



HEATING & AIR CONDITIONING

TECHNICAL GUIDE

SINGLE PIECE VARIABLE SPEED ECM COMMUNICATING AIR HANDLERS

FOR USE WITH SPLIT-SYSTEM COOLING & HEAT PUMPS

MODELS: AVC SERIES



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

Visit us on the web at:

www.upgnet.com and www.colemanac.com

Additional rating information can be found at:

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. 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 must be field installed to meet the requirement of the desired refrigerant.

FEATURES

RC² - Rigid Case Construction interior endoskeleton for structural support, flush 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 bolt-on 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 - Positive slope for drainage to reduce cause for 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.

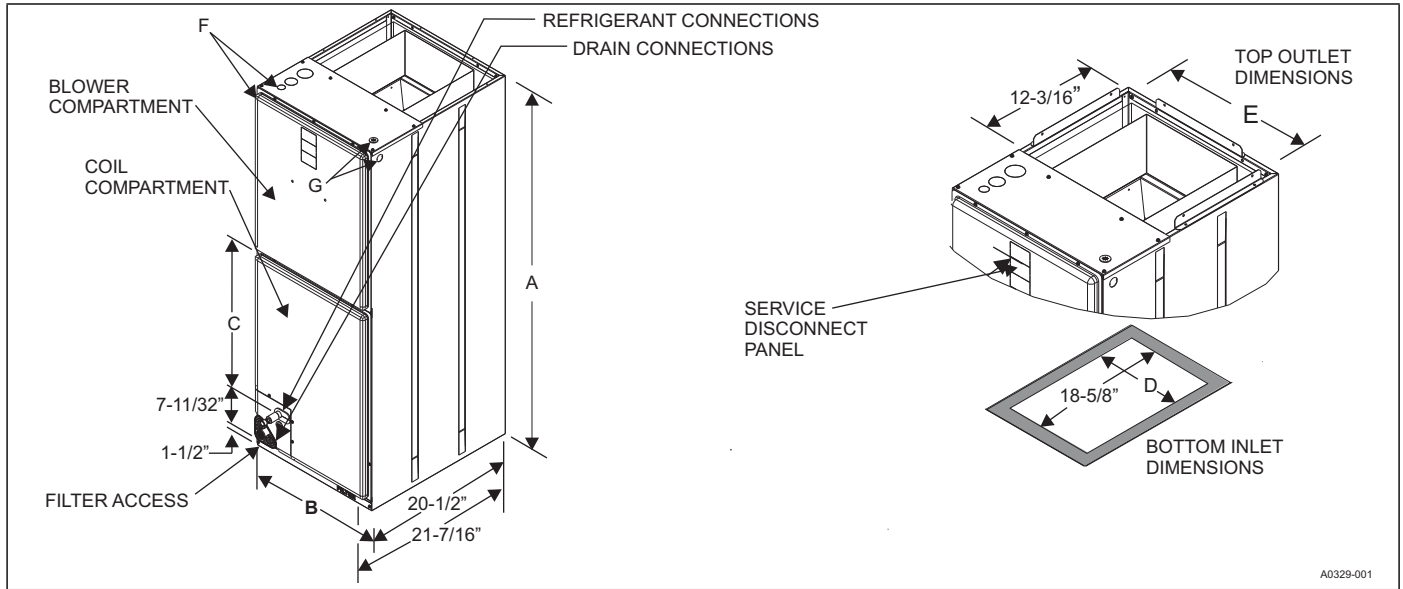
LIST OF SECTIONS

DESCRIPTION 1
 FEATURES 1
 NOMENCLATURE 2
 DIMENSIONS & DUCT CONNECTION DIMENSIONS 3
 DIMENSIONS 3
 COIL TECHNICAL DATA 3
 COOLING CAPACITY 4
 APPLICATION FACTORS - RATED CFM VS. ACTUAL CFM 4
 PHYSICAL & ELECTRICAL DATA - COOLING ONLY 5
 ELECTRICAL DATA - COOLING ONLY 5
 ELECTRICAL HEAT - MINIMUM FAN SPEED 5
 ELECTRIC HEAT PERFORMANCE DATA: 208/230-1-60 6
 ELECTRICAL DATA FOR SINGLE SOURCE
 POWER SUPPLY: 208/230-1-60 6
 ELECTRICAL DATA FOR MULTI-SOURCE
 POWER SUPPLY: 208/230-1-60 8
 POWER WIRING - LINE CONNECTIONS 9
 ACCESSORIES 9
 COMBUSTIBLE FLOOR BASE ACCESSORY 10
 LIMITATIONS 10
 TYPICAL APPLICATIONS 10
 TYPICAL THERMOSTAT CONNECTION 11
 Cooling Models with and without Electric Heat Wiring 11
 Two-Stage Heat Pump Wiring 11
 Air Handler with Communicating AC or HP 11
 AIR FLOW DATA (CFM) 12
 WIRING DIAGRAM 13

NOMENCLATURE

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

DIMENSIONS & DUCT CONNECTION DIMENSIONS



DIMENSIONS

Models	Dimensions ¹					Wiring Knockouts ²		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			7/8"	
AVC48DX21	55-1/2	24-1/2	26-5/8	21-1/4	23-1/2				
AVC60CX21	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				

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
18B	Cooling / Heat Pump	Sweat	4.3	2	14	(3) 12 x 17.1	1 x 0.866	3/8	Sine Wave
24B			5.0	2		(3) 14 x 17.1			
30B			6.4	2		(3) 18 x 17.1			
36B			7.1	2		(3) 20 x 17.1			
36C			7.1	2		(3) 20 x 17.1			
42C			8.6	2		(3) 24 x 17.1			
48C			8.6	2		(3) 24 x 17.1			
48D			8.6	2		(3) 24 x 17.1			
