



## TECHNICAL GUIDE

### SINGLE PIECE VARIABLE SPEED ECM COMMUNICATING AIR HANDLERS

FOR USE WITH SPLIT-SYSTEM COOLING & HEAT PUMPS

MODELS: AVC SERIES



ISO 9001  
Certified Quality  
Management System

Due to continuous product improvement, specifications are subject to change without notice.

Visit us on the web at:

[www.upgnet.com](http://www.upgnet.com) and [www.york.com](http://www.york.com)

Additional rating information can be found at:

[www.ahridirectory.org](http://www.ahridirectory.org)

#### WARRANTY SUMMARY

Standard 5-year limited parts warranty.

**Extended 10-year limited parts warranty** when product is registered online within 90 days of purchase for replacement or closing for new home construction.

## DESCRIPTION

This fan coil line offers the ultimate in application flexibility. This unit may be used for upflow, downflow, horizontal right, or horizontal left applications.

All JCI Unitary Products air handlers and coils can use a TXV to provide our customers with the optimum performance and refrigerant control. Single piece air handlers are available with "Flex-coils" (without a factory installed metering device). For added flexibility, an R-22 or R-410A TXV or piston must be field installed to meet the requirement of the desired refrigerant. Some coil models available with factory installed TXV.

## FEATURES

**RC<sup>2</sup>** - Rigid Case Construction interior endoskeleton for structural support, smooth side, and locks in insulation.

**Powder-painted** - G30 galvanized steel case provide a coated edge that resists corrosion and rust creep.

**MaxAlloy™ Coil** - Long life aluminum coils built to deliver lasting performance, efficiency and reliability.

**Quality Construction** - Structural components are made of Aluminum or G90 galvanized steel to prevent corrosion.

**Improved Insulation Design** - Single piece with no external screws to reduce thermal transmission paths to prevent sweating. Foil faced insulation for ease of cleaning.

**Thermostatic Expansion Valve** - The accessory chatleff style TXV provides easy installation to convert the indoor coil to the required refrigerant that does not require brazing to replace or install. Some models are available with factory installed TXV.

**Case Depth** - These models have 20.5" casing which provide ease of attic access and tight applications.

**Thermoset Drain Pan** - Low retention and positive slope for drainage to reduce potential mold or contaminants.

**Factory Sealed** - Achieves 2% or less total airflow leakage rate at duct leakage test conditions in positive and negative pressure for system airflow verification.

**Enhanced Filter Rack** - All models have integrated internal filter racks provided for use with 1" thick standard size filters.

**Electric Heat Kits** - 6HK series of field installed electric heat kits are available for installation-friendly and easy service applications.

**Blowers** - All models use direct-drive, variable speed ECM motors.

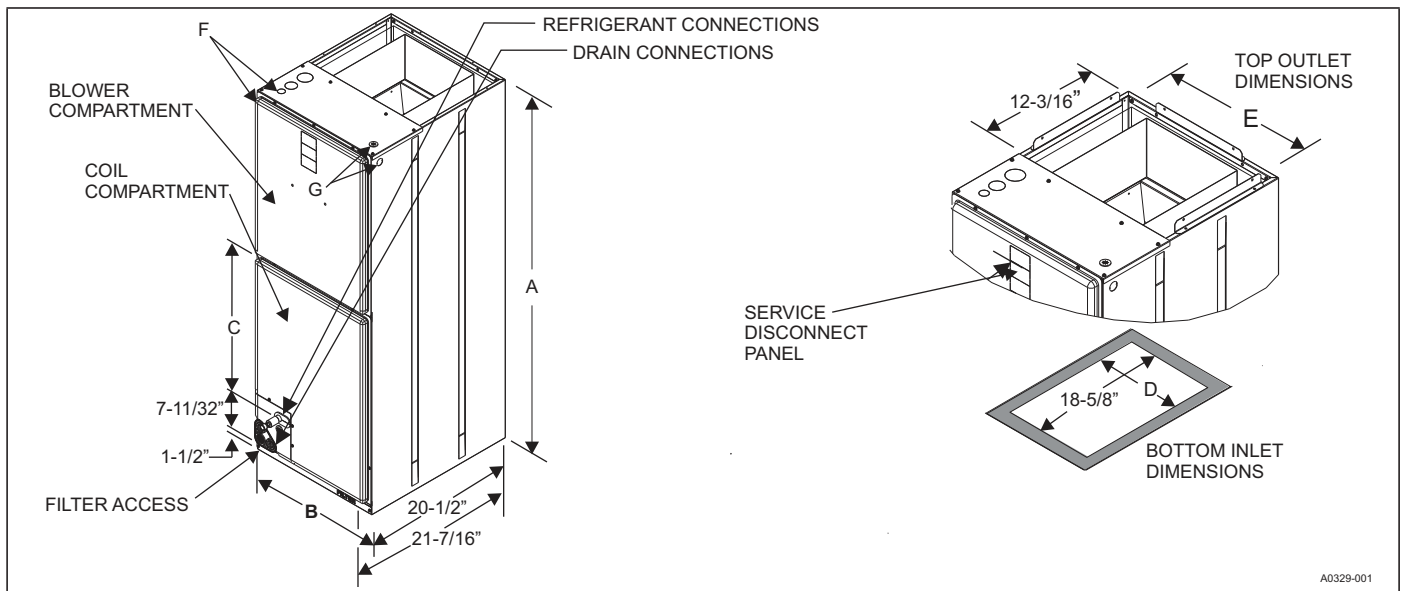
**LIST OF SECTIONS**

DESCRIPTION ..... 1  
 FEATURES ..... 1  
 NOMENCLATURE ..... 2  
 DIMENSIONS & DUCT CONNECTION DIMENSIONS ..... 3  
 DIMENSIONS ..... 3  
 COIL TECHNICAL DATA ..... 3  
 COOLING CAPACITY ..... 4  
 PHYSICAL & ELECTRICAL DATA - COOLING ONLY ..... 5  
 APPLICATION FACTORS - RATED CFM VS. ACTUAL CFM ..... 5  
 ELECTRICAL DATA - COOLING ONLY ..... 5  
 ELECTRICAL HEAT - MINIMUM FAN SPEED ..... 6  
 ELECTRIC HEAT PERFORMANCE DATA:  
 208/230-1-60 & 208/230-3-60 ..... 6  
 ELECTRICAL DATA FOR SINGLE SOURCE  
 POWER SUPPLY: 208/230-1-60 ..... 7  
 ELECTRICAL DATA FOR MULTI-SOURCE  
 POWER SUPPLY: 208/230-1-60 ..... 9  
 ELECTRICAL DATA FOR SINGLE SOURCE  
 POWER SUPPLY: 208/230-3-60 ..... 10  
 ELECTRICAL DATA FOR MULTI-SOURCE  
 POWER SUPPLY: 208/230-3-60 ..... 11  
 POWER WIRING - LINE CONNECTIONS ..... 11  
 ACCESSORIES ..... 11  
 COMBUSTIBLE FLOOR BASE ACCESSORY ..... 12  
 LIMITATIONS ..... 12  
 TYPICAL APPLICATIONS ..... 12  
 TYPICAL THERMOSTAT CONNECTION ..... 13  
 AIR FLOW DATA (CFM) ..... 14

