



Air Conditioning & Heating

AEPF

MULTI-POSITION, VARIABLE-SPEED

AIR HANDLERS

1½ TO 5 TONS

Standard Features

- Suitable for use with R-410A and R-22 refrigerants
- Check flowrate expansion device for cooling and heat pump applications
- Variable-speed motor
- Provides constant CFM over a wide range of static pressure conditions independent of duct system; provides low CFM for efficient fan-only operation
- Up to 14 adjustable airflow settings to optimize the system's CFM for each individual mode of operation
- Improved humidity control and comfort
- Compatible with heat pumps and variable-capacity cooling applications
- Multi-position — upflow, downflow or horizontal
- Built-in coil has horizontal, vertical, and downflow drain pans with secondary drain connections
- Complies with the Factory-sealed Air Handling Credit with or without field-installed filter kits as listed in the 2001 Florida Building Code, Chapter 13, Section 610.2.A.2.1
- AHRI Certified; ETL Listed

Cabinet Features

- Fully insulated, painted steel cabinet with attractive Architectural Gray finish
- Built-in filter rack for 1" filter (filter not included)
- Low-voltage cabinet connections; control circuit arranged to permit staging
- Power supply on top; low-voltage entry on top or side
- Factory-sealed to achieve 2% or less leakage rate with or without field-installed filter kits at 1.0" water gauge external duct static pressure



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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 Québec.



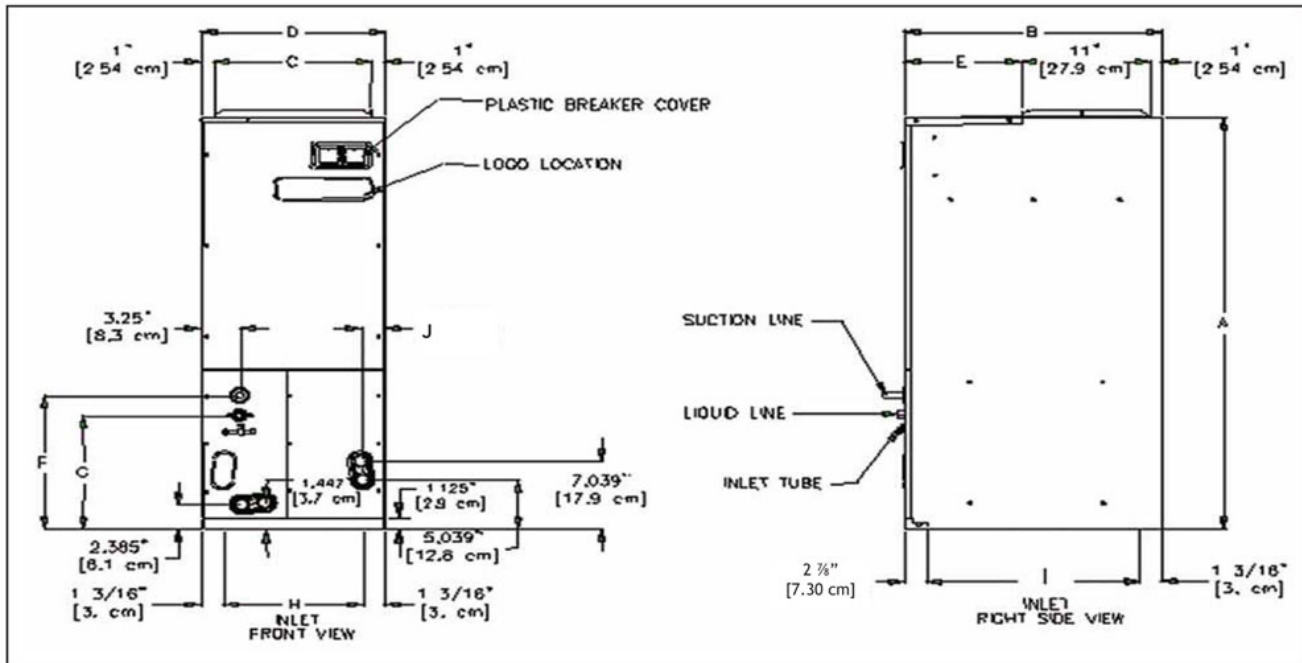
NOMENCLATURE

| | A | E | 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 | | | | | | | | | 1729 1½ 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 |
| | | | | | | | | | 3608 3 Tons Cooling/ 8 kW Electric Heat |

