

TECHNICAL GUIDE

SINGLE PIECE VARIABLE SPEED AIR HANDLERS

FOR USE WITH SPLIT-SYSTEM COOLING & HEAT PUMPS

MODELS: AVG24 THRU 60*(C)





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

Visit us on the web at:

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www.ahridirectory.org

DESCRIPTION

The Air Handler line offers the ultimate in comfort, sound and application flexibility. The models utilize a whisper quiet variable speed motor that provides humidity control and the lowest operating cost in the industry. The air handler is shipped ready to be installed in all positions, upflow, downflow, horizontal left or right, with minor adjustments. 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 a 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.

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 or prepainted G30 galvainzed.

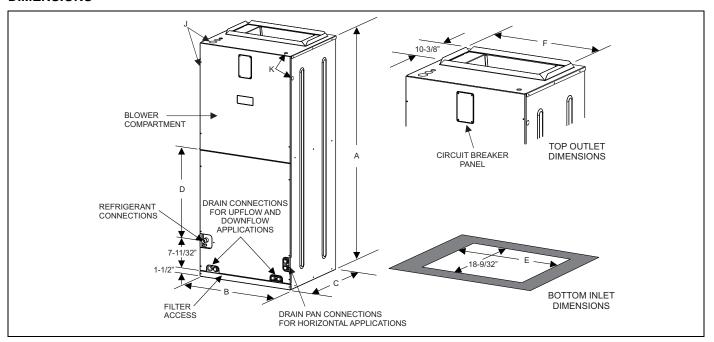
New 4 HK Heat Kit - Installation friendly, easy service, more robust, unique to new design.

ECM Variable Speed Motor - Designed for efficient, quiet operation with added indoor comfort control. With the use of a humidistat, the system 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.

Climate comfort system allows dealer to customize comfort settings based on regional location.

Communications - These models (C) may be connected as part of a communications system using a 4-wire connection bus.

DIMENSIONS



DIMENSIONS

| | | | Dimension | | Wiring Knoo | kouts ¹ | Refrigerant Connections | | | | |
|----------------|--------|-------|-----------|--------|-------------|--------------------|----------------------------|-------------|--------|---------|--|
| Models | Α | В | С | D E | | E F | | К | | ne Size | |
| | Height | Width | Depth | | _ | - | Power | Control | Liquid | Vapor | |
| AVG24B**H21(C) | 46 | 17.5 | | 12-3/8 | 13-29/32 | 14-19/32 | 7/0" (4/0") | 7/8" (1/2") | 3/8" | 3/4" | |
| AVG36C**H21(C) | 52 | 21 | 21.5 | 17-1/8 | 17-13/32 | 18-3/32 | 7/8" (1/2") 1 3/8" (1") | | | 7/8" | |
| AVG48D**H21(C) | 57 | 24.5 | 21.3 | 22-1/8 | 20-29/32 | 21-19/32 | 1 23/32" (1 1/4") | 170 (172) | | 7/8" | |
| AVG60D**H21(C) | 57 | 24.5 | | 22-1/8 | 20-29/32 | 21-19/32 | (, | | | 7/8' | |

^{1.} Actual size (Conduit size).

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 |
|----------------|-----------------------|------------------------|------------------------|--------------|----------------|---------------|------------------|--------------|-------------|------|
| AVG24B3XH21(C) | Cooling/ | | | | | | | | | None |
| AVG24B4FH21(C) | Cooling/ Heat Pump | Sweat | 3.89 | 2 | 14 | (2) 16 x 17.5 | 1 x 0.866 | 3/8 | Enhanced | 4F |
| AVG24B4KH21(C) | riout i ump | | | | | | | | | 4K |
| AVG36C3XH21(C) | | | | | | | | | | None |
| AVG36C4FH21(C) | 0 " / | | | | | | | | | 4F |
| AVG36C4GH21(C) | Cooling/ Heat Pump | Sweat | 4.86 | 3 | 12 | (2) 20 x 17.5 | 1 x 0.866 | 3/8 | Enhanced | 4G |
| AVG36C4HH21(C) | ricat i amp | | | | | | | | | 4H |
| AVG36C4KH21(C) | | | | | | | | | | 4K |
| AVG48D3XH21(C) | | | | | | | | | | None |
| AVG48D4FH21(C) | . , | | | | | | | | | 4F |
| AVG48D4HH21(C) | Cooling/ Heat Pump | Sweat | 5.83 | 3 | 11 | (2) 24 x 17.5 | 1 x 0.866 | 3/8 | Enhanced | 4H |
| AVG48D4JH21(C) | ricat i unip | | | | | | | | | 4J |
| AVG48D4KH21(C) | | | | | | | | | | 4K |
| AVG60D3XH21(C) | | | | | | | | | | None |
| AVG60D4HH21(C) | Cooling/ | Curant | F 00 | 3 | 44 | (2) 24 × 17 F | 1 × 0 000 | 2/0 | Enhanced | 4H |
| AVG60D4JH21(C) | Heat Pump | Sweat | 5.83 | 3 | 11 | (2) 24 x 17.5 | 5 1 x 0.866 3/8 | 3/8 | Enhanced | 4J |
| AVG60D4KH21(C) | | | | | | | | | | 4K |

