



Air Conditioning & Heating

ASUF SERIES

MULTI-POSITION MULTI-SPEED ECM BASED

AIR HANDLER 1½ TO 5 TONS



Product Features

- Check flowrator for cooling and heat pump applications
- Direct drive, multi-speed ECM blower motor
- All-aluminum evaporator coil
- Coil mounting track for quick repositioning
- Optimized for use with R-410A refrigerant
- 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
- Rigid SmartFrame™ cabinet
- 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
- AHRI certified; ETL listed

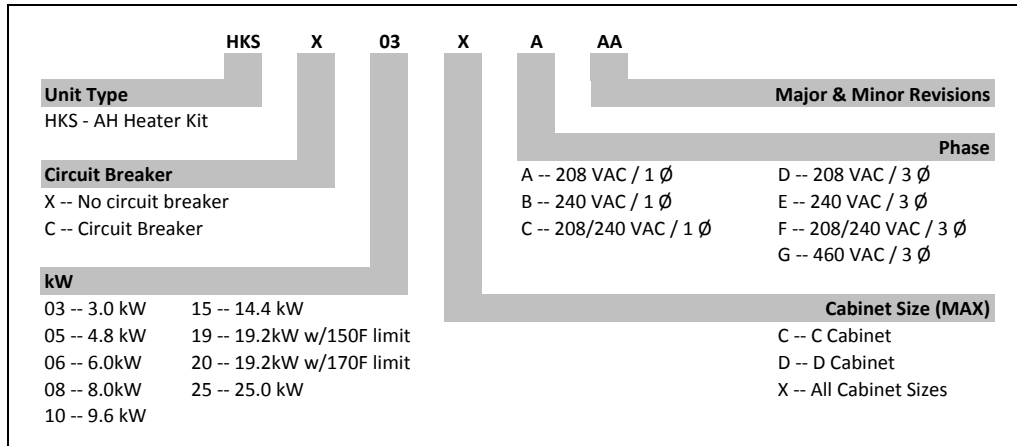
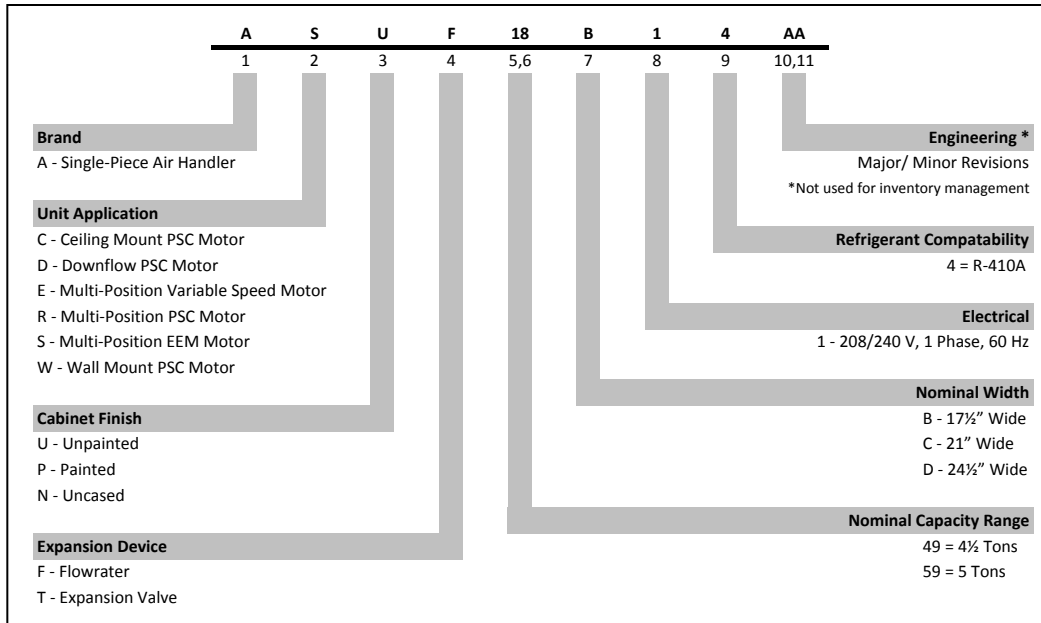
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* Complete warranty details available from your local dealer or at www.goodmanmfg.com. To receive the 10-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registration is not required in California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

