(23/BC)15BK1 BAYEA(23/BC)15LG3		BAYEA(23/BC)		BAYEA(33/CC)	<u>()</u>
) 	BAYEA(13/AC)05BK1 BAYFA(13/AC)05LG1	AC)05BK1	BAYEA(13/AC)	) BAYEA(13/AC)	13/AC)	10LG3					20BK1		25BK1	
5TAMXD06AV41DA	_	,1188	1063 / 1500	1125/1500	1500	1000 / 1188	1125 / 1563	1563	1250 / 1625	15	1500/1750		1625 / 1813	13
				,	T/4/ CM1 IC TV	, , , , , , , , , , , , , , , , , , , ,	7 4 4 4 4 4 4	114			'	$\frac{1}{1}$	,	
					AI FUIVIF / WI	II NOOI NEAL PUMP / WITH NP — SEE AIR HANDLER NAMEPLATE	IK HAINDLER IN	AMEPLAIE						

		STAMX	<b>STAMXD07AV51DA AIRF</b> I	<b>FLOW PERFORMANCE</b>		STANTCF	<b>CONSTANT CFM MODE / CONSTANT TORQUE MODE</b>	STANT TOR	QUE MO	DE			
OUTDOOR	COOLING	AIRFLOW	EXTERNAL STATIC	IC PRESSURE (Constant CFM / Constant Torque)	ant CFM / Const	ant Torque)	HEATING	AIRFLOW	В	EXTERNAL S	STATIC PRESSUR	ESSURE	
MULTIPLIEK (TONS)	AIRFLOW SETTING	POWER	0.1 0.3	3 0.5		6.0	SETTING	POWER	0.1	0.3	0.5	0.7	6.0
	290 CFM/ton	CFM Watts	1040 / 1151   1068 / 94 / 119   151 /	1056 1075 / 941 148 203 / 168	1066 / 799 247 / 175	1046 / 607 283 / 165	7 290 5 CFM/ton	CFM Watts	1039 95	1065 151	1071 203	1063 247	1045 283
	370	CFM	/1343 1332 /	1336/		_ `	10	CFM	1247	1266	1270	1263	1248
3.5 tons	CFM/ton	Watts	1/8 236/	7 967	349 /	. I-	L CFM/ton	Watts	150	213	2/0	321	363
	400 CFM/ton	Watts	_ \	1426 1429 / 1346 273   337 / 301	1423 / 1256 393 / 319	1410 / 1154 440 / 325	54 400 5 CFM/ton	Watts	1407	1423 274	337	392	1409 439
	450	CFM	1650 1579 /	5 1584 /	_	_		CFM	1564	1578	1582	1578	1569
	CFM/ton	Watts	348 /	416/		٧.	Ü	Watts	274	348	416	476	529
	290 CFM/ton	CFM	_ \	1223 1213 / 1128 196   248 / 220	1206 / 1018 297 / 234	1189 / 887 337 / 233	7 290 3 CFM/ton	CFM	1185	1206	1210 248	1203	1187 337
	370	CFM	1514 1495 /	4 1499 /	1495/		_	CFM	1407	1423	1426	1421	1409
4 tons	CFM/ton	Watts	306 /	372 /	430 / 327	\	Ü	Watts	206	274	337	392	439
	400 CFM/ton	CFM Watts	1602 / 360 /	1625 1606 / 1554 369   429 / 399	1602 / 1475 490 / 420	1592 / 1399 543 / 430	99 400 ) CFM/ton	CFM Watts	1587 285	1600 360	1604 428		1592 543
	450 CFM/ton	CFM	1873 1784 / 443 468 /	1813 1789 / 1747 481 543 / 512		1782 / 1597	Ŭ	CFM	1770 385	1783 467	1788	1788	1782 671
	290	CFM	1431 1340 /	1345/	1338/1179	<u>.</u>		CFM	1321	1338	1342	Н	1322
	CFM/ton	Watts	240 /		353 / 288	<b>√</b> ŀ	2 CFM/ton	Watts	174	240	300	352	396
	3/0 <sup>†</sup> CFM/ton	CFM	315/320 392/	1602 1665 / 1530 357 463 / 386	1662/1451 527/407	1653 / 1363		CFM	1564	348	1582		1569
4.5 tons **†	400	CFM	1873 1784 /	3 1789/	1788/1675	<b>I</b> -		CFM	1770	1783	1788	1788	1782
	CFM/ton	Watts	468/	543 /	612/534		C	Watts	385	467	543		671
	450	CFM	2099 2004 /	2012/		/		CFM	1989	2003	2011		2011
	CFM/ton	Watts	535/612 62//0	1777/	1469/1337	4/55//16	5	Watts	534	626	711	788	856
	290 CFM/ton	Watts	294 /	1489 1473 / 1413 301 358 / 329	1468 / 132 / 415 / 348	1455 / 1251 463 / 356	CFM/ton	Watts	1452 224	146 / 294	358	1466 415	1454 463
	370	CFM	1826 1831 /	5 1837 /		_		CFM	1723	1736	1741	1740	1734
5 tons	CFM/ton	Watts	451 499/	_	$\sim$		5 CFM/ton	Watts	357	437	511	578	636
	400 CEM (+05	CFM	1964 / 2073 1978 / 3	2015 1986 / 1953	1987 / 1886	1983 / 1814	14 400	CFM	1964	1978	1985	1988	1985
	450	CFM	2347 2245 /	2252 /		_		CFM	2232	2245	2252	2252	2186
	CFM/ton	Watts	842 /	934 /			1 CFM/ton	Watts	741	842	934	1016	1023
	tting tral OD size					• If the	If the air handler is applied in downflow or horizontal configurations, the airflow should not exceed 2000 CFM. Airflow above 2000 CFM fould result in water blow-off	ied in downfle	ow or hori	zontal config 00 CEM coul	gurations Id result i	, the airflov	/ N-off
Status I FD w	ill blink once p	er 100 CFM	Status I FD will blink once per 100 CFM requested. In forque	e mode, actual airflow may be lower	w may be lower.	•	All heating modes default to Constant CFM	It to Constan	t CFM.				:
Torque mode	will reduce air	flow when s	Torque mode will reduce airflow when static is above approximately 0.4" water column	mately 0.4" water	column.	•	Cooling airflow values are with wet coil, no filter	re with wet α	oil, no filte	_			
			STAMXD07A	7AV51DA MINIM	MINIMUM HEATING	AIRFLOW	SETTINGS						
	BAYEA(13/AC)04BK1	/AC)04BK1											1
MODEL NO.	BAYEA(13/AC)04LG1 BAYEA(13/AC)05BK1 BAYEA(13/AC)05LG1	BAYEA(13/AC)04LG1 BAYEA(13/AC)05BK1 BAYEA(13/AC)05LG1	BAYEA(13/AC)08BK1 BAYEA(13/AC)08LG1	BAYEA(13/AC)10BK1	)LG1 BAYEA(13/AC)		BAYEA(23/BC)15BK1	1 BAYEA(23/BC) 15LG3	3/BC)	BAYEA(23/BC) 20BK1	(BC)	BAYEA(33/CC) 25BK1	
5TAMXD07AV51DA	DA 1063/1188	/ 1188	1063 / 1500	1125 / 1500	1000/1188	1188	1125/1563	1250 / 1625	1625	1500/1750	.20	1625/1813	113
			WI	WITHOUT HEAT PUMP / WITH HP —	/ WITH HP — SE	E AIR HAND	SEE AIR HANDLER NAMEPLATE						

