

## TECHNICAL GUIDE

# SINGLE PIECE VARIABLE SPEED AIR HANDLERS

FOR USE WITH SPLIT-SYSTEM COOLING & HEAT PUMPS

MODELS: AVY24 THRU 60 AND SVY48 THRU 60













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

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#### **DESCRIPTION**

The Affinity Air Handler line offers the ultimate in comfort, sound and application flexibility. The Affinity models utilize a whisper quiet variable speed motor that provides humidity control and the lowest operating cost in the industry. The AVY air handler is shipped ready to be installed in all positions, upflow, downflow, horizontal left or right, with minor adjustments. The SVY 48 & 60 models are upflow only models designed into a shorter cabinet, for those special applications where reduced height is required. No special kits are required to install this deluxe product in any position.

All JCI Unitary Products air handlers and coils use a TXV to provide our customers with the optimum performance and refrigerant control required for 13 + Seer systems. Air handlers can be ordered with either a R-22 or R-410A TXV factory installed. Air handlers are also available with "Flex-coils" without a factory installed metering device, where for added flexibility, a R-22 or R-410A TXV can be field installed to meet your refrigerant choice.

#### **FEATURE**

**Thermal Expansion Valve** - Provides the ultimate refrigerant control required for today's high efficient product. The UPG bolton TXV provides easy installation to convert the air handler to the required refrigerant, which is a true bolt-on design that does not require brazing to replace or install.

MicroBlue<sup>TM</sup> Coated Fins - All air handler coils are treated with the MicroBlue<sup>TM</sup> hydrophilic coating to enhance the removal of condensate during the refrigeration cycle and reduce the possibility of water blow-off. The MicroBlue<sup>TM</sup> coating also reduces the growth of germ causing microbes for a healthier home environment.

**Insulated Cabinet** - All air handler cabinets are thermally insulated with 1" foil faced insulation (R-4.2) to prevent sweating. For applications in extreme humidity conditions an optional, field installed, external insulating wrap kit is also available.

**Factory -** Sealed to achieve 2% or less leakage rate with or without field installed filter at 1.0" water gauge external static pressure.

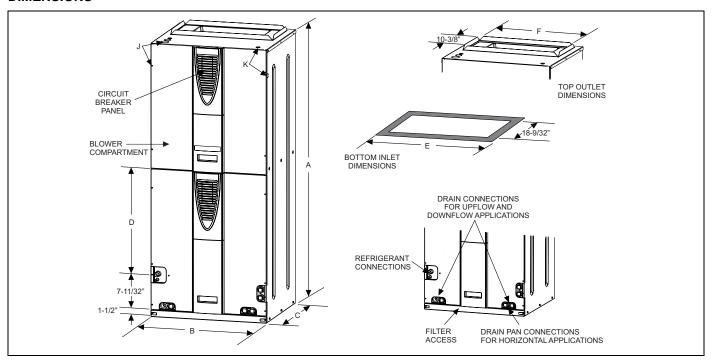
**Durable Finish Inside and Out** - Air handler casings are made of pre-painted galvanized steel which provides a better paint to steel bond that resists corrosion and rust creep. All internal coil sheet metal parts are made of G90 galvanized.

**New 4 HK Heat Kit -** Installation friendly, easy service, more robust, unique to new design.

**ECM Variable Speed Motor** - Designed for efficient, quiet operation with added indoor comfort control. With the use of a humidistat, the motor will monitor the humidity in the home and automatically keep the desired humidity level in both winter and summer seasons. The ECM motor utilizes only 24% of the energy used by standard blower motors to reduce your overall heating and cooling costs.

ClimaTrak Comfort Settings - Installers can set an operating cycle for the ECM motor that works best in a particular climate. Homeowners benefit from an operating cycle that maximizes their indoor comfort level regardless of whether they live in a dry, temperate, or humid climate.