60C			10.0	2		(3) 28 x 17.1			
60D			10.0	3		(3) 28 x 17.1			

COOLING CAPACITY¹

Models	Rated CFM ²	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
18B	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
24B	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
30B	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
36B	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
36C	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
42C	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
48C	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
48D	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
60C	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
60D	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.

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

PHYSICAL & ELECTRICAL DATA - COOLING ONLY

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

Models		42C	48C	48D	60C	60D
Blower - Diameter x Width		11 x 10	11 x 10	11 x 10	11 x 10	11 x 10
Motor	HP	1/2 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		4.5	7.0	7.0	7.0	7.0
Filter ¹	Type	DISPOSABLE OR PERMANENT				
	Size	20 x 20 x 1	20 x 20 x 1	22 x 20 x 1	20 x 20 x 1	22 x 20 x 1
	Permanent Type Kit	1PF0602	1PF0602	1PF0603	1PF0602	1PF0603
Shipping Operating Weight (lbs.)		144/136	158/150	163/153	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

ELECTRICAL DATA - COOLING ONLY

Models	Motor FLA ¹		Minimum Circuit Ampacity		MOP ²
	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 / 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 ^{1,2}	Nom. kW @240V	Air Handler Models									
		18B	24B	30B	36B	36C	42C	48C	48D	60C	60D
6HK(0,1)6500206	2.4	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	4.8	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)
6HK(0,1)6500806	7.7	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)
6HK(0,1)6501006	9.6	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)
6HK(1,2)6501306	12.5	-	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)
6HK(1,2)6501506	14.4	-	-	Med Hi (B)	Med Hi (B)	Med Hi (B)	Hi (A)	Med (C)	Med (C)	Med Lo (D)	Med Lo (D)
6HK(1,2)6501806	17.3	-	-	-	Med Hi (B)	Med Hi (B)	Hi (A)	Med (C)	Med Hi (B)	Med (C)	Med (C)
6HK(1,2)6502006	19.2	-	-	-	Med Hi (B)	Hi (A)	Hi (A)	Med Hi (B)	Hi (A)	Med Hi (B)	Med Hi (B)
6HK(1,2)6502506	24	-	-	-	-	-	-	-	Hi (A)	-	Med Hi (B)

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 & breaker jumper bar.