**NOMENCLATURE**

<b>PRODUCT TYPE</b>	<b>A</b>	A = Single Piece Air Handler
<b>POSITION MOTOR TYPE</b>	<b>V</b>	P = Multi PSC E = Multi Std ECM V = Multi VS ECM Z = Compact Up Std ECM
<b>OPTIONS</b>	<b>C</b>	C = Communications Ready - = Standard (No Options)
<b>NOMINAL UNIT CAPACITY</b>	<b>36</b>	18 = 1.5 Ton      42 = 3.5 Ton 24 = 2 Ton      48 = 4-Ton 30 = 2.5 Ton      49 = 4-Ton 36 = 3 Ton      60 = 5-Ton
<b>CABINET WIDTH</b>	<b>B</b>	A = 14.5" B = 17.5" C = 21.0" D = 24.5"
<b>TXV INDICATOR</b>	<b>X</b>	BA-BF = Valve Size X = no valve
<b>VOLTAGE (Voltage-Phase-Hertz)</b>	<b>2</b>	1 = 115-1-60      3 = 208/230-3-60 2 = 208/230-1-60      4 = 460-3-60
<b>GENERATION (MAJOR REVISION)</b>	<b>1</b>	1 = 1st Gen 2 = 2nd Gen etc.
<b>STYLE LETTER (MINOR REVISION) NOT USED FOR ORDERING</b>	<b>A</b>	A = Style A B = Style B etc.

**DIMENSIONS & DUCT CONNECTION DIMENSIONS**



**DIMENSIONS**

Models	Dimensions <sup>1</sup>					Wiring Knockouts <sup>2</sup>		Refrigerant Connections Line Size	
	A	B	C	D	E	F	G	Liquid	Vapor
	Height	Width				Power	Control		
AVC18BX21	41	17-1/2	12-7/8	14-1/4	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
AVC24BX21	41	17-1/2	12-7/8	14-1/4	16-1/2				
AVC30BX21	47-1/2	17-1/2	19-1/2	14-1/4	16-1/2				
AVC36BX21	47-1/2	17-1/2	19-1/2	14-1/4	16-1/2				
AVC36CX21	51-1/2	21	22-5/8	17-3/4	20				
AVC42CX21	51-1/2	21	22-5/8	17-3/4	20				
AVC48CX21	51-1/2	21	22-5/8	17-3/4	20				
AVC48DX21	55-1/2	24-1/2	26-5/8	21-1/4	23-1/2				
AVC49CX21	51-3/4	21	26-5/8	17-3/4	20				
AVC60CX22	55-3/4	21	26-7/8	17-3/4	20				
AVC60DX21	55-1/2	24-1/2	26-5/8	21-1/4	23-1/2			7/8	

- 1. All dimensions are in inches.
- 2. Actual size (Conduit size in parenthesis.).

**COIL TECHNICAL DATA**

Models	Application	Refrig. Conn. Types	Face Area (Sq. Ft.)	Rows Deep	Fins Per In.	Coil Size	Tube Geometry	Tube Diameter	Fin Type
AVC18BX21	Cooling /Heat Pump	Sweat	4.3	2	14	(3) 12 x 17.1	1 x 0.866	3/8	Sine Wave
AVC24BX21	Cooling /Heat Pump	Sweat	5.0	2	14	(3) 14 x 17.1	1 x 0.866	3/8	Sine Wave
AVC30BX21	Cooling /Heat Pump	Sweat	6.4	2	14	(3) 18 x 17.1	1 x 0.866	3/8	Sine Wave
AVC36BX21	Cooling /Heat Pump	Sweat	7.1	2	14	(3) 20 x 17.1	1 x 0.866	3/8	Sine Wave
AVC36CX21	Cooling /Heat Pump	Sweat	7.1	2	14	(3) 20 x 17.1	1 x 0.866	3/8	Sine Wave
AVC42CX21	Cooling /Heat Pump	Sweat	8.6	2	14	(3) 24 x 17.1	1 x 0.866	3/8	Sine Wave
AVC48CX21	Cooling /Heat Pump	Sweat	8.6	2	14	(3) 24 x 17.1	1 x 0.866	3/8	Sine Wave
AVC48DX21	Cooling /Heat Pump	Sweat	8.6	2	14	(3) 24 x 17.1	1 x 0.866	3/8	Sine Wave
AVC49CX21	Cooling /Heat Pump	Sweat	6.7	3	12	(2)28 x 17.1	1 x 0.866	3/8	Sine Wave
AVC60CX22	Cooling /Heat Pump	Sweat	10.0	2	14	(3) 28 x 17.1	1 x 0.866	3/8	Sine Wave
AVC60DX21	Cooling /Heat Pump	Sweat	10.0	3	12	(3) 28 x 17.1	1 x 0.866	3/8	Sine Wave

**COOLING CAPACITY<sup>1</sup>**

Models	Rated CFM <sup>2</sup>	Entering Air Dry/Wet Bulb (°F)	MBH@ Evap. Temp. and Corresponding R-410A Pressure (°F/PSIG)			
			35/107.9	40/118.9	45/130.7	50/143.3
AVC18B	600	85/72	45.7	41.6	36.8	30.5
		80/67	38.5	33.9	28.5	22.3
		75/62	31.5	26.5	20.5	15.9
		70/57	24.4	19.5	15.2	11.5
AVC24B	800	85/72	52.2	47.5	41.8	35.0
		80/67	43.6	38.3	31.9	24.5
		75/62	35.2	29.5	22.7	16.2
		70/57	27.1	20.7	15.5	11.4
AVC30B	1000	85/72	75.3	67.8	56.8	47.1
		80/67	62.6	54.6	44.2	34.5
		75/62	50.2	41.3	32.0	22.9
		70/57	37.8	30.1	21.5	16.2
AVC36B	1200	85/72	91.6	82.4	71.3	59.4
		80/67	76.5	65.4	54.6	42.8
		75/62	61.3	51.2	40.0	30.5
		70/57	47.5	38.1	28.7	22.3
AVC36C	1200	85/72	91.6	82.4	71.3	59.4
		80/67	76.5	65.4	54.6	42.8
		75/62	61.3	51.2	40.0	30.5
		70/57	47.5	38.1	28.7	22.3
AVC42C	1400	85/72	108.0	98.4	88.1	73.8
		80/67	93.3	82.1	69.7	57.0
		75/62	75.9	64.4	53.1	41.9
		70/57	60.7	49.9	39.4	32.4
AVC48C	1600	85/72	115.2	105.0	93.9	79.0
		80/67	88.3	78.2	65.5	52.6
		75/62	72.7	60.8	50.1	37.6
		70/57	57.7	46.9	36.6	29.7
AVC48D	1600	85/72	115.2	105.0	93.9	79.0
		80/67	88.3	78.2	65.5	52.6
		75/62	72.7	60.8	50.1	37.6
		70/57	57.7	46.9	36.6	29.7
AVC49C	1600	85/72	100.9	89.3	76.9	61.9
		80/67	82.7	70.7	57.6	44.1
		75/62	65.7	53.9	41.0	28.0
		70/57	50.2	38.5	27.7	21.2
AVC60C	1800	85/72	115.1	103.0	91.7	78.6
		80/67	96.8	85.9	73.7	60.5
		75/62	80.7	69.4	57.5	43.5
		70/57	58.7	48.9	37.7	32.7
AVC60D	1800	85/72	133.6	118.5	103.2	86.6
		80/67	111.4	96.2	80.3	62.8
		75/62	90.7	75.1	60.0	43.5
		70/57	70.6	56.9	42.5	32.8

1. Actual capacity varies with the outdoor AC or HP that is used with the system.
2. Airflow is calculated for each system tonnage.

