



Air Conditioning & Heating

ASPF

MULTI-POSITION AIR HANDLER WITH ENERGY-SAVING MOTOR

1½ TO 5 TONS

Standard Features

- Suitable for use with refrigerants R-410A and R-22
- All-aluminum evaporator coil
- Check flowrate expansion device for cooling and heat pump applications
- Discreet-speed ECM motor
- Enhances the performance of your Goodman® brand air conditioner or heat pump
- Multi-position — upflow, downflow or horizontal
- Built-in coil has horizontal, vertical, and downflow drain pans with secondary drain connections
- 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
- AHRI Certified; ETL Listed

Cabinet Features

- Fully insulated, painted steel cabinet with attractive Architectural Gray finish
- Foil-faced insulation is glued in place and covers the entire blower case to reduce operating sound and cabinet condensation
- Built-in filter rack for 1" filter (filter not included)
- Low-voltage cabinet connections
- Power supply on top
- Low-voltage entry on top or side



* 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 Québec.



NOMENCLATURE

	A	S	P	F	3610	1	6	AA	
	1	2	3	4	5,6,7,8	9	10	11,12	
Brand									Engineering *
A Single-piece Air Handler									Major/ Minor Revisions * Not used for inventory management
Unit Application									Refrigerant Compatibility
C Ceiling Mount PSC Motor									No Digit = R-22 only
D Downflow PSC Motor									6 = R-410A or R-22
E Multi-Position Variable-Speed Motor									
R Multi-Position PSC Motor									Electrical
S Multi-Position ECM Motor									1 208/240 V, 1 Phase, 60 Hz
W Wall Mount PSC Motor									
Cabinet Finish									Nominal Capacity Range @ 13 SEER
U Unpainted									Multi-Position & Downflow Applications
P Painted									1729 1¼ to 2½ Tons (for Export Systems)
N Uncased									1830 1½-3½ Tons
									3642 3-3½ Tons
Expansion Device									Ceiling-Mount & Wall-Mount Applications
F Flowrater									(Nominal Cooling Capacity/ Electric Heat kW)
T Expansion Valve									1805 1½ Tons Cooling/ 5 kW Electric Heat
									2405 2 Tons Cooling/ 5 kW Electric Heat
									3610 3 Tons Cooling/ 10 kW Electric Heat



