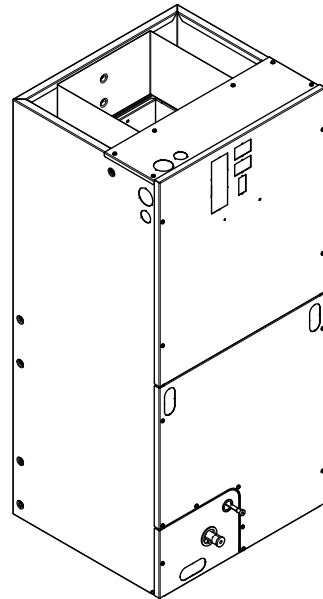
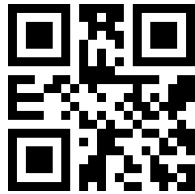


Installation, Operation, and Maintenance

Convertible Air Handlers 2 to 5 Ton

5TEM6B02AV21SA
5TEM6B03AV21SA
5TEM6D04AV31SA
5TEM6D05AV41SA
5TEM6D06AV41SA
5TEM6D07AV51SA



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

⚠ 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.

Introduction

Read this manual thoroughly before operating or servicing this unit.

This document is customer property and is to remain with this unit. Return to the service information pack upon completion of work.

Warnings, Cautions, and Notices

Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.

NOTICE

Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants.

Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

⚠ WARNING

Proper Field Wiring and Grounding Required!

Failure to follow code could result in death or serious injury.

All field wiring **MUST** be performed by qualified personnel. Improperly installed and grounded field wiring poses **FIRE** and **ELECTROCUTION** hazards. To avoid these hazards, you **MUST** follow requirements for field wiring installation and grounding as described in NEC and your local/state/national electrical codes.

⚠ WARNING

Personal Protective Equipment (PPE) Required!

Failure to wear proper PPE for the job being undertaken could result in death or serious injury.

Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, **MUST** follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing/servicing this unit, technicians **MUST** put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). **ALWAYS** refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, **ALWAYS** refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labelling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.
- If there is a risk of energized electrical contact, arc, or flash, technicians **MUST** put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, **PRIOR** to servicing the unit. **NEVER** PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. **ENSURE** ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.

⚠ WARNING**Follow EHS Policies!**

Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

⚠ WARNING**Cancer and Reproductive Harm!**

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.

⚠ WARNING**Safety Hazard!**

Failure to follow instructions below could result in death or serious injury or property damage.

This unit 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.

Do not allow children to play or climb on the unit or to clean or maintain the unit without supervision.

⚠ WARNING**Safety Hazard!**

Failure to follow instructions below could result in death or serious injury or property damage.

Connect the air handler to an outdoor unit suitable for use with R-454B refrigerant only.

⚠ WARNING**Hazardous Voltage!**

Failure to disconnect power before servicing could result in death or serious injury.

Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized. Verify that no power is present with a voltmeter.

⚠ WARNING**Grounding Required!**

Failure to follow instructions below could result in death or serious injury, or property damage.

- Reconnect all grounding devices.
- All parts of this product that are capable of conducting electrical current are grounded.
- If grounding wires, screws, straps, clips, nuts, or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

⚠ WARNING**Risk of Fire — Flammable Refrigerant!**

Failure to follow instructions below could result in death or serious injury, and equipment damage.

- To be repaired only by trained service personnel.
- Do not puncture refrigerant tubing.
- Dispose of properly in accordance with federal or local regulations.

⚠ WARNING**Live Electrical Components!**

Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

When it is necessary to work with live electrical components, have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks.

⚠ WARNING**Refrigerant under High Pressure!**

Failure to follow instructions below could result in an explosion which could result in death or serious injury or equipment damage.

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

⚠ CAUTION**Sharp Edges!**

Failure to follow instructions below could result in minor to moderate injury.

The service procedure described in this document involves working around sharp edges. To avoid being cut, technicians **MUST** put on all necessary Personal Protective Equipment (PPE), including gloves and arm guards.

⚠ CAUTION

Corrosion Hazard!

Failure to follow instructions below could result in personal injury or equipment damage.

To prevent shortening its service life, do not use air handler 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 and other components creates a corrosive condition which may cause rapid deterioration of the cabinet and internal components.

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Revision History

- Updated General Information chapter.
- Replaced images and updated steps in the Unit Conversion instruction chapter.

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General Information

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 Florida and California building codes

Optional Accessories

- 4,5,8,10,15,20, and 25 KW single phase electrical 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 - BAYTEMSPFG1A
- 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

Installation Recommendations

The 5TEM6 series air handler is designed for installation in a closet, utility room, alcove, basement, crawlspace, or attic. These versatile units are applicable to air conditioning and heat pump applications. Several models are available to meet the specific requirements of the outdoor equipment. Field installed electric resistance heaters are available.

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.*
- *Coil is pressurized with approximately 8 to 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.*

Notes:

- *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."*
- *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.*
- *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.*
- *There is no declared maximum altitude for operating the appliance.*
- *Charging of the refrigerating system shall be according to the instructions provided by the manufacturer of the outdoor unit.*

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 CO₂ 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 pressure-tested 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

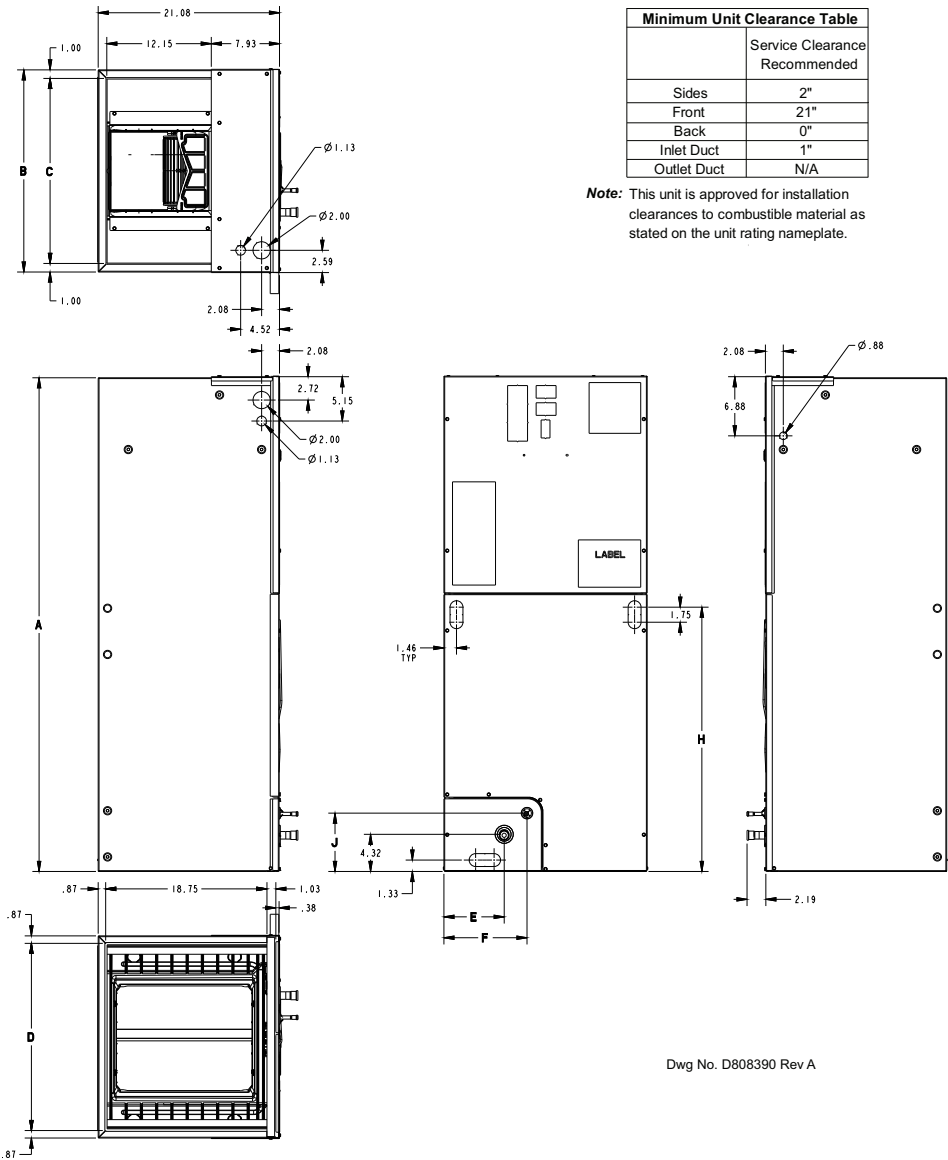
Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis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

1. 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;
 - b. all personal protective equipment is available and being used correctly;
 - c. 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.
5. 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.
8. 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.
11. 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.

Dimensional Data

Figure 1. Dimensional data

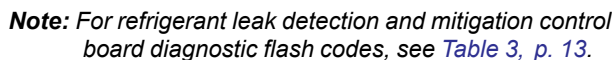


Note: All dimensions are reference dimensions.

Table 1. Product dimensions (inch)

| Product Dimensions | | | | | | | | | | |
|--------------------|-------|-------|-------|-------|------|------|-------|------|--------------|----------------|
| Air Handler Model | A | B | C | D | E | F | H | J | Flow Control | Gas Line Braze |
| 5TEM6B02, 03 | 46.77 | 18.50 | 16.50 | 16.75 | 5.43 | 7.08 | 20.07 | 5.76 | TXV | 3/4 |
| 5TEM6D04, D05 | 51.27 | 23.50 | 21.50 | 21.75 | 7.01 | 9.66 | 24.58 | 6.76 | TXV | 7/8 |
| 5TEM6D06, D07 | 57.40 | 23.50 | 21.50 | 21.75 | 7.01 | 9.66 | 30.71 | 6.76 | TXV | 7/8 |

Figure 2. Wiring diagram



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.

⚠ WARNING

Risk of Fire — Flammable Refrigerant!

Failure to follow instructions below could result in death or serious injury, and equipment damage.

- To be repaired only by trained service personnel.
- Do not puncture refrigerant tubing.
- Dispose of properly in accordance with federal or local regulations.

⚠ WARNING

Leak Detection System Installed!

Failure to follow instructions below could result in death or serious injury or equipment damage.

The unit is equipped with electrically powered safety measures and must be powered at all times after installation, except during servicing, to detect any leak.

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 de-energized include electrostatic air cleaners.

⚠ WARNING

Risk of Fire!

Failure to follow instructions below could cause a fire which could result in death, serious injury, and equipment damage.

Relocate the refrigerant sensor if installing the unit in any other orientation other than upflow.

For instructions on relocating the refrigerant sensor, see “Unit Conversion Instructions,” p. 32.

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 2, p. 12. 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 2. 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 ²) | | | | | | | | |
| 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

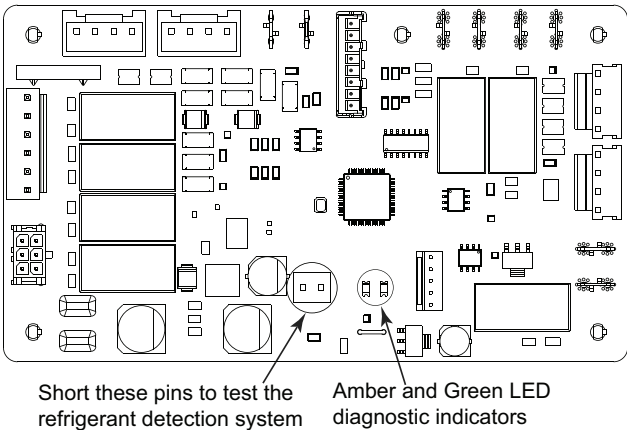
Note: All 5TEM6 model air handlers have been factory configured to provide sufficient airflow to dilute leaked refrigerant.

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 3, p. 13](#) below.

Figure 3. 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 [“Field Wiring Diagrams,” p. 19](#) 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.

Figure 4. QR code



Table 3. MCB diagnostic code table

For Software V07.1 and earlier

| 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 |

For Software V9.1 and later

| Condition | Green LED |
|---|------------------|
| No Power/Off | Off |
| Startup | On |
| Normal Operation | Slow Flash |
| Active Alarm - Sensor Communication Error | 2 Flash |
| Active Alarm - Refrigerant Leak or Sensor Failure | 3 Flash |
| Past Refrigerant Detected Alarm | 4 Flash |
| Past Sensor Communication or Sensor Error | 5, 6, or 7 Flash |

Notes:

1. *Amber LED diagnostic indicator should always be “ON”.*
2. *Software version is printed on label on control board.*

Installation Instructions

1. Unpacking

Carefully unpack the unit and inspect the contents for damage. If any damage is found at the time of delivery, proper notification and claims should be made with the carrier.

Check the rating plate to assure model number and voltage, plus any kits match with what you ordered. The manufacturer should be notified within 5 days of any discrepancy or parts shortage.

2. Location

The air handler should be centrally located and may be installed in a closet, alcove, utility room, basement, crawl space or attic. Minimum clearances must be met.

Important: *The downflow sub-base may be required with electric heat applications. See minimum clearance table.*

Equipment shall be installed in such a way which reduces the likelihood of ignition of leaked refrigerant.

WARNING

Risk of Fire!

Failure to follow instructions below could cause a fire which could result in death, serious injury, and equipment damage.

Confirm 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 must be equipped with an effective flame arrest.**
- **All indoor field-made joints of the field piping must be checked for refrigerant leaks after charging using an electronic leak detector calibrated for R-454B with sensitivity of 5 grams per year or better.**
- **The room must be constructed to avoid stagnation or fire hazard in the event of a refrigerant leak.**

The unit should be installed in a level position to ensure proper condensation drainage. Up to an additional 1/4-inch rise over the width or depth of the unit is allowed to create additional sloping towards the drain. Unit must be positioned between level and 1/4-inch rise, sloping toward the drain connections.

When the unit is installed in a closet or utility room, the room should be large enough, and have an opening to allow replacement of the unit. All servicing is done from the front and a clearance of 21-inch is needed for service unless the closet door aligns with the front of the air handler.

If you are installing the unit in an unconditioned space such as an attic or crawl space, you must ensure that the area provides sufficient air circulation to prevent moisture collection on the cabinet during high dew point conditions. A drain pan must be installed under the

entire unit when it is installed in or above a finished ceiling or in an unconditioned space.