**PHYSICAL & ELECTRICAL DATA - COOLING ONLY**

Models		18B	24B	30B	36B	36C	42C
Blower - Diameter x Width		10 x 8	10 x 8	10 x 8	10 x 8	11 x 10	11 x 10
Motor	HP	1/3 HP	1/3 HP	1/3 HP	1/2 HP	1/2 HP	1/2 HP
	Nominal RPM	1050	1050	1050	1050	1050	1050
Voltage		208/230	208/230	208/230	208/230	208/230	208/230
Full Load Amps @230V		2.9	2.9	2.9	4.5	4.5	4.5
Filter <sup>1</sup>	Type	DISPOSABLE OR PERMANENT					
	Size	16 x 20 x 1	16 x 20 x 1	16 x 20 x 1	16 x 20 x 1	20 x 20 x 1	20 x 20 x 1
	Permanent Type Kit	1PF0601	1PF0601	1PF0601	1PF0601	1PF0602	1PF0602
Shipping Operating Weight (lbs.)		91/85	93/87	119/113	119/113	120/114	144/136

Models		48C	48D	49C	60C	60D
Blower - Diameter x Width		11 x 10	11 x 10	11x10	11 x 10	11 x 10
Motor	HP	3/4 HP	3/4 HP	3/4 HP	3/4 HP	3/4 HP
	Nominal RPM	1050	1050	1050	1050	1050
Voltage		208/230	208/230	208/230	208/230	208/230
Full Load Amps @230V		7.0	7.0	7.0	7.0	7.0
Filter <sup>1</sup>	Type	DISPOSABLE OR PERMANENT				
	Size	20 x 20 x 1	22 x 20 x 1	20x20 x1	20 x 20 x 1	22 x 20 x 1
	Permanent Type Kit	1PF0602	1PF0603	1PF0602	1PF0602	1PF0603
Shipping Operating Weight (lbs.)		158/150	163/153	158/150	156/146	180/170

1. Field supplied.

**kW & MBH CONVERSIONS - FOR TOTAL POWER INPUT REQUIREMENT**

For a power distribution voltage that is different than the provided nominal voltage, multiply the kW and MBH data from the table by the conversion factor in the following table.

DISTRIBUTION POWER	NOMINAL VOLTAGE	CONVERSION FACTOR
208V	240V	0.75
220V	240V	0.84
230V	240V	0.92

**APPLICATION FACTORS - RATED CFM VS. ACTUAL CFM**

% Of Rated Airflow (CFM)	80%	90%	100%	110%	120%
Capacity Factor	0.96	0.98	1.00	1.02	1.03

**ELECTRICAL DATA - COOLING ONLY**

Models	Motor FLA <sup>1</sup>		Minimum Circuit Ampacity		MOP <sup>2</sup>
	208V	230V	208V	230V	
18B/24B/30B	3.0	2.9	3.8	3.6	15
36B/36C/42C	5.0	4.5	6.3	5.6	15
48C/48D/49C/60C/60D	7.3	7.0	9.1	8.8	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.

**ELECTRICAL HEAT - MINIMUM FAN SPEED**

Heater Kit Models <sup>1,2,3</sup>	Nom. kW @240V	Air Handler Models										
		18B	24B	30B	36B	36C	42C	48C	48D	49C	60C	60D
6HK(0,1)6500206	2.4kW	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)
6HK(0,1)6500506	4.8kW	Med Lo (D)	Med (C)	Med (C)	Med Lo (D)	Med (C)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)
6HK(0,1)6500806	7.7kW	Med (C)	Med Hi (B)	Med Hi (B)	Med Lo (D)	Med Hi (B)	Med (C)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)
6HK(0,1)6501006 6HK36501025	9.6kW	Med (C)	Med Hi (B)	Med Hi (B)	Med Lo (D)	Med Hi (B)	Med (C)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)
6HK(1,2)6501306	12.5kW	-	Med Hi (B)	Med Hi (B)	Med (C)	Med Hi (B)	Med (C)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)	Med Lo (D)
6HK(1,2)6501506 6HK36501525	14.4kW	-	-	Med Hi (B)	Med Hi (B)	Med Hi (B)	Hi (A)	Med (C)	Med (C)	Med (C)	Med Lo (D)	Med Lo (D)
6HK(1,2)6501806 6HK36501825	17.3kW	-	-	-	Med Hi (B)	Med Hi (B)	Hi (A)	Med (C)	Med Hi (B)	Med (C)	Med (C)	Med (C)
6HK(1,2)6502006 6HK46502025	19.2kW	-	-	-	Med Hi (B)	Hi (A)	Hi (A)	Med Hi (B)	Hi (A)	Med Hi (B)	Med Hi (B)	Med Hi (B)
6HK(1,2)6502506 6HK46502525	24kW	-	-	-	-	-	-	-	Hi (A)	-	-	Med Hi (B)

- (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 & breaker jumper bar.
- 6HK3 = 3-Phase with terminal block connectors only, 6HK4 = 3-Phase with service disconnect.

**ELECTRIC HEAT PERFORMANCE DATA: 208/230-1-60 & 208/230-3-60**

Heater Models <sup>1,2,3</sup>		Nominal kW @240V	Total Heat <sup>4</sup>				kW Staging			
			kW		MBH		W1 Only		W1 + W2	
			208V	230V	208V	230V	208V	230V	208V	230V
1PH	6HK(0,1)6500206	2.4	1.8	2.2	6.2	7.5	1.8	2.2	1.8	2.2
	6HK(0,1)6500506	4.8	3.6	4.4	12.3	15	3.6	4.4	3.6	4.4
	6HK(0,1)6500806	7.7	5.8	7.1	19.7	24.1	5.8	7.1	5.8	7.1
	6HK(0,1)6501006	9.6	7.2	8.8	24.6	30.1	7.2	8.8	7.2	8.8
	6HK(1,2)6501306	12.5	9.4	11.5	32	39.2	3.1	3.8	9.4	11.5
	6HK(1,2)6501506	14.4	10.8	13.2	36.9	45.1	3.6	4.4	10.8	13.2
	6HK(1,2)6501806	17.3	13	15.9	44.3	54.2	6.5	7.9	13	15.9
	6HK(1,2)6502006	19.2	14.4	17.6	49.2	60.2	7.2	8.8	14.4	17.6
	6HK(1,2)6502506	24	18	22	61.5	75.2	7.2	8.8	18	22
3PH	6HK36501025	9.6	7.2	8.8	24.6	30.1	7.2	8.8	7.2	8.8
	6HK36501525	14.4	10.8	13.2	36.9	45.1	10.8	13.2	10.8	13.2
	6HK36501825	17.3	13	15.9	44.3	54.2	13	15.9	13	15.9
	6HK46502025	19.2	14.4	17.6	49.2	60.2	7.2	8.8	14.4	17.6
	6HK46502525	24	18	22	61.5	75.2	9	11	18	22

- (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 & breaker jumper bar.
- 6HK3 = 3-Phase with terminal block connectors only, 6HK4 = 3-Phase with service disconnect.
- For different power distributions, see conversion table on Page 5.

