

Installation Manual: JME Series

Standard ECM Modular Multi-Position Air Handlers
208/230 V - Single Phase

York International Corp. 5005 York Drive
Norman, OK 73069

www.johnsoncontrols.com

2024-06-06

6404618-UIM-B-0624

Supersedes: 6404618-UIM-A-0324

Rev B

Contents

About the JME unit.....	5
Certification.....	5
DS Solutions App.....	5
Safety.....	5
Understanding safety symbols and instructions.....	5
Safety precautions.....	6
Safety requirements.....	7
Installation overview.....	9
Preparing for installation.....	10
Inspecting the unit.....	10
Selecting a location for installation.....	10
Providing the required clearances.....	10
Understanding installation and operation limitations.....	11
Becoming familiar with the unit components.....	11
Becoming familiar with the unit dimensions.....	12
Installing an electric heat kit.....	13
Installing the unit.....	14
Designing and installing the ductwork.....	15
Using an existing duct system.....	15
Configuring the air handler.....	15
Suspending the unit in horizontal applications.....	17
Using the duct flanges.....	18
Connecting the unit to the ductwork.....	19
Installing air filters.....	20
Connecting the wiring.....	21
Connecting the power line.....	21
Connecting the low voltage transformer.....	22
Connecting the field thermostat wiring.....	23
Control wiring diagrams for conventional wiring.....	24
Understanding the standard ECM nine-tap blower motor speed selections.....	26
Setting the blower motor speed.....	27
Adjusting the air system.....	29
Unit data.....	31
Maintenance.....	37
Replacing or cleaning filters.....	37
Cleaning the indoor coil.....	37
Checking the condensate drains.....	37
Wiring information - shown with refrigerant detection system (RDS) accessory.....	38
Start-up sheet.....	40

About the JME unit

The JME modular air handler series provides the flexibility for installation in any position. You can use JME units for upflow, downflow, horizontal right, or horizontal left applications.

You can locate JME units in a closet, utility room, attic, crawl space, or basement and use these versatile models for cooling or heat pump operation with or without electric heat. A fully cased indoor coil is required for add-on cooling or a heat pump.

Top or side power and control wiring, color coded leads for control wiring, and electric heaters all combine to make the installation easy and minimize installation cost.

Electric heat kits are available as field-installed accessories. Single-phase kits are available from 2 kW to 25 kW and 208/230 V three-phase kits are available from 10 kW to 25 kW.

Certification



Assembled at a facility with an ISO 9001:2015-certified Quality Management System

DS Solutions App

Johnson Controls believes in empowering our customers with unit-specific information at all times. Download the Ducted Systems Solutions Mobile App (DS Solutions App), which is available through the App Store for iOS and Google Play for Android. Users can use the DS Solutions App to scan the QR code located on the rating plate that is unique to each unit and provides information specific to the product. Take advantage of the features available for all units: Nomenclature, Literature (Technical Guide, Installation Manual and Wiring Diagrams), Parts list, Product Registration, Claims Tracking, and more.



iOS



Android

Safety

It is important to understand the safety symbols used in this manual. Read safety information carefully and follow all safety requirements to ensure correct installation.

Understanding safety symbols and instructions



This is a safety alert symbol. When you see this symbol on labels or in manuals, be alert to potential for personal injury.

Understand and pay particular attention to the signal words **DANGER**, **WARNING**, **CAUTION**, as well as the **NOTICE**, **Important**, and **Note** alerts.

DANGER indicates an **imminently** hazardous situation, which, if not avoided, **will result in death or serious injury**.

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 **may result in minor or moderate injury**. It is also used to alert against unsafe practices and hazards involving only property damage.

NOTICE indicates information considered important, but not hazard-related, such as messages relating to property damage.

Important indicates information that is essential to complete a task or may result in damage to the device if not followed.

Note indicates something of special interest or importance. Notes can contain any any type of information except safety information.

Safety precautions

Read these safety precautions carefully to ensure correct installation.

WARNING

FIRE OR ELECTRICAL HAZARD

Failure to follow the safety warnings exactly could result in serious injury, death or property damage. A fire or electrical hazard may result causing property damage, personal injury or loss of life.

WARNING

The air handler area must not be used as a broom closet or for any other storage purposes, as a fire hazard may be created. Never store items such as the following on, near or in contact with the furnace.

1. Spray or aerosol cans, rags, brooms, dust mops, vacuum cleaners or other cleaning tools.
2. Soap powders, bleaches, waxes or other Cleaning compounds; plastic items or containers; gasoline, kerosene, cigarette lighter fluid, dry cleaning fluids or other volatile fluid.
3. Paint thinners and other painting compounds.
4. Paper bags, boxes or other paper products.

Never operate the air handler with the blower door removed. To do so could result in serious personal injury and/or equipment damage

WARNING

This appliance is not intended for use 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 use of the appliance by a person responsible for their safety.

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

WARNING

Improper installation, adjustment, alteration, or maintenance may create a condition where the operation of the product could cause personal injury or property damage. Refer to this manual for assistance, or for additional information, consult a qualified contractor, installer, or service agency.

CAUTION

If using this unit in a system with R454B, a mildly flammable (A2L) refrigerant, refer to the indoor coil manual to ensure safe installation, operation, and servicing of this unit.

For minimum airflow (CFM) requirements, refer to the *Minimum room area* table in the *A2L refrigerant safety considerations* section of the indoor coil manual.

CAUTION

This product must be installed in strict compliance with the installation instructions and any applicable local, state, and national codes including, but not limited to building, electrical, and mechanical codes.

CAUTION

These air handlers must be transported and handled in an upright, upflow position. Failure to do so may result in unit damage and personal injury. Configuration conversions must be done at the site of installation.

NOTICE

To ensure a correct match for this indoor product, refer to the current *Tabular Data Sheet* for the outdoor equipment selected for the system application. If the indoor product model is not listed in the *Tabular Data Sheet* included with the outdoor unit, to access the current version of the *Tabular Data Sheet*, go to the *Residential Equipment & Supplies* section of the Offering Catalog at <http://www.simplygettingthejobdone.com> or scan the QR code provided on the outdoor unit nameplate.

Safety requirements

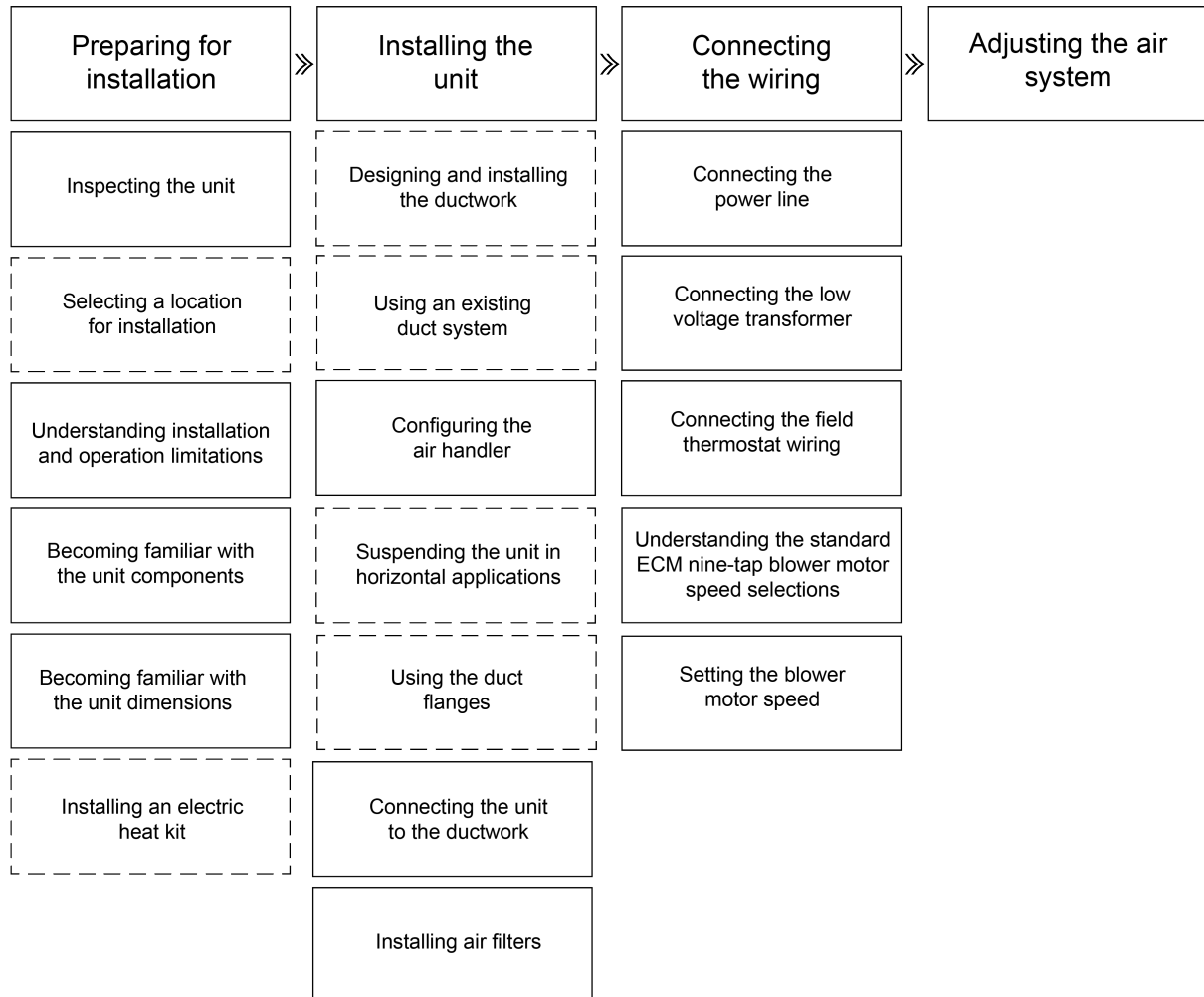
- Failure to carefully read and follow all instructions in this manual can result in air handler malfunction, death, personal injury, or property damage.
- Always install this air handler in accordance with all national and local building and safety codes and requirements, local plumbing or wastewater codes, and other applicable codes.
- Only install this air handler in a location and position specified in the [Preparing for installation](#).
- Do not use the air handler for temporary heating of buildings or structures under construction.

- Always install the air handler to operate within the air handler's intended maximum outlet air temperature.
- Clearance from combustibile material is provided under [Providing the required clearances](#).
- The unit rating plate displays the air handler model number. The unit dimensions for the supply air plenum are provided in [Figure 3](#) and [Table 1](#). Always install the plenum according to the instructions.
- It is necessary to maintain clearances for servicing and to allow access to the electric heaters and blower.
- It is necessary to verify the unit rating plate and power supply to ensure that the electrical characteristics match.
- When attaching ductwork with screws, carefully fasten the screws and keep them within 5/8 in. of the sides and back of the air handler.
- Install the air handler so the electrical components are protected from water.
- Installing and servicing heating and cooling equipment can be hazardous due to the electrical components. Only trained and licensed personnel must install, repair, or service heating and cooling equipment. Unlicensed service personnel can perform basic maintenance functions such as cleaning and replacing the air filters. When working on heating and cooling equipment, the precautions in the manuals and on the labels attached to the unit and other safety precautions must be observed as applicable.
- These instructions cover minimum requirements and conform to existing national standards and safety codes. In some instances, these instructions exceed certain local codes and ordinances, especially those who have not kept up with changing residential and non-HUD modular home construction practices. These instructions are required as a minimum for a safe installation.
- These models are not CSA listed or approved for installation into a HUD-approved modular home or a manufactured (mobile) home.