SPECIFICATIONS

| | AEPF 183016 | AEPF 303616 | AEPF 313716 | AEPF 426016 |
|--------------------------------|------------------------|------------------------|------------------------|------------------------|
| NOMINAL RATINGS | | | | |
| Cooling (BTU/h) | 18,000-30,000 | 30,000-36-000 | 30,000-36-000 | 42,000-60,000 |
| CFM (High/ Low) | 1,200/ 600 | 1,200/ 1,000 | 1,200/ 1,000 | 2,000/ 1,200 |
| BLOWER | | | | |
| Diameter | 9½" | 10⅝" | 10⅝" | 10⅝" |
| Width | 8" | 10⅝" | 10⅝" | 10⅝" |
| Coil Drain Connection FPT | ¾" | ¾" | ¾" | ¾" |
| SERVICE VALVE | | | | |
| Liquid | ⅝" | ⅝" | ⅝" | ⅝" |
| Suction | ¾" | ⅞" | ⅞" | ⅞" |
| ELECTRICAL DATA | | | | |
| Voltage | 208/240 | 208/240 | 208/240 | 208/240 |
| Electric Heat Capacity (kW) | 5, 8, 10 | 3, 5, 6, 8,10, 15 | 3, 5, 6, 8,10, 15 | 10, 15, 20, 21 |
| Min Circuit Ampacity | 2.5 / 2.5 | 3.1 / 3.1 | 3.1 / 3.1 | 7.8 / 7.8 |
| Max. Overcurrent Device (amps) | 15/15 | 15/15 | 15/15 | 15/15 |
| Minimum VAC | 197 | 197 | 197 | 197 |
| Maximum VAC | 253 | 253 | 253 | 253 |
| BLOWER MOTOR | | | | |
| FLA | 2.0 | 2.5 | 2.5 | 6.2 |
| HP | ½ | ¾ | ¾ | ¾ |
| SHIP WEIGHT (LBS) | 125 | 176 | 176 | 195 |

DIMENSIONS

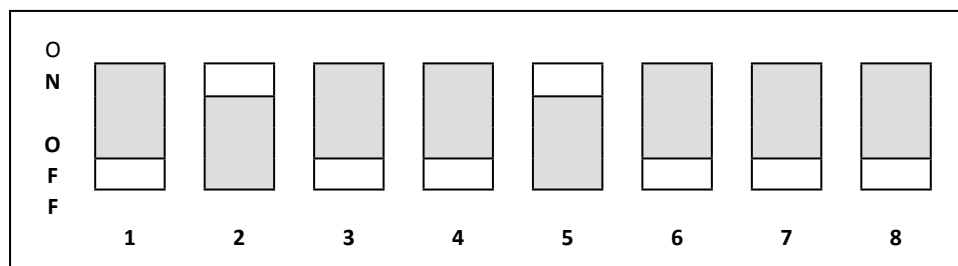


| MODEL | A | B | C | D | E | F | G | H | I | J |
|------------|--------------------|-----|--------------------|--------------------|-----|--------------------|----------------------|---------------------|----------------------|---------------------|
| AEPF183016 | 46 $\frac{3}{4}$ " | 22" | 17 $\frac{1}{2}$ " | 19 $\frac{1}{2}$ " | 10" | 14 $\frac{1}{2}$ " | 11 $\frac{15}{16}$ " | 17 $\frac{7}{8}$ " | 17 $\frac{15}{16}$ " | 2" |
| AEPF303616 | 53 $\frac{3}{4}$ " | 24" | 20" | 22" | 12" | 14 $\frac{1}{2}$ " | 11 $\frac{15}{16}$ " | 19 $\frac{9}{16}$ " | 19 $\frac{15}{16}$ " | 1 $\frac{13}{16}$ " |
| AEPF313716 | 53 $\frac{3}{4}$ " | 24" | 20" | 22" | 12" | 14 $\frac{1}{2}$ " | 11 $\frac{15}{16}$ " | 19 $\frac{9}{16}$ " | 19 $\frac{15}{16}$ " | 1 $\frac{13}{16}$ " |
| AEPF426016 | 53 $\frac{3}{4}$ " | 24" | 20" | 22" | 12" | 14 $\frac{1}{2}$ " | 11 $\frac{15}{16}$ " | 19 $\frac{9}{16}$ " | 19 $\frac{15}{16}$ " | 1 $\frac{13}{16}$ " |

