POLARAIR

AHRI

COMPLETE
2019 FANCOIL RANGE
ECO TECHNICAL CATALOG

SONKORGLOBAL
HVAC Solutions

YOUR SATISFACTION, OUR OBJECTIVE

SONKOR GLOBAL
HVAC Solutions

BECAUSE WE LOVE WHAT WE DO,

OUR PASSION IS QUALITY

COMPANY

INTRODUCTION

SONKOR GLOBAL
HVAC SOLUTIONS

Your Satisfaction, Our Objective

Sonkor has more than than 30 years experience in the international HVAC business. Working with our manufacturing and distribution clients, we find solutions to challenges unique to their markets.

We are based in Hong Kong. With offices in China, Europe, and North America we are able to provide global support to existing and new clients.

We understand our clients are the most valuable part of our business. Because of this we focus on providing support and product quality that exceeds client expectations. Our focus on integrity and professionalism supports a teamwork approach to conducting business.

We provide specialized knowledge and develop strong relationships with allow us to minimize challenges many overseas based manufacturers have when operating globally. Sonkor is always focused on delivering the results you want and need, delivered on time, and meet your requirements.

Our professional, global, multilingual, and client oriented team is trained to understand your needs and provide the best solution for you.

POLARAIR

Working with some of the most well-known and respected manufacturers and distributors in the world, Sonkor Global has developed our own brand, Polar Air, into a strong and well-respected brand. Polar Air is recognized worldwide and has become a standard for high quality HVAC product solutions.

Polar Air is represented around the world by carefully selected business partners. We work with companies that share our devotion to client service and high product quality. Our goal is to consistently strive to not only meet but to exceed client expectations.

Fan Coil solutions

The Sonkor Global Hydronic Fan Coil Unit range (FCU), is the result of over 20 years' experience designing and manufacturing fan coils for, and together with, the main hot and cold water machine manufacturers from the most demanding markets.
Our FCU range counts with CE and ETL approvals and has been certified by Europe's independent certification company, Eurovent, confirming the performance of our products, developed to meet the strictest international standards.

All our FCU ranges offer:

- **Universal integrated control** system with two different configurations:
  Total Control Configuration for complete system control including master-slave and Modbus protocol for BMS communication.
  Flexi Control Configuration for unit control from an external thermostat with additional control of drain pump, louvers and zonal control of product operations.
- **Energy efficient EC motors** or AC motors options.
- **Designs to reduce costs of stock**, distribution, maintenance and installation.
- **Fancoils suitable for all markets** including 230V/1ph/50Hz, 220V/1ph/60Hz, and 115V/1ph/60Hz.
- **Innovative accessories** to give more product flexibility:
  Auxiliary heating coils and auxiliary electric heaters for on-site installation.

We thank you for your time and your interest.
Please explore the following pages to learn more about our Fancoil product solutions.

ECO HIGH WALL SERIES
HIGH WALL EC MOTOR FAN COILS

MODELS

SWC Y-AECM

High Wall Fan Coils with EC Motor 115V/60Hz, cETLus approved, specified under AHRI standards.

SWC X-AECM

High Wall Fan Coils with EC Motor 220V/50Hz, cETLus approved, specified under AHRI standards.

ECO HIGH WALL SERIES
HIGH WALL EC
MOTOR FAN COILS

MODEL SWC Y-AECM
MODEL SWC X-AECM

Product Presentation

High Wall Fan Coils units were invented by Sonkor as the solution in applications where ducted fan coil units will not work, such as spaces without lowered ceilings or where floor space is not preferred for installation. The motorized adjustable louvers on the front of the unit allow for airflow control in heating and cooling modes. With a wide range of product sizes, simplicity of installation and ease of maintenance, High Wall Fan Coils are commonly used in residential and commercial installations for cooling and heating applications.

Sonkor Global ECO High Wall Series is the result of 20 years of product development experience, understanding world market requirements, and applying the technical innovation required to satisfy the most demanding specifications.

Product Range

The ECO High Wall Series offers an EC motor range of 115V/60Hz and 220V/1Ph/50Hz with cETLus approval ready for 24V thermostats and 24V valves, with the following capacities:

• 5 sizes of 2-pipe models from 3400 BTU (1kW) to 12600 BTU (3.7kW) cooling capacity.

• 3 sizes of 2-pipe models from 16100 BTU (4.72kW) to 20000 BTU (5.86kW) cooling capacity.

Product Features

• Energy Efficiency. The ECO High Wall Series Fan Coils incorporate a DC motor with variable speed modulation using an integrated EC motor driver.

Energy saving or unit power input at set H/M/L speeds is reduced by 30 - 50% when compared to traditional on/off AC motors. Moreover, in Energy Saving Auto – Mode (ESM), as airflow is continuously varied (step-less progression) between 15% and 100% of the maximum high speed airflow, energy saving will be 50 – 70% while precisely meeting the required cooling and heating loads of the space.

This innovation eliminates the need for the motor to turn off and on periodically to maintain the desired temperature of the environment, leading to total energy savings of up to 50% on an installation/project basis. Modulation of airflow to meet heating and cooling requirements of the space will also result in reducing temperature fluctuations within the space, as well as reducing fan noise.

The motor is driven by a 0 – 10 VDC signal originating from an inverter board integrated into the unit onboard controller, which utilizes PID logic in order to modulate motor RPMs in Energy Saving Auto - Mode (ESM).

• Flexibility. The ECO High Wall Series Fan Coils offer an integrated 2-way or 3-way valve (on/off with thermoelectric actuators) for all sizes, along with pre-configuration for 4x2 valve kit (optional), and 4-pipe control logic available by DIP switch setting. It also features Universal EC motors with adjustable RPMs by DIP Switch setting as well as Universal Control Boards with the same dimensions for the full range.

• Low Sound. The ECO High Wall Series Fan Coils series has been configured to minimize noise output with the smallest unit producing 38 d(B)A at high speed and the largest unit producing 59 d(B)A at high speed.

• Design. The ECO High Wall Series Fan Coils has an Elegant and Modern design. It has a flat front panel, LED display, and all capacities come housed in one of two cabinet sizes, which allows consistency and uniformity on projects where multiple units are required.

• 5 sizes provided with this dimension: 34½ x 9 x 12 inches (876 x 228 x 300mm).

• 3 sizes provided with this dimension: 42 x 9½ x 12¼ inches (1063 x 240 x 310mm).

Standard Configuration

The ECO High Wall Series Fan Coils comes with standard stainless steel insulated flexible hoses for connection to supply and return water pipes, Nylon Mesh Filter, stepping motor, LED display and Controls compatible for 24V thermostats and 24V valve connections.

Control Options*

Two control configuration options are offered for the ECO High Wall Series Fan Coils.

• Total Control Board (S type) – Field Programmable using easy to set dipswitches and controlled via Infra-red handset and/or wired wall pad. It includes a 24V signal for modulating valve controls and It offers the following control options: continuous with modulation or On/Off fan, 2 or 4 Pipe configuration, with or without valves, with or without electrical heater, preheat configuration and complete diagnostics.

Our S type controller also allows control of up to 32 Secondary units via a single Main Unit with IR Handset or Wall Pad controller, and up to 2048 units via BMS (Building Management System) with Modbus platform.

• Flexi Control Board (W type) – 24 VAC controller compatible with wired wall mounted thermostat, and on-off or modulating fan control. Control of supply air louvers, zone valves (24V or modulating), and limited LED diagnostics is included.*

** Modulating fan control via 0-10 VDC signal provided by BMS (BMS by others).*

* For any of the control options above, if a modulating valve is required, the unit needs a VWV controller to supply 0-10VDC signal to the valves. See accessory pages for further information or contact your nearest sales representative.

ECO HIGH WALL SERIES
HIGH WALL EC MOTOR FAN COILS

MODEL SWC Y-AECM
MODEL SWC X-AECM

Product Accessories

CONTROL ACCESSORIES

INFRA-RED HANDSET CONTROLLER + WALL HOLDER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

With Global Control functionality for Main and Secondary Unit groups.

UNLIMITED WIRED WALL PAD CONTROLLER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

Features: 7 day ON/OFF timer program. Addressable Main and Secondary units allowing control of up to 32 Secondary units via a single Main Unit with set or check of each unit parameters individually. Error display with addressable error diagnostic (Main unit Wall Pad displays Secondary unit address and error type). One Touch Global Control (Global Control Main Unit Wall Pad controls all units in the group). Onboard Room Air Temperature Sensor.

DIP SWITCH CONFIGURATION SERVICE

Preset Dip switch configuration for addressing Main Unit to Secondary Units. Dip Switch configuration labelled with carton tag.

EXTERNAL CONNECTION PLUGS

Factory prewired units with external accessory plugs for fast and easy connections.

UNIVERSAL EC THERMOSTAT

(FOR FLEXI CONTROL BOARD)

Main functions: 2-pipe, 4-pipe, 2-pipe +floor heating mode, floor heating, cooling. AC/EC motor 3-speed control. Motorized valve control. 0~10 VDC Modulating valve. EC motor RPM control. Low temperature protection. Remote ON/OFF function. Cooling and heating contact. Modbus protocol. Power supply: 24 Vac or VDC. Working environment: 0~50°C, 5~95%RH (no condensate). Self-power consumption: <2W. Protection class: IP30.

MORE ACCESSORIES

ELECTRICAL HEATERS

With 2-stage safety cut-out and can be configured as booster heaters or primary heaters.

VALVES

Integrated 2-way On/Off or 3-way bypass valves, ½" sizes with thermoelectric or 24Vac modulating Actuators.

CONDENSATE REMOVAL PUMP

Self-contained condensate removal system for use directly inside the highwall. Factory pre-installed.

ECO HIGH WALL SERIES
HIGH WALL EC MOTOR FAN COILS

MODEL SWC Y-AECM
MODEL SWC X-AECM

Technical Specifications (AHRI Standards)

SWC-AECM - Hydronic High Wall 2-pipe with EC Motor.

UNIT CONFIGURATION		SWC-AECM-[Size]-V			04	06	12	15	18	20	24	30
		Configuration			2-pipe							
		Number of Fan Blowers			Single							
		Power Supply		(V/Ph/Hz)	115 / 1 / 60 or 220 / 1 / 50							
		Operation Control			S Type: Total control version. W Type: Flexible control version.							
PERFORMANCE DATA	Air	Total AirFlow	H	CFM	218	294	294	379	464	576	635	729
			M		171	218	218	294	435	447	576	635
			L		129	171	171	218	335	353	353	447
	Cooling	Cooling Capacity	H	BTU/Hr	3377	6968	8078	10199	12590	16105	18071	20001
			M		2832	5519	6289	8336	11018	13058	16105	17382
			L		2303	4604	5429	6289	8987	11303	11303	13058
		Sensible Cooling Capacity	H		2745	4817	5480	7031	8686	10842	12304	13687
			M		2289	3754	4202	5659	7507	8723	10842	11782
			L		1831	3107	3600	4202	6080	7470	7470	8723
	Heating	Heating Capacity	H	BTU/Hr	5249	10832	12558	15856	19572	25036	28092	31092
			M		4403	8579	9777	12959	17129	20299	25036	27021
			L		3580	7158	8440	9777	13970	17571	17571	20299
		Max. Elec. Heater Capacity @ 115V / 220V		kW	0.5 / 0.75				0.8 / 1.5			
	Sound	Sound Pressure Level (Outlet)		dB(A)	33/29/24	59/31/26	40/33/28	45/34/31	49/44/37	47/39/36	47/44/37	50/47/40
		Sound Power Level (Outlet)			42/38/33	48/40/35	49/42/37	54/43/40	58/53/46	56/48/45	56/53/46	59/56/49
	Electrical	Fan Motor Power	H	W	13	18	13	22	30	30	40	50
			M		10	13	10	15	20	20	30	40
			L		6	10	8	10	13	15	19	25
		Fan Motor Running Current @ 115 / 220V	H	A	0.23 / 0.12	0.31 / 0.16	0.23 / 0.12	0.38 / 0.20	0.52 /0.27	0.52 / 0.27	0.70 /0.36	0.87 / 0.45
	Hydraulic	Water Flow Rate	H	GPM	0.7	1.4	1.6	2	2.5	3.2	3.6	4
			M		0.6	1.1	1.2	1.7	2.2	2.6	3.2	3.4
			L		0.5	0.9	1.1	1.2	1.8	2.2	2.2	2.6
		Cooling Pressure Drop	H	ft.Hd	4.9	7.9	6.5	9.7	13.5	14.1	17.1	20.4
			M		3.6	5.3	4.3	6.9	10.8	9.9	14.1	16
			L		2.5	3.9	3.3	4.3	7.6	7.7	7.7	9.9
		Heating Water Flow Rate @ H/M/L		GPM	Same as "Water Flow Rate"							
		Heating Pressure Drop	H	ft.Hd	4	7	6	9	12	13	15	1.8
			M		3.2	4.8	3.8	6.2	9.7	8.9	12.7	14.4
			L		2.3	3.5	3	3.8	6.9	6.9	6.9	8.9
		Water Content		Gal	0.01	0.02	0.03	0.03	0.05	0.07	0.07	0.07
CONSTRUCTION AND PACKING DATA		Water Connections	Type		NPT Threaded female							
			In	in.	1/2							
			Out									
		Condensate Drainage Connection			5/8							
		Dimensions	L	in.	34 ½					41 ⅞		
			W		9					9 7/16		
			H		11 13/16					12 3/16		
		Net Weight		lbs	24.3	26.5	28.7	28.7	30.9	35.3	35.3	35.3

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

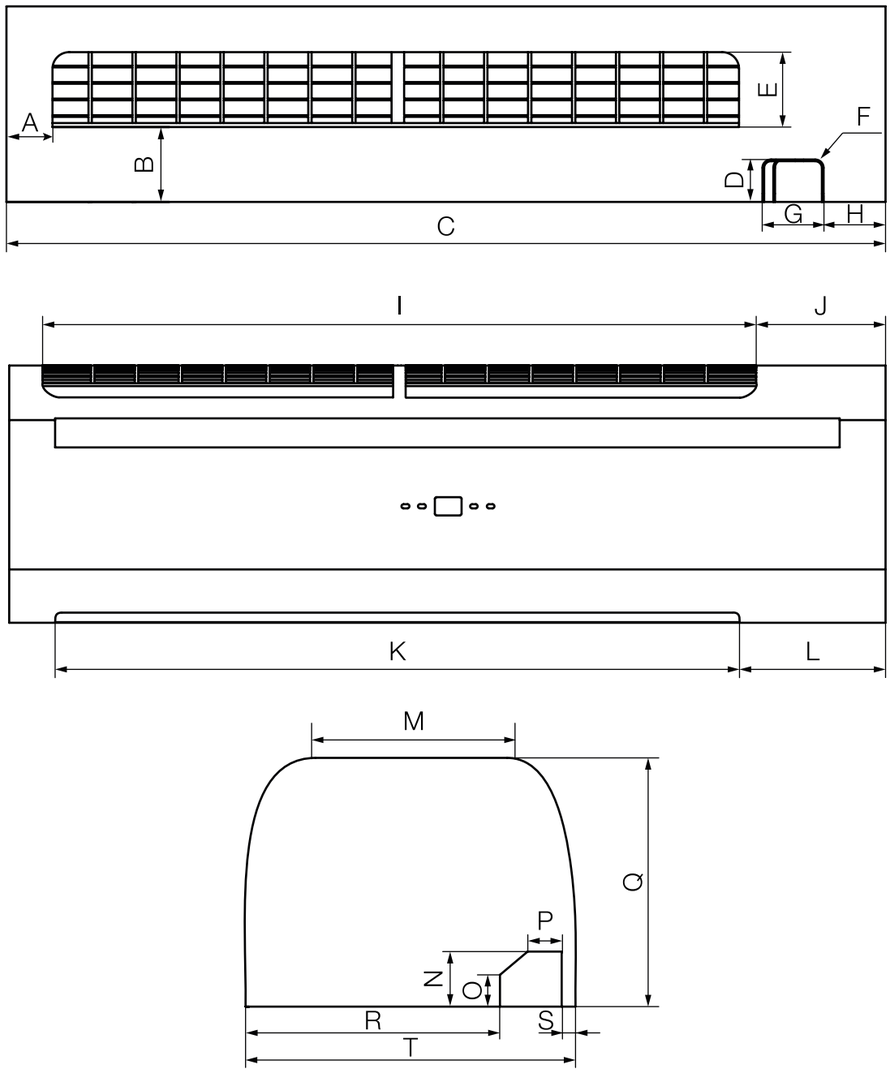
Return air temperature: 70F.
Inlet water temperature: 140F.

For specifications of 220V/60Hz models please refer to our selection software or contact your local sales representative.

ECO HIGH WALL SERIES
HIGH WALL EC
MOTOR FAN COILS

MODEL SWC Y-AECM
MODEL SWC X-AECM

Dimensional Drawings SWC AECM, 2 Pipe Models



Model	Unit Dimensions (inches)									
	A	B	C	D	E	F	G	H	I	J
SWC-04	1-9/16	4-1/8	34-7/16	2-3/16	4-1/8	R13-16	2-3/8	2-15/16	26-3/16	6-11/16
SWC-06	1-9/16	4-1/8	34-7/16	2-3/16	4-1/8	R13-16	2-3/8	2-15/16	26-3/16	6-11/16
SWC-12	1-9/16	4-1/8	34-7/16	2-3/16	4-1/8	R13-16	2-3/8	2-15/16	26-3/16	6-11/16
SWC-15	1-9/16	4-1/8	34-7/16	2-3/16	4-1/8	R13-16	2-3/8	2-15/16	26-3/16	6-11/16
SWC-18	1-9/16	4-1/8	34-7/16	2-3/16	4-1/8	R13-16	2-3/8	2-15/16	26-3/16	6-11/16

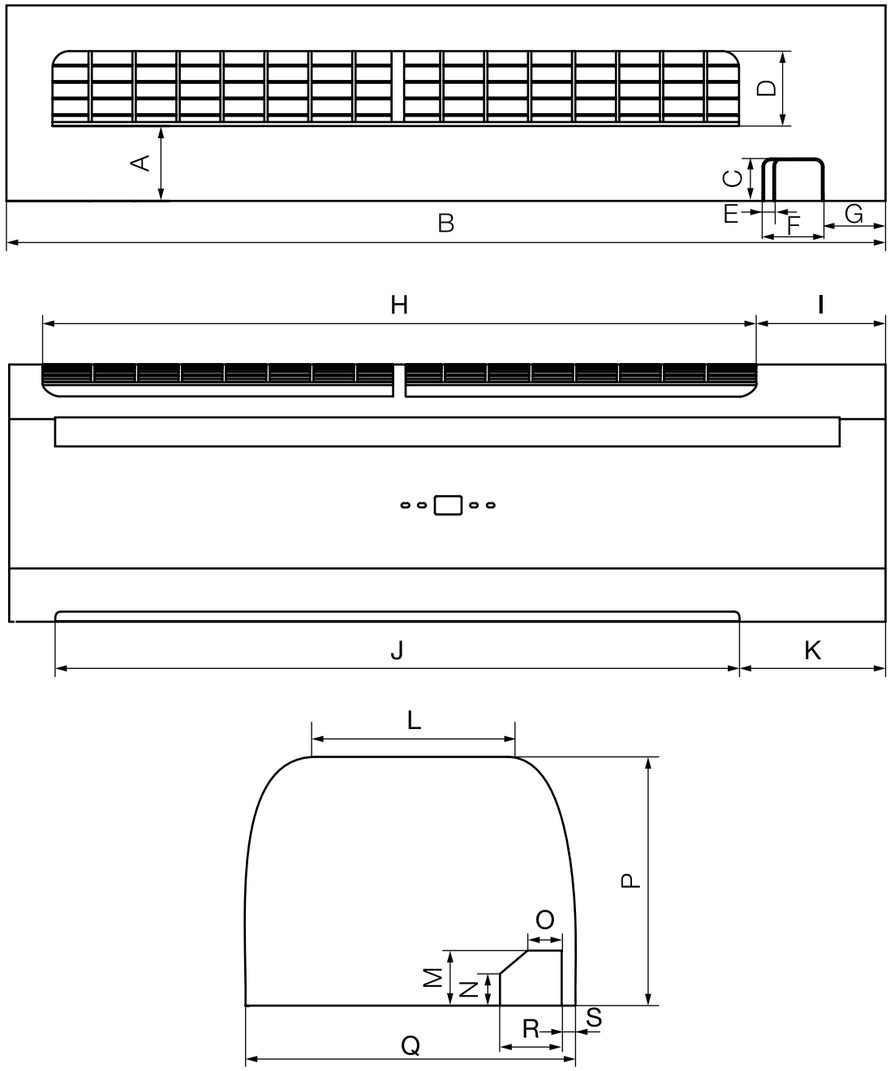
Model	Unit Dimensions (inches)									
	K	L	M	N	O	P	Q	R	S	T
SWC-04	27-15/16	4-15/16	7-7/8	2-3/16	1-3/16	1-3/16	8-11/16	9	3/8	11-13/16
SWC-06	27-15/16	4-15/16	7-7/8	2-3/16	1-3/16	1-3/16	8-11/16	9	3/8	11-13/16
SWC-12	27-15/16	4-15/16	7-7/8	2-3/16	1-3/16	1-3/16	8-11/16	9	3/8	11-13/16
SWC-15	27-15/16	4-15/16	7-7/8	2-3/16	1-3/16	1-3/16	8-11/16	9	3/8	11-13/16
SWC-18	27-15/16	4-15/16	7-7/8	2-3/16	1-3/16	1-3/16	8-11/16	9	3/8	11-13/16

*** Product dimensions are within ± 1/16 inches.**

ECO HIGH WALL SERIES
HIGH WALL EC
MOTOR FAN COILS

MODEL SWC Y-AECM
MODEL SWC X-AECM

Dimensional Drawings SWC AECM, 2 Pipe Models



Model	Unit Dimensions (inches)									
	A	B	C	D	E	F	G	H	I	J
SWC-20	3-9/16	41-5/16	2	3-9/16	9/16	2-7/8	2-15/16	33-1/16	6-1/8	32-1/4
SWC-24	3-9/16	41-5/16	2	3-9/16	9/16	2-7/8	2-15/16	33-1/16	6-1/8	32-1/4
SWC-30	3-9/16	41-5/16	2	3-9/16	9/16	2-7/8	2-15/16	33-1/16	6-1/8	32-1/4

Model	Unit Dimensions (inches)								
	K	L	M	N	O	P	Q	R	S
SWC-20	6-7/8	8-7/16	2-1/16	1-3/16	1-1/4	9-1/4	12-3/16	2-1/4	1/2
SWC-24	6-7/8	8-7/16	2-1/16	1-3/16	1-1/4	9-1/4	12-3/16	2-1/4	1/2
SWC-30	6-7/8	8-7/16	2-1/16	1-3/16	1-1/4	9-1/4	12-3/16	2-1/4	1/2

*** Product dimensions are within ± 1/16 inches.**

ECO SLIMLINE SERIES
DECORATIVE EC MOTOR FAN COILS

MODELS

PFWSL Y-AECM

Thin Console Fan Coils with EC Motor 115V/60Hz, cETLus approved specified under AHRI standards.