3. Duct Work

WARNING

Ignition Sources in Ductwork!

Failure to follow instructions below could result in death or serious injury.

For appliances using A2L refrigerants connected via an air duct system to one or more rooms, only auxiliary devices declared suitable with the refrigerant shall be installed in connecting ductwork.

The duct work should be installed in accordance with the NFPA No. 90A "Installation of Air Conditioning and Ventilating systems" and No. 90B "Residential Type Warm Air Heating and Air Conditioning Installation."

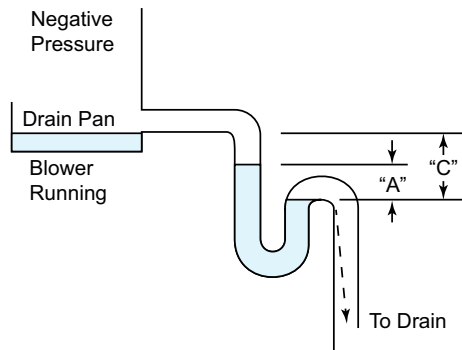
The duct work should be insulated in accordance with the applicable requirements for the particular installation as required by HUD, FHA, VA the applicable building code, local utility or other governing body.

4. Condensate Drain

The unit is supplied with primary and auxiliary condensate drains that have 3/4-inch NPT connections. The primary drain must be trapped outside the unit and piped in accordance with applicable building codes.

The figure shows the operation of a properly designed trap under normal operating conditions when the blower is running and the condensate is draining. Note the difference in height of the water column must at least equal the normal negative static pressure existing during operation between the cooling coil and blower. It is advisable to have the difference in water column height somewhat greater than the normal maximum operating static to allow for greater static caused by dirty filters or for the bounce of the water column on start-up.

Figure 5. Condensate drain



Proper operation of condensate trap under normal operating conditions.

"A" height of water column equals negative static pressure existing in system.

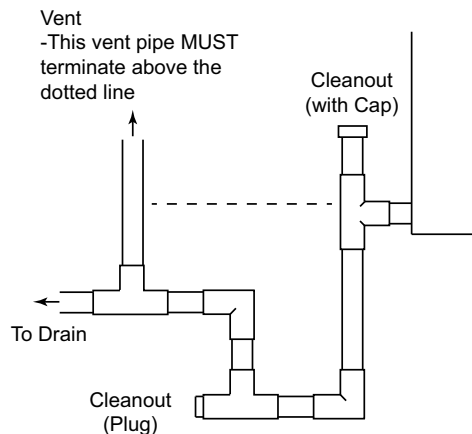
"C" dimension should at least equal two times the maximum negative static pressure that can occur in system.

Do not reduce the drain line size less than the connection size on the drain pan. Condensate should be piped to an open drain or to the outside. All drains must pitch downward away from the unit a minimum of 1/4-inch per foot of line to ensure proper drainage.

Important:

- If cleanout Tee is used, stand pipe must be sealed/capped.
- If a vent Tee is used, it must be downstream from the trap.

Figure 6. Condensate drain



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

5. Refrigerant Piping

Pipe-work including piping material, pipe routing, and installation shall include protection from physical damage in operation and service, and be in compliance

with national and local codes and standards. All field joints shall be accessible for inspection prior to being covered or enclosed.

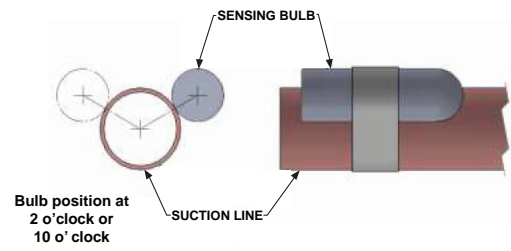
There is a holding charge of dry air in the indoor coil that will be evacuated when the sealing plugs are removed.

To protect the TXV, remove the TXV bulb from the tubing inside the unit before brazing the line set connections. Painted areas of the unit must be shielded during brazing to protect the finish.

After brazing, replace the TXV bulb and insulate it using the provided adhesive-backed insulation.

Note: For optimal performance, the TXV bulb can be located and insulated on the vapor line outside the unit. Pass the bulb and line through an opening in the line set panel. Place the bulb at the 10 or 2 o'clock position on the line, relative to the floor.

Figure 7. TXV sensing bulb



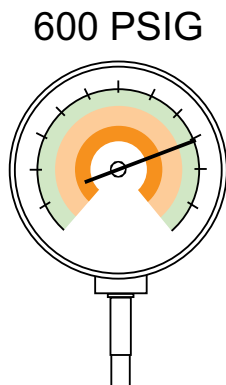
The two flammable refrigerant red warning tags on the line set connections should be removed prior to brazing and replaced once brazing is complete.

After completion of field piping for split systems, the field pipework shall be pressure tested with nitrogen and then vacuum tested prior to refrigerant charging, according to the following requirements:

Pressure test:

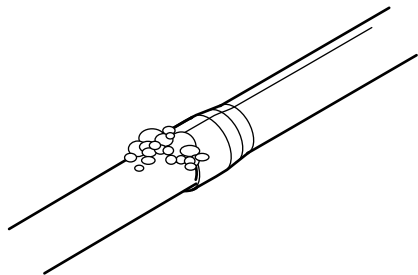
- Using dry nitrogen, pressurize the field piping and indoor coil to the lower of the maximum operating pressures listed on the name plates of the indoor and outdoor units (likely 600 psi).

Figure 8. Maximum operating pressure



- 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.
- Check for leaks by using a soapy solution at each field-made joint.

Figure 9. Leak check



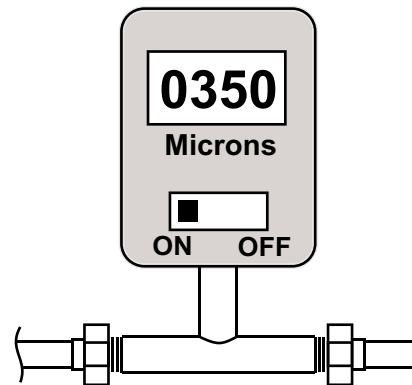
Note: Remove nitrogen pressure and repair any leaks before continuing.

Vacuum test:

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

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

Figure 10. Observe micron gauge reading



- 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 valve on the manifold gauge set.

All procedures for charging the system with refrigerant shall be according to the instructions provided by the manufacturer of the outdoor unit.

Important: Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks.

After charging the system, all indoor field-made joints of the field piping shall be checked for refrigerant leaks using an electronic leak detector calibrated for R-454B having a sensitivity of 5 grams per year or better.

6. Metering Device

All units are shipped and installed with an internally-checked, non-bleed TXV designed for air conditioning or heat pump operation. Some outdoor models may require a start assist kit. See outdoor unit for more information.

7. Blower

This unit is supplied with a variable speed motor with a direct drive blower wheel which can obtain various air flows. The unit is shipped with factory set cooling and heating air flows. Performance tables are available for additional airflow settings. Disconnect all power to the unit before making any adjustments to the airflow settings. Be sure to check the air flow and the temperature drop across the evaporator coil to ensure sufficient air flow.

Note: For optimal performance, seal the seams of the front panels using an appropriate tape to reduce air leakage.

8. Airflow Adjustment

NOTICE

Equipment Damage!

Failure to follow all instructions could result in equipment damage.

Disconnect power to the air handler before changing dip switch positions.

Blower speed changes are made on the ECM Fan Control. The ECM Fan Control controls the variable speed motor.

There is a bank of 8 dip switches. The dip switches work in pairs to match the airflow for the outdoor unit size (tons), cooling airflow adjustment, Fan off-delay options, and heating airflow adjustment. The switches appear as shown in Figure 12, p. 17.

Figure 11. ECM fan control

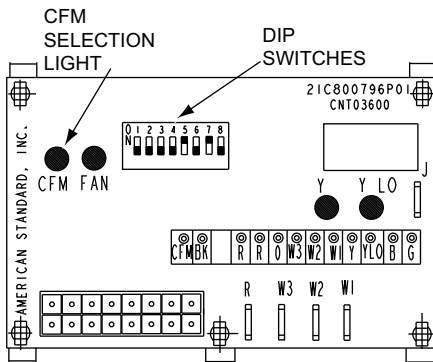
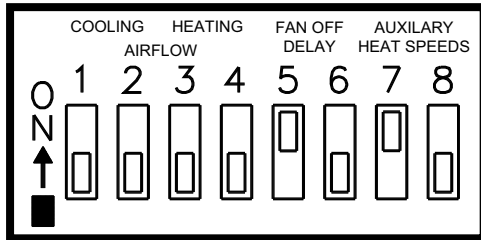


Figure 12. Dip switches



DIP SWITCHES (TYPICAL SETTINGS)

If the airflow needs to be increased or decreased, see the Blower Performance Table.

Be sure to set the correct airflow for cooling and heating.

Switches 1 to 4 Cooling Airflow

Switches 5 to 6 Fan Off Delay Options

Switches 7 to 8 Auxiliary Heat

Indoor Blower Timing

Important: Leave dip switches 5 and 6 in the “as-shipped” positions during system start-up and check out. Afterwards, adjust as desired.

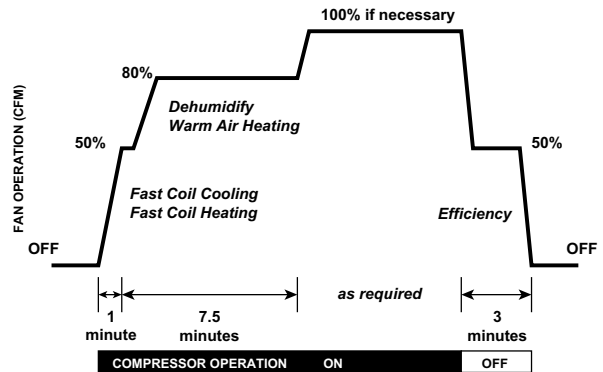
Table 4. Cooling off — delay options

| Switch Settings | | Selection | Nominal Airflow |
|-----------------|---------|-------------------------|---------------------|
| 5 — OFF | 6 — OFF | None | Same |
| 5 — ON | 6 — OFF | 1.5 Minutes | 100% ^(a) |
| 5 — OFF | 6 — ON | 3 Minutes | 50% |
| 5 — ON | 6 — ON | Enhanced ^(b) | 50–100% |

^(a) Default setting

^(b) This ENHANCED MODE selection provides a ramping up and ramping down of the blower speed to provide improved comfort, quietness, and potential energy savings. The graph shows the ramping process.

Figure 13. Enhanced mode



9. Wiring

Consult all schematic and pictorial wiring diagrams of this unit and the outdoor equipment to determine compatibility of wiring connections and to determine specific requirements.

All field wiring to the air handler should be installed in accordance with the latest edition of the National Electric Code NFPA No. 70 and any local codes. Check rating plates on unit for rated volts, minimum circuit ampacity and maximum over current protection. Supply circuit power wiring must be 75 degree C (167 degree F) minimum copper conductors only. Copper supply wires shall be sized to the National Electric Code or local code requirements, whichever is more stringent.

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.

The unit is shipped wired for 230/240 Volt AC 60 HZ 1 Phase Operation. If the unit is to be operated at 208 Vac 60HZ, follow the instructions on the indoor unit wiring diagram to change the low voltage transformer to 208 Vac operation (Ensure unit is properly grounded).

Class 2 low voltage control wiring should not be run in conduit with power wiring and must be separated from power wiring unless class 1 wire with proper voltage rating is used.

Low voltage control wiring should be 18 Awg, color coded (105 degree C minimum). For lengths longer

than 100ft., 16 Awg wire should be used. Make certain that separation of control wiring and power wiring has been maintained.

10. Air Filter

To protect the coil, blower and other internal parts from excessive dirt and dust an air filter must be installed before air enters the evaporator coil. A remote filter must be installed. Consult the filter manufacturer for proper sizing and maximum velocity requirements.

Important: Air filters shall meet the test requirements in UL 900.

11. Thermostat

Select a thermostat that is commonly used with HP or AC heating/cooling with electric heat. The thermostat will energize the fan on a demand for heat or cool.

Install the thermostat on an inside wall, away from drafts, lights or other heat sources in a location that has sufficient air circulation from other rooms being controlled by the thermostat.

12. Sequence of Operation Cooling (Cooling only)

When the thermostat calls for cooling, the circuit from R to G is completed. The blower motor is energized directly by the ECM fan control, which receives the 24Vac signal from the thermostat.

The circuit from R to Y is also complete energizing the compressor contactor of the outdoor unit. The contactor will close and start the compressor and condenser fan motor.

Cooling (heat pump)

When the thermostat calls for cooling, the circuit from R to G is completed. The blower motor is energized directly by the ECM fan control, which receives the 24Vac signal from the thermostat.

The circuit from R to Y is also complete energizing the compressor contactor of the outdoor unit. The contactor will close and start the compressor and condenser fan motor.

Circuit R to O energizes the reversing valve to the cooling position.

Heating (heat pump)

When the thermostat calls for heating, the circuit from R to G is completed and the blower motor is energized directly by the ECM fan control, which receives the 24Vac signal from the thermostat.

The circuit from R to Y is also complete energizing the compressor contactor of the outdoor unit. The contactor

will close and start the compressor and condenser fan motor.

In the heating mode, the reversing valve of the outdoor unit is not energized.

If the indoor temperature continues to fall, the R to W circuit is completed energizing the electric heat contactor(s).

Heating (electric heat only)

Note: The thermostat must be setup to bring the blower on when the electric heat is energized.

When the thermostat calls for heating, the circuit from R to G is completed and the blower motor is energized directly by the ECM fan control, which receives the 24Vac signal from the thermostat. The circuit from R to W is completed energizing the heating contactor(s).

Defrost

Supplemental heat during defrost can be provided by connecting the X2 (black) wire from the outdoor unit to W1 or W2 at the indoor unit. This will prevent cold air from being discharged from the indoor unit during defrost.

13. Operational and Checkout Procedures

To ensure proper function of the Refrigerant Leak Detection System, all procedures in the "[Refrigerant Leak Detection System](#)," p. 12 section of this manual must be verified.

To obtain proper performance, all units must be operated and charge adjustments made in accordance with procedures found in the Service Facts document of the outdoor unit.

After installation has been completed, it is recommended that the entire system be checked against the checkout list located at the back of this document. See "[Checkout Procedures](#)," p. 41.