Installation overview

Complete all of the stages outlined in [Figure 1](#). You may not need to perform tasks indicated with a dashed outline, depending on the specific installation.

Figure 1: Installation overview



A2074-002

Preparing for installation

Complete the necessary preparation before you begin the installation:

1. Inspect the unit.
2. Visit the installation site to select a suitable location for the unit if it is not already predetermined, and make sure that you provide the required clearances.
3. Make sure that you are aware of the installation and operation limitations.
4. Make sure that you are familiar with the unit dimensions and unit components.
5. Install an electric heat kit if required.
 - **Important:** If you do not install an electric heat kit, you must mark the unit name plate appropriately to indicate that no electric heat kit is installed.

Inspecting the unit

Note: There are no internal shipping or spacer brackets to remove.

To inspect the unit, do the following:

1. Inspect the air handler immediately after receiving it for possible damage during transit.
2. If damage is evident, do the following:
 - a. Note the extent of the damage on the carrier's freight bill.
 - b. Make a separate written request for the carrier's agent to inspect the unit.
 - c. Contact the local distributor for more information.
3. Check the unit for screws or bolts loosened in transit.
4. Verify that the coil and all accessories, such as a heat kit, are available.

Note: Complete installation of these accessories or field conversion of the unit before setting the unit in place or connecting any wiring, ductwork, or piping.

Selecting a location for installation

Location is usually predetermined. Check with the owner's or dealer's installation plans. Make sure that the predetermined location or the location you choose meets the following requirements:

- Provides adequate structural support, space for service access, and clearance for air return and supply duct connections.
- Is away from bedrooms or other rooms where normal operating sound levels may be objectionable if the air handler is placed directly overhead.
- Allows you to provide an auxiliary drain pan under the air handler when installing an indoor coil in an attic or above a finished ceiling, as is specified by most local building codes.
- Has a sufficient electrical supply.
- Allows you to completely seal the unit duct connections and other openings, and use a wrap of 2 in. fiberglass insulation with vinyl vapor barrier, if locating the unit in an area of high humidity, such as an unconditioned garage or attic. This prevents nuisance sweating of the casing.

Providing the required clearances

It is essential to provide the following clearances:

- Ensure to leave a minimum of 36 in. from the front of the unit for blower motor maintenance and servicing access.

- The supply air ductwork connected to this unit is designed for 1 in. clearance for the first 18 in. of duct length to combustible materials.
- A combustible floor base accessory is available for downflow applications of this unit, if required by local code.

Understanding installation and operation limitations

Before you begin:

Adhere to the following:

- The size of the unit must be based on an acceptable heat loss or gain calculation for the structure. Use Air Conditioning Contractors of America (ACCA) Manual J or another approved method.
- Only connect the air handler to a duct system that has an external static pressure within the allowable range.
- Airflow must be within the minimum and maximum limits approved for electric heat, indoor coils, and outdoor units.

Entering air temperature limits			
Wet bulb temperature (°F)		Dry bulb temperature (°F)	
Minimum	Maximum	Minimum	Maximum
57	72	65	95

- When installing an air handler so that supply ducts carry air circulated by the air handler to areas outside the space containing the air handler, the return air is also handled by one or more ducts sealed to the air handler casing and terminating in the space to be cooled or heated.
- The nameplate displays the air handler model number. The unit dimensions for the supply air plenum are provided in *Dimensions*. Always install the plenum according to the instructions.
- Check the available supply power and verify that it is within the normal operating voltage range for the unit. The acceptable voltage range for these units is as follows:

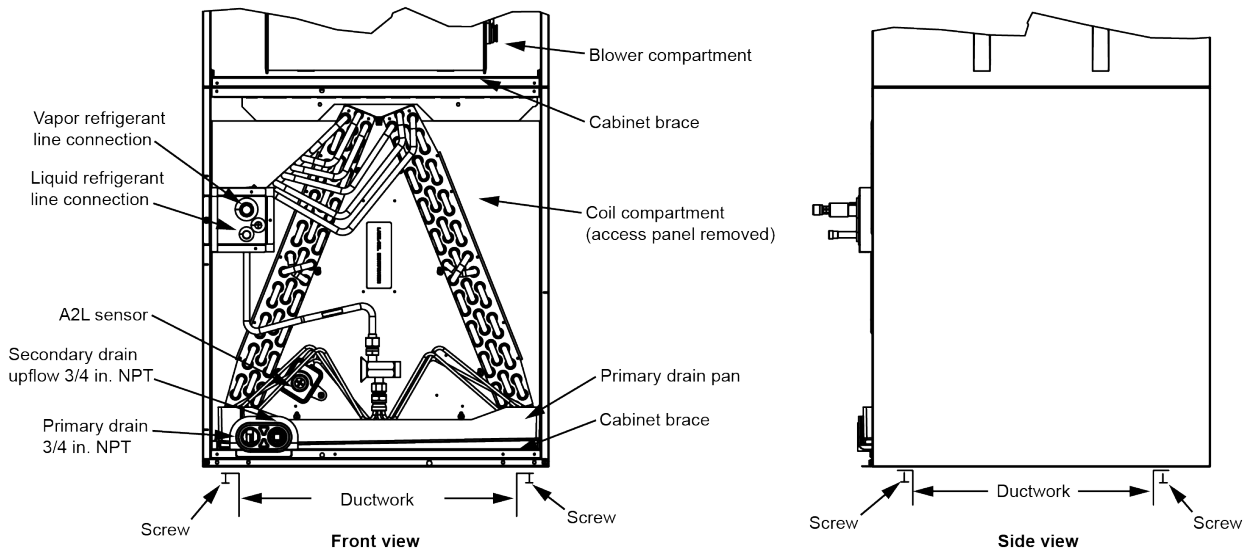
Air handler voltage	Normal operating voltage range ¹
208/230-1-60	187 V to 253 V

¹ Rated in accordance with ARI Standard 110, utilization range A

Becoming familiar with the unit components

- Make sure that you are familiar with the unit components before you begin the installation. See [Figure 2](#).

Figure 2: Return air duct attachment and component location, shown with an add-on indoor coil.



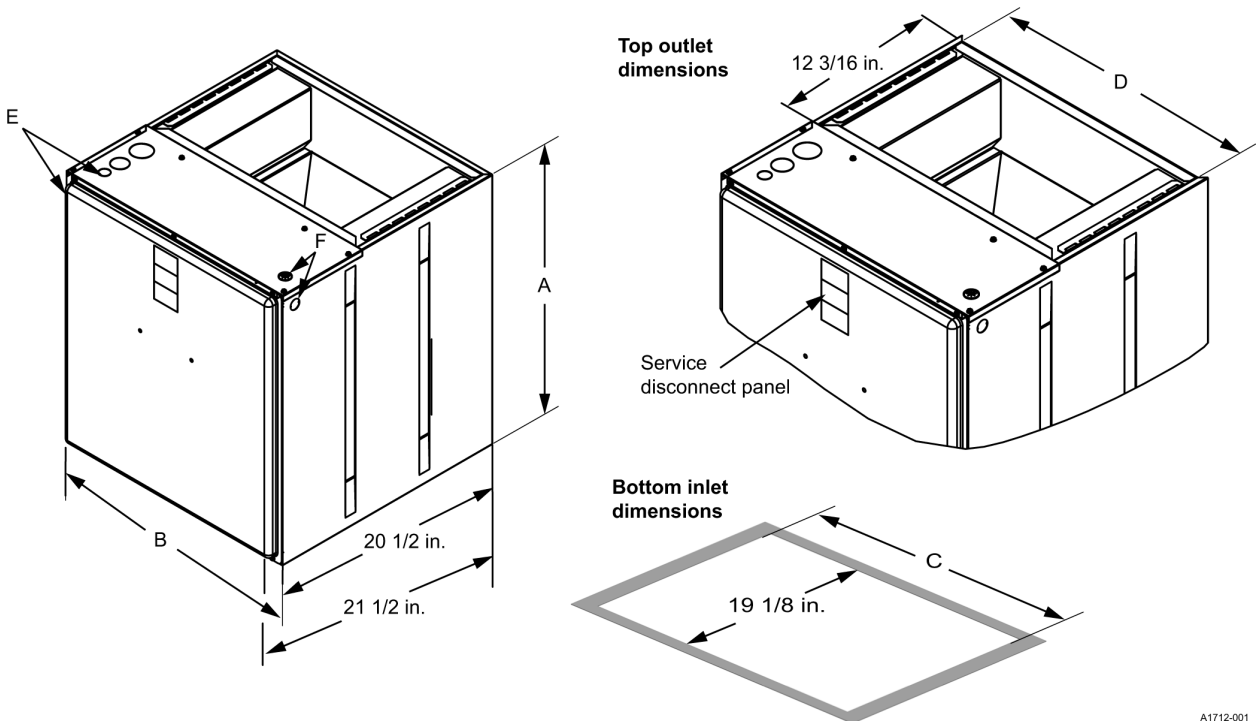
A2067-001

What to do next:
Install the unit.

Becoming familiar with the unit dimensions

- Make sure that you are familiar with the unit dimensions before you begin the installation. See [Figure 3](#) and [Table 1](#).

Figure 3: Dimensions and duct connection dimensions



A1712-001

Table 1: Dimensions

Models	Dimensions				Wiring knockouts (actual conduit size)	
	A	B	C	D	E	F
	Height (in.)	Width (in.)	Opening widths (in.)		Power (in.)	Control (in.)
JME08B2SN1	22 3/4	17 1/2	16 1/2	16 1/2	7/8 (1/2)	7/8 (1/2)
JME12B2SN1	22 3/4	17 1/2	16 1/2	16 1/2		
JME12C2SN1	22 3/4	21	20	20	1 3/8 (1)	
JME16C2SN1	22 3/4	21	20	20	1 23/32 (1 1/4)	
JME18D2SN1	22 3/4	24 1/2	23 1/2	23 1/2		

Installing an electric heat kit

About this task:

If the air handler requires electric heat, use only 8HK heater kits, as listed on the air handler name plate and in these instructions. Use data from [Table 5](#) to [Table 15](#) for information on the required minimum motor speed tap to use for heating operation and the maximum overcurrent protection device required as listed for combination of air handler and heater kit.

NOTICE

In some horizontal applications, the service disconnects on the electric heat kits must be rotated 180° so the up position of the disconnect is the ON position. This service disconnect orientation change is required by UL 60335-2-40 (in reference to all circuit breakers).

► Important:

- You connect the wiring for the electric heat kit as part of the procedures outlined in [Connecting the wiring](#).
- If you do not install an electric heat kit, you must mark the name plate appropriately to indicate that no electric heat kit is installed.

To install an electric heat kit, do the following:

- Install the electric heat kit according to the installation instructions included with the kit.
- After installing the electric kit, mark the air handler name plate to designate the electric heat kit that was installed.

Installing the unit

To install the unit correctly, you must do the following:

1. Design and install the ductwork, if required.
2. Configure the unit and suspend the unit for a horizontal application, if needed.
 - **Important:** Do not use hanging brackets to wall mount this single piece air handler unit.
3. Use the duct flanges if required and connect the unit to the ductwork.
4. Install air filters.

Designing and installing the ductwork

About this task:

Air supply and return may be handled in one of several ways best suited to the installation. Upflow, horizontal or downflow applications may be used. The vast majority of problems encountered with heating and cooling systems can be linked to incorrectly designed or installed duct systems. It is crucial to the success of an installation that the duct system is correctly designed and installed.

WARNING

Do not bring in return air from a location which could introduce hazardous substances into the airflow. Use 1/2 in. screws to connect ductwork to the cabinet. If pilot holes are drilled, drill only through the field duct and the unit flange.