AEPF DIPSWITCHES

The AEPF air handler blower motor is pre-programmed for operation at four distinct airflow levels when operating in the Cooling, Heat Pump heating, Backup heating (Electric Heating), and Backup + Heat Pump heating modes. Each mode has four levels to deliver different CFM. Simply flip the dipswitch for a different CFM combination.

SETTING THE MOTOR



AEPF DIPSWITCHES (CONT.)

| DIPSWITCH NUMBER | FUNCTION | INSTRUCTIONS |
|------------------|------------------------|--|
| 1 | Electric Heat Mode | Select the taps allowed in the tables (Dipswitch 1/2/ 7/8) below. |
| 2 | Electric Heat Mode | |
| 3 | N/A | N/A |
| 4 | Thermostat Mode | <p>ON = The system operates with single-stage units using a single-stage cooling or heat pump thermostat. (factory default)</p> <p>OFF = The system operates with two-stage units with either a conventional two-stage cooling/ heat pump thermostat or with an encoded two-stage thermostat for cooling operation.</p> <p>The encoded thermostats can be used with two-stage condensing units in retrofit applications where there aren't enough existing wires available for connections to the indoor thermostat and outdoor units.</p> |
| 5 | Cooling/Heat Pump Mode | Find the airflow for your application in the tables (Dipswitch 5/6/ 7/8) below. Set up the motor based on the outdoor unit capacity tons. |
| 6 | Cooling/Heat Pump Mode | |
| 7 | Trim CFM Adjust Mode | <p>Increase or decrease your selected airflow to fit your requirement.</p> <p>ON-OFF = Increases selected Cool/Heat Pump airflow by 10%.</p> <p>OFF-ON = Decreases selected Cool/Heat Pump airflow by 15%</p> <p>Note: Other settings have no effect on the set airflow.</p> |
| 8 | Trim CFM Adjust Mode | |

Dipswitch 1/2/ 7/8

AEPF1830

| HEATING ELEMENT (kW) | SWITCH POSITION | | | | EMERGENCY BACKUP | HP W/ BACKUP |
|----------------------|-----------------|-----|-----|-----|------------------|--------------|
| | 1 | 2 | 7 | 8 | | |
| Up to 10 | Off | Off | Off | Off | 1,100 | 1,210 |
| Up to 10 | On | Off | Off | Off | 890 | 935 |
| 5 | Off | On | Off | Off | 700 | 770 |

Dipswitch 5/6/ 7/8

AEPF1830

| OUTDOOR UNIT (TONS) | SWITCH POSITION | | | | INDOOR CFM | |
|---------------------|-----------------|-----|-----|-----|------------|-------|
| | 5 | 6 | 7 | 8 | COOL | HP |
| 2.5 | Off | Off | Off | Off | 1,100 | 1,100 |
| 2 | On | Off | Off | Off | 800 | 800 |
| 1.5 | Off | On | Off | Off | 600 | 600 |

AEPF3036/4260

| HEATING ELEMENT (kW) | SWITCH POSITION | | | | EMERGENCY BACKUP | HP W/ BACKUP |
|----------------------|-----------------|-----|-----|-----|------------------|--------------|
| | 1 | 2 | 7 | 8 | | |
| Up to 20 | Off | Off | Off | Off | 2,050 | 2,150 |
| Up to 20 | On | Off | Off | Off | 1,750 | 1,835 |
| Up to 15 | Off | On | Off | Off | 1,600 | 1,680 |
| Up to 10 | On | On | Off | Off | 1,200 | 1,260 |
| Up to 10 | On | On | Off | On | 1,020 | 1,070 |