NOMENCLATURE



HEATING kW CORRECTION FACTOR

SUPPLY VOLTAGE	240	230	220	210	208
CORRECTION FACTOR	1.00	0.92	0.84	0.77	0.75

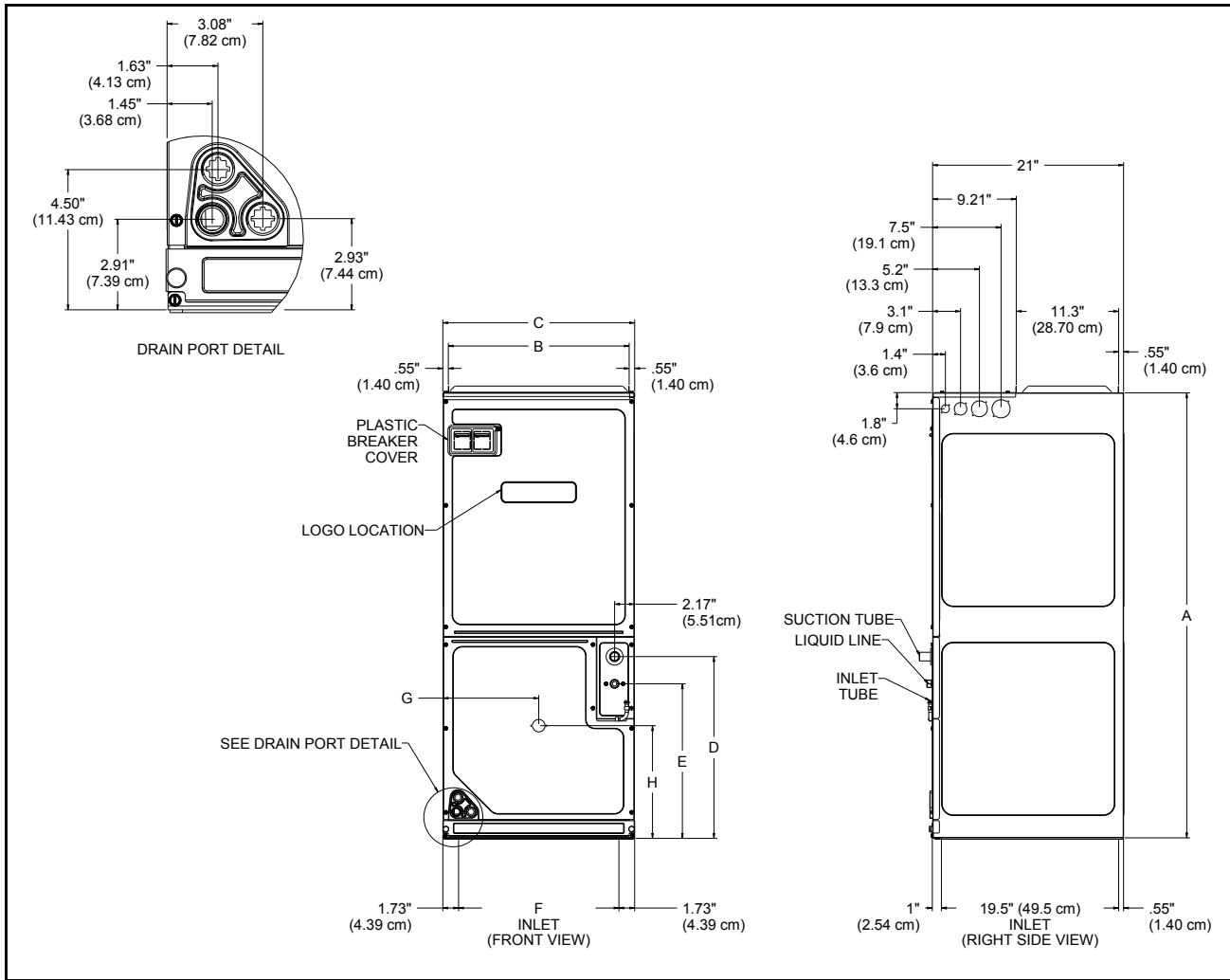
Multiply the 240-volt heating capacity by correction factors.

