



Air Conditioning & Heating

# MBVC

**MULTI-POSITION  
VARIABLE-SPEED ECM BASED  
COMFORTNET™ COMPATIBLE  
MODULAR BLOWER  
1½ TO 5 TONS**

### Product Features

- Variable-speed ECM blower motor
- Direct drive, multi-speed PSC 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
- 3 kW – 21 kW electric heat kits
- Blower section usable as electric heater
- Horizontal or vertical configuration capabilities
- 21" depth for easier attic access
- Foil-faced insulation covers the internal casing to reduce cabinet condensation
- Galvanized, leather grain-embossed finish
- AHRI certified; ETL listed



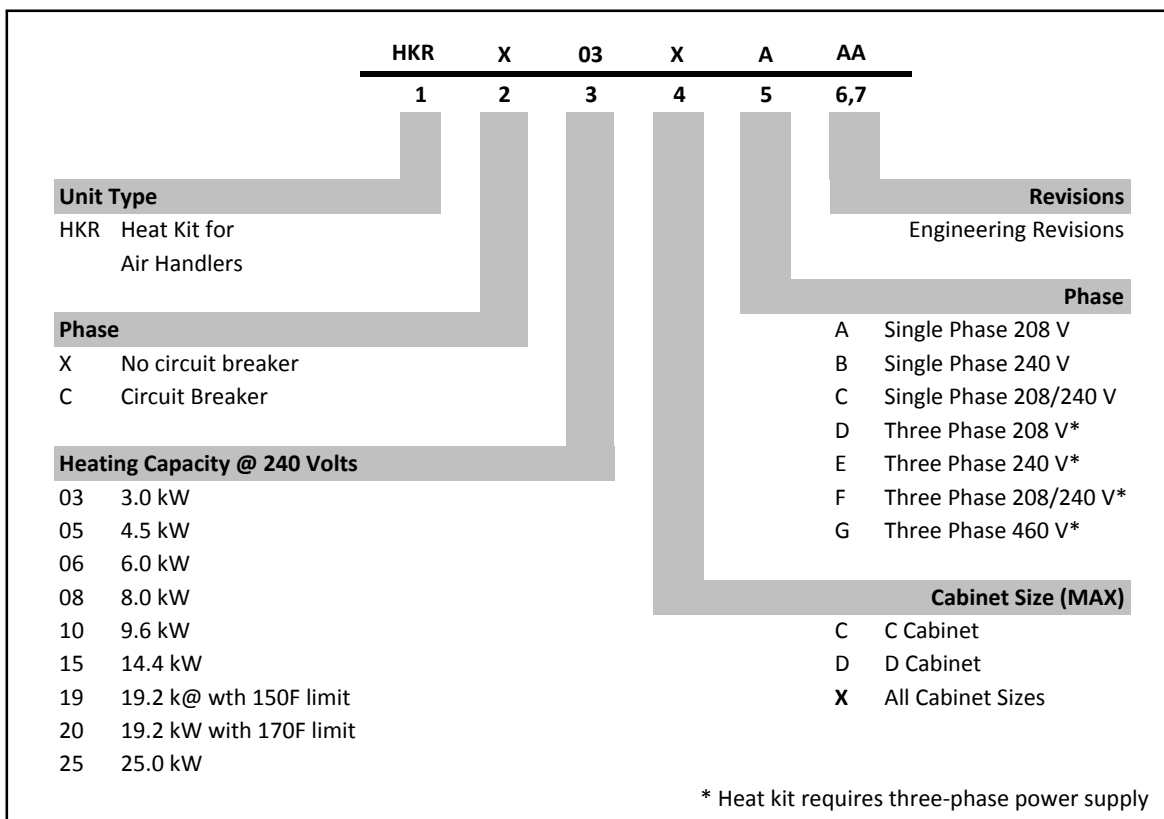
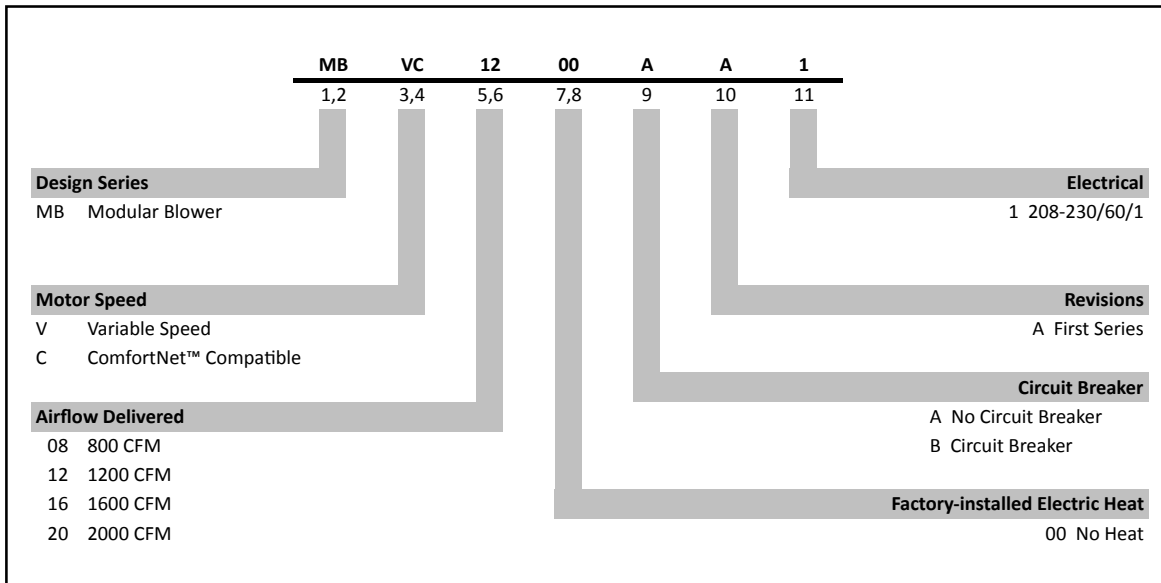
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\* Complete warranty details available from your local dealer or at [www.goodmanmfg.com](http://www.goodmanmfg.com). To receive the 10-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registration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

