Installer's Guide

18-GE14D1-5

Variable Speed – Communicating Air Handlers

4TEE3C01A1000A, 4TEE3C04A1000A, 4TEE3C07A1000A, 4TEE3C10A1000A
4TEE3C02A1000A, 4TEE3C05A1000A, 4TEE3C08A1000A,
4TEE3C03A1000A, 4TEE3C06A1000A, 4TEE3C09A1000A,

⚠ WARNING: HAZARDOUS VOLTAGE - DISCONNECT POWER BEFORE SERVICING

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

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

NOTE: The 4TEE3C10 air handler should NOT be installed in the horizontal left or down flow configuration unless the outdoor unit has an AHRI rating with 18-GJ01D1 in the AHRI Directory. System ratings listed without 18-GJ01D1 are for horizontal right and upflow configurations only. The manufacturer recommends installing only approved, matched indoor and outdoor systems.

This Air Handler can be configured for Communicating or 24 VAC modes. Using fully Communicating or 24 VAC modes, the Air Handler can support single or multi stage heat pump cooling only, or cooling with electric heat applications. Combined with a communicating Comfort Control only, the Air Handler will support a single stage 24 VAC cooling outdoor unit.

⚠ WARNING

SAFETY HAZARD!
THIS INFORMATION IS FOR USE BY INDIVIDUALS HAVING ADEQUATE BACKGROUNDS OF ELECTRICAL AND MECHANICAL EXPERIENCE. ANY ATTEMPT TO REPAIR A CENTRAL AIR CONDITIONING PRODUCT MAY RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE. THE MANUFACTURER OR SELLER CANNOT BE RESPONSIBLE FOR THE INTERPRETATION OF THIS INFORMATION, NOR CAN IT ASSUME ANY LIABILITY IN CONNECTION WITH ITS USE.

⚠ CAUTION

EQUIPMENT 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.

CONTENTS

A. GENERAL INFORMATION

These instructions do not cover all variations in systems or provide for every possible contingency. Should further information be desired or particular issues arise which are not covered sufficiently by this manual, contact your local distributor or the manufacturer as listed on the Air Handler nameplate.

These Air Handlers are shipped from the factory in the upflow or horizontal right configuration.

NOTE: Representative illustrations only - actual models may vary.

INSPECTION

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

⚠ CAUTION

FOR AIR HANDLERS NOT EQUIPPED WITH A FACTORY INSTALLED ELECTRIC HEATER, A FIELD INSTALLED HEATER IS AVAILABLE FROM THE DEALER. ONLY HEATERS BUILT BY TRANE ARE APPROVED FOR USE IN THE AIR HANDLER. These heaters have been designed and tested in accordance with UL standards to provide safe and reliable operation. A list of approved heaters is provided on the Air Handler rating nameplate. Heaters that are not factory approved could cause damage and are not covered under equipment warranty.

INSTALLATION LIMITATIONS & RECOMMENDATIONS

The general location of the Air Handler is normally selected by the architect, contractor and/or home owner for the most effective application and satisfaction.

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

These Air Handlers are suitable for installation in a closet, alcove or utility room with free, non-ducted, air return, using the area space as a return air plenum. With ducted supply air, if the minimum clearances to combustible materials and service access are observed, the above installations are suitable.

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.**

In addition, these Air Handlers are suitable for installation in an attic, garage or crawl space with ducted supply and return air.

This equipment has been evaluated in accordance with the Code of Federal Regulations, Chapter XX, Part 3280 or the equivalent. "SUITABLE FOR MOBILE HOME USE"

For proper installation the following items must be considered:

1. If adequate power is available and correct according to nameplate specifications.
2. Insulate all ducts, particularly if unit is located outside of the conditioned space.
3. Pursuant to Florida Building Code 13-610.2.A.2.1, this unit meets the criteria for a factory sealed Air Handler.
4. To ensure maximum efficiency and system performance, the existing supply and return duct system static pressures must not exceed the total available static pressure of the Air Handler. Reference ACCA Manual D, Manual S and Manual RS along with the Air Handler Product Data and Service Facts for additional information.
5. Penetration around the Refrigerant lines must be sealed and Electrical inlets need to be sealed at both the Low and the High Voltage.

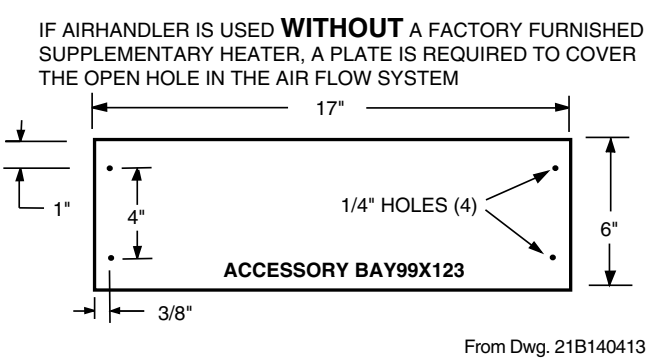


Figure 1. Sheetmetal Plate

6. It is recommended that the outline drawing be studied and dimensions properly noted and checked against selected installation site. By noting in advance which knockouts are to be used, proper clearance allowances can be made for installation and possible future service.
7. If supplementary heat is to be added, power supply must be sufficient to carry the load.
8. For Air Handlers not equipped with a factory installed electric heater, a field installed heater is available from Trane.

NOTE: If Air Handler is used WITHOUT a supplementary electric heater, a sheetmetal plate is required to cover the open hole in the airflow system. See Figure 1. Also seal the cabinet air tight where any wiring enters.

9. If field installed electric heaters are applied, minimum airflow settings, unit and duct clearances to combustibles must be maintained as stated on the Air Handler rating nameplate.

10. If the unit is installed without a return air duct, applicable local codes may limit this Air Handler to installation only in a single story residence & within conditioned space.
11. If the outdoor unit is to be installed later, or by others, then installation of the Air Handler must be made to allow access for refrigerant lines, or attach refrigerant lines to Air Handler when installing.
12. Make sure there are provisions for installing condensate drain lines.
13. If side, front or rear return is required, Air Handler must be elevated or placed on a plenum [TAYPLNM100 for 4TEE3C02, 03, 04, 06, & 08 (23.5" wide), TAYPLNM101 for 4TEE3C01 (21.5" wide), TAYPLNM102 for 4TEE3C05, 07, 09, & 10 (26" wide)]. Connecting return duct directly to the side, front or rear of the cabinet is not approved.
14. Route refrigerant & condensate drain lines away from Air Handler so they do not interfere with access panels and filters.
15. When external accessories are used, the additional height and width requirements must be considered in the overall space needed.
16. These units are not approved for outdoor installation.
17. These units are approved for draw-through application only.
18. **Flow-through Bypass Humidifiers**
    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-CH37D1-1.

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.

B. TWO PIECE CABINET DISASSEMBLY (OPTIONAL)

NOTE: For easier installation into tight areas, the 4TEE3C03, 04, 06, 08, 09, & 4TEE3C10A air handlers can be disassembled, moved to an attic or other space, and then reassembled.

Steps for disassembly and reassembly (See Figures 2 and 3)

1. Disconnect wiring.
2. Remove center bracket.
3. Remove COMM control box.
4. Remove blower assembly.
5. Remove coil.
6. Cut foil tape at cabinet parting line.
7. Remove top 8 screws. See Figure 2.
8. Separate upper and lower sections.
9. Set air handler in place.
10. Attach screws - insure gaskets are aligned along flange.
11. Use foil tape to seal - use minimum 3" foil tape.
12. Insert coil.
13. Reinstall blower assembly.
14. Reinstall COMM control box.
15. Reinstall center bracket.
16. Reconnect wiring.

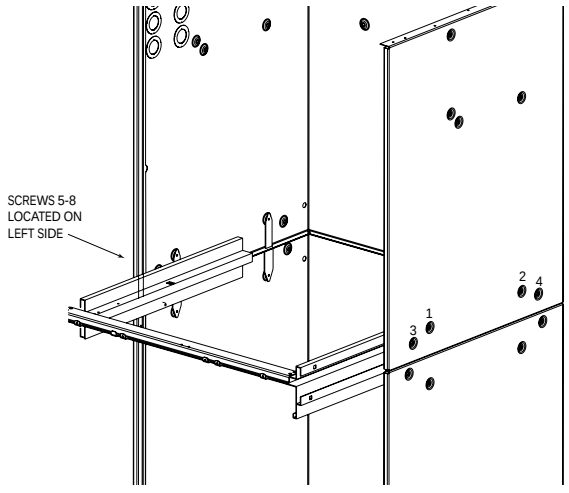


Figure 2. Spear Locations

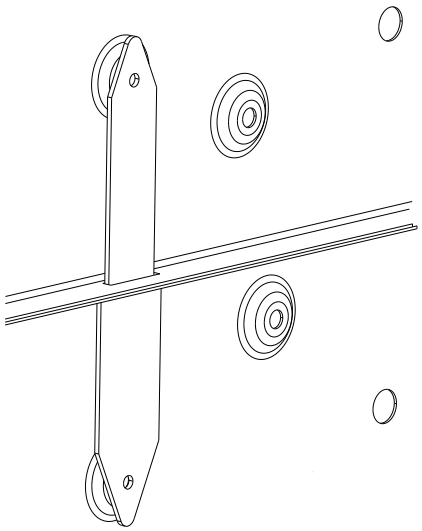


Figure 3. Two-Piece Wrapper Spear Closeup

C. UNIT INSTALLATION

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

UPFLOW

1. The horizontal drip tray should be removed ***for maximum efficiency***. See Figures 5, 6, and 7.
   a. Remove the coil by sliding it out on the coil channel supports. For the 4TEE3C05, 07, 09, & 10 units, there is a coil support tab at the top of the coil, connected to the case, that must be removed first.
   b. Remove 1" insulation strip covering the lip of the drip tray. See Figure 5.
   c. Detach the tray by removing the two screws at the drain pan and the two screws holding the two brackets at the top of the coil. See Figures 6 & 7.
   d. Remove drip tray by gently breaking the seal between the drip tray and drain pan.
2. Replace the factory installed baffle with supplied narrow baffle. See Figure 4.