SPECIFICATIONS

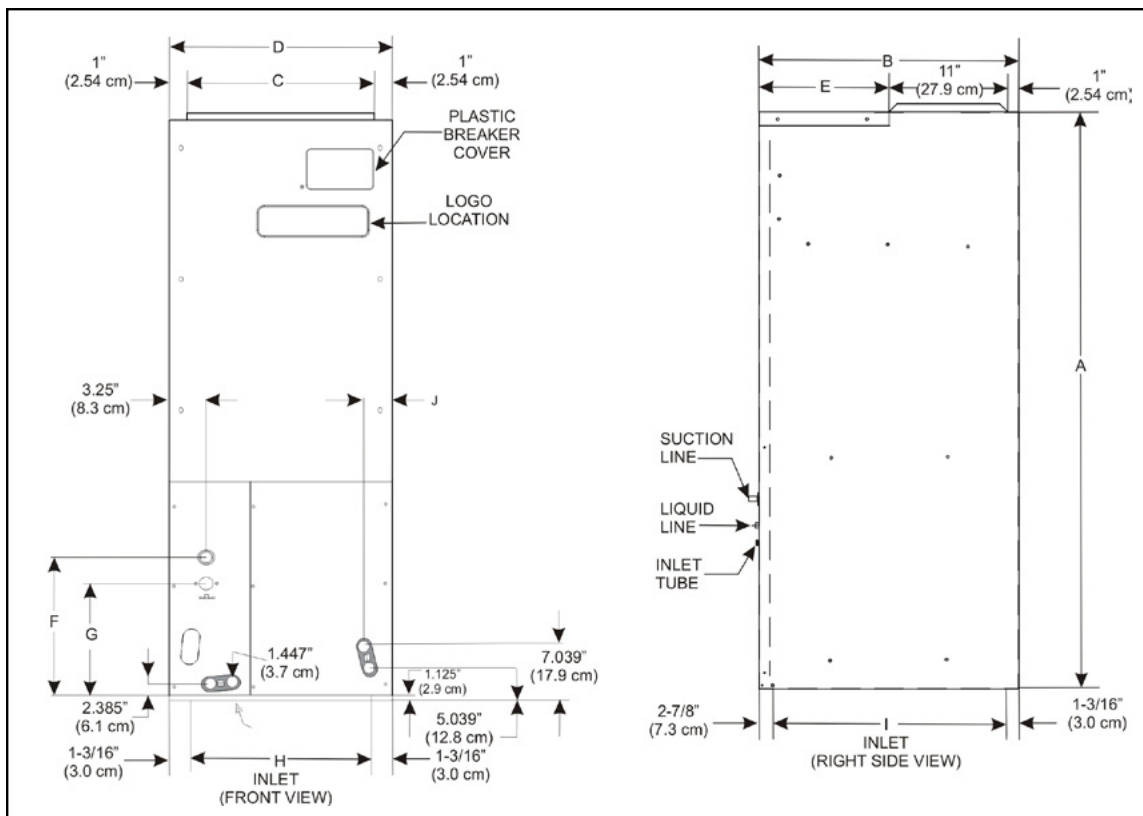
	ASPF 183016*	ASPF 313716*	ASPF 426016*
NOMINAL RATINGS			
Cooling (BTU/h)	18,000 - 30,000	30,000 - 36,000	42,000 - 60,000
Airflow rate CFM (High/ Low) ¹	1,085 / 650	1,350 / 600	2,000 / 1,175
Piston Size ²	0.065	0.074	0.093
BLOWER			
Diameter	9½"	10⅝"	11 ¹⁵ / ₁₆ "
Width	8"	10⅝"	10⅝"
Coil Drain Connection FPT	¾"	¾"	¾"
REFRIGERANT LINE CONNECTION SIZE			
Liquid	⅜"	⅜"	⅜"
Suction	¾"	⅞"	⅞"
ELECTRICAL DATA			
Voltage	208/240	208/240	208/240
Electric Heat Capacity (kW)	5, 8, 10	3, 5, 6, 8, 10, 15, 20	10, 15, 20
Min Circuit Ampacity	3.1 / 3.1	3.8 / 3.8	5.3 / 5.3
Max. Overcurrent Device	15 / 15 amps	15 / 15 amps	15 / 15 amps
Min. / Max VAC	197 / 253	197 / 253	197 / 253
Blower Motor FLA/ HP	2.5 / ½	3.0 / ¾	4.2 / ¾
SHIP WEIGHT (LBS)	125	176	189

¹ CFM @.3 static

² Shipped with Coil

Note: For a properly matched system and piston sizing information, refer to Amana piston kit chart of the corresponding Amana® outdoor unit.

DIMENSIONS



MODEL	A	B	C	D	E	F	G	H	I	J
ASPF183016*	46 $\frac{3}{4}$ "	22"	17 $\frac{1}{2}$ "	19 $\frac{1}{2}$ "	10"	14 $\frac{1}{2}$ "	11 $\frac{15}{16}$ "	17 $\frac{1}{8}$ "	17 $\frac{15}{16}$ "	2"
ASPF313716*	53 $\frac{3}{4}$ "	24"	20"	22"	12"	19 $\frac{5}{8}$ "	11 $\frac{15}{16}$ "	19 $\frac{5}{8}$ "	19 $\frac{15}{16}$ "	1 $\frac{13}{16}$ "
ASPF426016*	53 $\frac{3}{4}$ "	24"	20"	22"	12"	19 $\frac{5}{8}$ "	11 $\frac{15}{16}$ "	19 $\frac{5}{8}$ "	19 $\frac{15}{16}$ "	1 $\frac{13}{16}$ "