SPECIFICATIONS

	ASUF49C14*	ASUF59D14*
NOMINAL RATINGS		
Cooling (Btu/h)	54,000	60,000
BLOWER		
Diameter	10 $\frac{5}{8}$ "	12"
Width	10 $\frac{5}{8}$ "	10 $\frac{5}{8}$ "
COIL CONNECTIONS		
Liquid	$\frac{3}{8}$ "	$\frac{3}{8}$ "
Suction	$\frac{7}{8}$ "	$\frac{7}{8}$ "
Coil Drain Connect (FPT)	$\frac{3}{4}$ "	$\frac{3}{4}$ "
ELECTRICAL DATA		
Voltage	208 / 230	208 / 230
Min Circuit Ampacity	7/7	8/8
Max. Overcurrent Device (Amps)	15/15	15 / 15
Minimum VAC	197	197
Maximum VAC	253	253
Blower Motor		
Full Load Amps (FLA)	5.4	6.65
Horsepower (HP)	$\frac{3}{4}$	1
SHIP WEIGHT (LBS.)		
	125	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.

DIMENSIONS



MODEL	A	B	C	D	E	F	G	H
ASUF49C14*	49	20	21	20	17	17 $\frac{3}{8}$	10 $\frac{1}{2}$	12 $\frac{3}{8}$
ASUF59D14*	58	23 $\frac{3}{8}$	24 $\frac{1}{2}$	28 $\frac{3}{4}$	25 $\frac{1}{4}$	21 $\frac{1}{8}$	12 $\frac{1}{4}$	12 $\frac{3}{8}$

AIRFLOW DATA (UPFLOW POSITION)

Model Number	Speed Tap	Static Pressure (in w.c.)									
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ASUF49C14	1	1,420	1,375	1,335	1,290	1,240	1,185	1,140	1,075	1,005	---
	2	1,555	1,505	1,470	1,415	1,360	1,315	1,265	1,215	1,170	---
	3	1,645	1,605	1,575	1,525	1,465	1,420	1,370	1,315	1,275	---
	4	1,745	1,690	1,655	1,625	1,570	1,520	1,470	1,425	1,385	---
	5	1,825	1,785	1,745	1,715	1,670	1,625	1,580	1,535	1,485	---
ASUF59D14	1	1,485	1,425	1,400	1,325	1,270	1,220	1,165	1,115	1,080	1,005
	2	1,675	1,625	1,600	1,530	1,485	1,435	1,390	1,345	1,295	1,245
	3	1,820	1,770	1,745	1,685	1,640	1,595	1,555	1,510	1,470	1,420
	4	2,060	2,010	1,995	1,925	1,880	1,845	1,800	1,760	1,720	1,680
	5	2,225	2,180	2,160	2,085	2,060	2,010	1,970	1,930	1,895	1,850

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.
- Assumes dry coil with filter in place.
- All models are shipped from the factory with the speed tap set on T4.