#### **DIMENSIONS**



#### **DIMENSIONS**

			Dimension	s (Inches)	Wiring Knoo	Refrigerant Connections				
Models	Α	В	С	C D E F J	J	K	Line Size			
	Height	Width	Depth	5	_	•	Power	Control	Liquid	Vapor
AVY24B**H21	46	17.5		12-3/8	13-29/32	14-19/32		7/8" (1/2")	3/8"	3/4"
AVY36C**H21	52	21	21.5	17-1/8	17-13/32	18-3/32	7/8" (1/2") 1 3/8" (1") 1 23/32" (1 1/4")			7/8"
AVY48D**H21	57	24.5	(w/o cladding)	22-1/8	20-29/32	21-19/32				7/8"
SVY48D**N21	52	24.5	22.5	17-1/8	20-29/32	21-19/32				7/8"
AVY60D**H21	57	24.5	(with cladding)	22-1/8	20-29/32	21-19/32				7/8'
SVY60D**N21	52	24.5		17-1/8	20-29/32	21-19/32				7/8"

<sup>1.</sup> Actual size (Conduit size).

<sup>\*\*</sup> Thermal expansion device indicators - "2\_" indicates R-22 TXV is factory installed, "3X" indicates unit is a "Flex Coil" models with a field installed R-22 or R-410A TXV, and "4\_" indicates R-410A TXV is factory installed. Letter indicates TXV size as required, see outdoor unit technical information for proper matches and requirements.

#### **COIL TECHNICAL DATA**

Models	Application	Refrig. Conn. Types	Face Area (Sq. Ft.)	Rows Deep	Fin Per In.	Coil Size	Tube Geometry	Tube Dia.	Fin Type	TXV
AVY24B3XH21										None
AVY24B2AH21										2A
AVY24B4EH21	Cooling / Heat Pump	Sweat	3.89	2	14	(2) 16 x 17.5	1 x 0.866	3/8	Enhanced	4E
AVY24B4FH21	ricat i amp									4F
AVY24B4KH21										4K
AVY36C3XH21										None
AVY36C2AH21										2A
AVY36C4EH21										4E
AVY36C4FH21	Cooling /	Sweat	4.86	3	12	(2) 20 x 17.5	1 x 0.866	3/8	Enhanced	4F
AVY36C4GH21	Heat Pump		4.00	3			1 X U.000			4G
AVY36C4HH21										4H
AVY36C4KH21										4K
AVY36C4MH21										4M
AVY48D3XH21										None
AVY48D2CH21									Enhanced	2C
AVY48D4FH21			5.83	3	11	(2) 24 x 17.5	1 x 0.866	3/8		4F
AVY48D4HH21	Cooling /	Sweat								4H
AVY48D4JH21	Heat Pump	Sweat	5.63							4J
AVY48D4KH21										4K
SVY48D3XN21										None
SVY48D2CN21	1									2C
AVY60D3XH21										None
AVY60D2CH2	1									2C
AVY60D4HH21	Caalina /									4H
AVY60D4JH21	Cooling / Heat Pump	Sweat	5.83	3	11	(2) 24 x 17.5	1 x 0.866	3/8	Enhanced	4J
AVY60D4KH21	oat i amp									4K
SVY60D3XN21	1									None
SVY60D2CN21	1									2C

Note: H models are available with a factory installed horizontal drain pan.

## **COOLING CAPACITY**

Models	Rated CFM	Entering Air °F	MBH@ Evapora	tor Temperature and	d Corresponding P	ressure °F / PSIG
Woders	Rated Crivi	(Dry / Wet Bulb)	35 / 61.5	40 / 68.5	45 / 76.0	50 / 84.0
	•	FULL-CASED	"A" TYPE MULTI-P	OSITION		
		85/72	35.0	31.8	28.4	24.7
AVY24B**H21	800	80/67	32.2	29.1	25.7	22.3
AVIZ4D HZI	800	75/62	26.4	23.4	21.0	17.1
		70/57	21.4	18.6	20.2	12.1
		85/72	51.3	46.7	41.7	36.8
AVY36C**H21	1200	80/67	41.1	36.3	31.8	27.1
AV130C HZI		75/62	32.1	27.0	29.4	21.9
		70/57	27.6	25.4	23.5	18.3
		85/72	100.5	86.4	72.0	56.8
AVY48D**H21	1600	80/67	80.4	67.5	55.0	42.1
SVY48D**N21	1600	75/62	62.7	49.9	40.7	34.0
		70/57	53.9	47.2	36.81	28.71
		85/72	119.9	101.0	82.0	62.2
AVY60D**H21	1850	80/67	96.0	79.2	62.6	45.8
SVY60D**N21	1650	75/62	74.8	58.6	46.2	37.0
		70/57	64.3	55.4	43.2	33.7