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

^{**} Thermal expansion device indicators - "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.

COOLING CAPACITY

| Models | Rated CFM | Entering Air °F | MBH@ Evapora | tor Temperature an | 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 |
| AVG24B | 800 | 80/67 | 32.2 | 29.1 | 25.7 | 22.3 |
| AVG24b | 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 |
| AVG36C | 1200 | 80/67 | 41.1 | 36.3 | 31.8 | 27.1 |
| AVG36C | 1200 | 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 |
| AVG48D | 1600 | 80/67 | 80.4 | 67.5 | 55.0 | 42.1 |
| AVG46D | 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 |
| AVG60D | 1850 | 80/67 | 96.0 | 79.2 | 62.6 | 45.8 |
| AVGOUD | 1000 | 75/62 | 74.8 | 58.6 | 46.2 | 37.0 |
| | | 70/57 | 64.3 | 55.4 | 43.2 | 33.7 |

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 | | AVG24B | AVG36C | AVG48D | AVG60D | | | | | | |
|----------------------------------|-----------------|------------|--------------|-------------|------------|--|--|--|--|--|--|
| Blower - Diamete | er x Width | 10 x 7 | 10 x 7 | 10 x 10 | 10 x 10 | | | | | | |
| Motor | HP | 1/3 | 1/2 | 3/4 | 1 | | | | | | |
| 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 ¹ | 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 | 196/185 | 199/188 | | | | | | |

^{1.} Field supplied.

ELECTRICAL DATA - COOLING ONLY (60 Hz)

| Models | | tor Amps lertz | | rcuit Ampacity Hertz | Max. O.C.P. | Minimum Wire |
|--------|------|-------------------|------|-------------------------|------------------------|--------------|
| Models | 208V | 230V | 208V | 230V | Amps/Type ¹ | Size A.W.G. |
| AVG24B | 3.2 | 2.8 | 4.0 | 3.5 | 15 | 14 |
| AVG36C | 4.7 | 4.3 | 5.9 | 5.4 | 15 | 14 |
| AVG48D | 6.1 | 5.0 | 7.6 | 6.9 | 15 | 14 |
| AVG60D | 7.8 | 7.0 | 9.7 | 8.8 | 15 | 14 |

^{1.} OCP = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

ELECTRICAL DATA - 208/230-1-60

| | | Mari | NA: | | Total | Heat ¹ | | kW Staging | | | | | |
|--------|-------------|----------------|-------------------|------|-------|-------------------|------|------------|------|------|------|------|------|
| Models | Heat Kits* | Max. Static | Min. Speed Tap | K | W | MI | ЗН | W1 | Only | W2 | Only | W1 8 | & W2 |
| | | Otatio | Ореса Тар | 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 |
| | 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 |
| AVG24B | 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 |
| AVG246 | 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 |
| | 4HK16501306 | 0.5 | Heat A | 9.8 | 13 | 33.3 | 44.4 | 3.3 | 4.3 | 6.5 | 8.7 | 9.8 | 13 |
| | 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 |
| AVG36C | 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 |
| AVG36C | 4HK16501306 | 0.5 | Heat C | 9.8 | 13 | 33.3 | 44.4 | 3.3 | 4.3 | 6.5 | 8.7 | 9.8 | 13 |
| | 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 |
| | 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 |
| AVG48D | 4HK16501306 | 0.5 | Heat C | 9.8 | 13 | 33.3 | 44.4 | 3.3 | 4.3 | 6.5 | 8.7 | 9.8 | 13 |
| AVG46D | 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-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 |
| | 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 |
| AVG60D | 4HK16501306 | 0.5 | Heat C | 9.8 | 13 | 33.3 | 44.4 | 3.3 | 4.3 | 6.5 | 8.7 | 9.8 | 13 |
| AVGOOD | 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-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 | 24.0 |