## **Heater Attribute Data**

**Note:** Heater size will be announced when using the resistor that is being provided with the BAYEA heater. Heater can also be configured in the UX360 User Interface or Diagnostics Mobile App.

	5TAMXB02AV21DA												
				240 V	olt		208 Volt						
Heater Model No.	No. of Circuits	Ca <sub>l</sub>	oacity	Heater	Minimum Circuit	Maximum Overload	Capacity		Heater Amps	Minimum Circuit	Maximum Overload		
		kW	BTUH	Amps per Circuit	Ampacity	Protection	kW	BTUH	per Circuit	Ampacity	Protection		
No Heater	0	-	-	3.9 **	5	15	-	-	3.9 **	5	15		
BAYEA(13/AC)04+ +1	1	3.84	13100	16.0	25	25	2.88	9800	13.8	22	25		
BAYEA(13/AC)05+ +1	1	4.80	16400	20.0	30	30	3.60	12300	17.3	27	30		
BAYEA(13/AC)08+ +1	1	7.68	26200	32.0	45	45	5.76	19700	27.7	39	40		
BAYEA(13/AC)10+ +1 <sup>(a)</sup>	1	9.60	32800	40.0	55	60	7.20	24600	34.6	48	50		
BAYEA(13/AC)10LG3	AYEA(13/AC)10LG3 1-3 PH 9.60 32800 23.1 33 35								20.0	29	30		
Note: ** Motor Amps	lote: ** Motor Amps												

<sup>(</sup>a) Heater not qualified for 208V when installed in horizontal left position without Heat Pump

				5TAM	XC03AV3	B1DA							
				240 Volt			208 Volt						
Heater Model No.	Circuits Capacity Amps		Heater Amps per	Minimum Circuit Ampaci-	Circuit Maximum		Capacity		Minimum Circuit Ampacity	Maximum Overload Protection			
		kW	BTUH	Circuit	ty	Protection	kW	BTUH					
No Heater	0	-	-	3.9 **	5	15	-	-	3.9 **	5	15		
BAYEA(13/AC)04++1	1	3.84	13100	16.0	25	25	2.88	9800	13.8	22	25		
BAYEA(13/AC)05++1	1	4.80	16400	20.0	30	30	3.60	12300	17.3	27	30		
BAYEA(13/AC)08++1	1	7.68	26200	32.0	45	45	5.76	19700	27.7	39	40		
BAYEA(13/AC)10++1	1	9.60	32800	40.0	55	60	7.20	24600	34.6	48	50		
BAYEA(13/AC)10LG3	1-3 PH	9.60	32800	23.1	34	35	7.20	24600	20.0	29	30		
BAYEA(23/BC)15LG3	1-3 PH	14.40	42000	34.6	48	50	10.80	36900	30.0	42	45		
BAYEA(23/BC)15BK1 -	2	9.60	32800	40.0	55	60	7.20	24600	34.6	48	50		
Circuit 1(a) BAYEA(23/BC) L5BK1 - Circuit 2			25	3.60	12300	17.3	22	25					