NOMENCLATURE



HEATING kW CORRECTION FACTOR

<b>SUPPLY VOLTAGE</b>	240	230	220	210	208
<b>CORRECTION FACTOR</b>	1.00	0.92	0.84	0.77	0.75

Multiply the 240-volt heating capacity by correction factors.

# SPECIFICATIONS

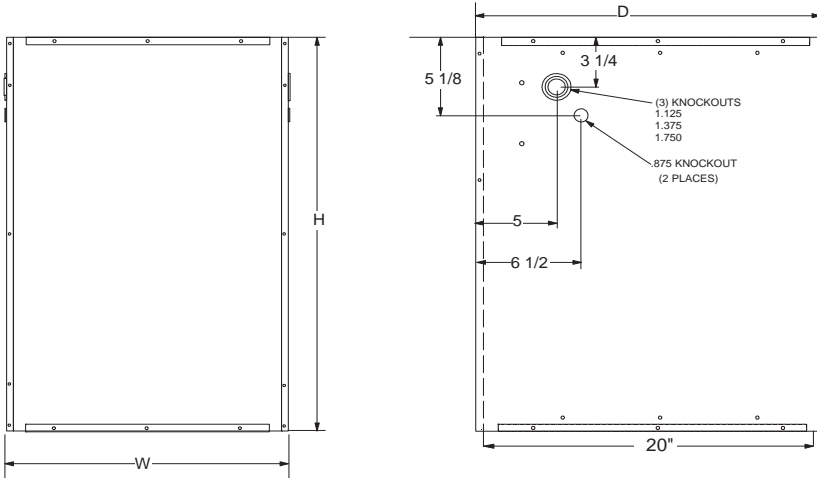
MODEL	1200	1500	2000
<b>BLOWER</b>			
CFM	10	10	11
HP	8	8	10
<b>ELECTRICAL DATA</b>			
VOLTS	208/230	208/230	208/230
AMPERES	4.3	5.3	5.8
PHASES	15	15	15
<b>Blower Motor</b>			
HP	8	8	8
<b>SHIP WEIGHT (LBS.)</b>	7	80	8

- Minimum Circuit Ampacity (MCA) and Maximum Overcurrent Protection (MOP) for blower without supplemental heat installed. Refer to unit nameplate for these specifications with approved accessory.