#### Air Handler Air Flow Data

	HIGH / LO	W SPEED COOLING	AND HEAT PUMP	AIRFLOW	
	CF			JUMPER S	SETTINGS
	4B		iC .		
High	Low	High	Low	COOL Tap	ADJ Tap
1088	707	1387	905	A	В
830	542	1151	753	В	В
948	617	1201	783	A	Α
716	465	1009	657	В	Α
854	556	1086	703	A	С
612	462	953	622	С	В
637	460	901	588	В	С
531	460	754	493	D	В
542	462	831	540	С	Α
462	462	657	460	D	А
474	460	751	494	С	С
461	464	588	461	D	С
4	8D	60	D	JUMPER S	SETTINGS
High	Low	High	Low	COOL Tap	ADJ Tap
2138	1442	2364	1545	Α	В
1759	1162	1962	1271	В	В
2009	1311	2123	1374	A	Α
1612	1052	1763	1146	В	А
1773	1166	1905	1237	A	С
1530	989	1777	1158	С	В
1459	947	1580	1021	В	С
1359	886	1596	1030	D	В
1388	904	1583	1019	С	А
1221	806	1413	929	D	А
1244	808	1412	926	С	С
1118	715	1277	841	D	С
	HIG	H / LOW SPEED ELE	CTRIC HEAT AIRE	OW	
	CF		- CINIO II LAN ANNI		
2	4B	36	SC .	_ JUMPER S	ETTINGS
High	Low	High	Low	HEAT Tap	ADJ Tap
1088	828	1387	908	A	N/A
954	714	1228	804	В	N/A
829	614	1151	756	С	N/A
678	523	923	609	D	N/A
4	8D	60	DD	JUMPER S	SETTINGS
High	Low	High	Low	HEAT Tap	ADJ Tap
2111	1417	2363	1488	A	N/A
1858	1252	2174	1252	В	N/A
1480	985	1868	1061	С	N/A
1400	000				

- 1. Airflow at nominal voltage, bottom return at 0.5 external static pressure, tested without filter installed, dry coil conditions.
- 2. These units have variable speed motors that automatically adjust to provide constant CFM from 0.0" to 0.6" w.c. static pressure.
- 3. From 0.6" to 1.0" static pressure, CFM is reduced by 2% per 0.1" increase in static.
- 4. Operation on duct systems with greater than 1.0" w.c. external static pressure is not recommended.
- 5. Both the COOL and the ADJUST tap must be set to obtain the cooling airflow desired (CFM).
- 6. The ADJ tap does not affect the HEAT tap setting.
- 7. Fan only airflow (CFM) = 63% of jumper selected COOL tap and ADJUST tap.
- $8. \ Low \ speed \ cooling \ used \ only \ with \ two \ stage \ outdoor \ units. \ (Speed \ is \ preset \ to \ 65\% \ of \ high \ speed).$
- 9. Dehumidification speed is 85% of jumper selected COOL tap and ADJUST tap.
- 10. When operating in both heat pump and electric heat modes, the airflow (CFM) will be per HEAT Tap CFM values only.
- 11. 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.
- 12. Airflow (CFM) indicator light (LED2) flashes once for every 100 CFM (i.e.: 12 Flashes is 1200 CFM) blinks are approximate +/- 10%.

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

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

## PHYSICAL & ELECTRICAL DATA - COOLING ONLY (60 Hz)

Models		AVY24B**H21	AVY36C**H21	AVY48D**H21 SVY48D**N21	AVY60D**H21 SVY60D**N21				
Blower - Diamet	er x Width	10 x 7	10 x 7 10 x 7		10 x 10				
Motor	HP	1/3	1/2	3/4	1				
IVIOLOI	Nominal RPM	1200	1200	1200	1200				
Voltage	·	230							
Amps	Full Load (230)	2.8	4.3	5.5	7.0				
	Туре		DISPOSABLE C	R PERMANENT					
Filter <sup>1</sup>	Size	16 x 20 x1	20 x 20 x1	22 x 20 x1	22 x 20 x1				
	Permanent Type Kit	1PF0601BK	1PF0602BK	1PF0603BK	1PF0603BK				
Shipping / Operating Weight (lbs.)		140/134	170/164	AV - 196/185 SV - 194/181	AV - 199/188 SV - 195/184				

<sup>1.</sup> Field supplied.