14. Maintenance

The system air filter(s) should be inspected, cleaned or replaced at least monthly. Make certain that the access panels are replaced and secured properly before placing the unit back in operation. This product is designed for dependable service; however, periodic maintenance should be scheduled and conducted by trained professional service personnel. This service should be conducted at least annually, and should include testing and inspection of electrical and refrigerant components. The heat transfer surface should be cleaned. The blower motor is permanently lubricated for normal operating conditions.

Field Wiring Diagrams

Figure 14. Single stage, cooling only

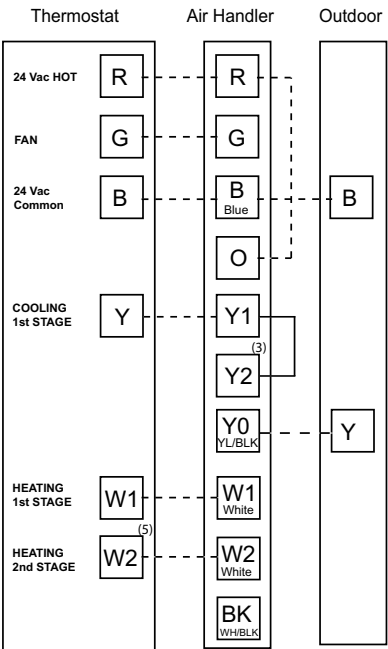


Figure 16. 2 Stage indoor airflow, cooling only

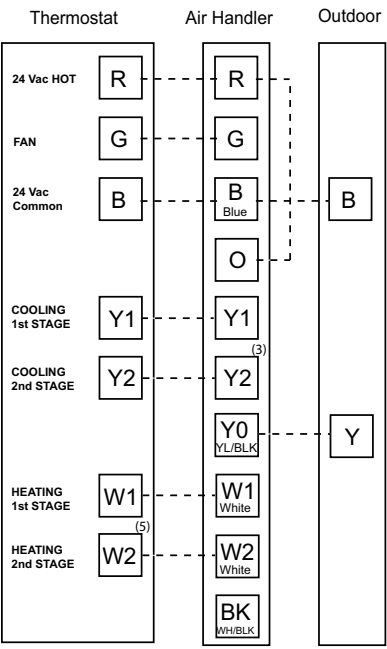


Figure 15. Single stage, HP

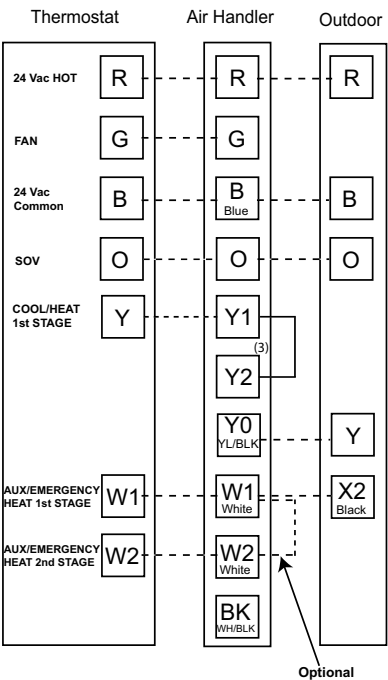


Figure 17. 2 Stage indoor airflow, HP

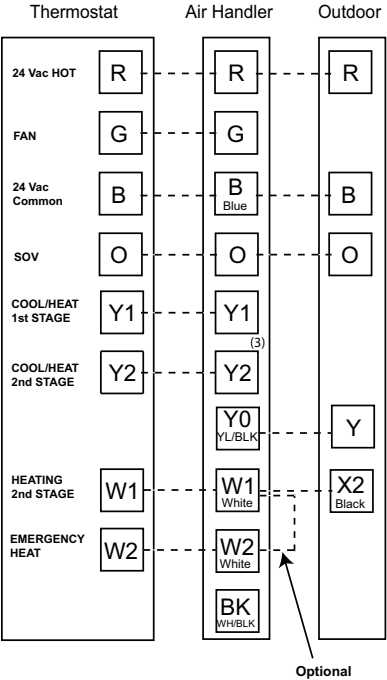


Figure 18. 2 Stage, 2 step, cooling only

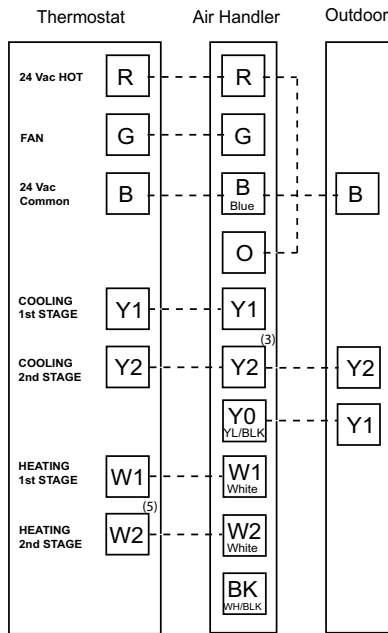
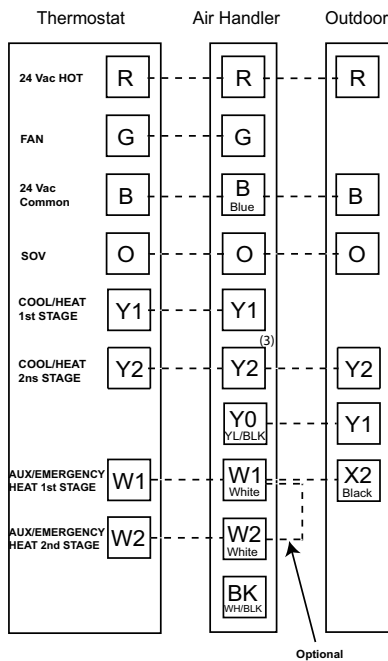


Figure 19. 2 Stage, 2 step, HP



Notes:

1. Units with pigtails require wirenuts for connections.
2. Cap all unused wires.
3. When BK is used with PWM-enabled Comfort Control, do not connect Y2 at the air handler.
4. When BK is used, cut the jumper between R and BK on the control board. See wiring schematic for details.
5. In AC systems for multiple stages of electric heat, jumper W1 and W2 together if comfort control has only one stage of heat.

External Switches and Accessories

The following optional connections are available on the mitigation control board (see connection diagrams [Figure 20, p. 21](#)):

- ACC1 and ACC2 accessory connections. Use when connecting an accessory to the air handler that could be considered a source of ignition (ex. electronic air cleaner).
- Aoa/Aob audible alarm connections. Use when configuring an audible alarm on the refrigerant detection system of the air handler.

ACC1, ACC2, and Aoa/Aob are dry contacts and need source voltage provided from either the accessory or the unit's control wiring.

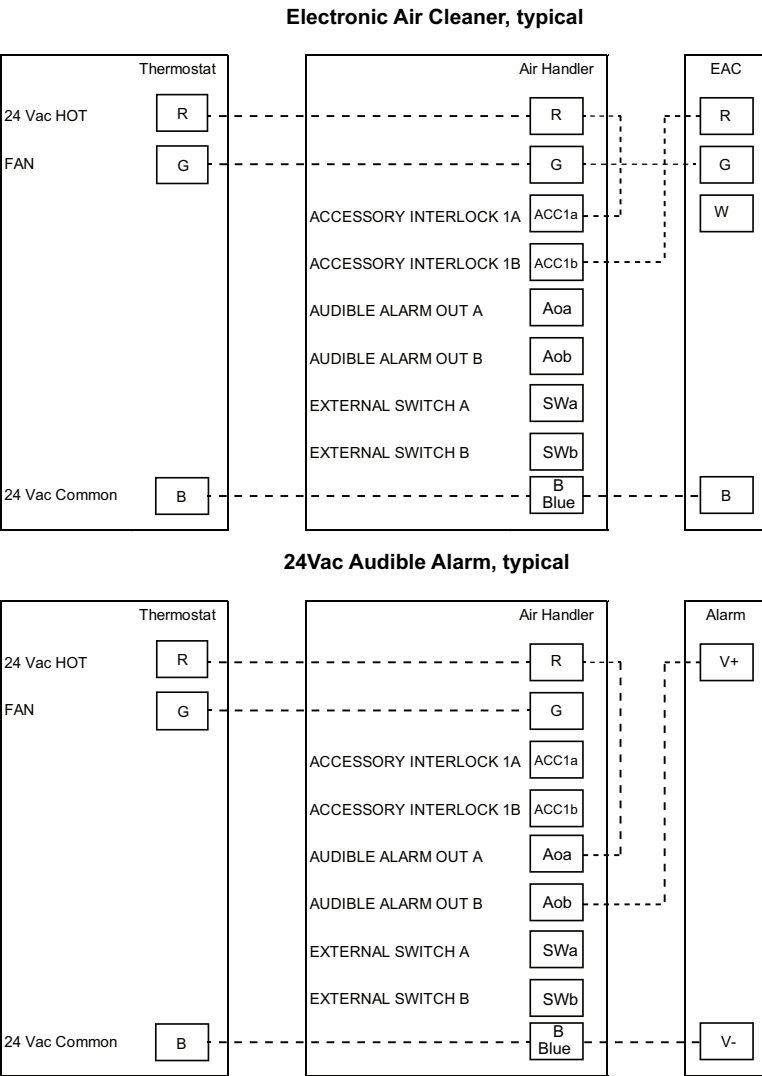
Connect using field-supplied 3/16-inch (Aoa/Aob) or 1/4-inch (ACC1, ACC2) female spade connections.

Figure 20. Accessories diagram



SCAN ME

Scan QR code to view instructional videos on field wiring for CleanEffects or AccuClean electronic air cleaners.



Performance and Electrical Data

Table 5. Cooling airflow performance – model 5TEM6B02AV21SA

| 5TEM6B02AV21SA Cooling Airflow Performance, Wet Coil, No Filter, No Heater | | | | | | | | | | | | |
|--|-----------------------|-----------------|--------------------|-----|-----|-----|---------------|--------------------------|---------|---------|---------|---------|
| Outdoor Unit Size (Tons) | Speed Setting | Airflow Setting | DIP Switch Setting | | | | Airflow Power | External Static Pressure | | | | |
| | | | SW1 | SW2 | SW3 | SW4 | | 0.1 | 0.3 | 0.5 | 0.7 | 0.9 |
| 1.5 | Low | 353 CFM/ton | ON | ON | OFF | ON | CFM Watts | 524 49 | 517 83 | 482 111 | 418 133 | 326 148 |
| | Normal | 401 CFM/ton | ON | ON | OFF | OFF | CFM Watts | 608 60 | 604 99 | 580 134 | 535 167 | 471 197 |
| | High | 451 CFM/ton | ON | ON | ON | OFF | CFM Watts | 683 76 | 683 119 | 664 160 | 626 198 | 571 233 |
| 2 | Low | 343 CFM/ton | OFF | ON | OFF | ON | CFM Watts | 693 78 | 693 122 | 674 164 | 638 202 | 583 237 |
| | Normal | 390 CFM/ton | OFF | ON | OFF | OFF | CFM Watts | 787 98 | 791 149 | 780 197 | 753 241 | 712 284 |
| | High | 439 CFM/ton | OFF | ON | ON | OFF | CFM Watts | 883 126 | 889 181 | 877 233 | 847 285 | 801 333 |
| 2.5 | Low | 300 CFM/ton | ON | OFF | OFF | ON | CFM Watts | 757 91 | 760 140 | 746 186 | 716 229 | 671 269 |
| | Normal ^(a) | 340 CFM/ton | ON | OFF | OFF | OFF | CFM Watts | 863 119 | 867 173 | 854 224 | 826 273 | 781 319 |
| | High | 383 CFM/ton | ON | OFF | ON | OFF | CFM Watts | 950 151 | 963 213 | 945 265 | 896 310 | 818 345 |

^(a) Factory default setting.

Table 6. Heating airflow performance – model 5TEM6B02AV21SA

| 5TEM6B02AV21SA Heating Airflow Performance, No Filter, No Heater | | | | | | | | | | | | |
|--|-----------------------|-----------------|--------------------|-----|-----|-----|---------------|--------------------------|----------|----------|----------|----------|
| Outdoor Unit Size (Tons) | Speed Setting | Airflow Setting | DIP Switch Setting | | | | Airflow Power | External Static Pressure | | | | |
| | | | SW1 | SW2 | SW3 | SW4 | | 0.1 | 0.3 | 0.5 | 0.7 | 0.9 |
| 1.5 | Low | 394 CFM/ton | ON | ON | OFF | ON | CFM Watts | 594 53 | 596 91 | 568 125 | 525 160 | 456 186 |
| | Normal | 448 CFM/ton | ON | ON | OFF | OFF | CFM Watts | 677 68 | 681 110 | 662 152 | 627 192 | 573 226 |
| | High | 493 CFM/ton | ON | ON | ON | OFF | CFM Watts | 744 81 | 749 127 | 739 175 | 709 219 | 665 257 |
| 2 | Low | 393 CFM/ton | OFF | ON | OFF | ON | CFM Watts | 791 91 | 796 139 | 792 191 | 764 238 | 726 278 |
| | Normal | 446 CFM/ton | OFF | ON | OFF | OFF | CFM Watts | 892 120 | 900 171 | 894 228 | 865 283 | 815 325 |
| | High | 491 CFM/ton | OFF | ON | ON | OFF | CFM Watts | 987 147 | 1013 201 | 983 260 | 961 322 | 913 365 |
| 2.5 | Low | 350 CFM/ton | ON | OFF | OFF | ON | CFM Watts | 878 115 | 886 166 | 880 222 | 851 276 | 810 321 |
| | Normal ^(a) | 398 CFM/ton | ON | OFF | OFF | OFF | CFM Watts | 101 151 | 989 205 | 998 264 | 974 328 | 926 371 |
| | High | 437 CFM/ton | ON | OFF | ON | OFF | CFM Watts | 1108 185 | 1092 241 | 1108 300 | 1072 372 | 1024 412 |

^(a) Factory default setting.