⚠ CAUTION

When installing the narrow coil baffle, make sure to align the baffle up with the holes so NOT to puncture the coil tubing.

   a. Remove the factory installed baffle assembly from the apex of the coil by using a 5/16" nutdriver to remove the screws.
   b. Replace this baffle with the factory supplied narrow coil baffle using the screws removed previously. See Figure 6.
3. Position unit on Pedestal or other suitable foundation. If Pedestal is not used, a frame strong enough to support the total weight must be provided. Provide a minimum height of 14 inches for proper unrestricted airflow.

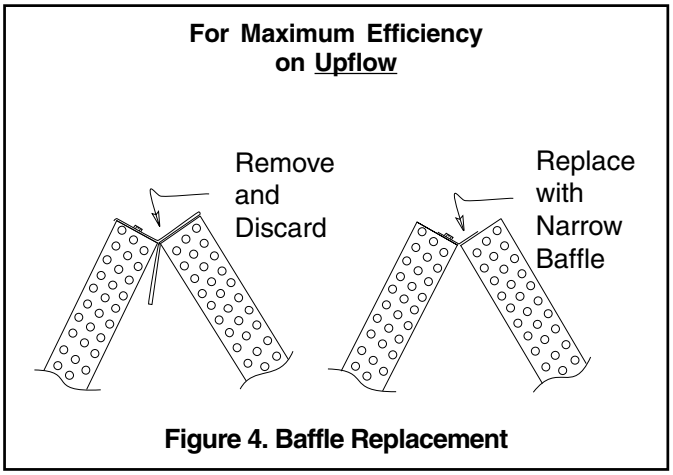


Figure 4. Baffle Replacement

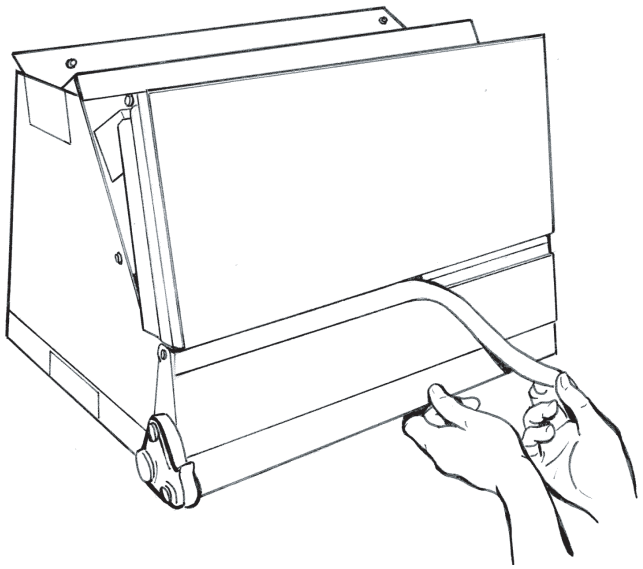


Figure 5. Remove Insulation Strip

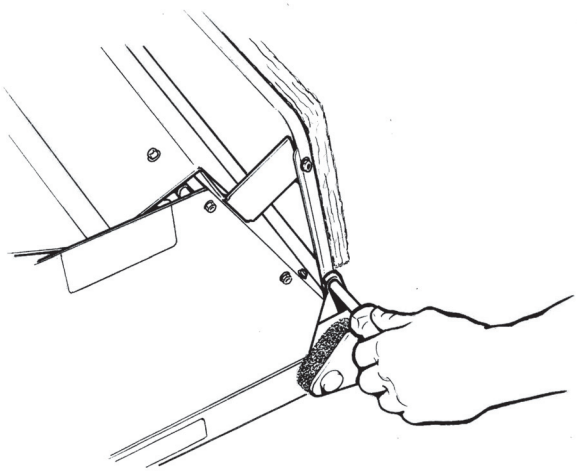


Figure 6. Remove Screws at Drain Pan

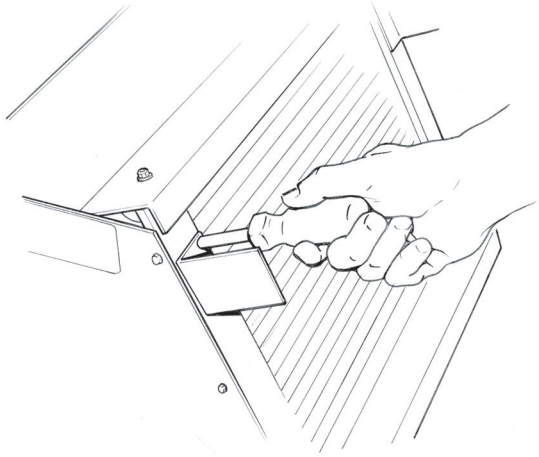


Figure 7. Remove Brackets

4. If a return air duct is connected to the air handler, it must be the same dimensions as shown in the outline drawing on page 18.
5. Pedestal and unit should be isolated from the foundation using a suitable isolating material.
6. **Openings where field wiring enters the cabinet must be completely sealed.** Location of power entry is shown on the outline drawing. Use 2.5" clear stickers to seal all unused electrical knockouts. See Figure 9.
7. After ductwork connections are made, seal airtight and per local codes.

HORIZONTAL RIGHT

1. ***For maximum efficiency*** and Customer ease of filter maintenance, it is recommended that a properly sized **remote filter** grille be installed for horizontal applications. Airflow should not exceed the face velocity of the filter being used. **The factory installed filter should then be removed from the unit.**
2. Unit is shipped from the factory in the horizontal right configuration. Unit conversion is not required.
3. If the unit is suspended, it must be supported from the bottom near both ends as well as the middle to prevent sagging. The service access must remain unobstructed. If the unit is supported along the length of the front and back with rails, the air handler only needs to be suspended at both ends. See Figure 8.
4. If the unit is not suspended it must be supported as mentioned above and isolated carefully to prevent sound transmission. Vibration isolators (field supplied) must be placed under the unit.
5. It is always recommended that an auxiliary drain pan be installed under a horizontal Air Handler (See Condensate Drain Piping) to prevent possible damage to ceilings.
6. Isolate the auxiliary drain pan from the unit or from the structure.
7. Connect the auxiliary drain line to a separate drain line (no trap is needed in this line) and terminate according to local codes.
8. If a return duct is connected to the air handler, it must be the same dimensions as the return opening shown in Figure 10 on page 6 or the outline drawing on page 17.
9. **Openings where field wiring enters the cabinet must be completely sealed.** Location of power entry is shown on the outline drawing. Use 2.5" clear stickers to seal all unused electrical knockouts. See Figure 9.
10. After ductwork connections are made, seal airtight and per local codes.

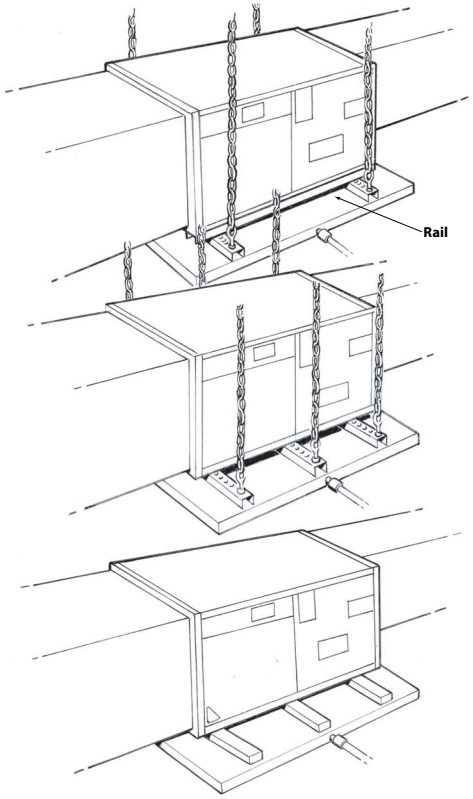


Figure 8. Mounting Installation Options for Horizontal Applications

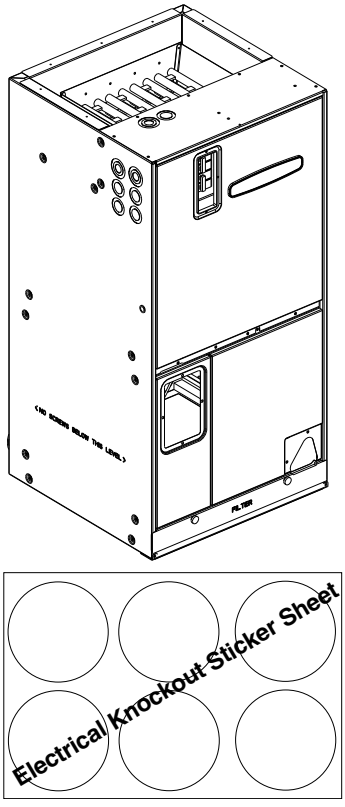


Figure 9. Electrical Knockouts

D. DUCT CONNECTIONS

The supply and return air ducts should be connected to the unit with flame retardant duct connectors. Convertible duct flanges are provided on the discharge opening to provide a "flush fit" for 3/4" or 1-1/2" duct board applications, see the Outline drawing on page 17 for sizes of the duct connections. After the duct is secured, seal around the supply duct to prevent air leakage.

NOTE: If the convertible duct flanges are not used, they must be removed and discarded for proper airflow.

COMM Control box must be removed to install or service heater accessory or communicating controls. See Figure 11.

IMPORTANT: Do NOT cover up control box screws with duct work. See Figure 11.

NOTE: If needed, a duct board return connection can be made to the sides of the unit using tape and/or mastic.

E. REFRIGERANT PIPING

IMPORTANT: Refrigerant piping must be routed to maintain service access to blower compartment and provide easy removal of filter access panel and filter.

1. Refrigerant connections are made outside the cabinet.

NOTE: TXV bulb MUST be protected (wrap a wet rag around the suction line between the TXV bulb and the braze joint) or removed, while brazing the tubing. Overheating of the sensing bulb will affect the functional characteristics and performance of the air handler.

NOTE: Penetration around the Refrigerant lines must be sealed and Electrical inlets should be sealed at both the low and the high voltage.

2. Installation of refrigerant lines is covered in the installation instructions packaged with the outdoor unit. Evacuation, leak testing and brazing procedures are included in those instructions. Read those instructions before starting installation of refrigerant lines.