CAUTION

This unit is not designed for non-ducted (freeblow) applications. Do not operate without ductwork attached to the unit. Never operate the equipment without filters.

- When installing a central air return grille in or near the living space, design the ductwork so that the grille is not in direct line with the opening in the unit. One or two elbows and acoustical duct liner assure a quieter system. For operation where the return air duct is short or where sound may be a problem, use acoustical duct liner inside the duct. Use flexible duct connectors to minimize the transmission of vibration and noise into the conditioned space.
- You must insulate ductwork where it runs through an unheated space during the heating season or through an uncooled space during the cooling season. Use a vapor barrier to prevent absorption of moisture from the surrounding air into the insulation.
- You must use a transition to match unit opening to correctly size the supply air duct. Suspend all ducts using flexible hangers and never fasten directly to the structure.
- You must fabricate and install ductwork in accordance with local and/ or national codes. This includes the standards of the National Fire Protection Association for Installation of Air-Conditioning and Ventilating Systems, NFPA No. 90B. If using electric heat, non-flammable material must be used. Duct systems must be designed in accordance with ACCA Manual D.

Using an existing duct system

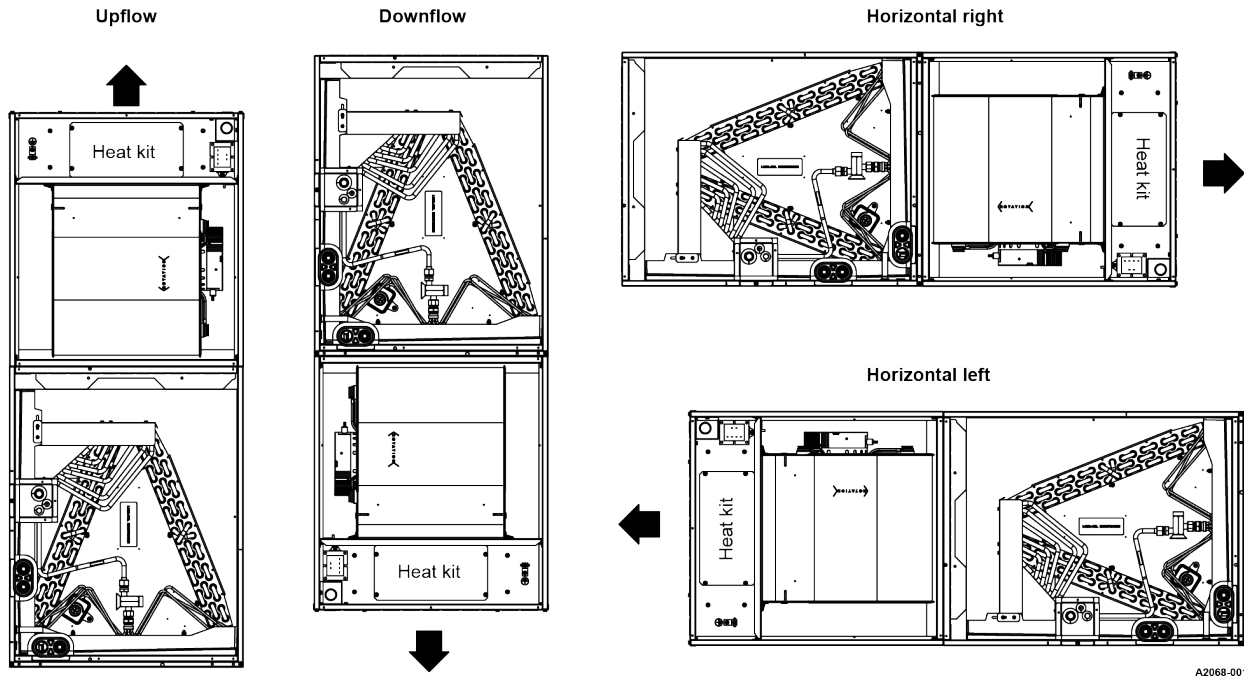
Check that the ductwork meets requirements and is correctly sized, and adjust the ductwork if needed. See [Designing and installing the ductwork](#) for more information about requirements.

Configuring the air handler

About this task:

You can install the unit in any position shown in [Figure 4](#). You must configure the air handler and coil for upflow, downflow, or horizontal applications.

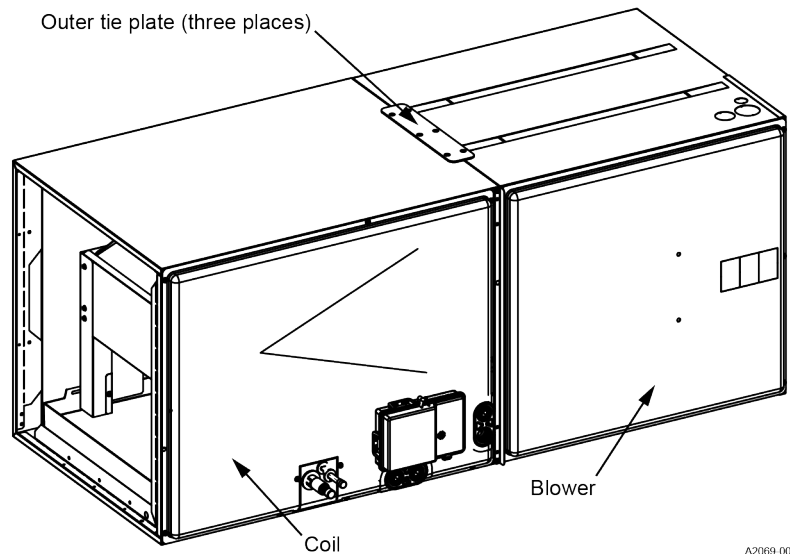
Figure 4: Typical installation



To configure the unit, do the following:

1. Apply the neoprene foam gasket to the return air end of the air handler.
2. Attach three tie plates to the external sides and back of the air handler casing using screws. See [Figure 5](#).

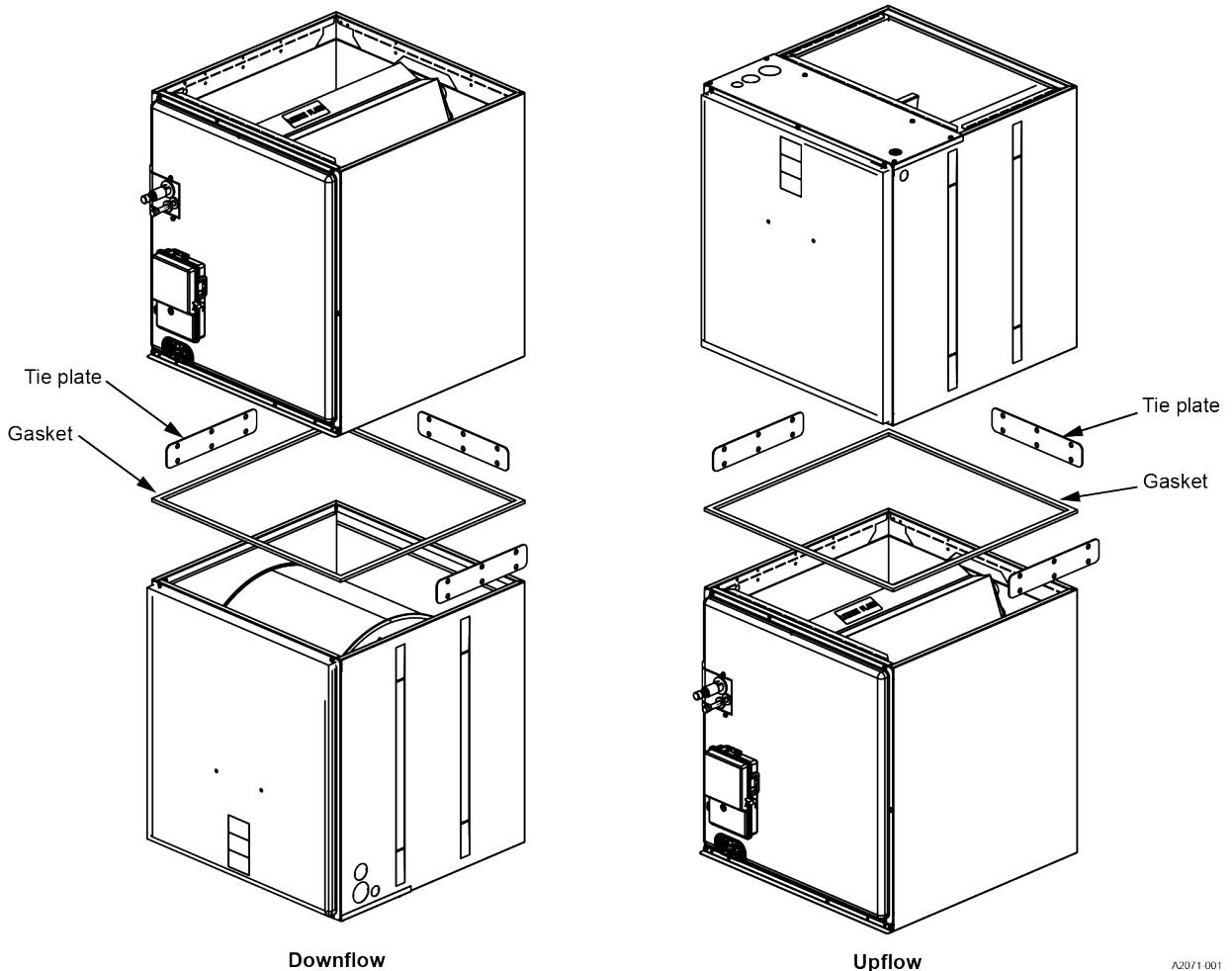
Figure 5: Coil and air handler attachment details



3. Position the air handler casing over the appropriate coil opening, depending on configuration. See [Figure 4](#).
4. Attach the three tie plates to the coil casing using screws. See [Figure 5](#).
5. Remove the coil access panel.

6. Slide the coil out of the coil cabinet and set the coil to the side.
7. Locate the 2 in. wide foam gasket.
8. Apply the foam gasket over the air handler and coil mating seams on the interior of both unit sides and back. See [Figure 6](#).

Figure 6: Gasket location



A2071-001

9. Slide the coil into the housing and install the coil access panel and coil filter door.

Suspending the unit in horizontal applications

About this task:

It is possible to suspend the air handler in horizontal applications. Use angle steel support brackets with minimum 3/8 in. threaded rods, supporting the unit from the bottom.

CAUTION

Do not lift the air handler by the cabinet brace. The cabinet brace is held in place by the coil channel. The cabinet brace could become disengaged from the cabinet causing the air handler to fall, potentially causing injury or damaging property. See [Figure 2](#) for the location of the cabinet braces.

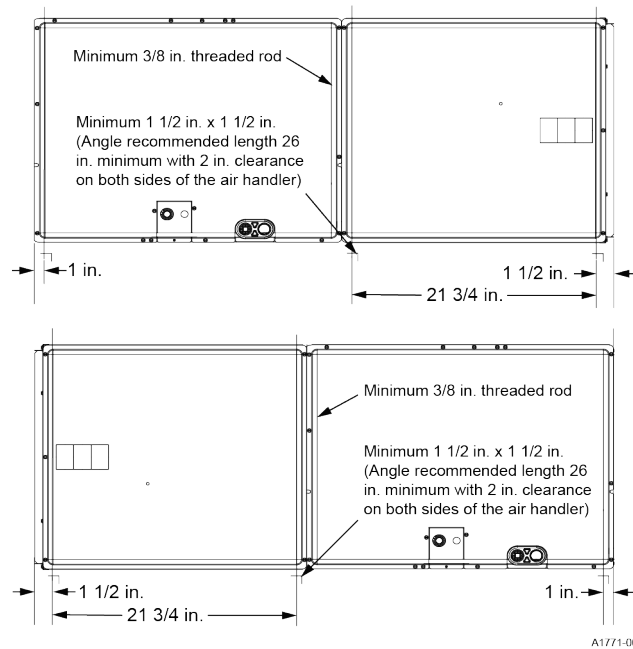
NOTICE

When assembling the support structure, size to provide clearance for access door removal.