Table 7. Cooling airflow performance – model 5TEM6B03AV21SA

| 5TEM6B03AV21SA Cooling Airflow Performance, Wet Coil, No Filter, No Heater | | | | | | | | | | | | |
|--|-----------------------|-----------------|--------------------|-----|-----|-----|---------------|--------------------------|------------|-------------|------------|------------|
| Outdoor Unit Size (Tons) | Speed Setting | Airflow Setting | DIP Switch Setting | | | | Airflow Power | External Static Pressure | | | | |
| | | | SW1 | SW2 | SW3 | SW4 | | 0.1 | 0.3 | 0.5 | 0.7 | 0.9 |
| 1.5 | Low | 353 CFM/ton | ON | ON | OFF | ON | CFM Watts | 479 39 | 455 68 | 440 95 | 395 121 | 331 143 |
| | Normal | 401 CFM/ton | ON | ON | OFF | OFF | CFM Watts | 577 52 | 553 86 | 548 119 | 509 149 | 454 176 |
| | High | 451 CFM/ton | ON | ON | ON | OFF | CFM Watts | 672 67 | 647 106 | 652 144 | 620 179 | 571 212 |
| 2 | Low | 343 CFM/ton | OFF | ON | OFF | ON | CFM Watts | 686 69 | 685 110 | 667 148 | 635 184 | 588 218 |
| | Normal | 390 CFM/ton | OFF | ON | OFF | OFF | CFM Watts | 796 92 | 799 137 | 788 181 | 763 223 | 724 264 |
| | High | 439 CFM/ton | OFF | ON | ON | OFF | CFM Watts | 892 116 | 899 165 | 892 215 | 872 263 | 837 312 |
| 2.5 | Low | 300 CFM/ton | ON | OFF | OFF | ON | CFM Watts | 749 82 | 751 125 | 738 166 | 710 206 | 668 244 |
| | Normal | 340 CFM/ton | ON | OFF | OFF | OFF | CFM Watts | 867 109 | 874 157 | 866 205 | 843 252 | 805 299 |
| | High | 383 CFM/ton | ON | OFF | ON | OFF | CFM Watts | 965 139 | 976 191 | 972 244 | 954 298 | 922 353 |
| 3 | Low | 310 CFM/ton | OFF | OFF | OFF | ON | CFM Watts | 940 131 | 950 182 | 945 234 | 926 286 | 892 339 |
| | Normal ^(a) | 330 CFM/ton | OFF | OFF | OFF | OFF | CFM Watts | 993 149 | 956 202 | 1002 257 | 985 313 | 953 370 |

^(a) Factory default setting.

Table 8. Heating airflow performance – model 5TEM6B03AV21SA

| 5TEM6B03AV21SA Heating Airflow Performance, No Filter, No Heater | | | | | | | | | | | | |
|--|-----------------------|-----------------|--------------------|-----|-----|-----|---------------|--------------------------|-------------|-------------|-------------|-------------|
| Outdoor Unit Size (Tons) | Speed Setting | Airflow Setting | DIP Switch Setting | | | | Airflow Power | External Static Pressure | | | | |
| | | | SW1 | SW2 | SW3 | SW4 | | 0.1 | 0.3 | 0.5 | 0.7 | 0.9 |
| 1.5 | Low | 394 CFM/ton | ON | ON | OFF | ON | CFM Watts | 571 44 | 574 82 | 544 113 | 502 137 | 441 171 |
| | Normal | 448 CFM/ton | ON | ON | OFF | OFF | CFM Watts | 677 60 | 682 99 | 668 138 | 618 170 | 572 206 |
| | High | 493 CFM/ton | ON | ON | ON | OFF | CFM Watts | 746 75 | 752 116 | 739 160 | 712 200 | 674 237 |
| 2 | Low | 393 CFM/ton | OFF | ON | OFF | ON | CFM Watts | 799 86 | 806 128 | 799 175 | 773 220 | 740 259 |
| | Normal | 446 CFM/ton | OFF | ON | OFF | OFF | CFM Watts | 902 111 | 911 157 | 912 210 | 891 260 | 861 308 |
| | High | 491 CFM/ton | OFF | ON | ON | OFF | CFM Watts | 995 131 | 994 181 | 986 242 | 984 293 | 954 352 |
| 2.5 | Low | 350 CFM/ton | ON | OFF | OFF | ON | CFM Watts | 887 106 | 895 152 | 895 204 | 873 254 | 843 300 |
| | Normal | 398 CFM/ton | ON | OFF | OFF | OFF | CFM Watts | 1004 135 | 1004 186 | 998 246 | 996 298 | 965 359 |
| | High | 437 CFM/ton | ON | OFF | ON | OFF | CFM Watts | 1089 160 | 1079 215 | 1064 282 | 1079 332 | 1040 408 |
| 3 | Low | 325 CFM/ton | OFF | OFF | OFF | ON | CFM Watts | 986 131 | 987 180 | 984 239 | 997 291 | 947 349 |
| | Normal ^(a) | 346 CFM/ton | OFF | OFF | OFF | OFF | CFM Watts | 1042 146 | 1038 198 | 1029 262 | 1034 313 | 1001 380 |

^(a) Factory default setting.

Performance and Electrical Data

Table 9. Cooling airflow performance – model 5TEM6D04AV31SA/5TEM6D05AV41SA

| 5TEM6D04AV31SA/5TEM6D05AV41SA Cooling Airflow Performance, Wet Coil, No Filter, No Heater | | | | | | | | | | | | |
|---|-----------------------|-----------------|--------------------|-----|-----|-----|---------------|--------------------------|-------------|--------------|-------------|-------------|
| Outdoor Unit Size (Tons) | Speed Setting | Airflow Setting | DIP Switch Setting | | | | Airflow Power | External Static Pressure | | | | |
| | | | SW1 | SW2 | SW3 | SW4 | | 0.1 | 0.3 | 0.5 | 0.7 | 0.9 |
| 2.5 | Low | 300 CFM/ton | ON | ON | OFF | ON | CFM Watts | 717 47 | 714 97 | 698 142 | 669 183 | 629 219 |
| | Normal | 341 CFM/ton | ON | ON | OFF | OFF | CFM Watts | 801 61 | 815 116 | 812 167 | 792 216 | 756 262 |
| | High | 384 CFM/ton | ON | ON | ON | OFF | CFM Watts | 890 76 | 922 136 | 933 195 | 922 252 | 890 308 |
| 3 | Low | 319 CFM/ton | OFF | ON | OFF | ON | CFM Watts | 887 75 | 919 135 | 929 194 | 918 251 | 886 306 |
| | Normal | 363 CFM/ton | OFF | ON | OFF | OFF | CFM Watts | 1106 135 | 1149 202 | 1173 272 | 1176 342 | 1160 414 |
| | High | 408 CFM/ton | OFF | ON | ON | OFF | CFM Watts | 1218 175 | 1263 249 | 1287 323 | 1291 401 | 1274 480 |
| 3.5 | Low | 315 CFM/ton | ON | OFF | OFF | ON | CFM Watts | 1117 139 | 1161 207 | 1184 227 | 1188 348 | 1172 420 |
| | Normal | 357 CFM/ton | ON | OFF | OFF | OFF | CFM Watts | 1233 179 | 1277 255 | 1300 331 | 1301 407 | 1281 484 |
| | High | 402 CFM/ton | ON | OFF | ON | OFF | CFM Watts | 1323 209 | 1365 294 | 1379 372 | 1365 443 | 1326 505 |
| 4 | Low | 308 CFM/ton | OFF | OFF | OFF | ON | CFM Watts | 1223 176 | 1268 250 | 1291 326 | 1294 403 | 1277 482 |
| | Normal ^(a) | 350 CFM/ton | OFF | OFF | OFF | OFF | CFM Watts | 1317 208 | 1354 293 | 1378 371 | 1370 441 | 1310 503 |
| | High | 394 CFM/ton | OFF | OFF | ON | OFF | CFM Watts | 1473 281 | 1493 372 | 1468 /435 | 1400 471 | 1294 482 |

^(a) Factory default setting.

Table 10. Heating airflow performance – model 5TEM6D04AV31SA/5TEM6D05AV41SA

| 5TEM6D04AV31SA/5TEM6D05AV41SA Heating Airflow Performance, No Filter, No Heater | | | | | | | | | | | | |
|---|---------------|-----------------|--------------------|-----|-----|-----|---------------|--------------------------|-------------|-------------|-------------|-------------|
| Outdoor Unit Size (Tons) | Speed Setting | Airflow Setting | DIP Switch Setting | | | | Airflow Power | External Static Pressure | | | | |
| | | | SW1 | SW2 | SW3 | SW4 | | 0.1 | 0.3 | 0.5 | 0.7 | 0.9 |
| 2.5 | Low | 341 CFM/ton | ON | ON | OFF | ON | CFM Watts | 798 53 | 815 108 | 810 158 | 799 211 | 761 255 |
| | Normal | 379 CFM/ton | ON | ON | OFF | OFF | CFM Watts | 873 64 | 906 124 | 917 179 | 912 240 | 881 292 |
| | High | 417 CFM/ton | ON | ON | ON | OFF | CFM Watts | 1018 101 | 1061 165 | 1083 229 | 1087 296 | 1069 361 |
| 3 | Low | 381 CFM/ton | OFF | ON | OFF | ON | CFM Watts | 1138 135 | 1186 204 | 1215 275 | 1222 347 | 1212 422 |
| | Normal | 424 CFM/ton | OFF | ON | OFF | OFF | CFM Watts | 1232 165 | 1278 239 | 1309 317 | 1314 393 | 1295 467 |
| | High | 466 CFM/ton | OFF | ON | ON | OFF | CFM Watts | 1306 186 | 1343 265 | 1373 348 | 1376 428 | 1332 483 |
| 3.5 | Low | 348 CFM/ton | ON | OFF | OFF | ON | CFM Watts | 1199 156 | 1248 228 | 1280 303 | 1285 377 | 1276 457 |
| | Normal | 386 CFM/ton | ON | OFF | OFF | OFF | CFM Watts | 1279 179 | 1319 255 | 1349 337 | 1353 415 | 1319 477 |
| | High | 425 CFM/ton | ON | OFF | ON | OFF | CFM Watts | 1382 218 | 1415 301 | 1429 389 | 1399 442 | 1333 484 |

Table 10. Heating airflow performance – model 5TEM6D04AV31SA/5TEM6D05AV41SA (continued)

| 5TEM6D04AV31SA/5TEM6D05AV41SA Heating Airflow Performance, No Filter, No Heater | | | | | | | | | | | | |
|---|-----------------------|-----------------|--------------------|-----|-----|-----|---------------|--------------------------|-------------|-------------|-------------|-------------|
| Outdoor Unit Size (Tons) | Speed Setting | Airflow Setting | DIP Switch Setting | | | | Airflow Power | External Static Pressure | | | | |
| | | | SW1 | SW2 | SW3 | SW4 | | 0.1 | 0.3 | 0.5 | 0.7 | 0.9 |
| 4 | Low | 338 CFM/ton | OFF | OFF | OFF | ON | CFM Watts | 1279 179 | 1319 255 | 1350 337 | 1353 415 | 1319 477 |
| | Normal ^(a) | 375 CFM/ton | OFF | OFF | OFF | OFF | CFM Watts | 1393 222 | 1426 307 | 1437 395 | 1402 444 | 1332 484 |
| | High | 413 CFM/ton | OFF | OFF | ON | OFF | CFM Watts | 1488 265 | 1505 352 | 1411 425 | 1370 522 | 1295 349 |

^(a) Factory default setting.

Table 11. Cooling airflow performance – model 5TEM6D06AV41SA/5TEM6D07AV51SA

| 5TEM6D06AV41SA/5TEM6D07AV51SA Cooling Airflow Performance, Wet Coil, No Filter, No Heater | | | | | | | | | | | | |
|---|-----------------------|-----------------|--------------------|-----|-----|-----|---------------|--------------------------|-------------|-------------|-------------|-------------|
| Outdoor Unit Size (Tons) | Speed Setting | Airflow Setting | DIP Switch Setting | | | | Airflow Power | External Static Pressure | | | | |
| | | | SW1 | SW2 | SW3 | SW4 | | 0.1 | 0.3 | 0.5 | 0.7 | 0.9 |
| 3 | Low | 324 CFM/ton | ON | ON | OFF | ON | CFM Watts | 993 101 | 1003 149 | 997 197 | 974 246 | 935 295 |
| | Normal | 368 CFM/ton | ON | ON | OFF | OFF | CFM Watts | 1077 122 | 1095 175 | 1096 227 | 1079 280 | 1045 332 |
| | High | 423 CFM/ton | ON | ON | ON | OFF | CFM Watts | 1233 173 | 1258 236 | 1264 297 | 1254 356 | 1227 413 |
| 3.5 | Low | 314 CFM/ton | OFF | ON | OFF | ON | CFM Watts | 1074 121 | 1092 174 | 1092 226 | 1075 279 | 1040 331 |
| | Normal | 357 CFM/ton | OFF | ON | OFF | OFF | CFM Watts | 1208 164 | 1232 225 | 1239 284 | 1228 342 | 1200 399 |
| | High | 411 CFM/ton | OFF | ON | ON | OFF | CFM Watts | 1453 258 | 1479 333 | 1490 405 | 1487 474 | 1468 539 |
| 4 | Low | 298 CFM/ton | ON | OFF | OFF | ON | CFM Watts | 1134 135 | 1157 191 | 1162 249 | 1149 302 | 1118 357 |
| | Normal | 339 CFM/ton | ON | OFF | OFF | OFF | CFM Watts | 1346 217 | 1371 286 | 1380 352 | 1373 416 | 1351 478 |
| | High | 389 CFM/ton | ON | OFF | ON | OFF | CFM Watts | 1605 371 | 1633 401 | 1647 481 | 1648 556 | 1635 626 |
| 5 | Low | 305 CFM/ton | OFF | OFF | OFF | ON | CFM Watts | 1565 301 | 1592 383 | 1606 461 | 1605 534 | 1591 603 |
| | Normal ^(a) | 347 CFM/ton | OFF | OFF | OFF | OFF | CFM Watts | 1754 414 | 1791 499 | 1794 582 | 1788 665 | 1798 745 |
| | High ^(b) | 399 CFM/ton | OFF | OFF | ON | OFF | CFM Watts | 1993 557 | 1997 645 | 1968 707 | 1906 743 | 1811 753 |

^(a) Factory default setting.

^(b) Airflow must not exceed 1800 cfm in horizontal right, horizontal left, and downflow applications due to condensate blowoff. The 5 ton high tap shall not be used in these applications.