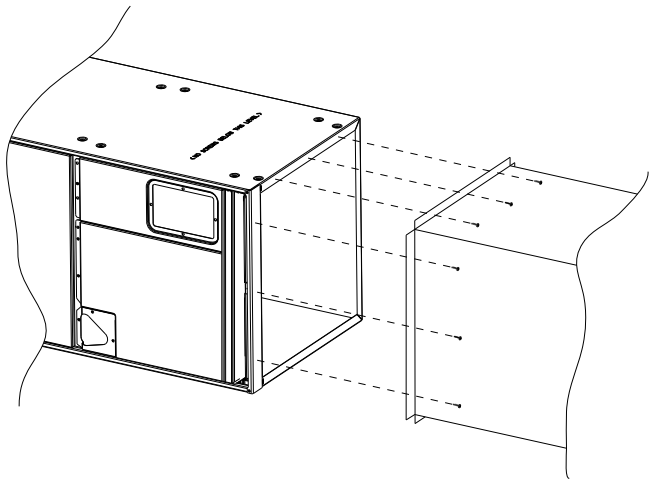


Figure 10. Flange Attachment

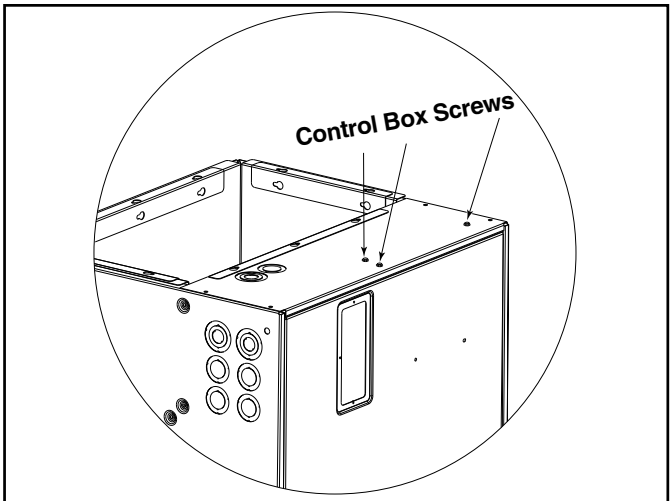


Figure 11. Control Box Screw Locations

F. BRAZING TO EVAPORATOR SECTION

NOTE: A brazing shield is provided in the Accessory Kit accompanying this unit. This shield fits over the refrigerant fittings while brazing. Wet the shield before brazing. See Figure 12.

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

1. Remove both sealing caps from indoor coil.
2. Field supplied tubing should be cut squared-off, ensuring the tube is still round and free of burrs at the connecting end. Clean the tubing to prevent contaminants from entering the system.
3. Run refrigerant tubing into the stub sockets of indoor unit coil. **Refrigerant line openings must be completely sealed.**
4. Braze and evacuate according to indoor and outdoor installation instructions.
5. Seal around refrigerant lines.

NOTE: Painted areas of unit must be shielded during brazing.

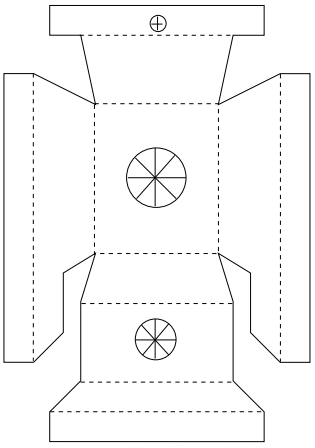


Figure 12. Braze Shield

G. CONDENSATE DRAIN PIPING

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

NOTE: Use Teflon® tape on the Air Handler drain line connections! Do Not Use pipe joint compound or PVC/CPVC cement!

The indoor blower is downstream of the evaporator coil which creates a negative pressure at the condensate drain connections during operation. The condensate drain connections in front of the indoor coil are 3/4" NPT. The lower right connection is the primary drain. See Figure 13.

Two secondary drain connections are provided for the different orientations (See Figure 13). The lower of the

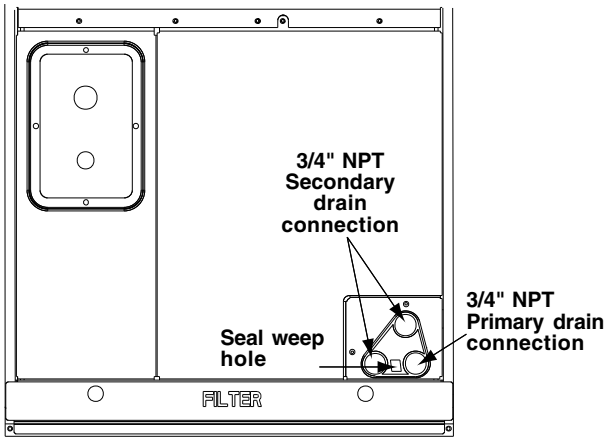


Figure 13. Drain Connections

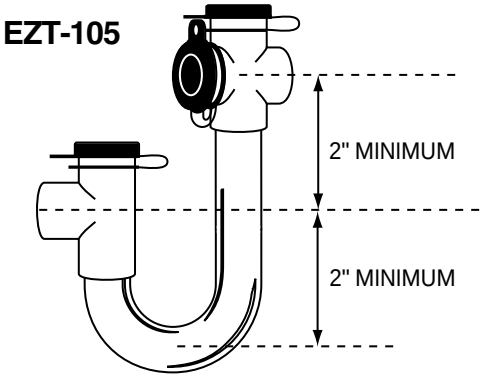


Figure 14. Manufactured Traps

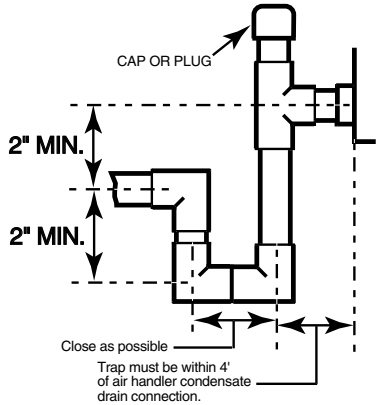


Figure 15. Field Fabricated Traps

two secondary drains should be connected as a backup to prevent condensate overflow by a blocked primary drain. The weep hole in center of drain coupling area should be sealed with caulk or RTV unless secondary drain is connected.

For proper drainage of condensate, the following steps should be followed:

1. The primary drain line must be trapped with a minimum of 2" water seal as shown in Figures 14 & 15. **Do not use preformed 3/4" PVC running traps.**

   The use of field fabricated or manufactured traps as shown in Figures 14 & 15 is acceptable. The manufactured trap shown in Figure 14 allows for a float switch option to be added. Refer to the manufacturers data and instructions for details.
2. The trap must be located within 4 feet of the Air Handler drain outlet connection.
3. It is recommended that a clean-out tee or cross be installed in the primary drain line for future maintenance (See Figure 14 & 15).
4. Do not use reducing fittings in the condensate drain lines.
5. Slope the drain lines downward a minimum of 1/4" per foot.
6. Insulate the primary drain to prevent sweating where pipe temperature could meet or fall below dewpoint temperatures.
7. **Provide means for drainage to prevent winter freeze-up of condensate line**.
8. Do not connect the drain line to a closed drain system.

It is always recommended that an auxiliary drain pan be installed under a horizontally installed Air Handler. Connect the auxiliary drain line to a separate drain line (no trap is needed in this line) and terminate according to local codes.

NOTE: Do NOT use a torch or flame near the plastic drain pan coupling.

NOTE: Do NOT tighten the drain pipe excessively. Support the condensate piping and traps outside the unit to prevent strain on the drain coupling.

H. ELECTRICAL - POWER WIRING

1. These Air Handlers are shipped from the factory wired for 208/230 Volts. The units may be wired for 208 Volts. Follow instructions on unit wiring diagram located on inside blower panel housing and in the Service Facts document included with the unit.
2. The selection of wire and fuse sizes should be made according to the Minimum Branch Circuit Ampacity and the Maximum Overcurrent Device listed on the unit nameplate.

IMPORTANT: The BAYHTR** electric heat accessory, designed for use with this air handler, may include up to a combination of three 30 and / or 60 amp circuit breakers to provide an electrical disconnect for service personnel that is intended to help protect internal electrical components in the event of a short circuit or ground fault. As designed, the circuit breakers supplied in the BAYHTR** accessory do not provide over-current protection of the branch circuit. Therefore, the branch circuit(s) shall be sized and protected according to the unit nameplate.

3. Field wiring diagrams for electric heaters and unit accessories are shipped with the accessory.
4. Wiring must conform to National and Local codes. Ground unit per Local codes following recognized safety procedures.

If an electric heater is not installed, the installer MUST seal opening with a sheet metal plate made per Figure 1 and the Knockout Plate provided in the Accessory Kit MUST be installed on the air handler and the conduit terminated to it. The electrical connections are made using the two power leads and ground wire connections which are located near the discharge of the blower. **Openings where field wiring enters the cabinet must be completely sealed.** Location of power entry is shown on the outline drawing. Use 2.5" clear stickers to seal all unused electrical knockouts. See Figure 9.

NOTE: If Air Handler is used with or without a heater, the electrical entry hole as well as any other cabinet penetrations must be sealed air tight.

IMPORTANT: When supplementary heaters are installed, inspect to insure that all packaging material has been removed.

I. CONTROL WIRING

1. Connect wiring between indoor unit, outdoor unit and Comfort Control. The use of color-coded low-voltage wires is recommended.
2. A low voltage terminal board is provided for control wiring, and is located on the left side of the cross brace in the center of the unit.
3. Field wiring diagrams on pages 14-16 show the low voltage wiring hookup for a single speed cooling only system (with supplementary heaters) and a Heat Pump system (with supplementary heaters). Plug in type electrical connectors are provided for use with supplementary heaters.

Table 1 — Control Wiring

Communicating Control Wiring	
WIRE SIZE	MAX. WIRE LENGTH*
18 AWG	250 FT

NEC Class II Wiring - 24 VOLTS	
WIRE SIZE	MAX. WIRE LENGTH**
18 AWG	150 FT
16 AWG	225 FT.
14 AWG	300 FT.

* The maximum total cable length for the entire Comfort Control communicating system is 500 ft. 18 AWG.