<sup>(</sup>a) MCA and MOP for circuit 1 contains the motor amps

				5TAM)	KD04AV3	1DA						
				240 Volt	t		208 Volt					
Heater Model No.	No. of Circuits	Capacity		Heater Amps	Circuit	Maximum Overload	Capacity		Heater Amps per Circuit	Minimum Circuit Ampacity	Maximum Overload Protection	
		kW	BTUH	per Circuit	Ampacity	Protection	kW	BTUH				
No Heater	0	-	-	3.9 **	5	15	-	-	3.9 **	5	15	
BAYEA(13/AC)04++1	1	3.84	13100	16.0	25	25	2.88	9800	13.8	22	25	
BAYEA(13/AC)05++1	1	4.80	16400	20.0	30	30	3.60	12300	17.3	27	30	
BAYEA(13/AC)08++1	1	7.68	26200	32.0	45	45	5.76	19700	27.7	39	40	
BAYEA(13/AC)10++1	1	9.60	32800	40.0	55	60	7.20	24600	34.6	48	50	
BAYEA(13/AC)10LG3	1-3 PH	9.60	32800	23.1	33	35	7.20	24600	20.0	29	30	
BAYEA(23/BC)15LG3	1-3 PH	14.40	42000	34.6	48	50	10.80	36900	30.0	42	45	
BAYEA(23/BC)15BK1 -	2	9.60	32800	40.0	55	60	7.20	24600	34.6	48	50	
Circuit 1 (a) BAYEA(23/BC) 15BK1 - Circuit 2	2	4.80	16400	20.0	25	25	3.60	12300	17.3	22	25	
BAYEA(23/BC)20BK1 -	2	9.60	32800	40.0	55	60	7.20	24600	34.6	48	50	
Circuit 1 BAYEA(23/BC) 20BK1 - Circuit 2	2	9.60	32800	40.0	50	50	7.20	24600	34.6	43	45	
Note: ** Motor Amps												

<sup>(</sup>a) MCA and MOP for circuit 1 contains the motor amps

				5TAMXI	005AV41	DA						
				240 Volt			208 Volt					
Heater Model No.	No. of Circuits	Capacity			Maximum Overload	Сар	acity	Heater	Minimum Circuit	Maximum Overload		
		kW	BTUH	Amps per Circuit	Ampacity		kW BTUH		Amps per Circuit		Protection	
No Heater	0	-	-	3.9 **	5	15	-	-	3.9 **	5	15	
BAYEA(13/AC)04++1	1	3.84	13100	16.0	25	25	2.88	9800	13.8	22	25	
BAYEA(13/AC)05++1	1	4.80	16400	20.0	30	30	3.60	12300	17.3	27	30	
BAYEA(13/AC)08++1	1	7.68	26200	32.0	45	45	5.76	19700	27.7	39	40	
BAYEA(13/AC)10++1	1	9.60	32800	40.0	55	60	7.20	24600	34.6	48	50	
BAYEA(13/AC)10LG3	1-3 PH	9.60	32800	23.1	33	35	7.20	24600	20.0	29	30	
BAYEA(23/BC)15LG3	1-3 PH	14.40	42000	34.6	48	50	10.80	36900	30.0	42	45	
BAYEA(23/BC)15BK1 -	2	9.60	32800	40.0	55	60	7.20	24600	34.6	48	50	
Circuit 1 (a) BAYEA(23/BC) 15BK1 - Circuit 2	2	4.80	16400	20.0	25	25	3.60	12300	17.3	22	25	
BAYEA(23/BC)20BK1 -		9.60	32800	40.0	55	60	7.20	24600	34.6	48	50	
Circuit 1 BAYEA(23/BC) 20BK1 - Circuit 2	2	9.60	32800	40.0	50	50	7.20	24600	34.6	43	45	
Note: ** Motor Amps												

<sup>(</sup>a) MCA and MOP for circuit 1 contains the motor amps

				5TAMXD	06AV41I	)A							
				240 Volt			208 Volt						
Heater Model No.	No. of Circuits	· Canacity		Heater		Maximum	Сар	Capacity		Minimum Circuit	Maximum		
	G.: Ga.:55	kW	BTUH	Amps per Circuit		Overload Protection	kW	BTUH	Amps per Circuit	Ampacity	Overload Protection		
No Heater	0	-	-	5.7 **	7	15	-	-	5.7 **	7	15		
BAYEA(13/AC)04++1	1	3.84	13100	16.0	27	30	2.88	9800	13.8	24	25		
BAYEA(13/AC)05++1	1	4.80	16400	20.0	32	35	3.60	12300	17.3	29	30		
BAYEA(13/AC)08++1	1	7.68	26200	32.0	47	50	5.76	19700	27.7	42	45		
BAYEA(13/AC)10++1	1	9.60	32800	40.0	57	60	7.20	24600	34.6	50	50		
BAYEA(13/AC)10LG3	1-3 PH	9.60	32800	23.1	35	40	7.20	24600	20.0	31	35		
BAYEA(23/BC)15LG3	1-3 PH	14.40	42000	34.6	50	60	10.80	36900	30.0	44	45		
BAYEA(23/BC)15BK1 - Circuit 1 (a) BAYEA(23/BC)15BK1 -	2	9.60	32800	40.0	57	35	7.20	24600	34.6	50	50		
Circuit 2	2	4.80	16400	20.0	25	50	3.60	12300	17.3	22	25		
BAYEA(23/BC)20BK1 - Circuit	,	9.60	32800	40.0	57	60	7.20	24600	34.6	50	50		
1 BAYEA(23/BC)20BK1 - Circuit 2	2	9.60	32800	40.0	50	50	7.20	24600	34.6	43	45		
BAYEA(33/CC)25BK1 — Circuit		9.60	32800	40.0	57	60	7.20	24600	34.6	50	50		
1 BAYEA(33/CC)25BK1 — Circuit 2 BAYEA(33/CC)25BK1	3	9.60	32800	40.0	50	50	7.20	24600	34.6	43	45		
— Circuit 3		4.80	16400	20.0	25	25	3.60	12300	17.3	22	25		
Note: ** Motor Amps													