Performance and Electrical Data

Table 12. Heating airflow performance – model 5TEM6D06AV41SA/5TEM6D07AV51SA

| 5TEM6D06AV41SA/5TEM6D07AV51SA Heating Airflow Performance, No Filter, No Heater | | | | | | | | | | | | |
|---|---------------|-----------------|--------------------|-----|-----|-----|---------------|--------------------------|-------------|-------------|-------------|-------------|
| Outdoor Unit Size (Tons) | Speed Setting | Airflow Setting | DIP Switch Setting | | | | Airflow Power | External Static Pressure | | | | |
| | | | SW1 | SW2 | SW3 | SW4 | | 0.1 | 0.3 | 0.5 | 0.7 | 0.9 |
| 3 | Low | 360 CFM/ton | ON | ON | OFF | ON | CFM Watts | 1058 108 | 1074 159 | 1079 11 | 1067 264 | 1031 315 |
| | Normal | 400 CFM/ton | ON | ON | OFF | OFF | CFM Watts | 1139 128 | 1159 183 | 1176 242 | 1166 296 | 1136 351 |
| | High | 440 CFM/ton | ON | ON | ON | OFF | CFM Watts | 1292 183 | 1318 248 | 1333 314 | 1328 375 | 1307 436 |
| 3.5 | Low | 348 CFM/ton | OFF | ON | OFF | ON | CFM Watts | 1162 136 | 1183 193 | 1199 253 | 1190 308 | 1162 364 |
| | Normal | 387 CFM/ton | OFF | ON | OFF | OFF | CFM Watts | 1336 199 | 1364 267 | 1378 335 | 1375 398 | 1356 461 |
| | High | 426 CFM/ton | OFF | ON | ON | OFF | CFM Watts | 1509 261 | 1544 341 | 1557 417 | 1559 489 | 1550 558 |
| 4 | Low | 338 CFM/ton | ON | OFF | OFF | ON | CFM Watts | 1332 197 | 1360 265 | 1375 333 | 1371 397 | 1352 459 |
| | Normal | 375 CFM/ton | ON | OFF | OFF | OFF | CFM Watts | 1521 265 | 1556 346 | 1569 422 | 1571 495 | 1563 564 |
| | High | 413 CFM/ton | ON | OFF | ON | OFF | CFM Watts | 1667 341 | 1714 426 | 1726 510 | 1725 587 | 1724 665 |
| 5 | Low | 326 CFM/ton | OFF | OFF | OFF | ON | CFM Watts | 1650 330 | 1694 415 | 1707 497 | 1707 574 | 1705 651 |
| | Normal (a) | 362 CFM/ton | OFF | OFF | OFF | OFF | CFM Watts | 1805 423 | 1846 509 | 1855 597 | 1831 660 | 1811 729 |
| | High | 398 CFM/ton | OFF | OFF | ON | OFF | CFM Watts | 1980 515 | 1991 604 | 1992 694 | 1923 723 | 1851 753 |

(a) Factory default setting.

Table 13. Electrical data – model 5TEM6B02AV21SA

| 5TEM6B02AV21SA Heater Data | | | | | | | | | | | |
|--------------------------------|------------------------|----------|-------|-------------------------|--------------------------|-----------------------------|----------|-------|-------------------------|--------------------------|-----------------------------|
| Heater Model No. | No. of Circuits/Phases | 240 Volt | | | | | 208 Volt | | | | |
| | | Capacity | | Heater Amps per Circuit | Minimum Circuit Ampacity | Maximum Overload Protection | Capacity | | Heater Amps per Circuit | Minimum Circuit Ampacity | Maximum Overload Protection |
| | | kW | BTUH | | | | kW | BTUH | | | |
| No Heater | | | | 2.8(a) | 4 | 15 | | | 2.8(a) | 4 | 15 |
| BAYHTR1504BRK BAYHTR1504LUG | 1/1 | 3.84 | 13100 | 16.0 | 24 | 25 | 2.88 | 9800 | 13.8 | 21 | 25 |
| BAYHTR1505BRK BAYHTR1505LUG | 1/1 | 4.80 | 16400 | 20.0 | 29 | 30 | 3.60 | 12300 | 17.3 | 25 | 25 |
| BAYHTR1508BRK BAYHTR1508LUG | 1/1 | 7.68 | 26200 | 32.0 | 44 | 45 | 5.76 | 19700 | 27.7 | 38 | 40 |
| BAYHTR1510BRK BAYHTR1510LUG | 1/1 | 9.60 | 32800 | 40.0 | 54 | 60 | 7.20 | 24600 | 34.6 | 47 | 50 |
| BAYHTR1517BRK Circuit 1 (b) | 2/1 | 9.60 | 32800 | 40.0 | 54 | 60 | 7.20 | 24600 | 34.6 | 47 | 50 |
| BAYHTR1517BRK Circuit 2 | | 4.80 | 16400 | 20.0 | 25 | 25 | 3.60 | 12300 | 17.3 | 22 | 25 |
| BAYHTR3510LUG | 1/3 | 9.60 | 32800 | 23.1 | 32 | 35 | 7.20 | 24600 | 20.0 | 28 | 30 |
| BAYHTR3517LUG | 1/3 | 14.40 | 49100 | 34.6 | 46 | 50 | 10.80 | 36900 | 30.0 | 41 | 45 |

(a) Motor Amps

(b) MCA and MOP for circuit 1 contains the motor amps

Table 14. Electrical data – model 5TEM6B03AV21SA

| 5TEM6B03AV21SA Heater Data | | | | | | | | | | | |
|---|----------------------------|----------|-------|-------------------------------|--------------------------------|-----------------------------------|----------|-------|-------------------------------|--------------------------------|-----------------------------------|
| Heater Model No. | No. of Circuits/ Phases | 240 Volt | | | | | 208 Volt | | | | |
| | | Capacity | | Heater Amps per Circuit | Minimum Circuit Ampacity | Maximum Overload Protection | Capacity | | Heater Amps per Circuit | Minimum Circuit Ampacity | Maximum Overload Protection |
| | | kW | BTUH | | | | kW | BTUH | | | |
| No Heater | | | | 4.3 ^(a) | 5 | 15 | | | 4.3 ^(a) | 5 | 15 |
| BAYHTR1504BRK BAYHTR1504LUG | 1/1 | 3.84 | 13100 | 16.0 | 25 | 25 | 2.88 | 9800 | 13.8 | 23 | 25 |
| BAYHTR1505BRK BAYHTR1505LUG | 1/1 | 4.80 | 16400 | 20.0 | 30 | 30 | 3.60 | 12300 | 17.3 | 27 | 30 |
| BAYHTR1508BRK BAYHTR1508LUG | 1/1 | 7.68 | 26200 | 32.0 | 45 | 45 | 5.76 | 19700 | 27.7 | 40 | 40 |
| BAYHTR1510BRK BAYHTR1510LUG | 1/1 | 9.60 | 32800 | 40.0 | 55 | 60 | 7.20 | 24600 | 34.6 | 49 | 50 |
| BAYHTR1517BRK Circuit 1 ^(b) | 2/1 | 9.60 | 32800 | 40.0 | 55 | 60 | 7.20 | 24600 | 34.6 | 49 | 50 |
| BAYHTR1517BRK Circuit 2 | | 4.80 | 16400 | 20.0 | 25 | 25 | 3.60 | 12300 | 17.3 | 22 | 25 |
| BAYHTR3510LUG | 1/3 | 9.60 | 32800 | 23.1 | 34 | 35 | 7.20 | 24600 | 20.0 | 30 | 30 |
| BAYHTR3517LUG | 1/3 | 14.40 | 49100 | 34.6 | 48 | 50 | 10.80 | 36900 | 30.0 | 42 | 45 |

(a) Motor Amps

(b) MCA and MOP for circuit 1 contains the motor amps

Table 15. Electrical data – model 5TEM6D04AV31SA/5TEM6D05AV41SA

| 5TEM6D04AV31SA/5TEM6D05AV41SA Heater Data | | | | | | | | | | | |
|---|----------------------------|----------|-------|-------------------------------|--------------------------------|-----------------------------------|----------|-------|-------------------------------|--------------------------------|-----------------------------------|
| Heater Model No. | No. of Circuits/ Phases | 240 Volt | | | | | 208 Volt | | | | |
| | | Capacity | | Heater Amps per Circuit | Minimum Circuit Ampacity | Maximum Overload Protection | Capacity | | Heater Amps per Circuit | Minimum Circuit Ampacity | Maximum Overload Protection |
| | | kW | BTUH | | | | kW | BTUH | | | |
| No Heater | | | | 4.3 ^(a) | 5 | 15 | | | 4.3 ^(a) | 5 | 15 |
| BAYHTR1504BRK BAYHTR1504LUG | 1/1 | 3.84 | 13100 | 16.0 | 25 | 25 | 2.88 | 9800 | 13.8 | 23 | 25 |
| BAYHTR1505BRK BAYHTR1505LUG | 1/1 | 4.80 | 16400 | 20.0 | 30 | 30 | 3.60 | 12300 | 17.3 | 27 | 30 |
| BAYHTR1508BRK BAYHTR1508LUG | 1/1 | 7.68 | 26200 | 32.0 | 45 | 45 | 5.76 | 19700 | 27.7 | 40 | 40 |
| BAYHTR1510BRK BAYHTR1510LUG | 1/1 | 9.60 | 32800 | 40.0 | 55 | 60 | 7.20 | 24600 | 34.6 | 49 | 50 |
| BAYHTR1517BRK Circuit 1 ^(b) | 2/1 | 9.60 | 32800 | 40.0 | 55 | 60 | 7.20 | 24600 | 34.6 | 49 | 50 |
| BAYHTR1517BRK Circuit 2 | | 4.80 | 16400 | 20.0 | 25 | 25 | 3.60 | 12300 | 17.3 | 22 | 25 |
| BAYHTR1523BRK Circuit 1 ^(b) | 2/1 | 9.60 | 32800 | 40.0 | 55 | 60 | 7.20 | 24600 | 34.6 | 49 | 50 |
| BAYHTR1523BRK Circuit 2 | | 9.60 | 32800 | 40.0 | 50 | 50 | 7.20 | 24600 | 34.6 | 43 | 45 |
| BAYHTR3510LUG | 1/3 | 9.60 | 32800 | 23.1 | 34 | 35 | 7.20 | 24600 | 20.0 | 30 | 30 |
| BAYHTR3517LUG | 1/3 | 14.40 | 49100 | 34.6 | 48 | 50 | 10.80 | 36900 | 30.0 | 42 | 45 |

(a) Motor Amps

(b) MCA and MOP for circuit 1 contains the motor amps

Table 16. Electrical data – model 5TEM6D06AV41SA/5TEM6D07AV51SA

| 5TEM6D06AV41SA/5TEM6D07AV51SA Heater Data | | | | | | | | | | | |
|---|----------------------------|----------|-------|-------------------------------|--------------------------------|-----------------------------------|----------|-------|-------------------------------|--------------------------------|-----------------------------------|
| Heater Model No. | No. of Circuits/ Phases | 240 Volt | | | | | 208 Volt | | | | |
| | | Capacity | | Heater Amps per Circuit | Minimum Circuit Ampacity | Maximum Overload Protection | Capacity | | Heater Amps per Circuit | Minimum Circuit Ampacity | Maximum Overload Protection |
| | | kW | BTUH | | | | kW | BTUH | | | |
| No Heater | | | | 6.8 ^(a) | 9 | 15 | | | 6.8 ^(a) | 9 | 15 |
| BAYHTR1504BRK BAYHTR1504LUG | 1/1 | 3.84 | 13100 | 16.0 | 29 | 30 | 2.88 | 9800 | 13.8 | 26 | 30 |
| BAYHTR1505BRK BAYHTR1505LUG | 1/1 | 4.80 | 16400 | 20.0 | 34 | 35 | 3.60 | 12300 | 17.3 | 30 | 30 |

Performance and Electrical Data

Table 16. Electrical data – model 5TEM6D06AV41SA/5TEM6D07AV51SA (continued)

| 5TEM6D06AV41SA/5TEM6D07AV51SA Heater Data | | | | | | | | | | | |
|---|----------------------------|----------|-------|-------------------------------|--------------------------------|-----------------------------------|----------|-------|-------------------------------|--------------------------------|-----------------------------------|
| Heater Model No. | No. of Circuits/ Phases | 240 Volt | | | | | 208 Volt | | | | |
| | | Capacity | | Heater Amps per Circuit | Minimum Circuit Ampacity | Maximum Overload Protection | Capacity | | Heater Amps per Circuit | Minimum Circuit Ampacity | Maximum Overload Protection |
| | | kW | BTUH | | | | kW | BTUH | | | |
| BAYHTR1508BRK BAYHTR1508LUG | 1/1 | 7.68 | 26200 | 32.0 | 49 | 50 | 5.76 | 19700 | 27.7 | 43 | 45 |
| BAYHTR1510BRK BAYHTR1510LUG | 1/1 | 9.60 | 32800 | 40.0 | 59 | 60 | 7.20 | 24600 | 34.6 | 52 | 60 |
| BAYHTR1517BRK Circuit 1 ^(b) | 2/1 | 9.60 | 32800 | 40.0 | 59 | 60 | 7.20 | 24600 | 34.6 | 52 | 60 |
| BAYHTR1517BRK Circuit 2 | | 4.80 | 16400 | 20.0 | 25 | 25 | 3.60 | 12300 | 17.3 | 22 | 25 |
| BAYHTR1523BRK Circuit 1 ^(b) | 2/1 | 9.60 | 32800 | 40.0 | 59 | 60 | 7.20 | 24600 | 34.6 | 52 | 60 |
| BAYHTR1523BRK Circuit 2 | | 9.60 | 32800 | 40.0 | 50 | 50 | 7.20 | 24600 | 34.6 | 43 | 45 |
| BAYHTR1525BRK Circuit 1 ^(b) | 4/1 | 6.00 | 20500 | 25.0 | 40 | 40 | 4.50 | 15400 | 21.6 | 36 | 40 |
| BAYHTR1525BRK Circuit 2 | | 6.00 | 20500 | 25.0 | 31 | 35 | 4.50 | 15400 | 21.6 | 27 | 30 |
| BAYHTR1525BRK Circuit 3 | | 6.00 | 20500 | 25.0 | 31 | 35 | 4.50 | 15400 | 21.6 | 27 | 30 |
| BAYHTR1525BRK Circuit 4 | | 6.00 | 20500 | 25.0 | 31 | 35 | 4.50 | 15400 | 21.6 | 27 | 30 |
| BAYHTR3510LUG | 1/3 | 9.60 | 32800 | 23.1 | 36 | 40 | 7.20 | 24600 | 20.0 | 33 | 35 |
| BAYHTR3517LUG | 1/3 | 14.40 | 49100 | 34.6 | 51 | 60 | 10.80 | 36900 | 30.0 | 45 | 45 |