## **ELECTRICAL DATA - COOLING ONLY (60 Hz)**

		tor Amps		cuit Ampacity	Max. O.C.P.	Minimum Wire
Models	60 H	lertz	60 I	Hertz	Amps/Type <sup>1</sup>	Size A.W.G.
	208V	230V	208V	208V 230V		012C A.W.O.
AVY24B**H21	3.2	2.8	4.0	3.5	15	14
AVY36C**H21	4.7	4.3	5.9	5.4	15	14
AVY48D**H21	6.1	5.0	7.6	6.9	15	14
SVY48D**N21	6.1	5.0	7.6	6.9	15	14
AVY60D**H21	7.8	7.0	9.7	8.8	15	14
SVY60D**N21	7.8	7.0	9.7	8.8	15	14

<sup>1.</sup> OCP = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

## **ELECTRICAL DATA - 208/230-1-60**

		Max.	Min.		Total	Heat <sup>1</sup>				kW St	aging		
Models	Heat Kits*	Static	Speed Tap	K	KW		MBH		Only	W2 (	Only	W1 8	% W2
		Otatio	opood iap	208v	230v	208v	230v	208v	230v	208v	230v	208v	230v
	4HK*6500206	0.5	Heat-D	1.9	2.5	6.4	8.5	1.9	2.5	1.9	2.5	1.9	2.5
AVY24B**H21	4HK*6500506	0.5	Heat-D	3.6	4.8	12.3	16.4	3.6	4.8	3.6	4.8	3.6	4.8
	4HK*6500806	0.5	Heat-C	5.6	7.5	19.2	25.6	2.8	3.75	5.6	7.5	5.6	7.5
	4HK*6501006	0.5	Heat-B	7.2	9.6	24.6	32.8	3.6	4.8	7.2	9.6	7.2	9.6
	4HK165N1506	0.5	Heat-A	10.8	14.4	36.9	49.1	3.6	4.8	7.2	9.6	10.8	14.4
	4HK*6500506	0.5	Heat-C	3.6	4.8	12.3	16.4	3.6	4.8	3.6	4.8	3.6	4.8
	4HK*6500806	0.5	Heat-C	5.6	7.5	19.2	25.6	2.8	3.75	5.6	7.5	5.6	7.5
AVY36C**H21	4HK*6501006	0.5	Heat-C	7.2	9.6	24.6	32.8	3.6	4.8	7.2	9.6	7.2	9.6
	4HK16501506	0.5	Heat-C	10.8	14.4	36.9	49.1	3.6	4.8	7.2	9.6	10.8	14.4
	4HK16501806	0.5	Heat-A	13.2	17.6	45.1	60.1	3.3	4.4	6.6	8.8	13.2	17.6
	4HK*6500506	0.5	Heat-D	3.6	4.8	12.3	16.4	3.6	4.8	3.6	4.8	3.6	4.8
	4HK*6500806	0.5	Heat-C	5.6	7.5	19.2	25.6	2.8	3.75	5.6	7.5	5.6	7.5
AVY48D**H21	4HK*6501006	0.5	Heat-C	7.2	9.6	24.6	32.8	3.6	4.8	7.2	9.6	7.2	9.6
SVY48D**N21	4HK16501506	0.5	Heat-C	10.8	14.4	36.9	49.1	3.6	4.8	7.2	9.6	10.8	14.4
OVITOD NZI	4HK16501806	0.5	Heat-B	13.2	17.6	45.1	60.1	3.3	4.4	6.6	8.8	13.2	17.6
	4HK16502006	0.5	Heat-B	14.4	19.2	49.2	65.5	3.6	4.8	7.2	9.6	14.4	19.2
	4HK16502506	0.5	Heat-B	18.0	24.0	61.5	81.9	3.6	4.8	10.8	14.4	18.0	24
	4HK*6500506	0.5	Heat-D	3.6	4.8	12.3	16.4	3.6	4.8	3.6	4.8	3.6	4.8
	4HK*6500806	0.5	Heat-D	5.6	7.5	19.2	25.6	2.8	3.75	5.6	7.5	5.6	7.5
AVY60D**H21	4HK*6501006	0.5	Heat-C	7.2	9.6	24.6	32.8	3.6	4.8	7.2	9.6	7.2	9.6
SVY60D**N21	4HK16501506	0.5	Heat-C	10.8	14.4	36.9	49.1	3.6	4.8	7.2	9.6	10.8	14.4
5 V 100D 1121	4HK16501806	0.5	Heat-C	13.2	17.6	45.1	60.1	3.3	4.4	6.6	8.8	13.2	17.6
	4HK16502006	0.5	Heat-C	14.4	19.2	49.2	65.5	3.6	4.8	7.2	9.6	14.4	19.2
	4HK16502506	0.5	Heat-C	18.0	24.0	61.5	81.9	3.6	4.8	10.8	14.4	18.0	24

<sup>1.</sup> See conversion Table 10.

