PRODUCT SPECIFICATIONS

Goodman®
Air Conditioning & Heating

AEPT SERIES

Multi-Position Air Handler

2 to 5 Ton

The AEPT multi-position air handler is approved for modular homes and may be installed in a utility room, closet, aclove, basement or attic.

Standard Features

- Variable-speed DC motor allows air volume variation for heating and cooling application needs
- Multi-position (upflow/horizontal or downflow) air handler
- Factory-installed, internally mounted TXV; check TXV for heat pump and cooling operation
- Built-in coil with horizontal, vertical, and downflow drain pans with secondary drain connections
- Copper tube/aluminum fin coil
- Low-voltage control circuit arranged to readily permit staging when required; top or side low-voltage entry
- Equipped for multiple branch circuit supply for lower installation cost; power supply entry on top and both sides
- Blower operation designed for soft start and stop for quieter, more efficient, operation; eliminates cold blast of air on heating start-up
- Built-in filter rack for 1" filter (filter not included)
- Factory-sealed (-00C-1*) models achieve a 2% or less leakage rate at 1" water gauge external duct static pressure
- Field-selectable airflow settings can be adjusted to optimize the system airflow for each mode of operation
- Provides constant air flow over a wide range of static pressure conditions independent of duct system; provides low air flow for efficient fan-only operation
- Provides improved humidity control and comfort; obtain additional humidity control using a standard dehumidistat
- Compatible with heat pumps, as well as single- and dual-capacity cooling units

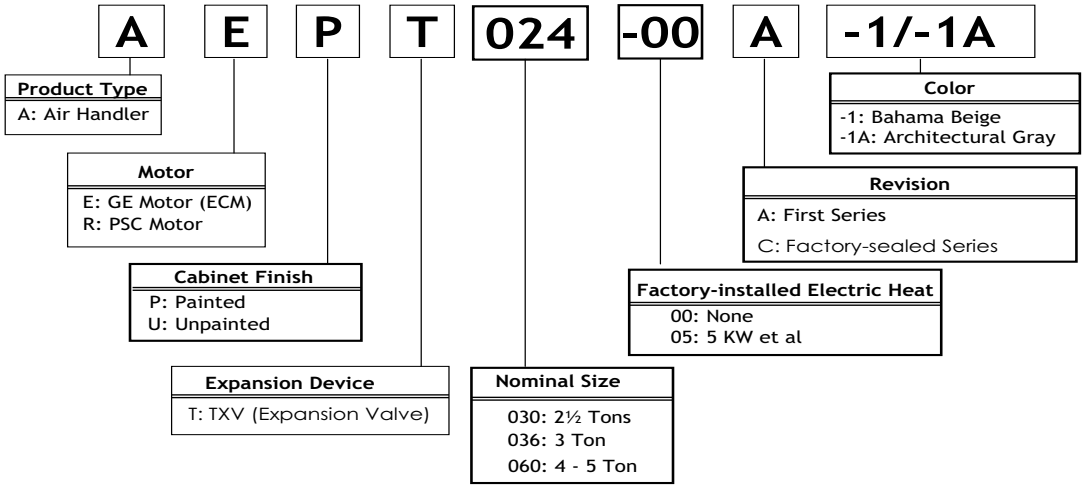
Cabinet Construction

- Fully insulated steel cabinet
- Rust-resistant, galvanized, leather-grain embossed finish
- The -00C-1* models comply with the Factory-sealed Air Handler Credit as listed in the 2001 Florida Building Code, Chapter 13, Section 610.2.A.2.1

Accessories

- Field-installed electric heat kits from 5 to 21 kW
- Permanent washable plastic air filters (FIL36-42, FIL48-61)
- Coil insulation kits for downflow applications (DPI 18-30, DPI 36-42, DPI 48-61)
- Horizontal drain pan insulation kits (DPIH 18-32, DPIH 36-42, DPIH 48-61)