** Maximum **total** length of low voltage wiring from outdoor unit, to indoor unit, and to Comfort Control.

J. AIRFLOW ADJUSTMENT

Blower speed changes are made using the User Interface mounted on the communicating Comfort Control box. The Air Handler control board controls the serial motor.

NOTE: Serial motors have bearings which are permanently lubricated and under normal use lubrication is not recommended.

When paired with a communicating outdoor unit, the Air Handler control board will auto-discover the outdoor unit size. Default settings are 400 CFM/ton and 1.5 minute at 100% CFM off delay. For other airflow settings, access the User Interface Menu (See Figure 16) to select options or use the options in the communicating Comfort Control. The full menu is listed in Figure 17.

When Air Handler is to be used in 24 VAC mode, access the User Interface to change the comfort control mode to 24 VAC, match the airflow for the outdoor unit size (tons), adjust the cooling airflow (CFM/ton), set the Fan on/off-delay options, and adjust the heating airflow per the Nameplate specifications on the air handler front panel. The User Interface appears as shown in Figure 16. The full menu is listed in Figure 18.

If the airflow needs to be increased or decreased, see the Blower Performance Table in the Service Facts. Information on changing the speed of the blower motor for your specific outdoor model size is in the Blower Performance Table.

Be sure to set the airflow for the correct tonnage. Refer to the User Interface for correct setting.

If the optional humidistat is used, remove R-BK jumper from the low voltage terminal board (not shown) and install the humidistat between R and BK. (Jumper R to O for cooling-only/non-heat pump systems with a humidistat.)

K. UNIT TEST MODE

Unit Test Mode (Air Handler)

The system must be idle or the comfort control switched to OFF before the Unit Test will run the air handler. The unit will work the same way in either Communicating or 24 VAC modes.

To access the Unit Test Mode scroll down through the User Interface Information Menu until you see the Unit Test option. Press ENTER. When prompted select YES and press ENTER. When the User Interface displays ARE YOU SURE? select YES and press ENTER to begin the Unit Test.

NOTE: While in Test Mode all comfort control requests will be ignored but if any button on the User Interface is pressed, the Unit Test will exit. The Unit Test will exit if a fault is detected during the test sequence.

The Unit Test will perform the following steps without delays.

1. Start blower at 50% airflow and Energize EAC relay.
2. After 10 seconds, go to 100% airflow for 10 seconds.
   (User Interface displays UNIT TEST – BLWR)
3. Energize Y1 relay for 15 seconds with 100% airflow.
   (User Interface displays UNIT TEST – COOL)
4. De-energize Y1 relay and go to Electric Heat airflow.
   (User Interface displays UNIT TEST – HEAT)
5. Energize blower interlock and stage 1 heat relay.
6. Energize humidifier relay.
7. After 1 second energize stage 2 heat relay.
8. After 1 more second energize stage 3 heat relay.
9. After 5 seconds de-energize blower interlock, stage 1, 2 & 3 heat, humidifier and EAC relays.
   (User Interface displays UNIT TEST – EXIT)
   Displayed for three seconds

NOTE: Airflow is default or programmed selections.

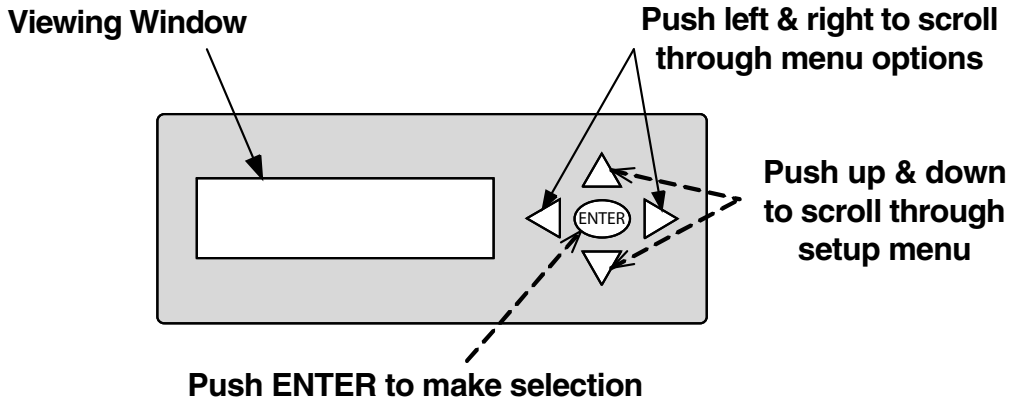
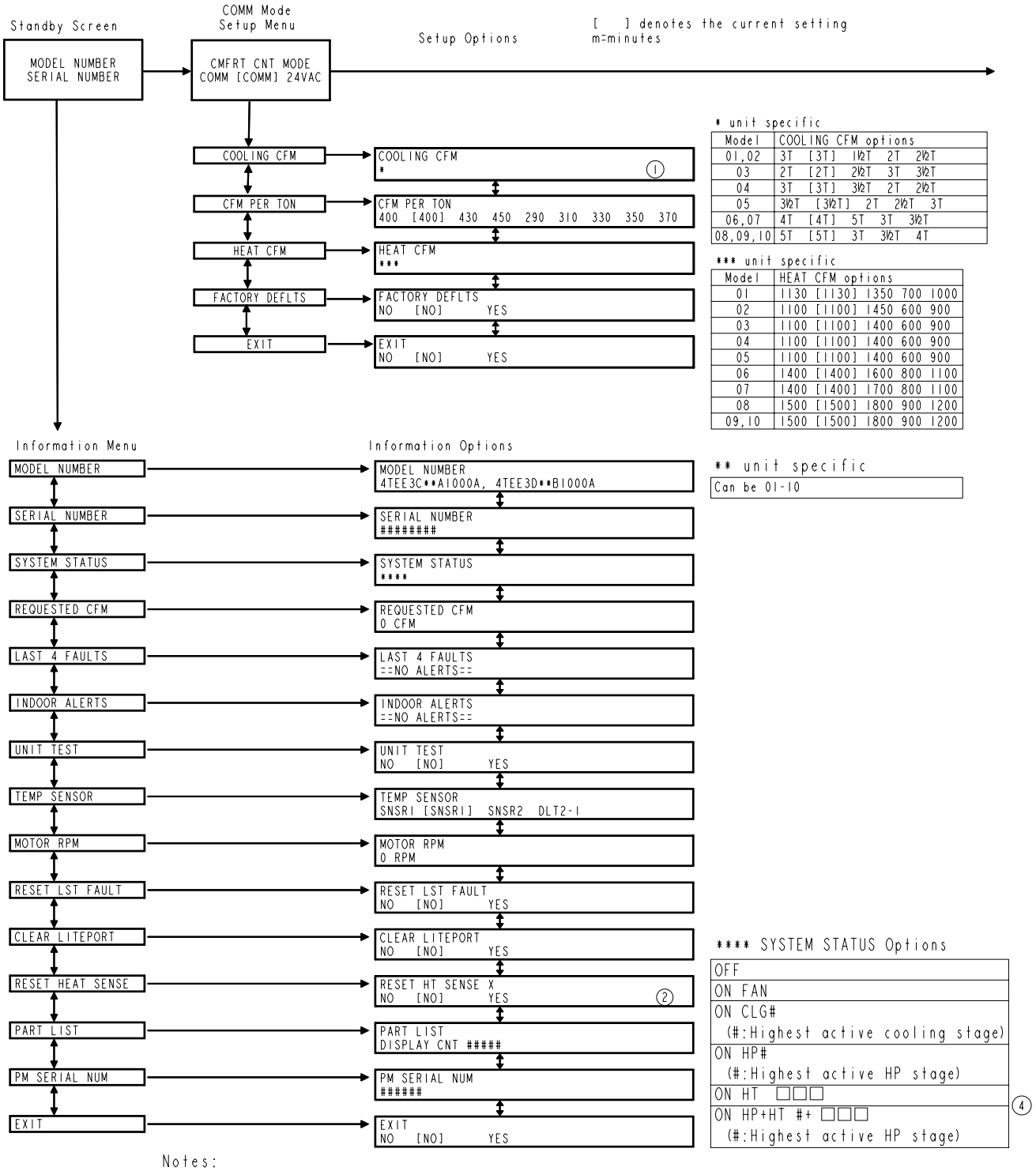