ECO SLIMLINE SERIES DECORATIVE EC MOTOR FAN COILS

PFWSL Y-AECM

Product Presentation

The PFWSL Y-AECM ECO Slimline Fan Coils, with energy efficient EC motors are meant for residential applications with a slim and elegant 5-1/8 in (130 mm) depth design.

This product range can achieve higher energy savings when combined with low temperature heat generators such as heat pumps, condensing boilers and system with built-in solar collectors.

With its sophisticated temperature regulator, the PFWSL Y-AECM provides thermal comfort in every season.

Product Range

The PFWSL Y-AECM ECO Slimline Series Fan Coils, offer an EC motor range of 115V/60Hz and can be provided with 24V thermostats and 24V valves in the following capacities:

• 5 sizes of 2 pipe, 2 row models from 3250 BTU/H to 11500 BTU/H (0.95kW to 3.37kW) cooling capacity and 5050 BTU/H to 17850 BTU/H (1.48kW to 5.23kW) heating capacity.

• 5 sizes of 4 pipe, 2 row models from 3200 BTU/H to 11150 BTU/H (0.95kW to 3.27kW) cooling capacity and 4100 BTU/H to 13700 BTU/H (1.21kW to 4.02kW) heating capacity.

Product Features

• Energy Efficiency. The PFWSL Y-AECM ECO Slimline Series Fan Coils incorporate a DC motor with variable speed modulation using an integrated EC motor driver.

Energy saving or unit power input at set H/M/L speeds is reduced by 30 - 50% when compared to traditional on/off AC motors. Moreover, in Energy Saving Auto – Mode (ESM), as airflow is continuously varied (step-less progression) between 15% and 100% of the maximum high speed airflow, energy saving will be 50–70% while precisely meeting the required cooling and heating loads of the space.

This innovation eliminates the need for the motor to turn off and on periodically to maintain the desired temperature of the environment, leading to total energy savings of up to 50% on an installation/project basis. Modulation of airflow to meet heating and cooling requirements of the space will also result in reducing temperature fluctuations within the space, as well as reducing fan noise.

The motor is driven by a 0 – 10 VDC signal originating from an inverter board integrated into the unit onboard controller, which utilizes PID logic in order to modulate motor RPMs in Energy Saving Auto - Mode (ESM).

• Flexibility. The PFWSL Y-AECM ECO Slimline Series Fan Coils has been designed to maximize product flexibility on site and in stock offering:

- Easy to remove front cover for ease of maintenance.
- Horizontal or vertical return air intake positions.
- Horizontal and vertical installation available;
- Auxiliary Electric Heater and Auxiliary 1 row Heating Coil suitable for On-site or In-stock installation.

• Design. The PFWSL Y-AECM ECO Slimline Series Fan Coils has an Elegant and Modern design, with only 5-1/8 in. (130 mm) depth.

• Low Sound. The PFWSL Y-AECM ECO Slimline Series Fan Coils features minimize noise level thanks to its tangential fan.

Standard Configuration

The ECO Slimline Series Fan Coils units are provided with 1/16 in nylon filters and right-hand coil connection.

Control Options

Two control configuration options are offered for the PFWSL Y-AECM ECO Slimline Series Fan Coils

• Total Control Board (S type) – Field Programmable using easy to set dipswitches and controlled via Infra-red handset and/or wired wall pad. It offers the following control options: Continuous with modulation; 2 or 4 Pipe configuration; with or without valves; with or without electrical heater; preheat configuration; complete diagnostics.

• Flexi Control Board (W type) – 24 VAC controller compatible with wired wall mounted thermostat, and on-off or modulating fan control. Control of integral condensate pump (pump is optional), zone valves (24V or modulating), and limited LED diagnostics is included.*

** Modulating fan control via 0-10 VDC signal provided by BMS (BMS by others).*

ECO SLIMLINE SERIES DECORATIVE EC MOTOR FAN COILS

MODEL PFWSL Y-AECM

Product Accessories

CONTROL ACCESSORIES

INFRA-RED HANDSET CONTROLLER + WALL HOLDER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

With Global Control functionality for Main and Secondary Unit groups.

ABS EXTERNAL LED RECEIVER

IR receiver in ABS housing with 70 inches length prewiring, which can be connected with S Type controls only. LED lights show working mode or error code.

UNLIMITED WIRED WALL PAD CONTROLLER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

Features: 7 day ON/OFF timer program. Addressable Main and Secondary units allowing control of up to 32 Secondary units via a single Main Unit with set or check of each unit parameters individually. Error display with addressable error diagnostic (Main unit Wall Pad displays Secondary unit address and error type). One Touch Global Control (Global Control Main Unit Wall Pad controls all units in the group). Onboard Room Air Temperature Sensor.

DIP SWITCH CONFIGURATION SERVICE

Preset Dip switch configuration for addressing Main Unit to Secondary Units. Dip Switch configuration labelled with carton tag.

UNIVERSAL EC THERMOSTAT

(FOR FLEXI CONTROL BOARD)

Main functions: 2-pipe, 4-pipe, 2-pipe +floor heating mode, floor heating, cooling. AC/EC motor 3-speed control. Motorized valve control. 0~10 VDC Modulating valve. EC motor RPM control. Low temperature protection. Remote ON/OFF function. Cooling and heating contact. Modbus protocol. Power supply: 24 Vac or VDC. Working environment: 0~50°C, 5~95%RH (no condensate). Self-power consumption: <2W. Protection class: IP30.

MORE ACCESSORIES

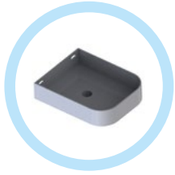
ELECTRICAL HEATERS

The electric heater module is supplied for winter heating as an alternative to the auxiliary hot water coil. We offer a complete range of PTC (Positive Thermal Coefficient) electric heaters kits, easy to connect to control box, with mounting fixture. The electric heater configuration is selectable by DIP switch on the internal control board.

VALVES + VALVE KITS

2-way On/Off or 3-way bypass valves, ¾" or ½" sizes with thermoelectric or 24Vac modulating Actuators.

Stainless Steel Hose and Cooper Piping Connection Kits for 2-way and 3-way valve options. Distance between inlet and outlet pipe connections standardized at 1.57inches (40mm) for hot water circuit, and 1.97inches (50mm) for cold water circuit.



AUXILIARY DRAIN PANS FOR VERTICAL OR HORIZONTAL INSTALLATIONS

Painted steel drain pans for suspended ceiling, built-in horizontal or floor standing fixed wall installations with right/left-sided coil connections.

METAL FEET FOR FLOOR STANDING PFWSL

See Technical Manual for further information.

ECO SLIMLINE SERIES DECORATIVE EC MOTOR FAN COILS

MODEL PFWSL Y-AECM

Technical Specifications (AHRI Standards)

PFWSL-Y-AECM-V - Hydronic Slimline Decorative 2-pipe with EC Motor.

UNIT CONFIGURATION		PFWSL-[Size]-Y-AECM-V				01	02	03	04	05
		Configuration				2-pipe				
		Number of Fan Blowers				Single			Twin	
		Power Supply			(V/Ph/Hz)	115 / 1 / 60				
		Operation Control				S Type: Total control version. WType: Flexible control version.				
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	108	176	247	308	347
			M	2		86	135	196	242	265
			L	1		54	84	134	198	231
	Cooling	Cooling Capacity	H	3	BTU/Hr	3249	5552	7992	9880	11480
			M	2		2718	4535	6738	8243	9379
			L	1		1898	3103	5010	7094	8452
		Sensible Cooling Capacity	H	3		2227	3738	5328	6618	7635
			M	2		1839	3015	4439	5455	6159
			L	1		1257	2018	3244	4672	5532
	Heating	Heating Capacity	H	3	BTU/Hr	5051	8630	12424	15358	17846
			M	2		4225	7051	10474	12815	14580
			L	1		2951	4824	7789	11028	13139
		Max. Elec. Heater Capacity			kW	0.75	1		1.5	
	Sound	Sound Pressure Level (Outlet)			dB(A)	39/33/28	43/37/31	45/41/34	47/41/35	49/45/38
		Sound Power Level (Outlet)				48/42/37	52/46/40	54/50/43	56/50/44	58/54/47
	Electrical	Fan Motor Power	H		W	14	17	22	22	24
			M			10	12	15	14	16.3
			L			6	8	9	10	11
		Fan Motor Running Current	H		A	0.24	0.30	0.38	0.38	0.42
	Hydraulic	Water Flow Rate	3		GPM	0.64	1.1	1.58	1.95	2.27
			2			0.54	0.9	1.33	1.63	1.85
			1			0.37	0.61	0.99	1.4	1.67
		Cooling Pressure Drop	3		Ft.Hd	0.08	0.26	0.6	0.34	0.52
			2			0.06	0.19	0.45	0.25	0.37
			1			0.03	0.1	0.27	0.2	0.31
		Heating Water Flow Rate @ 3/2/1			GPM	Same as "Water Flow Rate"				
		Heating Pressure Drop	3		Ft.Hd	0.07	0.24	0.54	0.31	0.47
			2			0.05	0.17	0.41	0.23	0.33
			1			0.03	0.09	0.25	0.18	0.28
		Water Content			Gal	0.116	0.193	0.272	0.349	0.425
CONSTRUCTION AND PACKING DATA		Water Connections	Type			NPT Threaded female				
			In		in	3/4"				
			Out							
		Condensate Drainage Connection				5/8"				
		Dimensions	L		in	29 1/8	37	44 7/8	52 3/4	60 5/8
			W			5 1/8				
			H			22 13/16				
		Net Weight			Lbs	41.9	48.5	55.2	61.8	68.4

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

Return air temperature: 70F.
Inlet water temperature: 140F.
Water flow-rate: same as 2-pipe cooling.

Technical Specifications (AHRI Standards)

PFWSL-Y-AECM -P- Hydronic Slimline Decorative 4-pipe with EC Motor.

UNIT CONFIGURATION		PFWSL--[Size]-Y-AECM-P				01	02	03	04	05
		Configuration				4-pipe				
		Number of Fan Blowers				Single			Twin	
		Power Supply			(V/Ph/Hz)	115 / 1 / 60				
		Operation Control				S Type: Total control version. WType: Flexible control version.				
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	108	176	247	308	347
			M	2		86	135	196	242	265
			L	1		54	84	134	198	231
	Cooling	Cooling Capacity	H	3	BTU/Hr	3228	5400	7685	9607	11143
			M	2		2700	4411	6479	8016	9103
			L	1		1886	3018	4818	6898	8204
		Sensible Cooling Capacity	H	3		2182	3588	5124	6410	7415
			M	2		1802	2894	4269	5284	5982
			L	1		1231	1937	3119	4525	5373
	Heating	Heating Capacity	H	3	BTU/Hr	4123	6746	9522	11836	13722
			M	2		3422	5496	7968	9878	11115
			L	1		2383	3801	5937	8440	9963
	Sound	Sound Pressure Level (Outlet)			dB(A)	39/33/28	43/37/31	45/41/34	47/41/35	49/45/48
		Sound Power Level (Outlet)				48/42/37	52/46/40	54/50/43	56/50/44	58/54/57
	Electrical	Fan Motor Power	H		W	14	17	22	22	24
			M			10	12	15	14	16.3
			L			6	8	9	10	11
		Fan Motor Running Current	H		A	0.24	0.30	0.38	0.38	0.42
	Hydraulic	Cooling Water Flow Rate	3		GPM	0.64	1.07	1.52	1.9	2.2
			2			0.53	0.87	1.28	1.58	1.8
			1			0.37	0.6	0.95	1.36	1.62
		Cooling Pressure Drop	3		Ft.Hd	0.25	0.81	0.62	0.5	0.76
			2			0.19	0.58	0.47	0.37	0.54
			1			0.1	0.3	0.28	0.29	0.45
		Heating Water Flow Rate	3		GPM	0.21	0.34	0.47	0.59	0.68
			2			0.17	0.27	0.4	0.49	0.55
			1			0.12	0.19	0.3	0.42	0.5
		Heating Pressure Drop	3		Ft.Hd	0.09	0.3	0.71	0.18	0.27
			2			0.07	0.21	0.52	0.13	0.19
			1			0.04	0.11	0.32	0.1	0.16
		Chilled Water Content			Gal	0.06	0.1	0.14	0.18	0.22
		Hot Water Content				0.030	0.050	0.070	0.090	0.110
CONSTRUCTION AND PACKING DATA		Water Connections	Type			NPT Threaded female				
			In		in	1/2"				
			Out							
		Condensate Drainage Connection				5/8				
		Dimensions	L		in	29 1/8	37	44 7/8	52 3/4	60 5/8
			W			5 1/8				
			H			22 13/16				
		Net Weight			Lbs	41.9	48.5	55.2	61.8	68.4

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

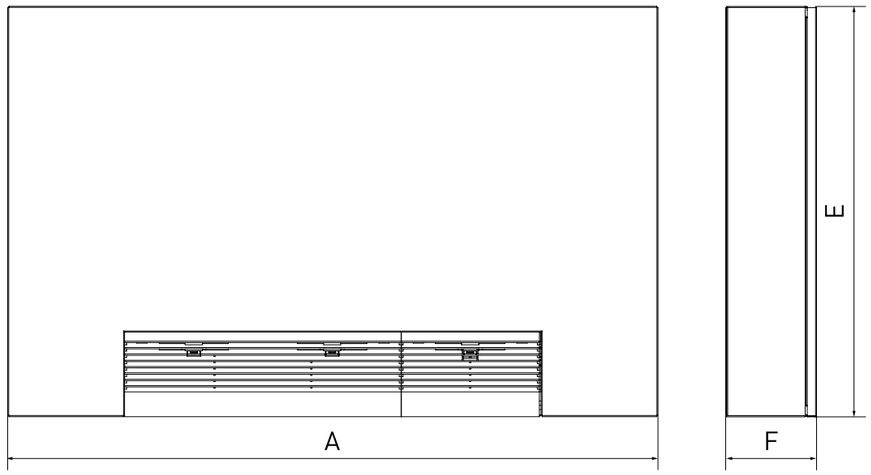
Heating mode (4-pipe):

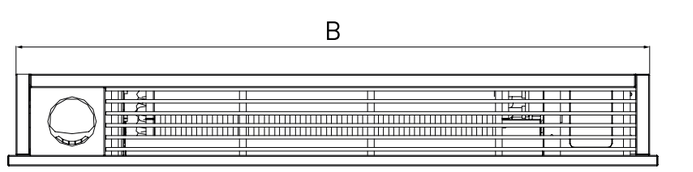
Return air temperature: 70F.
Inlet water temperature: 180F.
Outlet water temperature: 140F.

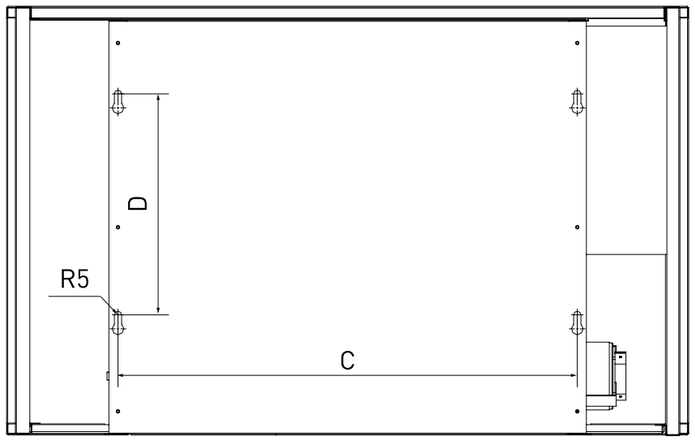
ECO SLIMLINE SERIES
DECORATIVE EC
MOTOR FAN COILS

MODEL PFWSL Y-AECM

Dimensional Drawings **PFWSL Y-AECM, 2 and 4 Pipe Models**







Model	Unit Dimensions (inches)					
	A	B	C	D	E	F
PFWSL-01	29-1/8	28-3/16	17-1/16	11-13/16	22-13/16	5-1/8
PFWSL-02	37	36-1/16	24-15/16	11-13/16	22-13/16	5-1/8
PFWSL-03	44-7/8	43-15/16	32-13/16	11-13/16	22-13/16	5-1/8
PFWSL-04	52-3/4	51-13/16	40-11/16	11-13/16	22-13/16	5-1/8
PFWSL-05	60-5/8	59-11/16	48-9/16	11-13/16	22-13/16	5-1/8

*** Product dimensions are within ± 1/16 inches.**

UNIVERSAL SERIES
DECORATIVE EC MOTOR FAN COILS

MODELS

PFWB Y-AECM
Universal Fan Coils with EC Motor 115V/60Hz, cETLus approved and specified under AHRI standards.

PFWB X-AECM
Universal Fan Coils with EC Motor 220V/60Hz, cETLus approved and specified under AHRI standards.

PFWBC Y-AECM
Universal Fan Coils with EC Motor 115V/60Hz, cETLus approved and specified under AHRI standards, with Decorative Cabinet.

PFWBC X-AECM
Universal Fan Coils with EC Motor 220V/60Hz, cETLus approved and specified under AHRI standards, with Decorative Cabinet.

ECO UNIVERSAL SERIES
DECORATIVE EC
MOTOR FAN COILS

PFWB Y-AECM
PFWB X-AECM
PFWBC Y-AECM
PFWBC X-AECM

ECO UNIVERSAL SERIES
UNIVERSAL EC
MOTOR FAN COILS

PFWB Y-AECM
PFWB X-AECM
PFWBC Y-AECM
PFWBC X-AECM

Product Presentation

Sonkor Global ECO Universal Series has been designed to meet the functional and technical requirements of the most demanding markets. These units are offered in a complete product range with 3 row, 3+1 row and 4 row configurations. Flexible pipe connections allow on site left or right tie-in. Auxiliary Heaters can be installed in the field or shop.

The ECO Universal Series Fan Coils have a discrete slim, modern and elegant design, and are available uncased (ECO Universal NC Series) for in the wall installation or with Decorative Cabinet (ECO Universal EXP Series) for external (exposed) horizontal under ceiling or vertical floor standing installations.

The ECO Universal EXP Series comes in a RAL9010 white color decorative metal casing and has integrated control options for Thermostat, Wall Pad, or Infrared Remote Control.

Product Range

The ECO Universal Series are available with 115V/60Hz and 220V/60Hz, cETLus approved with EC motors. The units can be provided with 24V thermostats and 24V valves in the following capacities:

• 9 sizes of 2-pipe, 3 row models from 5550 BTU/H (1.62Kw) to 32450 BTU/H (9.51kW) cooling capacity.

• 9 sizes of 2-pipe, 4 row models from 6050 BTU/H (1.77kW) to 38300 BTU/H (11.23kW) cooling capacity (non-standard configuration).

• 4 pipe models available with auxiliary heating coil (3+1 row configuration).

Product Features

• Energy Efficiency. The ECO Universal Series Fan Coils incorporate a DC motor with step-less speed modulation using an integrated EC motor driver.

Energy saving or unit power input at set H/M/L speeds is reduced by 30 - 50% when compared to traditional on/off AC motors. Moreover, in Energy Saving Auto – Mode (ESM), as airflow is continuously varied (step-less progression) between 15% and 100% of the maximum high speed airflow, energy saving will be 50 – 70% while precisely meeting the required cooling and heating loads of the space.

This innovation eliminates the need for the motor to turn off and on periodically to maintain the desired temperature of the environment, leading to total energy savings of up to 50% on an installation/ project basis. Modulation of airflow to meet heating and cooling requirements of the space will also result in reducing temperature fluctuations within the space, as well as reducing fan noise.

The motor is driven by a 0 – 10 VDC signal originating from an inverter board integrated into the unit onboard controller, which utilizes PID logic in order to modulate motor RPMs in Energy Saving Auto - Mode (ESM).

• Flexibility. The ECO Universal Series Fan Coils have been designed to maximize product flexibility on site, and in stock offering:

•Easy to remove front cover for ease of maintenance.

•Interchangeable Left / Right hand connections.

•Horizontal or vertical return air intake positions.

•Auxiliary Electric Heater and Auxiliary 1 row Heating Coil suitable for On-site or In-stock installation.

Standard Configuration

The ECO Universal Series offers as standard Nylon net filters and Interchangeable left/ right-side coil connections.

Control Options

Two control configuration options are offered for the ECO Universal Series.