AEPF3036/4260

| OUTDOOR UNIT (TONS) | SWITCH POSITION | | | | INDOOR CFM | |
|---------------------|-----------------|-----|-----|-----|------------|-------|
| | 5 | 6 | 7 | 8 | COOL | HP |
| 5 | Off | Off | Off | Off | 1,800 | 1,800 |
| 4 | On | Off | Off | Off | 1,580 | 1,580 |
| 3.5 | Off | On | Off | Off | 1,480 | 1,480 |
| 3 | On | On | Off | Off | 1,200 | 1,200 |
| 2.5 | On | On | Off | On | 1,020 | 1,020 |

AEPF3137

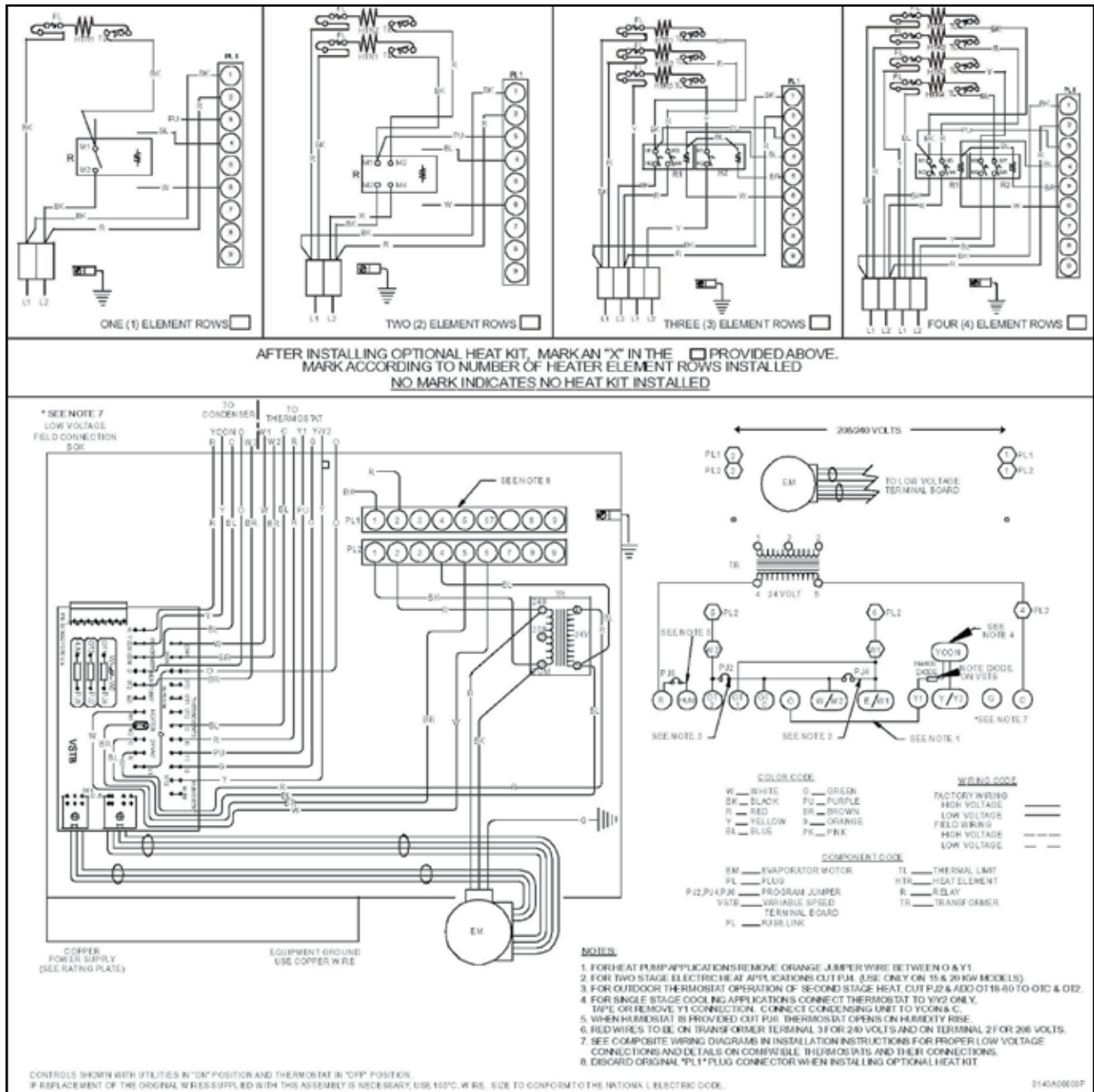
| HEATING ELEMENT (kW) | SWITCH POSITION | | | | EMERGENCY BACKUP | HP W/ BACKUP |
|----------------------|-----------------|----|-----|-----|------------------|--------------|
| | 1 | 2 | 7 | 8 | | |
| Up to 15 | Off | On | Off | Off | 1,600 | 1,680 |
| Up to 10 | On | On | Off | Off | 1,200 | 1,260 |
| Up to 10 | On | On | Off | On | 1,020 | 1,070 |