## ELECTRICAL DATA FOR SINGLE SOURCE POWER SUPPLY: 208/230-1-60

Air Handler Models	Heater Models <sup>1,2</sup>	Heater Amps @240V	Field Wiring			
			Min. Circuit Ampacity		MOP. <sup>3</sup>	
			208V	230V	208V	230V
18B	6HK(0,1)6500206	10	14.6	15.6	15	20
	6HK(0,1)6500506	20	25.4	27.5	30	30
	6HK(0,1)6500806	32	38.6	42.2	40	45
	6HK(0,1)6501006	40	47.0	51.5	50	60
24B	6HK(0,1)6500206	10	14.6	15.6	15	20
	6HK(0,1)6500506	20	25.4	27.5	30	30
	6HK(0,1)6500806	32	38.6	42.2	40	45
	6HK(0,1)6501006	40	47.0	51.5	50	60
	6HK(1,2)6501306	52	60.2	66.1	70	70
30B	6HK(0,1)6500206	10	14.6	15.6	15	20
	6HK(0,1)6500506	20	25.4	27.5	30	30
	6HK(0,1)6500806	32	38.6	42.2	40	45
	6HK(0,1)6501006	40	47.0	51.5	50	60
	6HK(1,2)6501306	52	60.2	66.1	70	70
	6HK(1,2)6501506	60	68.7	75.4	70	80
36B	6HK(0,1)6500206	10	17.1	17.6	20	20
	6HK(0,1)6500506	20	27.9	29.5	30	30
	6HK(0,1)6500806	32	41.1	44.2	45	45
	6HK(0,1)6501006	40	49.5	53.5	50	60
	6HK(1,2)6501306	52	62.7	68.1	70	70
	6HK(1,2)6501506	60	71.2	77.4	80	80
	6HK(1,2)6501806	72	84.4	92.0	90	100
	6HK(1,2)6502006	80	92.8	101.3	100	110
36C	6HK(0,1)6500206	10	17.1	17.6	20	20
	6HK(0,1)6500506	20	27.9	29.5	30	30
	6HK(0,1)6500806	32	41.1	44.2	45	45
	6HK(0,1)6501006	40	49.5	53.5	50	60
	6HK(1,2)6501306	52	62.7	68.1	70	70
	6HK(1,2)6501506	60	71.2	77.4	80	80
	6HK(1,2)6501806	72	84.4	92.0	90	100
	6HK(1,2)6502006	80	92.8	101.3	100	110
42C	6HK(0,1)6500206	10	17.1	17.6	20	20
	6HK(0,1)6500506	20	27.9	29.5	30	30
	6HK(0,1)6500806	32	41.1	44.2	45	45
	6HK(0,1)6501006	40	49.5	53.5	50	60
	6HK(1,2)6501306	52	62.7	68.1	70	70
	6HK(1,2)6501506	60	71.2	77.4	80	80
	6HK(1,2)6501806	72	84.4	92.0	90	100
	6HK(1,2)6502006	80	92.8	101.3	100	110
48C	6HK(0,1)6500206	10	19.9	20.7	25	25
	6HK(0,1)6500506	20	30.8	32.7	35	35
	6HK(0,1)6500806	32	44.0	47.3	45	50
	6HK(0,1)6501006	40	52.4	56.6	60	60
	6HK(1,2)6501306	52	65.6	71.3	70	80
	6HK(1,2)6501506	60	74.0	80.5	80	90
	6HK(1,2)6501806	72	87.3	95.2	90	100
	6HK(1,2)6502006	80	95.7	104.4	100	110

Continued on next page.

**ELECTRICAL DATA FOR SINGLE SOURCE POWER SUPPLY: 208/230-1-60 (Continued)**

Air Handler Models	Heater Models <sup>1,2</sup>	Heater Amps @240V	Field Wiring			
			Min. Circuit Ampacity		MOP. <sup>3</sup>	
			208V	230V	208V	230V
48D	6HK(0,1)6500206	10	19.9	20.7	25	25
	6HK(0,1)6500506	20	30.8	32.7	35	35
	6HK(0,1)6500806	32	44.0	47.3	45	50
	6HK(0,1)6501006	40	52.4	56.6	60	60
	6HK(1,2)6501306	52	65.6	71.3	70	80
	6HK(1,2)6501506	60	74.0	80.5	80	90
	6HK(1,2)6501806	72	87.3	95.2	90	100
	6HK(1,2)6502006	80	95.7	104.4	100	110
49C	6HK(0,1)6500206	10	19.9	20.7	25	25
	6HK(0,1)6500506	20	30.8	32.7	35	35
	6HK(0,1)6500806	32	44.0	47.3	45	50
	6HK(0,1)6501006	40	52.4	56.6	60	60
	6HK(1,2)6501306	52	65.6	71.3	70	80
	6HK(1,2)6501506	60	74.0	80.5	80	90
	6HK(1,2)6501806	72	87.3	95.2	90	100
	6HK(1,2)6502006	80	95.7	104.4	100	110
60C	6HK(0,1)6500206	10	19.9	20.7	25	25
	6HK(0,1)6500506	20	30.8	32.7	35	35
	6HK(0,1)6500806	32	44.0	47.3	45	50
	6HK(0,1)6501006	40	52.4	56.6	60	60
	6HK(1,2)6501306	52	65.6	71.3	70	80
	6HK(1,2)6501506	60	74.0	80.5	80	90
	6HK(1,2)6501806	72	87.3	95.2	90	100
	6HK(1,2)6502006	80	95.7	104.4	100	110
60D	6HK(0,1)6500206	10	19.9	20.7	25	25
	6HK(0,1)6500506	20	30.8	32.7	35	35
	6HK(0,1)6500806	32	44.0	47.3	45	50
	6HK(0,1)6501006	40	52.4	56.6	60	60
	6HK(1,2)6501306	52	65.6	71.3	70	80
	6HK(1,2)6501506	60	74.0	80.5	80	90
	6HK(1,2)6501806	72	87.3	95.2	90	100
	6HK(1,2)6502006	80	95.7	104.4	100	110
	6HK(1,2)6502506	100	117.3	128.3	125	150

1. (0,1) - maybe 0 (no service disconnect) or 1 (with service disconnect).

2. (1,2) maybe 1 (with service disconnect, no breaker jumper bar) or 2 (with service disconnect & breaker jumper bar).

3. 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.