Figure 16. User Interface

USER INTERFACE MENU - COMMUNICATING MODE

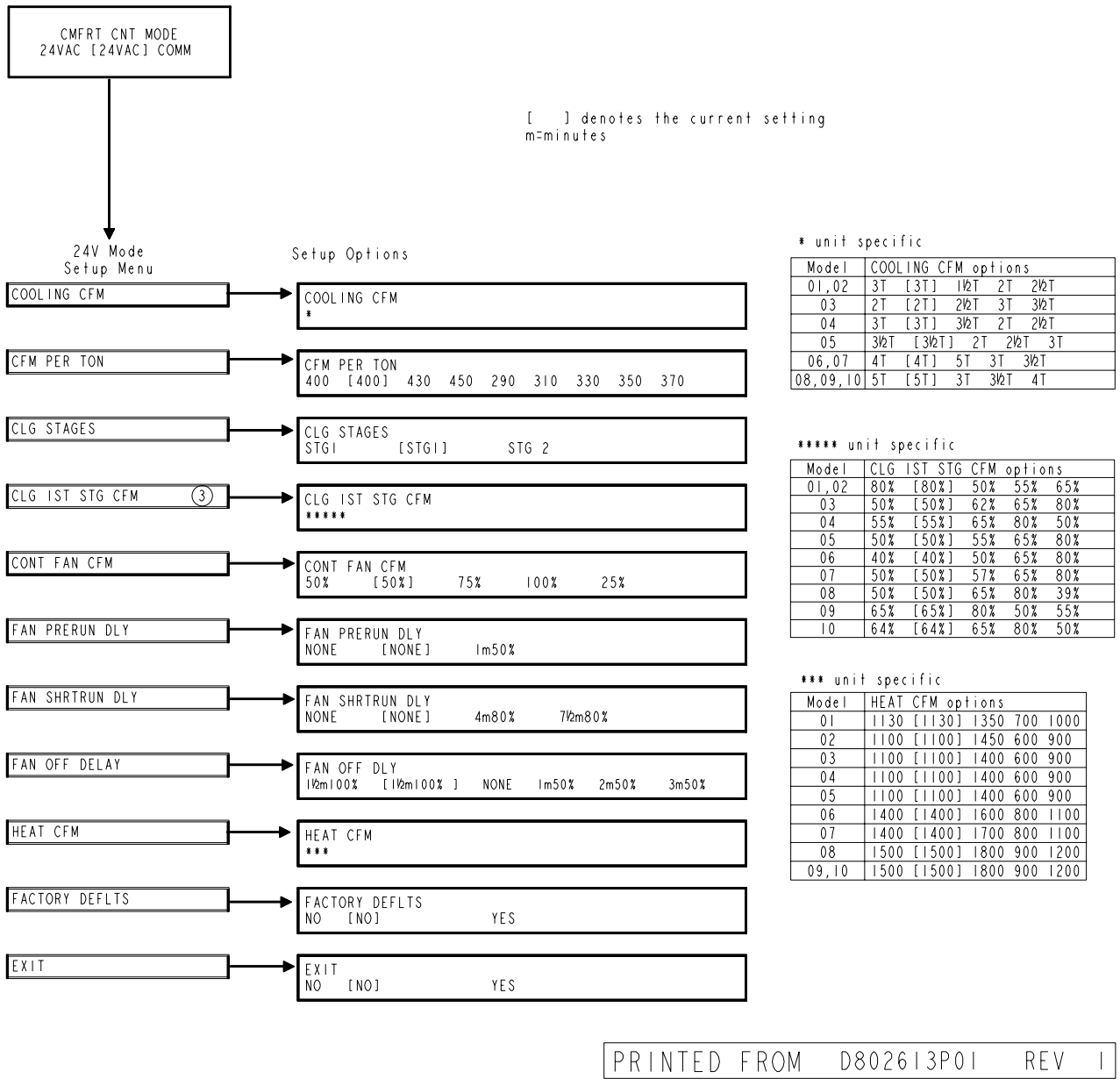


Notes:

1. Shown only when Outdoor Communicating Unit is not detected.
2. X indicates actual number of heat banks detected under RESET HT menu.
3. CLG IST STG CFM menu will not appear if STGI is selected in CLG STAGES menu.
4. An open box, □, designates a contactor sensed, but not energized. A closed box, ■, designates a contactor that is energized, present, or not. A hyphen, -, designates a contactor not sensed and not energized.

Figure 17. User Interface Menu - Communicating Mode

USER INTERFACE MENU- 24 VAC MODE



* unit specific

Model	COOLING CFM options
01,02	3T [3T] 1½T 2T 2½T
03	2T [2T] 2½T 3T 3½T
04	3T [3T] 3½T 2T 2½T
05	3½T [3½T] 2T 2½T 3T
06,07	4T [4T] 5T 3T 3½T
08,09,10	5T [5T] 3T 3½T 4T

***** unit specific

Model	CLG IST STG CFM options
01,02	80% [80%] 50% 55% 65%
03	50% [50%] 62% 65% 80%
04	55% [55%] 65% 80% 50%
05	50% [50%] 55% 65% 80%
06	40% [40%] 50% 65% 80%
07	50% [50%] 57% 65% 80%
08	50% [50%] 65% 80% 39%
09	65% [65%] 80% 50% 55%
10	64% [64%] 65% 80% 50%

*** unit specific

Model	HEAT CFM options
01	1130 [1130] 1350 700 1000
02	1100 [1100] 1450 600 900
03	1100 [1100] 1400 600 900
04	1100 [1100] 1400 600 900
05	1100 [1100] 1400 600 900
06	1400 [1400] 1600 800 1100
07	1400 [1400] 1700 800 1100
08	1500 [1500] 1800 900 1200
09,10	1500 [1500] 1800 900 1200

PRINTED FROM D802613P01 REV 1

Figure 18. User Interface Menu - 24 VAC Mode

L. AIR HANDLER FLASH CODES

Alert Notification				Alert Code	Alert Group	Alert Description
Fault LED	**COMM LED**	**User Interface Display**	**Comfort Control Display**			
Solid ON ‡	N/A	CNTRL FAULT †	ERR 18	**18**	Control Failure	Internal Control Error
Solid ON ‡	N/A	CHECK FUSE †	N/A +	**92**	Fuse Failure	24V Fuse Open Error
1 Flash *	N/A	EXT SW OPEN *	ERR 106 *	**106**	External Shutdown Fault	External Shutdown Input Open Error
2 Flash	N/A	PM MEM ERR	ERR 114	**114**	PM Bad or Missing Fault	PM Data Corrupt Error
		PM MISSING				PM Missing Error
		ID MTR ERR				Motor Mismatch Error
		PM UNIT ERR	N/A			PM Unit Data Error
		CAP MISMATCH				Compressor Capacity Mismatch Error
		PM DATA ERR				PM Data Section Error
3 Flash	Fast Flash	NO SYS CLK	ERR 91	**91**	Communication Inactive Fault	COMM Bit Master Clock Error
		SYS COMM ERR				COMM Heat/Cool Demand Error
	Device Count	BLW COMM ERR				Serial Motor Communication Inactive Error [1]
	Device Count	SYS COMM CRC	N/A	**90**	Communication Busy Fault	COMM System Busy Error
		BLW COMM CRC				Serial Motor Communication Busy Error
4 Flash	N/A	HT+LK ON ERR	ERR 105	**105**	Heater Interlock Relay Fault	Both Interlock Relay & Heater Relay Stuck Closed Error
		INTLK ON ERR				Interlock Relay Stuck Closed Error
		NTLK OFF ERR				Interlock Relay Stuck Open Error
4 Flash	N/A	HT ON ERR	ERR 104	**104**	Heater Relay Fault	Heater Relay Stuck Closed Error
		HT OFF ERR				Heater Relay Stuck Open Error
5 Flash *	N/A	DAS RNG ERR *	ERR 118 *	**118**	Discharge Air Temperature Fault	Discharge Air Temperature Range Error
		DAS UL ERR *				Discharge Air Temperature Upper Limit Error
		DAS LL ERR *				Discharge Air Temperature Lower Limit Error
5 Flash *	N/A	DAS SHORT *	N/A	**52**	Discharge Air Sensor Fault	Discharge Air Sensor Short Error
		DAS OPEN *				Discharge Air Sensor Open Error
6 Flash *	N/A	RAS RNG ERR *	N/A	**117**	Return Air Temperature Fault	Return Air Temperature Range Error
6 Flash *	N/A	RAS SHORT *	N/A	**110**	Return Air Sensor Fault	Return Air Sensor Short Error
		RAS OPEN *				Return Air Sensor Open Error
7 Flash	N/A	Y1 ON ERR	ERR 101	**101**	Y1 Relay Fault	Y1 Relay Stuck Closed Error
		Y1 OFF ERR				Y1 Relay Stuck Open Error
8 Flash	N/A	TWIN ERROR	N/A	**19**	Twinning Fault	Air Handler Twinning Error
9 Flash	N/A	DEMAND ERR *	N/A	**123**	Demand Configuration	Heat/Cool Demand Conflict Error*
		HT CFG ERR				Electric Heat Configuration Error

Notes:

† If Air Handler processor is reset or fuse is open, COMM Alert cannot be reported; if the processor is reset the User Interface will not be updated

* Alert flash code will not be implemented for initial release

‡ LitePort™ transmissions will be allowed during ON flash codes

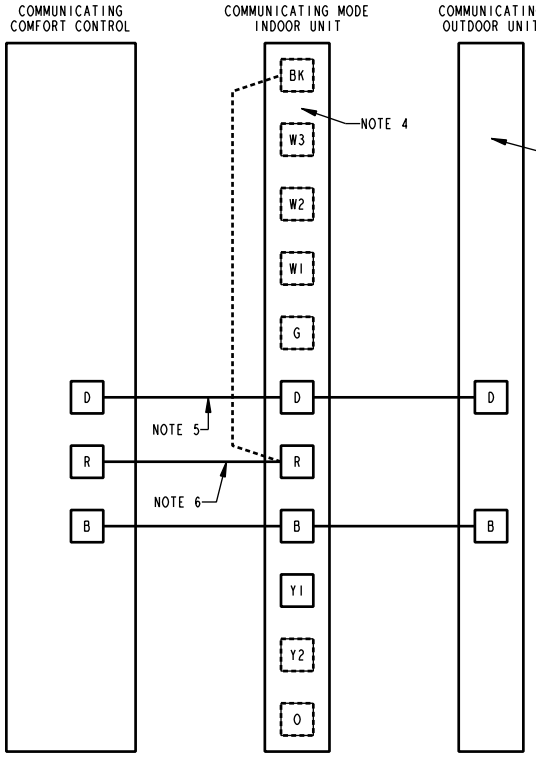
\+ Fuse alert notification level would show on Comfort Control, but when fuse is open the COMM bus has no power

[1] Comfort Control will switch system to "OFF" until this fault condition clears

PRINTED FROM D802247P01 REV07

M. FIELD WIRING - REFERENCE ONLY

COMMUNICATING INDOOR UNIT WITH COMMUNICATING COMFORT CONTROL & COMMUNICATING OUTDOOR UNIT



LEGEND

------ FACTORY WIRING

——— FIELD WIRING

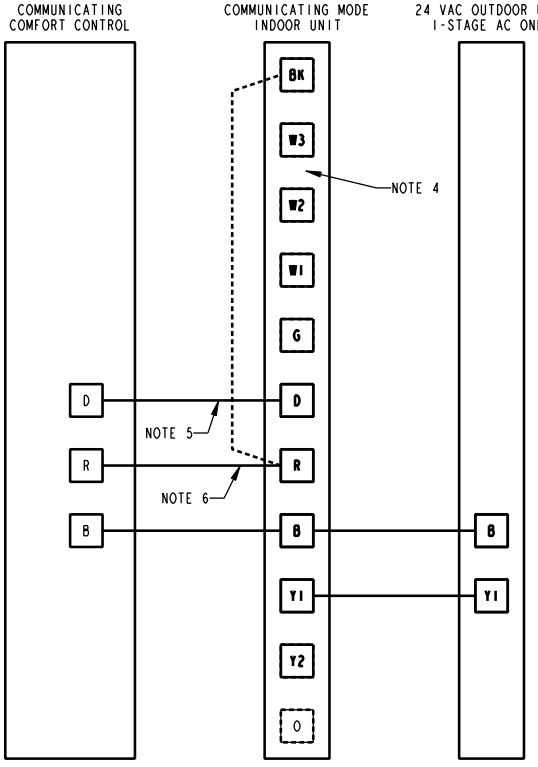
T — TERMINAL MAY OR MAY NOT BE PRESENT ON UNIT

NOTES:

1. SEE WIRING DIAGRAMS IN SERVICE FACTS FOR COMPLETE WIRING INFORMATION.
2. LOW VOLTAGE WIRING TO BE NO. 18 AWG MINIMUM CONDUCTOR.
3. BE SURE POWER SUPPLY AGREES WITH EQUIPMENT NAMEPLATE. POWER WIRING AND GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
4. IN COMMUNICATING MODE, UNUSED TERMINALS ARE NOT FUNCTIONAL. DO NOT USE.
5. "D" IS THE DATA LINE. INSTALLER TO SELECT A WIRE COLOR.
6. TO CONNECT OPTIONAL DEVICES (SUCH AS A FLOAT SWITCH) WIRE IN SERIES FROM INDOOR "R" TO COMFORT CONTROL "R".
7. WHEN CONVERTING OUTDOOR UNIT TO 24 VAC MODE, USE 24 VAC HARNESS ACCESSORY (BAYACHP024*).