ELECTRIC HEAT PERFORMANCE DATA: 208/230-1-60

Heater Models ^{1,2}		Nominal kW @240V	Total Heat ³				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	

1. (0,1) - 0 = no circuit breaker OR 1 = with circuit breaker.

2. (1,2) - 1 = with circuit breaker, no breaker jumper bar OR 2 = with circuit breaker & breaker jumper bar.

3. For different power distributions, see conversion table on Page 4.

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

Air Handler Models	Heater Models ^{1,2}	Heater Amps @240V	Field Wiring			
			Min. Circuit Ampacity		MOP. ³	
			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

For notes, see Page 7.

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

Air Handler Models	Heater Models ^{1,2}	Heater Amps @240V	Field Wiring			
			Min. Circuit Ampacity		MOP. ³	
			208V	230V	208V	230V
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
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)6502506	100	117.3	128.3	125	150
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)6502506	100	117.3	128.3	125	150

1. (0,1) - maybe 0 (no circuit breaker) or 1 (with circuit breaker).

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

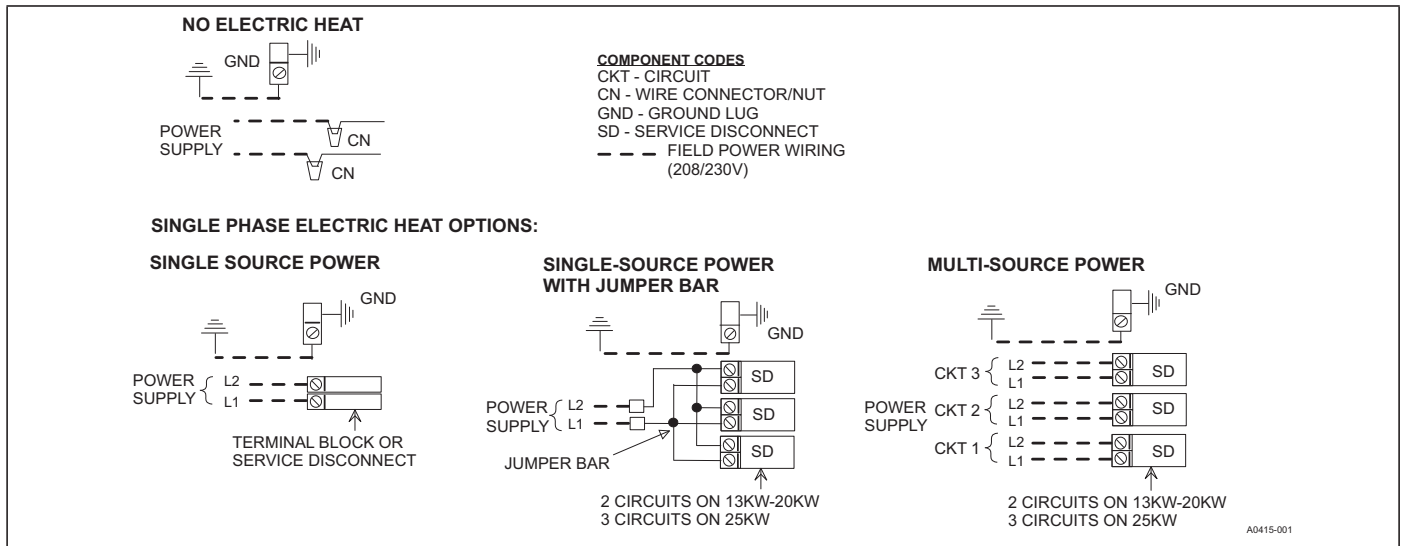
Air Handlers Models	Heater Models ^{1,2}	Heater Amps @240V	Min. Circuit Ampacity						MOP ³					
			208V			230V			208V			230V		
			Circuit						Circuit					
			1st ³	2nd	3rd	1st ³	2nd	3rd	1st ³	2nd	3rd	1st ³	2nd	3rd
24B	6HK16501306	52	22.5	37.6	–	24.4	41.5	–	25	40	–	25	45	–
30B	6HK16501306	52	22.5	37.6	–	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
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. (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 & breaker jumper bar.