# PRODUCT SPECIFICATIONS

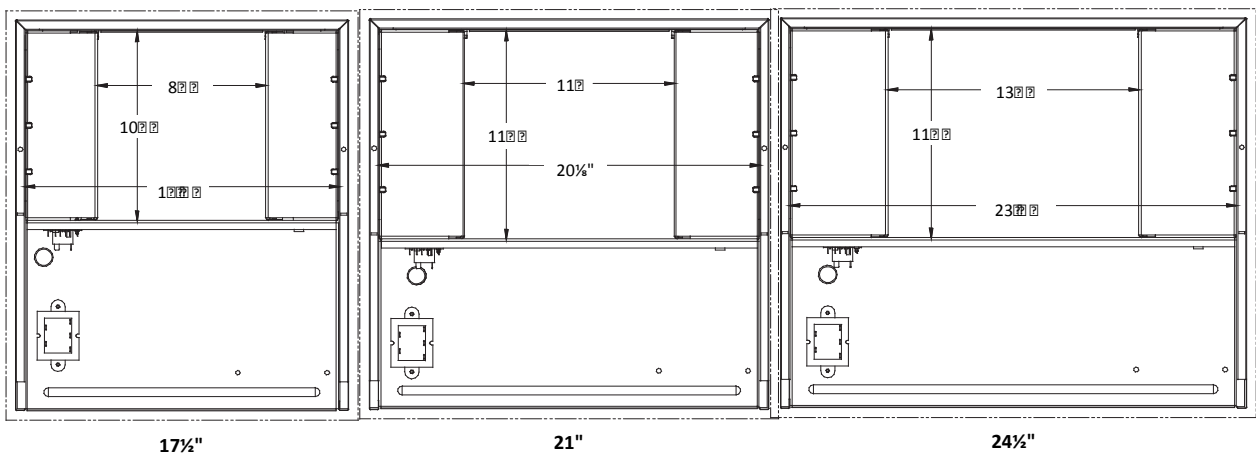
## DIMENSIONS

### SIDE AND FRONT VIEWS



MODEL	DIMENSIONS		
	WIDTH	DEPTH	HEIGHT
1200	17 1/2"	21"	27"
1000	21"	21"	30"
2000	24 1/2"	21"	30"

### TOP VIEW



**COOLING / HP AIRFLOW**

S1	S2	SPEED TAP	MBVC1200 AIRFLOW (SCFM)	MBVC1600 AIRFLOW (SCFM)	MBVC2000 AIRFLOW (SCFM)
off	off	2	200	1000	1200
22	off	2	800	1200	1200
off	22	2	1000	1400	1800
22	22	2	1200	1200	2000

COOLING / HP / AUX TRIM			COOLING PROFILE		
23	24	222 22222	25	22	
off	off	0	off	off	2
22	off	102	22	off	2
off	22	2102	off	22	2
22	22	0	22	22	2

**NOTES**

22 The chart is for information only. For satisfactory operation, external static pressure must not exceed value shown 2 on rating plate.

22 Use the CFM adjustment factors of .98 for horizontal left, .95 for horizontal right & .96 for downflow orientations.

## HEAT KIT DATA

Models	Circuit 1			Circuit 2			Single-Point Kit	
	Heater Amps	MCA <sup>1</sup>	MOP <sup>2</sup>	Heater Amps	MCA <sup>1</sup>	MOP <sup>2</sup>	MCA <sup>1</sup>	MOP <sup>2</sup>
<b>MBVC1200AA-1A*</b>	0	4.3	15	---	---	---	---	---
03	10.8	17.8	20	---	---	---	---	---
05	17.2	25.7	30	---	---	---	---	---
07	21.7	31.3	35	---	---	---	---	---
08	25.3	35.8	40	---	---	---	---	---
10	34.3	47.1	50	---	---	---	---	---
15	34.3	47.1	50	17.2	21.4	25	79	70
<b>MBVC1600AA-1A*</b>	0	5.3	15	---	---	---	---	---
03	10.8	19.8	20	---	---	---	---	---
05	17.2	27.7	30	---	---	---	---	---
07	21.7	33.3	35	---	---	---	---	---
08	25.3	37.8	40	---	---	---	---	---
10	34.3	49.1	50	---	---	---	---	---
15	34.3	49.1	50	17.2	21.4	25	71	80
<b>MBVC2000AA-1A*</b>	0	5.8	15	---	---	---	---	---
03	10.8	19.3	20	---	---	---	---	---
05	17.2	27.2	30	---	---	---	---	---
07	21.7	32.8	35	---	---	---	---	---
08	25.3	37.3	40	---	---	---	---	---
10	34.3	48.0	50	---	---	---	---	---
15	34.3	48.0	50	17.2	21.4	25	70	70
20	34.3	48.0	50	34.3	42.9	45	92	100