• Total Control Board (S type) – Field Programmable using easy to set dipswitches and controlled via Infra-Red handset and/or Wired Wall pad. It includes a 24V signal for modulating valve controls and It offers the following control options: Continuous with modulation or On/Off fan, 2 or 4 Pipe configuration, with or without valves, with or without electrical heater, preheat configuration and complete diagnostics.

Our S type controller also allows control of up to 32 Secondary units via a single Main Unit with IR Handset or Wall Pad controller, and up to 2048 units via BMS (Building Management System) with Modbus platform.

• Flexi Control Board (W type) – 24 VAC controller compatible with wired wall mounted thermostat, and on-off or modulating fan control. Control of integral condensate pump, zone valves (24V or modulating), and limited LED diagnostics is included.*

** Modulating fan control via 0-10 VDC signal provided by BMS (BMS by others).*

ECO UNIVERSAL SERIES DECORATIVE EC MOTOR FAN COILS

PFWB Y-AECM
PFWB X-AECM
PFWBC Y-AECM
PFWBC X-AECM

Product Accessories

CONTROL ACCESSORIES

INFRA-RED HANDSET CONTROLLER + WALL HOLDER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

With Global Control functionality for Main and Secondary Unit groups.

ABS EXTERNAL LED RECEIVER

IR receiver in ABS housing with 70 inches length prewiring, which can be connected with S Type controls only. LED lights show working mode or error code.

UNLIMITED WIRED WALL PAD CONTROLLER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

Features: 7 day ON/OFF timer program. Addressable Main and Secondary units allowing control of up to 32 Secondary units via a single Main Unit with set or check of each unit parameters individually. Error display with addressable error diagnostic (Main unit Wall Pad displays Secondary unit address and error type). One Touch Global Control (Global Control Main Unit Wall Pad controls all units in the group). Onboard Room Air Temperature Sensor.

DIP SWITCH CONFIGURATION SERVICE

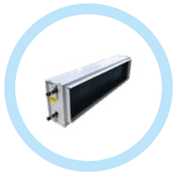
Preset Dip switch configuration for addressing Main Unit to Secondary Units. Dip Switch configuration labelled with carton tag.

UNIVERSAL EC THERMOSTAT

(FOR FLEXI CONTROL BOARD)

Main functions: 2-pipe, 4-pipe, 2-pipe +floor heating mode, floor heating, cooling. AC/EC motor 3-speed control. Motorized valve control. 0~10 VDC Modulating valve. EC motor RPM control. Low temperature protection. Remote ON/OFF function. Cooling and heating contact. Modbus protocol. Power supply: 24 Vac or VDC. Working environment: 0~50°C, 5~95%RH (no condensate). Self-power consumption: <2W. Protection class: IP30.

MORE ACCESSORIES



AUXILIARY HEATING COILS

Easy to install heating coil for 4 pipe applications.

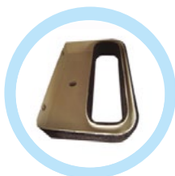
ELECTRICAL HEATERS

The electric heater is supplied for winter heating as an alternative to the auxiliary hot water coil. We offer a complete range of PTC (Positive Thermal Coefficient) electric heaters kits, easy to connect to control box, with mounting fixture. The electric heater configuration is selectable by DIP switch on the internal control board.

VALVES + VALVE KITS

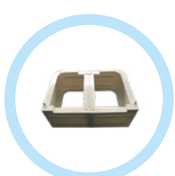
2-way On/Off or 3-way bypass valves, ¾" or ½" sizes, with thermoelectric or 24Vac modulating actuators.

Stainless Steel Hose and Copper Piping Connection Kits for 2-way and 3-way valve options. Distance between inlet and outlet pipe connections standardized at 1.57inches (40mm) for hot water circuit, and 1.97inches (50mm) for cold water circuit.



AUXILIARY DRAIN PANS FOR VERTICAL OR HORIZONTAL INSTALLATIONS

Painted steel drain pans for suspended ceiling, built-in horizontal or floor standing fixed wall installations with right/left-sided coil connections.



PLASTIC FEET FOR FLOOR STANDING PFWBC

(FOR DECORATIVE CABINET APPLICATIONS ONLY)

See Technical Manual for further information.

ECO UNIVERSAL SERIES DECORATIVE EC MOTOR FAN COILS

PFWB Y-AECM
PFWB X-AECM
PFWBC Y-AECM
PFWBC X-AECM

Technical Specifications (AHRI Standards)

PFWB-AECM-(3R)-V - Hydronic Universal Unit 3-row coil, 2-pipe with EC Motor.

PFWBC-AECM-(3R)-V - Hydronic Universal Cabinet 3-row coil, 2-pipe with EC Motor.

UNIT CONFIGURATION		PFWB(C)-AECM-(3R)-[Size]-V				06	09	12	15	18	24	30	36	40
		Configuration				2-pipe								
		Number of Fan Blowers				Single	Twin				Four			
		Power Supply			[V/Ph/Hz]	115 / 1 / 60 or 220 / 1 / 60								
		Operation Control				S Type: Total control version. WType: Flexible control version.								
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	194	296	398	494	571	794	926	1138	1296
			M	2		165	254	318	410	486	688	847	1006	1196
			L	1		116	201	265	357	398	582	720	794	1000
	Cooling	Cooling Capacity	H	3	BTU/Hr	5543	7991	10375	13189	15183	19974	23529	28632	32446
			M	2		4881	7111	8846	11509	13380	17938	21891	25945	30777
			L	1		3720	5961	7622	10353	11448	15772	19379	21613	26850
		Sensible Cooling Capacity	H	3		3771	5440	7126	8998	10286	13850	16218	19674	22230
			M	2		3283	4788	5987	7754	8987	12309	14968	17653	21004
			L	1		2475	3988	5137	6940	7654	10767	13164	14602	18102
	Heating	Heating Capacity	H	3	BTU/Hr	8618	12422	16129	20503	23602	31050	36576	44510	50438
			M	2		7588	11055	13751	17891	20800	27885	34031	40333	47844
			L	1		5783	9266	11849	16094	17797	24518	30125	33599	41739
		Max. Elec. Heater Capacity @ 115V / 220V				3400/1700	5100/2250	6800/3400			10200/5100			
	Sound	Sound Pressure Level (Outlet)			dB(A)	41/39/33	43/40/36	46/43/39	51/46/43	51/48/44	51/48/46	55/51/49	57/54/50	60/58/56
		Sound Power Level (Outlet)				50/48/42	52/49/45	55/52/48	60/55/52	60/57/53	60/57/55	64/60/58	66/63/59	69/67/65
	Electrical	Fan Motor Power	H		W	17	26	38	44	52	87	100	128	182
			M			13	15	23	30	36	60	71	92	147
			L			8	11	13	22	23	40	51	56	92
		Fan Motor Running Current @ 115V / 220V	H		A	0.30/0.15	0.45/0.24	0.66/0.35	0.77/0.40	0.90/0.41	1.51/0.79	1.74/0.91	2.23/1.16	3.17/1.65
	Hydraulic	Water Flow Rate	3		GPM	1.1	1.6	2.1	2.6	3	4	4.7	5.7	6.4
			2			1	1.4	1.8	2.3	2.6	3.5	4.3	5.1	6.1
			1			0.7	1.2	1.5	2	2.3	3.1	3.8	4.3	5.3
		Cooling Pressure Drop	3		ft.Hd	2.4	4.9	3	5.2	6.9	2.1	3.1	4.7	6.3
			2			2	4	2.3	4.1	5.6	1.8	2.7	4	5.8
			1			1.2	2.9	1.8	3.4	4.3	1.4	2.2	2.9	4.6
		Heating Water Flow Rate @ 3/2/1			GPM	Same as "Water Flow Rate"								
		Heating Pressure Drop	3		Ft.Hd	2.2	4.4	2.7	4.7	6.2	1.9	2.8	4.3	5.7
			2			1.8	3.6	2	3.7	5	1.6	2.5	3.6	5.2
			1			1.1	2.7	1.6	3.1	3.8	1.3	2	2.6	4.1
		Water Content			Gal	0.17	0.19	0.25	0.31	0.33	0.46	0.52	0.58	0.64
CONSTRUCTION AND PACKING DATA		Water Connections	Type			NPT Threaded female								
			In		in	3/4"								
			Out											
		Condensate Drainage Connection												
		Dimensions	L		in	33 ¾	35 ¾	41 ⅝	47 $^{3}/_{16}$	49 ½	69 $^{3}/_{16}$	69 $^{3}/_{16}$	75 ⅛	81
			W			9 $^{13}/_{16}$								
			H			19 $^{7}/_{16}$								
		Net Weight			Lbs	49	53	57	66	71	95	104	108	119

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

Return air temperature: 70F.
Inlet water temperature: 140F.
Water flow-rate: same as 2-pipe cooling.

For specifications of 220V/60Hz models please refer to our selection software or contact your local sales representative.

Technical Specifications (AHRI Standards)

PFWB-AECM-(4R)-V - Hydronic Universal Unit 4-row coil, 2-pipe with EC Motor.

PFWBC-AECM-(4R)-V - Hydronic Universal Cabinet 4-row coil, 2-pipe with EC Motor.

UNIT CONFIGURATION		PFWB(C)-AECM-(4R)-[Size]-V			06	09	12	15	18	24	30	36	40
		Configuration			2-pipe								
		Number of Fan Blowers			Single	Twin				Four			
		Power Supply		[V/Ph/Hz]	115 / 1 / 60 or 220 / 1 / 60								
		Operation Control			S Type: Total control version. WType: Flexible control version.								
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	194	296	398	494	571	794	926	1138	1296
			M	2		165	254	318	410	486	688	847	1006	1196
			L	1		116	201	265	357	398	582	720	794	1000
	Cooling	Cooling Capacity	H	3	BTU/Hr	6056	8593	11235	13695	16184	22904	27995	33105	38327
			M	2		5333	7647	9579	11950	14262	20570	26048	29998	36356
			L	1		4064	6410	8254	10750	12203	18086	23058	24989	31717
		Sensible Cooling Capacity	H	3		3969	5730	7455	9146	10745	15261	18627	21964	25562
			M	2		3455	5043	6263	7881	9388	13563	17192	19708	24152
			L	1		2605	4201	5373	7054	7996	11865	15119	16302	20815
	Sound	Sound Pressure Level (Outlet)			dB(A)	41/39/33	43/40/36	46/43/39	51/46/43	51/48/44	51/48/46	55/51/49	57/54/50	60/58/56
		Sound Power Level (Outlet)				50/48/42	52/49/45	55/52/48	60/55/52	60/57/53	60/57/55	64/60/58	66/63/59	69/67/65
	Electrical	Fan Motor Power	H		W	17	26	38	44	52	87	100	128	182
			M			13	15	23	30	36	60	71	92	147
			L			8	11	13	22	23	40	51	56	92
		Fan Motor Running Current @ 115V / 220V	H		A	0.30/0.15	0.45/0.24	0.66/0.35	0.77/0.40	0.90/0.47	1.51/0.79	1.74/0.91	2.23/1.16	3.17/1.65
	Hydraulic	Water Flow Rate	3		GPM	1.2	1.7	2.2	2.7	3.2	4.5	5.5	6.5	7.6
			2			1.1	1.5	1.9	2.4	2.8	4.1	5.1	5.9	7.2
			1			0.8	1.3	1.6	2.1	2.4	3.6	4.6	4.9	6.3
		Cooling Pressure Drop	3		ft.Hd	25.1	7.4	13.8	7.4	10.3	10.9	16.9	24.7	34.6
			2			20.2	6	10.5	5.9	8.3	9.1	15	20.9	31.7
			1			12.8	4.5	8.2	4.9	6.4	7.3	12.2	15.3	25.1
		Water Content			Gal	0.23	0.26	0.3	0.42	0.44	0.61	0.69	0.77	0.85
CONSTRUCTION AND PACKING DATA		Water Connections	Type		NPT Threaded female									
			In		3/4"									
			Out											
		Condensate Drainage Connection												
		Dimensions	L		in	33 ¾	35 ¾	41 ⅝	47 $^{3}/_{16}$	49 ½	69 $^{3}/_{16}$	69 $^{3}/_{16}$	75 ⅛	81
			W			9 $^{13}/_{16}$								
			H			19 $^{7}/_{16}$								
		Net Weight			Lbs	49	53	57	66	71	95	104	108	119

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

For specifications of 220V/60Hz models please refer to our selection software or contact your local sales representative.

ECO UNIVERSAL SERIES DECORATIVE EC MOTOR FAN COILS

PFWB Y-AECM
PFWB X-AECM
PFWBC Y-AECM
PFWBC X-AECM

Technical Specifications (AHRI Standards)

PFWBC-AECM-(3+1)-P - Hydronic Universal Fan Coil 3-row coil 4-pipe with EC Motor.
Auxiliary Heating Coil - 1 Row

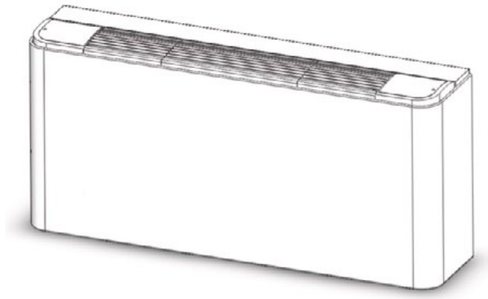
		PFWB(C) (3+1)-AECM -[Size]-P				06	09	12	15	18	24	30	36	40
PERFORMANCE DATA	Heating	Heating Capacity	H	3	BTU/Hr	6214	8816	11747	14594	16377	22719	26377	31485	35540
			M	2		5496	7773	9990	12732	14693	20581	24542	28807	33553
			L	1		4184	6589	8645	11364	12628	17992	21725	24157	29540
	Hydraulic	Heating Water Flow Rate @ 3/2/1		3	GPM	0.3	0.4	0.6	0.7	0.8	1.1	1.3	1.6	1.8
				2		0.3	0.4	0.5	0.6	0.7	1	1.2	1.4	1.7
				1		0.2	0.3	0.4	0.6	0.6	0.9	1.1	1.2	1.5
		Heating Pressure Drop		3	Ft.Hd	0.5	0.9	1.8	3.2	4.1	1.3	2	2.9	3.9
				2		0.4	0.7	1.4	2.5	3.4	1.1	1.7	2.5	3.6
				1		0.2	0.6	1.1	2.1	2.6	0.9	1.4	1.8	2.9
		Water Content			Gal	0.06	0.07	0.08	0.1	0.11	0.15	0.17	0.19	0.21
		Water Connection			in	1/2"								

*** Product dimensions are within ± 1/16 inches.**

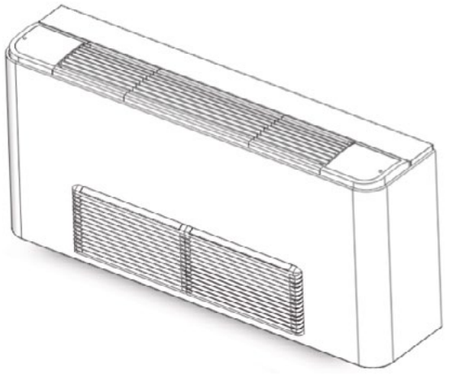
Heating mode (4-pipe):

Return air temperature: 70F.
Inlet water temperature: 180F.
Outlet water temperature: 140F.

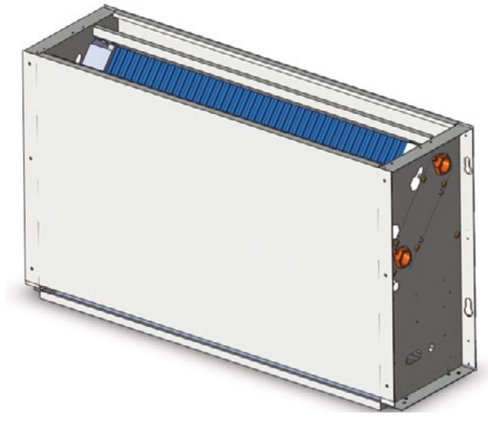
Unit Appearance



PFWBC-VAR
Cased with vertical air return.



PFWBC-HAR
Cased with horizontall air return.

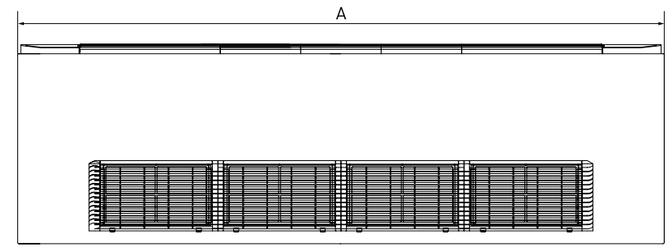


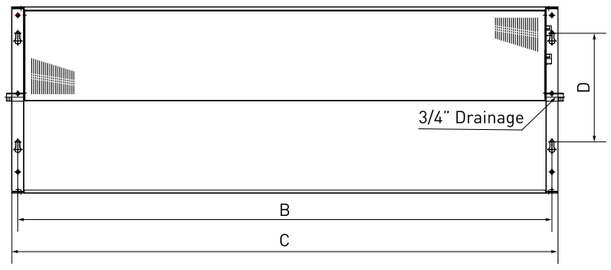
PFWB
Uncased.

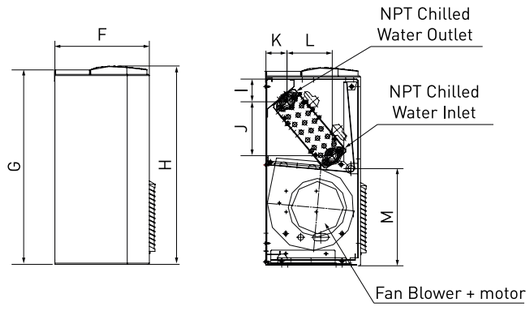
ECO UNIVERSAL SERIES
DECORATIVE EC
MOTOR FAN COILS

PFWB Y-AECM
PFWB X-AECM
PFWBC Y-AECM
PFWBC X-AECM

Dimensional Drawings **PFWBC AECM (3R/4R), 2-Pipe Models**







Model	Unit Dimensions (inches)												
	A	B	C	D	E	F	G	H	I	J	K	L	M
PFWBC-06-V	33-3/4	22-3/4	23-15/16	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2
PFWBC-09-V	35-3/4	24-3/4	25-15/16	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2
PFWBC-12-V	41-5/8	30-5/8	31-13/16	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2
PFWBC-15-V	47-9/16	36-9/16	37-3/4	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2
PFWBC-18-V	49-1/2	38-1/2	39-11/16	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2
PFWBC-24-V	69-3/16	58-3/16	59-3/8	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2
PFWBC-30-V	69-3/16	58-3/16	59-3/8	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2
PFWBC-36-V	75-1/8	64-1/16	65-1/4	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2
PFWBC-40-V	81	70	71-3/16	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2

*** Product dimensions are within ± 1/16 inches.**

ECO UNIVERSAL SERIES
DECORATIVE EC
MOTOR FAN COILS

PFWB Y-AECM
PFWB X-AECM
PFWBC Y-AECM
PFWBC X-AECM

Dimensional Drawings **PFWBC AECM (3+1R), 4-Pipe Models**

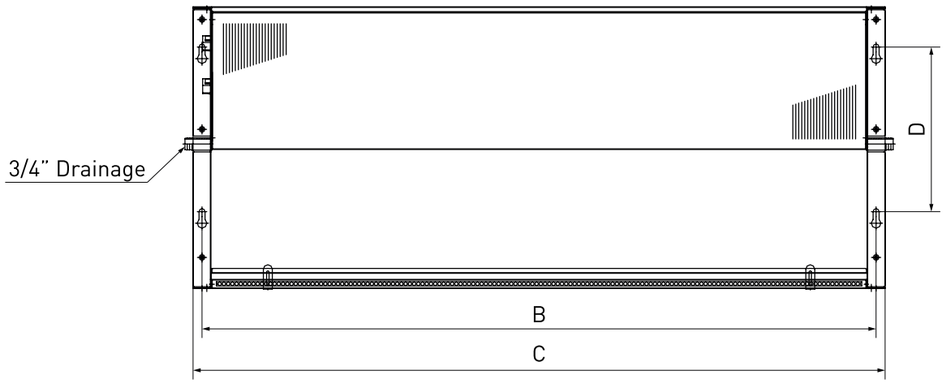
Model	Unit Dimensions (inches)													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
PFWBC-06-P	33-3/4	22-3/4	23-15/16	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2	2
PFWBC-09-P	35-3/4	24-3/4	25-15/16	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2	2
PFWBC-12-P	41-5/8	30-5/8	31-13/16	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2	2
PFWBC-15-P	47-9/16	36-9/16	37-3/4	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2	2
PFWBC-18-P	49-1/2	38-1/2	39-11/16	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2	2
PFWBC-24-P	69-3/16	58-3/16	59-3/8	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2	2
PFWBC-30-P	69-3/16	58-3/16	59-3/8	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2	2
PFWBC-36-P	75-1/8	64-1/16	65-1/4	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2	2
PFWBC-40-P	81	70	71-3/16	10-5/8	9-13/16	9-1/4	19-1/16	19-7/16	2-1/4	5-1/4	2-1/16	4-7/16	9-1/2	2

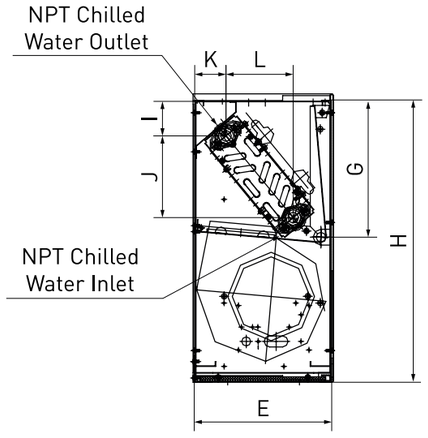
*** Product dimensions are within ± 1/16 inches.**