3. 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.

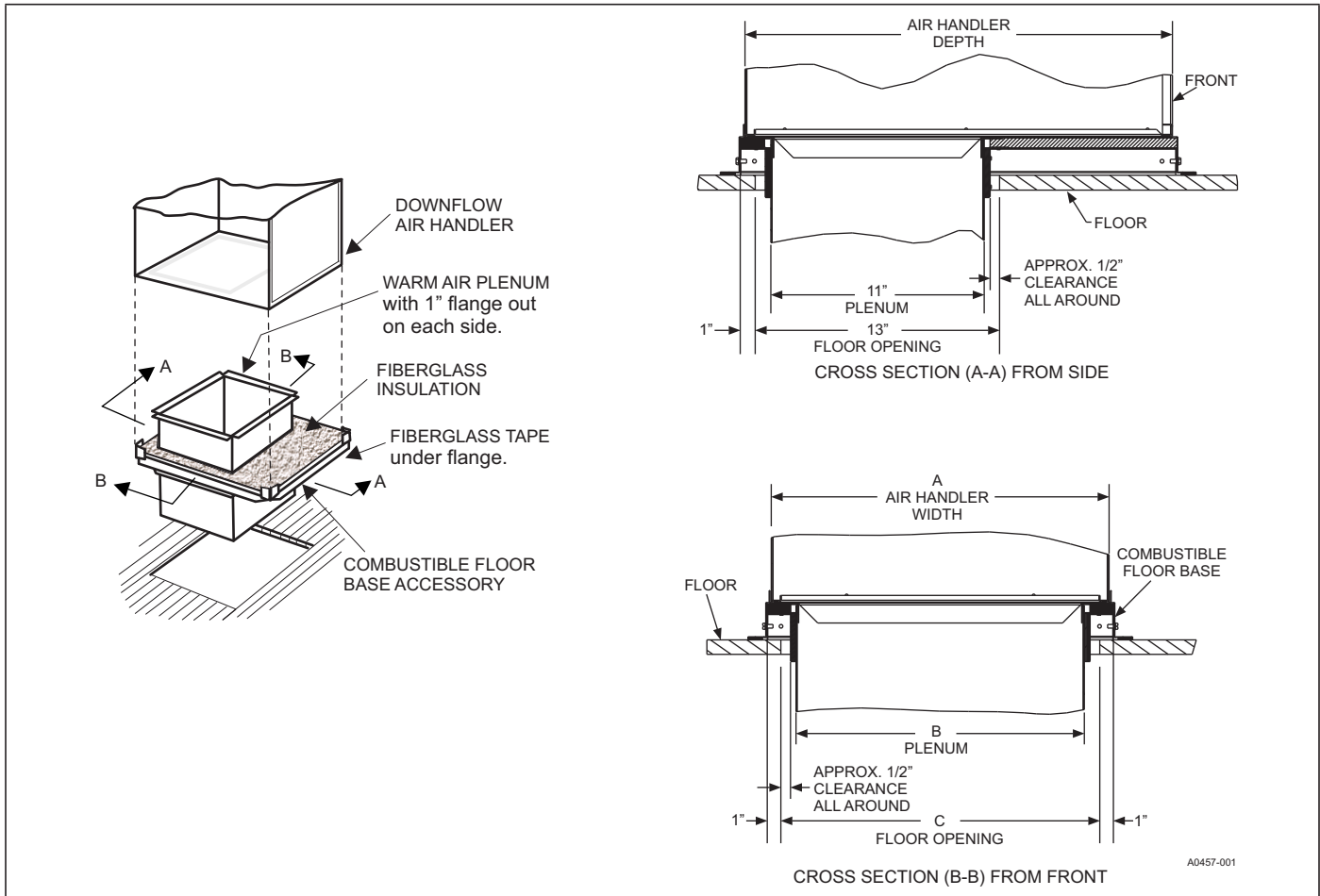
TXV Kits - Air handlers are shipped with “Flex-coils” without a factory installed metering device. For added flexibility, an R-22 or R-410A TXV or piston can be field installed to meet your refrigerant choice. All TXV kits are bolt-on and require no brazing to install. Some models are available with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

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.