All ampacities noted above include air handler motor amps  
 Circuit 1: Single-phase for Air Handlers / Circuit 2: Three-phase for HKR3 Heater Kits

<sup>1</sup> Minimum Circuit Ampacity (Heater Amps + Motor Amps) X 1.25

<sup>2</sup> Maximum Overcurrent Protection = 2.25 X Motor Amps + Heater Amps

\* Revision level that may or may not be designated

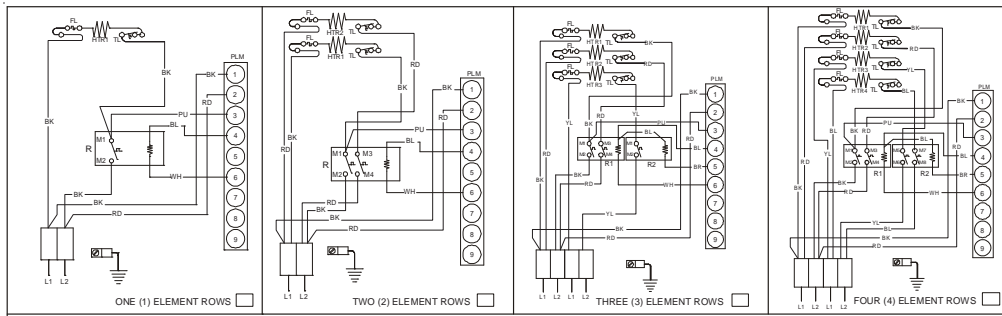
C = Circuit Breaker Option

--- indicates Not Required

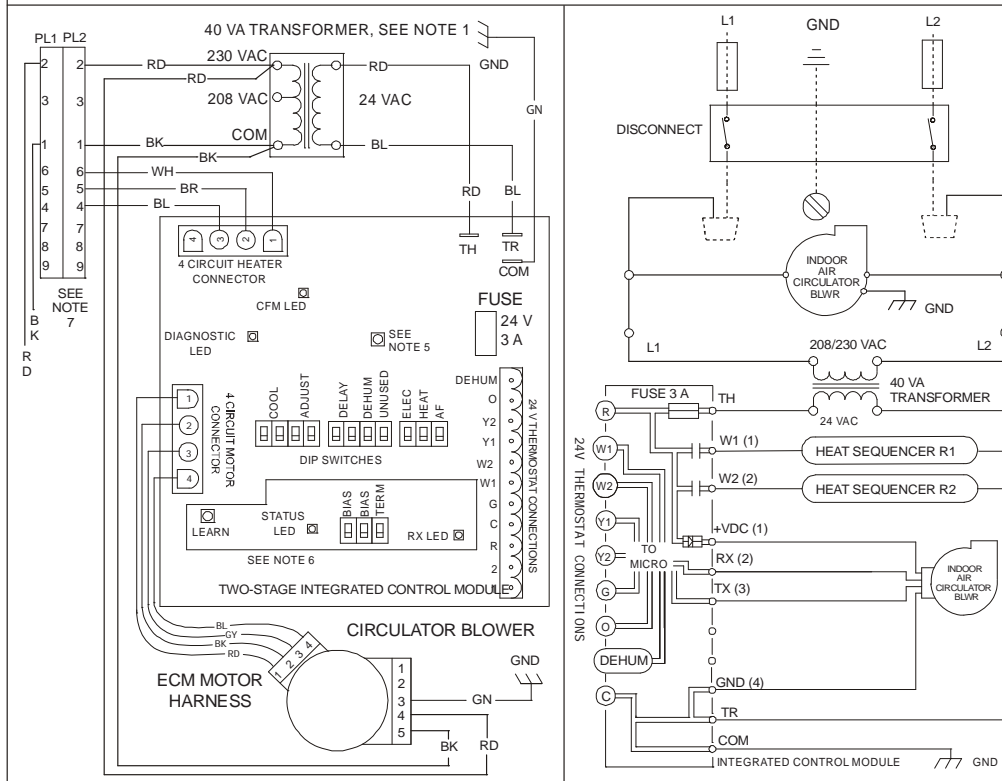
HKA meets the new UL1995 requirements for 15 and 20KW heaters