^(a) Motor Amps

^(b) MCA and MOP for circuit 1 contains the motor amps

Minimum Airflow CFM

Table 17. Models – 5TEM6B02AV21SA and 5TEM6B03AV21SA

| Heater | Minimum Heater Airflow CFM | |
|--|----------------------------|-------------------|
| | With Heat Pump | Without Heat Pump |
| BAYHTR1504BRK, BAYHTR1504LUG, BAYHTR1505BRK, BAYHTR1505LUG | 660 | 500 |
| BAYHTR1508BRK, BAYHTR1508LUG | 780 | 600 |
| BAYHTR1510BRK, BAYHTR1510LUG | 780 | 600 |
| BAYHTR1517BRK | 1050 | 850 |
| BAYHTR3510LUG | 780 | 600 |
| BAYHTR3517LUG | 900 | 850 |

Table 18. Models – 5TEM6D04AV31SA and 5TEM6D05AV41SA

| Heater | Minimum Heater Airflow CFM | |
|--|----------------------------|-------------------|
| | With Heat Pump | Without Heat Pump |
| BAYHTR1504BRK, BAYHTR1504LUG, BAYHTR1505BRK, BAYHTR1505LUG | 875 | 675 |
| BAYHTR1508BRK, BAYHTR1508LUG | 950 | 820 |
| BAYHTR1510BRK, BAYHTR1510LUG | 1000 | 820 |
| BAYHTR1517BRK | 1000 | 820 |
| BAYHTR3510LUG | 875 | 820 |
| BAYHTR3517LUG | 1000 | 950 |
| BAYHTR1523BRK | 1300 | 1140 |

Table 19. Models – 5TEM6D06AV41SA and 5TEM6D07AV51SA

| Heater | Minimum Heater Airflow CFM | |
|--|----------------------------|-------------------|
| | With Heat Pump | Without Heat Pump |
| BAYHTR1504BRK, BAYHTR1504LUG, BAYHTR1505BRK, BAYHTR1505LUG | 1200 | 975 |
| BAYHTR1508BRK, BAYHTR1508LUG | 1350 | 975 |
| BAYHTR1510BRK, BAYHTR1510LUG | 1350 | 975 |
| BAYHTR1517BRK | 1365 | 975 |
| BAYHTR3510LUG | 1300 | 975 |
| BAYHTR3517LUG | 1365 | 1120 |
| BAYHTR1523BRK | 1365 | 1300 |
| BAYHTR1525BRK | 1810 | 1505 |

Notes: See following tables for heater application:

- Pressure Drop for Electrical Heaters
- Minimum Heating Airflow Matrix (on unit nameplates)

Table 20. Airflow performance with auxiliary heat - models 5TEM6B02AV21SA and 5TEM6B03AV21SA

| Airflow Settings | DIP Switch Settings | | Nominal Airflow |
|------------------|---------------------|----------|-----------------|
| | Switch 7 | Switch 8 | |
| Low | ON | ON | 601 |
| Med-Lo | OFF | ON | 661 |
| Med-Hi | ON | OFF | 781 |
| High | OFF | OFF | 973 |

Table 21. Airflow performance with auxiliary heat - models 5TEM6D04AV31SA and 5TEM6D05AV41SA

| Airflow Settings | DIP Switch Settings | | Nominal Airflow |
|------------------|---------------------|----------|-----------------|
| | Switch 7 | Switch 8 | |
| Low | ON | ON | 696 |
| Med-Lo | OFF | ON | 825 |
| Med-Hi | ON | OFF | 1150 |
| High | OFF | OFF | 1298 |

Minimum Airflow CFM

Table 22. Airflow performance with auxiliary heat - models 5TEM6D06AV41SA and 5TEM6D07AV51SA

| Airflow Settings | DIP Switch Settings | | Nominal Airflow |
|------------------|---------------------|----------|-----------------|
| | Switch 7 | Switch 8 | |
| Low | ON | ON | 1000 |
| Med-Lo | OFF | ON | 1130 |
| Med-Hi | ON | OFF | 1354 |
| High | OFF | OFF | 1596 |

Heater Pressure Drop Table

Table 23. Heat pressure drop

| Airflow CFM | Number of Racks | | | | | Heater Racks | |
|----------------|---------------------------------|------|------|------|--|--------------|--------------|
| | 1 | 2 | 3 | 4 | | Heater Model | No. of Racks |
| | Air Pressure Drop — Inches W.G. | | | | | | |
| 1800 | 0.02 | 0.04 | 0.06 | 0.14 | | BAYHTR1504 | 1 |
| 1700 | 0.02 | 0.04 | 0.06 | 0.14 | | BAYHTR1505 | 2 |
| 1600 | 0.02 | 0.04 | 0.06 | 0.13 | | BAYHTR1508 | 2 |
| 1500 | 0.02 | 0.04 | 0.06 | 0.12 | | BAYHTR1510 | 2 |
| 1400 | 0.02 | 0.04 | 0.06 | 0.12 | | BAYHTR1517 | 3 |
| 1300 | 0.02 | 0.04 | 0.05 | 0.11 | | BAYHTR3510 | 3 |
| 1200 | 0.01 | 0.04 | 0.05 | 0.10 | | BAYHTR3517 | 3 |
| 1100 | 0.01 | 0.03 | 0.05 | 0.09 | | BAYHTR1523 | 4 |
| 1000 | 0.01 | 0.03 | 0.04 | 0.09 | | BAYHTR1525 | 4 |
| 900 | 0.01 | 0.03 | 0.04 | 0.08 | | — | — |
| 800 | 0.01 | 0.03 | — | — | | — | — |
| 700 | 0.01 | 0.02 | — | — | | — | — |
| 600 | 0.01 | 0.02 | — | — | | — | — |

Unit Conversion Instructions

⚠ WARNING

Risk of Fire!

Failure to follow instructions below could cause a fire which could result in death, serious injury, and equipment damage.

Relocate the refrigerant sensor if installing the unit in any other orientation other than upflow.

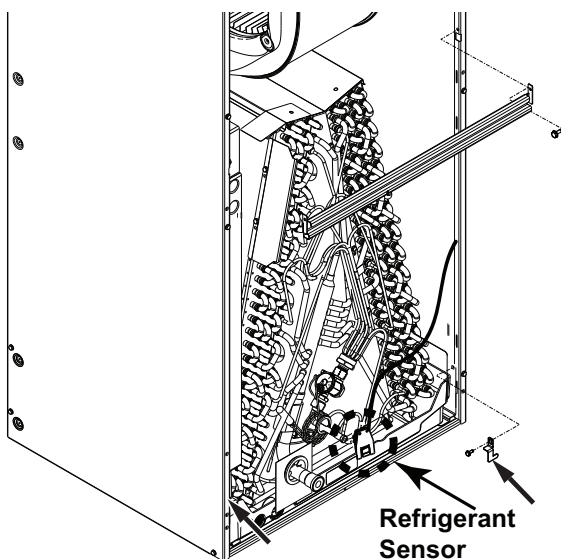
Horizontal Left Sensor Relocation

Important: For horizontal applications, airflow restrictions apply for condensate blow off. See [“Performance and Electrical Data,” p. 22](#) tables in this manual.

Follow the conversion steps when installing the air handler in horizontal left configuration.

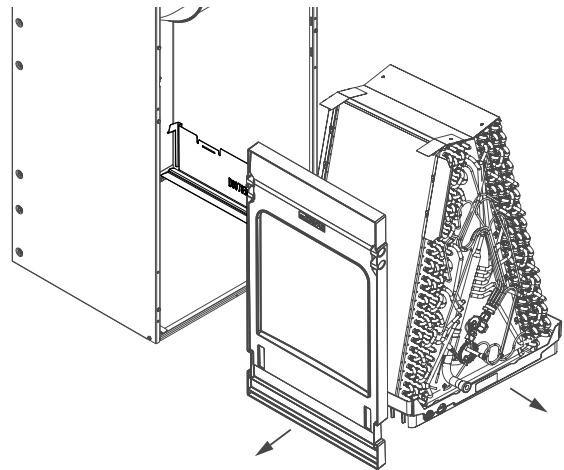
1. Remove the front panels from the air handler. The coil and line set panel do not need to be separated.
2. Remove the fasteners on both sides of the coil. Retain the coil containing brackets and screws.
3. Proceed to [Step 11](#), if using coil support brackets as shown in [Figure 23](#), p. 32. Proceed to [Step 4](#), if using coil support brackets shown in [Figure 24](#), p. 33.
4. Remove the two screws holding the center horizontal bracket and rotate out of place. Retain parts.

Figure 21. Horizontal bracket and refrigerant sensor



5. Pull refrigerant sensor up and away from the primary drain pan and remove it from the pan. Detach the sensor and clip from the wire harness and move it out of the way.
6. Slide the Coil assembly out.

Figure 22. Coil assembly and horizontal drain pan



7. Bend the two tabs on the right coil support bracket. Tabs should be bent inward so they are parallel to the bottom flange.

Figure 23. Coil support brackets

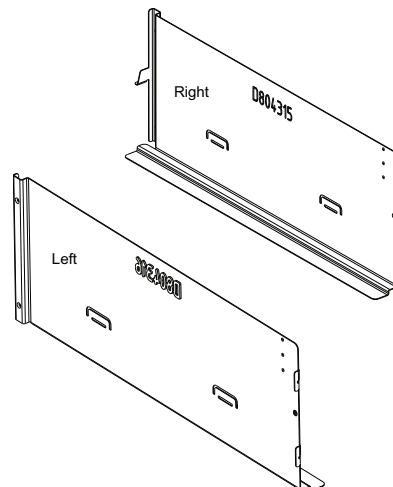
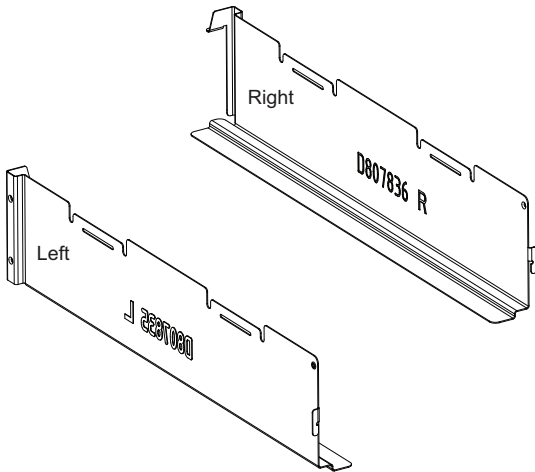


Figure 24. Coil Support Brackets with two large tabs

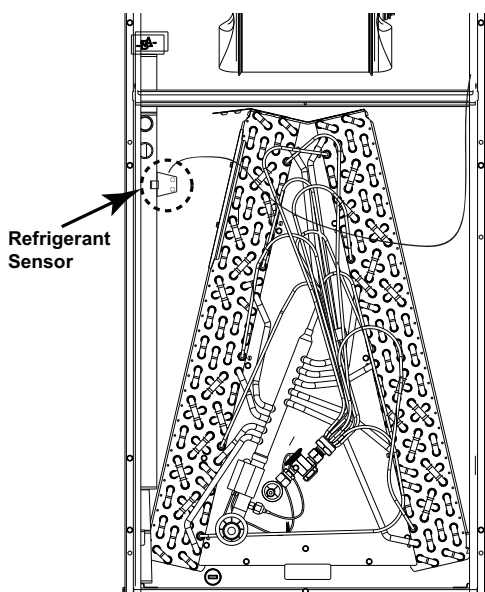


8. Slide the coil assembly back into the air handler cabinet.

Important: When reinstalling coil in [Step 8](#), it is important that the coil corner locks in place under the rear tab in the side bracket to support the coil weight horizontally. There are 2 additional tabs for added support.

9. Replace the center horizontal bracket from [Step 4](#).
10. Replace coil retaining brackets and screws from [Step 2](#).
11. Secure sensor to secondary pan using provided clip. Sensor should be positioned close to secondary drain lines.
12. Position extra wire length in the secondary drain pan.

Figure 25. Horizontal left refrigerant sensor location



13. Replace all panels.

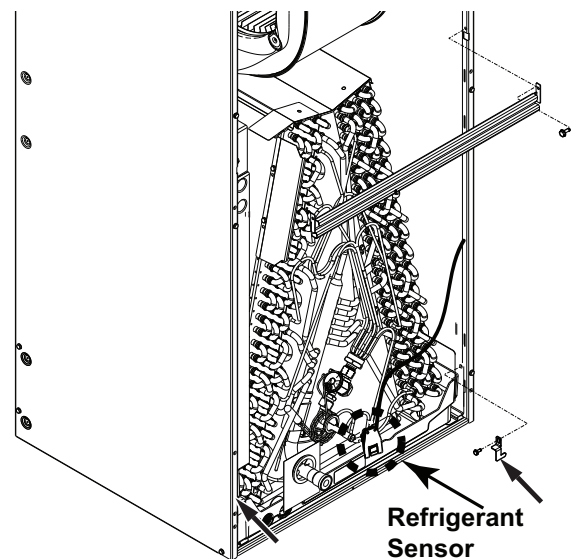
Downflow

Important: For downflow applications, airflow restrictions apply for condensate blow off. See [“Performance and Electrical Data,” p. 22 tables in this manual.](#)

Follow the conversion steps when installing the air handler in downflow configuration.