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 |

See conversion Table below.
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 ¹ | 75°C Wire | Size - AWG |
| | omgio i naco | 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 |
| AVG24B | 4HK*6500806 | 31.3 | 37.85 | 42.63 | 45 | 45 | 8 | 8 |
| AVG24B | 4HK*6501006 | 40.0 | 47.33 | 53.50 | 50 | 60 | 8 | 6 |
| | 4HK16501306 | 54.2 | 62.6 | 71.3 | 70 | 80 | 4 | 2 |
| | 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 |
| AVG36C | 4HK*6501006 | 40.0 | 49.21 | 55.38 | 50 | 60 | 8 | 6 |
| AVG36C | 4HK16501306 | 54.2 | 64 | 72.8 | 70 | 80 | 4 | 2 |
| | 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 |
| | 4HK*6501006 | 40.0 | 50.96 | 56.88 | 60 | 60 | 6 | 6 |
| A) (C 40D | 4HK16501306 | 54.2 | 66.4 | 75.2 | 70 | 80 | 4 | 2 |
| AVG48D | 4HK16501506 | 60.0 | 72.63 | 81.88 | 90 | 90 | 3 | 3 |
| | 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 |
| | 4HK*6501006 | 40.0 | 53.08 | 58.75 | 60 | 60 | 6 | 6 |
| A\/CC0D* | 4HK16501306 | 54.2 | 68.4 | 77.2 | 70 | 80 | 4 | 2 |
| AVG60D* | 4HK16501506 | 60.0 | 74.75 | 83.75 | 90 | 90 | 3 | 3 |
| | 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 |

^{1.} 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 ¹ | 75°C | Wire Size - | AWG |
|---------|-------------|-----------|--------------|-----------|---------|------------|--------------------|---------|-------------|---------|
| Models | Heater | | Circuit | | | Circuit | | | Circuit | |
| Wiodels | 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 |
| AVG24B | 4HK16501306 | 43.1/48.6 | 19.5/22.5 | - | 45/50 | 20/25 | - | 6/6 | 12/10 | - |
| AVG24D | 4HK165N1506 | 47.5/53.5 | 21.7/25.0 | _ | 50/60 | 25/25 | - | 8/6 | 10/10 | _ |
| | 4HK16501306 | 41.7/47.9 | 22.4/25.0 | - | 50/50 | 30/30 | _ | 6/6 | 12/10 | _ |
| AVG36C | 4HK16501506 | 48.5/55.4 | 21.7/25.0 | _ | 50/60 | 25/25 | - | 8/6 | 10/10 | _ |
| | 4HK16501806 | 44.9/51.2 | 39.8/45.8 | - | 45/60 | 40/50 | _ | 8/8 | 8/8 | _ |
| | 4HK16501306 | 42.9/49.1 | 23.6/26.2 | - | 50/50 | 30/30 | - | 6/6 | 12/10 | - |
| | 4HK16501506 | 51.0/56.9 | 21.7/25.0 | - | 60/60 | 25/25 | - | 6/6 | 10/10 | _ |
| AVG48D | 4HK16501806 | 47.4/52.7 | 39.8/45.8 | - | 50/60 | 40/60 | _ | 6/6 | 8/6 | _ |
| | 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 |
| | 4HK16501306 | 43.9/50.1 | 24.6/27.2 | - | 50/60 | 30/30 | _ | 6/6 | 10/10 | - |
| | 4HK16501506 | 53.1/58.8 | 21.7/25.0 | _ | 60/60 | 25/25 | - | 6/6 | 10/10 | - |
| AVG60D | 4HK16501806 | 49.5/54.6 | 39.8/45.8 | _ | 50/60 | 40/60 | _ | 6/6 | 8/6 | _ |
| | 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 |

^{1.} O.C.P. = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

^{*} May be 0 (no breaker) or 1 (with breaker).

ELECTRICAL DATA - 208/230-3-60

| | Heat Kit | Mari | Min. | | Total Heat ¹ | | | | KW Staging | | | | | |
|--------|---------------------------|----------------|--------|------|-------------------------|------|------|------|------------|---------|------|---------|------|--|
| Models | Heat Kit - Three Phase | Max. Static | Speed | K | W | M | ВН | W1 | Only | W2 Only | | W1 + W2 | | |
| | | | Тар | 208V | 230V | 208V | 230V | 208V | 230V | 208V | 230V | 208V | 230V | |
| AVG24B | 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 | |
| AVG36C | 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 | |
| AVG30C | 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 | |
| | 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 | |
| AVG48D | 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 | |
| | 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 | |
| | 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 | |
| AVG60D | 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 | |
| | 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 | |

^{1.} See conversion table on Page 4.

