



Air Conditioning & Heating

## PRODUCT SPECIFICATIONS



1½ TO 5 TONS

**MULTI-POSITION, VARIABLE-SPEED**

# AEPF

## AIR HANDLERS

The Goodman® brand AEPF Multi-Position, Variable-Speed Air Handler is suitable for use with refrigerants R-410A and R-22. This unit's blower motor allows for a soft start and stop for quieter, more efficient operation and eliminates the cold blast of air upon heating start-up. Using an ECM™ motor, this air handler is ideal for new or retrofit applications.

### 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



\* 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. Full warranty details available at [www.goodmanmfg.com](http://www.goodmanmfg.com).



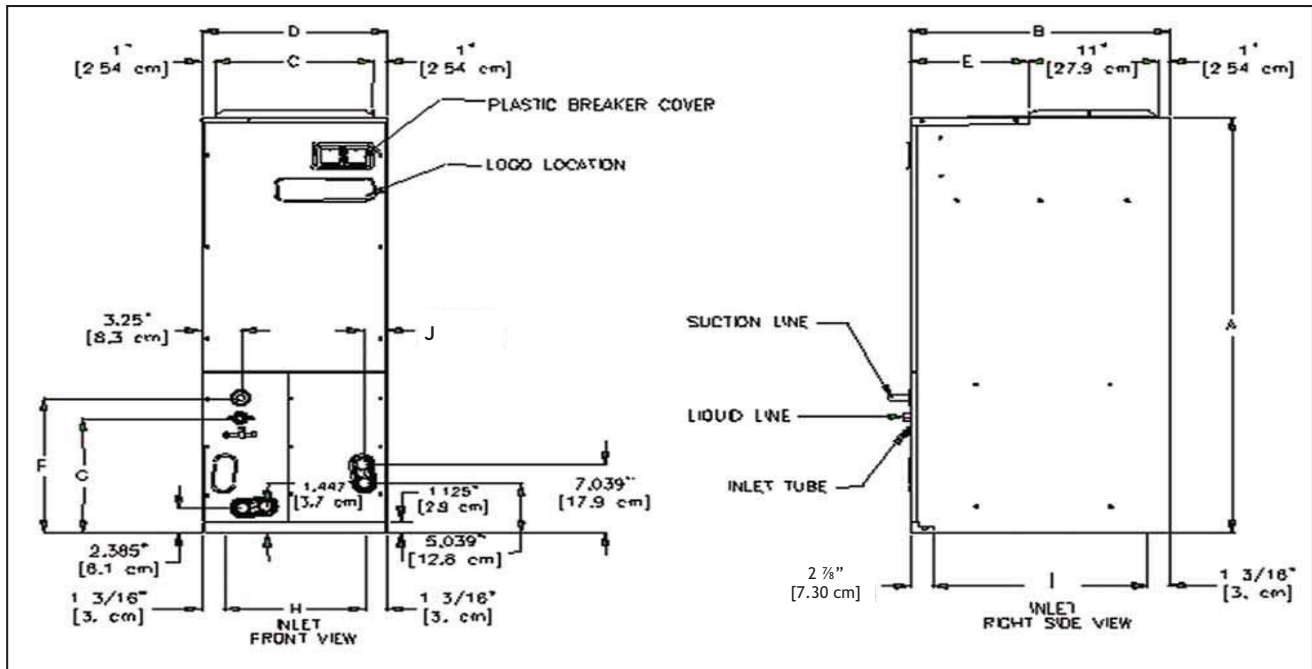
NOMENCLATURE

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

	<b>AEPF 183016</b>	<b>AEPF 303616</b>	<b>AEPF 313716</b>	<b>AEPF 426016</b>
<b>Nominal Ratings</b>				
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
<b>Blower</b>				
Diameter	9½"	10 <sup>5</sup> / <sub>8</sub> "	10 <sup>5</sup> / <sub>8</sub> "	10 <sup>5</sup> / <sub>8</sub> "
Width	8"	10 <sup>5</sup> / <sub>8</sub> "	10 <sup>5</sup> / <sub>8</sub> "	10 <sup>5</sup> / <sub>8</sub> "
Coil Drain Connection FPT	¾"	¾"	¾"	¾"
<b>Service Valve</b>				
Liquid	⅜"	⅜"	⅜"	⅜"
Suction	¾"	⅞"	⅞"	⅞"
<b>Electrical Data</b>				
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
<b>Blower Motor</b>				
FLA	2.0	2.5	2.5	6.2
HP	½	¾	¾	¾
<b>Ship Weight (lbs)</b>	125	176	176	195