- Only applicable when HKA kits are included in table
- MBVC and MBR models

# WIRING DIAGRAM - AIR HANDLER



NOTE: WHEN INSTALLING HEATER KIT, ENSURE SPEED TAP DOES NOT EXCEED MINIMUM BLOWER SPEED (MBS) SPECIFIED FOR THE AIRHANDLER/HEATER KIT COMBINATION ON THIS UNIT'S S&R PLATE. AFTER INSTALLING OPTIONAL HEAT KIT, MARK AN "X" IN THE  PROVIDED ABOVE. MARK ACCORDING TO NUMBER OF HEATER ELEMENT ROWS INSTALLED. NO MARK INDICATES NO HEAT KIT INSTALLED.



- NOTES:
- PLACE RED WIRE ON TRANSFORMER TERMINAL 2 FOR 208 VAC OPERATION.
  - MANUFACTURER'S SPECIFIED REPLACEMENT PARTS MUST BE USED WHEN SERVICING.
  - IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE BLOWER MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C. USE COPPER CONDUCTORS ONLY.
  - UNIT MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. AND LOCAL CODES.
  - TO RECALL THE LAST 6 FAULTS, MOST RECENT TO LEAST RECENT, DEPRESS SWITCH FOR MORE THAN 2 SECONDS WHILE IN STANDBY (N THERMOSTAT INPUTS).
  - BIAS AND TERM DIPSWITCHES MUST BE IN "ON" POSITION. RED STATUS LED PROVIDES NETWORK STATUS. GREEN RX LED INDICATES NETWORK TRAFFIC. USE LEARN BUTTON TO RESET NETWORK.
  - DISCARD CONNECTOR PL1 WHEN INSTALLING OPTIONAL HEAT KIT.
- 0140A00039 REV. A

COLOR CODES:

PK	PINK
BR	BROWN
WH	WHITE
BL	BLUE
GY	GRAY
RD	RED
YL	YELLOW
OR	ORANGE
VT	VIOLET
GN	GREEN
BK	BLACK

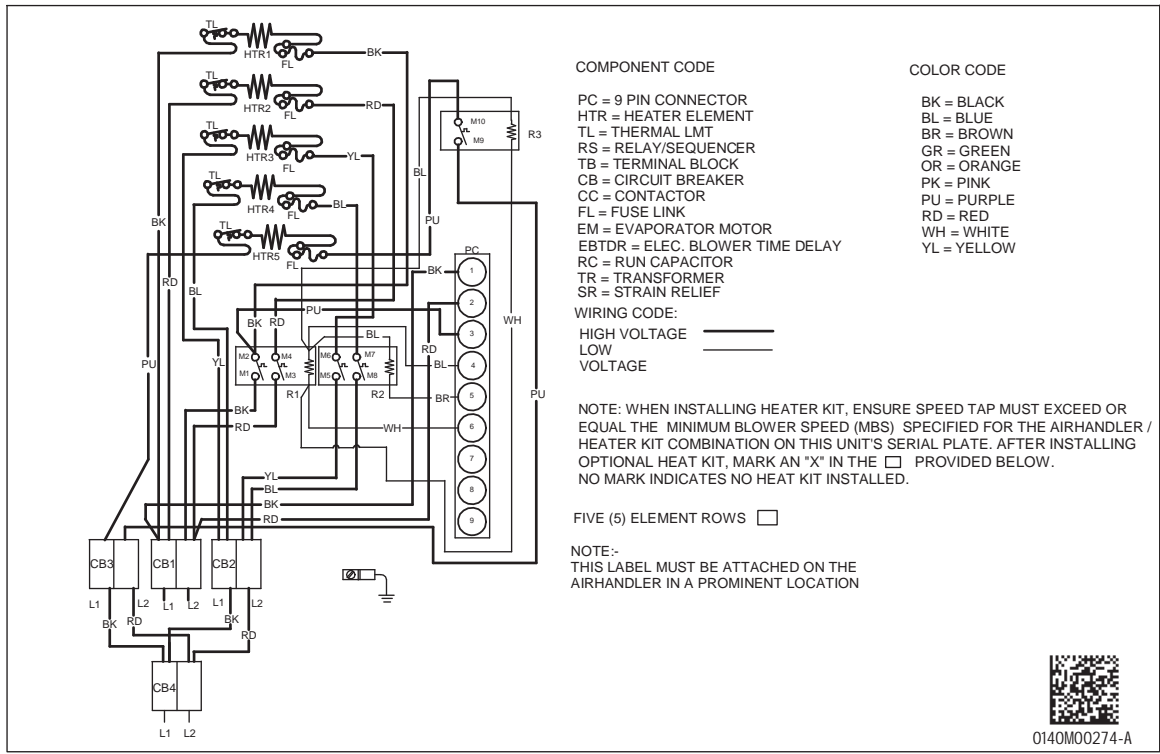
LOW VOLTAGE (24V)	—
LOW VOLTAGE FIELD	----
HI VOLTAGE (230V)	—
HI VOLTAGE FIELD	----
JUNCTION	●
TERMINAL	○
INTERNAL TO INTEGRATED CONTROL	—
EQUIPMENT GND	⏏
FIELD GND	⏏
FIELD SPLICE	⏏
RESISTER	⏏
OVERCURRENT PROT. DEVICE	⏏
PLUG CONNECTION	⏏