ECO UNIVERSAL SERIES
DECORATIVE EC
MOTOR FAN COILS

PFWB Y-AECM
PFWB X-AECM
PFWBC Y-AECM
PFWBC X-AECM

Dimensional Drawings **PFWB AECM (3R/4R), 2-Pipe Models**





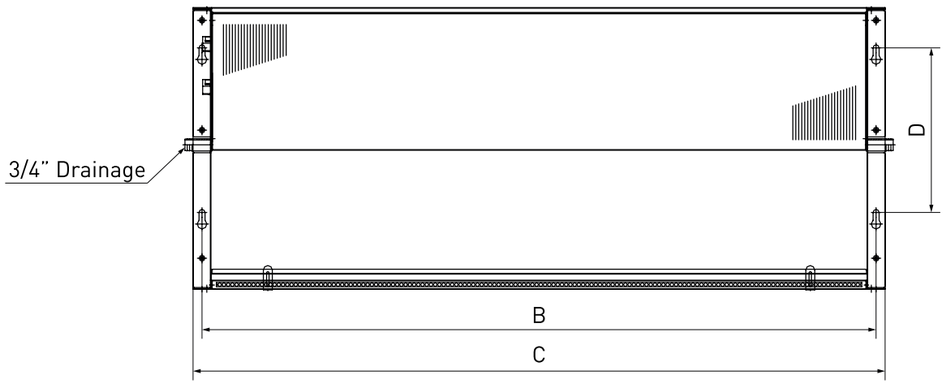
Model	Unit Dimensions (inches)									
	B	C	D	E	G	H	I	J	K	L
PFWB-06-V	22-3/4	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16
PFWB-09-V	24-3/4	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16
PFWB-12-V	30-5/8	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16
PFWB-15-V	36-9/16	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16
PFWB-18-V	38-1/2	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16
PFWB-24-V	58-3/16	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16
PFWB-30-V	53-3/16	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16
PFWB-36-V	64-1/16	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16
PFWB-40-V	70	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16

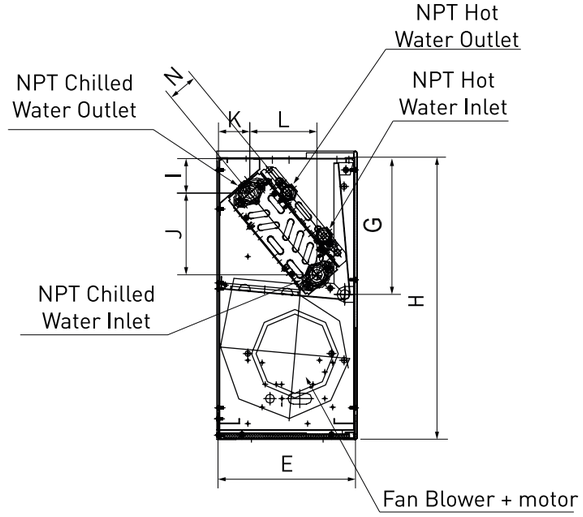
*** Product dimensions are within ± 1/16 inches.**

ECO UNIVERSAL SERIES
DECORATIVE EC
MOTOR FAN COILS

PFWB Y-AECM
PFWB X-AECM
PFWBC Y-AECM
PFWBC X-AECM

Dimensional Drawings **PFWB AECM (3+1R), 4-Pipe Models**





Model	Unit Dimensions (inches)										
	B	C	D	E	G	H	I	J	K	L	N
PFWB-06-P	22-3/4	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16	2
PFWB-09-P	24-3/4	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16	2
PFWB-12-P	30-5/8	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16	2
PFWB-15-P	36-9/16	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16	2
PFWB-18-P	38-1/2	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16	2
PFWB-24-P	58-3/16	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16	2
PFWB-30-P	58-3/16	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16	2
PFWB-36-P	64-1/16	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16	2
PFWB-40-P	70	23-15/16	10-5/8	9-1/16	8-3/4	18-1/8	2-1/4	5-1/4	2-1/16	4-7/16	2

*** Product dimensions are within ± 1/16 inches.**

ECO SUPERIOR SERIES
CASSETTE EC MOTOR FAN COILS

MODELS

PCGH Y-AECM

Cassette Fan Coils with EC Motor 115V/60Hz, cETLus approved, specified under AHRI standards.

PCGH X-AECM

Cassette Fan Coils with EC Motor 220V/60Hz, cETLus approved, specified under AHRI standards.

ECO SUPERIOR SERIES
CASSETTE EC
MOTOR FAN COILS

MODEL PCGH Y-AECM
MODEL PCGH X-AECM

ECO SUPERIOR SERIES CASSETTE EC MOTOR FAN COILS

PCGH Y-AECM
PCGH X-AECM

Product Presentation

The ECO Superior Series Cassette Fan Coils have been designed to minimize after sales labor cost, to maximize product flexibility on-site and in-stock, and to optimize the distribution process. This series offers a wide range of capacities with the following front panel sizes:

- 26 ¾ x 26 ¾ x 1 ⅛ (in) / 680 x 680 x 28 (mm)
- 26 ¾ x 48 $^{13}/_{16}$ x 1 ⅛ (in) / 680 x 1240 x 28 (mm)
- 32 $^{11}/_{16}$ x 32 $^{11}/_{16}$ x 1 ⅛ (in) / 830 x 830 x 28 (mm)
- 38 $^{9}/_{16}$ x 39 x 1 ⅛ (in) / 980 x 980 x 28 (mm)

Product Range

The ECO Superior Series Cassette fan coils are available with 115V/60Hz and 220V/60Hz, ETL approved and EC motors. The units can be provided with 24V thermostats and 24V valves in the following capacities:

• 7 sizes of 2-pipe, 2 row models from 10700 BTU/H (3.14kW) to 32500 BTU/H (9.5 kW) cooling capacity.

• 5 sizes of 4-pipe, 2+1 row models from 12850 BTU/H (3.77kW) to 22300 BTU/H (6.54kW) cooling capacity.

Product Features

• Energy Efficiency. The ECO Superior Series Cassette Fan Coils incorporate a DC motor with variable speed modulation using an integrated EC motor driver.

Energy saving or unit power input at set H/M/L speeds is reduced by 30 - 50% when compared to traditional on/off AC motors. Moreover, in Energy Saving Auto – Mode (ESM), as airflow is continuously varied (step-less progression) between 15% and 100% of the maximum high speed airflow, energy saving will be 50 – 70% while precisely meeting the required cooling and heating loads of the space.

This innovation eliminates the need for the motor to turn off and on periodically to maintain the desired temperature of the environment, leading to total energy savings of up to 50% on an installation/project basis. Modulation of airflow to meet heating and cooling requirements of the space will also result in reducing temperature fluctuations within the space, as well as reducing fan noise.

The motor is driven by a 0 – 10 VDC signal originating from an inverter board integrated into the unit onboard controller, which utilizes PID logic in order to modulate motor RPMs in Energy Saving Auto - Mode (ESM).

• Flexibility for Distribuion and Maintenance. The ECO Superior Series Cassette Fan Coils have been designed to maximize product flexibility on site and in stock offering the following features:

•Plug and Play Control Boxes, accessible without removing ceiling tiles or ceiling access door.

•Easy to remove the front panel, filter and integrated drain pump.

•1-step access to power terminals and auxiliary contacts for quick and easy wiring.

•Internal air vents and water purge valve accessible without removal of drain-pan.

•Easy to remove drain pan. After removal of drain pan all internal components can be easily accessed for servicing and maintenance, including drain pump and float switch, motor and fan, and electrical heater.

Standard Configuration

The ECO Superior Series Cassette Fan Coils offer as standard Nylon net filter(s), stepping motors for louvers, LED display with infra-red signal receiver, return air temperature sensor, coil temperature sensor, integrated condensate pump with float switch, and control systems compatible with 24V thermostats and 24V valve connections.

Control Options

Two control configuration options are offered for the ECO Superior Series Cassette Range.

• Total Control Board Plug and Play Box (S type) – Field Programmable using easy to set dipswitches and controlled via Infra-red handset and/or wired wall pad. It includes a 24V signal for modulating valve controls and It offers the following control options: continuous with modulation or On/Off fan, 2 or 4 Pipe configuration, with or without valves, with or without electrical heater, preheat configuration and complete diagnostics. Our S type controller also allows control of up to 32 Secondary units via a single Main Unit with IR Handset or Wall Pad controller, and up to 2048 units via BMS (Building Management System) with Modbus platform.

• Flexi Control Board (W type) – 24 VAC controller compatible with wired wall mounted thermostat, and on-off or modulating fan control. Control of supply air louvers, integral condensate pump (pump is optional), zone valves (24V or modulating), and limited LED diagnostics is included.*

• Without Control Box Option (X type) – The PCGH Y-AECM Cassette can be stocked without a control board box installed. The control board boxes for S or W type can be kept in stock separately, and can be easily plugged into the unit for use on demand.

** Modulating fan control via 0-10 VDC signal provided by BMS (BMS by others).*

ECO SUPERIOR SERIES CASSETTE EC MOTOR FAN COILS

MODEL PCGH Y-AECM
MODEL PCGH X-AECM

Product Accessories

CONTROL ACCESSORIES

INFRA-RED HANDSET CONTROLLER + WALL HOLDER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

With Global Control functionality for Main and Secondary Unit groups.

UNLIMITED WIRED WALL PAD CONTROLLER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

Features: 7 day ON/OFF timer program. Addressable Main and Secondary units allowing control of up to 32 Secondary units via a single Main Unit with set or check of each unit parameters individually. Error display with addressable error diagnostic (Main unit Wall Pad displays Secondary unit address and error type). One Touch Global Control (Global Control Main Unit Wall Pad controls all units in the group). Onboard Room Air Temperature Sensor.

DIP SWITCH CONFIGURATION SERVICE

Preset Dip switch configuration for addressing Main Unit to Secondary Units. Dip Switch configuration labelled with carton tag.

EXTERNAL CONNECTION PLUGS

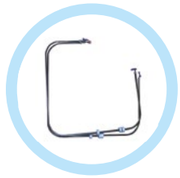
Factory prewired units with external accessory plugs for fast and easy connections.

UNIVERSAL EC THERMOSTAT

(FOR FLEXI CONTROL BOARD)

Main functions: 2-pipe, 4-pipe, 2-pipe +floor heating mode, floor heating, cooling. AC/EC motor 3-speed control. Motorized valve control. 0~10 VDC Modulating valve. EC motor RPM control. Low temperature protection. Remote ON/OFF function. Cooling and heating contact. Modbus protocol. Power supply: 24 Vac or VDC. Working environment: 0~50°C, 5~95%RH (no condensate). Self-power consumption: <2W. Protection class: IP30.

MORE ACCESSORIES

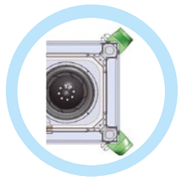


ELECTRICAL HEATERS

With 2-stage safety cut-outs and can be configured as booster heaters or primary heaters. Can be easily installed on-site or in stock via plug-and-play wiring and brackets. Onboard electric heater controller can be configured using easily set dipswitches.

VALVES

2-way On/Off or 3-way bypass valves, ¾" sizes with thermoelectric or 24Vac modulating Actuators.



PLASTIC FRESH AIR FLANGES

Allows up to 15% of unit airflow up to a maximum of 59CFM (100m³/h) as fresh air intake (per connection).
Cassette comes with knock out fresh air connection holes. ABS plastic flanges use only 2 screws for fixture to unit.

PLATIC BRANCH DUCT FLANGES

For delivery of treated air to adjacent spaces with 2 connectors per single fan model.

ECO SUPERIOR SERIES CASSETTE EC MOTOR FAN COILS

MODEL PCGH Y-AECM
MODEL PCGH X-AECM

Technical Specifications (AHRI Standards)

PCG(H) AECM-V- Hydronic Cassette 2-pipe with EC Motor.

					PCG(H)-AECM-[Size]-V	PCG-04R	PCG-08	PCG-08R	PCG-09	PCG-16	PCH-12	PCH-20
UNIT CONFIGURATION					Configuration	2-pipe						
					Number of Fan Blowers	Single			Twin		Single	
					Power Supply (V/Ph/Hz)	115 / 1 / 60 or 220 / 1 / 60						
					Operation Control -PCG(H)	S Type: Total control version. W Type: Flexible control version.						
PERFORMANCE DATA	Air	Total AirFlow	H	CFM		338	476	476	600	853	765	1300
			M			224	306	306	318	535	482	812
			L			118	118	118	212	212	212	482
	Cooling	Cooling Capacity	H	BTU/Hr		10732	15342	16563	20314	28497	23358	32423
			M			7885	10457	11530	12029	19515	16170	26552
			L			4579	4912	5141	8963	8841	8295	18233
		Sensible Cooling Capacity	H			7479	10239	12734	13662	19128	15899	23166
			M			5391	6837	8685	7847	12809	10746	18776
			L			3094	3197	3841	5732	5761	5445	12609
	Heating	Heating Capacity	H	BTU/Hr		16684	23849	25748	31578	44300	36311	50403
			M			12257	16255	17923	18700	30337	25137	41276
			L			7118	7636	7992	13934	13744	12895	28343
		Max. Elec. Heater Capacity @ 115V / 220V				1700 / 3400	3400 / 6800			5100 / 10200		6800 / 13600
	Sound	Sound Pressure Level [Outlet]		dB(A)		43/39/27	50/40/26	50/40/26	45/42/30	54/42/30	56/45/32	58/50/37
		Sound Power Level [Outlet]				52/48/36	59/49/35	59/49/35	54/51/39	63/51/39	65/54/41	67/59/46
	Electrical	Cooling Fan Motor Power	H	W		21	47	47	38	89	82	224
			M			14,8	18	18	27	34	37	79
			L			11	11	11	18	18	16	27
		Heating Fan Motor Power	H			16	42	42	33	84	77	219
			M			9,8	13	13	22	29	32	74
			L			6	6	6	13	13	11	22
		Fan Motor Running Current @ 115V / 220V	H	A		0.37 / 0.19	0.82 / 0.43	0.82 / 0.43	0.66 / 0.35	1.55 / 0.81	1.43 / 0.75	3.90 / 2.04
	Hydraulic	Cooling Water Flow Rate	H	GPM		2.1	3	3.3	4	5.6	4.6	6.4
			M			1.6	2.1	2.3	2.4	3.9	3.2	5.2
			L			0.9	1	1	1.8	1.8	1.6	3.6
		Cooling Pressure Drop	H	Ft.Hd		5	10.6	14.4	10.8	12.8	11.3	8.8
			M			2.9	5.5	7.8	4.4	6.7	6	6.3
			L			1.2	1.5	2	2.7	1.7	1.9	3.3
		Heating Water Flow Rate @ H/M/L		GPM		Same as "Cooling Water Flow Rate"						
		Heating Pressure Drop	H	Ft.Hd		4.5	9.5	13	9.7	11.5	10.1	7.9
			M			2.7	5	7	4	6	5.4	5.6
			L			1.1	1.4	1.8	2.4	1.6	1.7	3
		Water Content		Gal		0.33	0.41	0.36	0.59	0.73	0.47	0.64
CONSTRUCTION AND PACKING DATA		Water Connections	Type			NPT Threaded female						
			In	in.		3/4"						
			Out									
		Condensate Drainage Connection										
		Dimensions	L	in.		22 5/8			44 7/8		28 3/4	32 11/16
			W			22 5/8			22 13/16		28 3/4	32 11/16
			H			9 13/16	11 7/16		9 13/16	11 7/16	10 1/4	11 7/16
		Panel Dimensions				26 3/4 x 26 3/4 x 1 1/8			26 3/4 x 48 13/16 x 1 1/8		32 11/16 x 32 11/16 x 1 1/8	38 9/16 x 38 9/16 x 1 1/8
		Net Weight		lbs		61.7	66.1	72.8	110	115	79.4	110

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

Return air temperature: 70F.
Inlet water temperature: 140F.
Water flow-rate: same as 2-pipe cooling.

For specifications of 220V/60Hz models please refer to our selection software or contact your local sales representative.

Technical Specifications (AHRI Standards)

PCG(H) AECM-P - Hydronic Cassette 4-pipe with EC Motor.

					PCG(H)-AECM-[Size]-P	PCG-08	PCG-09	PCG-16	PCH-12	PCH-20
UNIT CONFIGURATION					Configuration	4-pipe				
					Number of Fan Blowers	Single	Twin		Single	
					Power Supply (V/Ph/Hz)	115 / 1 / 60 or 220 / 1 / 60				
					Operation Control -PCG(H)	S Type: Total control version. W Type: Flexible control version.				
PERFORMANCE DATA	Air	Total AirFlow	H	CFM		476	600	853	765	1235
			M			306	318	535	482	812
			L			118	212	212	212	482
	Cooling	Cooling Capacity	H	BTU/Hr		12852	13298	16078	19609	22318
			M			9129	8200	11783	13823	17245
			L			4305	6000	5740	7165	13585
		Sensible Cooling Capacity	H			8794	9407	11280	13408	15307
			M			6129	5621	8140	9265	11660
			L			2873	4102	3946	4790	9018
	Heating	Heating Capacity	H	BTU/Hr		14857	20246	25172	15851	31509
			M			10642	12451	17819	11250	22839
			L			4878	9148	8530	5789	15118
		Max. Elec. Heater Capacity @ 115V / 220V				3400 / 6800		5100 / 10200		6800 / 13600
	Sound	Sound Pressure Level [Outlet]		dB(A)		50/40/26	45/42/30	54/42/30	56/45/32	58/50/37
		Sound Power Level [Outlet]				59/49/35	54/51/39	63/51/39	65/54/41	67/59/46
	Electrical	Cooling Fan Motor Power	H	W		47	38	89	82	224
			M			18	27	34	37	79
			L			11	18	18	16	27
		Heating Fan Motor Power	H			42	33	84	77	219
			M			13	22	29	32	74
			L			6	13	13	11	22
		Fan Motor Running Current @ 115V / 220V	H	A		0.82 / 0.43	0.66 / 0.35	1.55 / 0.81	1.43 / 0.75	3.90 / 2.04
	Hydraulic	Cooling Water Flow Rate	H	GPM		2.5	2.6	3.2	3.9	4.4
			M			1.8	1.6	2.3	2.7	3.4
			L			0.9	1.2	1.1	1.4	2.7
		Cooling Pressure Drop	H	Ft.Hd		5.6	15.5	4.6	2.3	6.9
			M			3.2	6.8	2.7	1.3	4.5
			L			0.9	4	0.8	0.4	3
		Heating Water Flow Rate	H	GPM		0.7	1	1.3	0.8	1.6
			M			0.5	0.6	0.9	0.6	1.1
			L			0.2	0.5	0.4	0.3	0.8
		Heating Pressure Drop	H	Ft.Hd		0.4	0.4	0.6	0.4	0.9
			M			0.2	0.2	0.4	0.2	0.5
			L			0.1	0.1	0.1	0.1	0.2
		Chilled Water Content		Gal		0.28	0.36	0.51	0.36	0.44
		Hot Water Content				0.13	0.23	0.23	0.11	0.2
CONSTRUCTION AND PACKING DATA		Water Connections	Type			NPT Threaded female				
			In	in.		3/4"				
			Out							
		Condensate Drainage Connection								
		Dimensions	L	in.		22 5/8	44 7/8		28 3/4	32 11/16
			W			22 5/8	22 13/16		28 3/4	32 11/16
			H			11 7/16	9 13/16	11 7/16	10 1/4	11 7/16
		Panel Dimensions				26 3/4 x 26 3/4 x 1 1/8	26 3/4 x 48 13/16 x 1 1/8		32 11/16 x 32 11/16 x 1 1/8	38 9/16 x 38 9/16 x 1 1/8
		Net Weight		lbs		66.1	110	115	79.4	110

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (4-pipe):

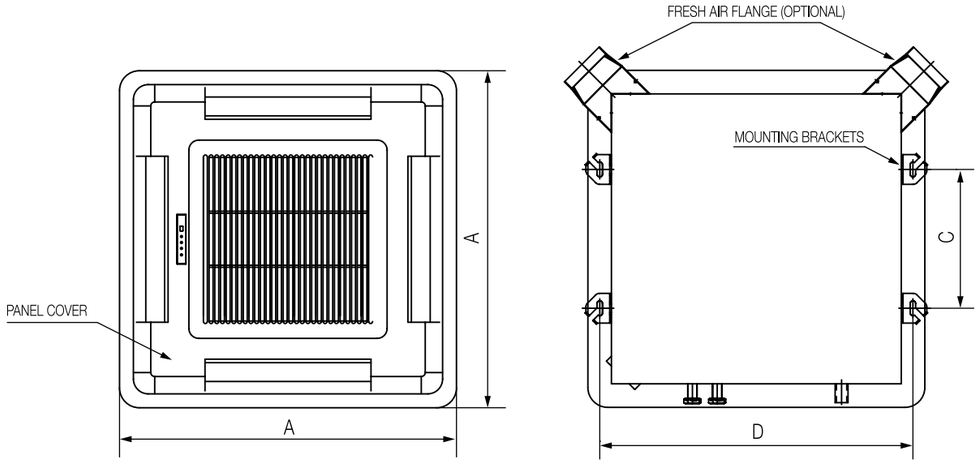
Return air temperature: 70F.
Inlet/ outlet water temperature: 180F/ 140F.