<sup>(</sup>a) MCA and MOP for circuit 1 contains the motor amps

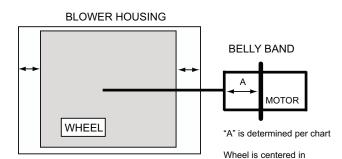
				5TAMXD	07AV51	)A						
				240 Vol	t		208 Volt					
Heater Model No.	No. of Circuits	Сар	Capacity			Maximum Overload	Capacity		Heater	Minimum Circuit	Maximum Overload	
		kW	BTUH	Amps per Circuit		Protection	kW	BTUH	Amps per Circuit		Protection	
No Heater	0	1	-	6.9 **	9	15	-	-	6.9 **	9	15	
BAYEA(13/AC)04++1	1	3.84	13100	16.0	29	30	2.88	9800	13.8	26	30	
BAYEA(13/AC)05++1	1	4.80	16400	20.0	34	35	3.60	12300	17.3	30	30	
BAYEA(13/AC)08++1	1	7.68	26200	32.0	49	50	5.76	19700	27.7	43	45	
BAYEA(13/AC)10++1	1	9.60	32800	40.0	59	60	7.20	24600	34.6	52	60	
BAYEA(13/AC)10LG3	1-3 PH	9.60	32800	23.1	37	40	7.20	24600	20.0	33	35	
BAYEA(23/BC)15LG3	1-3 PH	14.40	42000	34.6	51	60	10.80	36900	30.0	45	45	
BAYEA(23/BC)15BK1 - Circuit 1  (a) BAYEA(23/BC)15BK1 -	2	9.60	32800	40.0	59	60	7.20	24600	34.6	52	60	
Circuit 2	2	4.80	16400	20.0	25	25	3.60	12300	17.3	22	25	
BAYEA(23/BC)20BK1 - Circuit 1	2	9.60	32800	40.0	59	60	7.20	24600	34.6	52	60	
BAYEA(23/BC)20BK1 - Circuit 2	2	9.60	32800	40.0	50	50	7.20	24600	34.6	43	45	
BAYEA(33/CC)25BK1 (b) -		9.60	32800	40.0	59	60	7.20	24600	34.6	52	60	
Circuit 1 BAYEA(33/CC)25BK1 - Circuit 2 BAYEA(33/CC)25BK1 -	3	9.60	32800	40.0	50	50	7.20	24600	34.6	43	45	
Circuit 3		4.80	16400	20.0	25	25	3.60	12300	17.3	22	25	
Note: ** Motor Amps			-	-	-				-	-		

**Note:** See Product Data or Air Handler nameplate for approved combinations of Air Handlers and Heaters.

**Note:** Heater model numbers may have additional suffix digits.

 <sup>(</sup>a) MCA and MOP for circuit 1 contains the motor amps
 (b) Heater not qualified for 208V when installed in horizontal left position without Heat Pump

# Distance from Belly Band to Shaft Face of Motor for Minimum Vibration



MODEL	DIM " A "
5TAMXB02AV21DA	2-3/8
5TAMXC03AV31DA	2-3/8
5TAMXD04AV31DA	2-3/8
5TAMXD05AV41DA	2-3/8
5TAMXD06AV41DA	2-3/8
5TAMXD07AV51DA	2-3/8
-	

## **Filters**

## Table 30. Filter Considerations

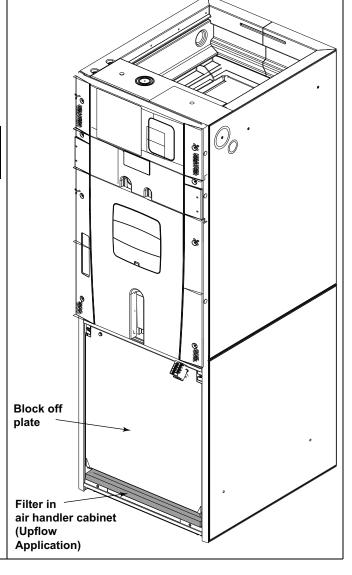
- A filter must be installed within the system.
- A filter channel is provided in the unit at the bottom of the Blower/ Filter compartment.

Blower Housing

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.

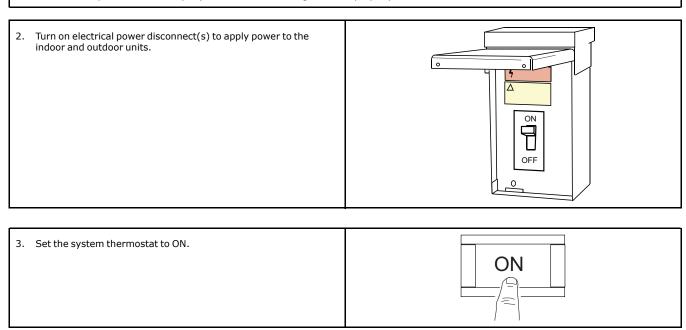
Table 31. Filter Sizes

Cabinet Width	17.5"	21.0"	23.5"
Filter Size	16 x 20	20 x 20	22 x 20



## **System Start Up**

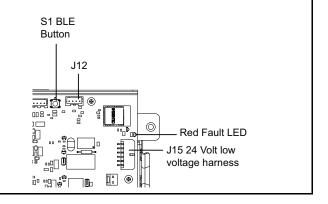
1. Make sure all panels are securely in place and that all wiring has been properly dressed and secured.



## **Fault Reporting**

The Air Handler Control (AHC) will show active faults and store historical faults in 24 volt mode. In 24 volt mode, the AHC will report active faults continuously and will report the last four faults stored after a power cycle of the unit. Refer to the LED flash code or Diagnostics Mobile App for fault code identification.

In Link Communicating mode, faults will report to the UX360 User Interface Service Menu and Diagnostics Mobile App.