## ELECTRICAL DATA FOR MULTI-SOURCE POWER SUPPLY: 208/230-1-60

Air Handlers Models	Heater Models	Heater Amps @240V	Min. Circuit Ampacity						MOP <sup>1</sup>					
			208V			230V			208V			230V		
			Circuit						Circuit					
			1st <sup>3</sup>	2nd	3rd	1st <sup>3</sup>	2nd	3rd	1st <sup>3</sup>	2nd	3rd	1st <sup>3</sup>	2nd	3rd
24B	6HK16501306	52	22.5	37.6	–	24.4	41.5	–	25	40	–	25	45	–
30B	6HK16501306	52	22.5	37.6	–	24.4	41.5	–	25	40	–	25	45	–
	6HK16501506	60	25.4	43.3	–	27.6	47.9	–	30	45	–	30	50	–
36B	6HK16501306	52	25.0	37.6	–	26.4	41.5	–	25	40	–	30	45	–
	6HK16501506	60	27.9	43.3	–	29.6	47.9	–	30	45	–	30	50	–
	6HK16501806	72	45.3	39.0	–	48.8	43.1	–	50	40	–	50	45	–
	6HK16502006	80	49.6	43.3	–	53.5	47.9	–	50	45	–	60	50	–
36C	6HK16501306	52	25.0	37.6	–	26.4	41.5	–	25	40	–	30	45	–
	6HK16501506	60	27.9	43.3	–	29.6	47.9	–	30	45	–	30	50	–
	6HK16501806	72	45.3	39.0	–	48.8	43.1	–	50	40	–	50	45	–
	6HK16502006	80	49.6	43.3	–	53.5	47.9	–	50	45	–	60	50	–
42C	6HK16501306	52	25.0	37.6	–	26.4	41.5	–	25	40	–	30	45	–
	6HK16501506	60	27.9	43.3	–	29.6	47.9	–	30	45	–	30	50	–
	6HK16501806	72	45.3	39.0	–	48.8	43.1	–	50	40	–	50	45	–
	6HK16502006	80	49.6	43.3	–	53.5	47.9	–	50	45	–	60	50	–
48C	6HK16501306	52	27.9	37.6	–	29.5	41.5	–	30	40	–	30	45	–
	6HK16501506	60	30.8	43.3	–	32.7	47.9	–	35	45	–	35	50	–
	6HK16501806	72	48.1	39.0	–	51.9	43.1	–	50	40	–	60	45	–
	6HK16502006	80	52.5	43.3	–	56.7	47.9	–	60	45	–	60	50	–
48D	6HK16501306	52	27.9	37.6	–	29.5	41.5	–	30	40	–	30	45	–
	6HK16501506	60	30.8	43.3	–	32.7	47.9	–	35	45	–	35	50	–
	6HK16501806	72	48.1	39.0	–	51.9	43.1	–	50	40	–	60	45	–
	6HK16502006	80	52.5	43.3	–	56.7	47.9	–	60	45	–	60	50	–
	6HK16502506	100	52.5	43.3	21.7	56.7	47.9	24.0	60	45	25	60	50	25
49C	6HK16501306	52	27.9	37.6	–	29.5	41.5	–	30	40	–	30	45	–
	6HK16501506	60	30.8	43.3	–	32.7	47.9	–	35	45	–	35	50	–
	6HK16501806	72	48.1	39.0	–	51.9	43.1	–	50	40	–	60	45	–
	6HK16502006	80	52.5	43.3	–	56.7	47.9	–	60	45	–	60	50	–
60C	6HK16501306	52	27.9	37.6	–	29.5	41.5	–	30	40	–	30	45	–
	6HK16501506	60	30.8	43.3	–	32.7	47.9	–	35	45	–	35	50	–
	6HK16501806	72	48.1	39.0	–	51.9	43.1	–	50	40	–	60	45	–
	6HK16502006	80	52.5	43.3	–	56.7	47.9	–	60	45	–	60	50	–
60D	6HK16501306	52	27.9	37.6	–	29.5	41.5	–	30	40	–	30	45	–
	6HK16501506	60	30.8	43.3	–	32.7	47.9	–	35	45	–	35	50	–
	6HK16501806	72	48.1	39.0	–	51.9	43.1	–	50	40	–	60	45	–
	6HK16502006	80	52.5	43.3	–	56.7	47.9	–	60	45	–	60	50	–
	6HK16502506	100	52.5	43.3	21.7	56.7	47.9	24.0	60	45	25	60	50	25

1. MOP = Maximum Overcurrent Protection device; must be HACR type circuit breaker or time delay fuse. The 1st 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.

**ELECTRICAL DATA FOR SINGLE SOURCE POWER SUPPLY: 208/230-3-60**

Air Handler Models	Heater Models <sup>1</sup>	Heater Amps @240V	Field Wiring			
			Min. Circuit Ampacity		MOP. <sup>2</sup>	
			208V	230V	208V	230V
18B	6HK36501025	23.1	28.8	31.3	30	35
24B	6HK36501025	23.1	28.8	31.3	30	35
30B	6HK36501025	23.1	28.8	31.3	30	35
	6HK36501525	34.6	41.2	45.1	45	50
36B	6HK36501025	23.1	31.3	33.3	35	35
	6HK36501525	34.6	43.7	47.1	45	50
	6HK36501825	41.6	51.3	55.5	50	60
	6HK46502025 <sup>3</sup>	46.2	56.3	61.0	60	70
36C	6HK36501025	23.1	31.3	33.3	35	35
	6HK36501525	34.6	43.7	47.1	45	50
	6HK36501825	41.6	51.3	55.5	55	60
	6HK46502025 <sup>3</sup>	46.2	56.3	61.0	60	70
42C	6HK36501025	23.1	31.3	33.3	35	35
	6HK36501525	34.6	43.7	47.1	45	50
	6HK36501825	41.6	51.3	55.5	55	60
	6HK46502025 <sup>3</sup>	46.2	56.3	61.0	60	70
48C	6HK36501025	23.1	34.2	36.4	35	40
	6HK36501525	34.6	46.6	50.2	50	55
	6HK36501825	41.6	54.2	58.6	55	60
	6HK46502025 <sup>3</sup>	46.2	59.2	64.1	60	70
48D	6HK36501025	23.1	34.2	36.4	35	40
	6HK36501525	34.6	46.6	50.2	50	55
	6HK36501825	41.6	54.2	58.6	55	60
	6HK46502025 <sup>3</sup>	46.2	59.2	64.1	60	70
	6HK46502525 <sup>3</sup>	57.7	71.6	77.9	80	80
49C	6HK36501025	23.1	34.2	36.4	35	40
	6HK36501525	34.6	46.6	50.2	50	55
	6HK36501825	41.6	54.2	58.6	55	60
	6HK46502025 <sup>3</sup>	46.2	59.2	64.1	60	70
60C	6HK36501025	23.1	34.2	36.4	35	40
	6HK36501525	34.6	46.6	50.2	50	55
	6HK36501825	41.6	54.2	58.6	55	60
	6HK46502025 <sup>3</sup>	46.2	59.2	64.1	60	70
60D	6HK36501025	23.1	34.2	36.4	35	40
	6HK36501525	34.6	46.6	50.2	50	55
	6HK36501825	41.6	54.2	58.6	55	60
	6HK46502025 <sup>3</sup>	46.2	59.2	64.1	60	70
	6HK46502525 <sup>3</sup>	57.7	71.6	77.9	80	80

1. 6HK3 = 3-Phase with terminal block connections only, 6HK4 = 3-Phase with service disconnect.

2. MOP = Maximum Overcurrent Protection device; must be HACR type circuit breaker or time delay fuse. The 1st 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.

