

***MULTI-POSITION, VARIABLE-SPEED,
ECM-BASED, COMFORTNET™ COMPATIBLE,
INVERTER-TUNED AIR HANDLER
2 TO 5 TONS***



Contents

Nomenclature	2
Product Specifications	3
Dimensions	4
Airflow Data	5
Heat Kit Data.....	6
Wiring Diagram	7

Product Features

- Internal factory-installed, inverter tuned thermal expansion valve for cooling and heat pump applications
- Variable-speed ECM blower motor
- ComfortNet™ Communicating System compatible
- Auto configuration of the airflow and tonnage in communicating mode
- Provides constant CFM over a wide range of static pressure conditions independent of duct system
- CFM indicator
- Fault recall of six most recent faults
- Provides adjustable low CFM for efficient fan-only operation
- Improved humidity and comfort control
- Built-in compatibility with multi-stage heat pump and cooling applications
- All-aluminum evaporator coil
- AHRI certified; ETL listed
- Rigid SmartFrame™ cabinet
- Cabinet air leakage less than 2.0% at 1.0 inch H2O when tested in accordance with ASHRAE standard 193
- Cabinet air leakage less than 1.4% at 0.5 inch H2O when tested in accordance with ASHRAE standard 193
- 3 kW – 25 kW electric heater kits
- Horizontal or vertical configuration capabilities
- 21" depth for easier attic access
- DecaBDE-free thermoplastic drain pan with secondary drain connections
- Screw-less sides and back helps to reduce condensation when installed in humid locations
- Foil-faced insulation covers the internal casing to reduce cabinet condensation
- Galvanized, leather grain-embossed finish
- Glue-less cabinet insulation retention
- Tool-less filter access



* Complete warranty details available from your local dealer or at www.goodmanmfg.com. To receive the 10-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registration is not required in California or Quebec.

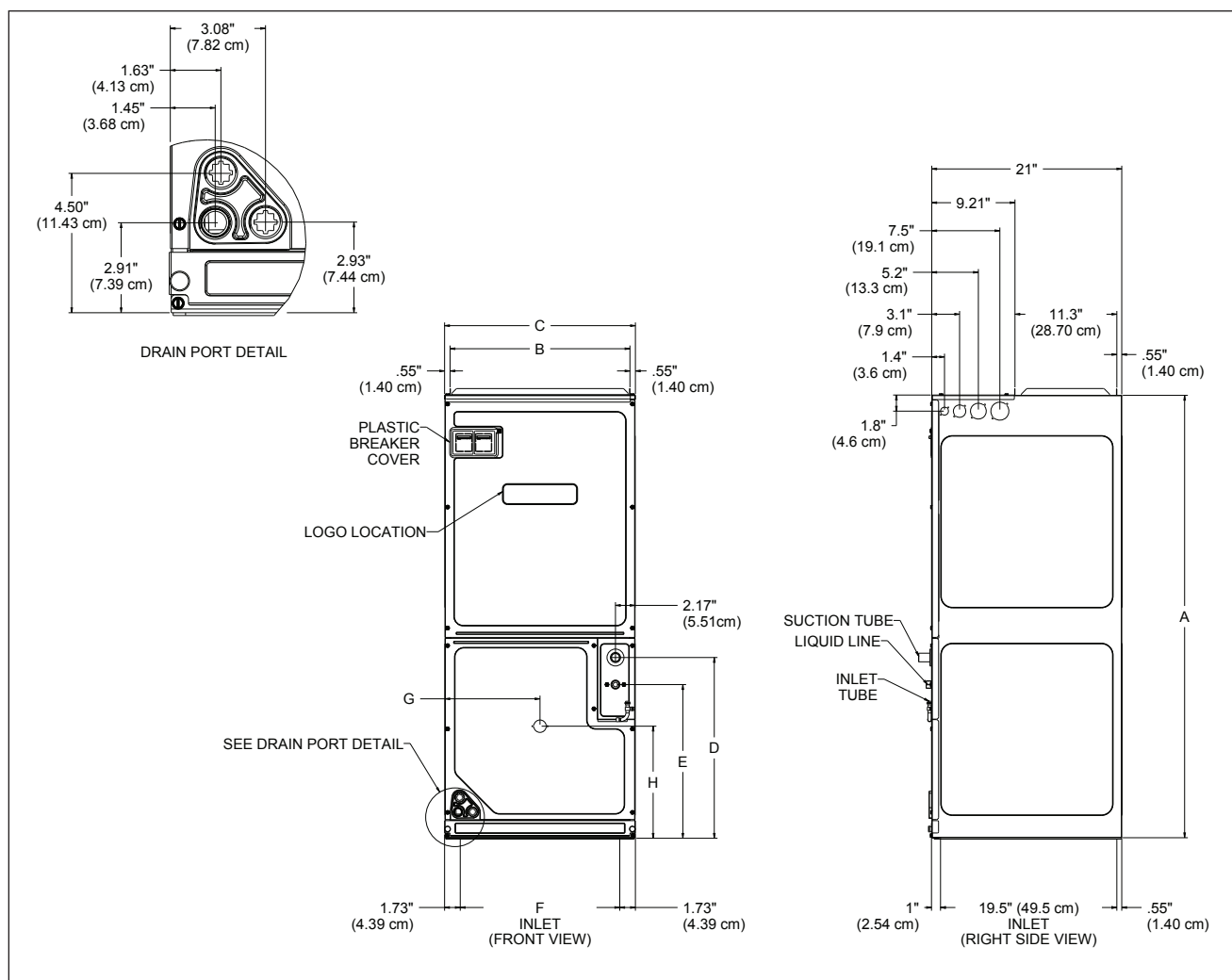
	A	V	P	V	C	18	B	1	4	AA	
	1	2	3	4	5	6,7	8	9	10	11,12	
Brand											Engineering*
A Single-Piece Airhandler											Major/Minor Revisions
											*Not used for inventory management
Unit Application											Refrigerant Charge
R Multi Position PSC Motor											4 = R-410A
S Multi Position EEM Motor											
V Multi Position Variable-Speed Motor-Communitacating											Electrical
											1 208/230V, 1 Phase, 60 Hz
Cabinet Finish											Cabinet Width
U Unpainted											B = 17½"
P Painted											C = 21"
											D = 24½"
Expansion Device											Nominal Capacity @ 13SEER
T Expansion Device											18 = 1½ Tons 42 = 3½ Tons
V Inverter Tuned Expansion Valve											24 = 2 Tons 48 = 4 Tons
											30 = 2½ Tons 60 = 5 Tons
											36 = 3 Tons
											Communications
											C = ComfortNet™ Compatible