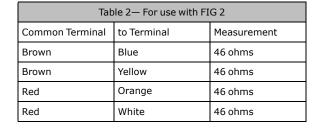


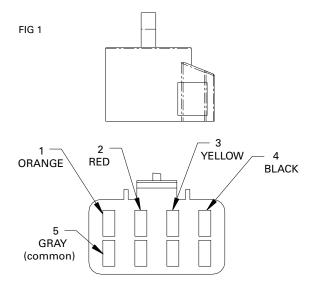
## Table 32. RED LED Fault Codes

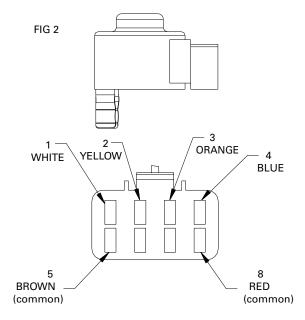
Flash Code	Alarm Group	Alarm
2	Equipment Missing, Mismatch or Configuration Issue	No Model Number, Bad Model Number, No Valid Configuration
3	Blower Issue	Blower Communication, Low or No Airflow, Blower Motor Power High, Blower Motor Mismatch
4	EEV Issue	Coil is shorted or open, Valve Stuck, ET, GT, Low SH, High SH
5	Sensor Issue	SAT Sensor out of range, RA Static Pressure Sensor out of range
6	Indoor Heat Issue	CFG1-Electric Heat not detected, CFG2-Electric Heat not configured
7	External Switch	Switch 1 or Switch 2
8	Condensate Issue	
9	Frost Issue	

# Stepper Motor Tables —For use with Low and High Superheat Troubleshooting

Tab	Table 1 — For use with FIG 1									
Common Terminal	to Terminal	Measurement								
Gray	Orange	46 ohms								
Gray	Red	46 ohms								
Gray	Yellow	46 ohms								
Gray	Black	46 ohms								







## **Unit Test Options**

## Table 33. 24 Volt Mode:

Internal test can only be triggered using the Diagnostic Mobile App. There is not a local way to run any test mode manually. Tests available from the Diagnostics Mobile App are:

The monitor menu in the Diagnostic Mobile App will show important information while in test modes that prove the test is successful.

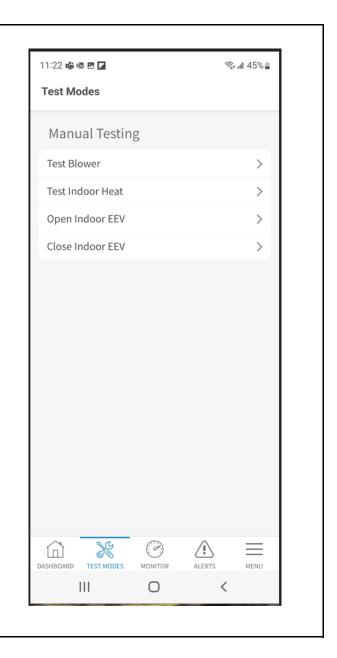
**Test Blower** allows the user to select a specific airflow to run the blower at. It is selectable from a slider and is dynamic and will speed up or slow down as the user moves the slider.

**Test Indoor Heat** will test the different stages of indoor heat to prove they are working.

**Open Indoor EEV** test will open the TAMX EEV fully for 30 seconds. This can be verified by watching the monitor screens during this test.

**Close Indoor EEV** test will close the TAMX EEV completely for 90 seconds. If the system is running, you will see the refrigerant pressures react to a closed valve and will likely fault on low pressure.

All tests can be stopped during the test and do not need to finish.



## **Table 34. Link Communicating Mode:**

All test modes can be run from the User Interface (UX360) or the Diagnostics Mobile App.

## **ET / GT and Supply Air Temperature Sensor**

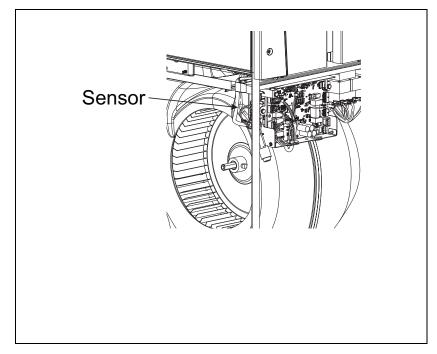
Table 35. Thermal Resistance and Voltage Table