To suspend the unit in a horizontal application, do the following:

1. Install angle steel support brackets in your chosen installation location.
2. Attach the threaded rods at the locations shown in [Figure 7](#), leaving enough clearance between the door and the rod so that doors can be easily removed for service.

Figure 7: Suspension support locations for horizontal applications



Using the duct flanges

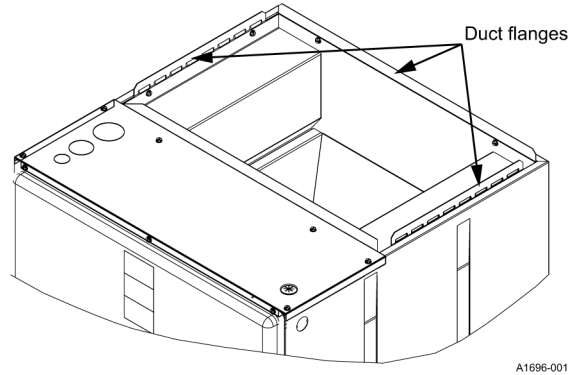
About this task:

You can use the duct flanges that are integrated into the casing if required.

To use the duct flanges, do the following:

1. Fold the flanges into position.
2. Anchor the flanges with screws. See [Figure 8](#).

Figure 8: Duct attachment



Connecting the unit to the ductwork

About this task:

There are several ways to handle the supply and return air duct connections. The location and sizing of the connections depends on the situation and the method best suited to the installation. You can use upflow, horizontal or downflow applications.

- ① **Note:** Ductwork that is not designed to match the supply air opening can cause turbulence inside the plenum. This turbulence can change the airflow patterns across the electric heater limit switch/switches.

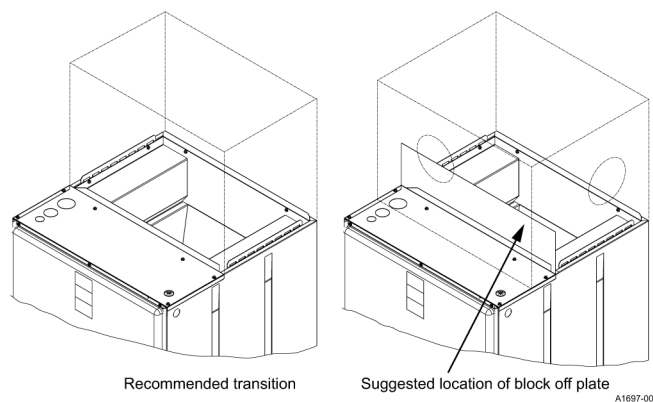
⚠ CAUTION

Use 1/2 in. screws to connect ductwork to the unit. Longer screws may pierce the drain pan and cause leakage. If drilling pilot holes, drill only through the field duct and the unit bottom duct flange.

To connect the unit to the ductwork, do the following:

1. Use a transition to match unit opening to correctly size the supply air duct. See [Table 1](#) for air handler unit inlet and outlet dimensions.
2. If the factory suggested transition cannot be fabricated, attach a block-off plate approximately 8 in. high and running the full width of the plenum to the supply opening. See [Figure 9](#). Using a block-off plate enables better air circulation across the limit switches.

Figure 9: Ductwork transition



Installing air filters

About this task:



Never operate the equipment without filters.

You must install return air filters. Filters are field supplied and filtration must be accomplished external to the unit.

To install air filters, do the following:

- Secure the air filters in the return air ductwork as required.

What to do next:

Connect the wiring.

Connecting the wiring

To connect the wiring correctly, you must do the following:

1. Connect the power line.
2. Connect the low-voltage transformer.
3. Connect the field thermostat wiring.
4. Familiarize yourself with the standard ECM nine-tap blower motor speed selections and set the blower motor speed.

Connecting the power line

About this task:

WARNING

Before obtaining access to terminals, all supply circuits must be disconnected.

WARNING

A fused disconnect switch must be field provided for the unit to be in compliance with UL 60335-2-40 Clause 7.12.2.

► **Important:**

- All electrical connections to air handlers must be made with copper conductors. **Direct connection of aluminum wiring to air handlers is not approved.**
- If aluminum conductors are present, follow all applicable local and national codes when converting from aluminum to copper conductors before connecting to the air handler.
- The chosen conductor and connections must meet or exceed the amperage rating of the overcurrent protector (service disconnect or fuse) in the circuit.
- Existing aluminum wire within the structure must be sized correctly for the application according to the National Electric Code in the United States or the Canadian Electrical Code in Canada and local codes. Use caution when sizing aluminum rather than copper conductors, as aluminum conductors are rated for less current than copper conductors of the same size.

- **Important:** Refer to the installation instructions for the electric heat kit for additional information about connecting the wiring for the electric heat kit as needed.

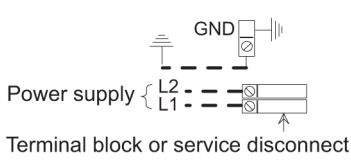
To connect the power line, do the following:

1. See [Figure 10](#).

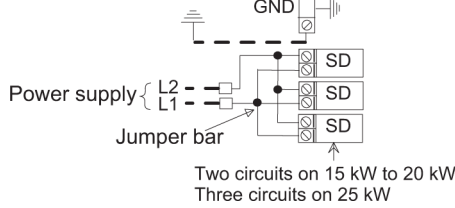
Figure 10: Line power connections

1 Phase Electric Heat Power Options:

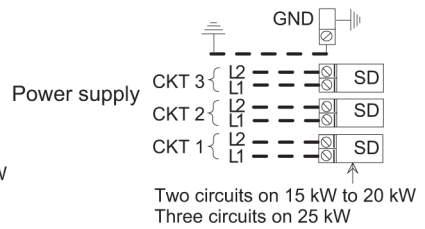
Single source power



Multi-source power with jumper bar

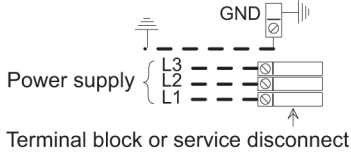


Multi-source power

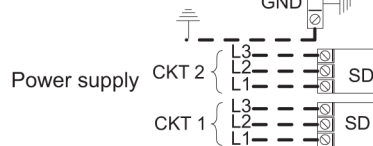


3 Phase Electric Heat Power Options:

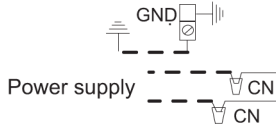
Single source power



Multi-source power



No Electric Heat:



Component Codes:
 GND - Ground lug
 SD - Service disconnect
 CKT - Circuit
 CN - Wire connector/nut
 - - - Field power wiring
 (208/230 V)

A1699-001

2. Bring power into the unit through the supply air end of the unit (top left when unit is vertical) or the left side panel. Use the hole appropriate to the unit's orientation in each installation to bring the conduit from the disconnect.
3. Terminate the power lead conduit at the electrical control box. See [Table 12](#) to [Table 15](#) and refer to the latest edition of the National Electric Code in the United States or the Canadian Electrical Code in Canada and local codes to determine correct wire sizing.
4. Seal the wiring entry point on the outside of the unit to minimize air leakage.

Connecting the low voltage transformer

About this task:

The 24 V power supply is provided by an internally wired low voltage transformer that is standard on all models.

NOTICE

All wiring must comply with local and national electrical code requirements. Read and heed all unit caution labels.

- **Important:** Refer to the installation instructions for the electric heat kit for additional information about connecting the wiring for the electric heat kit as needed.

To connect the low-voltage transformer, do the following:

- If connecting the unit to a 208 V power supply, the low voltage transformer must be rewired to the 208 V tap. See [Figure 19](#) for a detail of the transformer.

- Note that field-supplied low voltage wiring can exit the unit through the top right (when the unit is in vertical upflow) or the right side panel. See [Figure 3](#). Remove the knockout and pierce the foil faced insulation to allow wiring to pass through. Use as small of a hole as possible to minimize air leakage.
- Install a 7/8 in. plastic bushing in the selected hole and keep low voltage wiring as short as possible inside the control box.
- To further minimize air leakage, seal the wiring entry point at the outside of the unit.
- Connect the field wiring at the pigtails supplied with the air handler. See [Wiring information - shown with refrigerant detection system \(RDS\) accessory](#) for system wiring.

Connecting the field thermostat wiring

1. See the relevant wiring diagram for this application in [Control wiring diagrams for conventional wiring](#).
2. Connect the field thermostat wiring.

Control wiring diagrams for conventional wiring

NOTICE

Do not bond any of the outdoor unit W wires together.

NOTICE

The mitigation control board has a bank of DIP switches. For use with this JME air handler, both switches must be in the 0 or OFF position. For all other indoor models, both switches must be in the 1 or ON position.

- ① **Note:** If you are pairing with a R-410A system, connect the thermostat directly to the air handler or outdoor unit, depending on the specific application.

Table 2: Control wiring with mitigation control by matching indoor and outdoor units

