

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.amana-hac.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 Québec.



NOMENCLATURE

	A	S	U	F	18	B	1	4	AA	
	1	2	3	4	5,6	7	8	9	10,11	
Brand	A - Single-Piece Air Handler									Engineering *
										Major/ Minor Revisions
										*Not used for inventory management
Unit Application										Refrigerant Compatibility
C - Ceiling Mount PSC Motor										4 = R-410A
D - Downflow PSC Motor										
E - Multi-Position Variable Speed Motor										
R - Multi-Position PSC Motor										Electrical
S - Multi-Position EEM Motor										1 - 208/240 V, 1 Phase, 60 Hz
W - Wall Mount PSC Motor										
Cabinet Finish										Nominal Width
U - Unpainted										B - 17½" Wide
P - Painted										C - 21" Wide
N - Uncased										D - 24½" Wide
Expansion Device										Nominal Capacity Range
F - Flowrater										49 = 4½ Tons
T - Expansion Valve										59 = 5 Tons

	HKS	X	03	X	A	AA	
Unit Type	HKS - AH Heater Kit						Major & Minor Revisions
Circuit Breaker							Phase
X -- No circuit breaker							A -- 208 VAC / 1 Ø
C -- Circuit Breaker							D -- 208 VAC / 3 Ø
							B -- 240 VAC / 1 Ø
							E -- 240 VAC / 3 Ø
							C -- 208/240 VAC / 1 Ø
							F -- 208/240 VAC / 3 Ø
							G -- 460 VAC / 3 Ø
kW							Cabinet Size (MAX)
03 -- 3.0 kW	15 -- 14.4 kW						C -- C Cabinet
05 -- 4.8 kW	19 -- 19.2kW w/150F limit						D -- D Cabinet
06 -- 6.0kW	20 -- 19.2kW w/170F limit						X -- All Cabinet Sizes
08 -- 8.0kW	25 -- 25.0 kW						
10 -- 9.6 kW							

HEATING kW CORRECTION FACTOR

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

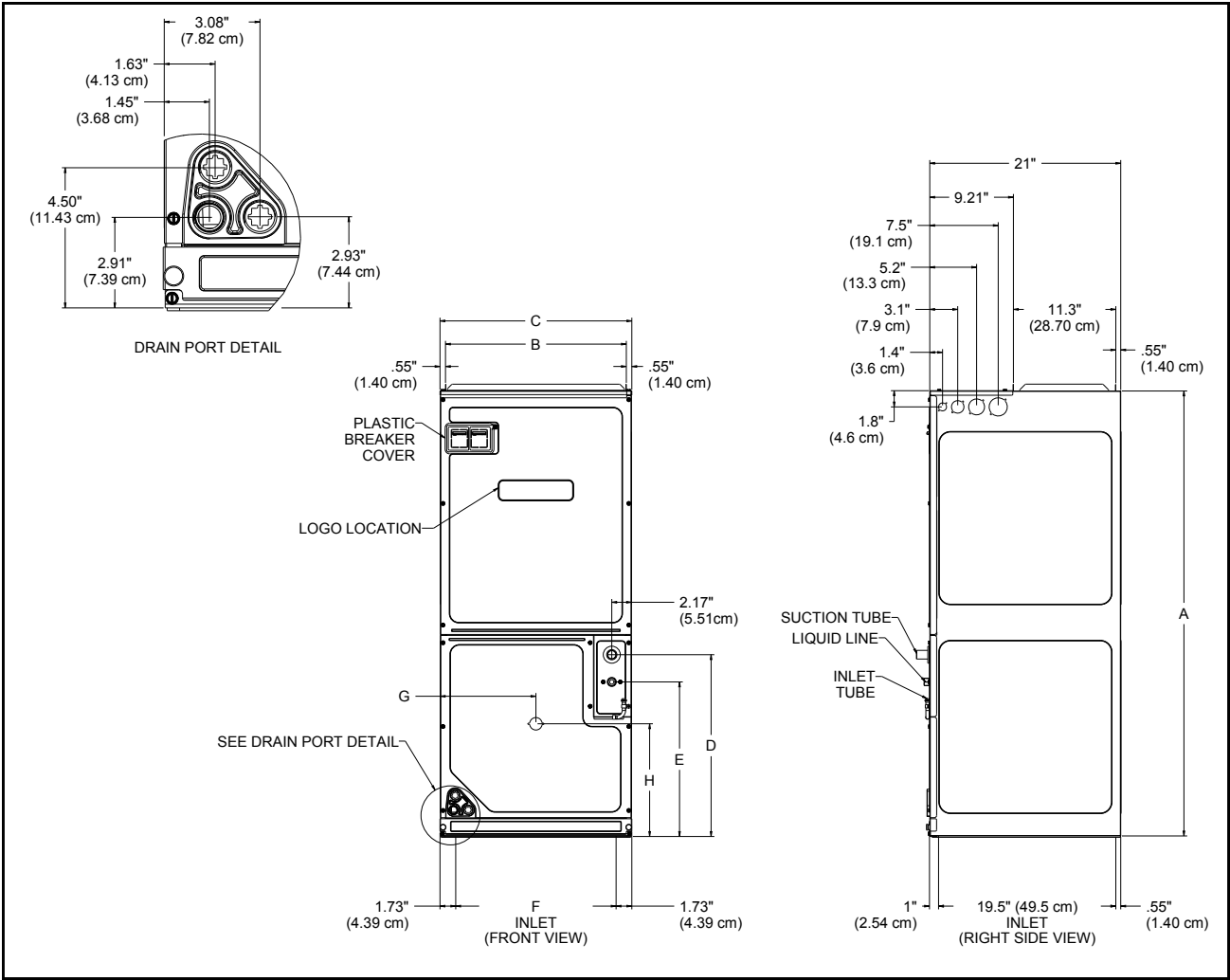
Multiply the 240-volt heating capacity by correction factors.