TEMP F	ТЕМР С	THERMISTOR RESISTANCE (OHMS) *	Volts DC at plug J3 EVAP TEMP (ET) Orange to Orange GAS TEMP (GT) Black to	TEMP F	ТЕМР С	THERMISTOR RESISTANCE (OHMS) *	Volts DC at plug J3 EVAP TEMP (ET) Orange to Orange GAS TEMP (GT) Black to	TEMP F	ТЕМР С	THERMISTOR RESISTANCE (OHMS) *	Volts DC at plug J3 EVAP TEMP (ET) Orange to Orange GAS TEMP (GT) Black to
20	-6.67	45075.79	Black 1.89	64	17.78	13476.21	<u>Black</u> 1.17	108	42,22	4752.65	8lack 0.50
21	-6.11	43763.76	1.88	65	18.33	13138.29	1.15	100	42.78	4649.14	0.49
22	-5.56	42494.36	1.88	66	18.89	12809.93	1.13	110	43.33	4548.19	0.48
23	-5.00	41266.06	1.87	67	19.44	12490.82	1.11	111	43.89	4449.73	0.47
24	-4.44	40077.41	1.86	68	20.00	12180.67	1.09	112	44.44	4353.70	0.46
25	-3.89	38926.99	1.85	69	20.56	11878.94	1.07	113	45.00	4260.02	0.45
26	-3.33	37813.46	1.84	70	21.11	11585.67	1.06	114	45.56	4168.63	0.43
27	-2.78	36735.53	1.83	71	21.67	11300.63	1.04	115	46.11	4079.48	0.43
28	-2.22	35691.94	1.82	72	22.22	11023.53	1.02	116	46.67	3992.49	0.42
29	-1.67	34681.49	1.81	73	22.78	10754.14	1.00	117	47.00	3907.61	0.41
30	-1.11	33703.02	1.79	74	23.33	10492.21	0.98	118	47.88	3824.78	0.40
31	-0.56	32755.43	1.78	75	23.89	10237.51	0.96	119	48.33	3743.96	0.40
32	0.00	31837.65	1.77	76	24.44	9989.83	0.95	120	48.89	3665.67	0.39
33	0.56	30948.64	1.75	77	25.00	9748.93	0.93	121	49.44	3588.08	0.38
34	1.11	30087.41	1.74	78	25.56	9514.63	0.91	122	50.00	3512.92	0.37
35	1.67	29253.02	1.72	79	26.11	9287.72	0.89	123	50.56	3439.56	0.36
36	2.22	28444.53	1.71	80	26.67	9064.99	0.88	124	51.11	3367.95	0.36
37	2.78	27661.07	1.69	81	27.22	8849.27	0.86	125	51.67	3298.03	0.35
38	3.33	26901.79	1.67	82	27.78	8639.38	0.84	126	52.22	3229.76	0.34
39	3.89	26165.86	1.66	83	28.33	8435.31	0.83	127	52.78	3163.10	0.34
40	4.44	25452.49	1.64	84	28.89	8236.36	0.81	128	53.33	3098.01	0.33
41	5.00	24760.93	1.62	85	29.44	8042.90	0.80	129	53.89	3031.44	0.32
42	5.56	24090.44	1.60	86	30.00	7854.60	0.78	130	54.44	2972.36	0.31
43	6.11	23440.31	1.58	87	30.56	7671.30	0.77	131	55.00	2911.73	0.31
44	6.67	22809.87	1.57	88	31.11	7492.86	0.75	132	55.56	2852.50	0.30
45	7.22	22198.45	1.55	89	31.67	7319.12	0.74	133	56.11	2794.65	0.30
46	7.78	21605.43	1.53	90	32.22	7149.96	0.72	134	56.67	2738.13	0.29
47	8.33	21030.19	1.51	91	32.78	6985.24	0.71	135	57.22	2682.92	0.28
48	8.89	20472.15	1.49	92	33.33	6824.82	0.69	136	57.78	2928.98	0.28
49	9.44	19930.75	1.47	93	33.89	6668.58	0.68	137	58.33	2576.27	0.27
50	10.00	19405.43	1.45	94	34.44	6516.41	0.67	138	58.89	2524.77	0.27
51	10.56	18895.66	1.43	95	35.00	6368.17	0.65	139	59.44	2474.44	0.26
52	11.11	18400.95	1.41	96	35.56	6223.77	0.64	140	60.00	2425.25	0.26
53	11.67	17920.80	1.39	97	36.11	6083.08	0.63	141	60.56	2377.18	0.25
54	12.22	17454.74	1.37	98	36.67	5946.01	0.61	142	61.11	2330.20	0.25
55	12.78	17002.31	1.35	99	37.22	5812.44	0.60	143	61.67	2284.27	0.24
56	13.33	16563.08	1.33	100	37.78	5682.28	0.59	144	62.22	2239.38	0.24
57	13.89	16136.61	1.31	101	38.33	5555.43	0.58	145	62.78	2195.49	0.23
58	14.44	15622.51	1.29	102	38.89	5431.80	0.56	146	63.33	2152.59	0.23
59	15.00	15320.36	1.27	103	39.44	5311.29	0.55	147	63.89	2110.64	0.22
60	15.56	41929.80	1.25	104	40.00	5193.82	0.54	148	64.44	2069.63	0.22
61	16.11	14550.46	1.23	105	40.56	5079.31	0.53	149	65.00	2029.52	0.21
62	16.67	14181.97	1.21	106	41.11	4967.66	0.52	150	65.56	1990.31	_
63	17.22	13824.00	1.19	107	41.67	4858.80	0.51		Values	should be wit	hin +/- 5%

## **Return Air Temperature Sensor**

Table 36. Thermal Resistance and Voltage Table

TEMP 0 <sub>F</sub>	TEMP <sup>0</sup> C	THERMISTOR RESISTANCE (OHMS)	Volts DC at J13 pins 1&2 (pin to pin)
40	4.4	25452	1.85
45	7.2	22198	1.70
50	10.0	19405	1.55
55	12.8	17002	1.41
60	15.6	14930	1.28
65	18.3	13138	1.17
70	21.1	11586	1.06
75	23.9	10238	0.96
80	26.7	9065	0.87
85	29.4	8043	0.78
90	32.2	7150	0.71
95	35.0	6368	0.64
100	37.8	5682	0.58
105	40.6	5079	0.53
110	43.3	4548	0.48
115	46.1	4079	0.43
120	48.9	3665	0.39
125	51.7	3298	0.35



## **Sequence of Operation**

**5TAMX** 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 5TAMX 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.

- 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.
- 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 - 24 Volt Mode Cooling Mode

 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)

- The AHC will receive input from the two temperature sensors and start to control 1st stage superheat.
- 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) - 24 Volt Mode Heat pump (compressor only)

- 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.
- 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**

- 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.
- 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.
- The AHC sends a command to the serial communicating blower motor to run at the requested CFM.

#### **Defrost**

 The OD unit will initiate defrost and send a message to the AHC.

- 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

- 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.