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, 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.

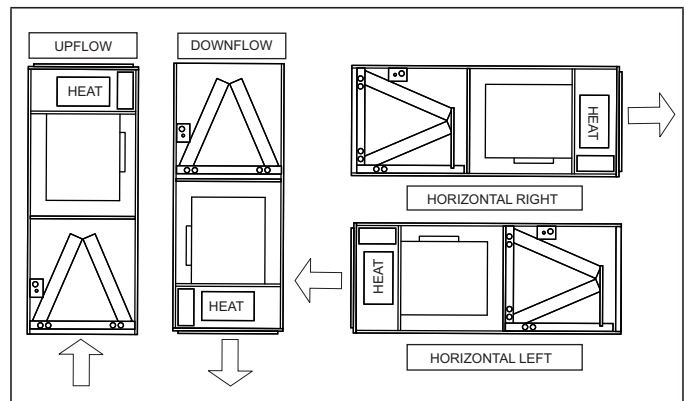
Voltage limits are as follows:

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

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

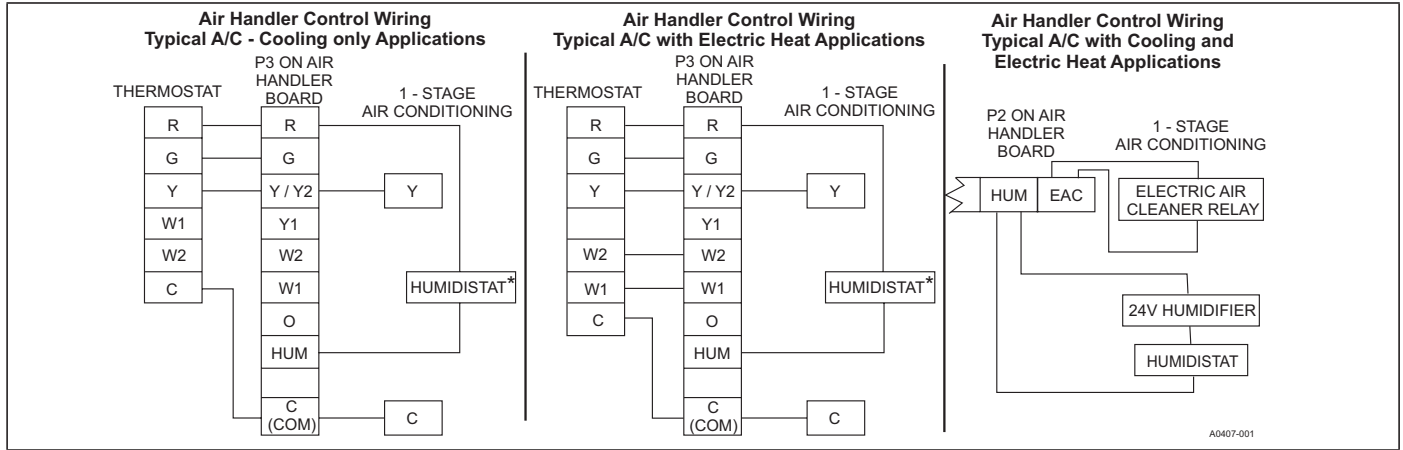
Airflow must be within the minimum and maximum limits approved for electric heat, evaporator coils and outdoor units.

