



ADPF SERIES

DEDICATED DOWNFLOW AIR HANDLER

THREE-SPEED, 1½- TO 5-TON UNITS

Standard Features

- Suitable for use with refrigerants R-410A and R-22
- Check flowrate expansion device
- Direct-drive, multi-speed motor
- Transformer and blower time-delay on all units
- Dedicated downflow requires no modification in the field
- AHRI Certified
- ETL Listed

Cabinet Features

- Fully insulated, painted steel cabinet with attractive Architectural Gray finish
- Built-in coil has downflow drain pan with secondary drain connections
- Power supply entry at top; low-voltage entry on left side and top



Contents

| | |
|------------------------------|---|
| Nomenclature | 2 |
| Product Specifications | 3 |
| Dimensions | 4 |
| Airflow Data | 5 |
| Heat Kit Match-Ups | 6 |
| Wiring Diagram | 7 |
| Accessories | 8 |



* 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 | D | P | F | 3642 | 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 Charge |
| 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 EEM 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 | | | | | | | | | 3642 3-3½ Tons |
| N Uncased | | | | | | | | | 1830 1½-3½ Tons |
| | | | | | | | | | 1729 1½ to 2½ Tons (for Export Systems) |
| 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 |
| | | | | | | | | | 3608 3 Tons Cooling/ 8 kW Electric Heat |