**5TAMX** 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.

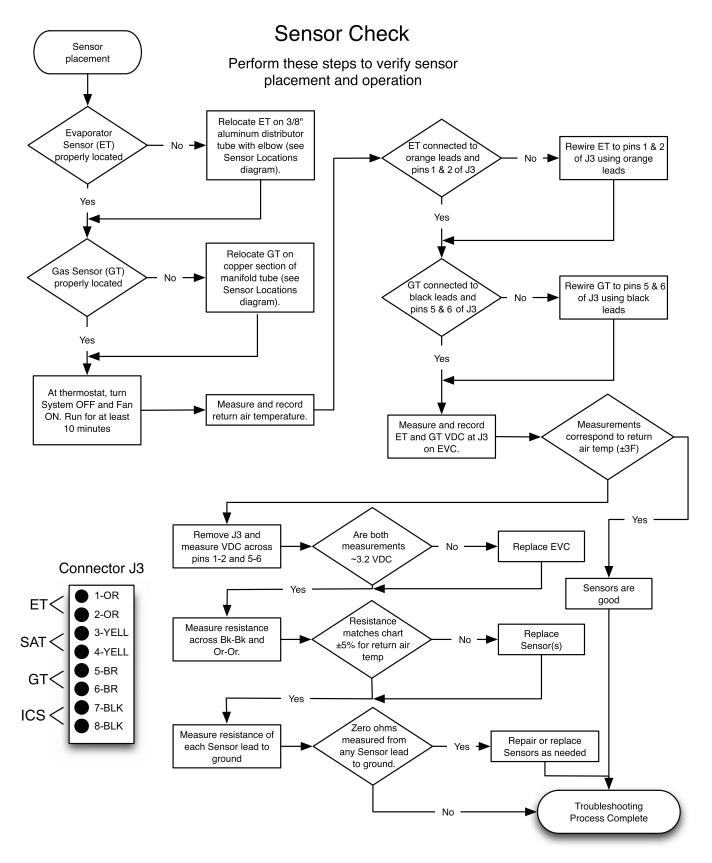
## **Checkout Procedures**

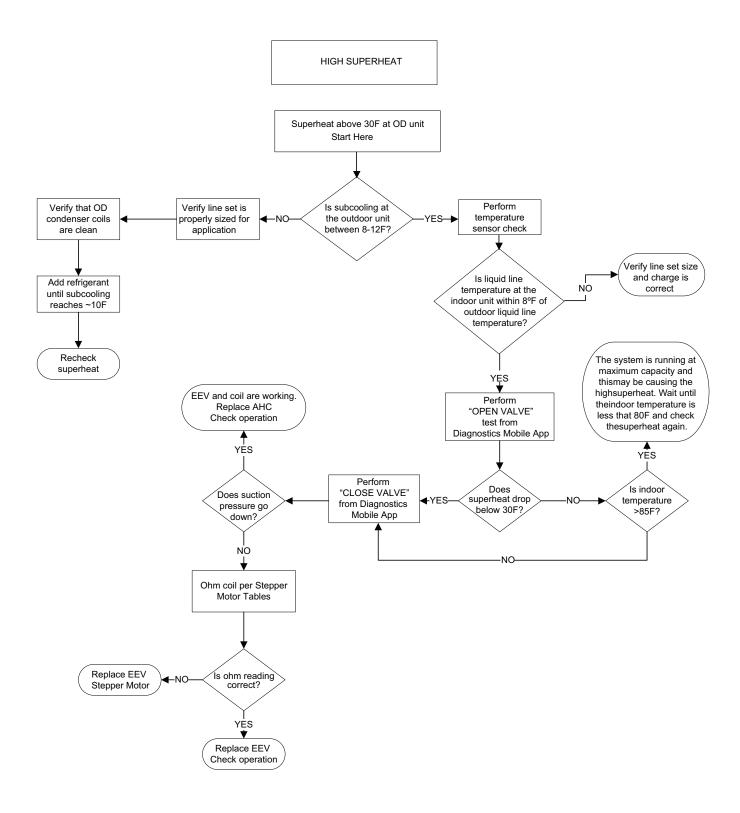
The final phase of the installation is the system Checkout Procedures. The following list represents the most common items covered in a Checkout Procedure. Confirm all requirements in this document have been met.

	All wiring connections are tight and properly secured.		Supply registers and return grilles are open, unobstructed, and air filter is installed.
	Voltage and running current are within limits.		Indoor blower and outdoor fan are operating smoothly and
	Heater size resistor installed in the electric heat harness if used.		without obstruction.
	All refrigerant lines (internal and external to equipment) are isolated, secure, and not in direct contact with each other or structure.		Indoor blower motor set on correct speed setting to deliver required CFM.
	of accure.		Cover panels are in place and properly tightened.
	All braze connections have been checked for leaks. A vacuum of 350 microns provides confirmation that the refrigeration system is leak free and dry.		For gas heating systems, manifold pressure has been checked and all gas line connections are tight and leak free.
	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.		For gas heating systems, flue gas is properly vented.
			System functions safely and properly in all modes.
	Ductwork is sealed and insulated.		Owner has been instructed on use of system and given manual.
	All drain lines are clear with joints properly sealed. Pour water into drain pan to confirm proper drainage.		