## KW & MBH CONVERSIONS - FOR TOTAL POWER INPUT REQUIREMENT

	208V		240V		.751
FOR	230V	OPERATION MULTIPLY	240V	TABULATED KW & MBH BY	.918
	220V		240V		.840

## **COMFORT SETTINGS SELECTION**

Delay Tap	Comfort Setting
A	Normal
В	Humid
С	Dry
D	Temperate

<sup>\*</sup> May be 0 (no breaker) or 1 (with breaker).

## ELECTRICAL DATA (FOR SINGLE SOURCE POWER SUPPLY) - COPPER WIRE 208/230-1-60

		Heater			Field	Wiring			
Models	Heat Kit - Single Phase*	Amps	Min. Circu	it Ampacity	Max. O.C.P.	Amps/Type <sup>1</sup>	75°C Wire Size - AWG		
	J	240V	208V	230V	208V	230V	208V	230V	
	4HK*6500206	10.4	15.28	16.53	20	20	12	12	
	4HK*6500506	20.0	25.67	28.50	30	30	10	10	
AVY24B**H21	4HK*6500806	31.3	37.85	42.63	45	45	8	8	
	4HK*6501006	40.0	47.33	53.50	50	60	8	6	
	4HK165N1506	60.0	69.00	78.50	70	90	4	3	
	4HK*6500506	20.0	27.54	30.38	30	35	10	10	
	4HK*6500806	31.3	39.73	44.50	45	45	8	8	
AVY36C**H21	4HK*6501006	40.0	49.21	55.38	50	60	8	6	
	4HK16501506	60.0	70.88	80.38	70	90	4	3	
	4HK16501806	73.3	85.32	97.00	90	100	4	3	
	4HK*6500506	20.0	29.29	31.88	35	35	8	8	
	4HK*6500806	31.3	41.48	46.00	45	50	8	8	
A) () (40 D **! 10 4	4HK*6501006	40.0	50.96	56.88	60	60	6	6	
AVY48D**H21 SVY48D**N21	4HK16501506	60.0	72.63	81.88	90	90	3	3	
OVITOD NZI	4HK16501806	73.3	87.07	98.50	90	100	3	2	
	4HK16502006	80.0	94.29	106.88	100	125	3	1	
	4HK16502506	100.0	115.96	131.88	125	150	1	1/0	
	4HK*6500506	20.0	31.42	33.75	35	35	8	8	
	4HK*6500806	31.3	43.60	47.88	45	50	8	8	
A) ()/COD**LIC4	4HK*6501006	40.0	53.08	58.75	60	60	6	6	
AVY60D**H21 SVY60D**N21	4HK16501506	60.0	74.75	83.75	90	90	3	3	
OVIOUD NEI	4HK16501806	73.3	89.19	100.38	90	110	3	2	
	4HK16502006	80.0	96.42	108.75	100	125	3	1	
	4HK16502506	100.0	118.08	133.75	125	150	1	1/0	