AIRFLOW DATA

MODEL	MOTOR SPEED TAP	CFM DELIVERED AGAINST EXTERNAL STATIC PRESSURE				
		0.1"	0.2"	0.3"	0.4"	0.5"
ASPF183016*	Low (T1)	700	670	650	595	510
	Med-Low (T2)	820	785	765	745	705
	Medium (T3)	920	900	850	840	815
	Med-High (T4)	1,075	1,055	1,015	975	960
	High (T5)	1,130	1,115	1,085	1,040	1,000
ASPF313716*	Low (T1)	1,060	865	600	515	420
	Med-Low (T2)	1,105	910	795	745	690
	Medium (T3)	1,165	1,070	1,020	960	915
	Med-High (T4)	1,285	1,240	1,195	1,140	1,100
	High (T5)	1,435	1,395	1,350	1,315	1,265
ASPF426016*	Low (T1)	1,445	1,275	1,175	940	855
	Med-Low (T2)	1,545	1,405	1,325	1,260	1,145
	Medium (T3)	1,660	1,610	1,555	1,490	1,415
	Med-High (T4)	1,905	1,870	1,810	1,750	1,695
	High (T5)	2,115	2,070	2,000	1,965	1,915

NOTES:

- Assumes dry coil with filter in place; SCFM correction for wet coil = 4%
- All ASPF models are shipped from the factory with the speed tap set on T4.

HEAT KIT SELECTION

	ASPF 183016	ASPF 313716	ASPF 426016
HKR-03*	X	X	X
HKR-05*, HKR-05C*	X	X	X
HKR-06*	X	X	X
HKR-08*, HKR-08C*	X ¹	X ¹	X
HKR-10*, HKR-10C*	X ¹	X ¹	X
HKR-15CA, HKR-15CB	X ²	X ²	X ¹
HKR-20CA, HKR-20CB		X ²	X ¹
^ HKR3-15*	X ²	X ²	X ¹
^ HKR3-20*		X ²	X ¹

* Revision level that may or may not be designated

C Circuit breaker option

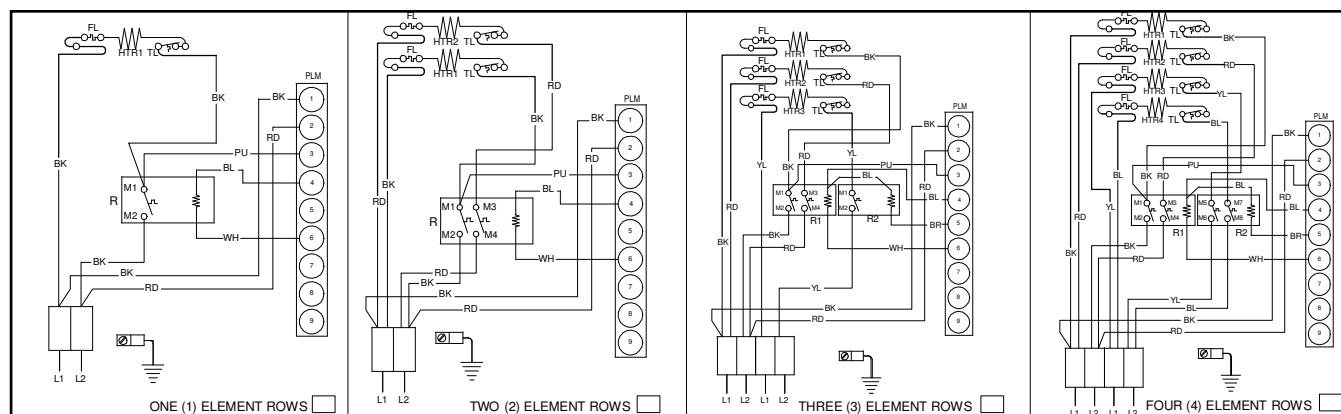
^ Heat kit requires three-phase power supply

¹ Air handler must be on speed tap 2, 3, 4, or 5.

