Air handler configuration

These air handler units are supplied ready to install in an upflow or horizontal left position. See **Figure 4**. If the unit requires either downflow or horizontal right airflow configurations, the unit must have the coil assembly repositioned. See **Downflow or horizontal right conversion**.

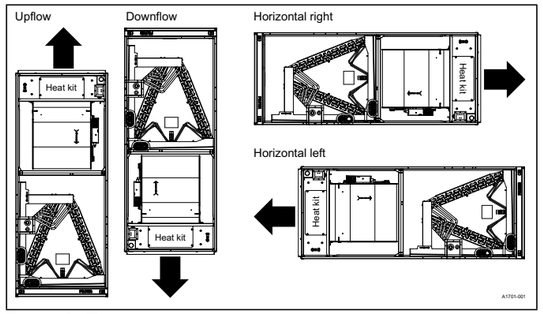

Figure 4: Typical installation

Downflow or horizontal right conversion

NOTICE

Convert the air handler to the desired orientation prior to installation. Conversion must be made before brazing the refrigerant connections to the coil.

NOTICE

These models are shipped with a horizontal baffle plate. Remove and retain this plate for horizontal right application. Discard for all other applications.

1. Remove the coil access panel.
2. Slide the coil and drain pan assembly out of the air handler.
3. Turn the air handler cabinet upside down (downflow position).
4. If installing the unit in a horizontal right position, the following models require installation of a horizontal baffle plate shipped with the unit: C48G and C60H. The horizontal baffle plate must be secured to the coil delta plates. See **Installing a horizontal baffle plate**.
5. Slide the coil back into the cabinet.
6. Install the coil access panel. Conversion is now complete.

Installing a horizontal baffle plate

1. With the coil removed from the air handling unit and laying on its horizontal drain pan, locate the pre-drilled holes in the front and rear coil delta plates.
2. Insert the horizontal baffle plate into the end of the coil. Insert one end of the horizontal baffle plate into the top side of the primary drain pan as shown in **Figure 5** in the *Installation Manual*.
3. Secure the horizontal baffle plate in place with two screws, one in the front delta plate and one in the rear delta plate.

Horizontal left applications (all models)

Air handling units are supplied ready to install in a horizontal left position. A horizontal drain pan is factory installed. Refer to the *Installation Manual* for further installation instructions.

Positioning the unit in horizontal applications

Set the unit so that it is sloped 1/4 in. towards the drain line connection.

Horizontal suspension

These air handlers may be suspended in horizontal applications. Use angle steel support brackets with minimum 3/8 in. threaded rods, supporting the unit from the bottom. Attach the threaded rods at the locations shown in **Figure 5**, leaving enough clearance between the door and the rod so that doors can be removed for service.

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. Refer to **Figure 1** in the *Installation Manual* for the location of the cabinet braces.

NOTICE

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

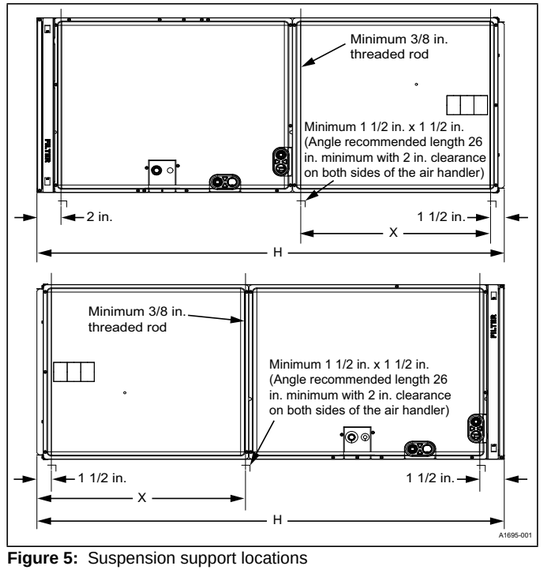

Figure 5: Suspension support locations

Table 6: Horizontal suspension dimensions

Air handler cabinet size	X (in.)	H (in.)
B18B	21 3/4	47
B24C/B36D	21 3/4	49 5/8
C36D	21 3/4	51
C42F/D42F	21 3/4	57
C48G/D48G/D60J	21 3/4	61 1/4
C60H/D60H	21 3/4	63

6135660-URG-A-0222
Supersedes: None

York International Corp.
5005 York Drive
Norman, OK 73069

Quick Reference Guide

Variable Speed ECM Single Piece Multi-position Residential Air Handlers

This document does not replace the Installation Manual, which must be referred to for detailed information.