<sup>1.</sup> O.C.P. = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

## ELECTRICAL DATA (FOR MULTI SOURCE POWER SUPPLY) - COPPER WIRE 208/230-1-60

		Min.	Circuit Ampa	acity	Max. O	.C.P. Amps	/Type <sup>1</sup>	75°C Wire Size - AWG			
Models	Heater			Circuit			Circuit				
Wodels	Model	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	
		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	
AVY24B**H21	4HK165N1506	47.5 / 53.5	21.7 / 25.0	_	50 / 60	25 / 25	_	8/6	10 / 10	_	
AVY36C**H21	4HK16501506	48.5 / 55.4	21.7 / 25.0	_	50 / 60	25 / 25	_	8/6	10 / 10	_	
AV 1300 1121	4HK16501806	44.9 / 51.2	39.8 / 45.8	_	45 / 60	40 / 50	_	8/8	8/8	_	
	4HK16501506	51.0 / 56.9	21.7 / 25.0	_	60 / 60	25 / 25	_	6/6	10 / 10	_	
AVY48D**H21	4HK16501806	47.4 / 52.7	39.8 / 45.8	_	50 / 60	40 / 60	_	6/6	8/6	_	
SVY48D**N21	4HK16502006	51.0 / 56.9	43.4 / 50.0	_	60 / 60	45 / 50	_	6/6	8/8	_	
	4HK16502506	51.0 / 56.9	43.4 / 50.0	21.7 / 25.0	60 / 60	45 / 50	25 / 25	6/6	8/8	10 / 10	
	4HK16501506	53.1 / 58.8	21.7 / 25.0	_	60 / 60	25 / 25	_	6/6	10 / 10	_	
AVY60D**H21	4HK16501806	49.5 / 54.6	39.8 / 45.8	_	50 / 60	40 / 60	_	6/6	8/6	_	
SVY60D**N21	4HK16502006	53.1 / 58.8	43.4 / 50.0	_	60 / 60	45 / 50	_	6/6	8/8	_	
	4HK16502506	53.1 / 58.8	43.4 / 50.0	21.7 / 25.0	60 / 60	45 / 50	25 / 25	6/6	8/8	10 / 10	

<sup>1.</sup> O.C.P. = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

<sup>\*</sup> May be 0 (no breaker) or 1 (with breaker).

## **ELECTRICAL DATA - 208/230-3-60**

	Heat Kit - Three Phase	Max. Static	Min. Speed Tap	Total Heat <sup>1</sup>			KW Staging						
Models				KW		MBH		W1 Only		W2 Only		W1 + W2	
				208V	230V	208V	230V	208V	230V	208V	230V	208V	230V
AVY24B**H21	4HK06501025	0.5	Heat-B	7.2	9.6	24.6	32.8	7.2	9.6	7.2	9.6	7.2	9.6
AVY36C**H21	4HK06501025	0.5	Heat-C	7.2	9.6	24.6	32.8	7.2	9.6	7.2	9.6	7.2	9.6
AV 130C 1121	4HK06501525	0.5	Heat-C	10.8	14.4	36.9	49.1	10.8	14.4	10.8	14.4	10.8	14.4
AVY48D**H21	4HK06501025	0.5	Heat-C	7.2	9.6	24.6	32.8	7.2	9.6	7.2	9.6	7.2	9.6
SVY48D**N21	4HK06501525	0.5	Heat-C	10.8	14.4	36.9	49.1	10.8	14.4	10.8	14.4	10.8	14.4
OVI TOD INZI	4HK06501825	0.5	Heat-B	12.9	17.2	44.7	58.7	12.9	17.2	12.9	17.2	12.9	17.2
A) /)/COD**! IO4	4HK06501025	0.5	Heat-C	7.2	9.6	24.6	32.8	7.2	9.6	7.2	9.6	7.2	9.6
AVY60D**H21 SVY60D**N21	4HK06501525	0.5	Heat-C	10.8	14.4	36.9	49.1	10.8	14.4	10.8	14.4	10.8	14.4
31133B 1421	4HK16502525	0.5	Heat-C	18.0	24.0	61.4	81.4	9.0	12.0	18.0	24.0	18.0	24.0

<sup>1.</sup> See conversion table on Page 5.

## ELECTRICAL DATA (FOR SINGLE SOURCE POWER SUPPLY) - COPPER WIRE 208/230-3-60

	Heat Kit - Three Phase	Heater Amps 240V	Field Wiring							
Models			Min. Circu	it Ampacity	Max. O.C.P.	<sup>1</sup> Amps/Type	75°C Wire Size - AWG			
			208V	230V	208V	230V	208V	230V		
AVY24B**H21	4HK06501025	23.1	28.5	32.4	30	35	10	8		
AVY36C**H21	4HK06501025	23.1	30.4	34.3	30	35	10	8		
AVISOC HZI	4HK06501525	34.7	42.9	48.8	45	50	8	8		
A) () ( 4 C D ± 1 1 C 4	4HK06501025	23.1	31.3	35.1	35	35	8	8		
AVY48D**H21 SVY48D**N21	4HK06501525	34.7	43.8	49.6	45	50	8	8		
3 1 40D N21	4HK06501825	41.4	51.0	58.0	60	60	6	6		
AVY60D**H21	4HK06501025	23.1	33.8	37.6	35	40	8	8		
SVY60D**N21	4HK06501525	34.7	46.3	52.1	50	60	8	6		