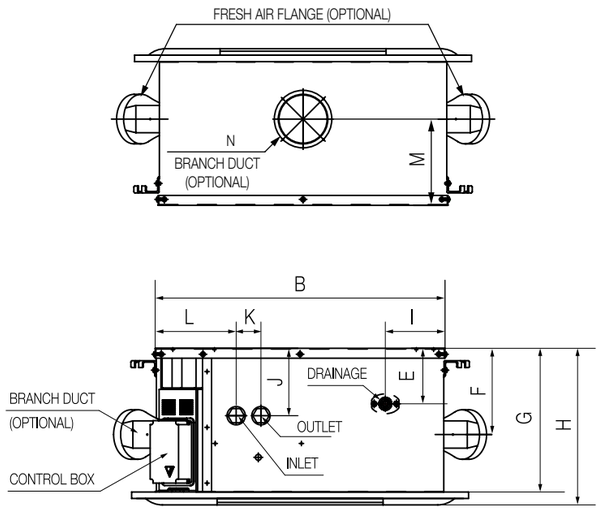
For specifications of 220V/60Hz models please refer to our selection software or contact your local sales representative.

ECO SUPERIOR SERIES
CASSETTE EC
MOTOR FAN COILS

MODEL PCGH Y-AECM
MODEL PCGH X-AECM

Dimensional Drawings PCGH AECM 2-Pipe, Single Fan Models





Model	Unit Dimensions (inches)						
	A	B	C	D	E	F	G
PCG-04-V	26-3/4	22-15/16	11	24-11/16	2-7/16	4-7/8	10-1/16
PCG-08/08R-V	26-3/4	22-15/16	11	24-11/16	4-7/16	6-7/8	11-7/16
PCH-12-V	32-11/16	28-3/4	13-9/16	30-1/2	3-5/16	5-7/8	10-1/4
PCH-20-V	36-9/16	32-11/16	19-3/16	34-7/16	4-3/16	7	11-7/16

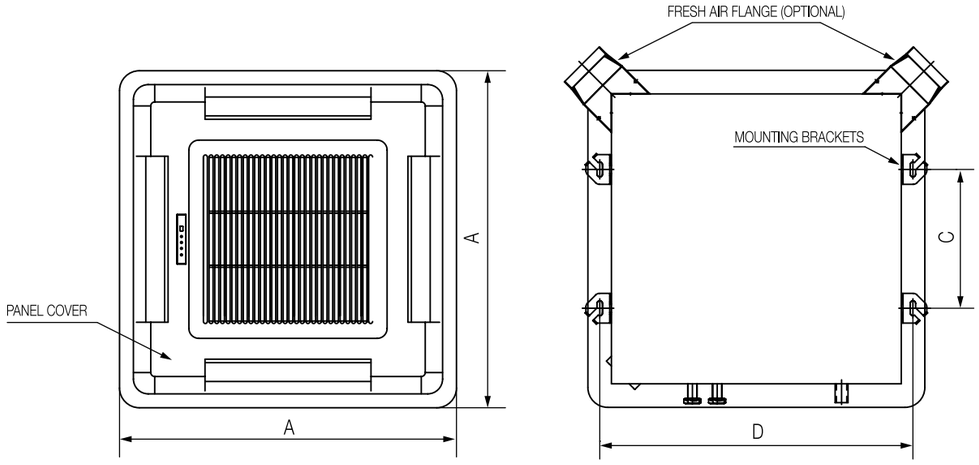
Model	Unit Dimensions (inches)						
	H	I	J	K	L	M	N
PCG-04-V	11-1/8	4-5/8	4-5/16	2	6-3/8	4-7/8	Ø3-15/16
PCG-08/08R-V	12-1/2	4-5/8	5-3/8	2	6-3/8	6-7/8	Ø3-15/16
PCH-12-V	11-5/16	4-15/16	6-7/16	2	6-3/8	5-3/16	Ø3-15/16
PCH-20-V	12-1/2	4-15/16	4-5/8	2	6-1/8	5-3/4	Ø3-15/16

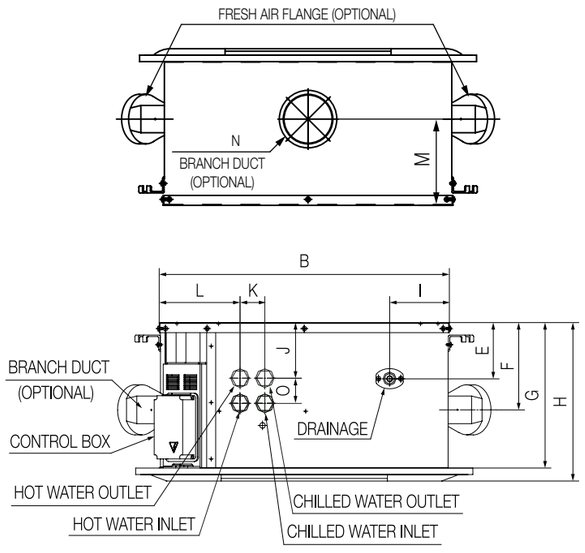
*** Product dimensions are within ± 1/16 inches.**

ECO SUPERIOR SERIES
CASSETTE EC
MOTOR FAN COILS

MODEL PCGH Y-AECM
MODEL PCGH X-AECM

Dimensional Drawings PCGH AECM 4-Pipe, Single Fan Models





Model	Unit Dimensions (inches)							
	A	B	C	D	E	F	G	H
PCG-08-P	26-3/4	22-15/16	11	24-11/16	4-7/16	6-7/8	11-7/16	12-1/2
PCH-12-P	32-11/16	28-3/4	13-9/16	30-1/2	3-5/16	5-7/8	10-1/4	11-5/16
PCH-20-P	36-9/16	32-11/16	19-3/16	34-7/16	4-3/16	7	11-7/16	12-1/2

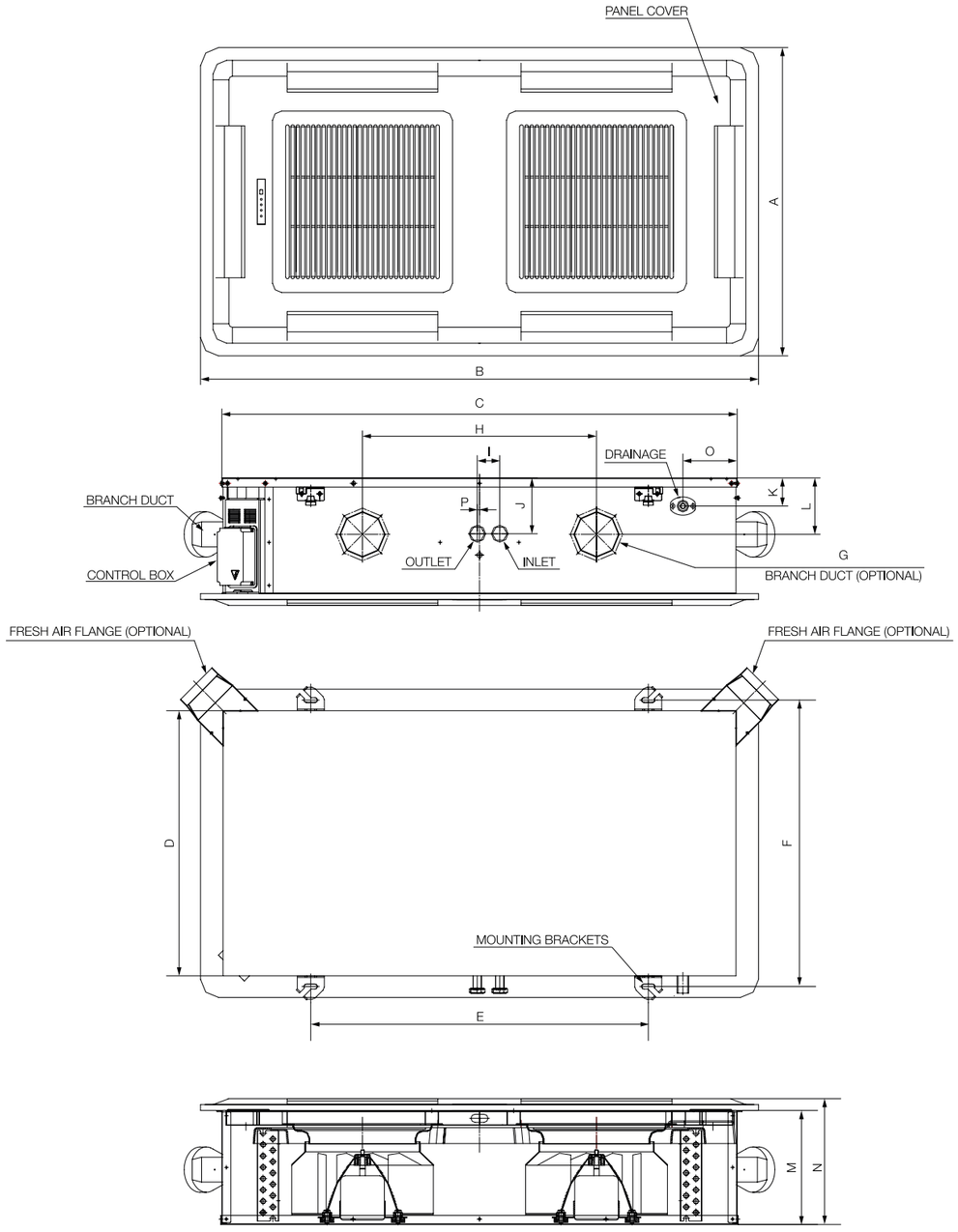
Model	Unit Dimensions (inches)						
	I	J	K	L	M	N	O
PCG-08-P	4-5/8	4-5/16	2	6-3/8	6-7/8	Ø3-15/16	2
PCH-12-P	4-15/16	4-7/16	2	6-3/8	5-3/16	Ø3-15/16	2
PCH-20-P	4-5/8	4-5/16	2	6-1/8	5-3/4	Ø3-15/16	2

*** Product dimensions are within ± 1/16 inches.**

ECO SUPERIOR SERIES CASSETTE EC MOTOR FAN COILS

MODEL PCGH Y-AECM
MODEL PCGH X-AECM

Dimensional Drawings PCGH AECM 2-Pipe, Twin Fan Models



Model	Unit Dimensions (inches)							
	A	B	C	D	E	F	G	H
PCG-09-V	26-3/4	48-13/16	45-1/16	23	29-1/2	24-13/16	Ø3-15/16	20-1/2
PCH-16-V	26-3/4	48-13/16	45-1/16	23	29-1/2	24-13/16	Ø3-15/16	20-1/2

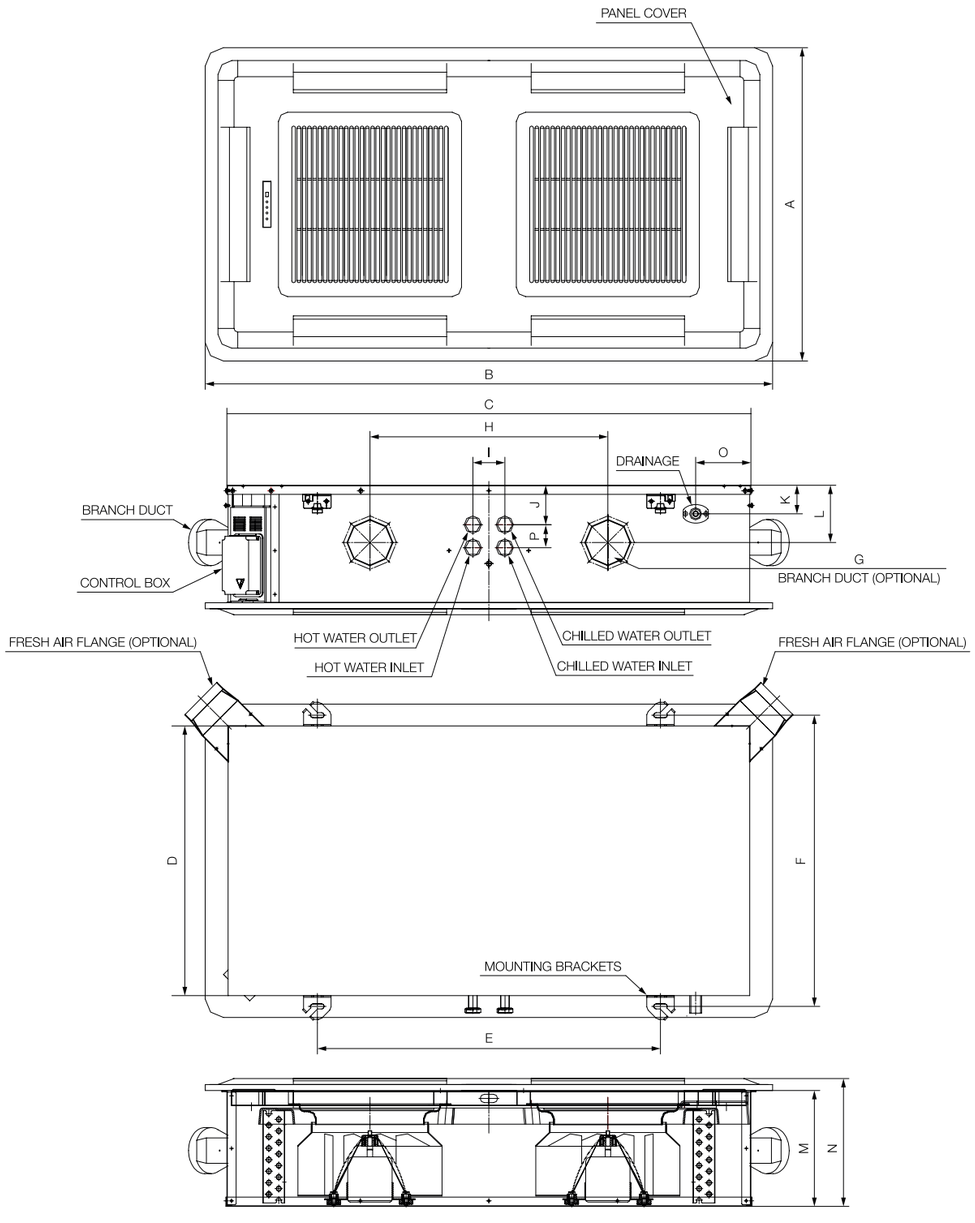
Model	Unit Dimensions (inches)						
	I	J	K	L	M	N	O
PCG-09-V	2	4-13/16	2-7/16	4-7/8	10-1/16	11-1/8	4-5/8
PCH-16-V	2	5-5/16	4-7/16	6-7/8	11-7/16	12-1/2	4-5/8

*** Product dimensions are within ± 1/16 inches.**

ECO SUPERIOR SERIES CASSETTE EC MOTOR FAN COILS

MODEL PCGH Y-AECM
MODEL PCGH X-AECM

Dimensional Drawings PCGH AECM 4-Pipe, Twin Fan Models



Model	Unit Dimensions (inches)							
	A	B	C	D	E	F	G	H
PCG-09-V	26-3/4	48-13/16	45-1/16	23	29-1/2	24-13/16	Ø3-15/16	20-1/2
PCH-16-V	26-3/4	48-13/16	45-1/16	23	29-1/2	24-13/16	Ø3-15/16	20-1/2

Model	Unit Dimensions (inches)							
	I	J	K	L	M	N	O	P
PCG-09-P	2-3/4	3-3/8	2-7/16	4-7/8	10-1/16	11-1/8	4-5/8	2
PCH-16-P	2-3/4	4-5/16	4-7/16	6-7/8	11-7/16	12-1/2	4-5/8	2

*** Product dimensions are within ± 1/16 inches.**

ECO 1WAY SUPER SLIM SERIES
CASSETTE EC MOTOR FAN COILS

MODELS

PCSL Y-AECM

Low Profile Cassette Fan Coils with EC Motor 115V/60Hz, specified under AHRI standards.

ECO 1WAY SUPER SLIM SERIES
CASSETTE EC
MOTOR FAN COILS

MODEL PCSL Y-AECM

ECO 1WAY SUPER SLIM SERIES
CASSETTE EC
MOTOR FAN COILS

PCSL Y-AECM

Product Presentation

The PCSL Y-AECM ECO 1way Super Slim Cassette Fan Coils Series, feature an innovative design, high control flexibility, and easy maintenance.

The PCSL Y-AECM fan coil units use tangential fans and are equipped with integral condensate pumps and energy efficient EC motors.

With a sophisticated temperature regulator, our fan coils provide thermal comfort in every season.

Product Range

The PCSL Y-AECM ECO 1way Super Slim Cassette Fan Coils Series offers an EC motor range of 115V/60Hz with the following capacities:

• 2 sizes of 2 pipe, 2 row models from 8650 BTU/H (2.53kW) to 10780 BTU/H (3.16kW) cooling capacity and 13450 BTU/H (3.94kW) to 16750 BTU/H (4.91kW) heating capacity.

Product Features

• Energy Efficiency.

The PCSL Y-AECM ECO 1way Super Slim Cassette Fan Coils Series incorporate a DC motor with variable speed modulation using an integrated EC motor driver.

Energy saving or unit power input at set H/M/L speeds is reduced by 30 - 50% when compared to traditional on/off AC motors. Moreover, in Energy Saving Auto – Mode (ESM), as airflow is continuously varied (step-less progression) between 15% and 100% of the maximum high speed airflow, energy saving will be 50 – 70% while precisely meeting the required cooling and heating loads of the space.

This innovation eliminates the need for the motor to turn off and on periodically to maintain the desired temperature of the environment, leading to total energy savings of up to 50% on an installation/project basis. Modulation of airflow to meet heating and cooling requirements of the space will also result in reducing temperature fluctuations within the space, as well as reducing fan noise.

The motor is driven by a 0 – 10 VDC signal originating from an inverter board integrated into the fan coil unit onboard controller, which utilizes PID logic in order to modulate motor RPMs in Energy Saving Auto - Mode (ESM).

• Casing Design. The special height of 6 inches (152mm) is meant for reduced space installations in hotels, apartments, offices, etc.

• Low Sound. The tangential fans and a high quality, low noise onboard condensate pump results in quiet, comfortable functionality.

• Flexibility for Distribution and Maintenance. The PCSL Y-AECM ECO 1way Super Slim Cassette Fan Coils Series have been designed to maximize product flexibility on site and in stock offering the following features:
• Ceiling installation, ease of installation and maintenance;
• Easy to remove front panel, filter and integrated drain pump and drain pan.
• 1-step access to power terminals and auxiliary contacts for quick and easy wiring.
• Easy-to-connect external valves, which can be fitted directly onto the cassette during installation.

Standard Configuration

The PCSL Y-AECM ECO 1 Way Super Slim Series Cassette Fan Coils offer as standard a nylon mesh air filter(s), stepping motors for louvers, LED display with infra-red signal receiver and condensate pump with float switch.

Control Options

Two control configuration options are offered for the PCSL Y-AECM ECO 1way Super Slim Cassette Fan Coils Series.

• Total Control Board (S type) – Field Programmable using easy to set dipswitches and controlled via Infrared handset and/or wired wall pad. It offers the following control options: On-off or continuous with modulation fan control; 2 pipe configuration; with or without valves; with or without electrical heater; preheat configuration; complete diagnostics.

Our S type controller also allows control of up to 32 Secondary units via a single Main Unit with IR Handset or Wall Pad controller, and up to 2048 units via BMS (Building Management System) with Modbus platform.

• Flexi Control Board (W type) – Flexible function control for External Thermostat applications, with control of Drain Pump, Louvers, Zone Control product operations, and limited LED diagnostics.

ECO 1WAY SUPER SLIM SERIES
CASSETTE EC
MOTOR FAN COILS
MODEL PCSL Y-AECM

Product Accessories

CONTROL ACCESSORIES

INFRA-RED HANDSET CONTROLLER + WALL HOLDER
(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

With Global Control functionality for Main and Secondary Unit groups.

UNLIMITED WIRED WALL PAD CONTROLLER
(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

Features: 7 day ON/OFF timer program. Addressable Main and Secondary units allowing control of up to 32 Secondary units via a single Main Unit with set or check of each unit parameters individually. Error display with addressable error diagnostic (Main unit Wall Pad displays Secondary unit address and error type). One Touch Global Control (Global Control Main Unit Wall Pad controls all units in the group). Onboard Room Air Temperature Sensor.

DIP SWITCH CONFIGURATION SERVICE

Preset Dip switch configuration for addressing Main Unit to Secondary Units. Dip Switch configuration labelled with carton tag.

EXTERNAL CONNECTION PLUGS

Factory prewired units with external accessory plugs for fast and easy connections.

UNIVERSAL EC THERMOSTAT
(FOR FLEXI CONTROL BOARD)

Main functions: 2-pipe, 4-pipe, 2-pipe +floor heating mode, floor heating, cooling. AC/EC motor 3-speed control. Motorized valve control. 0~10 VDC Modulating valve. EC motor RPM control. Low temperature protection. Remote ON/OFF function. Cooling and heating contact. Modbus protocol. Power supply: 24 Vac or VDC. Working environment: 0~50°C, 5~95%RH (no condensate). Self-power consumption: <2W. Protection class: IP30.

MORE ACCESSORIES

ELECTRICAL HEATERS

The electric heater is supplied for winter heating as an alternative to the auxiliary hot water coil. We offer a complete range of PTC (Positive Thermal Coefficient) electric heaters kits, easy to connect to control box, with mounting fixture. The electric heater configuration is selectable by DIP switch on the internal control board.

VALVES + VALVE KITS

2-way On/Off or 3-way bypass valves, ½" sizes with thermoelectric or 24Vac modulating Actuators.

Stainless Steel Hose and Copper Piping Connection Kits for 2-way and 3-way valve options. Distance between inlet and outlet pipe connections standardized at 1.57inches (40mm) for hot water circuit, and 1.97inches (50mm) for cold water circuit.

ECO 1WAY SUPER SLIM SERIES CASSETTE EC MOTOR FAN COILS

MODEL PCSL Y-AECM

Technical Specifications (AHRI Standards)

PCSL-Y-AECM-V - Hydronic Cassette 2-Pipe with EC Motor.