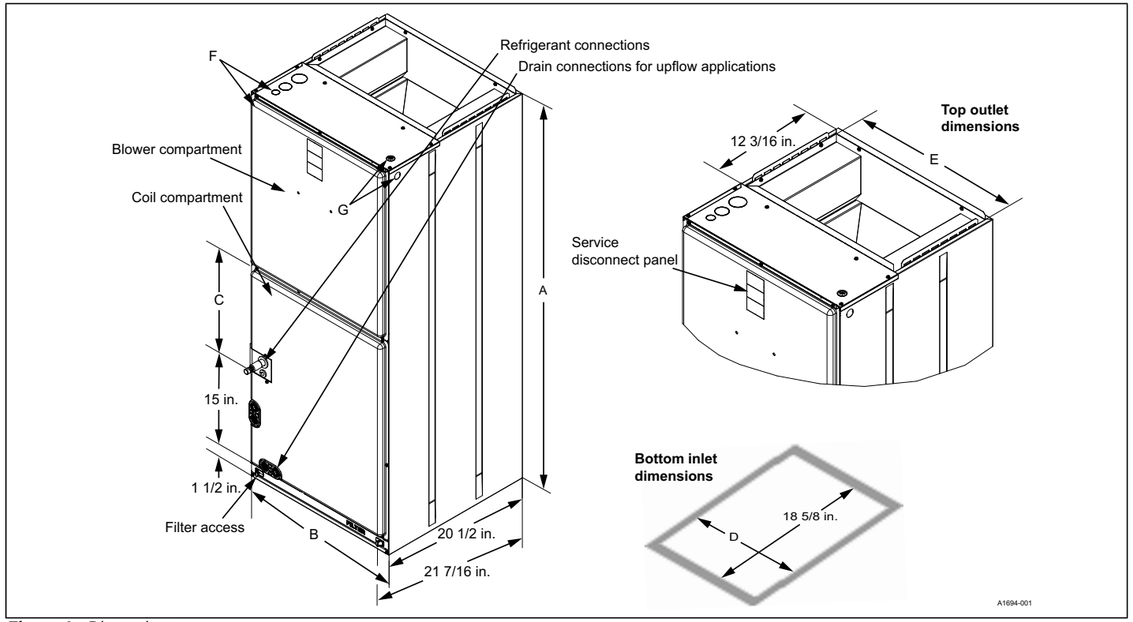

Figure 1: Dimensions

Table 1: Dimensions[1]

Models	Dimensions					Wiring knockouts[2]		Refrigerant connections line size	
	A	B	C	D	E	F	G		
	Height (in.)	Width (in.)	Opening widths (in.)			Power (in.)	Control (in.)	Liquid (in.)	Vapor (in.)
JHVT**B18B**	47	17 1/2	7 1/2	16 1/2	16 1/2	7/8 (1/2) 1 3/8 (1) 1 23/32 (1 1/4)	7/8 (1/2)	3/8	3/4
JHVT**B24C**	49 5/8	17 1/2	10	16 1/2	16 1/2				
JHVT**B36D**	49 5/8	17 1/2	10	16 1/2	16 1/2				
JHVT**C36D**	51	21	11 1/2	20	20				
JHVT**C42F**	56 3/4	21	17 1/2	20	20				
JHVT**D42F**	57	24 1/2	17 1/4	23 1/2	23 1/2				7/8
JHVT**C48G**	61 1/4	21	21 3/4	20	20				
JHVT**D48G**	61 1/4	24 1/2	21 3/4	23 1/2	23 1/2				
JHVT**C60H**	63	21	23 1/2	20	20				
JHVT**D60H**	63	24 1/2	23 1/2	23 1/2	23 1/2				
JHVT**D60J**	61 1/4	24 1/2	21 3/4	23 1/2	23 1/2				

1. All dimensions are in inches.
2. Actual size (conduit size)

Notes:

- The controls may require correct polarity on the power supply and a adequate ground.
- These units are rated for use with single and three phase 208 V or 230 V supply power.
- Use flexible duct connectors.
- Supply air ductwork must remain the size of the supply opening for the first 12 in. before transition to the correct duct size.
- The return and supply duct may be fastened to the bottom or sides of the air handler using screws no longer than 1/2 in..
- Line voltage electrical knockouts are available on the left top and left casing side. Refer to the *Installation Manual* for information on correct sizing of overcurrent protection and supply wire sizes.
- Low voltage electrical knockouts are available on the right top and right casing side.
- Seal electrical openings and duct connections to prevent air infiltration.
- If installing the air handler above a finished ceiling, use a secondary drain pan.
- It is necessary to trap condensate drain pans and slope them toward the drain.
- At start up, measure the external duct static and adjust the blower speed accordingly.