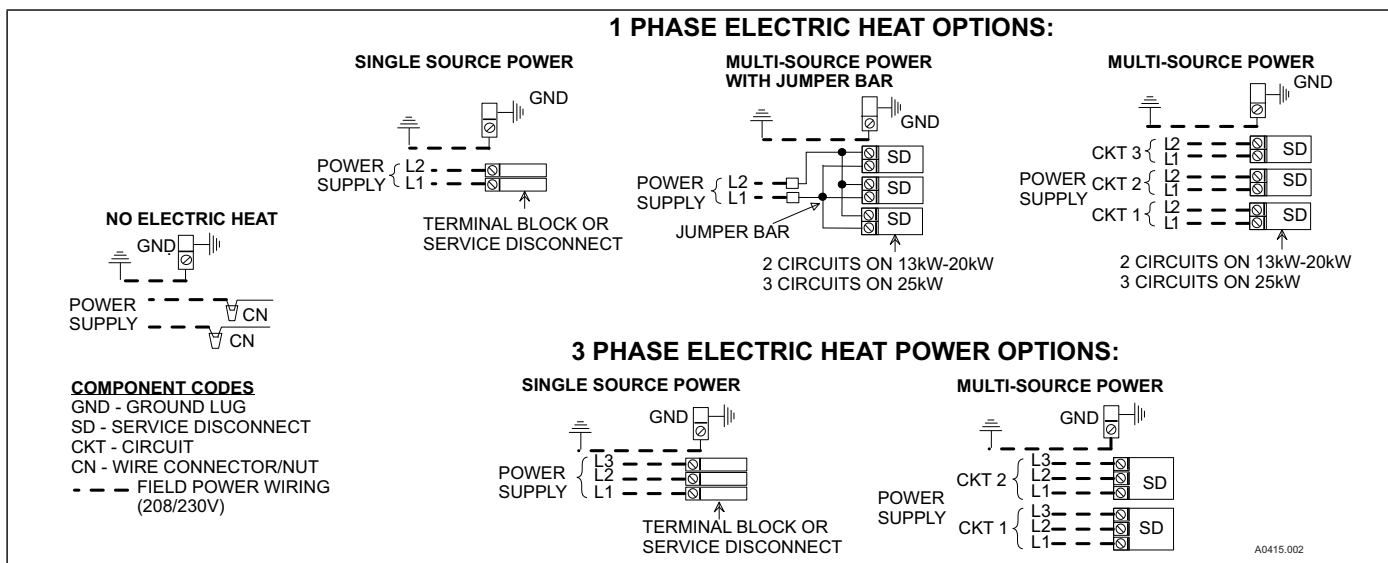
3. The 20kW and 25kW heater models (6HK46502025 and 6HK46502525) come with circuit breakers standard. Single source power MCA and MOP requirements are given here only for reference if used with field installed single point power modification.

**ELECTRICAL DATA FOR MULTI-SOURCE POWER SUPPLY: 208/230-3-60**

Air Handlers Models	Heater Models <sup>1</sup>	Heater Amps @240V	Min. Circuit Ampacity				MOP <sup>2</sup>			
			208V		230V		208V		230V	
			Circuit				Circuit			
			1st <sup>2</sup>	2nd	1st <sup>2</sup>	2nd	1st <sup>2</sup>	2nd	1st <sup>2</sup>	2nd
36B	6HK46502025	46.2	31.3	25.0	33.3	27.6	35	25	35	30
36C	6HK46502025	46.2	31.3	25.0	33.3	27.6	35	25	35	30
42C	6HK46502025	46.2	31.3	25.0	33.3	27.6	35	25	35	30
48C	6HK46502025	46.2	34.1	25.0	36.4	27.6	35	25	40	30
48D	6HK46502025	46.2	34.1	25.0	36.4	27.6	35	25	40	30
	6HK46502525	57.7	40.4	31.3	43.3	34.6	45	35	45	35
49C	6HK46502025	46.2	34.1	25.0	36.4	27.6	35	25	40	30
60C	6HK46502025	46.2	34.1	25.0	36.4	27.6	35	25	40	30
60D	6HK46502025	46.2	34.1	25.0	36.4	27.6	35	25	40	30
	6HK46502525	57.7	40.4	31.3	43.3	34.6	45	35	45	35

- The 20kW and 25kW heater models (6HK46502025 and 6HK46502525) come with service disconnects standard.
- MOP = Maximum Overcurrent Protection device; must be HACR type circuit breaker or time delay fuse. The 1st 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.

**POWER WIRING - LINE CONNECTIONS**



**ACCESSORIES**

Refer to Price Manual for specific model numbers where not shown.

**TXV Kits** - Air handlers are shipped with "Flex-coils" without a factory installed metering device. For added flexibility, an R-22 or R-410A TXV or piston can be field installed to meet your refrigerant choice. All TXV kits are chatleff style and require no brazing to install. Some models are available with a factory installed TXV.

**Electric Heaters** - 6HK models shown under electrical data include sequential operation and temperature dual limit switches for safe, efficient operation. Service disconnects are provided where shown.

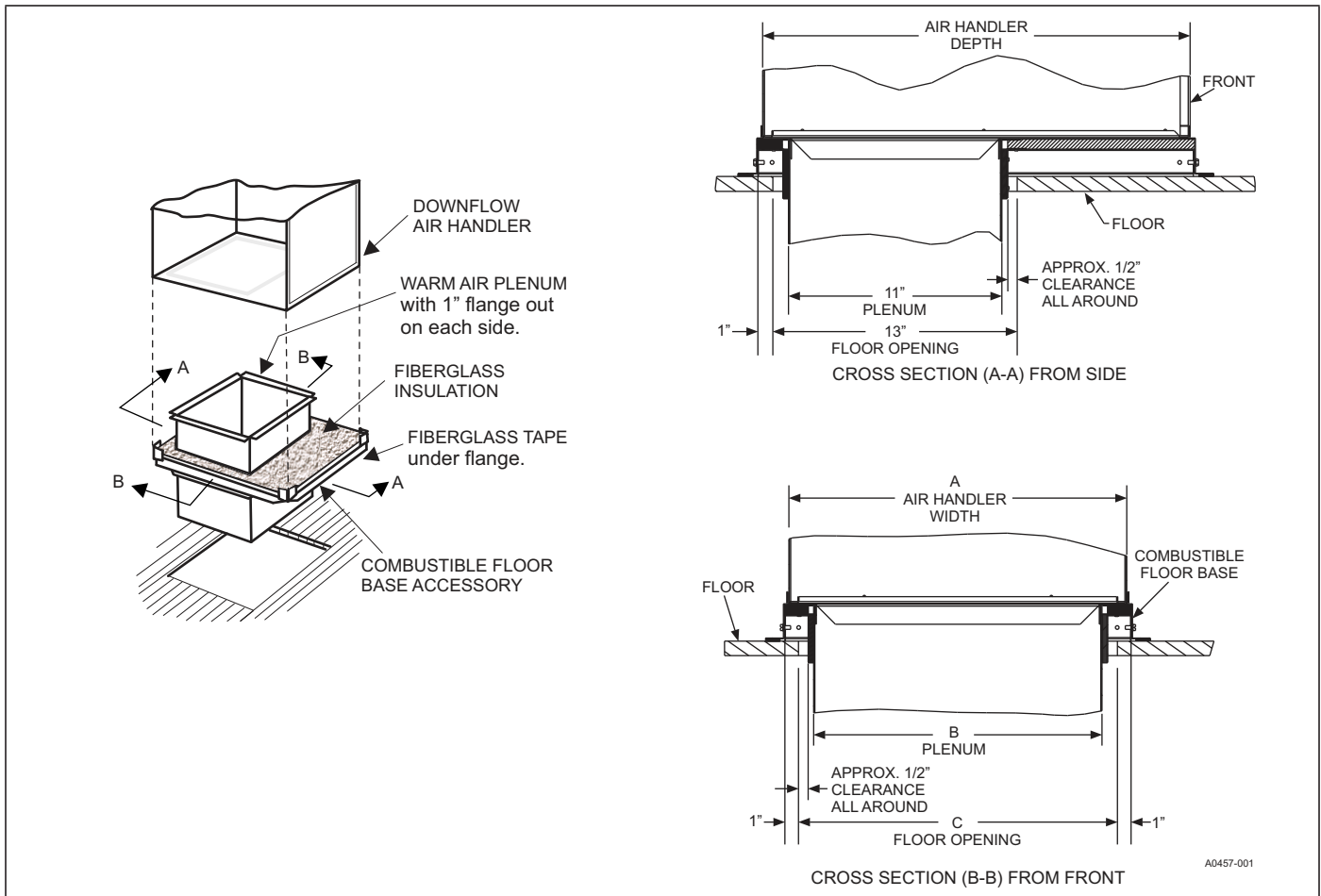
SINGLE SOURCE POWER ACCESSORIES (SINGLE PHASE)	
S1-02435670000	For heat kits with 2 service disconnects.
S1-02435671000	For heat kits with 3 service disconnects.
SINGLE SOURCE POWER ACCESSORY (THREE PHASE)	
S1-32436041000	Contains a terminal block and wiring to connect service disconnects together.