Nomenclature



Specifications

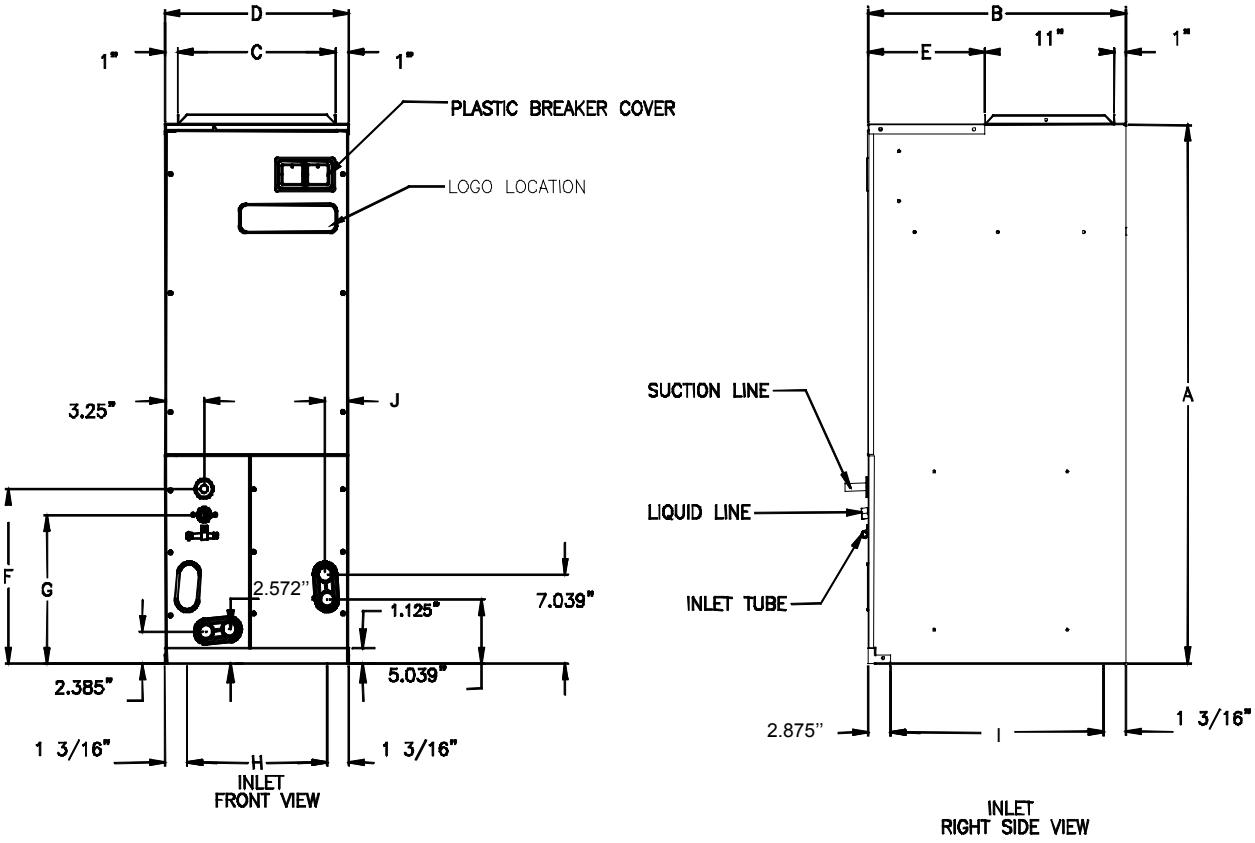
Model	Blower		Coil Drain Connection FPT	Liquid Connection	Suction Connection	Approximate Shipping Weight (pounds)
	Diameter	Width				
AEPT030-00C-1/00C-1A	9½"	8"	3/4"	3/8"	3/4"	147
AEPT036-00C-1/00C-1A	10⅝"	10⅝"	3/4"	3/8"	7/8"	176
AEPT060-00C-1/00C-1A	10⅝"	10⅝"	3/4"	3/8"	7/8"	195

Electrical Data

Model	Single Supply Circuit		Minimum VAC	Maximum VAC	Blower Motor	
	Minimum Circuit Ampacity	Max. Overcurrent Protection			FLA	HP
AEPT030-00C-1/00C-1A	2.5/2.5	15/15	197	253	2.0	1/2
AEPT036-00C-1/00C-1A	3.1/3.1	15/15	197	253	2.5	3/4
AEPT060-00C-1/00C-1A	7.8/7.8	15/15	197	253	6.2	3/4

* Minimum Circut Ampacity @ 208/ 240 V +Maximum Overcurrent Protection @ 208/ 240 V

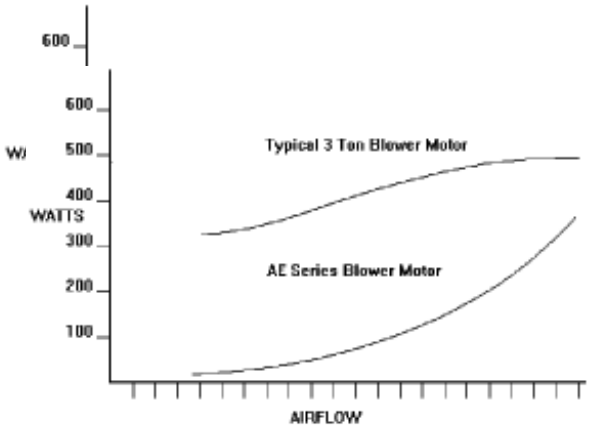
Dimensions



Model	A	B	C	D	E	F	G	H	I	J
AEPT030-00C-1/00C-1A	46¾"	22"	17½"	19½"	10"	14½"	11.935"	17⅛"	17.938"	2.024"
AEPT036-00C-1/00C-1A AEPT060-00C-1/00C-1A	53¼"	24"	20"	22"	12"	14½"	11.935"	19⅝"	17.938	1.837"

AEPT Overview

The AEPT air handler represents the next generation of indoor air moving and conditioning equipment. Combining all of the advantages of our standard air handlers with the features and benefits of a variable-speed DC programmable motor, the AEPT air handler has been designed to provide the highest level of indoor comfort at the increased efficiency levels demanded today.