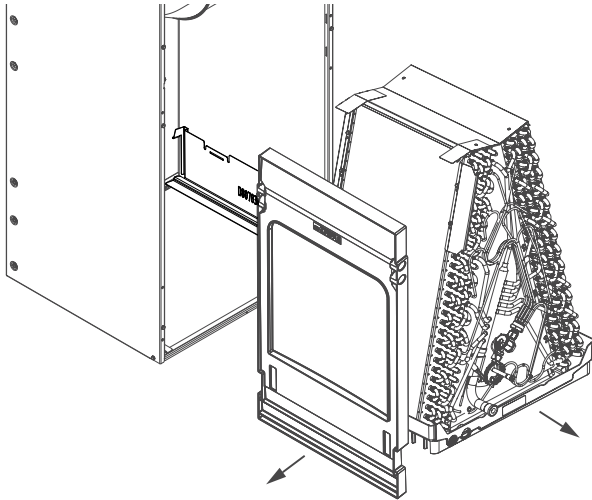
1. Remove the front panels from the air handler. The coil and line set panel do not need to be separated.
2. Remove the fasteners on both sides of the coil.
3. Remove the two screws holding the center horizontal bracket and rotate out of place. Retain parts.

Figure 26. Horizontal bracket and refrigerant sensor



4. Pull refrigerant sensor up and away from the primary drain pan and remove it from the pan. Detach the sensor and clip from the wire harness and move it out of the way.
5. Slide the coil assembly out. Remove and discard the horizontal drain pan.

Figure 27. Coil assembly and horizontal drain pan



6. On both sides of the cabinet, remove the screws that hold the coil support brackets and retain for later use. Seal the holes to prevent air leakage.
7. Rotate and lift the two coil support brackets to remove from front slots in cabinet.

Figure 28. Coil support brackets

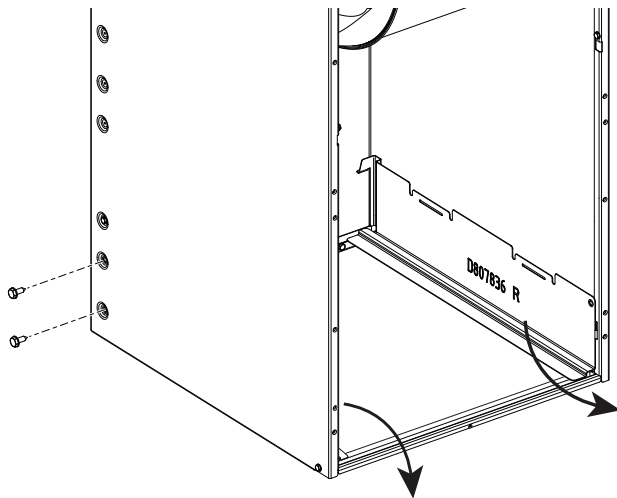


Figure 29. Coil support brackets

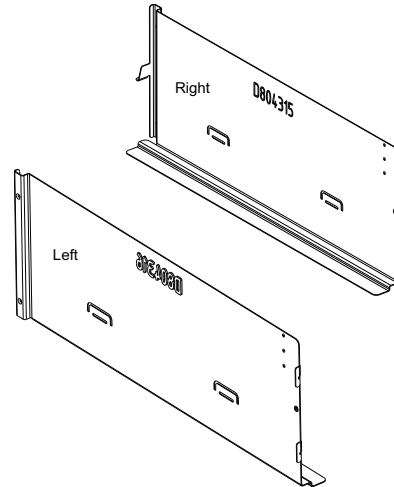
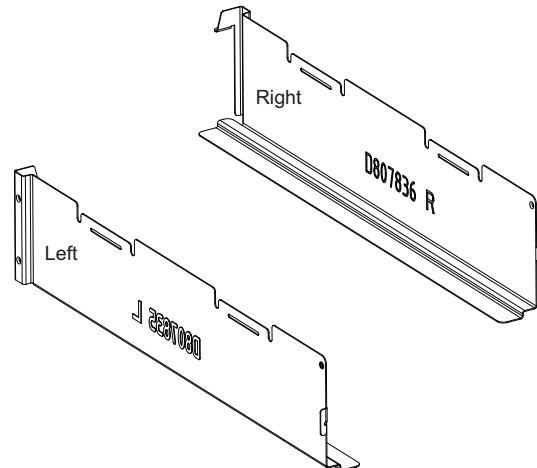
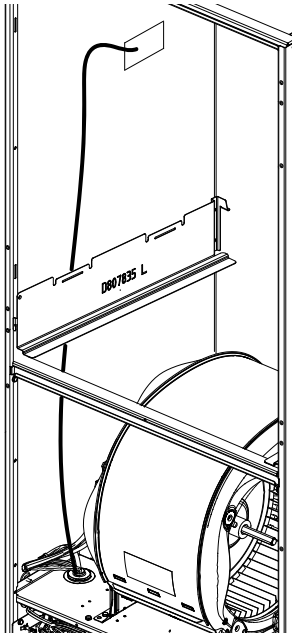


Figure 30. Coil Support Brackets with two large tabs



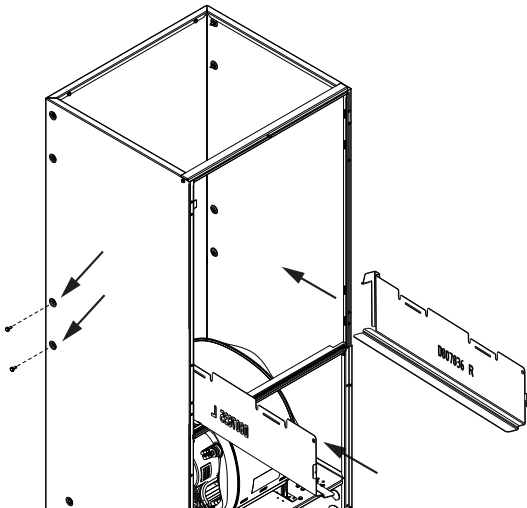
8. Rotate the unit into the downflow orientation.
9. Pre-drill four clearance holes in the cabinet at dimples located below the location the screws were removed for the coil support brackets. There are two holes per side. See location of holes.
10. Replace the center horizontal bracket removed in [Step 3](#). Use the screws retained from [Step 3](#). to attach.
11. Place coil support brackets into the slots and rotate into place. Push downward to lock into place. Refrigerant sensor wire harness should be routed between coil support bracket and the insulation.

Figure 31. Refrigerant sensor wire harness



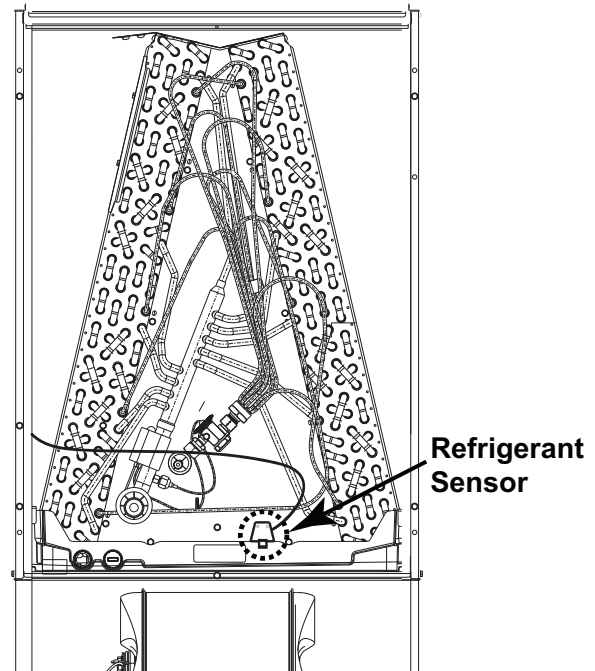
12. Secure each bracket with the screws that were previously removed.

Figure 32. Coil support brackets



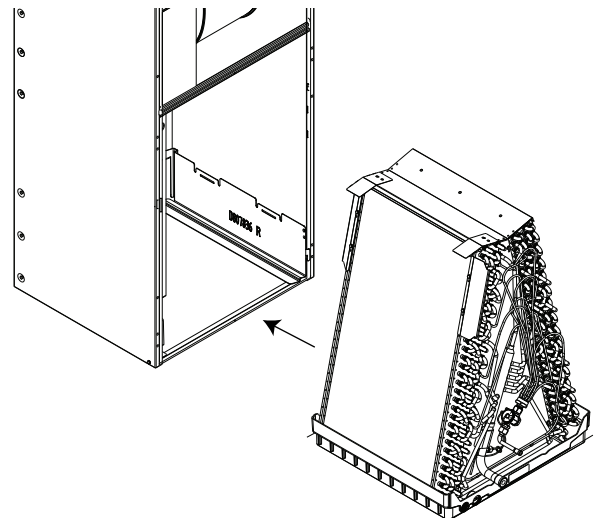
13. Slide the coil assembly back into the air handler cabinet as shown.

Figure 33. Downflow refrigerant sensor location



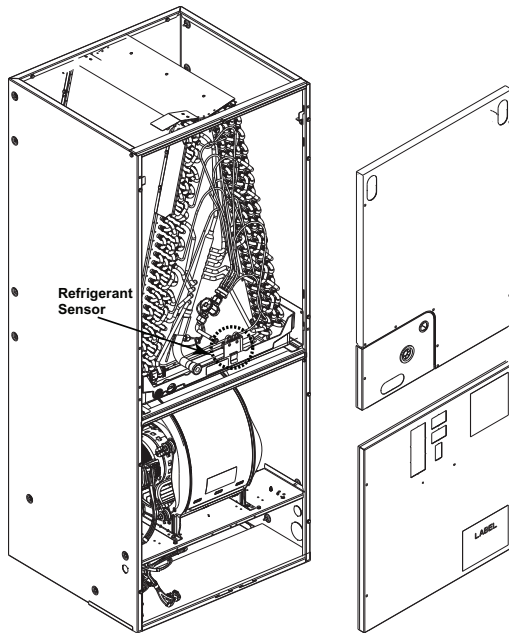
14. Clip refrigerant sensor back onto primary drain pan (as shown in figure above) and reconnect the sensor to the wire harness. Position extra wire length next to the coil.
15. Remove the appropriate knock out for the condensate piping.

Figure 34. Coil assembly



16. Replace all panels.

Figure 35. Front panels



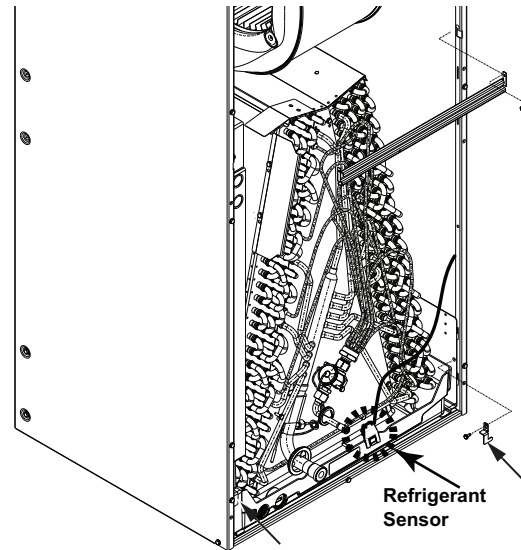
Horizontal Right

Important: For horizontal applications, airflow restrictions apply for condensate blow off. See *“Performance and Electrical Data,” p. 22 tables in this manual.*

Follow the conversion steps when installing the air handler in horizontal right configuration.

1. Remove the front panels from the air handler. The coil and line set panel do not need to be separated.
2. Remove the fasteners on both sides of the coil. Retain the coil retaining brackets and screws.
3. Remove the two screws holding the center horizontal bracket and rotate out of place. Retain parts.
4. Pull refrigerant sensor up and away from the primary drain pan and remove it from the pan. Detach the sensor and clip from the wire harness and move it out of the way.

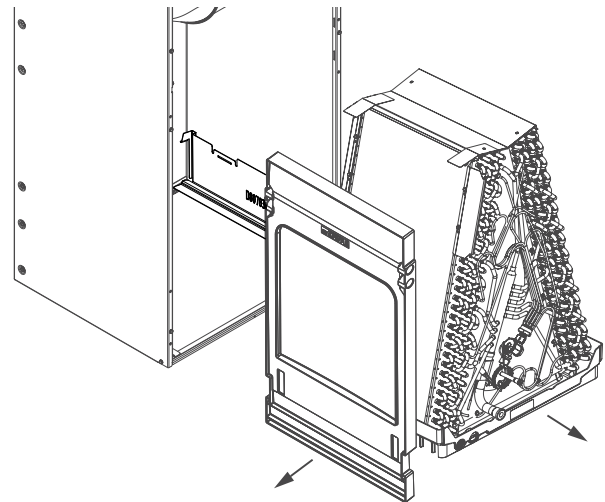
Figure 36. Horizontal bracket and refrigerant sensor



5. Make note of the horizontal drain pan orientation (up/down).
6. Slide the coil assembly out.

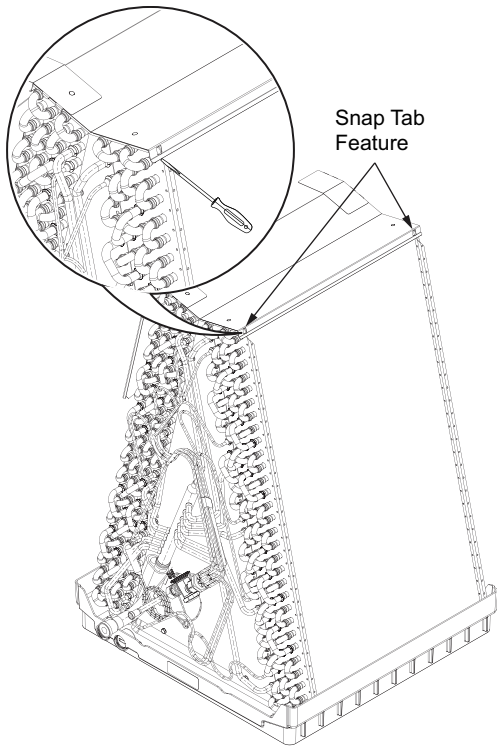
Important: For horizontal right applications on some models, the top panel assembly of the coil must be rotated for proper condensate management. See *Figure 40, p. 37* and *Figure 41, p. 38.*

Figure 37. Coil assembly and horizontal drain pan



7. If rotating the top panel assembly is required, position a flathead tip underneath the top baffle flange and pivot the screwdriver downward to release the front tab as shown below.
8. Repeat for right rear tab to release top baffle assembly from coil.