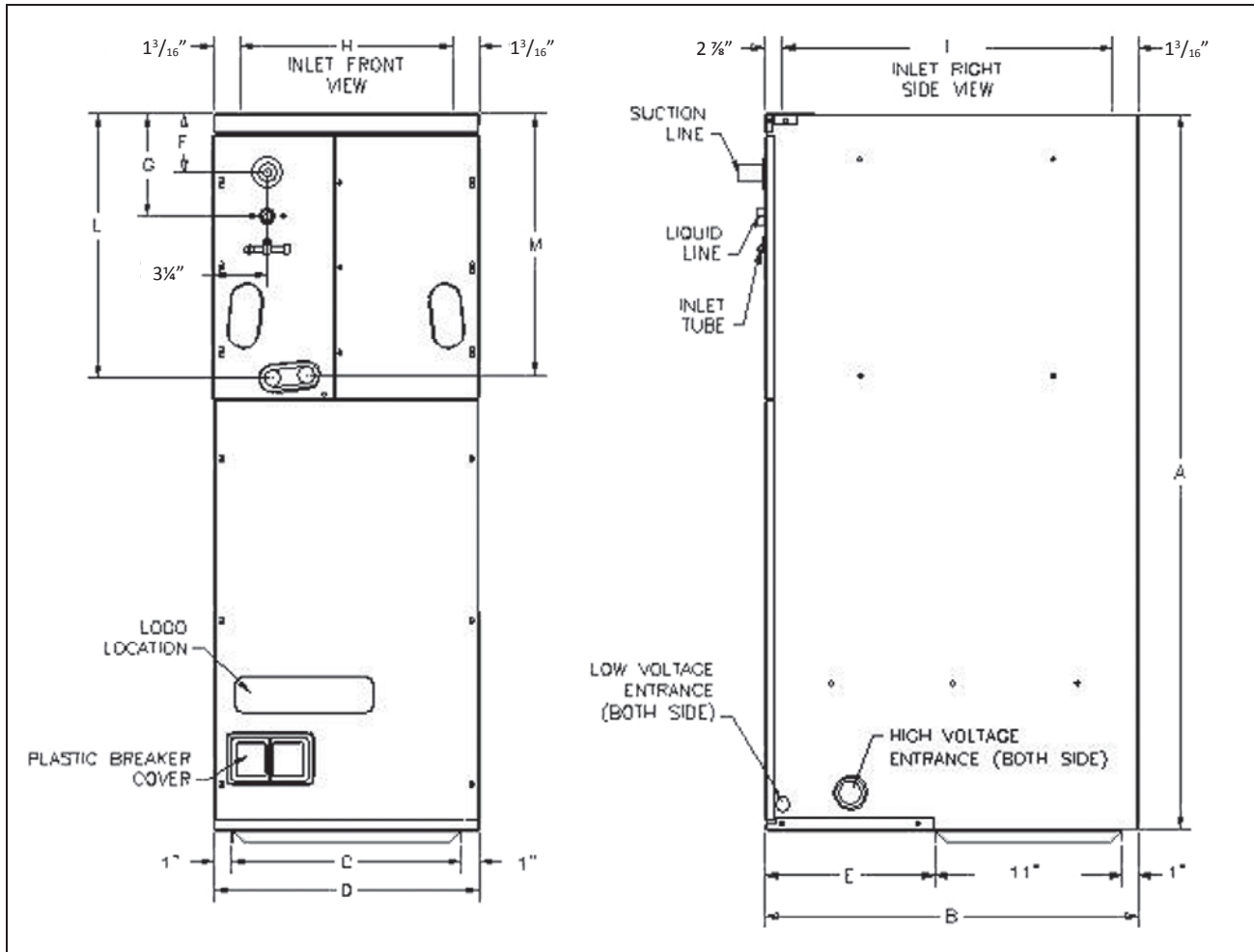


SPECIFICATIONS

| | ADPF 182416 | ADPF 304216 | ADPF 486016 |
|------------------------------------|------------------------|------------------------|------------------------|
| NOMINAL RATINGS | | | |
| Cooling (BTU/h) | 18,000-24,000 | 30,000-42,000 | 48,000-60,000 |
| Airflow Rate CFM (High/ Med/ Low)* | 1,025/ 860/ 650 | 1,625/ 1,400/ 1,250 | 2,040/ 1,895/ 1,585 |
| BLOWER | | | |
| Diameter | 9½" | 10⅝" | 10⅝" |
| Width | 6" | 8" | 10⅝" |
| Coil Drain Connection FPT | ¾" | ¾" | ¾" |
| SERVICE VALVE | | | |
| Liquid | ⅜" | ⅜" | ⅜" |
| Suction | ¾" | ⅞" | ⅞" |
| ELECTRICAL DATA | | | |
| Voltage | 208 - 230 | 208 - 230 | 208 - 230 |
| Min Circuit Ampacity | 2.4/ 2.4 | 3.7/ 3.9 | 5.1/ 5.1 |
| Max. Overcurrent Device (amps) | 15/ 15 | 15/ 15 | 15 /15 |
| Min./Max. VAC | 197/ 253 | 197/ 253 | 197/ 253 |
| BLOWER MOTOR | | | |
| FLA | 1.7 | 2.95 | 4.3 |
| HP | ⅓ | ½ | ¾ |
| SHIP WEIGHT (LBS) | 96 | 131 | 151 |

* CFM @.3 static

DIMENSIONS



| MODEL | A | B | C | D | E | F | G | H | I | L | M |
|------------|--------------------|-----|--------------------|--------------------|-----|-------------------|----------------------|--------------------|----------------------|---------------------|---------------------|
| ADPF182416 | 42 $\frac{1}{8}$ " | 22" | 13 $\frac{1}{2}$ " | 15 $\frac{1}{2}$ " | 10" | 3 $\frac{1}{2}$ " | 6 $\frac{1}{16}$ " | 13 $\frac{3}{8}$ " | 17 $\frac{15}{16}$ " | 15 $\frac{1}{2}$ " | 15 $\frac{5}{16}$ " |
| ADPF304216 | 53 $\frac{3}{4}$ " | 24" | 20" | 22" | 12" | 9 $\frac{1}{4}$ " | 11 $\frac{13}{16}$ " | 19 $\frac{5}{8}$ " | 19 $\frac{15}{16}$ " | 21 $\frac{7}{16}$ " | 21 $\frac{1}{4}$ " |
| ADPF486016 | 53 $\frac{3}{4}$ " | 24" | 20" | 22" | 12" | 9 $\frac{1}{4}$ " | 11 $\frac{13}{16}$ " | 19 $\frac{5}{8}$ " | 19 $\frac{15}{16}$ " | 21 $\frac{7}{16}$ " | 21 $\frac{1}{4}$ " |