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

| Models | Heat Kit - Three Phase | Heater Amps 240V | Field Wiring | | | | | | |
|--------|---------------------------|------------------------|-----------------------|------|------------------------------------|------|----------------------|------|--|
| | | | Min. Circuit Ampacity | | Max. O.C.P. ¹ Amps/Type | | 75°C Wire Size - AWG | | |
| | | | 208V | 230V | 208V | 230V | 208V | 230V | |
| AVG24B | 4HK06501025 | 23.1 | 28.5 | 32.4 | 30 | 35 | 10 | 8 | |
| AVG36C | 4HK06501025 | 23.1 | 30.4 | 34.3 | 30 | 35 | 10 | 8 | |
| AVGS6C | 4HK06501525 | 34.7 | 42.9 | 48.8 | 45 | 50 | 8 | 8 | |
| | 4HK06501025 | 23.1 | 31.3 | 35.1 | 35 | 35 | 8 | 8 | |
| AVG48D | 4HK06501525 | 34.7 | 43.8 | 49.6 | 45 | 50 | 8 | 8 | |
| | 4HK06501825 | 41.4 | 51.0 | 58.0 | 60 | 60 | 6 | 6 | |
| AVG60D | 4HK06501025 | 23.1 | 33.8 | 37.6 | 35 | 40 | 8 | 8 | |
| | 4HK06501525 | 34.7 | 46.3 | 52.1 | 50 | 60 | 8 | 6 | |

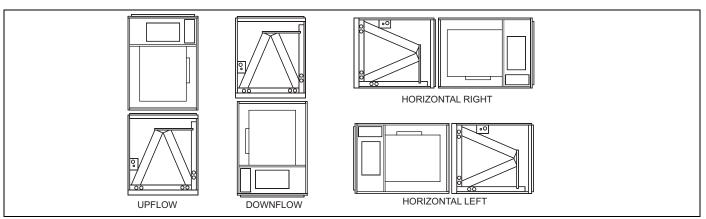
^{1.} O.C.P. = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

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

| Models | | Minimum Circuit Ampacity | | | Max. O.C.P. ¹ Amps/Type | | | 75°C Wire Size - AWG | | |
|--------|-------------|--------------------------|-----------|---------|------------------------------------|---------|---------|----------------------|---------|---------|
| | Heater | Circuit | | | | | | | | |
| | 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 |
| AVG60D | 4HK16502525 | 41.0/44.9 | 31.3/36.1 | -/- | 45/45 | 35/40 | -/- | 8/8 | 8/8 | -/- |

^{1.} O.C.P. = Over Current Protection device, must be HACR type Circuit Breaker or Time Delay fuse.

TYPICAL APPLICATIONS WITH MC MULTI-POSITION COILS



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

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:

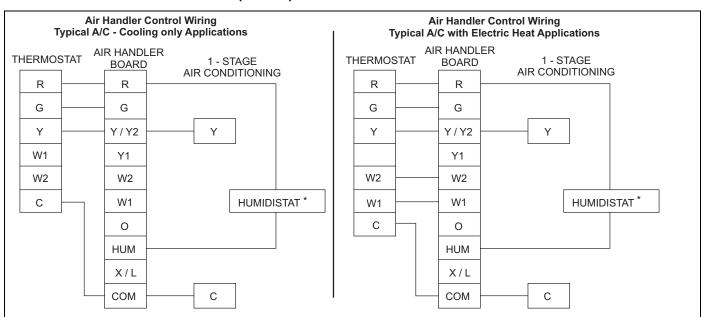
| Air Handler Voltage | Voltage code | ¹ Normal Operating Voltage Range | |
|---------------------|--------------|--|--|
| 208/230-1-60 | 06 | 187-253 | |

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.

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

CONVENTIONAL CONTROL WIRING (24 VAC)

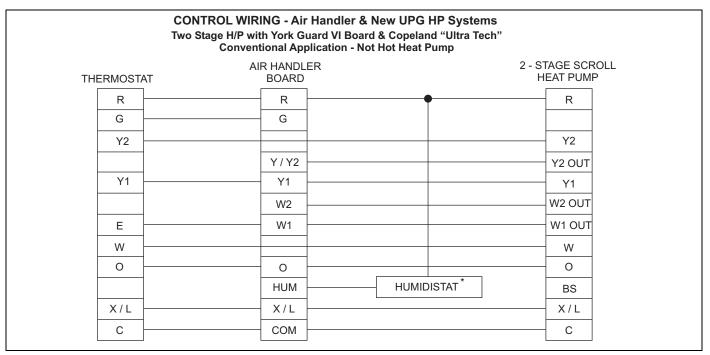


* Optional dehumidification humidistat switch contacts open on humidity rise.