<sup>1.</sup> O.C.P. = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

## ELECTRICAL DATA (FOR MULTI SOURCE POWER SUPPLY) - COPPER WIRE 208/230-3-60

	Heater Model	Minimum Circuit Ampacity			Max. O.C.P. <sup>1</sup> Amps/Type			75°C Wire Size - AWG		
Models		Circuit								
		1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
		208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230
AVY60D**H21 SVY60D**N21	4HK16502525	41.0 / 44.9	31.3 / 36.1	-/-	45 / 45	35 / 40	-/-	8/8	8/8	-/-

<sup>1.</sup> O.C.P. = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

#### **ACCESSORIES**

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

**TXV Kits** - TXV kits are available for "Flex-coil" applications and converting R-22 to R-410A or as a service replacement. All kits are bolt-on and require no brazing to install.

**Electric Heaters -** 4HK models shown under electrical data include sequential operation and temperature dual limit switches for safe, efficient operation. Circuit breakers are provided where shown.

**External Insulating Wrap Kit -** Provides a vinyl covered thermal insulation wrap, providing additional thermal insulation protection to prevent sweating in applications where extreme high humidity is present. Air Handler cover (or wrap) has Velcro edges for easy installation and access.

S1-1JV0117

S1-1JV0121

S1-1JV0124

S1-1JV0224 (SV\* models only)

#### Humidstat - S1-2HU16700124

Control when used with ECM variable speed models will monitor humidity level in both winter and summer seasons. Adjusts blower speed and airflow provided to maintain desired humidity levels.

## **LIMITATIONS**

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

Voltage limits are as follows:

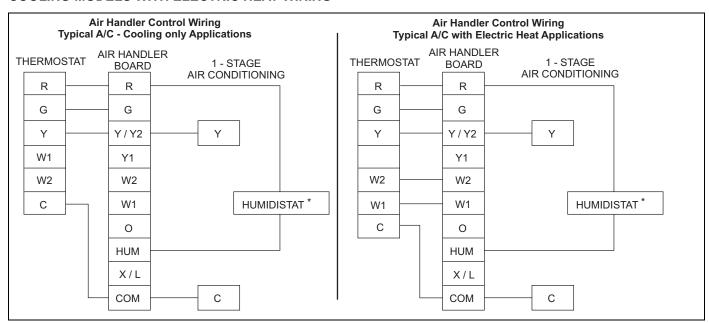
Air Handler Voltage	Voltage code	<sup>1</sup> Normal Operating Voltage Range
208/230-1-60	06	187-253

<sup>1.</sup>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.

Entering Air Temperature Limits							
Wet Bulb Temp. °F Dry Bulb Temp. °F							
Min.	Max.	Min.	Max.				
57	72	65	95				

#### **COOLING MODELS WITH ELECTRIC HEAT WIRING**

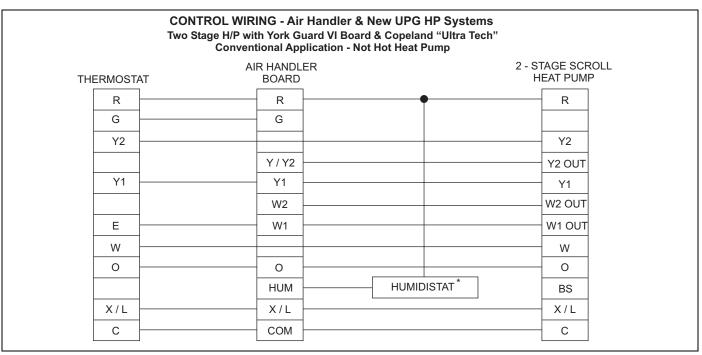


<sup>\*</sup> Optional dehumidification humidistat switch contacts open on humidity rise.

#### **NOTES**

- 1. "Y/Y2" Terminal on air handler control board 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 MODE jumper on air handler control board to the HP position.
- 4. To change quantity of heat during HP defrost cycle reverse connections at W1 and W2 on air handler control board.

#### TWO-STAGE COOLING WIRING



<sup>\*</sup> Optional dehumidification humidistat switch contacts open on humidity rise.

#### NOTES

- 1. "Y/Y2" Terminal on air handler control board 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 MODE jumper on air handler control board to the HP position.
- 4. To change quantity of heat during HP defrost cycle reverse connections at W1 and W2 on air handler control board.

## **TYPICAL APPLICATIONS**