AIRFLOW DATA

| MODEL | SPEED | CFM DELIVERED AGAINST EXTERNAL STATIC PRESSURE | | | | |
|------------|-------|--|-------|-------|-------|-------|
| | | 0.1" | 0.2" | 0.3" | 0.4" | 0.5" |
| ADPF182416 | High | 1,155 | 1,090 | 1,025 | 950 | 895 |
| | Med | 940 | 890 | 860 | 815 | 755 |
| | Low | 695 | 665 | 650 | 610 | 550 |
| ADPF304216 | High | 1,700 | 1,660 | 1,625 | 1,545 | 1,505 |
| | Med | 1,500 | 1,440 | 1,400 | 1,350 | 1,345 |
| | Low | 1,370 | 1,300 | 1,250 | 1,230 | 1,220 |
| ADPF486016 | High | 2,150 | 2,105 | 2,040 | 1,970 | 1,880 |
| | Med | 1,960 | 1,935 | 1,895 | 1,825 | 1,750 |
| | Low | 1,670 | 1,625 | 1,585 | 1,525 | 1,455 |

Note: Assumes dry coil with filter in place; SCFM correction for wet coil = 4% (208V / 240V)

HEAT KIT MATCH-UPS

HEAT KIT SELECTION

| MODEL | ADPF 182416 | ADPF 304216 | ADPF 486016 |
|-------------------|----------------|----------------|----------------|
| HKR-03* | X | X | X |
| HKR-05*, HKR-05C* | X | X | X |
| HKR-06* | X | X | X |
| HKR-08*, HKR-08C* | X ¹ | X | X |
| HKR-10*, HKR-10C* | X ¹ | X | X |
| HKR-15C* | X ² | X ³ | X |
| HKR-20C* | | X ³ | X |
| HKR-21C* | | X ³ | X |
| ^ HKR3-15* | | X ³ | X |
| ^ HKR3-20* | | X ³ | X |

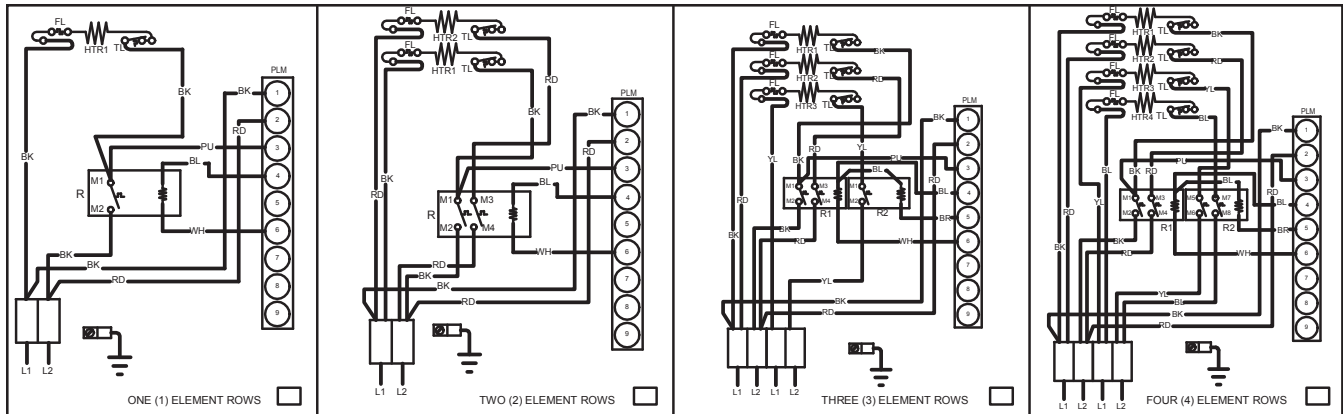
- * Revision level that may or may not be designated
- C Circuit breaker option
- ^ Heat kit requires three-phase power supply
- ¹ Air handler must either be on medium or high speed
- ² Air handler must be on high speed
- ³ Air handler must be on medium or high speed