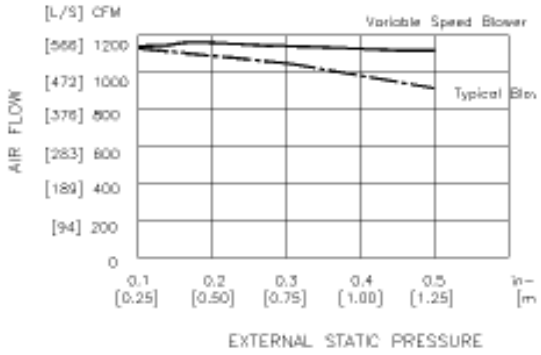
The AEPT air handlers do not require any special external electronic controls and can be operated with the same controls as our standard air handlers without any extensive or complicated connections.

Efficiency

The variable-speed DC motors utilized in the AEPT air handler are, at full load, over 20% more efficient than the motors utilized in the typical air handler. They also maintain their efficiency throughout the entire load range in variable-speed applications.

Constant CFM vs. Static Pressure

The air flow delivered to a system by a typical air handler is dependent upon the static pressure requiring careful attention to the design of the air distribution network. Often, the system's air flow requirements in the cooling mode are different from the heating mode, making it necessary to design the air distribution network for the cooling or heating mode, or a compromise of the two. In such cases, the system's capacity may be reduced, resulting in higher operating costs and a lower level of comfort.



The AEPT air handler delivers the optimum air flow for the system size, whether in heating or cooling mode, regardless of the static pressure imposed by the air distribution.

Constant Fan

The air flow delivered to the system in constant fan operation by the typical air handler is the full system requirement. In most applications, the constant fan operation is intended to provide air circulation throughout the conditioned space to prevent air stratification. In such applications, the full system air flow is not required and results in a high background noise level and high operating cost.

The AEPT air handler delivers to the system approximately 30% of the full system air flow in constant fan operation (60% or Y1 air flow can be field-selected). This results in lower background noise levels and lower operating cost.

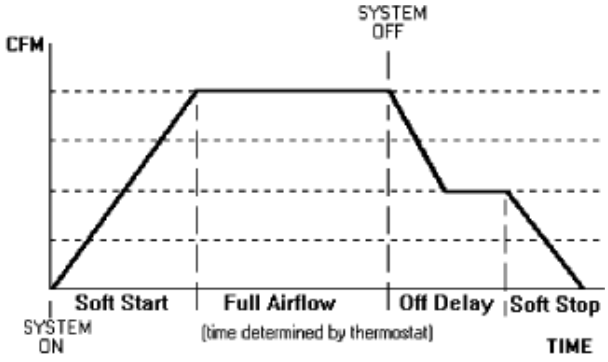
Humidity Control

When matched with today's high-efficiency outdoor sections, the typical air handler operating under high-humidity conditions may not remove sufficient moisture from the conditioned air to provide the desired comfort level.

The AEPT air handler provides further humidity control when operated with a standard 24V de-humidistat. When the de-humidistat detects a high-humidity condition, the air flow delivered to the system is reduced, allowing the indoor coil to remove more moisture from the conditioned air. When the de-humidistat detects normal humidity conditions, the air flow delivered to the system is increased to the normal level.

Soft Start/Stop vs. Instant On/Off

Upon a call for system operation, the blower motor of a typical air handler is energized at full speed. Because of the time lag between a call for system operation and the system operating at full capacity, this often results in complaints of blasts of warm air at start-up in the cooling mode, and of blasts of cold air at start-up in the heating mode. There are also potential complaints of noise and distraction caused by the blower motor starting at full speed.



Air flow delivered to the system by the AEPT air handler for a typical cooling/heating cycle.

Soft Start

Upon a call for system operation, the AEPT's blower motor provides a soft start. This means the air flow gradually increases from zero to the system's full air flow requirements. Ramping the air flow during the system start-up matches the air flow more closely to the immediate system capacity, eliminating blasts of warm or cold air. Ramping the air flow from zero to full system requirements also eliminates the perceived noise and distraction, which occurs on start-up with the typical air handler.