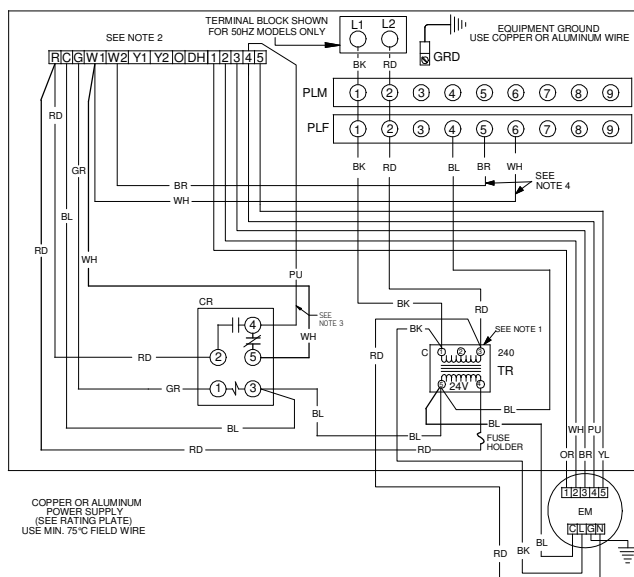
² Air handler must be on speed tap 4 or 5.

³ Air handler must be on speed tap 3, 4, or 5.

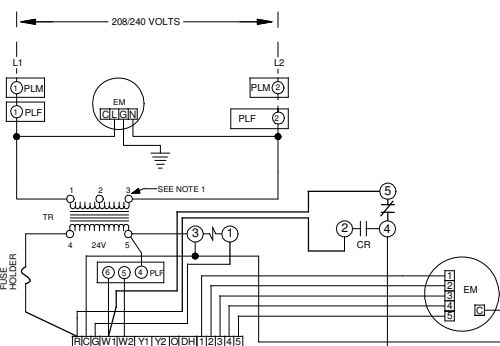
ASPF****B*/D* WIRING DIAGRAM



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.



IF REPLACEMENT OF THE ORIGINAL WIRES
SUPPLIED WITH THIS ASSEMBLY IS NECESSARY,
USE WIRE THAT CONFORMS TO THE
NATIONAL ELECTRIC CODE



<u>COLOR CODE</u>		<u>WIRING CODE</u>	
BK _ BLACK	GR _ GREEN	FACTORY WIRING	HIGH VOLTAGE
RD _ RED	PU _ PURPLE	LOW VOLTAGE	_____
YL _ YELLOW	BR _ BROWN	FIELD WIRING	
BL _ BLUE	WH _ WHITE	HIGH VOLTAGE	___ _
		LOW VOLTAGE	___ _
 <u>COMPONENT CODE</u>			
EM _ EVAPORATOR MOTOR		TR _ TRANSFORMER	
TB _ TERMINAL BOARD		PLF _ FEMALE PLUG CONNECTOR	
R _ RELAY		PLM _ MALE PLUG CONNECTOR	
CR _ CONTROL RELAY		F _ FUSE LINK	
EBTOR _ ELECTRIC BLOWER TIME		EL _ ELECTRICAL LIMIT	
		HTR _ HEAT ELEMENTS	

Notes:

- 1) Red wires to be on transformer terminal "3" for 240 volts and on terminal "2" for 208 volts.
- 2) See composite wiring diagrams in installation instructions for proper low voltage wiring connections.
- 3) Confirm speed tap selected is appropriate for application. If speed tap needs to be changed, connect purple wire from terminal 4 of CR relay to appropriate tap at TB.
- 4) Brown and white wires are used with Heat Kits only.