HEAT KIT DATA

MODEL	CIRCUIT 1			CIRCUIT 2			SINGLE-POINT KIT	
	HEATER AMPS	MCA ¹	MOP ²	HEATER AMPS	MCA ¹	MOP ²	MCA ¹	MOP ²
ASUF49C14AC	0 / 0	7 / 7	15 / 15	---	---	---	--	--
HKS*03XC*	10.8 / 12.5	20 / 22	25 / 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	50.1 / 57	60 / 60	---	---	---	--	--
HKSX15XF*	0/0	7 / 7	15/15	30/34.6	38/43	40/45	--	--
HKSX20XF*	0/0	7 / 7	15/15	37/43	47/54	50/60	--	--
HKSC15*##	34.7 / 40.0	50.1 / 57	60 / 60	17.3 / 20	22 / 25	25 / 25	72 / 82	80 / 90
HKSC19C#*	34.3 / 40.0	50.1 / 57	60 / 60	34.7 / 40	43 / 50	45 / 50	93 / 107	100 / 110
HKSC15XF*	0/0	7 / 7	15/15	30/34.6	38/43	40/50	--	--
HKSC20XF*	0/0	7 / 7	15/15	37/43	47/54	50/60	--	--
ASUF59D14AD	0 / 0	8 / 8	15 / 15	---	---	---	--	--
HKS*03XC*	10.8 / 12.5	22 / 24	25 / 25	---	---	---	--	--
HKS*05XC*	17.3 / 20.0	30 / 33	30 / 35	---	---	---	--	--
HKS*06XC*	21.7 / 25.0	35.4 / 40	40 / 40	---	---	---	--	--
HKS*08XC*	28.9 / 33.3	44 / 50	45 / 50	---	---	---	--	--
HKS*10XC*	34.7 / 40.0	52 / 58	60 / 60	---	---	---	--	--
HKSX15XF*	0/0	8 / 8	15/15	30/34.6	38/43	40/45	--	--
HKSX20XF*	0/0	8 / 8	15/15	38/43	47/54	50/60	--	--
HKSC15*##	34.7 / 40.0	52 / 58	60 / 60	17.3 / 20	22 / 25	25 / 25	73 / 83	80 / 90
HKSC20D#*	34.3 / 39.6	52 / 58	60 / 60	34.7 / 40	43 / 50	45 / 50	95 / 108	100 / 110
HKSC15XF*	0/0	8 / 8	15/15	30/34.6	38 / 43	40 / 45	--	--
HKSC20XF*	0/0	8 / 8	15/15	38/43	47/54	50 / 60	--	--
HKSC25DC*	52/60	73/83	80/90	34.7/40	43/50	45/50	117 / 133	125 / 150

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

¹ Minimum Circuit Ampacity (Heater Amps + Motor Amps) X 1.25
² Maximum Overcurrent Protection = 2.25 X Motor Amps + Heater Amps
 * Revision level that may or may not be designated