PRINTED FROM D802614P01 REV01

COMMUNICATING INDOOR UNIT WITH COMMUNICATING COMFORT CONTROL & 24 VAC SINGLE STAGE COOLING



LEGEND

------ FACTORY WIRING

——— FIELD WIRING

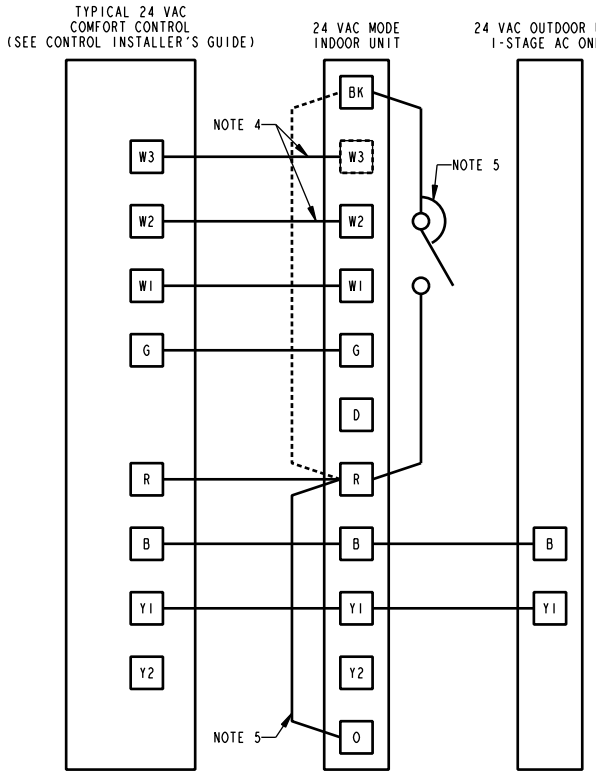
T — TERMINAL MAY OR MAY NOT BE PRESENT ON UNIT

NOTES:

1. SEE WIRING DIAGRAMS IN SERVICE FACTS FOR COMPLETE WIRING INFORMATION.
2. LOW VOLTAGE WIRING TO BE NO. 18 AWG MINIMUM CONDUCTOR.
3. BE SURE POWER SUPPLY AGREES WITH EQUIPMENT NAMEPLATE. POWER WIRING AND GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
4. IN COMMUNICATING MODE, UNUSED TERMINALS ARE NOT FUNCTIONAL. DO NOT USE.
5. "D" IS THE DATA LINE. INSTALLER TO SELECT A WIRE COLOR.
6. TO CONNECT OPTIONAL DEVICES (SUCH AS A FLOAT SWITCH) WIRE IN SERIES FROM INDOOR "R" TO COMFORT CONTROL "R".

PRINTED FROM D802614P02 REV01

COMMUNICATING INDOOR UNIT WITH 24 VAC COMFORT CONTROL & 24 VAC SINGLE STAGE COOLING



LEGEND

------ FACTORY WIRING

——— FIELD WIRING

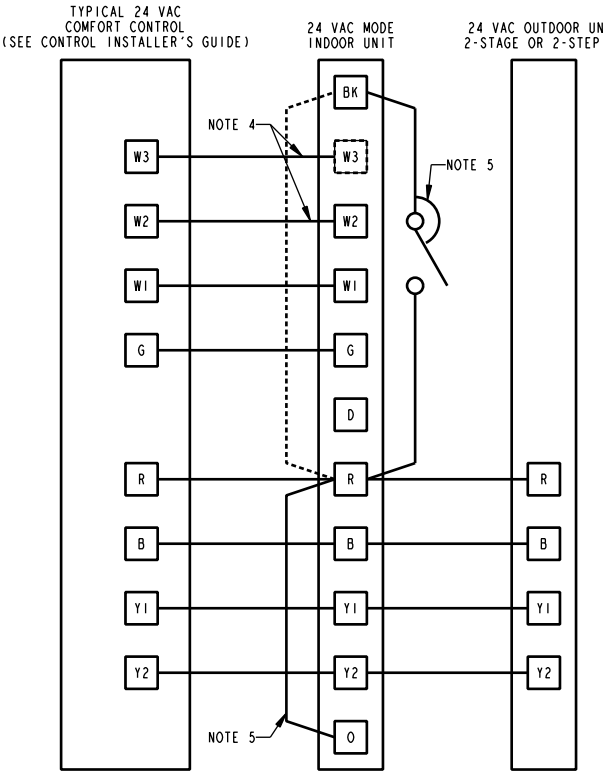
T TERMINAL MAY OR MAY NOT BE PRESENT ON UNIT

NOTES:

1. SEE WIRING DIAGRAMS IN SERVICE FACTS FOR COMPLETE WIRING INFORMATION.
2. LOW VOLTAGE WIRING TO BE NO. 18 AWG MINIMUM CONDUCTOR.
3. BE SURE POWER SUPPLY AGREES WITH EQUIPMENT NAMEPLATE. POWER WIRING AND GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
4. OPTIONAL FIELD WIRING. CONNECT ONLY IF THESE HEATING STAGES ARE USED.
5. CONNECTIONS TO "R" , "BK", AND "O" MUST BE MADE AS SHOWN FOR PROPER OPERATION WITH OPTIONAL HUMIDISTAT IN COOLING. FACTORY "R" TO "BK" JUMPER ON TERMINAL BLOCK MUST BE REMOVED ON AIR HANDLING UNITS. FACTORY "R" TO "BK" JUMPER ON FURNACE CONTROL MUST BE CUT ON FURNACES.

PRINTED FROM D802614P03 REV01

COMMUNICATING INDOOR UNIT WITH 24 VAC COMFORT CONTROL & 24 VAC 2-STAGE OR 2-STEP COOLING



LEGEND

------ FACTORY WIRING

——— FIELD WIRING

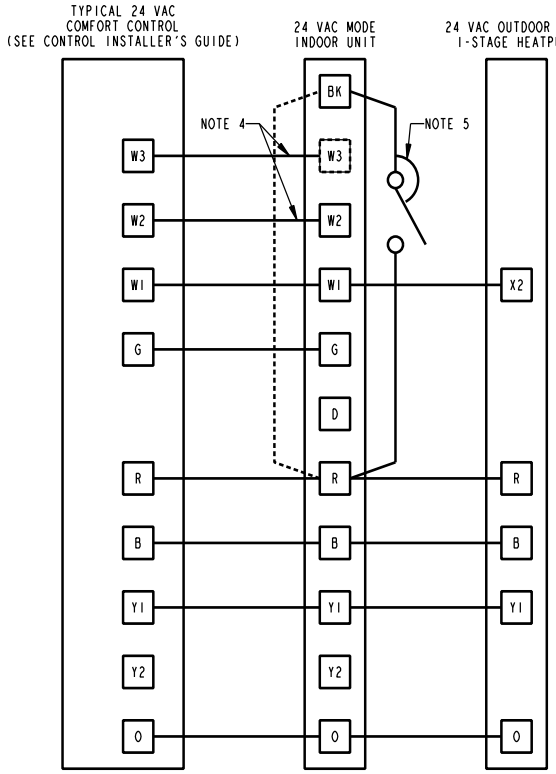
T TERMINAL MAY OR MAY NOT BE PRESENT ON UNIT

NOTES:

1. SEE WIRING DIAGRAMS IN SERVICE FACTS FOR COMPLETE WIRING INFORMATION.
2. LOW VOLTAGE WIRING TO BE NO. 18 AWG MINIMUM CONDUCTOR.
3. BE SURE POWER SUPPLY AGREES WITH EQUIPMENT NAMEPLATE. POWER WIRING AND GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
4. OPTIONAL FIELD WIRING. CONNECT ONLY IF THESE HEATING STAGES ARE USED.
5. CONNECTIONS TO "R" , "BK", AND "O" MUST BE MADE AS SHOWN FOR PROPER OPERATION WITH OPTIONAL HUMIDISTAT IN COOLING. FACTORY "R" TO "BK" JUMPER ON TERMINAL BLOCK MUST BE REMOVED ON AIR HANDLING UNITS. FACTORY "R" TO "BK" JUMPER ON FURNACE CONTROL MUST BE CUT ON FURNACES.
6. SEE USER INTERFACE 24 VAC MODE SETUP MENU FOR 1ST STAGE CFM OPTIONS.
   2-STAGE = 39-64%
   2-STEP = 65-80%