SINGLE POINT KIT **

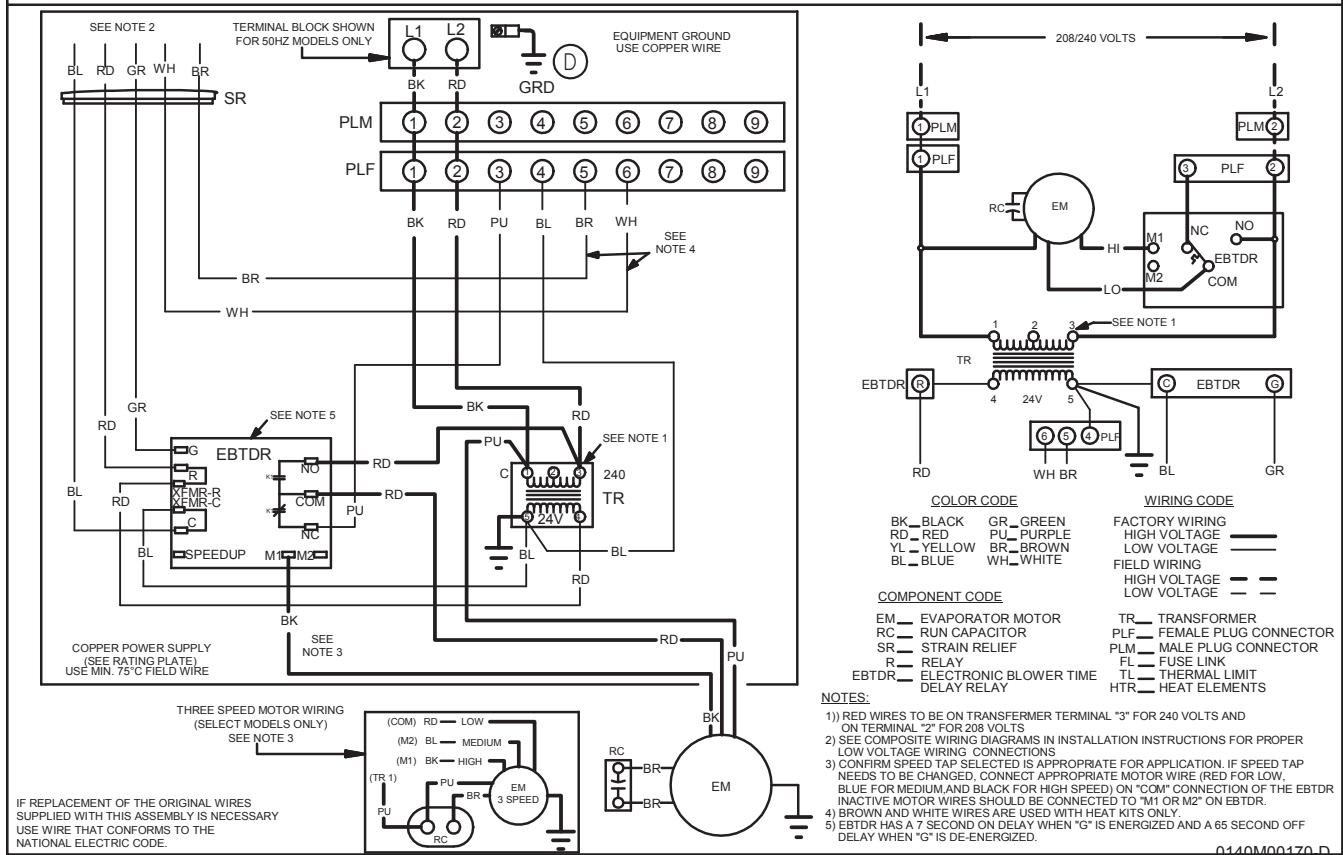
| MODEL | HKR-15C | HKR-20C | HKR-21C |
|--------|---------|---------|---------|
| SPW-01 | X | X | X |

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

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.



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

FOR R-22 SYSTEMS

| VALVE | DESCRIPTION | USED WITH OUTDOOR UNITS BELOW |
|-------|-----------------|--------------------------------------|
| TX3N2 | Non-bleed valve | 3 Ton > Air Conditioner & Heat Pump |
| TX5N2 | Non-bleed valve | 3½ Ton < Air Conditioner & Heat Pump |

FOR R-410A SYSTEMS

| VALVE | DESCRIPTION | CAP USED WITH OUTDOOR UNITS BELOW |
|-------|-----------------|--------------------------------------|
| TX3N4 | Non-bleed valve | 3 Ton > Air Conditioner & Heat Pump |
| TX5N4 | Non-bleed valve | 3½ Ton < Air Conditioner & Heat Pump |

FILTERS

| ADPF | FILTER # | QTY REQUIRED |
|------|-----------|-----------------|
| 1824 | FIL 18-32 | 1 |
| 3042 | FIL 48-61 | 1 |
| 4860 | FIL 48-61 | 1 |