**DIMENSIONS**

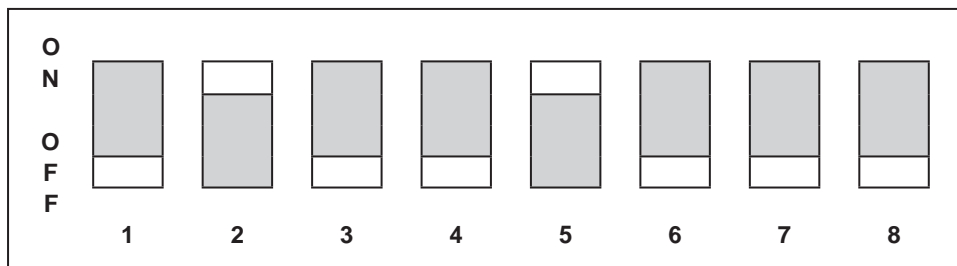


Model	A	B	C	D	E	F	G	H	I	J
AEPF183016	46 <sup>3</sup> / <sub>4</sub> "	22"	17 <sup>1</sup> / <sub>2</sub> "	19 <sup>1</sup> / <sub>2</sub> "	10"	14 <sup>1</sup> / <sub>2</sub> "	11 <sup>15</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> "	17 <sup>15</sup> / <sub>16</sub> "	2"
AEPF303616	53 <sup>1</sup> / <sub>4</sub> "	24"	20"	22"	12"	14 <sup>1</sup> / <sub>2</sub> "	11 <sup>15</sup> / <sub>16</sub> "	19 <sup>5</sup> / <sub>8</sub> "	19 <sup>15</sup> / <sub>16</sub> "	1 <sup>13</sup> / <sub>16</sub> "
AEPF313716	53 <sup>1</sup> / <sub>4</sub> "	24"	20"	22"	12"	14 <sup>1</sup> / <sub>2</sub> "	11 <sup>15</sup> / <sub>16</sub> "	19 <sup>5</sup> / <sub>8</sub> "	19 <sup>15</sup> / <sub>16</sub> "	1 <sup>13</sup> / <sub>16</sub> "
AEPF426016	53 <sup>1</sup> / <sub>4</sub> "	24"	20"	22"	12"	14 <sup>1</sup> / <sub>2</sub> "	11 <sup>15</sup> / <sub>16</sub> "	19 <sup>5</sup> / <sub>8</sub> "	19 <sup>15</sup> / <sub>16</sub> "	1 <sup>13</sup> / <sub>16</sub> "

**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><b>Note:</b> 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

#### 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

#### AEPF3137

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

### 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

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

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

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

**ACCESSORIES**

**HEAT KIT SELECTION**

Models	AEPF 183016A*	AEPF 183016B*	AEPF 303616A*	AEPF 303616B*	AEPF 426016A*	AEPF 426016B*
HKR-03*		X		X		X
HKR-05*/-05C*	X	X		X		X
HKR-06*		X		X		X
HKR-08*/-08C*	X	X	X	X		X
HKR-10*/-10C*	X <sup>1</sup>	X <sup>1</sup>	X	X	X	X
HKR-15C*			X <sup>1</sup>	X <sup>1</sup>	X	X
HKR-20C*					X <sup>2</sup>	X <sup>2</sup>
HKR-21C*					X <sup>2</sup>	X <sup>2</sup>

\* Revision level that may or may not be designated

C Circuit breaker option

<sup>1</sup> This heater kit can only be used for '1000 CFM or higher' applications