	HKS	X	03	X	A	AA	
	1	2	3	4	5	6,7	
Unit Type							Revisions
HKS Heat Kit for Air Handlers							Engineering Revisions
Circuit Breaker							Phase
X No circuit breaker							A Single Phase 208 V E Three Phase 240 V
C Circuit Breaker							B Single Phase 240 V F Three Phase 208/240 V
							C Single Phase 208/240 V G Three Phase 460 V
							D Three Phase 208 V
Heating Capacity @ 240 Volts							Cabinet Size (MAX)
03 3.0 kW 15 14.4 kW							C C Cabinet
05 4.5 kW 19 19.2 kW wth 150F limit							D D Cabinet
06 6.0 kW 20 19.2 kW with 170F limit							X All Cabinet Sizes
08 8.0 kW 25 25.0 kW							
10 9.6 kW							

	AVPVC24 C14A*	AVPVC36 D14A*	AVPVC48 D14A*	AVPVC60 D14A*
NOMINAL RATINGS				
Cooling (BTU/h)	24,000	36,000	48,000	60,000
BLOWER				
Diameter	10 $\frac{5}{8}$ "	10 $\frac{5}{8}$ "	10 $\frac{5}{8}$ "	11 $\frac{5}{8}$ "
Width	8"	10 $\frac{5}{8}$ "	10 $\frac{5}{8}$ "	10 $\frac{5}{8}$ "
COIL CONNECTIONS				
Liquid	$\frac{3}{8}$ "	$\frac{3}{8}$ "	$\frac{3}{8}$ "	$\frac{3}{8}$ "
Suction	$\frac{7}{8}$ "	$\frac{7}{8}$ "	$\frac{7}{8}$ "	$\frac{7}{8}$ "
Coil Drain Connection (FPT)	$\frac{3}{4}$ "	$\frac{3}{4}$ "	$\frac{3}{4}$ "	$\frac{3}{4}$ "
ELECTRICAL DATA				
Voltage	208/240	208/240	208/240	208/240
Min Circuit Ampacity	4.9/4.9	6.5/6.5	6.5/6.5	8.6/8.6
Max. Overcurrent Device (Amps)	15/15	15/15	15/15	15/15
Minimum VAC	197	197	197	197
Maximum VAC	253	253	253	253
BLOWER MOTOR				
Full Load Amps (FLA)	3.9	5.2	5.2	6.9
Horsepower (HP)	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{3}{4}$	1
SHIP WEIGHT (LBS.)	118	155	167	167

NOTE

- Minimum Circuit Ampacity (MCA) and Maximum Overcurrent Protection (MOP) for blower without supplemental heat installed. Refer to unit nameplate and/or Heat Kit Data for specification with approved accessory heaters installed.