Table 2: Airflow data (CFM)

DIP Switch	B18B		B24C		B36D		C36D		C42F		D42F	
	High cool	Low cool	High cool	Low cool	High cool	Low cool	High cool	Low cool	High cool	Low cool	High cool	Low cool
000	575	400	700	475	800	550	825	600	1100	700	1125	675
001	625	450	725	525	900	600	900	650	1200	750	1225	875
010	675	475	800	575	975	650	1000	700	1300	800	1325	925
011	725	525	850	625	1075	700	1050	750	1400	850	1425	1000
100	775	550	925	650	1150	775	1150	825	1500	925	1550	1075
101	850	575	975	700	1250	825	1225	850	1625	975	1675	1150
110	900	625	1075	725	1325	900	1300	900	1725	1050	1775	1225
111	950	650	1100	775	1400	950	1350	950	1825	1100	1875	1275

DIP Switch	C48G		D48G		C60H		D60H		D60J	
	High cool	Low cool	High cool	Low cool	High cool	Low cool	High cool	Low cool	High cool	Low cool
000	1150	725	1125	700	1400	975	1400	975	1375	925
001	1250	775	1225	875	1525	1075	1550	1075	1475	1050
010	1350	850	1325	925	1650	1150	1700	1150	1750	1125
011	1450	900	1425	1000	1800	1250	1850	1250	1875	1225
100	1575	975	1550	1075	1925	1350	2000	1350	2000	1350
101	1675	1025	1675	1150	2050	1425	2125	1425	2000	1400
110	1775	1100	1800	1225	2050	1525	2125	1550	2000	1475
111	1875	1150	1900	1275	2050	1600	2125	1650	2000	1575

Notes:

- Air handler units have been tested to UL 60335-2-40 / CSA 22.2 No. 236 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 tested at 0.5 in. W.C. external static pressure. Above 0.5 in. W.C., CFM is reduced by 2% per 0.1 in. increase in static.
- Low speed cooling used only with two stage outdoor units. Speed is preset to 65% of high speed.
- Dehumidification speed is 85% of jumper selected cool tap.
- Any compressor operation uses HI COOL and LO COOL DIP switches. Indoor heating operates off the heatkit selection and the HEAT DIP switches.
- At some settings, low cool and/or low heat airflow may be lower than what is required to operate an airflow switch on certain models of electronic air cleaners. Consult the instructions for the electronic air cleaner for further details.
- Airflow (CFM) indicator light (LED2) flashes once for every 100 CFM (for example, 12 flashes is 1200 CFM) - blinks are approximate ±10% of actual CFM.

Airflow selection

When not using communicating functionality, you must set the airflow and comfort setting selection switches correctly at the time of installation for correct system operation. Place switches in the correct locations based on the information shown in **Table 2**. An example of switch positions is shown below in **Figure 2**. 0 indicates the OFF position and 1 indicates the ON position. The airflow configuration switches are located in the SW4 switch bank.

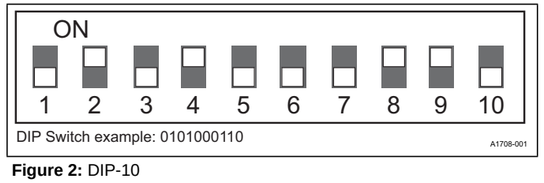

Figure 2: DIP-10

Inputs to the air handler control board pass to the motor, which determines the target CFM to deliver. Refer to the *Installation Manual* for more information on these inputs.

NOTICE

Incorrect airflow and comfort settings may result in decreased system efficiency and performance.

These variable speed air handlers are designed to deliver constant airflow (CFM) regardless of the external static pressure (ESP) in the ductwork. Therefore, if too many supply registers are closed, a filter becomes clogged, or there is a restriction in the ductwork, the motor automatically operates at a higher speed to compensate for the higher ESP. This may result in a higher operating sound level and motor damage.

Clearances

It is essential to provide the following clearances:

- Refrigerant piping and connections - minimum 12 in.
- Maintenance and servicing access - minimum 36 in. from the front of the unit for blower motor or coil replacement
- Condensate drain lines routed to clear filter and panel access
- Filter removal - minimum 36 in.
- The supply air ductwork connected to this unit is designed for 1 in. clearance for the first 18 in. of combustible materials if an electric heat kit accessory is installed.
- A combustible floor base accessory is available for downflow applications of this unit, if required by local code.