**Combustible Floor Base Accessory** - If an electric heat accessory which is rated for greater than zero clearance to combustible surfaces is installed in these air handlers in the downflow operating positions on a combustible floor, one of the following combustible floor base accessory models is required: S1-1FB1917, S1-1FB1921, S1-1FB1924.

**Breaker Moisture Seal Accessory** - A clear circuit breaker moisture barrier seals the breakers from humidity and dust. The flexibility of the clear cover allows circuit breakers to be turned ON or OFF without removing the cover. The cover firmly attaches to the access panel around the circuit breakers with the use of double backed adhesive tape. To ensure that moisture or dust does not contaminate circuit breakers, an S1-02435672000, Circuit Breaker, Cover Seal may be ordered.

**Thermostat** - Compatible thermostat controls are available through accessory sourcing. For optimum performance, these outdoor units are fully compatible with our York touch screen thermostat with proprietary (patent-pending) hexagon interface. For more information, see the thermostat section of the Product Equipment Catalog.

**COMBUSTIBLE FLOOR BASE ACCESSORY**



Floor Base Models	Used with	Dimensions		
		A	B	C
1FB1917	AVC18B, AVC24B, AVC30B, AVC36B	17.5	14.0	16.0
1FB1921	AVC36C, AVC42C, AVC48C, AVC49C, AVC60C	21.0	17.5	19.5
1FB1924	AVC48D, AVC60D	24.5	21.0	23.0

**LIMITATIONS**

These units must be wired and installed in accordance with all national and local safety codes.

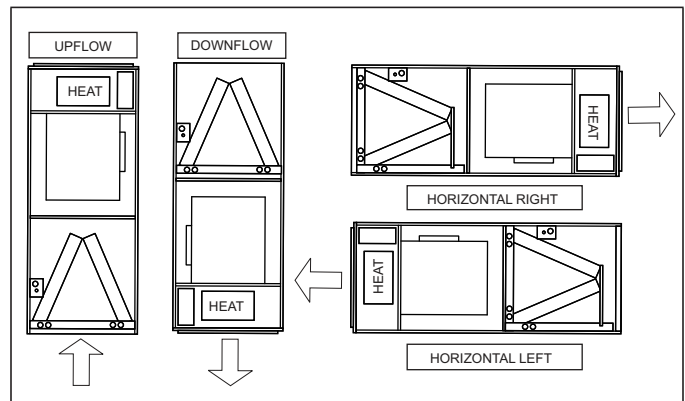
Voltage limits are as follows:

Air Handler Voltage	Voltage code	Normal Operating Voltage Range <sup>1</sup>
208/230-1-60	06	187-253

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

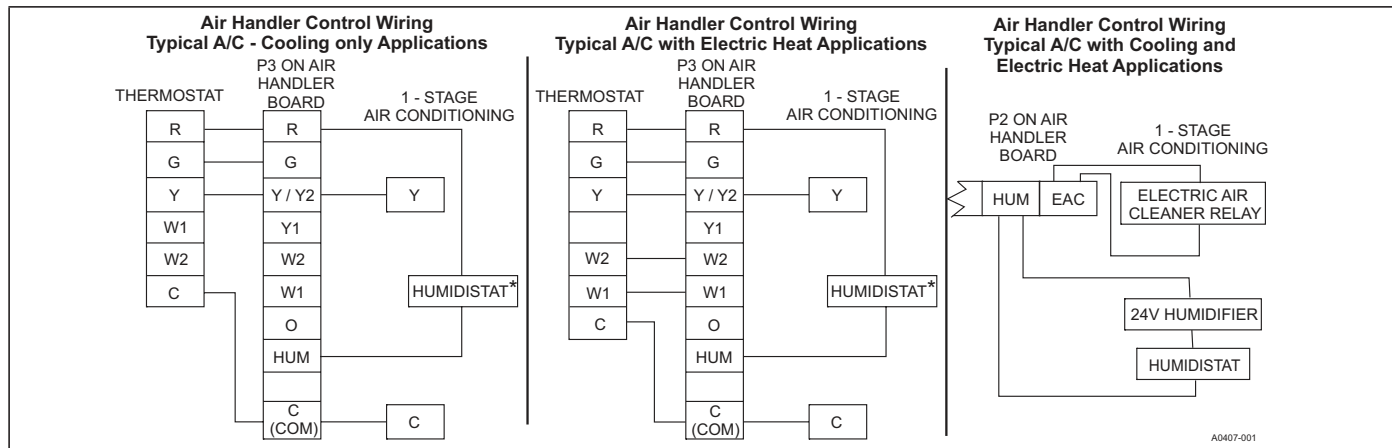
Airflow must be within the minimum and maximum limits approved for electric heat, evaporator coils and outdoor units.

**TYPICAL APPLICATIONS**



### TYPICAL THERMOSTAT CONNECTION

#### Cooling Models with and without Electric Heat Wiring

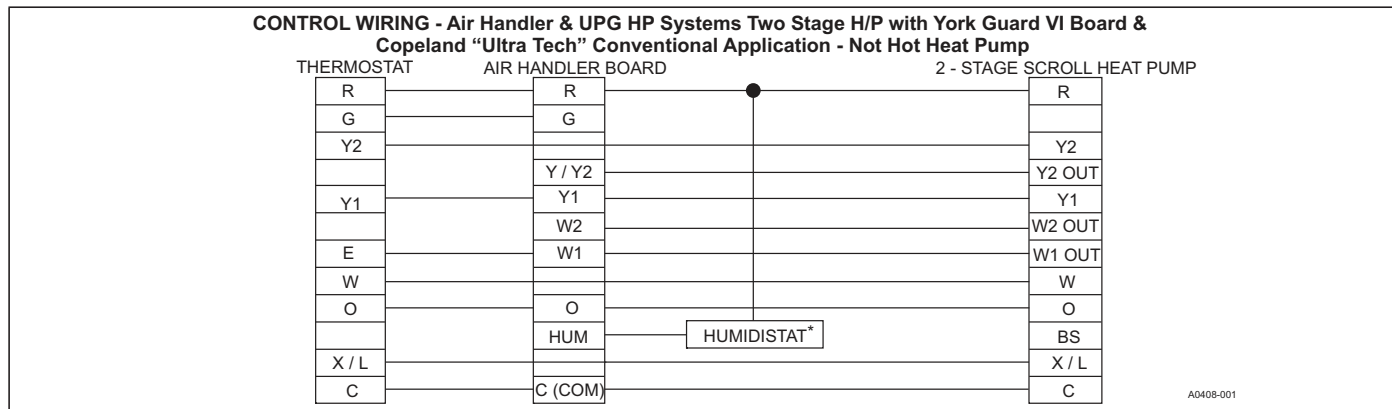


\* Optional dehumidification humidistat switch contacts open on humidity rise.