						01	02
UNIT CONFIGURATION		PCSL-Y-AECM-[Size]-V				01	02
		Configuration				2-pipe	
		Number of Fan Blowers				Single	
		Power Supply			[V/Ph/Hz]	115 / 1 / 60	
		Operation Control				S Type: Total Control Function W Type: Flexible Control Function	
PERFORMANCE DATA	Air	Total AirFlow	H		CFM	265	353
			M			206	265
			L			88	147
	Cooling	Cooling Capacity	H		BTU/Hr	8651	10777
			M			7161	8651
			L			3555	5487
		Sensible Cooling Capacity	H			5732	7259
			M			4711	5732
			L			2331	3548
	Heating	Heating Capacity	H		BTU/Hr	13449	16753
			M			11133	13449
			L			5526	8529
		Max. Elec. Heater Capacity				3412	
	Sound	Sound Pressure Level (Outlet)			dB(A)	37/33/23	41/37/26
		Sound Power Level (Outlet)				46/42/32	50/46/35
	Electrical	Cooling Fan Motor Power	H		W	18	27
			M			13	18
			L			9	10
		Heating Fan Motor Power	H			13	22
			M			8	13
			L			4	5
		Fan Motor Running Current	H		A	0.23	0.38
	Hydraulic	Water Flow Rate	H		GPM	1.7	2.1
			M			1.4	1.7
			L			0.7	1.1
		Cooling Pressure Drop	H		Ft.Hd	6.9	10.1
			M			5	6.9
			L			1.5	3.2
		Heating Water Flow Rate			GPM	Same as "Water Flow Rate"	
		Heating Pressure Drop	H		Ft.Hd	6.3	9.1
			M			4.5	6.3
			L			1.4	2.9
		Water Content			Gal	0.17	0.17
CONSTRUCTION AND PACKING DATA		Water Connections	Type			NPT Thread Female	
			In		in	1/2"	
			Out				
		Condensate Drainage Connection				3/4	
		Dimensions	L		in	41 ½	
			W			16 13/16	
			H			10	
		Panel Dimensions				46 ½ x 18 ⅜ x 1	
		Net Weight			Lbs	29.7	

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

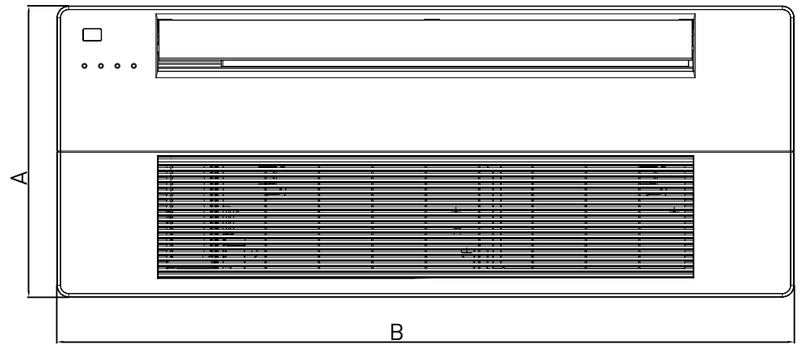
Heating mode (2-pipe):

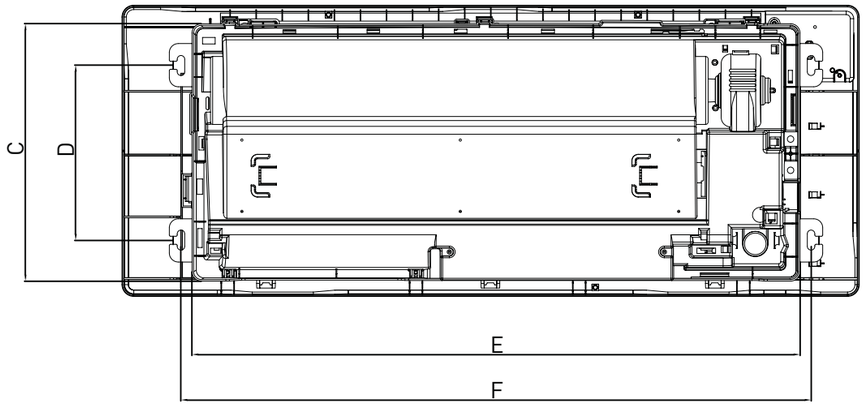
Return air temperature: 70F.
Inlet water temperature: 140F.
Water flow-rate: same as 2-pipe cooling.

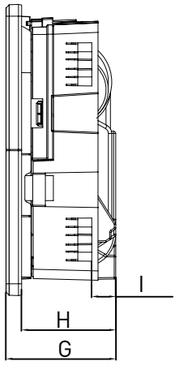
ECO 1WAY SUPER SLIM SERIES CASSETTE EC MOTOR FAN COILS

MODEL PCSL Y-AECM

Dimensional Drawings PCSL Y-AECM, 2 Pipe Models







Model	Unit Dimensions (inches)								
	A	B	C	D	E	F	G	H	I
PCSL-01-V	18 3/8	49 9/16	16 1/4	11 1/16	38 3/8	39 3/4	6 15/16	5 15/16	1 1/2
PCSL-02-V	18 3/8	49 9/16	16 1/4	11 1/16	38 3/8	39 3/4	6 15/16	5 15/16	1 1/2

*** Product dimensions are within ± 1/16 inches.**

ECO L-STAT AMV SERIES
DUCTED EC MOTOR FAN COILS

MODELS

PDWA Y-AECM

Low Static Ducted Fan Coils with EC Motor 115V/60Hz, cETLus approved, specified under AHRI standards.

PDWA X-AECM

Low Static Ducted Fan Coils with EC Motor 220V/60Hz, cETLus approved, specified under AHRI standards.

PDWSL Y-AECM

Slimline Low Static Ducted Fan Coils with EC Motor 115V/60Hz, cETLus approved, specified under AHRI standards.

PDWSL X-AECM

Slimline Low Static Ducted Fan Coils with EC Motor 220V/60Hz, cETLus approved, specified under AHRI standards.

ECO L-STAT AMV SERIES
DUCTED EC
MOTOR FAN COILS

PDWA Y-AECM
PDWA X-AECM

ECO L-STAT AMV SERIES DUCTED EC MOTOR FAN COILS

PDWA Y-AECM
PDWA X-AECM

Product Presentation

The ECO L-STAT AMV Series Low Static Ducted Fan Coils have been specifically designed to satisfy high cooling capacity at low external static applications. They represent one of the most cost effective solutions to provide a comfortable environment for both commercial and residential applications.

With a quiet operation, compact dimensions and low heights, these units are ideal for ceiling concealed installations even in buildings with limited ceiling spaces.

Product Range

The ECO L-STAT AMV Series Ducted Fan Coils are available with 115V/60Hz and 220V/60Hz, cETLus approval and EC motors. The units can be provided with 24V thermostats and 24V valves in the following capacities:

• 10 sizes of 2 pipe, 3 row models from 10300 BTU/H to 53650 BTU/H (3kW to 15.72kW) cooling capacity, and 16000 BTU/H to 83400 BTU/H (4.68kW to 24.44kW) heating capacity.

• 10 sizes of 2 pipe, 4 row models from 9500 BTU/H to 62300 BTU/H (2.78kW to 18.26kW) cooling capacity, and 14800 BTU/H to 96900 BTU/H (4.33kW to 28.39kW) heating capacity.

• 10 sizes of 4 pipe, 3+1row models from 10900 BTU/H to 52100 BTU/H (3.19kW to 15.27kW) cooling capacity and 8800 BTU/H to 45000 BTU/H (2.58kW to 13.19kW) heating capacity.

Product Features

• Energy Efficiency. The ECO L-STAT AMV Low Static Pressure Ducted Fan Coils incorporate a DC motor with step-less speed modulation using an integrated EC motor driver.

Energy saving or unit power input at set H/M/L speeds is reduced by 30 - 50% when compared to traditional on/off AC motors. Moreover, in Energy Saving Auto–Mode (ESM), as airflow is continuously varied (step-less progression) between 15% and 100% of the maximum high speed airflow, energy saving will be 50 – 70% while precisely meeting the required cooling and heating loads of the space.

This innovation eliminates the need for the motor to turn off and on periodically to maintain the desired temperature of the environment, leading to total energy savings of up to 50% on an installation/project basis. Modulation of airflow to meet heating and cooling requirements of the space will also result in reducing temperature fluctuations within the space, as well as reducing fan noise.

The motor is driven by a 0 – 10 VDC signal originating from an inverter board integrated into the unit onboard controller, which utilizes PID logic in order to modulate motor RPMs in Energy Saving Auto - Mode (ESM).

• Design. The ECO L-STAT AMV Low Static Pressure Ducted Fan Coils feature an advanced structure for high efficiency performance, low noise, convenient installation and low maintenance. With a low height design this fan coil series is perfect for low height ceiling concealed installations.

• Flexibility. The ECO L-STAT AMV Series Low Static Ducted Fan Coils are available with left or right hand water connections, which can be easily switched in the field by changing the positions of the water inlet and outlet directions, when required.

• Performance. The ECO L-STAT AMV Series Low Static Pressure Ducted Fan Coils count with optimized water circuit designs and have been tested in accredited thermal test rooms to guarantee perfect performance and low chilled water pressure drops.

The ECO L-STAT AMV Series Low Static Pressure Ducted Fan Coils can supply more air flow at higher ESP, with an air flow range from 200 to 1600 CFM at medium speed with ESP (External Static Pressure) of 0.30ft.wg (50Pa).

Standard Configuration

The ECO L-STAT AMV Low Static Pressure Ducted Fan Coils are supplied with air filter and statically and dynamically balanced centrifugal fans.

Control Options

Two control configuration options are offered for the ECO L-STAT AMV Series.

• Total Control Board (S type) – Field Programmable using easy to set dipswitches and controlled via Infra-red handset and/or wired wall pad. It includes a 24V signal for modulating valve controls and It offers the following control options: continuous with modulation or On/Off fan, 2 or 4 Pipe configuration, with or without valves, with or without electrical heater, preheat configuration, complete diagnostics. Our S Type controller also allows control of up to 32 Secondary units via a single Main Unit with IR Handset or Wall Pad controller, and up to 2048 units via BMS (Building Management System) with Modbus platform.

• Flexi Control Board (W type) – 24 VAC controller compatible with wired wall mounted thermostat, and on-off or modulating fan control. Control of integral condensate pump (pump is optional), zone valves (24V or modulating), and limited LED diagnostics is included.*

** Modulating fan control via 0-10 VDC signal provided by BMS (BMS by others).*

ECO L-STAT AMV SERIES DUCTED EC MOTOR FAN COILS

PDWA Y-AECM
PDWA X-AECM

Product Accessories

CONTROL ACCESSORIES

INFRA-RED HANDSET CONTROLLER + WALL HOLDER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

With Global Control functionality for Main and Secondary Unit groups.

ABS EXTERNAL LED RECEIVER

IR receiver in ABS housing with 70 inches length prewiring, which can be connected with S Type controls only. LED lights show working mode or error code.

UNLIMITED WIRED WALL PAD CONTROLLER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

Features: 7 day ON/OFF timer program. Addressable Main and Secondary units allowing control of up to 32 Secondary units via a single Main Unit with set or check of each unit parameters individually. Error display with addressable error diagnostic (Main unit Wall Pad displays Secondary unit address and error type). One Touch Global Control (Global Control Main Unit Wall Pad controls all units in the group). Onboard Room Air Temperature Sensor.

DIP SWITCH CONFIGURATION SERVICE

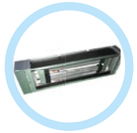
Preset Dip switch configuration for addressing Main Unit to Secondary Units. Dip Switch configuration labelled with carton tag.

UNIVERSAL EC THERMOSTAT

(FOR FLEXI CONTROL BOARD)

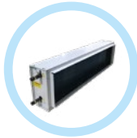
Main functions: 2-pipe, 4-pipe, 2-pipe +floor heating mode, floor heating, cooling. AC/EC motor 3-speed control. Motorized valve control. 0~10 VDC Modulating valve. EC motor RPM control. Low temperature protection. Remote ON/OFF function. Cooling and heating contact. Modbus protocol. Power supply: 24 Vac or VDC. Working environment: 0~50°C, 5~95%RH (no condensate). Self-power consumption: <2W. Protection class: IP30.

MORE ACCESSORIES



ELECTRICAL HEATERS

The electric heater module is supplied for winter heating as an alternative to the auxiliary hot water coil. We offer a complete range of electric heaters kits, easy to connect to control box, with mounting fixture. The electric heater configuration is selectable by DIP switch on the internal control board.



AUXILIARY HEATING COILS

Factory installed heating coil for 4 pipe applications.

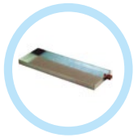
VALVES + VALVE KITS

2-way On/Off or 3-way bypass ball valves, ¾" size, with motorized or modulating 24VAC actuators.

Stainless Steel Hose and Copper Piping Connection Kits for 2-way and 3-way valve options. Distance between inlet and outlet pipe connections standardized at 40m (1.6in) for hot water circuit, and 50mm (2in) for cold water circuit.

INSULATION FOR SOUND ATTENUATION

5mm (0.20 inches), 10mm (0.40 inches) or 15mm (0.60 inches) NBR material insulation for sound attenuation.



OPTIONAL STAINLESS STEEL DRAIN PAN

ECO L-STAT AMV SERIES DUCTED EC MOTOR FAN COILS

PDWA Y-AECM
PDWA X-AECM

Technical Specifications (AHRI Standards)

PDWA-AECM (3R)-V - Hydronic Ductable Unit 3-row coil, 2-pipe with EC Motor.

UNIT CONFIGURATION		PDWA AECM (3R) V-[Size]				200	300	400	500	600	800	1000	1200	1400	1600
		Configuration				2-pipe									
		Number of Fan Blowers				Single		Twin			Three		Four	Three	Four
		Power Supply			(V/Ph/Hz)	115 / 1 / 60 or 220 / 1 / 60									
		Operation Control				S Type: Total control version. W Type: Flexible control version.									
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	326	406	543	563	690	972	1040	1103	1676	1865
			M	2		264	346	469	498	634	819	949	999	1513	1760
			L	1		176	239	289	298	398	529	476	722	1136	1473
		External Static Pressure	H	3	in.wg	0.2									
			M	2		0.2									
			L	1		0.2									
	Cooling	Cooling Capacity	H	3	BTU/Hr	10275	12285	16391	18006	21197	32188	33075	37695	46710	53646
			M	2		8785	11283	14375	16970	18748	27685	29090	35324	43400	49403
			L	1		6558	8856	9864	11663	15944	17584	20035	28226	39027	44654
		Sensible Cooling Capacity	H	3		7029	8334	11311	12283	14392	21887	22771	25922	31956	36452
			M	2		5963	7626	9850	11540	12575	18672	19825	24222	29579	33375
			L	1		4370	5882	6610	7766	10630	11532	13395	19028	26315	29887
	Heating	Heating Capacity	H	3	BTU/Hr	15973	19097	25480	27991	32951	50038	51417	58598	72613	83394
			M	2		13657	17539	22346	26381	29144	43037	45222	54913	67467	76800
			L	1		10195	13768	15329	18131	24785	27336	31146	43878	60669	69417
		Max. Elec. Heater Capacity @ 115V / 220V			kW	1 / 2	1.5 / 3	2 / 4	2.5 / 5				3 / 6		
	Sound	Sound Pressure Level (outlet)			dB(A)	48/47/43	50/49/46	52/50/44	52/51/46	54/52/49	53/52/47	56/54/50	58/55/52	58/54/50	59/57/55
		Sound Pressure Level (Inlet+Radiated)				50/49/45	52/51/48	54/52/46	54/53/48	46/54/51	55/54/49	58/56/52	60/57/54	60/56/52	61/59/57
		Sound Power Level (outlet)				57/56/52	59/58/55	61/59/53	61/60/55	63/61/58	62/61/56	65/63/59	67/64/61	67/63/59	68/66/64
		Sound Power Level (Inlet+Radiated)				59/58/54	61/60/57	63/61/55	63/62/57	65/63/60	64/63/58	67/65/61	69/66/63	69/65/61	70/68/66
	Electrical	Fan Motor Power	H		W	53	63	83	96	102	150	180	224	363	380
			M			43	52	58	68	84	128	147	190	286	310
			L			26	31	35	49	62	84	94	113	170	190
		Fan Motor Running Current @ 115V / 220V	H		A	0.92/0.48	1.1/0.57	1.44/0.75	1.67/0.87	1.77/0.93	2.61/1.36	3.13/1.64	3.90/2.04	6.31/3.30	6.61/3.45
	Hydraulic	Water Flow Rate	3		GPM	2.03	2043	3.24	3.56	4.19	6.36	5.53	7.44	9.22	10.6
			2			1.73	3.23	2.84	3.35	3.7	5.47	5.74	6.98	8.57	9.76
			1			1.3	1.75	1.95	2.3	3.15	3.47	3.96	5.57	7.71	8.82
		Cooling Pressure Drop	3		Ft.Hd	7.4	11.2	6.8	8.8	12.7	15.8	5.8	7.7	13.2	18.2
			2			5.6	9.7	5.4	7.9	10.3	12.2	4.7	6.9	11.7	15.8
			1			3.4	6.4	2.9	4.2	7.8	5.6	2.5	4.7	9.8	13.3
		Heating Water Flow			GPM	Same as "Water Flow Rate"									
		Heating Pressure Drop	3		Ft.Hd	6.6	10.1	6.1	7.9	11.4	14.2	5.2	6.9	11.9	16.4
			2			5.1	8.8	4.9	7.1	9.3	11	4.2	6.2	10.5	14.2
			1			3.1	5.8	2.6	3.8	7.0	5.1	2.2	4.2	8.8	12
		Water Content			Gal	0.19	0.19	0.23	0.27	0.31	0.35	0.51	0.55	0.59	0.75
CONSTRUCTION AND PACKING DATA		Water Connections	Type	In	in.	NPT Threaded female									
				Out		3/4"									
		Condensate Drainage Connection													
		Dimensions	L		in.	29 ¾	33 ¹³⁄₁₆	37 ⅝	45 ½	49 ⁷⁄₁₆	65 ⅜	69 ⅛	73	69 ⅛	77
			W			21 ⅜								24 ⁷⁄₁₆	
			H			9 ¹³⁄₁₆								11 ¹³⁄₁₆	

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

Return air temperature: 70F.
Inlet water temperature: 140F.
Water flow-rate: same as 2-pipe cooling.

For specifications of 220V/60Hz models please refer to our selection software or contact your local sales representative.

Technical Specifications (AHRI Standards)

PDWA-AECM (4R)-V - Hydronic Ductable Unit 4-row coil, 2-pipe with EC Motor.

UNIT CONFIGURATION		PDWA AECM (4R) V-[Size]				200	300	400	500	600	800	1000	1200	1400	1600
		Configuration				2-pipe									
		Number of Fan Blowers				Single		Twin			Three		Four	Three	Four
		Power Supply			(V/Ph/Hz)	115 / 1 / 60 or 220 / 1 / 60									
		Operation Control				S Type: Total control version. W Type: Flexible control version.									
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	326	406	543	563	690	972	1040	1103	1676	1865
			M	2		264	346	469	498	634	819	949	999	1513	1760
			L	1		176	239	289	298	398	529	476	722	1136	1473
		External Static Pressure	H	3	in.wg	0.2									
			M	2		0.2									
			L	1		0.2									
	Cooling	Cooling Capacity	H	3	BTU/Hr	9497	14259	18913	21536	24984	38094	39769	42469	59922	62319
			M	2		8115	12684	16878	19620	23445	33495	36930	39514	55655	59742
			L	1		5973	9529	11660	13111	16398	24072	21604	30546	44524	52441
		Sensible Cooling Capacity	H	3		6520	9534	12657	18881	16675	25548	26453	28140	40283	41630
			M	2		5526	8419	11218	17131	15605	22307	24458	25972	37289	39836
			L	1		3985	6200	7579	11191	10686	15689	13805	19865	29318	34567
	Heating	Heating Capacity	H	3	BTU/Hr	14764	22167	29401	33479	38839	59218	61823	66020	93151	96878
			M	2		12616	19718	26237	30500	36446	52069	57410	61426	86518	92872
			L	1		9285	14814	18127	20382	25491	37420	33584	47485	69214	81522
		Max. Elec. Heater Capacity @ 115v / 220v			kW	1 / 2	1.5 / 3	2 / 4	2.5 / 5				3 / 6		
	Sound	Sound Pressure Level (outlet)			dB(A)	48/47/43	50/49/46	52/50/44	52/51/46	54/52/49	53/52/47	56/54/50	58/55/52	58/54/50	59/57/55
		Sound Pressure Level (Inlet+Radiated)				50/49/45	52/51/48	54/52/46	54/53/48	56/54/51	55/54/49	58/56/52	60/57/54	60/56/52	61/59/57
		Sound Power Level (outlet)				57/56/52	59/58/55	61/59/53	61/60/55	63/61/58	62/61/56	65/63/59	67/64/61	67/63/59	68/66/64
		Sound Power Level (Inlet+Radiated)				59/58/54	61/60/57	63/61/55	63/62/57	65/63/60	64/63/58	67/65/61	69/66/63	69/65/61	70/68/66
	Electrical	Fan Motor Power	H		W	53	63	83	96	102	150	180	224	363	380
			M			43	52	58	68	84	128	147	190	286	310
			L			26	31	35	49	62	84	94	113	170	190
		Fan Motor Running Current @ 115V / 220V	H		A	0.92/0.48	1.10/0.57	1.44/0.75	1.67/0.87	1.77/0.93	2.61/1.36	3.13/3.90	3.90/2.04	6.31/3.30	6.61/3.45
	Hydraulic	Cooling Water Flow Rate	3		GPM	1.88	2.82	3.73	4.25	4.93	7.52	7.85	8.39	11.83	12.31
			2			1.60	2.5	3.33	3.87	4.63	6.61	7.29	7.8	10.99	11.8
			1			1.18	1.88	2.3	2.59	3.24	4.75	4.27	6.03	8.79	10.36
		Cooling Pressure Drop	3		Ft.Hd	9.9	19.4	35.3	16	22.5	28.1	32.6	38.8	27.2	31.4
			2			7.6	15.9	29.1	13.6	20.2	22.6	28.7	34.3	24	29.2
			1			4.5	9.8	15.5	6.9	11.0	12.9	11.5	22.2	16.4	23.4
		Hot Water Flow Rate			GPM	Same as "Cooling Water Flow Rate"									
		Hot Pressure Drop	3		Ft.Hd	8.9	17.5	31.8	14.4	20.3	25.3	29.3	34.9	24.5	28.3
			2			6.8	14.3	26.2	12.3	18.2	20.3	25.9	30.9	21.6	26.3
			1			4.0	8.8	14.0	6.2	9.9	11.6	10.4	19.9	14.8	21.1
		Water Content			Gal	0.19	0.23	0.27	0.31	0.35	0.51	0.55	0.59	0.68	0.75
CONSTRUCTION AND PACKING DATA		Water Connections	Type	In	in.	NPT Threaded female									
				Out		3/4"									
		Condensate Drainage Connection													
		Dimensions	L		in.	29 ¾	33 ¹³⁄₁₆	37 ⅝	45 ½	49 ⁷⁄₁₆	65 ⅜	69 ⅛	73	69 ⅛	77
			W			21 ⅜								24 ⁷⁄₁₆	
			H			9 ¹³⁄₁₆								11 ¹³⁄₁₆	
		Net Weight			lbs	37	51	53	62	68	79	95	99	112	132

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

Return air temperature: 70F.
Inlet water temperature: 140F.
Water flow-rate: same as 2-pipe cooling.