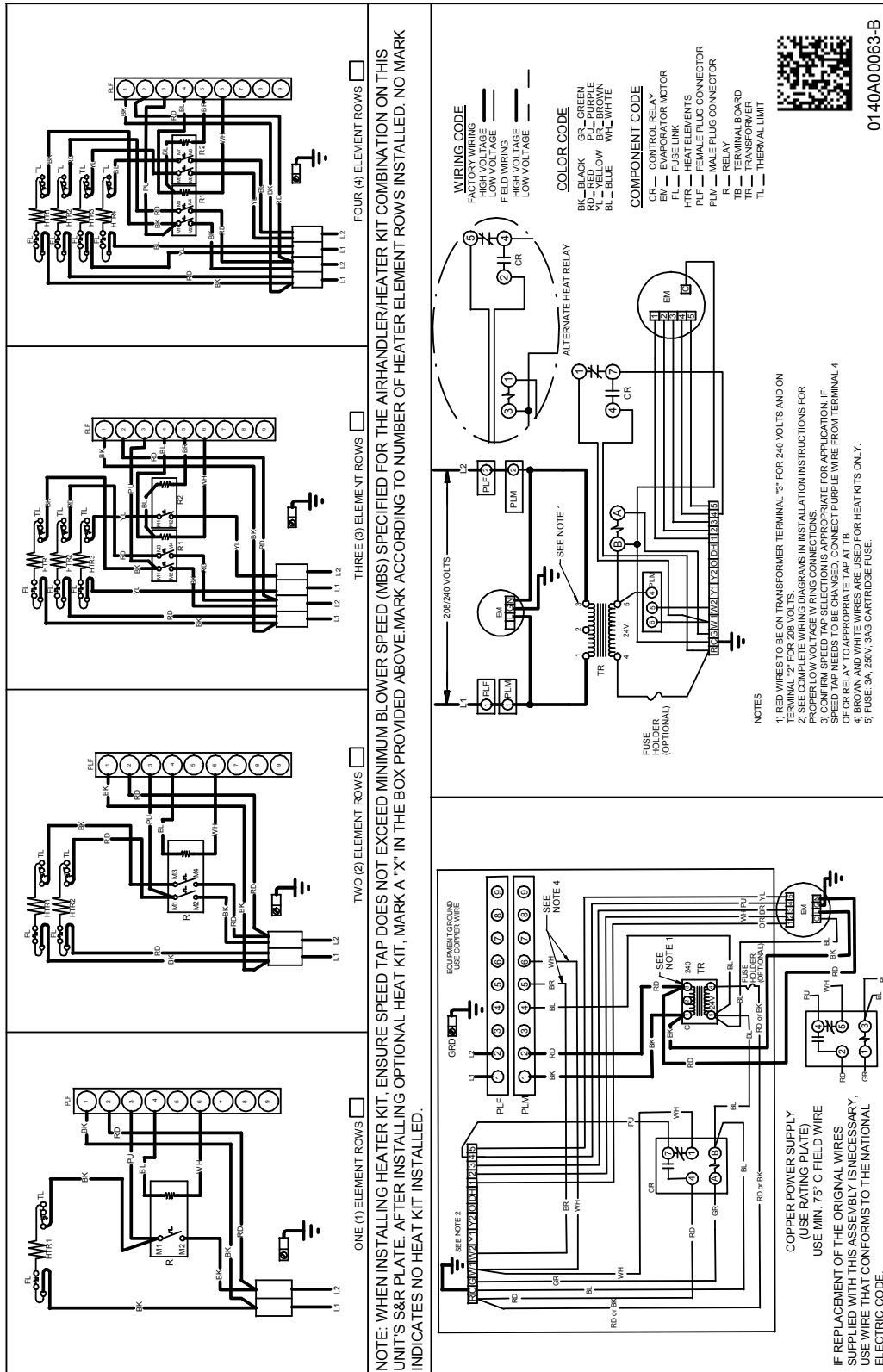
C = Circuit Breaker Option

--- 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