External duct static

Measure the supply air static pressure. Record this positive number. Measure the return air static pressure. Record this negative number. Treat the negative number as a positive and add the two numbers together to determine the total external system static pressure. If a filter rack is installed on the return air end of the air handler or indoor coil section, make sure to measure the return air duct static between the filter and the indoor coil.

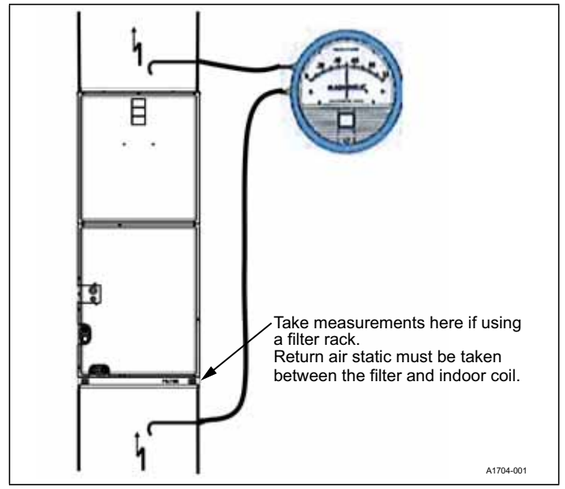

Figure 3: Duct static measurements

Table 3: Electrical heat: minimum fan CFM for single-phase heatkits

Heater kit models[1,2]	Nominal kW at 240 V	Airflow configuration heat dip switch setting*	Aux heat configuration heatkit selection dip switch setting	Air handler models (CFM[3])										
				B18B	B24C	B36D	C36D	C42F	D42F	C48G	D48G	C60H	D60H	D60J
8HK(0,1)6500206	2.4	00	0001	625	650	625	825	825	825	825	825	825	825	825
8HK(0,1)6500506	4.8	00	0010	650	650	650	825	825	825	825	825	825	825	825
8HK(0,1)6500806	7.7	00	0011	750	800	750	1100	1100	1150	1100	1150	1100	1150	1150
8HK(0,1)6501006	9.6	00	0100	790	950	750	1100	1100	1500	1100	1500	1100	1500	1500
8HK(1,2)6501506	14.4	00	0101	—	650, 950	650, 975	825, 1100	825, 1100	825, 1575	825, 1100	825, 1575	825, 1100	825, 1575	825, 1700
8HK(1,2)6502006	19.2	00	0110	—	—	750, 975	1100, 1300	1100, 1300	1325, 1575	1100, 1300	1325, 1575	1100, 1300	1325, 1575	1500, 1700
8HK(1,2)6502506	24	00	0111	—	—	—	—	—	—	—	1325, 1650	—	1325, 1650	1500, 1800

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 minimum fan CFM, if there are two values present, the first value is low-stage CFM (W1) and the second value is full-stage CFM (W1+W2). If higher kW/CFM is needed for low-stage, see **Table 5**.

* To increase airflow by approximately 20%, adjust the HEAT DIP switches from 00 to 01.

Table 4: Electrical heat: minimum fan CFM for three-phase heatkits

Heater kit models[1,2]	Nominal kW at 240 V	Airflow configuration heat dip switch setting*	Aux heat configuration heatkit selection dip switch setting	Air handler models (CFM[3])										
				B18B	B24C	B36D	C36D	C42F	D42F	C48G	D48G	C60H	D60H	D60J
8HK06501025	9.6	00	1000	790	950	1150	1150	1150	1500	1150	1500	1150	1500	1700
8HK06501525	14.4	00	1001	—	950	1150	1150	1150	1575	1150	1575	1150	1575	1700
8HK16502025	19.2	00	1010	—	—	1150, 1150	1150, 1300	1150, 1400	1500, 1575	1150, 1300	1500, 1575	1150, 1300	1500, 1575	1700
8HK16502525	24	00	1011	—	—	—	—	—	—	—	1575, 1650	—	1575, 1650	1700, 1800

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 minimum fan CFM, if there are two values present, the first value is low-stage CFM (W1) and the second value is full-stage CFM (W1+W2). If higher kW/CFM is needed for low-stage, see **Table 5**.

* To increase airflow by approximately 20%, adjust the HEAT DIP switches from 00 to 01.

Table 5: Aux heat configuration - stage 1 kW dip switch settings

W1 = W1	00, 01
W1 = W2	10
W1 = W1 + W2	11