TYPICAL APPLICATIONS



TYPICAL THERMOSTAT CONNECTION

Cooling Models with and without Electric Heat Wiring

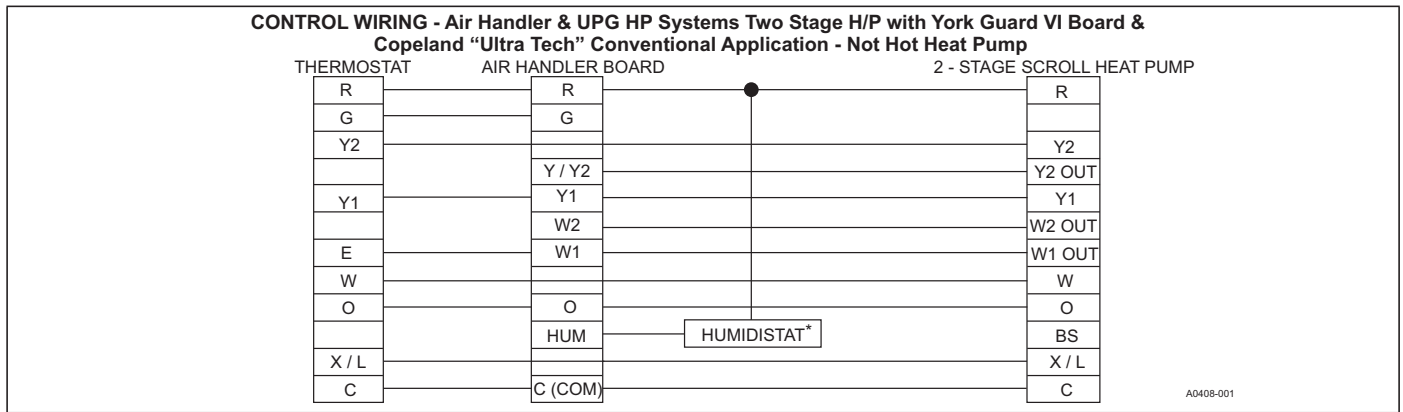


* Optional dehumidification humidistat switch contacts open on humidity rise.

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

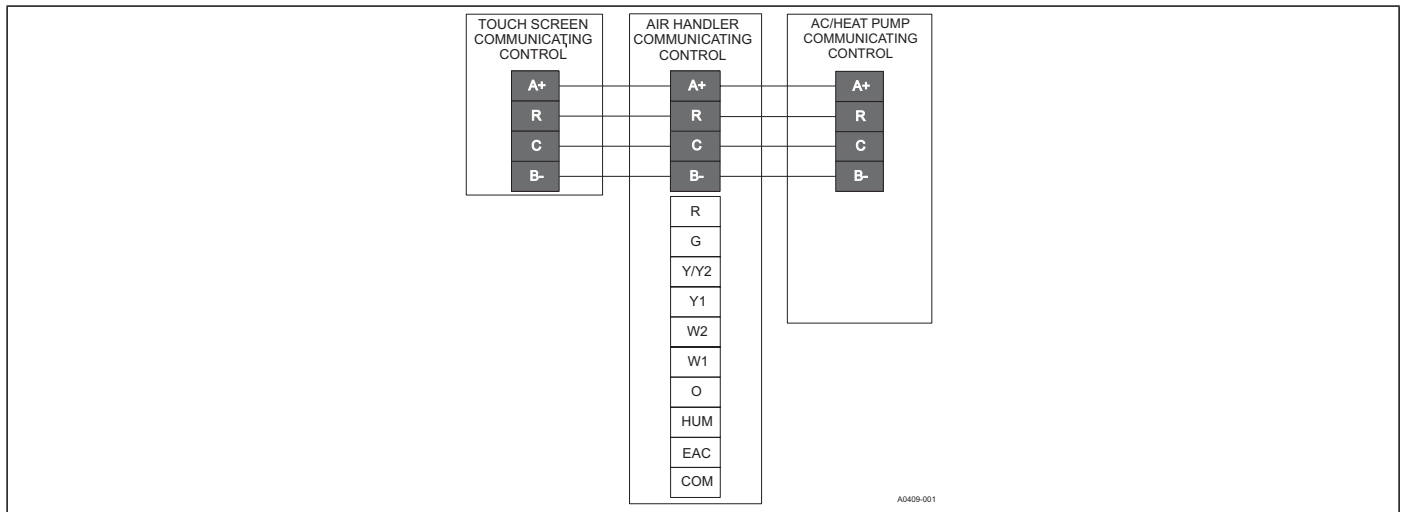


* Optional dehumidification humidistat switch contacts open on humidity rise.