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 ³ / ₈	10 ¹ / ₂	12 ³ / ₈
ASUF59D14*	58	23 ³ / ₈	24 ¹ / ₂	28 ³ / ₄	25 ³ / ₄	21 ¹ / ₈	12 ¹ / ₄	12 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

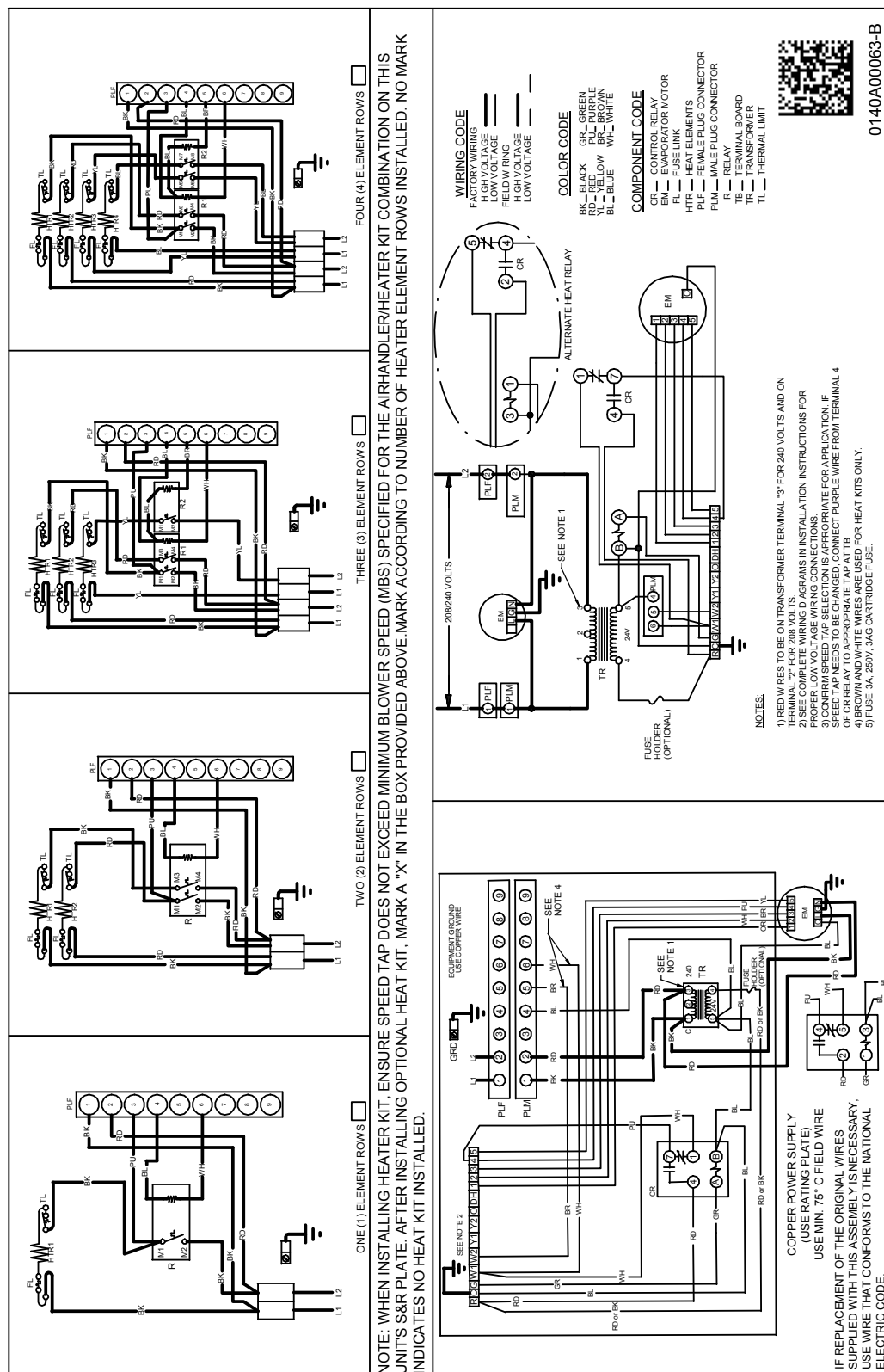
C = Circuit Breaker Option

--- 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.

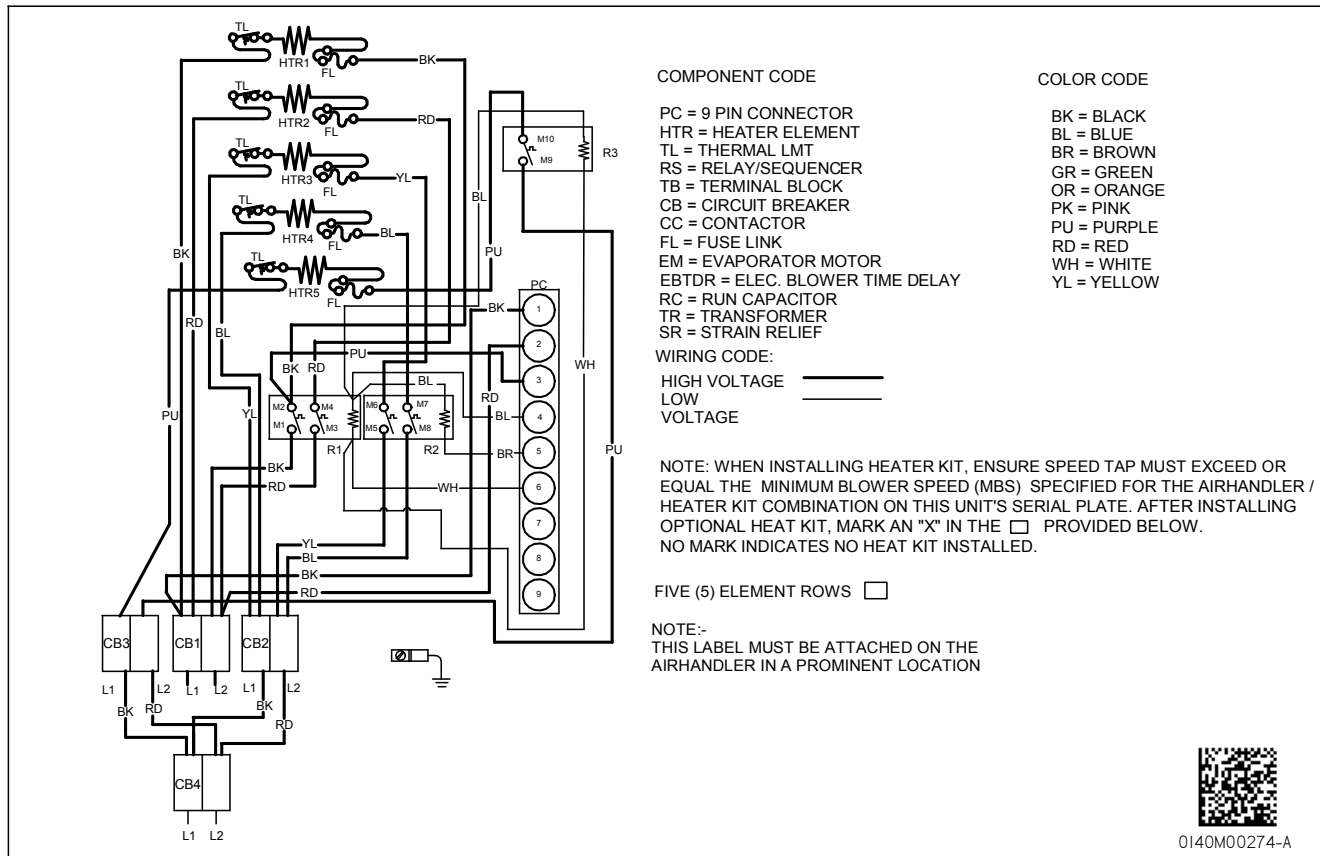


WARNING

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.