Figure 11: Standard single-stage HP with standard ECM air handler

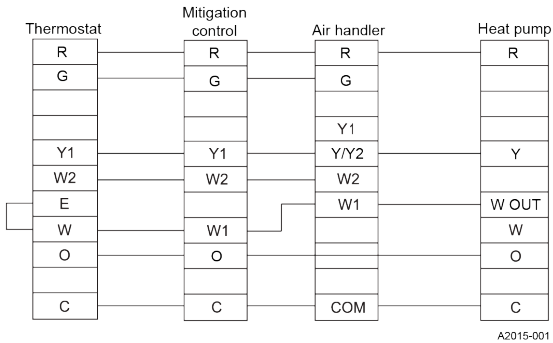


Figure 12: Standard multi-stage HP with standard ECM air handler

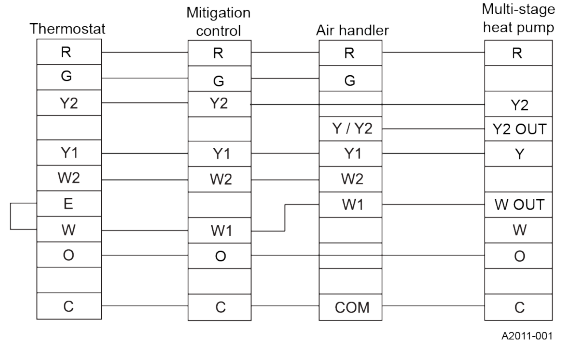


Figure 13: Premium multi-stage HP with standard ECM air handler

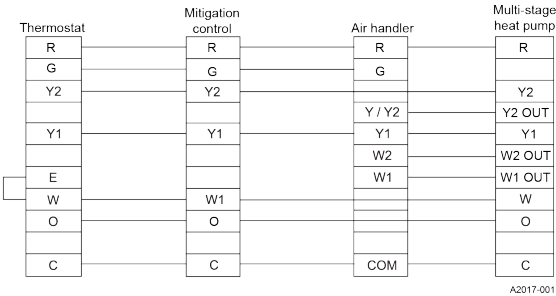


Figure 14: Standard multi-stage AC with standard ECM air handler

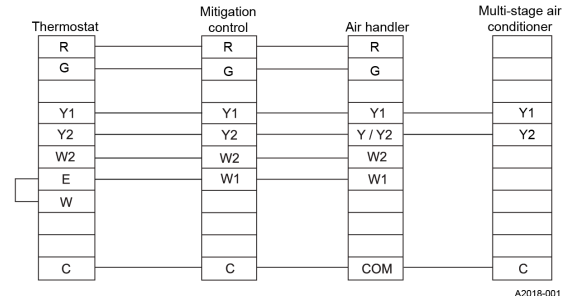


Figure 15: Premium multi-stage AC with standard ECM air handler

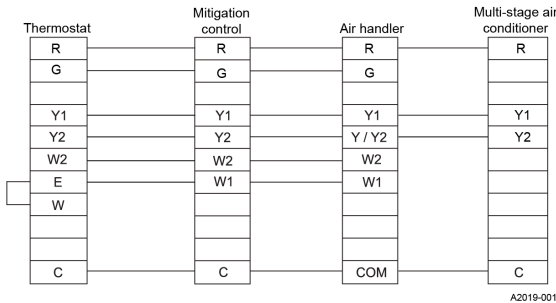
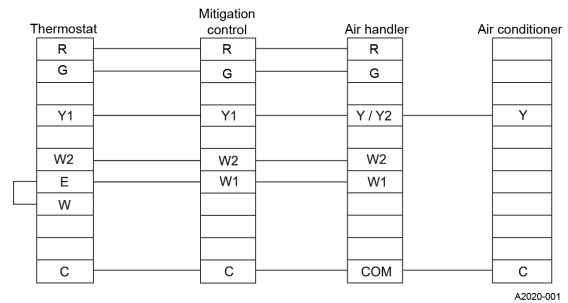


Figure 16: Standard single-stage AC with standard ECM air handler



Understanding the standard ECM nine-tap blower motor speed selections

JHE and JME standard ECM air handling units use a blower motor programming strategy that provides nine different torque (speed) selections instead of the standard five speeds. The motor still physically only has the same five speed tap wiring connections labeled 1, 2, 3, 4, and 5. The new strategy is referred to as nine-tap standard ECM. The motors used in previous models are the same, but a programming change is what makes the motor usable as a nine-tap standard ECM .

Five-tap standard ECM motors can have simultaneous 24 VAC input signals (thermostat calls) provided, and when they do, the motor prioritizes the input signal on the highest number of input tap selected. For example, if a five-tap standard ECM motor had calls on input tap 2 and input tap 4, the motor ignores tap 2 and operates the motor for the torque (speed) programmed on tap 4.

When a nine-tap standard ECM motor receives a single input on tap 1 to tap 5, the motor operates on the speed tap that is energized. Simultaneous speed taps can still be energized, but when they are, the motor selects the two highest number input taps energized, and those translate into programmed torque (speeds) 6, 7, 8, or 9. See [Table 3](#).

If there was a simultaneous 24 VAC input on tap 2 and tap 3, the motor would operate on the torque (speed) programmed for tap 6. As another example, if a nine-tap standard ECM motor has simultaneous 24 VAC input signal on taps 1, 3 and 4, the motor would ignore the input on tap 1. Tap 3 and 4 would take priority and the motor would operate on the torque (speed) programmed for tap 8.

Table 3: Nine-tap standard ECM tap motor programming

Input tap numbers				Operating programmed speed tap number
1				1
2				2
3				3
4				4
5				5
1 and 2		2 and 3		6
1 and 3		2 and 4		7
1 and 4		3 and 4		8
1 and 5	2 and 5	3 and 5	4 and 5	9

The refrigerant detection system (RDS) contains a bank of two DIP switches. Ensure the switches are set in the 0,0 or OFF, OFF position for use with the nine-tap standard ECM motor. When the switches are in the OFF positions, the RDS does not allow the circulating blower speed (G) signal to pass through during compressor (Y) calls.

The room thermostat must be set to provide a circulating blower (G) signal any time there is an electric heat (W) signal. This setting is by default on most room thermostats.

The circulating blower input (G signal) has a double-tap connection. For most applications, leave one of the G signal connections connected to its factory default position on speed tap 1 and leave the electric heat kit speed tap connected to its factory default position on speed tap 5.

Additional information

To better visualize the many speed tap input possibilities and airflow selection on a multi-stage heat pump application, read the following additional information:

At system commissioning, it is determined that low-speed compressor heating needs to use speed tap 4 and high-speed compressor heating needs to use speed tap 8. The installer would place low-speed compressor cooling or heating (Y1) input on motor speed tap input 4 and the high-speed compressor cooling or heating (Y2) input on speed tap 3. As the RDS does not allow the circulating blower speed (G) signal to pass through during compressor (Y) calls, the only motor input during a single-stage compressor cooling or heating call would be on speed tap 4. During a call for high-speed compressor cooling or heating, there is always a Y1 call (input on tap 4) accompanying the Y2 call (input on tap 3) and in this case, the motor would translate simultaneous input on tap 3 + tap 4 as torque (speed) programmed as tap 8.

Most of the electric heat minimum fan speeds are 7 to 9. An emergency electric heat call (W signal) is always accompanied by a circulating blower call (G signal), so in this example, the motor translates a simultaneous input on speed tap 1 + speed tap 5 as torque (speed) programmed as tap 9. If the compressor was operating providing full speed (Y1+Y2) heat pump heating and a call came in for auxiliary or supplemental heating, the motor would have an input on speed tap 3 + speed tap 4 + speed tap 5. The motor would ignore the input on speed tap 3 and translate the speed tap inputs on 4 and 5 as speed torque (speed) programmed as tap 9.

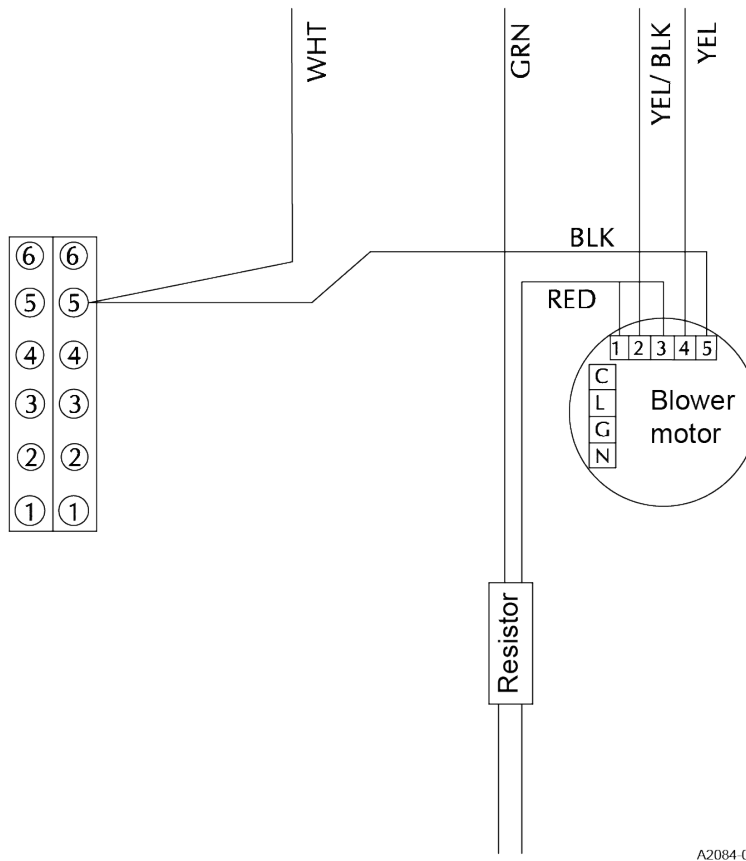
Setting the blower motor speed

About this task:

- Adjust the blower motor speed to provide airflow within the minimum and maximum limits approved for indoor coils, electric heat, and outdoor units. Make speed tap adjustments at the motor terminal block.
- The circulating blower (green) thermostat input is factory connected to speed tap 1 and tap 2, which translates into programmed speed tap 6 as shown in 9 tap table. The circulating blower (yellow/black) thermostat input is used for first stage cooling or heat pump heating blower speed. The circulating blower (yellow) thermostat input is used for the second-stage cooling or heat pump heating blower speed. If using a single-stage outdoor section, the Y1 and Y/Y2 inputs must be bonded together. See [Wiring information - shown with refrigerant detection system \(RDS\) accessory](#) for wiring details.

Note: Each of the standard ECM blower motor speed taps have a built-in 60 s off delay.

Figure 17: Blower speed connections



A2084-001

1. To establish the required speed for the system you are installing, see the airflow data in [Table 16](#).
2. Connect the motor wires to the motor speed tap receptacle for the required speed.

What to do next:

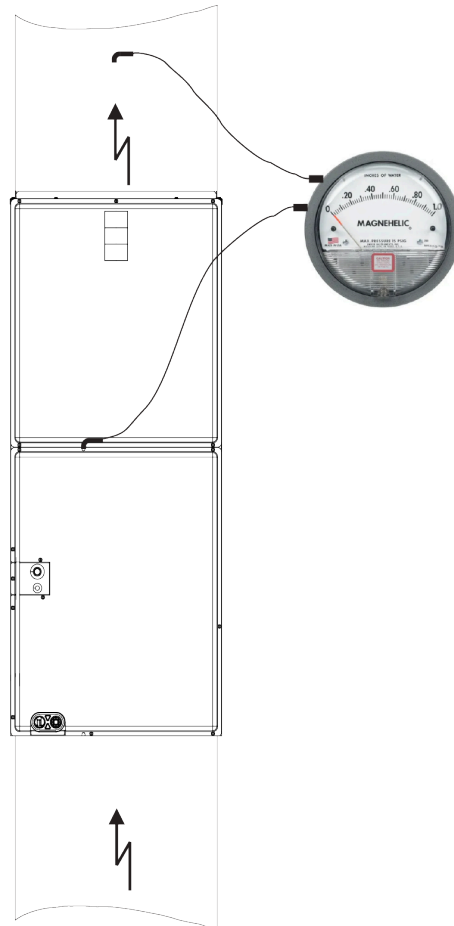
Adjust the air system.

Adjusting the air system

About this task:

You must adjust the air system to keep the CFM within the airflow limitations of the indoor coil if needed. To check the cubic feet per minute (CFM), measure the external duct static pressure using a manometer and static pressure tips. Figure 18 shows how to use a manometer to measure external duct static pressure.

Figure 18: Duct static measurements



A2073-001

To adjust the air system, do the following:

1. To prepare the coil for static pressure measurements, run only the fan to ensure a dry coil.
2. Drill a hole 12 in. away from the air handler in the supply air duct.
3. Note that the leaving air side of the indoor coil has provisions for inserting a static pressure tip. See the indoor coil *Installation Manual* for more information before proceeding to Step 4.
4. Insert the static pressure tips and energize the blower motor.
5. Measure the supply air static pressure. Record this positive number.
6. Be aware that you must take the return air pressure reading between the indoor coil and the air handler. Measure the return air static pressure. Record this negative number.
7. Treat the negative number as a positive, and add the two numbers together to determine the total external system static pressure.

8. See [Table 16](#) to determine the airflow and make the necessary adjustments to keep the CFM within the airflow limitations of the coil.