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)¹

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

Cool Tap	ADJ Tap	AVC42C		AVC48C		AVC48D		AVC60C		AVC60D	
		High	Low	High	Low	High	Low	High	Low	High	Low
A	B	1596	1037	1760	1144	1760	1144	1860	1308	1935	1316
B	B	1400	910	1540	1001	1540	1001	1840	1196	1772	1152
A	A	1425	926	1600	1040	1600	1040	1750	1138	1800	1170
B	A	1250	813	1400	910	1400	910	1600	1040	1575	1024
A	C	1268	824	1424	926	1424	926	1531	995	1665	1082
C	B	1344	874	1320	858	1320	858	1581	1028	1491	969
B	C	1113	723	1246	810	1246	810	1400	910	1457	947
D	B	1120	728	1100	715	1100	715	1323	860	1350	878
C	A	1200	780	1200	780	1200	780	1375	894	1325	861
D	A	1000	650	1000	650	1000	650	1150	748	1200	780
C	C	1068	694	1068	694	1068	694	1203	782	1226	797
D	C	890	579	890	579	890	579	1006	654	1110	722

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

Heat Tap	AVC42C		AVC48C		AVC48D		AVC60C		AVC60D	
	High	Low	High	Low	High	Low	High	Low	High	Low
A	1430	1200	1650	1200	1650	1150	1850	1250	1825	1150
B	1375	1150	1550	1150	1600	1050	1775	1200	1775	1050
C	1150	1050	1375	1050	1325	1000	1570	1150	1570	1000
D	900	900	1150	1000	1125	780	1370	1050	1375	950

1. Air handler units have been tested to UL 1995 / CSA 22.2 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. Applications above 0.5" are not recommended. 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.

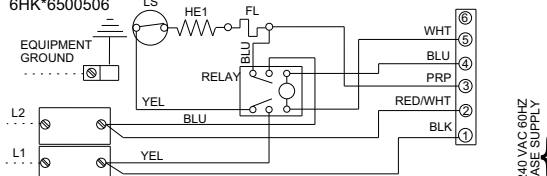
Airflow (CFM) indicator light (LED2) flashes once for every 100 CFM (i.e.: 12 flashes is 1200 CFM) - blinks are approximate +/- 10% of actual CFM.

WIRING DIAGRAM

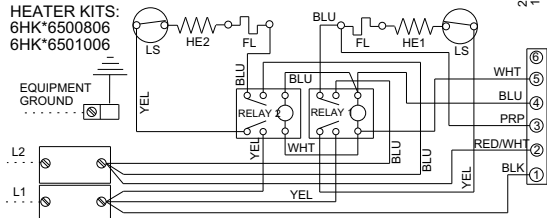
WHEN INSTALLING HEATER KIT, BE SURE THE BLOWER SPEED IS SET TO THE SPEED SPECIFIED FOR THE AIR HANDLER/HEATER KIT COMBINATION ON THIS UNIT'S INSTALLATION INSTRUCTIONS.

SEE INSTALLATION INSTRUCTIONS FOR PROPER LOW VOLTAGE FIELD WIRING CONNECTIONS.