<sup>2</sup> 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 \*\*

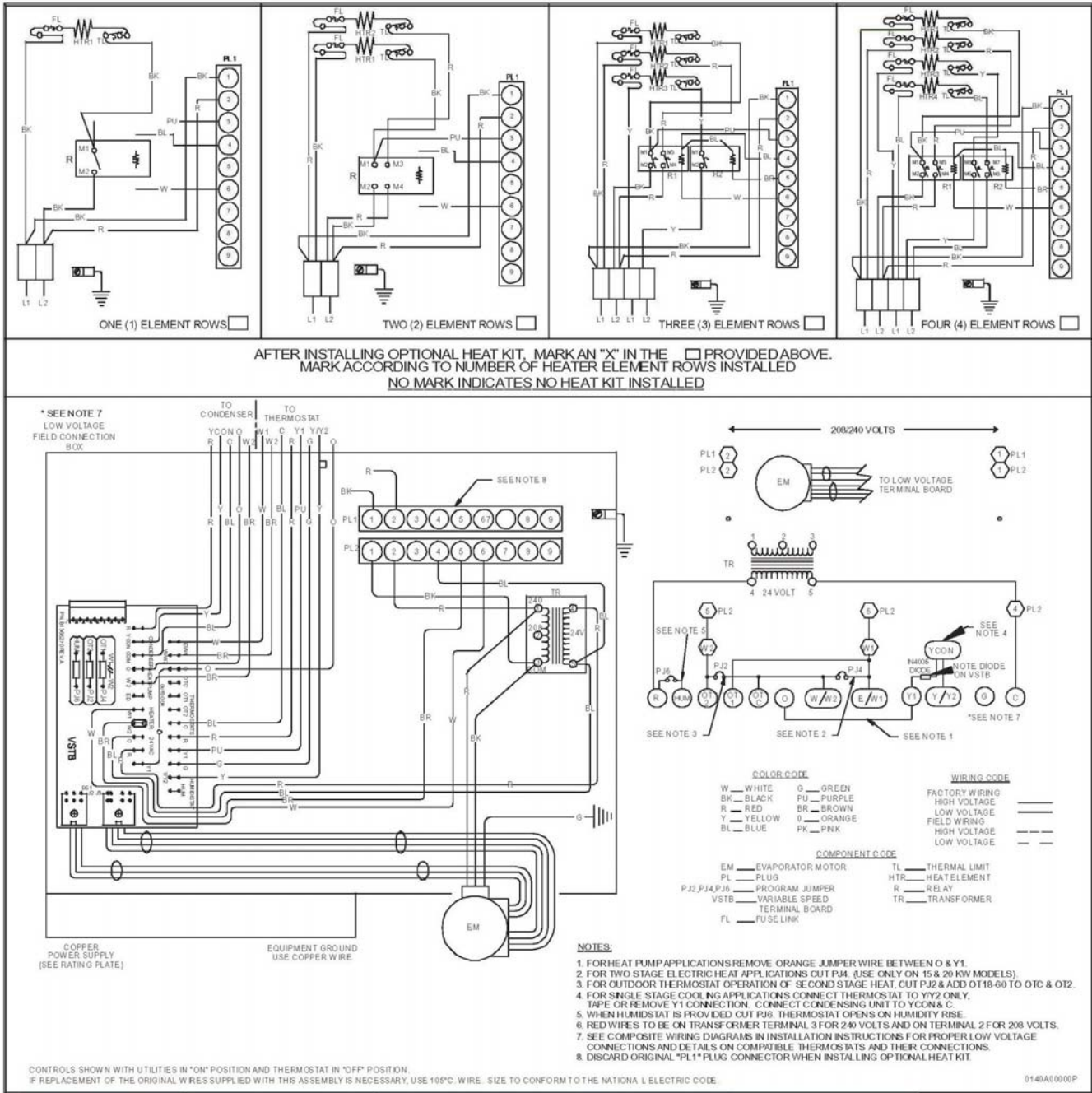
Model	HKR-15C	HKR-20C	HKR-21C
SPW-01	X	X	X

\*\* 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

# AEPF WIRING DIAGRAM



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

	<p><b>WARNING</b> <b>High Voltage:</b> 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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