⚡ 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.

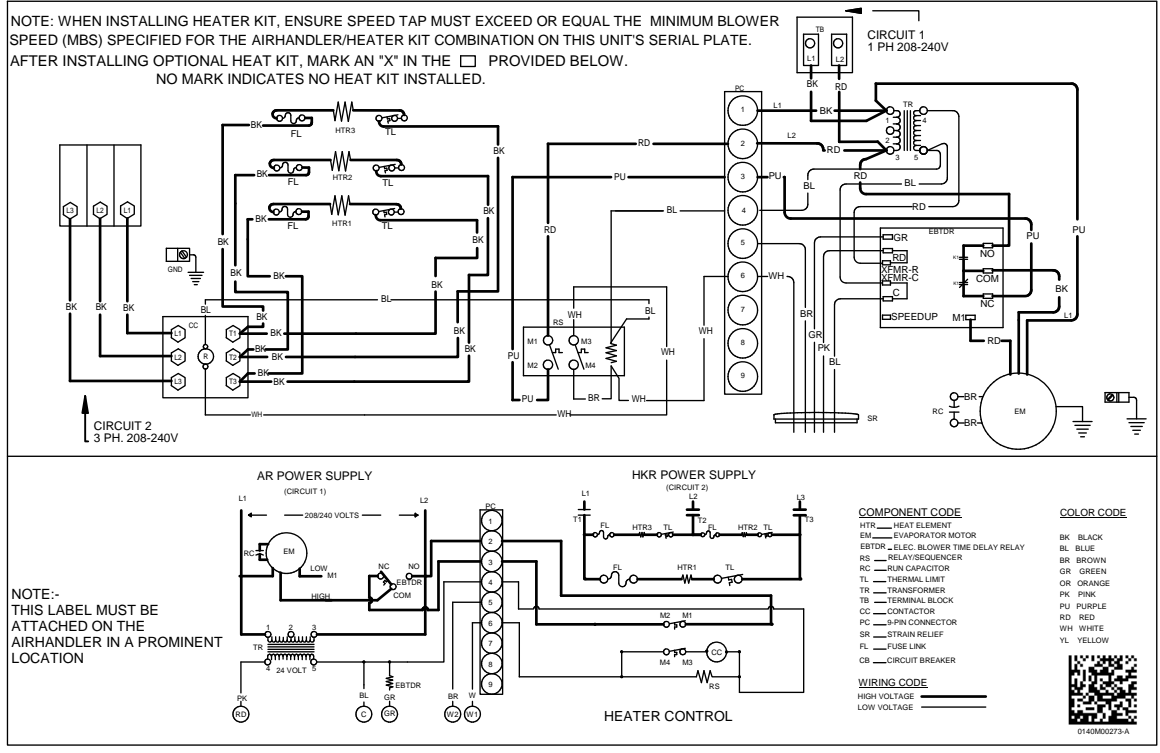
WARNING

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

# WIRING DIAGRAM - 5 ELEMENT HEATER KIT



# WIRING DIAGRAM - 3 PHASE HEATER KIT



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