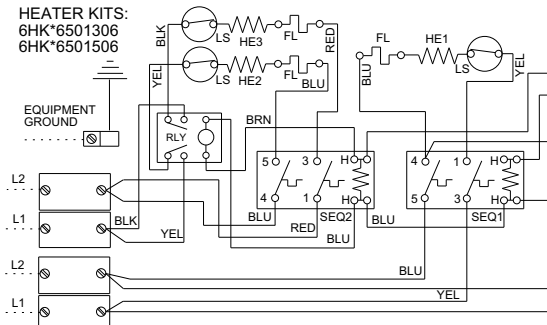
HEATER KITS:
6HK*6500206
6HK*6500506



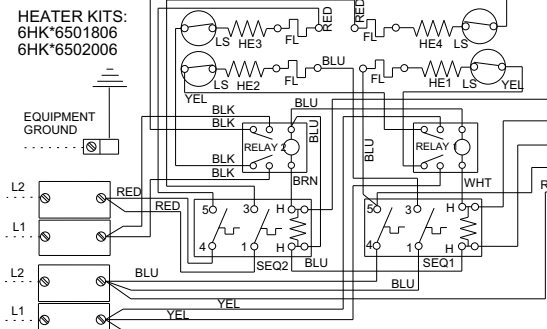
HEATER KITS:
6HK*6500806
6HK*6501006



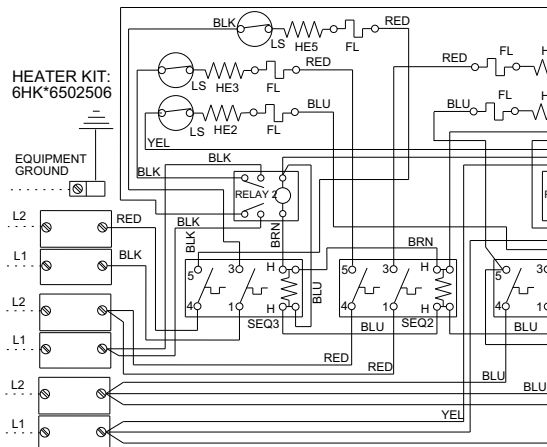
HEATER KITS:
6HK*6501306
6HK*6501506



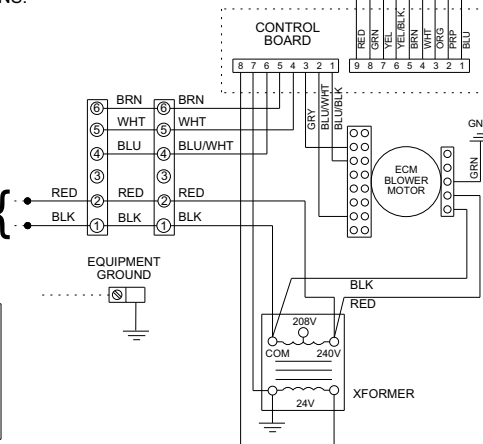
HEATER KITS:
6HK*6501806
6HK*6502006



HEATER KIT:
6HK*6502506

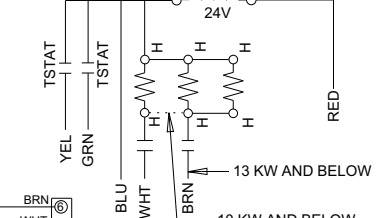
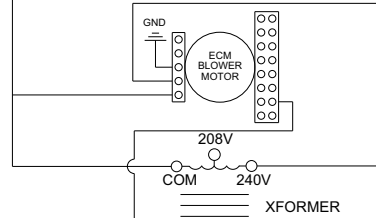
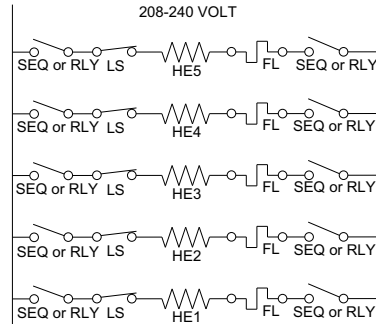


CONTROL BOARD



ECM AIR HANDLER WITH NO HEAT KIT WIRING DIAGRAM

208-240 VOLT



- LEGEND**
 LS - LIMIT SWITCH
 SEQ - SEQUENCER
 HE - HEATING ELEMENT
 FL - FUSIBLE LINK
 H - SEQUENCER HEATER
 RLY - RELAY
 TSTAT - WALL THERMOSTAT

USE COPPER CONDUCTORS ONLY.
 IF ALUMINUM CONDUCTORS ARE PRESENT,
 ALL APPLICABLE LOCAL AND NATIONAL
 CODES MUST BE FOLLOWED.

5009096-UWD-A-0415

NOTES