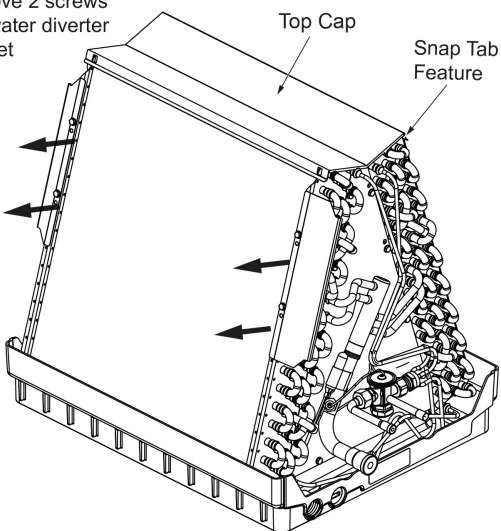
Figure 38. Top baffle



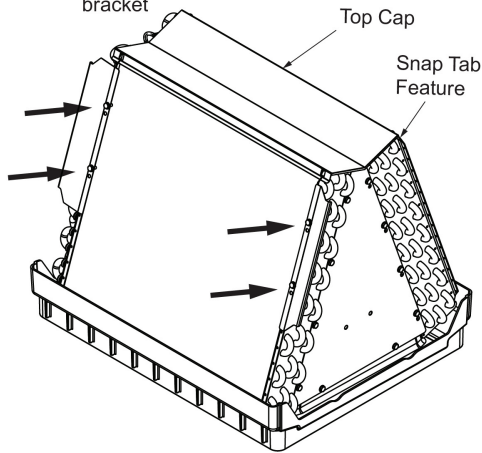
9. Rotate 180 degrees and snap all four corner tabs to lock in place.

Figure 40. 5TEM6B02AV21SA/5TEM6B03AV21SA

Remove 2 screws
and water diverter
bracket



Replace 2 screws
and water diverter
bracket



10. Remove left side water diverter brackets and screws and reinstall on the right side.

The coil slabs are different and the mount hole locations will vary. See the illustrations on the following pages that correspond to the unit tonnage to see the correct mounting position of the water diverter bracket.

Important: The water diverter brackets are not symmetrical and will vary by tonnage.

Figure 39. Top baffle and water diverter brackets

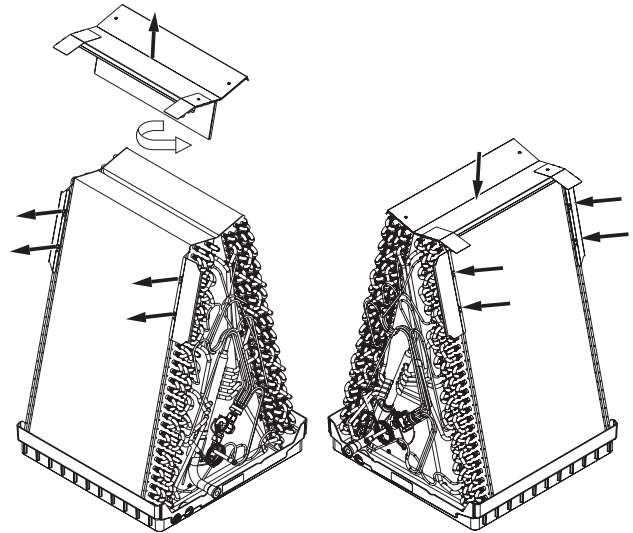
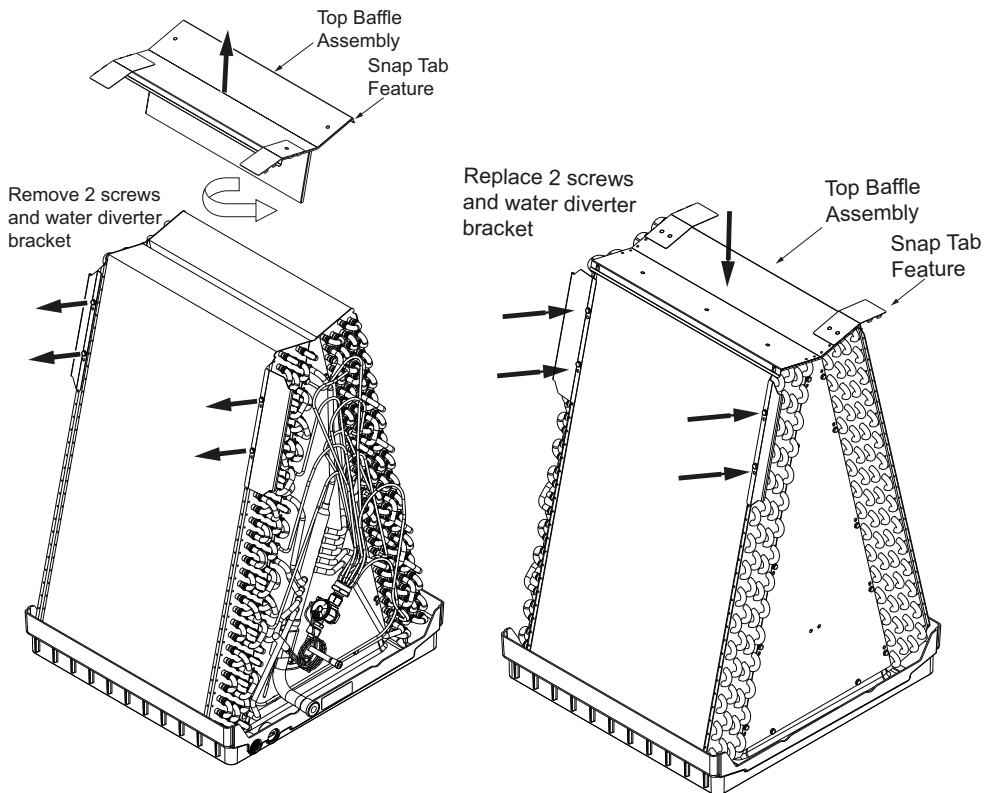


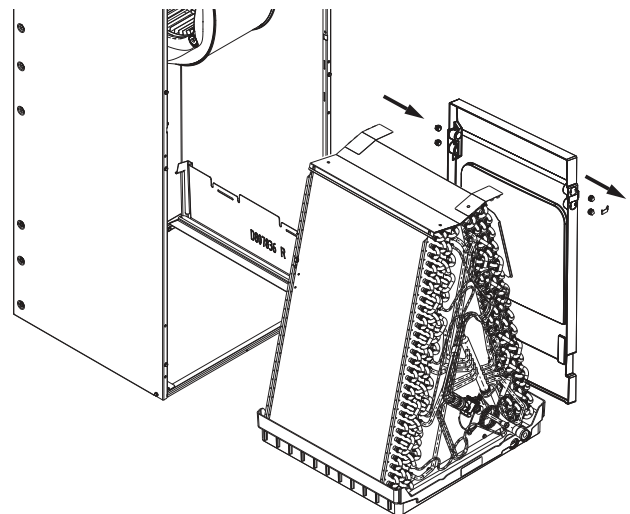
Figure 41. 5TEM6D04AV31SA/5TEM6D05AV41SA/5TEM6D06AV41SA/5TEM6D07AV51SA



11. To allow the horizontal pan to slide in on the right, cut and remove the zip tie holding the sensor wire harness on the right side of the coil cabinet.
12. Relocate the horizontal drain pan from the left side of the coil to the right side.
13. Remove the drain pan support bracket. Do not discard. Remove the two drain plugs from the front of the drain pan and insert them in the drains at the rear of the drain pan.

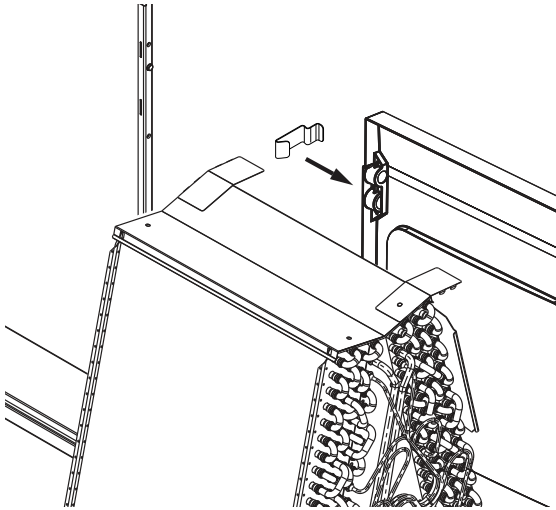
Important: When reinstalling coil in [Step 17](#), it is important that the coil corner locks in place under the rear tab in the side bracket to support the coil weight horizontally. There are two additional tabs for added support.

Figure 42. Coil assembly and horizontal drain pan



14. Reinstall the drain pan support bracket. The bracket should be located between the two drain plugs as shown.

Figure 43. Drain pan support bracket



15. Proceed to [Step 16](#) if using coil support brackets as shown in [Figure 45](#), p. 39. Proceed to [Step 17](#) if using coil support brackets shown in [Figure 44](#), p. 39.
16. Bend the two tabs on the Left Coil Support Bracket. Tabs should be bent inward so they are parallel to the bottom flange.

Figure 44. Coil support brackets

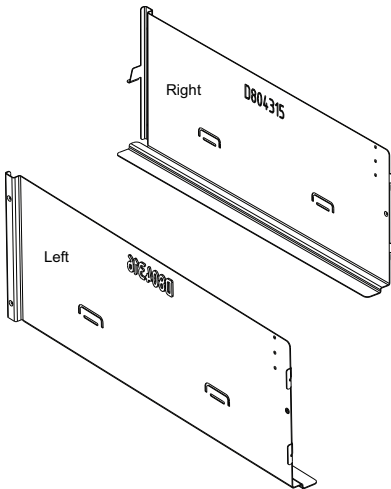
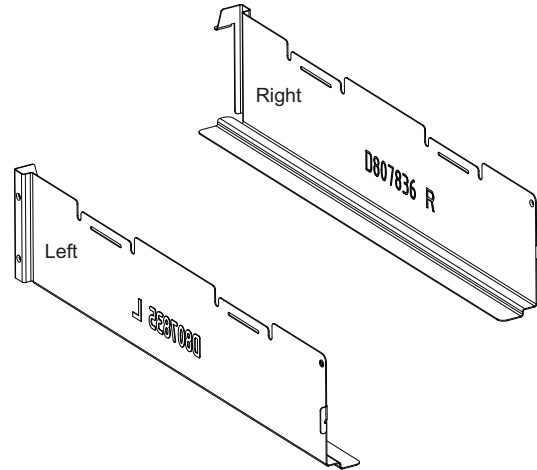


Figure 45. Coil Support Brackets with two large tabs

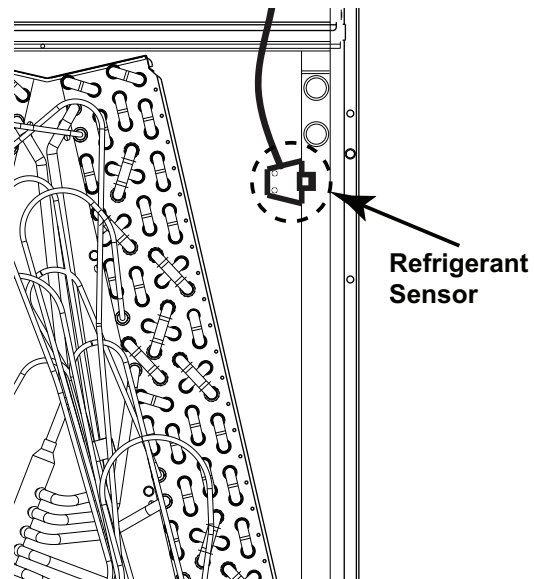


17. Slide the coil assembly back into the air handler cabinet.

Important: Make sure that the coil corner locks in place under the rear tab and two additional tabs along the length of the drain pan in the side left bracket to support the coil weight in the horizontal right position.

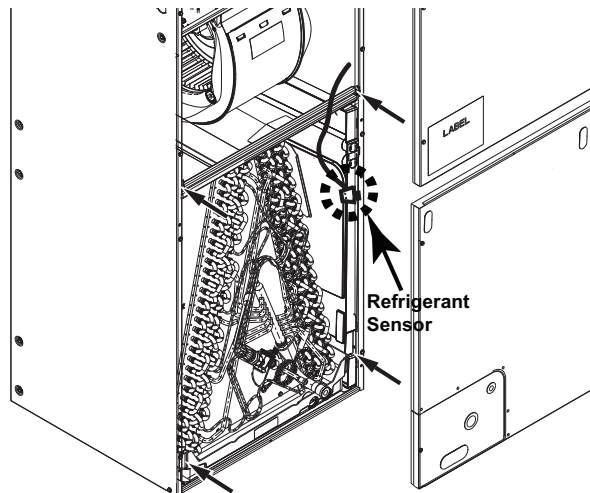
18. Replace the center horizontal bracket using screws removed earlier in [Step 3](#).
19. Replace the two coil retaining brackets removed in a previous step.
20. Rotate unit into horizontal right position.
21. Install sensor onto secondary drain pan using the provided clip. Sensor should be positioned close to the drain lines. Reconnect the sensor to the wire harness and position extra wire length in the drain pan.

Figure 46. Horizontal right refrigerant sensor location



22. Replace all panels.

Figure 47. Front panels



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.
- ☐ Voltage and running current are within limits.
- ☐ All refrigerant lines (internal and external to equipment) are isolated, secure, and not in direct contact with each other or structure.
- ☐ All braze connections have been checked for leaks. A vacuum of 350 microns provides confirmation that the refrigeration system is leak free and dry.
- ☐ If unit is installed in any orientation other than upflow, refrigerant sensor is properly relocated.
- ☐ 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.
- ☐ Ductwork is sealed and insulated.
- ☐ All drain lines are clear with joints properly sealed. Pour water into drain pan to confirm proper drainage. Provide enough water to ensure drain trap is primed.
- ☐ Supply registers and return grilles are open, unobstructed, and air filter is installed.
- ☐ Indoor blower and outdoor fan are operating smoothly and without obstruction.
- ☐ Indoor blower motor set on correct speed setting to deliver required CFM. Blower and fan set screws are tight.
- ☐ Cover panels are in place and properly tightened.
- ☐ System functions safely and properly in all modes.
- ☐ Refrigerant leak detection system mitigating actions are verified.
- ☐ All refrigerant safety procedures have been verified.
- ☐ Owner has been instructed on use of system and given manual.

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