MODEL	A	B	C	D	E	F	G	H
AVPVC24C14	49	20	21	20	17	17 $\frac{3}{4}$	10 $\frac{1}{2}$	12 $\frac{3}{8}$
AVPVC36D14	58	23 $\frac{3}{8}$	24 $\frac{1}{2}$	28 $\frac{3}{4}$	25 $\frac{1}{4}$	21 $\frac{1}{4}$	12 $\frac{3}{8}$	12 $\frac{3}{8}$
AVPVC48D14	58	23 $\frac{3}{8}$	24 $\frac{1}{2}$	28 $\frac{3}{4}$	25 $\frac{1}{4}$	21 $\frac{1}{4}$	12 $\frac{3}{8}$	12 $\frac{3}{8}$
AVPVC60D14	58	23 $\frac{3}{8}$	24 $\frac{1}{2}$	28 $\frac{3}{4}$	25 $\frac{1}{4}$	21 $\frac{1}{4}$	12 $\frac{3}{8}$	12 $\frac{3}{8}$

MODEL	RATED AIR FLOW CFM								
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
AVPVC24C14A*	700	690	690	685	680	670	665	660	655
AVPVC36D14A*	1190	1170	1165	1160	1145	1130	1120	1105	1100
AVPVC48D14A*	1445	1440	1430	1415	1405	1390	1380	1375	1370
AVPVC60D14A*	1645	1640	1640	1635	1630	1625	1620	1620	1615

MODEL	MAXIMUM AIR FLOW CFM								
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
AVPVC24C14A*	770	760	760	755	750	735	730	725	720
AVPVC36D14A*	1310	1285	1280	1275	1260	1245	1230	1215	1210
AVPVC48D14A*	1590	1585	1575	1560	1545	1530	1520	1515	1505
AVPVC60D14A*	1810	1805	1805	1800	1790	1785	1780	1780	1775

NOTES

- The chart is for information only. For satisfactory operation, external static pressure must not exceed value shown on rating plate.
- Use the CFM adjustment factors of .98 for horizontal left, .95 for horizontal right & .96 for downflow orientations.
- Airflow data indicated is at 230V without air filter in place.

ELECTRIC HEAT AIRFLOW

HTR kW	DIP SWITCH SETTINGS			AVPVC24 C14	AVPVC36 D14†	AVPVC48 D14††	AVPVC60 D14†††
	9	10	11				
3	ON	ON	ON	730	850**	NR	NR
5	ON	ON	OFF	780	1250	1250	1250
6	ON	OFF	ON	850	1300	1300	1300
8	ON	OFF	OFF	950	1500	1500	1500
10	OFF	ON	ON	1025	1550	1550	1550
15	OFF	ON	OFF	NR	1720	1720	1780
20	OFF	OFF	ON	NR	1800	1815	1850
21 or 25*	OFF	OFF	OFF	OFF	NR	1850	1850

* Within thermostat user menu, CTK0* communicating thermostat will display 20kW for OFF- OFF- ON dipswitch selection, 21kW for OFF-OFF-OFF dipswitch selection.

† For match up with a 2 ton outdoor unit: Heater kit application shall not exceed 10 kW. Airflow for 5 kW up to 10 kw heater kits shall be set to 850 cfm speed tap of ON-ON-ON.

†† For match up with a 3 ton outdoor unit: Heater kit application shall not exceed 15 kW. Airflow for 5 kW up to 15 kw heater kits shall be set to 1300 cfm speed tap of ON-OFF-ON.

††† For match up with a 3.5 ton outdoor unit: Heater kit application shall not exceed 20 kW. Airflow for 5 kW up to 20 kw heater kits shall be set to 1500 cfm speed tap of ON-OFF-OFF.