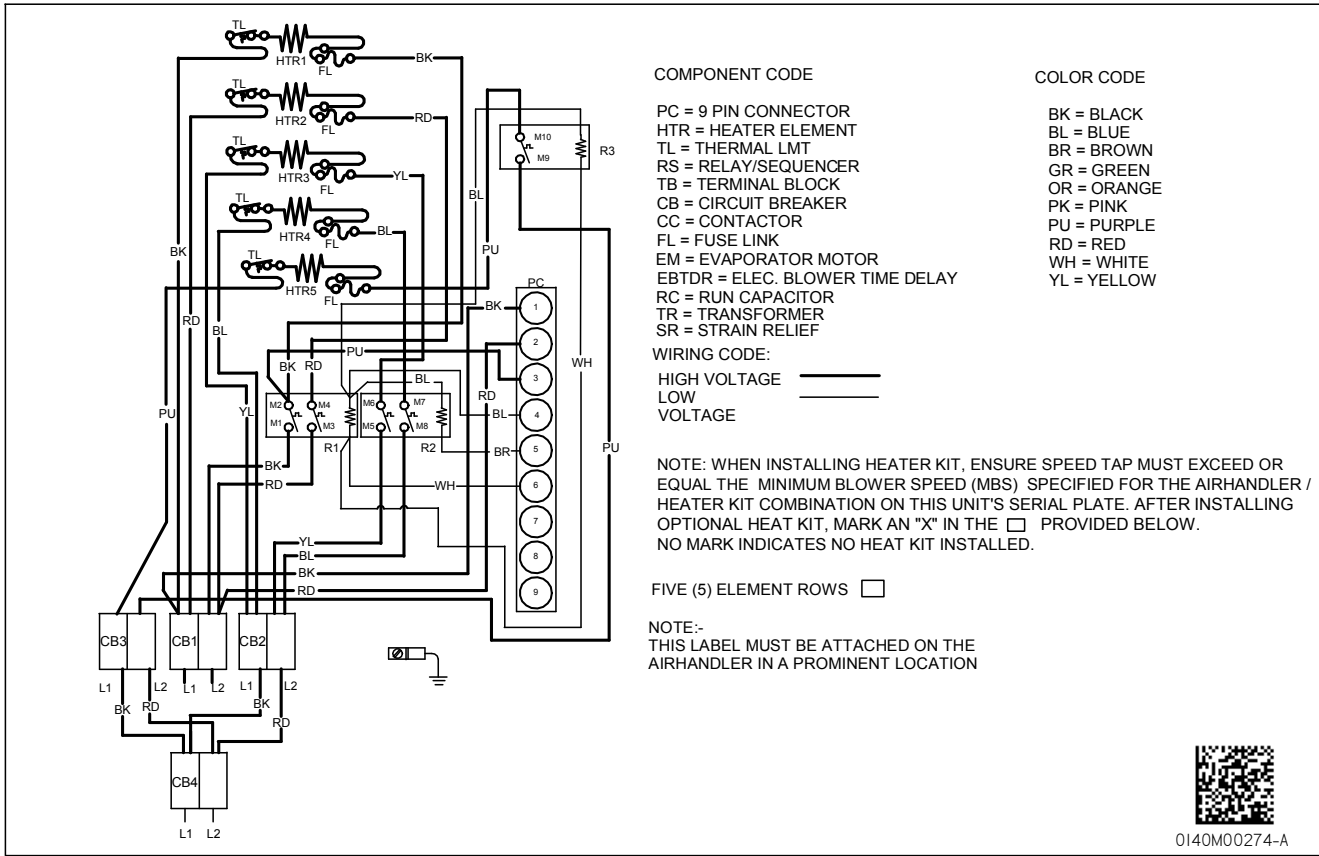


NOTE: The five element, 25 kW heater kit is not SHOWN ABOVE.