PRINTED FROM D802614P04 REV01

COMMUNICATING INDOOR UNIT WITH 24 VAC COMFORT CONTROL & 24 VAC SINGLE STAGE HEAT PUMP



LEGEND

------ FACTORY WIRING

——— FIELD WIRING

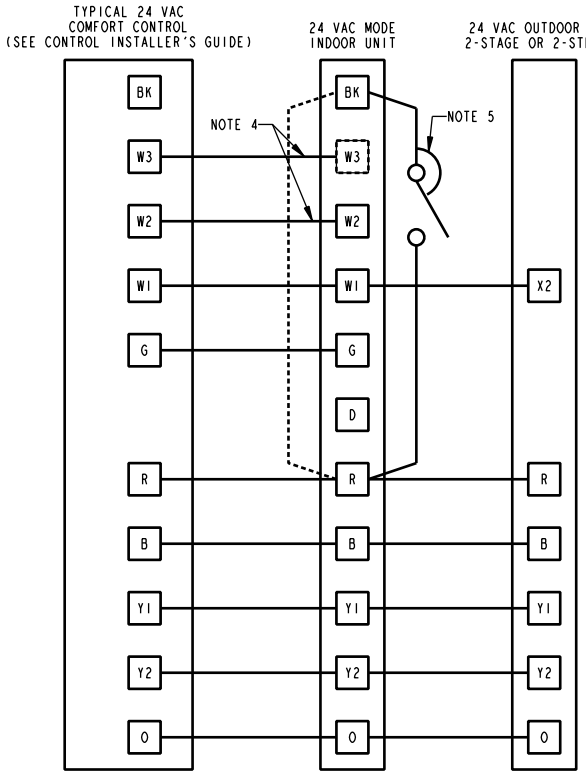
[T] TERMINAL MAY OR MAY NOT BE PRESENT ON UNIT

NOTES:

1. SEE WIRING DIAGRAMS IN SERVICE FACTS FOR COMPLETE WIRING INFORMATION.
2. LOW VOLTAGE WIRING TO BE NO. 18 AWG MINIMUM CONDUCTOR.
3. BE SURE POWER SUPPLY AGREES WITH EQUIPMENT NAMEPLATE. POWER WIRING AND GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
4. OPTIONAL FIELD WIRING. CONNECT ONLY IF THESE HEATING STAGES ARE USED.
5. CONNECTIONS TO "R" , "BK", AND "O" MUST BE MADE AS SHOWN FOR PROPER OPERATION WITH OPTIONAL HUMIDISTAT IN COOLING. FACTORY "R" TO "BK" JUMPER ON TERMINAL BLOCK MUST BE REMOVED ON AIR HANDLING UNITS. FACTORY "R" TO "BK" JUMPER ON FURNACE CONTROL MUST BE CUT ON FURNACES.
6. ON FURNACE APPLICATIONS, COMFORT CONTROL MUST BE DUAL FUEL COMPATIBLE (SEE CONTROL INSTALLERS GUIDE) OR MUST USE TAYPLUS103.

PRINTED FROM D802614P05 REV01

COMMUNICATING INDOOR UNIT WITH 24 VAC COMFORT CONTROL & 24 VAC 2-STAGE OR 2-STEP HEAT PUMP



LEGEND

------ FACTORY WIRING

——— FIELD WIRING

[T] TERMINAL MAY OR MAY NOT BE PRESENT ON UNIT

NOTES:

1. SEE WIRING DIAGRAMS IN SERVICE FACTS FOR COMPLETE WIRING INFORMATION.
2. LOW VOLTAGE WIRING TO BE NO. 18 AWG MINIMUM CONDUCTOR.
3. BE SURE POWER SUPPLY AGREES WITH EQUIPMENT NAMEPLATE. POWER WIRING AND GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
4. OPTIONAL FIELD WIRING. CONNECT ONLY IF THESE HEATING STAGES ARE USED.
5. CONNECTIONS TO "R" , "BK", AND "O" MUST BE MADE AS SHOWN FOR PROPER OPERATION WITH OPTIONAL HUMIDISTAT IN COOLING. FACTORY "R" TO "BK" JUMPER ON TERMINAL BLOCK MUST BE REMOVED ON AIR HANDLING UNITS. FACTORY "R" TO "BK" JUMPER ON FURNACE CONTROL MUST BE CUT ON FURNACES.
6. ON FURNACE APPLICATIONS, COMFORT CONTROL MUST BE DUAL FUEL COMPATIBLE (SEE CONTROL INSTALLERS GUIDE) OR MUST USE TAYPLUS103.
7. SEE USER INTERFACE 24 VAC MODE SETUP MENU FOR 1ST STAGE CFM OPTIONS.
   2-STAGE = 39-64%
   2-STEP = 65-80%

PRINTED FROM D802614P06 REV01

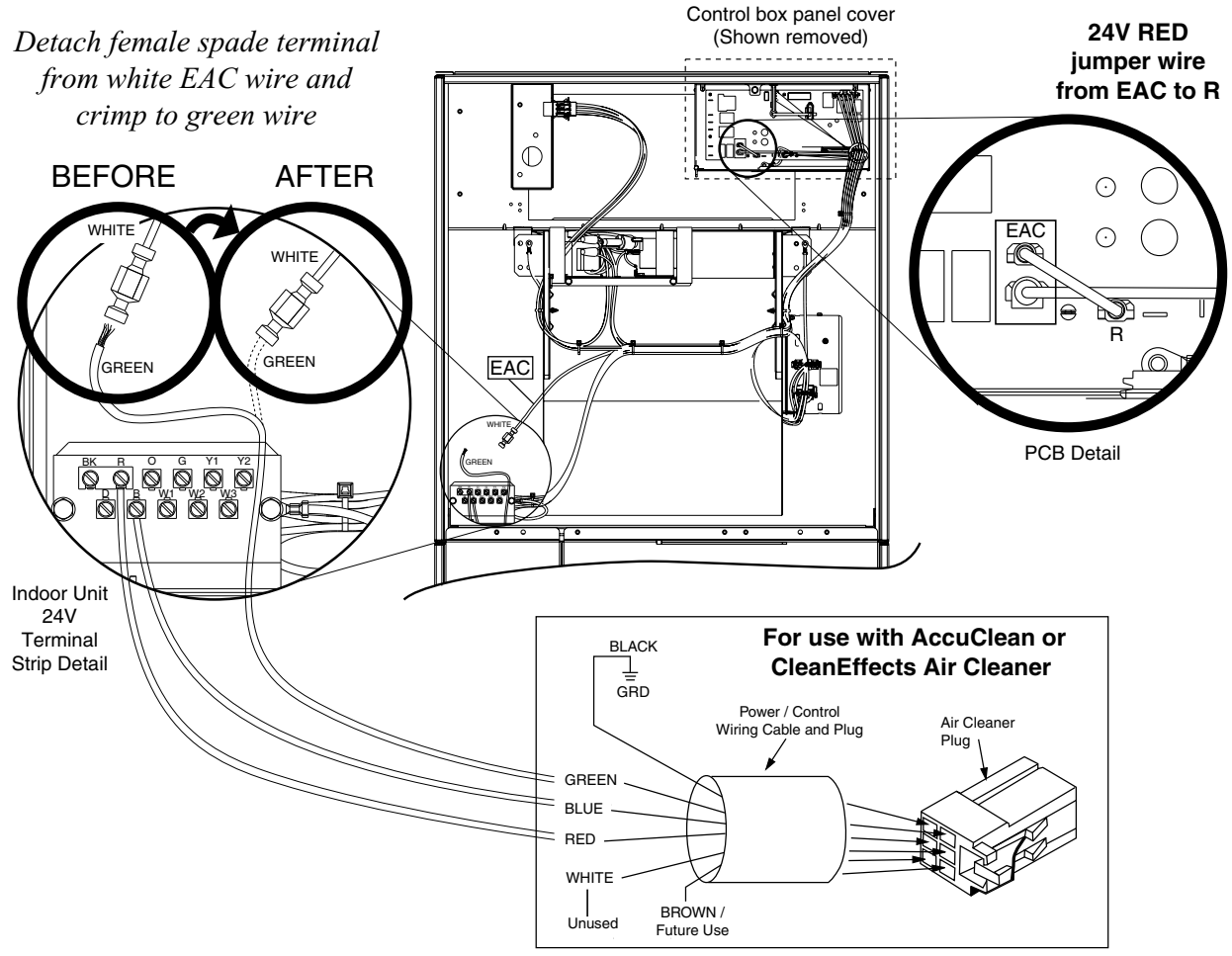
ELECTRICAL CONNECTIONS TO EAC

⚠ WARNING

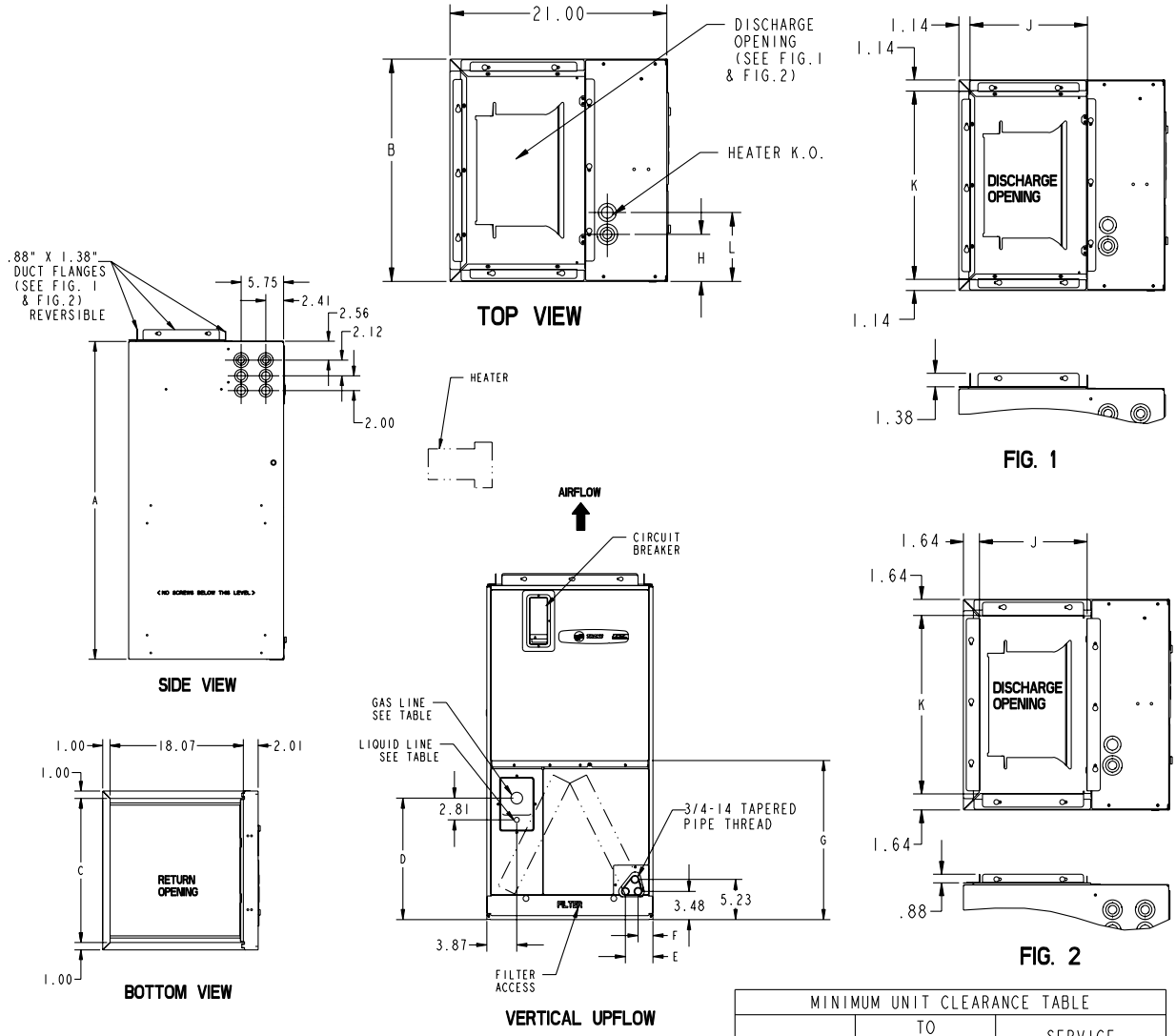
HAZARDOUS VOLTAGE! DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS BEFORE SERVICING. FOLLOW PROPER LOCKOUT/TAGOUT PROCEDURES TO ENSURE THE POWER CAN NOT BE INADVERTENTLY ENERGIZED. FAILURE TO DISCONNECT POWER BEFORE SERVICING COULD RESULT IN DEATH OR SERIOUS INJURY.