Unit data

See the following tables for unit data as needed:

Table 4: Physical and electrical data - cooling only

Models		JME08B	JME12B	JME12C	JME16C	JME18D
Blower - diameter x width (in.)		11 x 8	11 x 8	11 x 10	11 x 10	11 x 11
Motor	HP	1/3 HP	1/2 HP	1/2 HP	3/4 HP	3/4 HP
	Nominal RPM	1050	1050	1050	1050	1050
Voltage (V)		208/230	208/230	208/230	208/230	208/230
Full load amps at 230 V (A)		3.1	4.8	4.8	6.8	6.8
Filter (field supplied)	Type	Disposable or cleanable				
	Size (in.)	16 x 20 x 1	16 x 20 x 1	20 x 20 x 1	20 x 20 x 1	23 x 20 x 1
	Bottom rack	1BR01117	1BR01117	1BR01121	1BR01121	1BR01124
Shipping/operating weight (lb)		55/54	57/56	61/60	63/62	67/66

Table 5: Electrical data - cooling only

Models	Motor FLA ¹	Minimum circuit ampacity (A)	MOP ²
JME08B	3.1	3.9	15
JME12B/JME12C	4.8	6.0	15
JME16C/JME18D	6.8	8.5	15

1 FLA = Full load amps

2 MOP = Maximum Overcurrent Protection device; must be HACR type circuit breaker or time delay fuse. Refer to the latest edition of the National Electric Code or in Canada the Canadian electrical Code and local codes to determine correct wire sizing.

Table 6: Electrical heat with heat pump: minimum fan speed (CTF coil)

Heater kit models ^{1, 2}	Nominal kW at 240 V	Blower motor speed tap number by air handler model				
		JME08B	JME12B	JME12C	JME16C	JME18D
8HK(0,1)6500206	2.4	7	9	9	6	7
8HK(0,1)6500506	4.8	7	9	9	6	7
8HK(0,1)6500806	7.7	7	9	9	6	7
8HK(0,1)6501006	9.6	7	9	9	6	7
8HK06501025						
8HK(1,2)6501506	14.4	—	9	9	6	7
8HK06501525						
8HK(1,2)6502006	19.2	—	9	9 ³	6	7
8HK16502025						
8HK(1,2)6502506	24	—	—	—	—	7
8HK16502525						

1 (0,1) - 0 = no service disconnect or 1 = with service disconnect

2 (1,2) - 1 = with service disconnect, no breaker jumper bar or 2 = with service disconnect and breaker jumper bar

3 -2006 max ESP is 0.4 in., three-phase 8HK not approved for downflow applications. -2025 cannot be used with heat pump applications.

Table 7: Electrical heat with heat pump: minimum fan speed (CTM coil)

Heater kit models ^{1, 2}	Nominal kW at 240 V	Blower motor speed tap number by air handler model				
		JME08B	JME12B	JME12C	JME16C	JME18D
8HK(0,1)6500206	2.4	9	9	9	8	7
8HK(0,1)6500506	4.8	9	9	9	8	7
8HK(0,1)6500806	7.7	9	9	9	8	7
8HK(0,1)6501006	9.6	9 ³	9	9	8	7
8HK06501025						
8HK(1,2)6501506	14.4	—	9	9	8	7
8HK06501525						
8HK(1,2)6502006	19.2	—	9	9	8	7
8HK16502025						
8HK(1,2)6502506	24	—	—	—	—	7
8HK16502525						

1 (0,1) - 0 = no service disconnect or 1 = with service disconnect

2 (1,2) - 1 = with service disconnect, no breaker jumper bar or 2 = with service disconnect and breaker jumper bar

3 For single-phase 8HK not approved for horizontal right with heat pump applications

Table 8: Default blower speeds for FER compliance - electrical heat only

Model number	High sales volume heat kit ^{1, 2, 3}	Nominal kW at 240 V	Thermostat inputs w1/[w1+w2]	Default blower motor speed tap number		
				Heat	Max air flow	Continuous fan
JME08B	8HK(0,1)6500806	7.7	w1	9	9	7
JME12B	8HK(0,1)6501006	9.6	w1	8	9	7
JME12C	8HK(0,1)6500806	7.7	w1	7	9	7
JME16C ³	8HK(1,2)6501506	14.4	w1+w2	8	9	7
JME18D ³	8HK(1,2)6501506	14.4	w1+w2	7	9	7

- 1 (0,1) - 0 = no service disconnect or 1 = with service disconnect
- 2 (1,2) - 1 = with service disconnect, no breaker jumper bar or 2 = with service disconnect and breaker jumper bar
- 3 For JME16C and JME18D models with 15 kW (8HK*65015**) heat kit, tie the AHU W1 and W2 thermostat inputs together for FER compliance.

Table 9: Application factors - rated CFM versus actual CFM

% of rated airflow (CFM)	80	90	100	110	120
Capacity factor	0.96	0.98	1	1.02	1.03

Table 10: kW and MBH conversions for total power input requirement

Distribution power (V)	Nominal voltage (V)	Conversion factor
208	240	0.75
220	240	0.84
230	240	0.92

Note: For a power distribution voltage that is different from the provided nominal voltage, multiply the kW and MBH data from [Table 11](#) by the conversion.

Table 11: Electric heat performance data: 208/230-1-60 and 208/230-3-60

Heater models ^{1, 2}		Nominal kW at 240 V	Total heat ³				kW staging			
			kW		MBH		W1 only		W1 and W2	
			208 V	230 V	208 V	230 V	208 V	230 V	208 V	230 V
Single phase	8HK(0,1)6500206	2.4	1.8	2.2	6.2	7.5	1.8	2.2	1.8	2.2
	8HK(0,1)6500506	4.8	3.6	4.4	12.3	15	3.6	4.4	3.6	4.4
	8HK(0,1)6500806	7.7	5.8	7.1	19.7	24.1	5.8	7.1	5.8	7.1
	8HK(0,1)6501006	9.6	7.2	8.8	24.6	30.1	7.2	8.8	7.2	8.8
	8HK(1,2)6501506	14.4	10.8	13.2	36.9	45.1	3.6	4.4	10.8	13.2
	8HK(1,2)6502006	19.2	14.4	17.6	49.2	60.2	7.2	8.8	14.4	17.6
Three phase	8HK(1,2)6502506	24	18	22	61.5	75.2	7.2	8.8	18	22
	8HK06501025	9.6	7.2	8.8	24.6	30.1	7.2	8.8	7.2	8.8
	8HK06501525	14.4	10.8	13.2	36.9	45.1	10.8	13.2	10.8	13.2
	8HK16502025	19.2	14.4	17.6	49.2	60.2	7.2	8.8	14.4	17.6
	8HK16502525	24	18	22	61.5	75.2	9	11	18	22

- 1 (0,1) - 0 = no service disconnect or 1 = with service disconnect
- 2 (1,2) - 1 = with service disconnect, no breaker jumper bar or 2 = with service disconnect and breaker jumper bar
- 3 For different power distributions, see [Table 10](#).

Table 12: Electrical data for single source power supply: 208/230-1-60

Air handler models	Heater models ^{1, 2}	Heater amps (A) at 240 V	Field wiring			
			Minimum circuit ampacity (A)		MOP ³ (A)	
			208 V	230 V	208 V	230 V
JME08B	8HK(0,1)6500206	10	14.7	15.8	15	20
	8HK(0,1)6500506	20	25.5	27.8	30	30
	8HK(0,1)6500806	32	38.7	42.5	40	45
	8HK(0,1)6501006	40	47.1	51.7	50	60
JME12B	8HK(0,1)6500206	10	16.8	18.0	20	20
	8HK(0,1)6500506	20	27.6	29.9	30	30
	8HK(0,1)6500806	32	40.9	44.6	45	45
	8HK(0,1)6501006	40	49.3	53.8	50	60
	8HK(1,2)6501506	60	70.9	77.7	80	80
	8HK(1,2)6502006	80	92.5	101.7	100	110

Table 12: Electrical data for single source power supply: 208/230-1-60

Air handler models	Heater models ^{1, 2}	Heater amps (A) at 240 V	Field wiring			
			Minimum circuit ampacity (A)		MOP ³ (A)	
			208 V	230 V	208 V	230 V
JME12C	8HK(0,1)6500206	10	16.8	18.0	20	20
	8HK(0,1)6500506	20	27.6	29.9	30	30
	8HK(0,1)6500806	32	40.9	44.6	45	45
	8HK(0,1)6501006	40	49.3	53.8	50	60
	8HK(1,2)6501506	60	70.9	77.7	80	80
	8HK(1,2)6502006	80	92.5	101.7	100	110
JME16C	8HK(0,1)6500206	10	19.3	20.5	20	25
	8HK(0,1)6500506	20	30.1	32.4	35	35
	8HK(0,1)6500806	32	43.4	47.1	45	50
	8HK(0,1)6501006	40	51.8	56.3	60	60
	8HK(1,2)6501506	60	73.4	80.2	80	90
	8HK(1,2)6502006	80	95.0	104.2	100	110
JME18D	8HK(0,1)6500206	10	19.3	20.5	20	25
	8HK(0,1)6500506	20	30.1	32.4	35	35
	8HK(0,1)6500806	32	43.4	47.1	45	50
	8HK(0,1)6501006	40	51.8	56.3	60	60
	8HK(1,2)6501506	60	73.4	80.2	80	90
	8HK(1,2)6502006	80	95.0	104.2	100	110
	8HK(1,2)6502506	100	116.7	128.1	125	150

- (0,1) - 0 = no service disconnect or 1 = with service disconnect
- (1,2) - 1 = with service disconnect, no breaker jumper bar or 2 = with service disconnect and breaker jumper bar
- MOP = Maximum Overcurrent Protection device; must be HACR type circuit breaker or time delay fuse. Refer to the latest edition of the National Electric Code or in Canada the Canadian electrical Code and local codes to determine correct wire sizing.

Table 13: Electrical data for multi-source power supply: 208/230-1-60

Air handlers models	Heater models ¹	Heater amps (A) at 240 V	Minimum circuit ampacity (A)						MOP ² (A)					
			208 V			230 V			208 V			230 V		
			Circuit						Circuit					
			First	Second	Third	First	Second	Third	First	Second	Third	First	Second	Third
JME12B	8HK16501506	60	27.4	43.5	—	29.7	48.1	—	30	45	—	30	50	—
	8HK16502006	80	49.3	43.3	—	53.8	47.8	—	50	45	—	60	50	—
JME12C	8HK16501506	60	27.4	43.5	—	29.7	48.1	—	30	45	—	30	50	—
	8HK16502006	80	49.3	43.3	—	53.8	47.8	—	50	45	—	60	50	—
JME16C	8HK16501506	60	29.9	43.5	—	32.2	48.1	—	30	45	—	35	50	—
	8HK16502006	80	51.8	43.3	—	56.3	47.8	—	60	45	—	60	50	—
JME18D	8HK16501506	60	29.9	43.5	—	32.2	48.1	—	30	45	—	35	50	—
	8HK16502006	80	51.8	43.3	—	56.3	47.8	—	60	45	—	60	50	—
	8HK16502506	100	51.8	43.3	21.6	56.3	47.8	23.9	60	45	25	60	50	25

- 8HK1 = with service disconnect, no breaker jumper bar
- MOP = Maximum Overcurrent Protection device; must be HACR type circuit breaker or time delay fuse. The first circuit includes blower motor amps. Refer to the latest edition of the National Electric Code or in Canada the Canadian electrical Code and local codes to determine correct wire sizing.