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

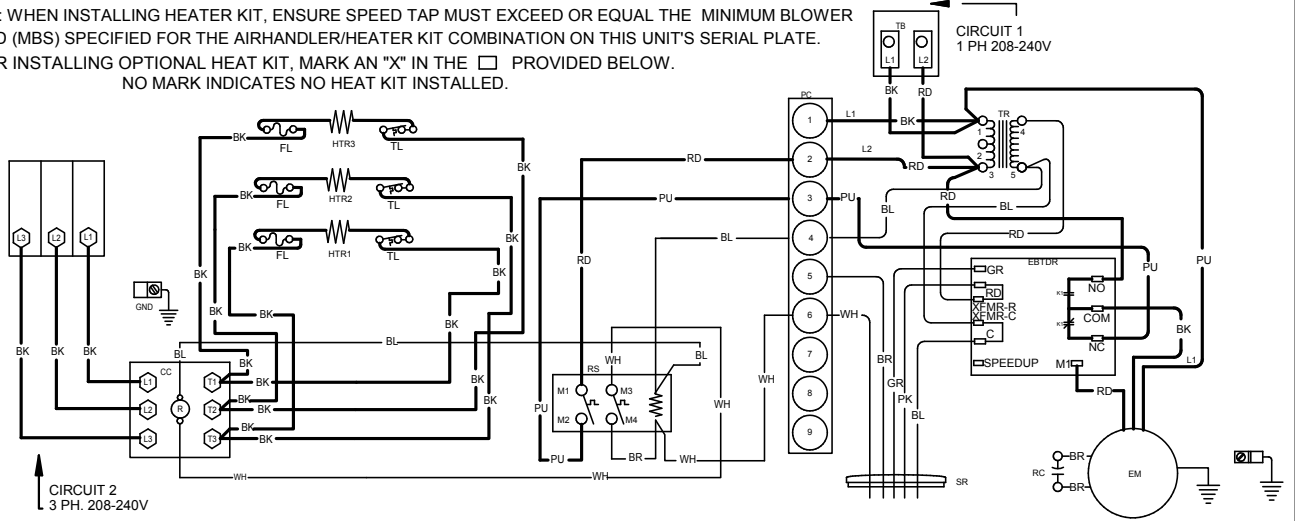
	<p>WARNING</p>	<p>High Voltage: Disconnect all power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury, or death.</p>	
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WIRING DIAGRAM – 5 ELEMENT HEATER KIT

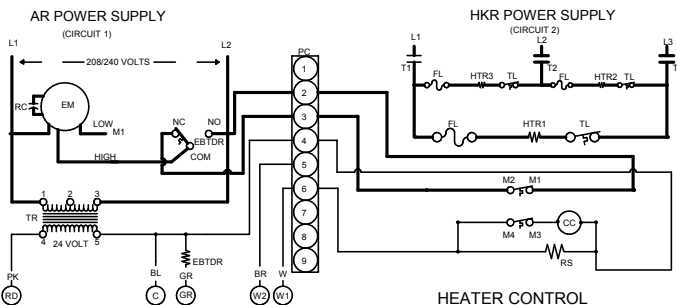


WIRING DIAGRAM – 3 PHASE HEATER KIT

NOTE: WHEN INSTALLING HEATER KIT, ENSURE SPEED TAP MUST EXCEED OR EQUAL THE MINIMUM BLOWER SPEED (MBS) SPECIFIED FOR THE AIRHANDLER/HEATER KIT COMBINATION ON THIS UNIT'S SERIAL PLATE. AFTER INSTALLING OPTIONAL HEAT KIT, MARK AN "X" IN THE PROVIDED BELOW. NO MARK INDICATES NO HEAT KIT INSTALLED.



NOTE:- THIS LABEL MUST BE ATTACHED ON THE AIRHANDLER IN A PROMINENT LOCATION



COMPONENT CODE		COLOR CODE	
HTR	HEAT ELEMENT	BK	BLACK
EM	EVAPORATOR MOTOR	BL	BLUE
EBTDR	ELEC. BLOWER TIME DELAY RELAY	BR	BROWN
RS	RELAY/SEQUENCER	GR	GREEN
RC	RUN CAPACITOR	OR	ORANGE
TL	THERMAL LIMIT	PK	PINK
TR	TRANSFORMER	PU	PURPLE
TB	TERMINAL BLOCK	RD	RED
CC	CONTACTOR	WH	WHITE
PC	9-PIN CONNECTOR	YL	YELLOW
SR	STRAIN RELIEF		
FL	FUSE LINK		
CB	CIRCUIT BREAKER		

WIRING CODE	
HIGH VOLTAGE	—————
LOW VOLTAGE	—————



ACCESSORIES

DOWNFLOW INSULATION KIT

DPI-B	DPI-C	DPI-D
	ASUF49C14	ASUF59D14

FILTERS

CHASSIS	PART#	SIZE
B	ALFH16201E	16.0" x 20.0"
C	ALFH1912201E	19.5" x 20.0"
D	ALFH20231E	23.0" x 20.0"

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