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REV B

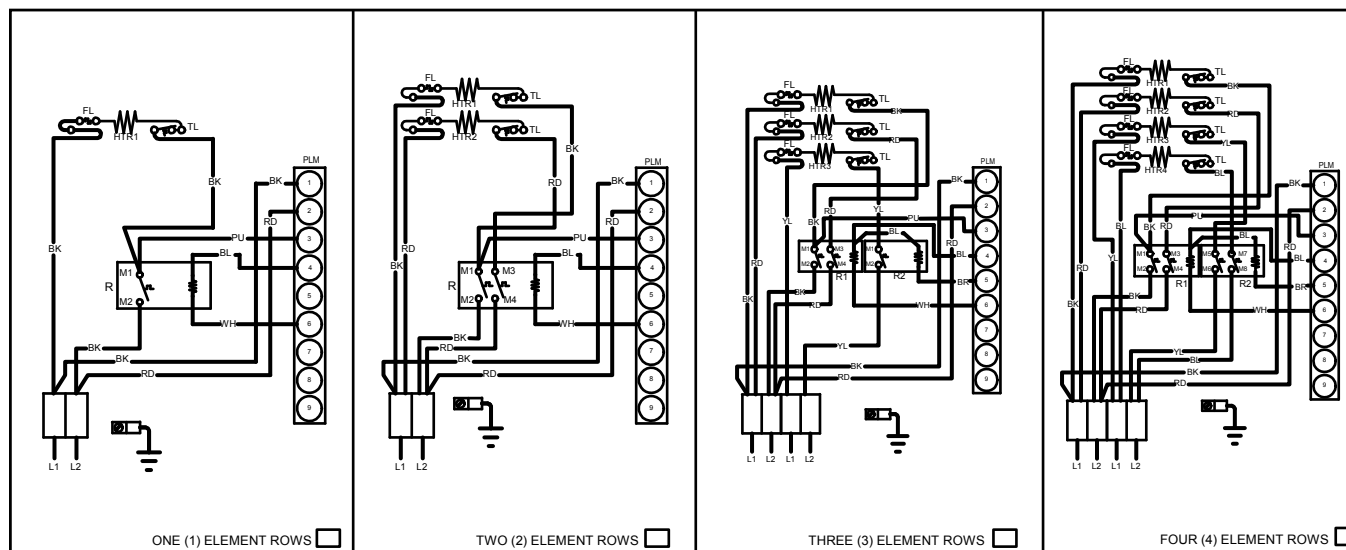
Wiring is subject to change. Always refer to the wiring diagram or the unit for the most up-to-date wiring.



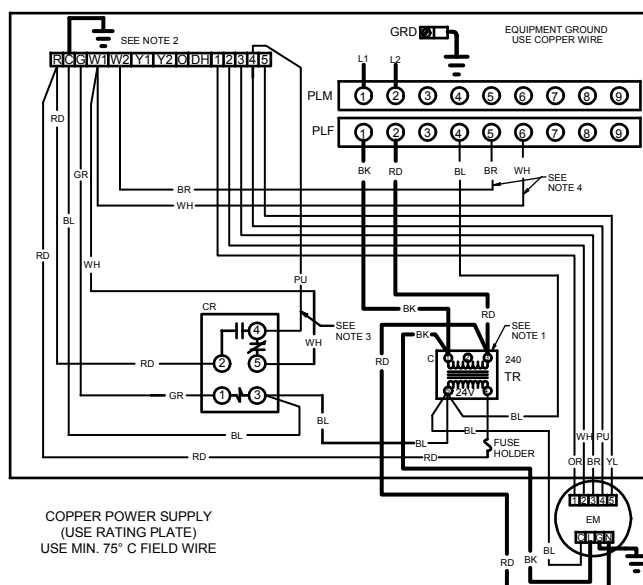
High Voltage: Disconnect all power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury, or death.



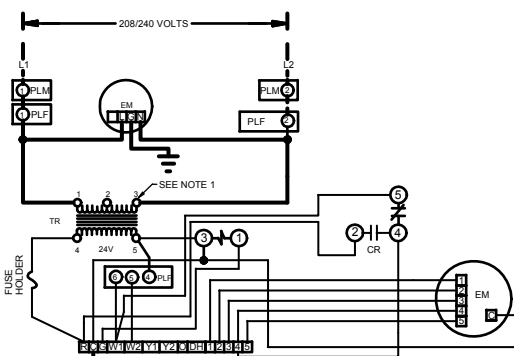
ASPF****C*/E* WIRING DIAGRAM



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 A "X" IN THE ☐ PROVIDED ABOVE. MARK ACCORDING TO NUMBER OF HEATER ELEMENT ROWS INSTALLED. NO MARK INDICATES NO HEAT KIT INSTALLED.