Soft Stop

Upon a call to shut down system operation, the AEPT's blower motor provides a soft stop. This means the air flow delivered to the system ramps down to approximately 50% of the full system requirements and remains there for a period of time and then ramps down to a full stop. The shut-down air profile is intended to take the maximum advantage of the residual cooling or heating capacity of the indoor coil without blasts of warm or cold air. Ramping the air flow from full system requirements to zero also eliminates the perceived noise and distraction, which occurs on shut-down with a typical air handler.

Two-Speed Application

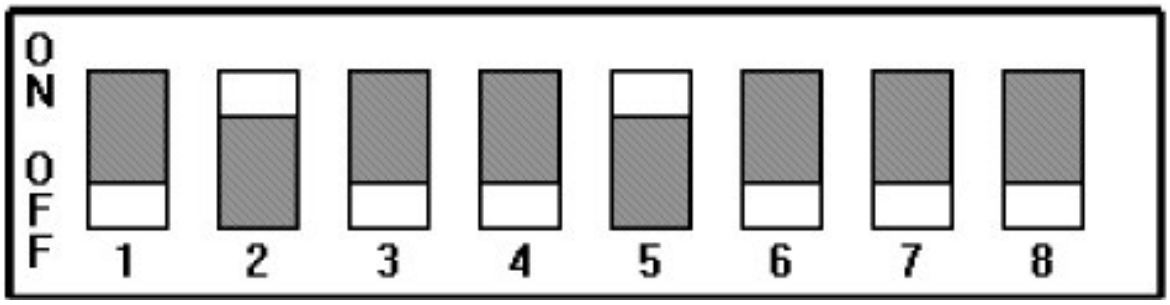
The typical air handler blower motor, when matched with a 2-speed outdoor section, normally does not deliver the optimum air flow to the system for both high- and low-speed operation. This is due to design limitations inherent in the design of the standard induction motor. Because of this, the typical 2-speed application is designed to operate based upon the air flow delivered at either high or low speed. As a result, the overall system efficiency and comfort level provided by the system are compromised.

The AEPT air handler delivers the optimum air flow to the system for both high- and low-speed operations. As a result, the overall system efficiency and comfort level provided by the system are not compromised.

AEPT Dipswitches

The AEPT air handler blower motors have been pre-programmed for operation at four distinct air flow levels when operating in the Cooling, Heat Pump Heating, Backup Heating (Electric Heating) and Backup + Heat Pump Heating. Each mode has four levels to deliver different CFM. Simply flip the dipswitch, and you can get a different CFM combination.

Setting Up Your Motor



Dipswitch Number	Function	Instructions
1	Electric Heat Mode	Select the taps allowed in the tables (Dipswitch 1/2) below.
2	Electric Heat Mode	
3	N/A	N/A
4	Thermostat Mode	ON = The system operates with single-stage units using a single-stage cooling or heat pump thermostat. (factory default) 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. 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.
5	Cooling/Heat Pump Mode	Find the air flow for your application in the tables (Dipswitch 5/6) below.
6	Cooling/Heat Pump Mode	Set up the motor based on the outdoor unit capacity tons.
7	Trim CFM Adjust Mode	Increase or decrease your selected air flow to fit your requirement. ON-OFF = Increases selected Cool/Heat Pump air flow by 10%. OFF-ON = Decreases selected Cool/Heat Pump air flow by 15% NOTE: Other settings have no effect on the set air flow.
8	Trim CFM Adjust Mode	

Dipswitch 1/2

AEPT30

Heating Element (kW)	Switch Position	Emergency Backup	Heat Pump with Backup
Up to 10	OFF-OFF	1,100	1,210
Up to 10	ON-OFF	850	935
5	OFF-ON	700	770

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Heating Element (kW)	Switch Position	Emergency Backup	Heat Pump with Backup
Up to 20	OFF-OFF	2,050	2,150
Up to 20	ON-OFF	1,750	1,835
Up to 15	OFF-ON	1,600	1,680
Up to 10	ON-ON	1,200	1,260

Dipswitch 5/6

AEPT30

Outdoor Unit (Tons)	Switch Position	Indoor Air Flow	
		Cool	Heat Pump
2.5	OFF-OFF	1,100	1,100
2	ON-OFF	800	800
1.5	OFF-ON	600	600

AEPT36/60

Outdoor Unit (Tons)	Switch Position	Indoor Air Flow	
		Cool	Heat Pump
5	OFF-OFF	1,800	1,800
4	ON-OFF	1,580	1,580
3.5	OFF-ON	1,480	1,480
3	ON-ON	1,200	1,200

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

Heat Kit Selection

Model	AEPT030-00C-1/00C-1A	AEPT036-00C-1/00C-1A	AEPT060-00C-1/00C-1A
HKR-05C	X		
HKR-08C	X	X	
HKR-10C	X	X	X
HKR-15C		X	X
HKR-20C			X
HKR-21C			X

NOTE: The C indicates circuit breakers are optional
*Heat Kit requires 3-phase power supply