AEPF3137

| OUTDOOR UNIT (TONS) | SWITCH POSITION | | | | INDOOR CFM | |
|---------------------|-----------------|----|-----|-----|------------|-------|
| | 5 | 6 | 7 | 8 | COOL | HP |
| 3.5 | Off | On | Off | Off | 1,480 | 1,480 |
| 3 | On | On | Off | Off | 1,200 | 1,200 |
| 2.5 | On | On | Off | On | 1,020 | 1,020 |

Note: When applying a humidistat (normally closed), refer to the installation and operating instructions. The humidistat can adjust the cooling airflow to 85%.

AEPF WIRING DIAGRAM



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



ACCESSORIES

HEAT KIT SELECTION

| MODELS | AEPF 183016A* | AEPF 183016B* | AEPF 303616A* | AEPF 303616B* | AEPF 313716* | AEPF 426016A* | AEPF 426016B* |
|---------------|------------------|------------------|------------------|------------------|-----------------|------------------|------------------|
| HKR-03* | | X | | X | X | | X |
| HKR-05*/-05C* | X | X | | X | X | | X |
| HKR-06* | | X | | X | X | | X |
| HKR-08*/-08C* | X | X | X | X | X | | X |
| HKR-10*/-10C* | X ¹ | X ¹ | X | X | X | X | X |
| HKR-15C* | | | X ¹ | X ¹ | X ¹ | X | X |
| HKR-20C* | | | | | | X ² | X ² |
| HKR-21C* | | | | | | X ² | X ² |

* Revision level that may or may not be designated

C Circuit breaker option

¹ This heater kit can only be used for '1000 CFM or higher' applications

² This heater kit can only be used for '1200 CFM or higher' applications

EXPANSION VALVE KITS FOR AIR CONDITIONING-ONLY APPLICATIONS

| KIT NUMBER | USED WITH | DESCRIPTION |
|------------|---------------|-----------------|
| XVB18-36C | AEPF 18 to 36 | 20% bleed valve |
| XVB42-60C | AEPF 42 to 60 | 20% bleed valve |
| XV18-36C | AEPF 18 to 36 | Non-bleed valve |
| XV42-60C | AEPF 42 to 60 | Non-bleed valve |

EXPANSION VALVE KITS FOR AIR CONDITIONING AND HEAT PUMP APPLICATIONS

For R-22 SYSTEMS

| VALVE | DESCRIPTION | USED WITH OUTDOOR UNITS BELOW |
|-------|-----------------|--------------------------------------|
| TX2N2 | Non-bleed valve | 1½ Ton > Air Conditioner & Heat Pump |
| 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 | USED WITH OUTDOOR UNITS BELOW |
|-------|-----------------|--------------------------------------|
| TX2N4 | Non-bleed valve | 1½ Ton > Air Conditioner & Heat Pump |
| TX3N4 | Non-bleed valve | 3 Ton > Air Conditioner & Heat Pump |
| TX5N4 | Non-bleed valve | 3½ Ton < Air Conditioner & Heat Pump |

ACCESSORIES (CONT.)

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 AEPF air handler as long as a compatible heat kit is installed in the unit.

FILTERS

| AEPF | FILTER # | QTY REQUIRED |
|------|-----------|--------------|
| N/A | FIL 18-32 | 1 |
| 1830 | FIL-36-42 | 1 |
| 3036 | FIL 48-61 | 1 |
| 4260 | FIL 48-61 | 1 |