PROCEDURE:

1) On the communicating systems air handler, remove the blower access panel.
2) Remove the communicating control box cover.
3) Locate the red jumper wire which is attached from EAC to R on the Communicating Systems PCB. Confirm it is connected. If there is not a jumper wire installed, then one must be installed in this location in order for the air cleaner to function properly.
4) Replace the Communicating control box cover.
5) Locate the white wire coming from the Communicating System Air Handler PCB labeled "EAC". The wire will have a male spade terminal connected to it and a female spade terminal inserted into the male terminal. Remove the female spade terminal and crimp it to the green wire on the air cleaner harness.
6) Connect the green wire from the air cleaner harness to the white wire on the Communicating Systems Air Handler.
7) Using the wire harness supplied with the air cleaner, connect the Red and Blue wires from the air cleaner harness to "R" and "B" on the Indoor Unit 24V Terminal Strip respectively.
8) Connect the Black wire from the air cleaner wire harness to earth ground by attaching the wire to a grounded screw that is connected to the metal air handler chassis.
9) Replace the blower access panel.



N. OUTLINE DRAWING FOR 4TEE3C01-10A



MODEL NO.	FIG. 1 J	FIG. 1 K	FIG. 2 J	FIG. 2 K
4TEE3C01, 4TEE3D01	12.0	19.5	11.0	18.5
4TEE3C02, 4TEE3D02, 4TEE3C03, 4TEE3D03, 4TEE3C04, 4TEE3D04, 4TEE3C06, 4TEE3D06, 4TEE3C08, 4TEE3D08,		21.5		20.5
4TEE3C05, 4TEE3D05, 4TEE3C07, 4TEE3D07, 4TEE3C09, 4TEE3D09 4TEE3C10, 4TEE3D10		24.0		23.0

MINIMUM UNIT CLEARANCE TABLE		
	TO COMBUSTIBLE MATERIAL (REQUIRED)	SERVICE CLEARANCE (RECOMMENDED)
SIDES	0"	2"
FRONT	0"	21"
BACK	0"	0"
INLET DUCT	0"	1"
OUTLET DUCT	1"*	
* 1" FOR THE FIRST 3 FT. OF OUTLET DUCT WHEN ELECTRIC HEATERS ARE INSTALLED.		

MODEL NO.	A	B	C	D	E	F	G	H	L	GAS LINE BRAZE	LIQ. LINE BRAZE	FLOW CONTROL
4TEE3C01, 4TEE3D01	43	21.50	19.50	15.57	3.62	1.89	N/A	3.65	5.77	3/4	3/8	TXV/NB
4TEE3C02, 4TEE3D02	45	23.50	21.50	17.57				4.65	6.77		3/8	
4TEE3C05, 4TEE3D05,	51.75	26	24	18.33	3.21	1.48		5.90	8.02			
4TEE3C07, 4TEE3D07	57.90			27.12								
4TEE3C09, 4TEE3D09	62.75						36.00					
4TEE3C10, 4TEE3D10												
4TEE3C03, 4TEE3D03	57.90	23.50	21.50	17.00	3.62	1.89	31.15	4.65	6.77	5/8		
4TEE3C04, 4TEE3D04,										3/4		
4TEE3C06, 4TEE3D06, 4TEE3C08, 4TEE3D08				26.77								

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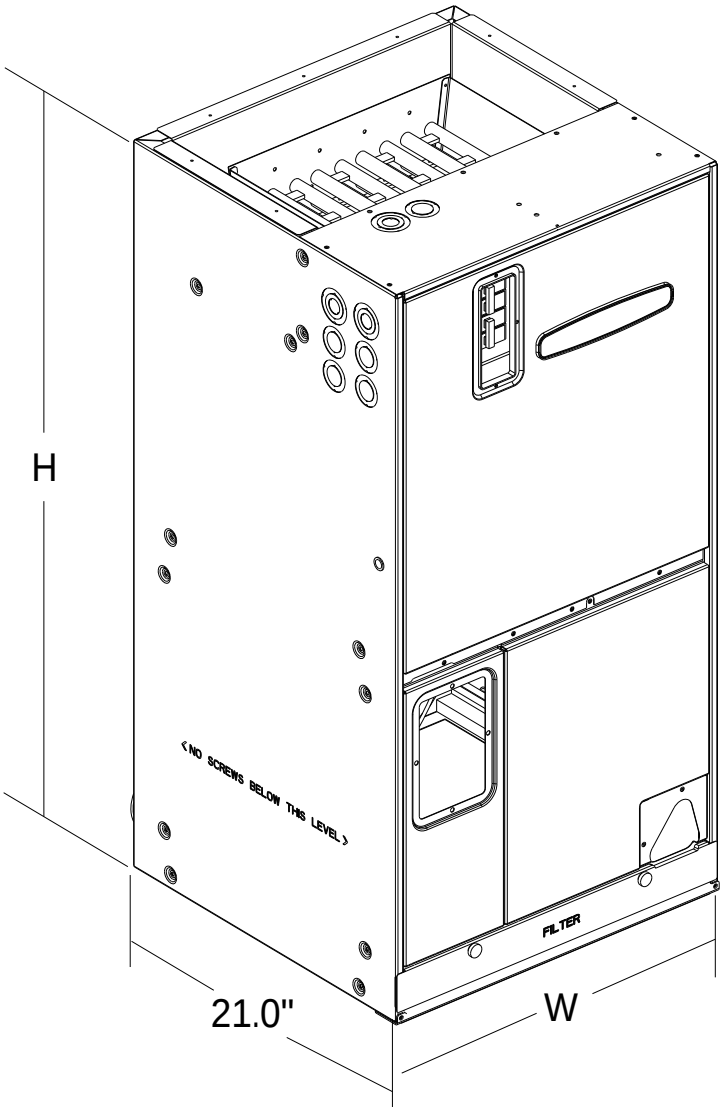
4TEE3C01-10A AIR HANDLERS DIMENSIONAL DATA



4TEE3C03, 04, 06, 08, 09 & 10A are two piece cabinets

Model No.	H	W
4TEE3C01A1000A	43.00	21.50
4TEE3C02A1000A	45.00	23.50
4TEE3C03A1000A	57.90	23.50
4TEE3C04A1000A	57.90	23.50
4TEE3C05A1000A	51.75	26.00
4TEE3C06A1000A	57.90	23.50
4TEE3C07A1000A	57.90	26.00
4TEE3C08A1000A	57.90	23.50
4TEE3C09A1000A	62.75	26.00
4TEE3C10A1000A	62.75	26.00

O. CHECKOUT PROCEDURE

1. Check the Air Handler installation in accordance with the instructions below.
2. "Operational Procedure" for the system installation can be found in the outdoor unit Installer Guide and will be compatible with this Air Handler.

CHECKOUT PROCEDURES

After installation has been completed, it is recommended that the Air Handler be checked against the following checklist.

1. Make sure power is OFF at power disconnect switch ..... [ ]
2. Check all field wiring for tight connections. See that grounding of unit is in accord with code ..... [ ]
3. Make sure unit suspension (if used) is secure and that there are no tools or loose debris in, around or on top of the unit ..... [ ]
4. Check all duct outlets; they must be open and unrestricted ..... [ ]
5. Check drain lines and be sure all joints are tight ..... [ ]
6. Make sure secondary drain pan is installed ..... [ ]
7. Check power supply for correct requirements per unit nameplate ..... [ ]
8. Check filters for proper size. Inform owner of proper procedure for removal and reinstallation ..... [ ]
9. Energize the system and carefully observe its operation; make any necessary adjustment ..... [ ]
10. Instruct owner, engineer (if applicable) on proper operating procedure and leave Use and Care Manual with owner ..... [ ]

SUPPLEMENTARY HEATERS CHECKOUT PROCEDURES

IF A HEATER IS USED, SEE "INSTALLATION LIMITATIONS & RECOMMENDATIONS" TO DETERMINE IF THE HEATER REQUIRES A SPECIAL CIRCUIT.

1. Be sure the disconnect switch is OFF, and safety label (if any) is attached ..... [ ]
2. Check field wiring for tight connections and grounding according to codes ..... [ ]
3. Check circuit protection for proper size per nameplate specifications ..... [ ]
4. Check control box panel — in place and secured ..... [ ]

NOTE: Operation of heaters must be checked during the operation check of the total system.

Trane
6200 Troup Highway
Tyler, TX 75707

05/10