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 (24 VAC)

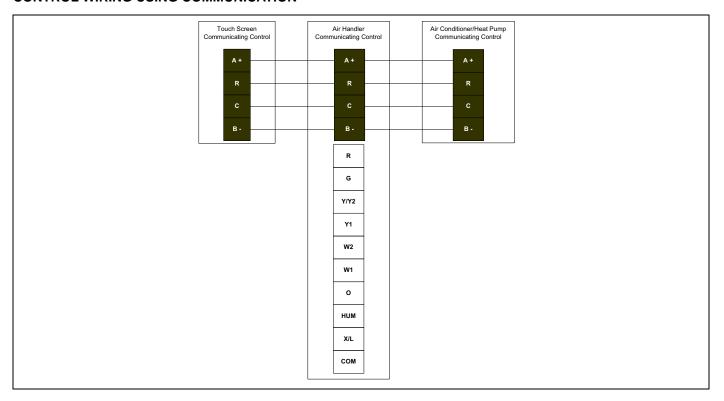


^{*} Optional dehumidification humidistat switch contacts open on humidity rise.

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.

CONTROL WIRING USING COMMUNICATION



AIR FLOW

Air Handler Air Flow Data

| | HIGH/LC | W SPEED COOLING | S AND HEAT PUMP A | IRFLOW | |
|------|----------|-------------------|-------------------------|-----------------|----------|
| | | М | | JUMPER S | SETTINGS |
| 2 | 24B | | 6C | | |
| 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 | А |
| 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 | А |
| 462 | 462 | 657 | 460 | D | Α |
| 474 | 460 | 751 | 494 | С | С |
| 461 | 464 | 588 | 461 | D | С |
| 4 | 18D | 6 | 0D | JUMPER SETTINGS | |
| High | Low | High | Low | COOL Tap | ADJ Tap |
| 2138 | 1442 | 2364 | 1545 | A | В |
| 1759 | 1162 | 1962 | 1271 | В | В |
| 2009 | 1311 | 2123 | 1374 | Α | А |
| 1612 | 1052 | 1763 | 1146 | В | Α |
| 1773 | 1166 | 1905 | 1237 | Α | С |
| 1530 | 989 | 1777 | 1158 | С | В |
| 1459 | 947 | 1580 | 1021 | В | С |
| 1359 | 886 | 1596 | 1030 | D | В |
| 1388 | 904 | 1583 | 1019 | С | Α |
| 1221 | 806 | 1413 | 929 | D | А |
| 1244 | 808 | 1412 | 926 | С | С |
| 1118 | 715 | 1277 | 841 | D | С |
| | HI | SH/I OW SPEED ELF | CTRIC HEAT AIRFLO | nw . | |
| | | M | -OTRIOTILAT AIRTE | J 11 | |
| - | 24B | | 6C | JUMPER SETTINGS | |
| High | Low | High | Low | HEAT Tap | ADJ Tap |
| 1088 | 828 | 1387 | 908 | A | Abs Tap |
| 954 | 714 | 1228 | 804 | В | Any |
| 829 | 614 | 1151 | 756 | С | Any |
| 678 | 523 | 923 | 609 | D | Any |
| | 48D | | 923 609 60D | | BETTINGS |
| | High Low | | Low | HEAT Tap | ADJ Tap |
| 2111 | 1417 | High 2363 | 1488 | А | ADJ Tap |
| 1858 | 1252 | 2174 | 1252 | В | Any |
| 1480 | 985 | 1868 | 1061 | С | Any |
| 1250 | 840 | 1387 | 823 | D | |
| 1250 | 040 | 1307 | 023 | U | Any |

- 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.
- $7. \ Low \ speed \ cooling \ used \ only \ with \ two \ stage \ outdoor \ units. \ (Speed \ is \ preset \ to \ 65\% \ of \ high \ speed).$
- 8. Dehumidification speed is 85% of jumper selected COOL tap and ADJUST tap.
- 9. When operating in both heat pump and electric heat modes, the airflow (CFM) will be per HEAT Tap CFM values only.
- 10. 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.
- 11. 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.

NOTES