** 3 kW heater kit is not applicable for this indoor application.

NR - Not rated

NOTES

- Airflow data shown applies to the electric heat only in either legacy mode or communicating mode operation
- Within thermostat user menu CTK04 communicating thermostat will display 20KW for OFF- OFF- ON dip switch selection, 21kW for OFF-OFF-OFF dip switch selection.

MODELS	CIRCUIT 1			CIRCUIT 2			SINGLE-POINT KIT	
	AMPS	MCA ¹	MOP ²	AMPS	MCA ¹	MOP ²	MCA ¹	MOP ²
AVPVC24C14AA	0.0/0.0	4.9/4.9	15/15	---	---	---	---	---
HKS*03XC*	10.8/12.5	18/21	20/25	---	---	---	---	---
HKS*05XC*	17.3/20.0	27/30	30/30	---	---	---	---	---
HKS*06XC*	21.7/25.0	32/36	35/40	---	---	---	---	---
HKS*08XC*	28.9/33.3	41/47	45/50	---	---	---	---	---
HKS*10XC*	34.7/40.0	48/55	50/60	---	---	---	---	---
AVPVC36D14AB	0.0/0.0	6.5/6.5	15/15	---	---	---	---	---
HKS*03XC*	10.8/12.5	20/22	20/25	---	---	---	---	---
HKS*05XC*	17.3/20.0	28/32	30/35	---	---	---	---	---
HKS*06XC*	21.7/25.0	34/38	35/40	---	---	---	---	---
HKS*08XC*	28.9/33.3	43/48	45/50	---	---	---	---	---
HKS*10XC*	34.7/40.0	50/57	50/60	---	---	---	---	---
HKSC15*##	34.7/40.0	50/57	50/60	17.3/20.0	22/25	25/25	72/82	80/90
HKSC20D##	34.7/40.0	50/57	50/60	34.7/40	43/50	45/50	93/107	100/110
HKSC15XF*	0.0/0.0	6.5/6.5	15/15	30.0/34.6	38/43	40/45	---	---
HKSC20XF*	0.0/0.0	6.5/6.5	15/15	37.5/43.3	47/54	50/60	---	---
AVPVC48D14AB	0.0/0.0	6.5/6.5	15/15	---	---	---	---	---
HKS*03XC*	10.8/12.5	20/22	20/25	---	---	---	---	---
HKS*05XC*	17.3/20.0	28/32	30/35	---	---	---	---	---
HKS*06XC*	21.7/25.0	34/38	35/40	---	---	---	---	---
HKS*08XC*	28.9/33.3	43/48	45/50	---	---	---	---	---
HKS*10XC*	34.7/40.0	50/57	50/60	---	---	---	---	---
HKSC15*##	34.7/40.0	50/57	50/60	17.3/20.0	22/25	25/25	72/82	80/90
HKSC20D##	34.7/40.0	50/57	50/60	34.7/40	43/50	45/50	93/107	100/110
HKSC15XF*	0.0/0.0	6.5/6.5	15/15	30.0/34.6	38/43	40/45	---	---
HKSC20XF*	0.0/0.0	6.5/6.5	15/15	37.5/43.3	47/54	50/60	---	---
HKSC25DC*	52.0/60.0	74/84	80/90	34.7/40.0	43/50	45/50	117/134	125/150
AVPVC60D14AC	0.0/0.0	8.6/8.6	15/15	---	---	---	---	---
HKS*03XC*	10.8/12.5	22/24	25/25	---	---	---	---	---
HKS*05XC*	17.3/20.0	30/34	35/35	---	---	---	---	---
HKS*06XC*	21.7/25.0	36/40	40/40	---	---	---	---	---
HKS*08XC*	28.9/33.3	45/50	45/60	---	---	---	---	---
HKS*10XC*	34.7/40.0	52/59	60/60	---	---	---	---	---
HKSC15*##	34.7/40.0	52/59	60/60	17.3/20	22/25	25/25	74/84	80/90
HKSC20D##	34.7/40.0	52/59	60/60	34.7/40.0	43/50	45/50	95/109	100/110
HKSC15XF*	0.0/0.0	8.6/8.6	15/15	30.0/34.6	38/43	40/45	---	---
HKSC20XF*	0.0/0.0	8.6/8.6	15/15	37.5/43.3	47/54	50/60	---	---
HKSC25DC*	52.0/60.0	74/84	80/90	35/40	43/50	45/50	117/134	125/150