Table 14: Electrical data for single source power supply: 208/230-3-60

Air handler models	Heater models ¹	Heater amps (A) at 240 V	Field wiring			
			Minimum circuit ampacity (A)		MOP ² (A)	
			208 V	230 V	208 V	230 V
JME08B	8HK06501025	23.1	28.9	31.5	30	35
JME12B	8HK06501025	23.1	31.0	33.6	35	35
	8HK06501525	34.6	43.5	47.4	45	50
	8HK16502025 ¹	46.2	56.0	61.2	60	70
JME12C	8HK06501025	23.1	31.0	33.6	35	35
	8HK06501525	34.6	43.5	47.4	45	50
JME16C	8HK06501025	23.1	33.5	36.1	35	40
	8HK06501525	34.6	46.0	49.9	50	50
	8HK16502025 ¹	46.2	58.5	63.7	60	70

Table 14: Electrical data for single source power supply: 208/230-3-60

Air handler models	Heater models ¹	Heater amps (A) at 240 V	Field wiring			
			Minimum circuit ampacity (A)		MOP ² (A)	
			208 V	230 V	208 V	230 V
JME18D	8HK06501025	23.1	33.5	36.1	35	40
	8HK06501525	34.6	46.0	49.9	50	50
	8HK16502025 ¹	46.2	58.5	63.7	60	70
	8HK16502525 ¹	57.7	71.0	77.5	80	80

- 0 = no service disconnect or 1 = with service disconnect. The 20 kW and 25 kW heater models (8HK16502025 and 8HK16502525) come with service disconnects standard. Single source power MCA and MOP requirements are given here only for reference if used with field installed single point power modification.
- MOP = Maximum overcurrent protection device; must be HACR type circuit breaker or time delay fuse. The first circuit includes blower motor amps. Refer to the latest edition of the National Electric Code or in Canada the Canadian electrical Code and local codes to determine correct wire sizing.

Table 15: Electrical data for multi-source power supply: 208/230-3-60

Air handlers models	Heater models ¹	Heater amps (A) at 240 V	Minimum circuit ampacity (A)				MOP ² (A)			
			208 V		230 V		208 V		230 V	
			Circuit				Circuit			
			First ²	Second	First ²	Second	First ²	Second	First ²	Second
JME12B	8HK16502025	46.2	31.0	25.0	33.6	27.6	35	25	35	30
JME16C	8HK16502025	46.2	33.5	25.0	36.1	27.6	35	25	40	30
JME18D	8HK16502025	46.2	33.5	25.0	36.1	27.6	35	25	40	30
	8HK16502525	57.7	39.7	31.2	43.0	34.5	40	35	45	35

- The 20 kW and 25 kW heater models (8HK16502025 and 8HK16502525) come with circuit breakers standard.
- MOP = Maximum overcurrent protection device; must be HACR type circuit breaker or time delay fuse. The first circuit includes blower motor amps. Refer to the latest edition of the National Electric Code or in Canada the Canadian electrical Code and local codes to determine correct wire sizing.

Table 16: Airflow data (CFM per Watts)

Models	Blower motor speed tap number	External static pressure (in. W.C.)										
		Unit	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
JME08B	9	CFM	1050	1025	975	925	875	850	800	750	725	675
		W	117	124	132	139	147	155	162	170	177	185
	8	CFM	1000	950	900	850	800	750	700	650	625	575
		W	97	104	112	119	127	134	141	149	156	164
	7	CFM	900	850	800	750	700	650	600	550	500	450
		W	78	85	92	98	105	112	119	125	132	139
	6	CFM	750	700	625	575	525	450	400	350	300	225
		W	53	58	64	69	75	80	85	91	96	102
	5	CFM	825	775	700	650	600	550	500	450	400	350
		W	64	70	76	82	88	94	100	106	112	118
	4	CFM	625	550	475	425	350	275	—	—	—	—
		W	35	40	45	51	56	61	—	—	—	—
	3	CFM	750	675	625	575	500	450	375	325	275	200
		W	56	62	67	73	79	84	90	96	101	107
	2	CFM	700	650	575	525	475	400	350	275	225	150
		W	48	54	59	64	70	75	80	86	91	96
	1	CFM	500	400	325	250	175	100	—	—	—	—
		W	26	30	35	39	44	48	—	—	—	—

Table 16: Airflow data (CFM per Watts)

Models	Blower motor speed tap number	External static pressure (in. W.C.)										
		Unit	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
JME12B	9	CFM	1575	1550	1550	1525	1500	1475	1450	1425	1425	1400
		W	413	418	425	432	440	450	460	472	484	498
	8	CFM	1400	1375	1350	1325	1300	1275	1250	1225	1200	1175
		W	276	285	293	302	311	319	328	336	345	353
	7	CFM	1175	1125	1100	1050	1025	975	950	900	875	825
		W	155	163	170	178	186	193	201	209	216	224
	6	CFM	1100	1050	1000	975	925	875	850	800	775	725
		W	128	136	143	151	158	166	174	181	189	196
	5	CFM	1000	950	900	850	800	775	725	675	625	575
		W	100	107	115	122	129	137	144	152	159	166
	4	CFM	775	725	675	625	550	500	450	375	325	275
		W	59	65	71	77	83	89	95	101	108	114
	3	CFM	725	675	625	550	500	425	375	325	250	200
		W	52	58	63	69	75	81	86	92	98	104
	2	CFM	475	400	300	225	150	—	—	—	—	—
		W	24	29	33	38	42	—	—	—	—	—
	1	CFM	400	300	225	—	—	—	—	—	—	—
		W	19	23	28	—	—	—	—	—	—	—
JME12C	9	CFM	1650	1625	1575	1550	1500	1475	1425	1400	1350	1325
		W	286	298	310	322	334	346	358	370	382	395
	8	CFM	1500	1450	1400	1350	1325	1275	1225	1200	1150	1100
		W	208	219	231	242	253	264	276	287	298	309
	7	CFM	1300	1250	1200	1150	1075	1025	975	925	875	825
		W	142	152	162	172	182	192	203	213	223	233
	6	CFM	1200	1150	1100	1050	1000	925	875	825	775	725
		W	124	133	142	152	161	170	180	189	198	208
	5	CFM	1000	925	850	800	725	675	600	550	475	425
		W	77	85	92	100	107	115	123	130	138	145
	4	CFM	850	775	700	600	525	450	375	300	225	—
		W	54	60	67	73	79	86	92	98	105	—
	3	CFM	825	750	675	600	525	450	—	—	—	—
		W	54	61	67	74	81	87	—	—	—	—
	2	CFM	675	575	475	400	300	200	—	—	—	—
		W	36	41	46	52	57	62	—	—	—	—
	1	CFM	500	375	275	—	—	—	—	—	—	—
		W	22	27	31	—	—	—	—	—	—	—
JME16C	9	CFM	1975	1950	1900	1875	1850	1825	1775	1750	1725	1700
		W	458	471	483	496	509	521	534	546	559	571
	8	CFM	1825	1775	1750	1725	1675	1650	1600	1575	1550	1500
		W	360	372	384	397	409	421	433	446	458	470
	7	CFM	1550	1500	1450	1400	1375	1325	1275	1250	1200	1150
		W	221	232	243	254	265	276	287	298	309	320
	6	CFM	1475	1425	1375	1325	1300	1250	1200	1150	1100	1050
		W	202	213	224	235	246	256	267	278	289	299
	5	CFM	1275	1225	1175	1100	1050	1000	950	900	825	775
		W	139	149	158	168	178	188	197	207	217	227
	4	CFM	950	875	800	750	675	600	550	475	400	350
		W	73	80	87	95	102	110	117	125	132	139
	3	CFM	725	650	550	475	400	325	225	—	—	—
		W	41	47	53	59	65	71	77	—	—	—
	2	CFM	650	550	450	350	275	175	—	—	—	—
		W	34	39	45	50	55	60	—	—	—	—
	1	CFM	475	375	250	150	—	—	—	—	—	—
		W	23	28	33	38	—	—	—	—	—	—

Table 16: Airflow data (CFM per Watts)

Models	Blower motor speed tap number	External static pressure (in. W.C.)										
		Unit	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
JME18D	9	CFM	2375	2325	2275	2250	2200	2175	2125	2100	2050	2000
		W	594	611	627	644	661	677	694	711	727	744
	8	CFM	2200	2175	2125	2075	2025	1975	1950	1900	1850	1800
		W	474	489	504	519	534	549	564	579	594	609
	7	CFM	1975	1925	1875	1825	1775	1725	1675	1625	1575	1525
		W	340	354	368	382	396	410	424	438	452	466
	6	CFM	1650	1575	1525	1450	1400	1325	1275	1200	1150	1075
		W	204	212	222	234	246	260	275	291	308	327
	5	CFM	1500	1450	1375	1300	1250	1175	1100	1050	975	900
		W	161	173	186	199	212	225	237	250	263	276
	4	CFM	1350	1300	1225	1150	1075	1000	925	850	800	725
		W	127	138	149	160	171	182	193	204	215	226
	3	CFM	900	825	725	625	525	450	350	250	—	—
		W	56	63	71	79	86	94	101	109	—	—
	2	CFM	700	600	475	375	250	125	—	—	—	—
		W	35	43	50	57	62	65	—	—	—	—
	1	CFM	650	525	400	275	150	—	—	—	—	—
		W	32	38	44	50	56	—	—	—	—	—

Note:

- No electric heat installed
- Air handler units are tested to UL60335-2-40 standards up to 0.6 in. W.C. external static pressure.
- Dry coil conditions only; tested without filters
- For optimal performance, external static pressures of 0.2 in. W.C. to 0.5 in. W.C. are recommended. Heating applications are tested at 0.5 in. W.C. external static pressure.
- Airflow data shown is from testing performed at 230 V. JME units use a standard ECM constant torque motor and there is minimal variation of airflow at other distribution voltage values. The above data can be used for airflow at other distribution voltages.

Maintenance

Periodic maintenance involves the following:

- Replacing or cleaning filters.
- Cleaning the indoor coil.
- Checking the condensate drain lines.

► **Important:** The bearings of the blower motor are permanently lubricated and require no maintenance.

Inspect filters at least once a month, and clean or replace them when they become dirty. The frequency of cleaning depends upon the hours of operation and the local atmospheric conditions. Clean filters keep unit efficiency high.

Replacing or cleaning filters

Inspect filters at least once a month, and clean permanent filters or replace disposable filters when they become dirty. The frequency of cleaning depends upon the hours of operation and the local atmospheric conditions. Clean filters keep the unit efficiency high.

Cleaning the indoor coil

About this task:

Clean the indoor coil with water if necessary. As an alternative to water, Evap-Green by Nu-Calgon is the only pH neutral coil cleaner approved for use when it is correctly diluted. Ensure to thoroughly rinse the cleaned coils after using Evap-Green.

CAUTION

Ensure adequate precautions are taken to protect electrical components from liquid.

To clean the indoor coil, do the following:

1. Shut off all power to the unit.
2. Clean the indoor coil with water or a suitable coil cleaner.
3. Rinse the indoor coil after cleaning.

Checking the condensate drains

During the cooling season, check the condensate drain lines to ensure that condensate is flowing from the primary drain but not from the secondary drain.