**NOTES:**

1. "Y/Y2" Thermostat wire must be connected for full CFM and applications requiring 60 second blower off delay for SEER enhancement.
2. Move HUM STAT jumper on air handler control board to YES position if humidistat is used.
3. For heat pump applications - set AC/HP jumper on air handler control board to the HP position.

#### Two-Stage Heat Pump Wiring

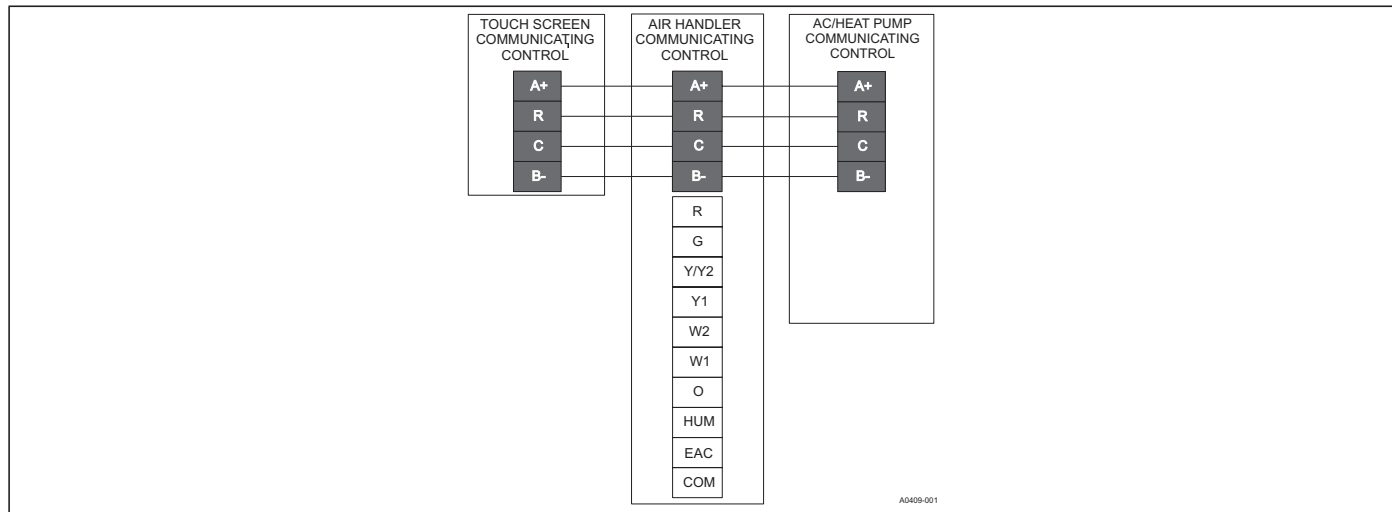


\* Optional dehumidification humidistat switch contacts open on humidity rise.

**NOTES:**

1. "Y/Y2" Thermostat wire must be connected for full CFM and applications requiring 60 second blower off delay for SEER enhancement.
2. Remove humidistat jumper on air handler control board.
3. For heat pump applications - set AC/HP jumper on air handler control board to the HP position.

#### Air Handler with Communicating AC or HP



**AIR FLOW DATA (CFM)<sup>1</sup>**

High/Low Speed Cooling and Heat Pump CFM													
Cool Tap	ADJ Tap <sup>2</sup>	AVC18B		AVC24B		AVC30B		AVC36B		AVC36C		AVC42C	
		High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
A	B	810	527	1022	562	1060	731	1350	878	1350	878	1596	1037
B	B	675	439	795	437	1013	658	1238	804	1238	804	1400	910
A	A	720	468	900	495	1000	650	1200	780	1200	780	1425	926
B	A	600	390	700	385	900	585	1100	715	1100	715	1250	813
A	C	630	410	783	431	875	569	1050	683	1050	683	1268	824
C	B	534	347	766	421	844	548	1125	731	1125	731	1344	874
B	C	525	341	609	335	788	512	963	626	963	626	1113	723
D	B	450	293	568	312	703	457	900	585	900	585	1120	728
C	A	475	309	675	371	750	488	1000	650	1000	650	1200	780
D	A	400	260	500	275	625	406	800	520	800	520	1000	650
C	C	416	270	587	323	656	427	875	569	875	569	1068	694
D	C	350	228	435	239	547	355	700	455	700	455	890	579

Cool Tap	ADJ Tap <sup>2</sup>	AVC48C		AVC48D		AVC49C		AVC60C		AVC60D			
		High	Low	High	Low	High	Low	High	Low	High	Low		
A	B	1760	1144	1760	1144	1773	1127	1860	1308	1935	1316		
B	B	1540	1001	1540	1001	1564	964	1840	1196	1772	1152		
A	A	1600	1040	1600	1040	1617	1004	1750	1138	1800	1170		
B	A	1400	910	1400	910	1412	866	1600	1040	1575	1024		
A	C	1424	926	1424	926	1432	885	1531	995	1665	1082		
C	B	1320	858	1320	858	1332	809	1581	1028	1491	969		
B	C	1246	810	1246	810	1250	755	1400	910	1457	947		
D	B	1100	715	1100	715	1085	654	1323	860	1350	878		
C	A	1200	780	1200	780	1189	720	1375	894	1325	861		
D	A	1000	650	1000	650	964	580	1150	748	1200	780		
C	C	1068	694	1068	694	1044	638	1203	782	1226	797		
D	C	890	579	890	579	847	516	1006	654	1110	722		

High/Low Speed Heat CFM														
Heat Tap	AVC18B		AVC24B		AVC30B		AVC36B		AVC36C		AVC42C			
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low		
A	850	850	1025	980	1025	850	1225	1020	1425	1150	1430	1200		
B	750	750	960	960	960	775	1150	950	1150	1000	1375	1150		
C	675	675	725	725	750	750	950	750	925	925	1150	1050		
D	425	425	580	580	580	580	725	725	675	675	900	900		

Heat Tap	AVC48C		AVC48D		AVC49C		AVC60C		AVC60D					
	High	Low	High	Low	High	Low	High	Low	High	Low				
A	1650	1200	1650	1150	1668	964	1850	1250	1825	1150				
B	1550	1150	1600	1050	1564	791	1775	1200	1775	1050				
C	1375	1050	1325	1000	1392	703	1570	1150	1570	1000				
D	1150	1000	1125	780	1127	540	1370	1050	1375	950				

1. Air handler units have been tested to UL 1995 / CSA 22.2 No. 236 standards up to 0.50" wc. external static pressure. Dry coil conditions only, tested without filters.  
 For optimal performance, external static pressures of 0.2" to 0.5" are recommended. Heating applications tested at 0.50" w.c. esp. Above 0.5" CFM is reduced by 2% per 0.1" increase in static.  
 The ADJ tap does not affect the HEAT tap setting.  
 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 and ADJUST tap.  
 When operating in both heat pump and electric heat modes, the airflow (CFM) will be per HEAT tap CFM values only.  
 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 (i.e.: 12 flashes is 1200 CFM) - blinks are approximate +/- 10% of actual CFM.