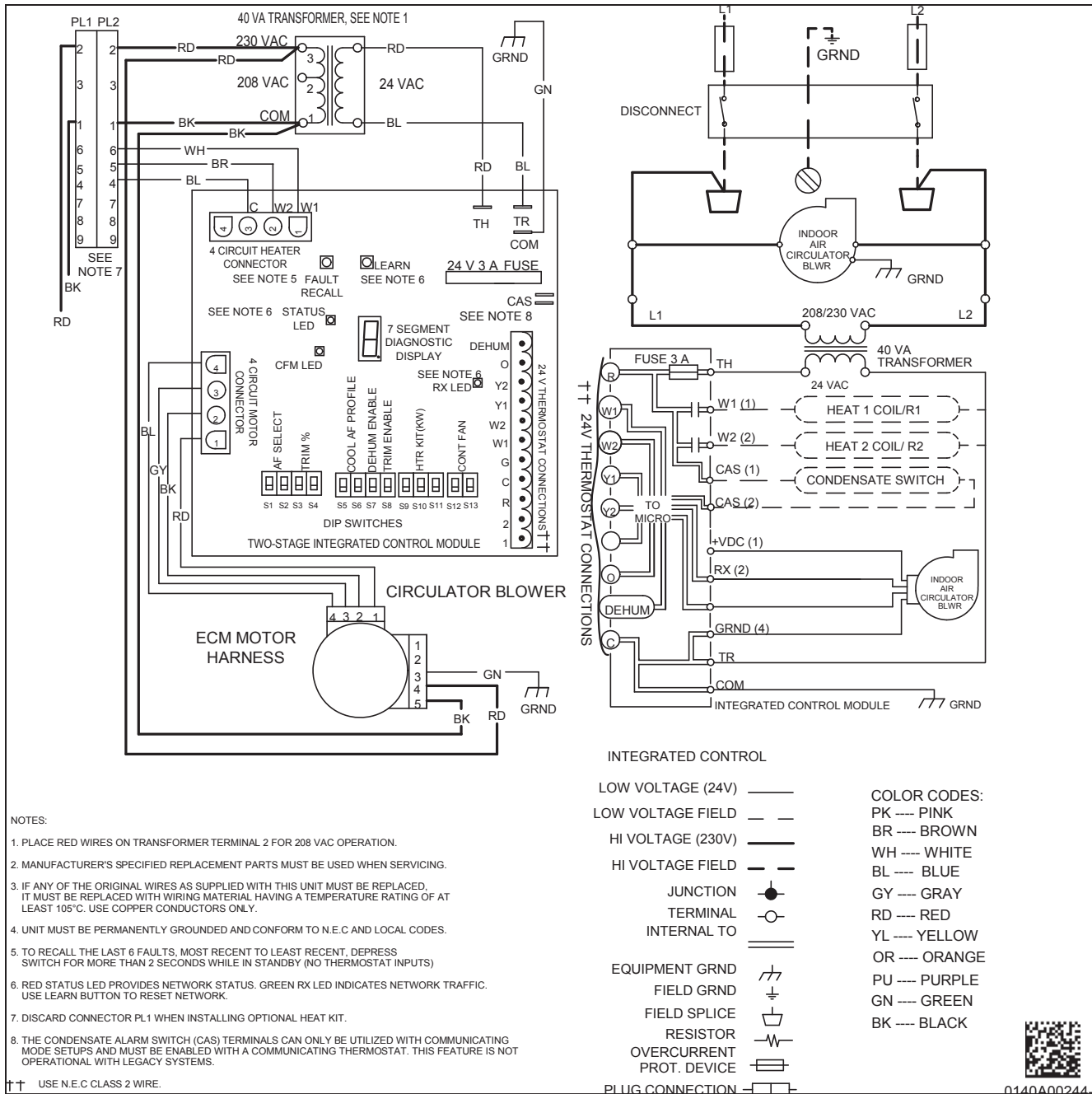
¹ Minimum Circuit Ampacity (Heater Amps + Motor Amps) X 1.25² Maximum Overcurrent Protection = 2.25 X Motor Amps + Heater Amps[^] Circuit 1: Single-phase for Air Handlers Circuit 2: Three-phase for HKR3 Heater Kits

* Revision level that may or may not be designated

C = Circuit Breaker Option

--- indicates Not Required

HKA meets the new UL1995 requirements for 15 and 20KW heaters



Wiring is subject to change. Always refer to the wiring diagram on the unit for the most up-to-date wiring.



High Voltage: Disconnect all power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury, or death.