If condensate ever flows from the secondary drain:

1. Shut off the unit immediately.
2. Clean the condensate pan and drains to ensure a free flowing primary drain.

Wiring information - shown with refrigerant detection system (RDS) accessory

Figure 19: Wiring diagram: standard ECM single phase heat kits

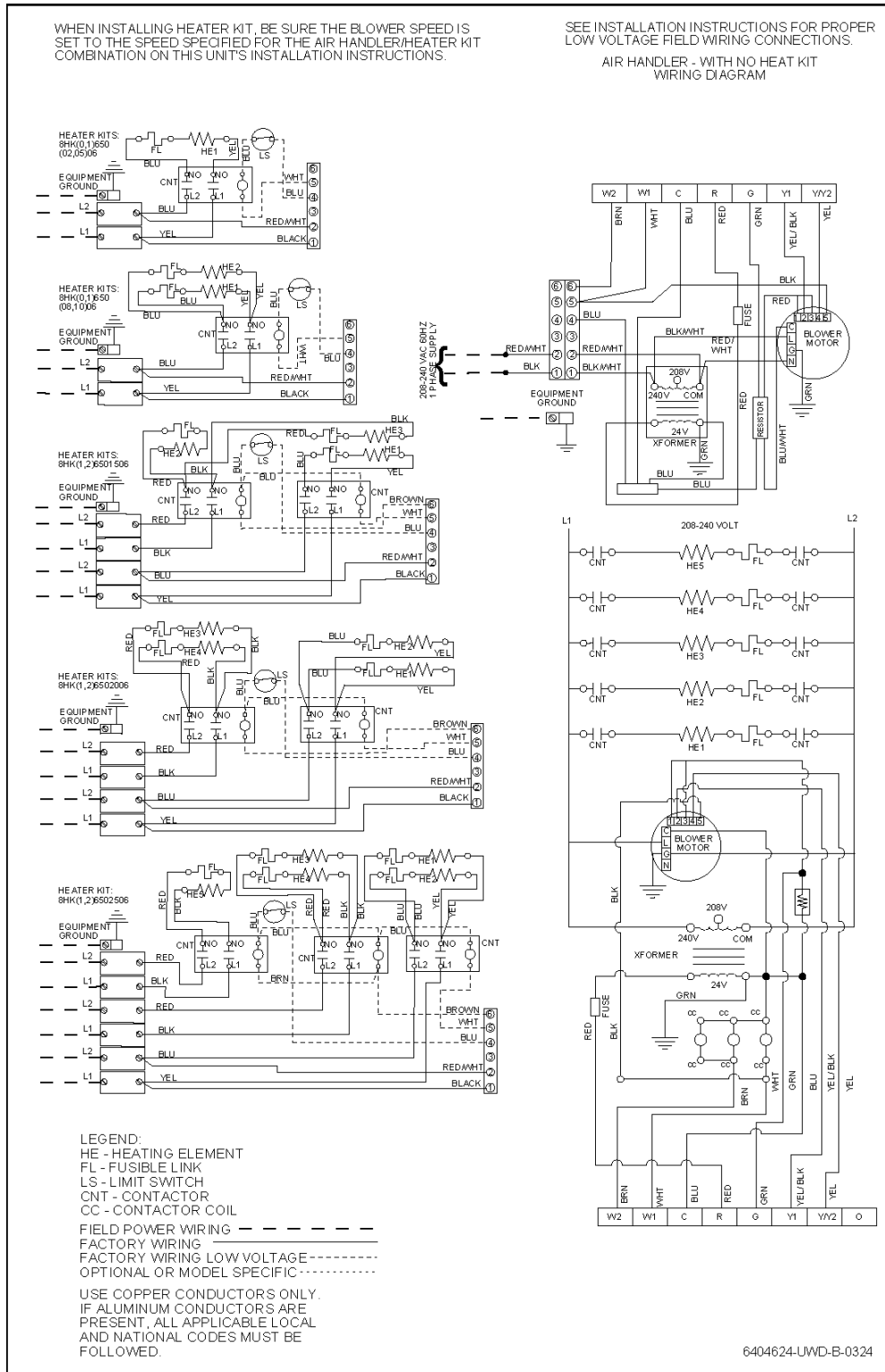
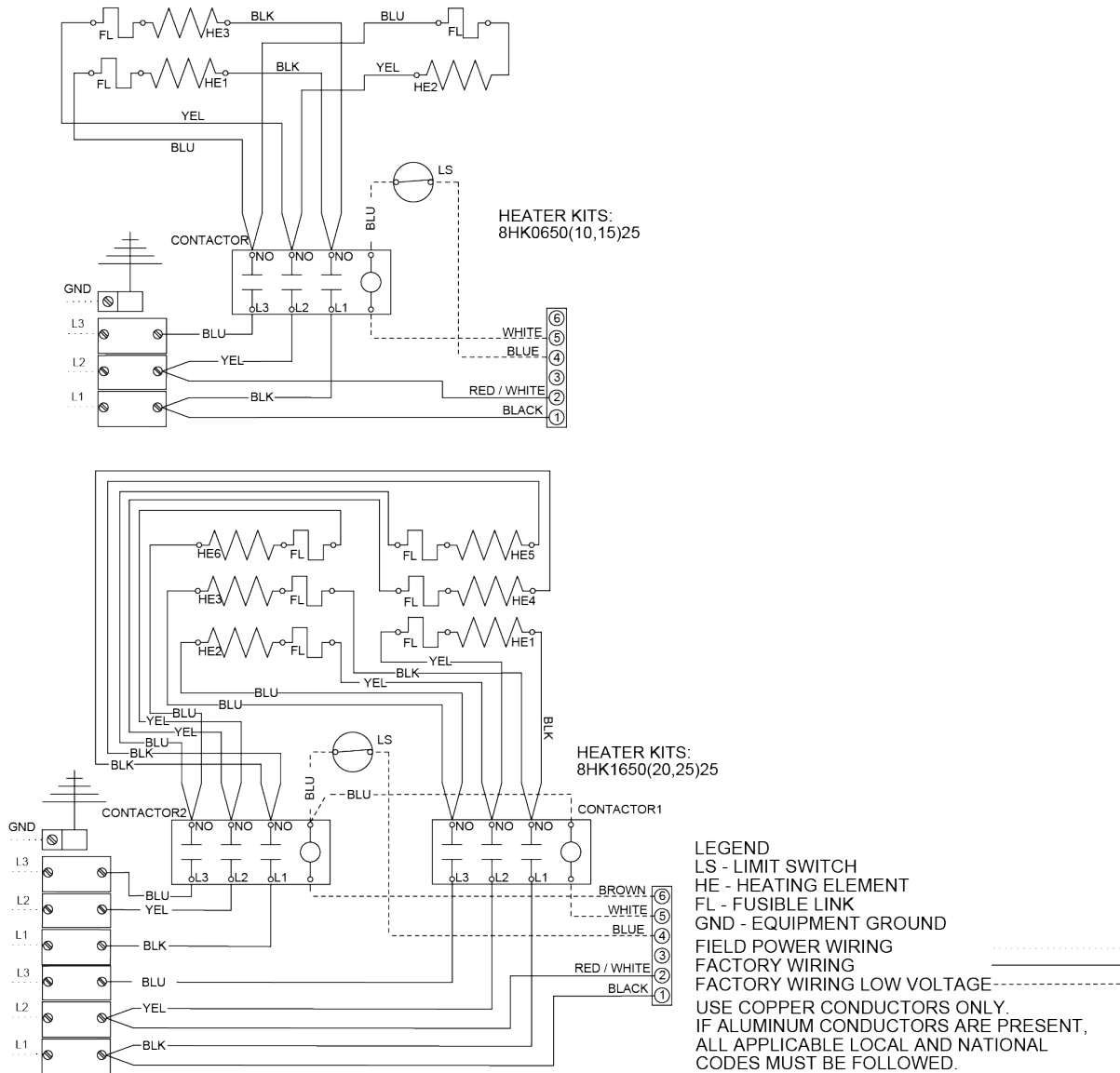


Figure 20: Wiring diagram: 208/230V three-phase heat kits

WHEN INSTALLING HEATER KIT, BE SURE THE BLOWER SPEED IS SET TO THE SPEED SPECIFIED FOR THE AIR HANDLER / HEATER KIT COMBINATION IN THIS UNIT'S INSTALLATION INSTRUCTIONS

3 PHASE ELECTRIC HEAT KITS



6151789-UWD-A-0821

Third-Party Trademarks Notice: For information about third-party trademarks, refer to the relevant company websites.

Start-up sheet

Start-up Sheet

Residential Air Handler with Electric Heat

Correct start-up is critical to customer comfort and equipment longevity

Start-up date Company name Start-up technician

Owner information

Name Address Daytime phone
 City State or province Zip or postal code

Equipment data

Unit model number Unit serial number

General information (check all that apply)

New construction Upflow Horizontal Left
 Retrofit Downflow Horizontal Right

Unit location and connections (check all that apply)

Unit is level Duct connections are complete: Supply Return
 Condensate drain is connected correctly (refer to installation manual) Condensate trap is primed with water

Filters

Filters installed Number of filters Filter size

Electrical connections and inspection (complete all that apply)

208 VAC 230 VAC 460 VAC
 Wires and electrical connections inspected Transformer wired correctly for primary supply voltage Ground connected
 Line voltage measured (VAC) Low voltage value between R and C at control board (VAC)
 Thermostat wiring is complete Thermostat cycle rate or heat anticipator adjusted to Installation Manual specifications

Airflow setup

Blower type and set-up	Variable speed ECM (circle 0 or 1)	Heat	0 / 1	0 / 1							
		Low cool	0 / 1	0 / 1	0 / 1						
		High cool	0 / 1	0 / 1	0 / 1						
		Delay	0 / 1	0 / 1							
		Stage 1 kW	0 / 1	0 / 1							
	Heat kit selection		0 / 1	0 / 1	0 / 1	0 / 1					
	Standard ECM	Compressor high	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8	<input type="radio"/> 9
		Compressor low	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8	<input type="radio"/> 9
		Continuous fan	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8	<input type="radio"/> 9
		Electric heat	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8	<input type="radio"/> 9
Supply static (in. W.C.)	<input type="text"/>	Supply air dry bulb temperature	<input type="text"/>	Outside air dry bulb temperature	<input type="text"/>						
Return static (in. W.C.)	<input type="text"/>	Return air dry bulb temperature	<input type="text"/>	Return air wet bulb temperature	<input type="text"/>						
Total external static pressure	<input type="text"/>	Temperature drop	<input type="text"/>	Supply air wet bulb temperature	<input type="text"/>						

Other switches (check all that apply)

HUMIDISTAT YES NO AC/HP AC HP CONT FAN L M H

Continued on next page

Electric heat (complete all that apply)

Electric heat kit:	Model number	<input type="text"/>	Serial number	<input type="text"/>	Rated kW	<input type="text"/>	
Number of elements	Measured amperage (A)	Heater 1	<input type="text"/>	Heater 2	<input type="text"/>	Heater 3	<input type="text"/>
		Heater 4	<input type="text"/>	Heater 5	<input type="text"/>	Heater 6	<input type="text"/>
	Measured voltage (V)	Heater 1	<input type="text"/>	Heater 2	<input type="text"/>	Heater 3	<input type="text"/>
		Heater 4	<input type="text"/>	Heater 5	<input type="text"/>	Heater 6	<input type="text"/>
Heating return air dry bulb temperature	<input type="text"/>	Heating supply air dry bulb temperature	<input type="text"/>	Air temperature rise	<input type="text"/>		

Job site clean-up

- Job site has been cleaned, and indoor and outdoor debris removed from job site.
- Tools have been removed from unit.
- All panels have been installed.

Unit operation and cycle test (complete all that apply)

- Operate the unit through continuous fan cycles from the thermostat, noting and correcting any problems.
- Operate the unit through cooling cycles from the thermostat, noting and correcting any problems.
- Operate the unit through mechanical heating cycles from the thermostat, noting and correcting any problems.
- Operate the unit through emergency heating cycles from the thermostat, noting and correcting any problems.

Owner education

- Provide the owner with the owner's manual.
- Explain operation of system to the owner.
- Explain thermostat use and programming (if applicable) to the owner.
- Explain the importance of regular filter replacement and equipment maintenance.

Comments and additional job details

Subject to change without notice. Published in U.S.A. Copyright © 2024 by Johnson Controls. All rights reserved.