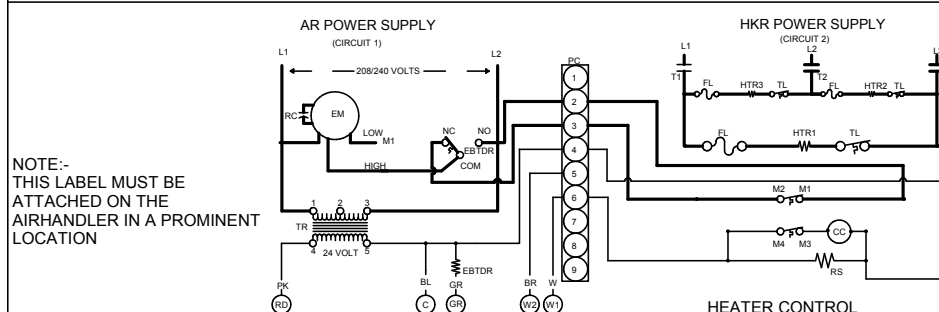
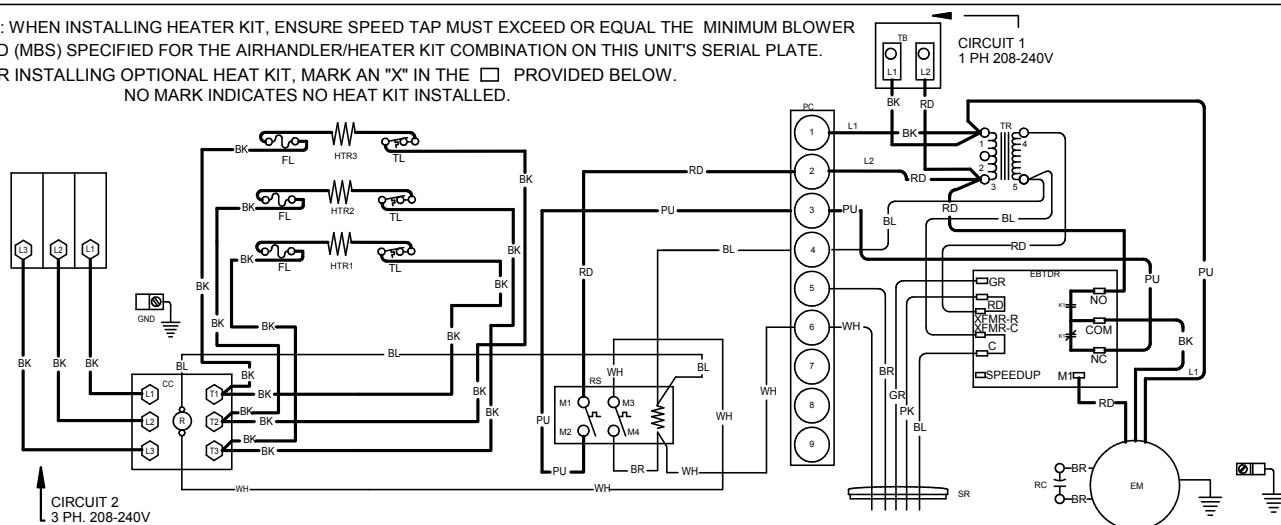


WIRING DIAGRAM – 5 ELEMENT HEATER KIT



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

HTR — HEAT ELEMENT
EM — EVAPORATOR MOTOR
EBTDR — ELEC. BLOWER TIME DELAY RELAY
RS — RELAY/SEQUENCER
RC — RUN CAPACITOR
TL — THERMAL LIMIT
TR — TRANSFORMER
TB — TERMINAL BLOCK
CC — CONTACTOR
PC — 9-PIN CONNECTOR
SR — STRAIN RELIEF
FL — FUSE LINK
CB — CIRCUIT BREAKER

WIRING CODE

HIGH VOLTAGE ———
LOW VOLTAGE ———

COLOR CODE

BK — BLACK
BL — BLUE
BR — BROWN
GR — GREEN
OR — ORANGE
PK — PINK
PU — PURPLE
RD — RED
WH — WHITE
YL — YELLOW



0140M00273-A

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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