For specifications of 220V/60Hz models please refer to our selection software or contact your local sales representative.

ECO L-STAT AMV SERIES DUCTED EC MOTOR FAN COILS

PDWA Y-AECM
PDWA X-AECM

Technical Specifications (AHRI Standards)

PDWA-AECM (3+1R)-P - Hydronic Ductable Unit 3+1-row coil, 4-pipe with EC Motor.

UNIT CONFIGURATION		PDWA AECM (3R+1) V-[Size]				200	300	400	500	600	800	1000	1200	1400	1600
		Configuration				4-pipe									
		Number of Fan Blowers				Single		Twin			Three		Four	Three	Four
		Power Supply			[V/Ph/Hz]	115 / 1 / 60 or 220 / 1 / 60									
		Operation Control				S Type: Total control version. W Type: Flexible control version.									
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	326	406	543	563	690	972	1040	1103	1676	1865
			M	2		264	346	469	498	634	819	949	999	1513	1760
			L	1		176	239	289	298	398	529	476	722	1136	1473
		External Static Pressure	H	3	in.wg	0.2									
			M	2		0.2									
			L	1		0.2									
	Cooling	Cooling Capacity	H	3	BTU/Hr	10880	13151	16670	18006	20876	32809	31669	34007	49689	52103
			M	2		9247	11700	14895	16323	19592	28757	29559	31609	46048	49789
			L	1		6781	8856	10222	11064	13715	20563	17247	24649	36936	43436
		Sensible Cooling Capacity	H	3		7468	8961	11521	12283	14150	22333	21761	23242	34083	35358
			M	2		6291	7921	10222	11050	13181	19459	20183	21436	31484	33665
			L	1		6780	5882	6861	7334	9070	13637	11394	16549	24809	29015
	Heating	Heating Capacity	H	3	BTU/Hr	8812	10878	14076	14986	17792	25527	27253	28798	40554	45006
			M	2		7478	9635	12595	13684	16606	22403	25453	26683	37596	43340
			L	1		5493	7298	8725	9115	11561	16037	14927	20781	30061	37870
	Sound	Sound Pressure Level (outlet)			dB(A)	48/47/43	50/49/46	52/50/44	52/51/46	54/52/49	53/52/47	56/54/50	58/55/52	58/54/50	59/57/55
		Sound Pressure Level (Inlet+Radiated)				50/49/45	52/51/48	54/52/46	54/53/48	56/54/51	55/54/49	58/56/52	60/57/54	60/56/52	61/59/57
		Sound Power Level (outlet)				57/56/52	59/58/55	61/59/53	61/60/55	63/61/58	62/61/56	65/63/59	67/64/61	67/63/59	68/66/64
		Sound Power Level (Inlet+Radiated)				59/58/54	61/60/57	63/61/55	63/62/57	65/63/60	64/63/58	67/65/61	69/66/63	69/65/61	70/68/66
	Electrical	Fan Motor Power	H		W	53	63	83	96	102	150	180	224	363	380
			M			43	52	58	68	84	128	147	190	286	310
			L			26	31	35	49	62	84	94	113	170	190
		Fan Motor Running Current @ 115V / 220V	H		A	0.92/0.48	1.10/0.57	1.44/0.75	1.67/0.87	1.77/0.93	2.61/1.36	3.13/1.64	3.90/2.04	6.31/3.30	6.61/3.45
	Hydraulic	Cooling Water Flow Rate	3		GPM	2.15	2.6	3.29	3.56	4.12	6.48	6.25	6.72	9.81	10.29
			2			1.83	2.31	2.94	3.22	3.87	5.68	5.84	6.24	9.09	9.83
			1			1.34	1.75	2.02	2.18	2.71	4.06	3.41	4.87	7.29	8.58
		Cooling Pressure Drop	3		Ft.Hd	8.1	12.6	7.0	8.8	12.4	16.3	5.4	6.5	14.7	17.3
			2			6.2	10.4	5.8	7.4	11.1	13.0	4.8	5.7	12.9	16.0
			1			3.6	6.4	3.0	3.8	6.1	7.4	1.9	3.7	8.9	12.7
		Hot Water Flow Rate	3		GPM	0.44	0.54	0.7	0.75	0.89	1.27	1.36	1.43	2.02	2.24
			2			0.37	0.48	0.63	0.68	0.83	1.12	1.27	1.33	1.87	2.16
			1			0.27	0.36	0.43	0.45	0.58	0.8	0.74	1.04	1.5	1.89
		Hot Pressure Drop	3		Ft.Hd	0.9	1.5	2.6	3.3	0.7	1.8	2.1	2.6	0.4	0.5
			2			0.8	1.2	2.2	2.8	0.6	1.4	1.9	2.2	0.4	0.5
			1			0.4	0.7	1.2	1.4	0.3	0.8	0.8	1.5	0.3	0.4
		Cooling Water Content			Gal	0.19	0.23	0.27	0.31	0.35	0.51	0.55	0.59	0.68	0.75
		Heating Water Content				0.06	0.08	0.09	0.1	0.12	0.17	0.18	0.2	0.23	0.25
CONSTRUCTION AND PACKING DATA		Water Connections	Type		in.	NPT Threaded female									
			In			3/4"									
			Out												
		Condensate Drainage Connection													
		Dimensions	L		in.	29 3/4	33 11/16	37 5/8	45 1/2	49 7/16	65 3/16	69 1/16	73	69 1/16	77
			W			21 5/8								24 7/16	
			H			9 13/16								11 13/16	
		Net Weight			lbs	37	51	53	62	68	79	95	99	112	132

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (4-pipe):

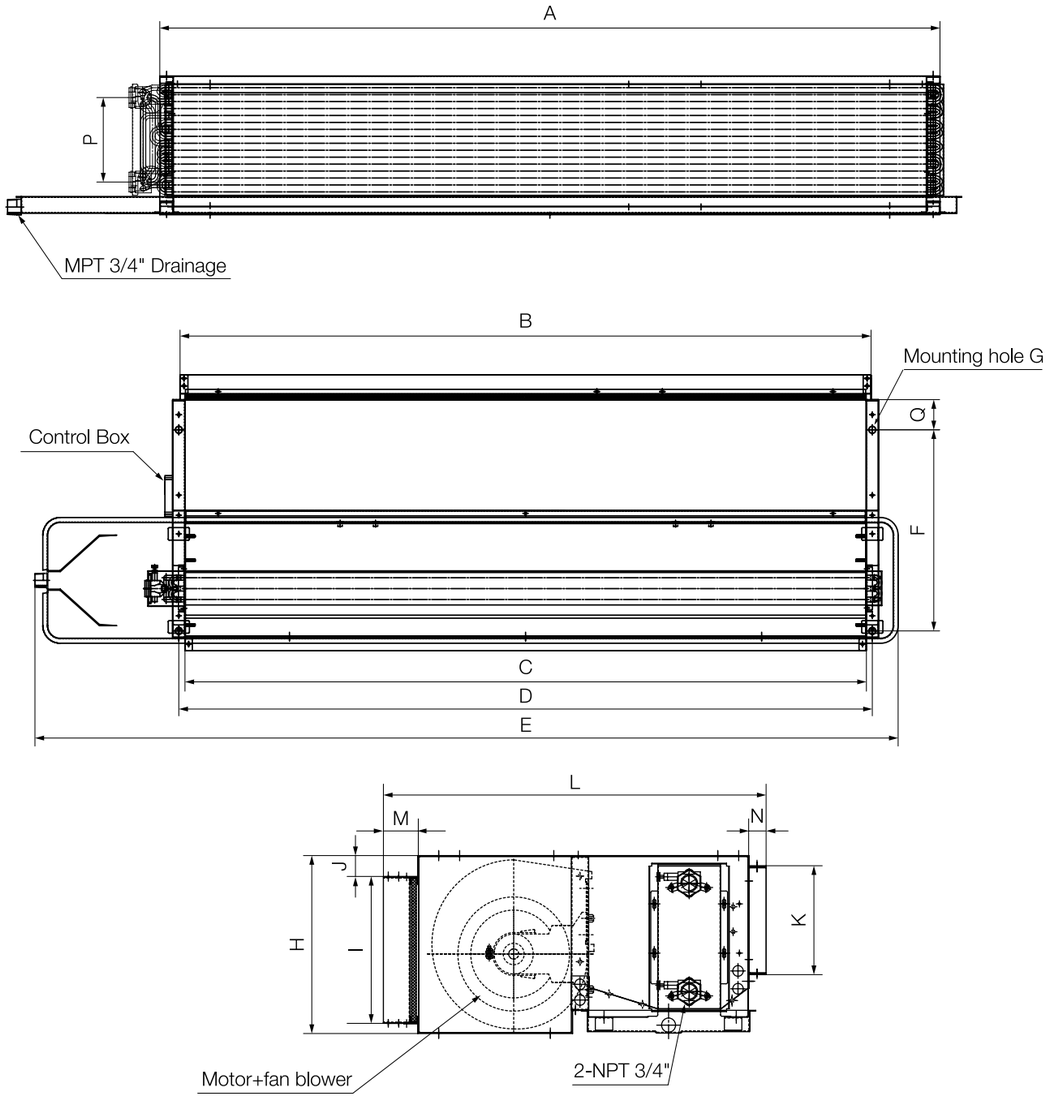
Return air temperature: 70F.
Inlet water temperature: 180F.
Outlet water temperature: 140F.

For specifications of 220V/60Hz models please refer to our selection software or contact your local sales representative.

ECO L-STAT AMV SERIES
DUCTED EC
MOTOR FAN COILS

PDWA Y-AECM
PDWA X-AECM

Dimensional Drawings **PDWA AECM (3R/4R), 2-Pipe Models**



Model	Unit Dimensions (inches)							
	A	B	C	D	E	F	G	H
PDWA-200-V	21-1/16	19-1/8	19-1/8	20-1/16	29-3/4	15-3/4	Ø9/16	9-13/16
PDWA-300-V	25	23-1/16	23-1/16	24	33-11/16	15-3/4	Ø9/16	9-13/16
PDWA-400-V	28-15/16	26-15/16	26-15/16	27-15/16	37-10/16	15-3/4	Ø9/16	9-13/16
PDWA-500-V	32-7/8	30-7/8	30-7/8	31-7/8	45-1/2	15-3/4	Ø9/16	9 13/16
PDWA-600-V	36-13/16	34-13/16	34-13/16	35-13/16	49-7/16	15-3/4	Ø9/16	9-13/16
PDWA-800-V	52-9/16	50-9/16	50-9/16	51-9/16	65-3/16	15-3/4	Ø9/16	9-13/16
PDWA-1000-V	56-1/2	54-1/2	54-1/2	55-1/2	69-1/8	15-3/4	Ø9/16	9-13/16
PDWA-1200-V	62	60-1/16	60-1/16	61	73-1/16	15-3/4	Ø9/16	9-13/16
PDWA-1400-V	56-1/2	54-1/2	54-1/2	55-8/16	69-1/8	18-1/2	Ø9/16	11-13/16
PDWA-1600-V	66-3/4	64-3/4	64-3/4	65-3/4	76-15/16	18-1/2	Ø9/16	11-13/16

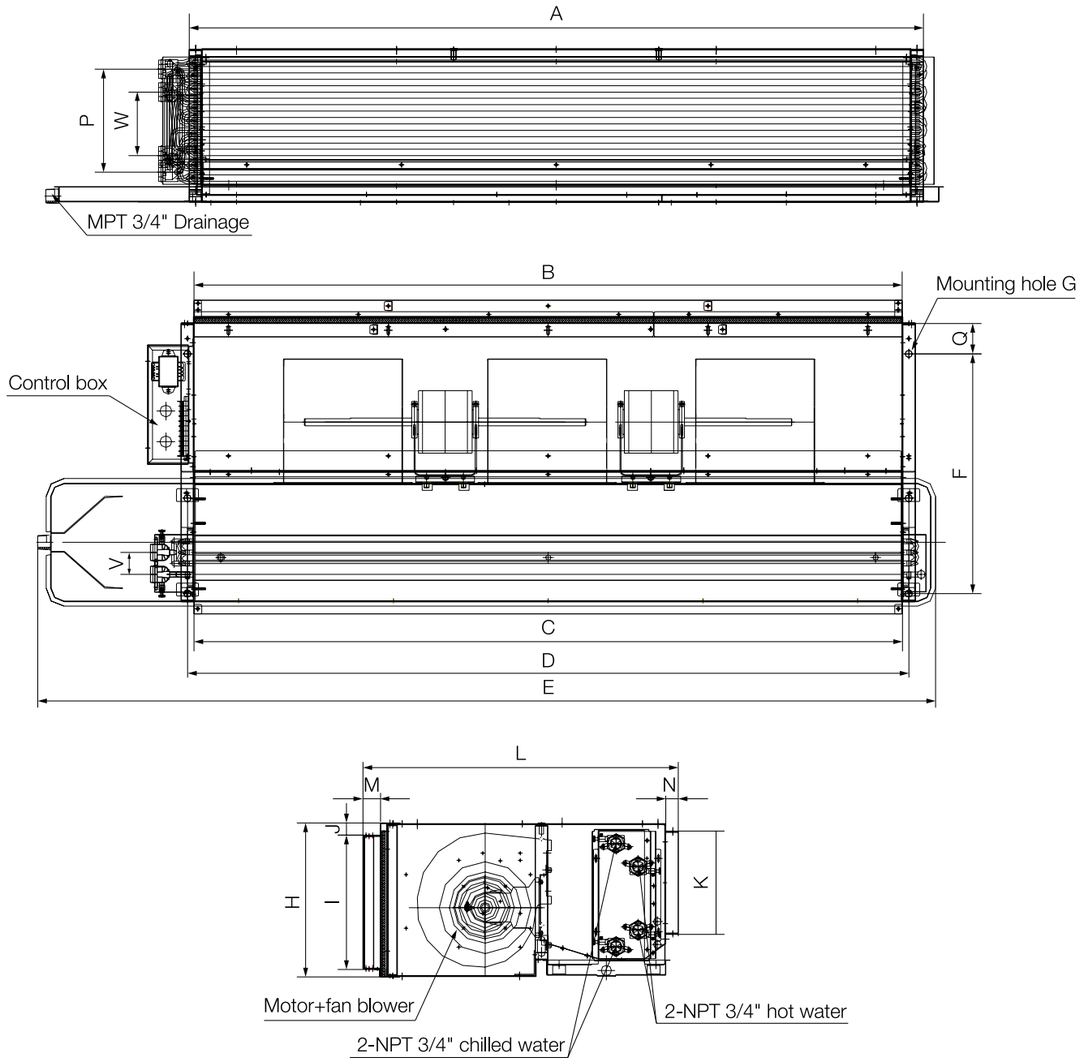
Model	Unit Dimensions (inches)							
	I	J	K	L	M	N	P	Q
PDWA-200-V	8-3/8	1	6	21-1/2	1-3/8	1	6	2-3/8
PDWA-300-V	8-3/8	1	6	21-1/2	1-3/8	1	6	2-3/8
PDWA-400-V	8-3/8	1	6	21-1/2	1-3/8	1	6	2-3/8
PDWA-500-V	8-3/8	1	6	21-1/2	1-3/8	1	6	2-3/8
PDWA-600-V	8-3/8	1	6	21-1/2	1-3/8	1	6	2-3/8
PDWA-800-V	8-3/8	1	6	21-1/2	1-3/8	1	6	2-3/8
PDWA-1000-V	8-3/8	1	6	21-1/2	1-3/8	1	6	2-3/8
PDWA-1200-V	8-3/8	1	6	21-1/2	1-3/8	1	6	2-3/8
PDWA-1400-V	10-3/8	1	8	24-1/4	1-3/8	1	7-15/16	2-3/8
PDWA-1600-V	10-3/8	1	8	24-1/4	1-3/8	1	7-15/16	2-3/8

*** Product dimensions are within ± 1/16 inches.**

ECO L-STAT AMV SERIES DUCTED EC MOTOR FAN COILS

PDWA Y-AECM
PDWA X-AECM

Dimensional Drawings **PDWA AECM (3+1R), 4-Pipe Models**



Model	Unit Dimensions (inches)								
	A	B	C	D	E	F	G	H	I
PDWA-200-P	21-1/16	19-1/8	19-1/8	20-1/16	29-3/4	15-3/4	Ø9/16	9-13/16	8-3/8
PDWA-300-P	25	23-1/16	23-1/16	24	33-11/16	15-3/4	Ø9/16	9-13/16	8-3/8
PDWA-400-P	28-15/16	26-15/16	26-15/16	27-15/16	37-10/16	15-3/4	Ø9/16	9-13/16	8-3/8
PDWA-500-P	32-7/8	30-7/8	30-7/8	31-7/8	45-1/2	15-3/4	Ø9/16	9 13/16	8-3/8
PDWA-600-P	36-13/16	34-13/16	34-13/16	35-13/16	49-7/16	15-3/4	Ø9/16	9-13/16	8-3/8
PDWA-800-P	52-9/16	50-9/16	50-9/16	51-9/16	65-3/16	15-3/4	Ø9/16	9-13/16	8-3/8
PDWA-1000-P	56-1/2	54-1/2	54-1/2	55-1/2	69-1/8	15-3/4	Ø9/16	9-13/16	8-3/8
PDWA-1200-P	62	60-1/16	60-1/16	61	73-1/16	15-3/4	Ø9/16	9-13/16	8-3/8
PDWA-1400-P	56-1/2	54-1/2	54-1/2	55-8/16	69-1/8	18-1/2	Ø9/16	11-13/16	10-3/8
PDWA-1600-P	66-3/4	64-3/4	64-3/4	65-3/4	76-15/16	18-1/2	Ø9/16	11-13/16	10-3/8

Model	Unit Dimensions (inches)								
	J	K	L	M	N	P	Q	V	W
PDWA-200-P	1	6	21-1/2	1-3/8	1	6	2-3/8	1-11/16	2-15/16
PDWA-300-P	1	6	21-1/2	1-3/8	1	6	2-3/8	1-11/16	2-15/16
PDWA-400-P	1	6	21-1/2	1-3/8	1	6	2-3/8	1-11/16	2-15/16
PDWA-500-P	1	6	21-1/2	1-3/8	1	6	2-3/8	1-11/16	2-15/16
PDWA-600-P	1	6	21-1/2	1-3/8	1	6	2-3/8	1-11/16	2-15/16
PDWA-800-P	1	6	21-1/2	1-3/8	1	6	2-3/8	1-11/16	2-15/16
PDWA-1000-P	1	6	21-1/2	1-3/8	1	6	2-3/8	1-11/16	2-15/16
PDWA-1200-P	1	6	21-1/2	1-3/8	1	6	2-3/8	1-11/16	2-15/16
PDWA-1400-P	1	6	24-1/4	1-3/8	1	7-15/16	2-3/8	1-11/16	4-15/16
PDWA-1600-P	1	6	24-1/4	1-3/8	1	7-15/16	2-3/8	1-11/16	4-15/16

*** Product dimensions are within ± 1/16 inches.**

ECO L/M-STAT SLIMLINE SERIES
FAN COILS

PDWSL Y-AECM
PDWSL X-AECM

ECO L-STAT SLIMLINE SERIES DUCTED EC MOTOR FAN COILS

PDWSL Y-AECM
PDWSL X-AECM

Product Presentation

In line with space saving trends and modern industrial design, Sonkor Global HVAC has developed the PDWSL fan coil range to meet the specific demands of performance, size, acoustics, low energy usage, ease of installation and maintenance for low height concealed ducted fan coils. All the PDWSL fan coils with centrifugal fans and a condensate water pumps are equipped with EC motors which reduce electrical consumption compared to AC models. These products achieve very high energy saving levels as they can be combined with low temperature heat generators such as air or water to water heat pumps and condensing boilers.