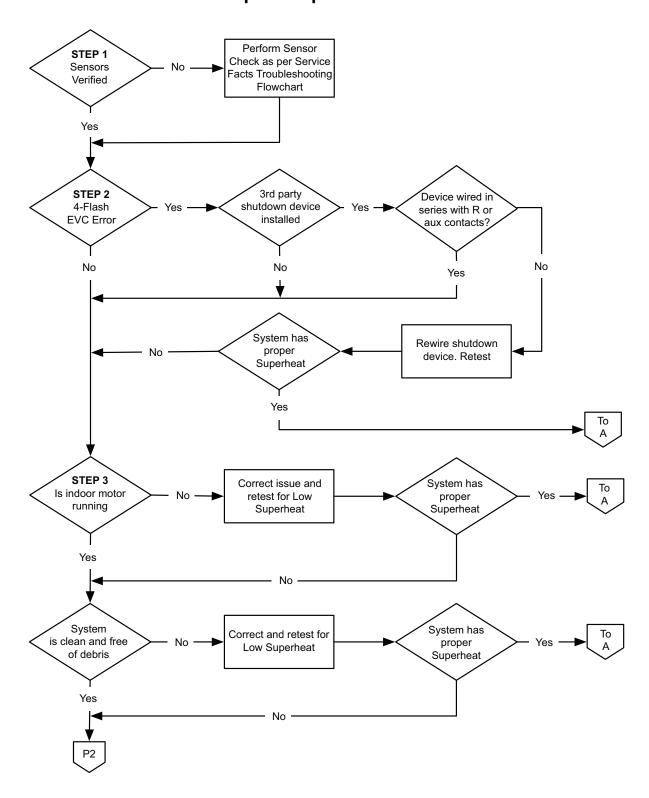
This product may be covered by one or more of the following patents and their foreign equivalents: 5621888, 5901156, 6208263, 6353376, and 6448901. Other patents are pending. Made under license.

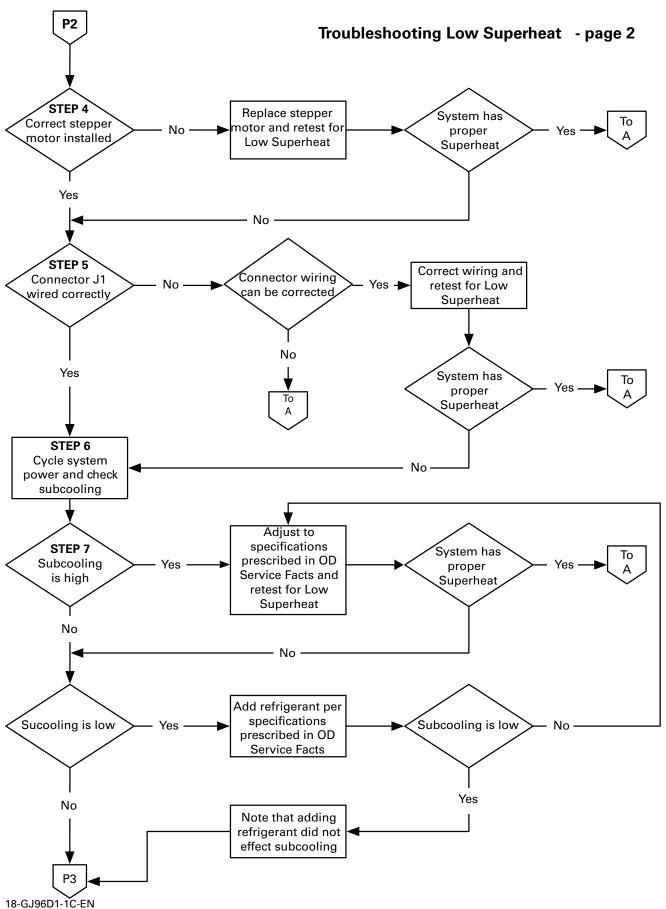
## **Troubleshooting**

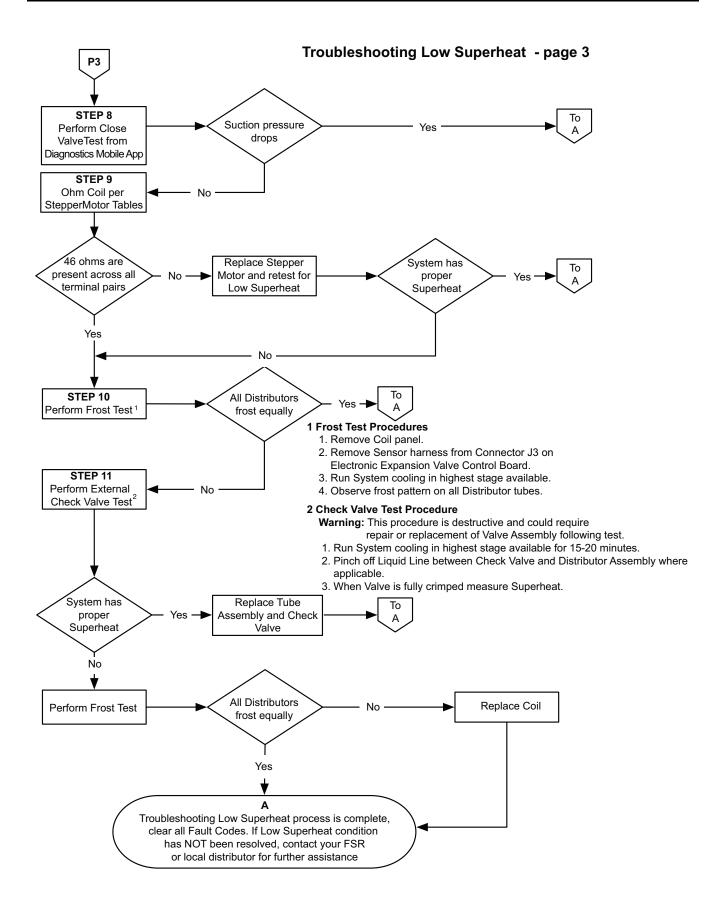




# Troubleshooting Low Superheat Perform these steps if Superheat is less than 3°F







## **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 present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de license. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil de 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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## About Trane and American Standard Heating and Air Conditioning

Trane and American Standard create comfortable, energy efficient indoor environments for residential applications. For more information, please visit www.trane.com or www.americanstandardair.com.



The manufacturer has a policy of continuous data improvement and it reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.