IF REPLACEMENT OF THE ORIGINAL WIRES SUPPLIED WITH THIS ASSEMBLY IS NECESSARY, USE WIRE THAT CONFORMS TO THE NATIONAL ELECTRIC CODE.



COLOR CODE

BK - BLACK
RD - RED
YL - YELLOW
BL - BLUE

GR - GREEN
PL - PURPLE
BR - BROWN
WH - WHITE

COMPONENT CODE

EM - EVAPORATOR MOTOR
TB - TERMINAL BOARD
R - RELAY
CR - CONTROL RELAY
EBTDR - ELECTRONIC BLOWER TIME DELAY RELAY

WIRING CODE

FACTORY WIRING
HIGH VOLTAGE
LOW VOLTAGE
FIELD WIRING
HIGH VOLTAGE
LOW VOLTAGE

TR - TRANSFORMER
PLF - FEMALE PLUG CONNECTOR
PLM - MALE PLUG CONNECTOR
FL - FUSE LINK
TL - THERMAL LIMIT
HTR - HEAT ELEMENTS

NOTES:

- 1) RED WIRES TO BE ON TRANSFORMER TERMINAL "3" FOR 240 VOLTS AND ON TERMINAL "2" FOR 280 VOLTS
- 2) SEE COMPLETE WIRING DIAGRAMS IN INSTALLATION INSTRUCTIONS FOR PROPER LOW VOLTAGE WIRING CONNECTIONS.
- 3) CONFIRM SPEED TAP SELECTION IS APPROPRIATE FOR APPLICATION. IF SPEED TAP NEEDS TO BE CHANGED, CONNECT PURPLE WIRE FROM TERMINAL 4 OF CR RELAY TO APPROPRIATE TAP AT TB
- 4) BROWN AND WHITE WIRES ARE USED FOR HEAT KITS ONLY.

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Wiring is subject to change. Always refer to the wiring diagram or 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.



ACCESSORIES

EXPANSION VALVE KITS FOR AIR CONDITIONING AND HEAT PUMP APPLICATIONS

KIT NUMBER	DESCRIPTION	APPLICATION	REFRIGERANT	TONNAGE: OUTDOOR UNIT
XVB18-36C	20% Bleed Valve	AC Only	R-22	1½ - 3 Ton
XVB42-60C	20% Bleed Valve	AC Only	R-22	3½ - 5 Ton
XV18-36C	Non-bleed Valve	AC Only	R-22	1½ - 3 Ton
XV42-60C	Non-bleed Valve	AC Only	R-22	3½ - 5 Ton
TX2N2	Non-bleed Valve	AC or HP	R-22	1½ - 2 Ton
TX3N2	Non-bleed Valve	AC or HP	R-22	2½ - 3 Ton
TX5N2	Non-bleed Valve	AC or HP	R-22	3½ - 5 Ton
TX2N4A	Non-bleed Valve	AC or HP	R-410A	1½ - 2 Ton
TX3N4	Non-bleed Valve	AC or HP	R-410A	2½ - 3 Ton
TX5N4	Non-bleed Valve	AC or HP	R-410A	3½ - 5 Ton

DRAIN PAN INSULATION KITS

DOWNFLOW APPLICATIONS

CHASSIS SIZE	INSULATION KIT
Small (15½")	DPI18-30/20
Medium (19½")	DPI36-42/20
Large (22")	DPI48-60/20

Note: Each kit contains enough material to modify 20 coils

HORIZONTAL APPLICATIONS

CHASSIS SIZE	INSULATION KIT
Small (15½")	DPIH18-32
Medium (19½")	DPIH36-42
Large (22")	DPIH48-61

Note: Each kit contains enough material to modify 20 coils

SINGLE-POINT KIT **

MODEL	HKR-15C	HKR-20C	HKR-21C
SPW-01	X	X	X

** Must be installed along with any of the above compatible heat kits. This kit will fit any ASPF air handler as long as a compatible heat kit is installed in the unit.

FILTERS

ASPF	FILTER #	QTY REQUIRED
1830	FIL-36-42	1
3137	FIL 48-61	1
4260	FIL 48-61	1