With its sophisticated temperature regulator, this product range guarantees thermal comfort in every season. It heats and cools extremely quickly, and once the desired temperature is reached it maintains it accurately and silently.

Product Range

The L-STAT Series Slimline Ducted Fan Coil offers a range of 115V/60Hz and 220V/60Hz, with the following capacities:

• 3 sizes of 2 pipe models from 13400 BTU/H to 28900 BTU/H (3.93kW to 8.46kW) cooling capacity and from 20850 BTU/H to 44900 BTU/H (6.11kW to 13.15kW) heating capacity.

• 4 pipe models also available.

Product Features

• Energy Efficiency. The ECO L/M-STAT Slimline Series Low Static Ducted Fan Coils incorporates a DC motor with step-less speed modulation using an integrated EC motor driver.

Energy saving or unit power input at set H/M/L speeds is reduced by 30 - 50% when compared to traditional on/off AC motors. Moreover, in Energy Saving Auto – Mode (ESM), as airflow is continuously varied (step-less progression) between 15% and 100% of the maximum high speed airflow, energy saving will be 50 – 70% while precisely meeting the required cooling and heating loads of the space.

This innovation eliminates the need for the motor to turn off and on periodically to maintain the desired temperature of the environment, leading to total energy savings of up to 50% on an installation/project basis. Modulation of airflow to meet heating and cooling requirements of the space will also result in reducing temperature fluctuations within the space, as well as reducing fan noise.

The motor is driven by a 0 - 10 VDC signal originating from an inverter board integrated into the unit onboard controller, which utilizes PID logic in order to modulate motor RPMs in Energy Saving Auto - Mode (ESM).

• Casing Design. The 7 7/8 in. special height is meant for reduced space installations in hotels, apartments, offices, etc. This fan coil series is perfect for low height ceiling concealed installations.

• Performance. The ECO L/M-STAT AMV Series Low Static Ducted Fan Coils are built with optimized forward curved metal centrifugal fans to achieve minimum noise levels as well as an integral quiet condensate pump and with a maximum head of 27 9/16 in.

Standard Configuration

The ECO L/M-STAT Slimline Series Low Static Ducted Fan Coils offer as standard are supplied with return plenum and air filter and statically and dynamically balanced centrifugal fans.

Control Options

Two control configuration options are offered for the ECO L-STAT AMV Series.

• Total Control Board (S type) – Field Programmable using easy to set dipswitches and controlled via Infra-red handset and/or wired wall pad. It includes a 24V signal for modulating valve controls and It offers the following control options: continuous with modulation or On/Off fan, 2 or 4 Pipe configuration, with or without valves, with or without electrical heater, preheat configuration, complete diagnostics. Our S Type controller also allows control of up to 32 Secondary units via a single Main Unit with IR Handset or Wall Pad controller, and up to 2048 units via BMS (Building Management System) with Modbus platform.

• Flexi Control Board (W type) – 24 VAC controller compatible with wired wall mounted thermostat, and on-off or modulating fan control. Control of integral condensate pump (pump is optional), zone valves (24V or modulating), and limited LED diagnostics is included.*

** Modulating fan control via 0-10 VDC signal provided by BMS (BMS by others).*

ECO L-STAT AMV SERIES DUCTED EC MOTOR FAN COILS

PDWSL Y-AECM
PDWSL X-AECM

Product Accessories

CONTROL ACCESSORIES

INFRA-RED HANDSET CONTROLLER + WALL HOLDER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

With Global Control functionality for Main and Secondary Unit groups.

ABS EXTERNAL LED RECEIVER

IR receiver in ABS housing with 70 inches length prewiring, which can be connected with S Type controls only. LED lights show working mode or error code.

UNLIMITED WIRED WALL PAD CONTROLLER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

Features: 7 day ON/OFF timer program. Addressable Main and Secondary units allowing control of up to 32 Secondary units via a single Main Unit with set or check of each unit parameters individually. Error display with addressable error diagnostic (Main unit Wall Pad displays Secondary unit address and error type). One Touch Global Control (Global Control Main Unit Wall Pad controls all units in the group). Onboard Room Air Temperature Sensor.

DIP SWITCH CONFIGURATION SERVICE

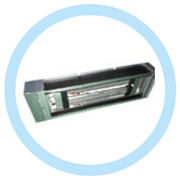
Preset Dip switch configuration for addressing Main Unit to Secondary Units. Dip Switch configuration labelled with carton tag.

UNIVERSAL EC THERMOSTAT

(FOR FLEXI CONTROL BOARD)

Main functions: 2-pipe, 4-pipe, 2-pipe +floor heating mode, floor heating, cooling. AC/EC motor 3-speed control. Motorized valve control. 0~10 VDC Modulating valve. EC motor RPM control. Low temperature protection. Remote ON/OFF function. Cooling and heating contact. Modbus protocol. Power supply: 24 Vac or VDC. Working environment: 0~50°C, 5~95%RH (no condensate). Self-power consumption: <2W. Protection class: IP30.

MORE ACCESSORIES



ELECTRICAL HEATERS

The electric heater module is supplied for winter heating as an alternative to the auxiliary hot water coil. We offer a complete range of electric heaters kits, easy to connect to control box, with mounting fixture. The electric heater configuration is selectable by DIP switch on the internal control board.

VALVES + VALVE KIT

2-way On/Off or 3-way bypass ball valves, ¾" and ½" size, with motorized or modulating 24VAC actuators.

Stainless Steel Hose and Copper Piping Connection Kits for 2-way and 3-way valve options. Distance between inlet and outlet pipe connections standardized at 40m (1.6in) for hot water circuit, and 50mm (2in) for cold water circuit.

ECO L-STAT AMV SERIES DUCTED EC MOTOR FAN COILS

PDWSL Y-AECM
PDWSL X-AECM

Technical Specifications (AHRI Standards)

PDWSL-AECM-V - Hydronic Ductable Unit 3-row coil, 2-pipe with EC Motor.

UNIT CONFIGURATION		PDWSL-AECM-[Size]-V			01	02	03
		Configuration			2-pipe		
		Number of Fan Blowers			2	3	4
		Power Supply		(V/Ph/Hz)	115 / 1 / 60 or 220 / 1 /60		
		Operation Control			S Type: Total control version. W Type: Flexible control version.		
PERFORMANCE DATA	Air	Air Flow	H	3	500	800	1041
			M	2	382	559	782
			L	1	147	235	335
		External Static Pressure	H	3	0,05		
			M	2	0,05		
			L	1	0,05		
	Cooling	Cooling Capacity	H	3	13400	22540	28862
			M	2	10982	17152	23411
			L	1	5151	8665	12009
		Sensible Cooling Capacity	H	3	9359	15528	20006
			M	2	7548	11608	15965
			L	1	3522	5844	8090
	Heating	Heating Capacity	H	3	20832	35040	44867
			M	2	17072	26664	36394
			L	1	8008	13470	18669
		Max. Elec. Heater Capacity @ 115V / 220V			0.5 / 1	1 / 2	1.5 / 3
	Sound	Sound Pressure Level (Outlet)			46/37/19	49/40/25	50/41/26
		Sound Pressure Level (Inlet + Radiated)			49/40/25	52/43/28	53/44/29
		Sound Power Level (Outlet)			55/46/31	58/49/34	59/50/35
		Sound Power Level (Inlet + Radiated)			58/49/34	61/52/37	62/53/38
	Electrical	Fan Motor Power	H		50	82	100
			M		23	40	43
			L		11	15	17
		Fan Motor Running Current @ 115V / 220V	H		0.86 / 0.43	1.42 / 0.71	1.74 / 0.87
	Hydronic	Cooling Water Flow Rate	3		2.65	4.45	5.7
			2		2.17	3.39	4.62
			1		1.02	1.71	2.37
		Cooling Pressure Drop	3		0.39	0.63	0.4
			2		0.28	0.4	0.28
			1		0.08	0.12	0.09
		Heating Water Flow Rate	3		2.65	4.45	5.7
			2		2.17	3.39	4.62
			1		1.02	1.71	2.37
		Heating Pressure Drop	3		0.35	0.57	0.36
			2		0.25	0.36	0.25
			1		0.07	0.11	0.08
		Water Content			0.208	0.35	0.475
CONSTRUCTION AND PACKING DATA		Water Connections	Type	In	Socket (Threaded Female)		
				Out	3/4"		
		Condensate Drainage Connection			1"		
		Dimensions	L		31 ½	48 5/8	61 13/16
			W		19 7/8		
			H		7 7/8		

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

Return air temperature: 70F.
Inlet water temperature: 140F.
Water flow-rate: same as 2-pipe cooling.

For specifications of 220V/60Hz models please refer to our selection software or contact your local sales representative.

Technical Specifications (AHRI Standards)

PDWSL-AECM-P - Hydronic Ductable Unit 3-row coil, 4-pipe with EC Motor.

UNIT CONFIGURATION		PDWSL-AECM-[Size]-P			01	02	03
		Configuration			4-pipe		
		Number of Fan Blowers			2	3	4
		Power Supply		(V/Ph/Hz)	115 / 1 / 60 or 220 / 1 / 60		
		Operation Control			S Type: Total control version. W Type: Flexible control version.		
PERFORMANCE DATA	Air	Air Flow	H	3	500	800	1041
			M	2	382	559	782
			L	1	147	235	335
		External Static Pressure	H	3	0.05		
			M	2	0.05		
			L	1	0.05		
	Cooling	Cooling Capacity	H	3	13400	22540	28862
			M	2	10982	17152	23411
			L	1	5151	8665	12009
		Sensible Cooling Capacity	H	3	9359	15528	20006
			M	2	7548	11608	15965
			L	1	3522	5844	8090
	Heating	Heating Capacity	H	3	11533	18600	24733
			M	2	9500	14367	20133
			L	1	4733	7633	10833
	Sound	Sound Pressure Level (Outlet)			46/37/19	49/40/25	50/41/26
		Sound Pressure Level (Inlet + Radiated)			49/40/25	52/43/28	53/44/29
		Sound Power Level (Outlet)*			55/46/31	58/49/34	59/50/35
		Sound Power Level (Inlet + Radiated)*			58/49/34	61/52/37	62/53/38
	Electrical	Fan Motor Power (1)	H		50	82	100
			M		23	40	43
			L		11	15	17
		Fan Motor Running Current @ 115V / 220V	H		0.86 / 0.43	1.42 / 0.71	1.74 / 0.87
	Hydronic	Cooling Water Flow Rate	3		2.65	4.45	5.7
			2		2.17	3.39	4.62
			1		1.02	1.71	2.37
		Cooling Pressure Drop	3		0.39	0.63	0.4
			2		0.28	0.4	0.28
			1		0.08	0.12	0.09
		Heating Water Flow Rate	3		1.089	1.76	2.339
			2		0.898	1.36	1.903
			1		0.447	0.722	1.023
		Heating Pressure Drop	3		0.56	0.28	0.58
			2		0.4	0.18	0.41
			1		0.12	0.06	0.14
		Cooling Water Content			0.208	0.35	0.475
		Heating Water Content			0.069	0.116	0.158
CONSTRUCTION AND PACKING DATA		Cooling Water Connections	Type	In	Socket Threaded Female		
				Out	3/4"		
		Heating Water Connections		In	1/2"		
				Out			
		Condensate Drainage Connection			1"		
		Dimensions	L		31 ½	48 5/8	61 13/16
			W		19 7/8		
			H		7 7/8		
		Net Weight			44	62	77

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

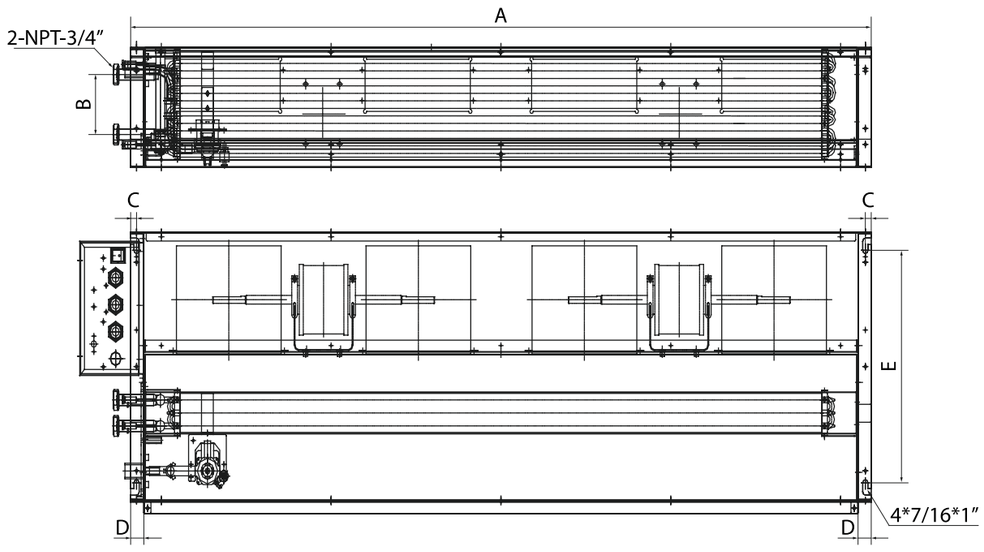
Return air temperature: 70F.
Inlet/ outlet water temperature: 149F/ 131F.

For specifications of 220V/60Hz models please refer to our selection software or contact your local sales representative.

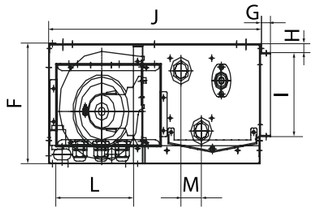
ECO L-STAT AMV SERIES DUCTED EC MOTOR FAN COILS

PDWSL Y-AECM
PDWSL X-AECM

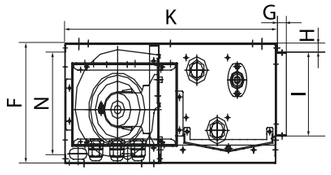
Dimensional Drawings (mm) PDWSL-AECM 2/4 Pipe Models



Return air from bottom



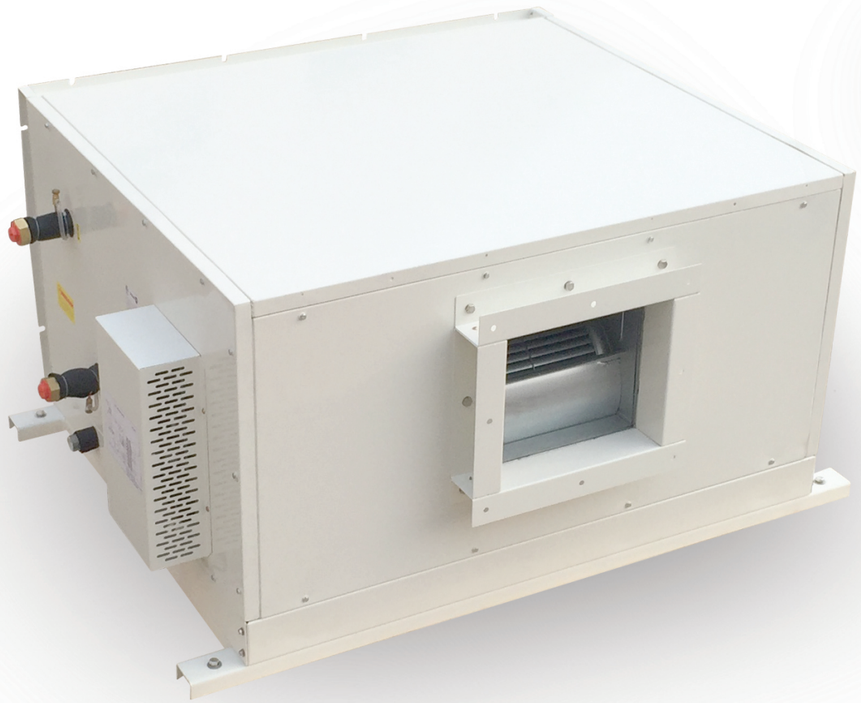
Return air from rear



Model	Unit Dimensions (inches)						
	A	B	C	D	E	F	G
PDWSL-01	31-1/2	4	1/2	1-1/8	15-1/4	7-7/8	13/16
PDWSL-02	45-5/8	4	1/2	1-1/8	15-1/4	7-7/8	13/16
PDWSL-03	61-13/16	4	1/2	1-1/8	15-1/4	7-7/8	13/16

Model	Unit Dimensions (inches)						
	H	I	J	K	L	M	N
PDWSL-01	5/8	5-1/2	18-1/8	18-1/8	6-1/2	1-11/16	6-11/16
PDWSL-02	5/8	5-1/2	18-1/8	18-1/8	6-1/2	1-11/16	6-11/16
PDWSL-03	5/8	5-1/2	18-1/8	18-1/8	6-1/2	1-11/16	6-11/16

*** Product dimensions are within ± 1/16 inches.**



ECO H-STAT AMV SERIES
DUCTED EC MOTOR FAN COILS

MODELS

PDWB AECM

High Static Ducted Fan Coils with EC Motor 220V/60Hz, cETLus approved, specified under AHRI standards.

HAHU AECM

Horizontal Mini Air Handling Ducted Units with EC Motor 220V/60Hz, specified under AHRI standards.

VAHU AECM

Vertical Mini Air Handling Ducted Units with EC Motor 220V/60Hz, specified under AHRI standards.

ECO H-STAT AMV SERIES
DUCTED EC
MOTOR FAN COILS

MODEL PDWB AECM

ECO H-STAT AMV SERIES DUCTED EC MOTOR FAN COILS

PDWB AECM

Product Presentation

The ECO H-STAT AMV Series of Ducted Fan Coils have been specifically designed to satisfy high cooling capacity and high static applications.

The AMV Series Fan Coils represent one of the most cost effective solutions to provide a comfortable environment for commercial applications.

With quiet operation, compact dimensions and low heights, these units are ideal for ceiling concealed installations even in buildings with limited ceiling space.

Product Range

The ECO H-STAT AMV Series High Static Ducted Fan Coils are available with 220V/60Hz, cETLus approved EC motors. This units can be provided with 24V thermostats and 24V valves in the following capacities:

- **5 sizes of 2 pipe, 3 row models from 24200 BTU/H to 64900 BTU/H (7.1kW to 19.02kW) cooling capacity, and 37650 BTU/H to 100900 BTU/H (11.03kW to 29.58kW) heating capacity.**
- **5 sizes of 2 pipe, 4 row models from 34400 BTU/H to 72100 BTU/H (10,1kW to 21,13kW) cooling capacity, and 53800 BTU/H to 118900 BTU/H (15,77kW to 34,83 kW) heating capacity.**
- **2 pipe 6 row models also available.**
- **4 pipe models also available.**

Product Features

- **Energy Efficiency.** The ECO H-STAT AMV High Static Pressure Ducted Fan Coils incorporate a DC motor with step-less speed modulation using an integrated EC motor driver.

Energy saving or unit power input at set H/M/L speeds is reduced by 30 - 50% when compared to traditional on/off AC motors. Moreover, in Energy Saving Auto–Mode (ESM), as airflow is continuously varied (step-less progression) between 15% and 100% of the maximum high speed airflow, energy saving will be 50 – 70% while precisely meeting the required cooling and heating loads of the space.

This innovation eliminates the need for the motor to turn off and on periodically to maintain the desired temperature of the environment, leading to total energy savings of up to 50% on an installation/project basis. Modulation of airflow to meet heating and cooling requirements of the space will also result in reducing temperature fluctuations within the space, as well as reducing fan noise.

The motor is driven by a 0 – 10 VDC signal originating from an inverter board integrated into the unit onboard controller, which utilizes PID logic in order to modulate motor RPMs in Energy Saving Auto - Mode (ESM).

- **Design.** The ECO H-STAT AMV High Static Pressure Ducted Fan Coils feature an advanced structure for high efficiency air draw through the coil performance, low noise, convenient installation and low maintenance. With a low height design this fan coil series is perfect for low height ceiling concealed installations.
- **Low Noise.** The ECO H-STAT AMV High Static Pressure Ducted Fan Coils are built with enlarged fan wheels to permit lower fan speed selection for the same external static pressure, with the same airflow requirement. The result is significantly reduced noise levels.
- **Flexibility.** The ECO H-STAT AMV High Static Pressure Ducted Fan Coils are available with left or right hand water connections, which can be easily switched in the field by changing the positions of the fan-motor assembly, and the supply air flange assembly, when required.
- **Performance.** The ECO H-STAT AMV High Static Pressure Ducted Fan Coils are built with optimized water circuit designs and have been tested in accredited thermal test rooms to guarantee performance and low water pressure drops.

The ECO HSTAT AMV Series can supply more air flow at higher ESP, with an air flow range from 1000 to 2200 CFM at medium speed at an ESP of 0.3 in. wg (50Pa).

Standard Configuration

The ECO H-STAT AMV Series High Static Pressure Ducted Fan Coils are supplied with air filter, centrifugal fans with forward curved blades, statically and dynamically balanced, as standard.

Control Options

The ECO H-STAT AMV Series High Static Pressure Ducted Fan Coils offer 2 different control options to satisfy specific applications.

- **Total Control Board (S type)** – Field Programmable using easy to set dipswitches and controlled via Infra-red handset and/or wired wall pad. It includes a 24V signal for modulating valve controls and It offers the following control options: continuous with modulation or On/Off fan, 2 or 4 Pipe configuration, with or without valves, with or without electrical heater, preheat configuration and complete diagnostics. Our S type controller also allows control of up to 32 Secondary units via a single Main Unit with IR Handset or Wall Pad controller, and up to 2048 units via BMS (Building Management System) with Modbus platform.

- **Flexi Control Board (W type)** – Flexible function control for External Thermostat applications including a 24V signal for modulating valve controls, with control of Drain Pump, Zone Control valve functionality and limited LED diagnostics.*

** Modulating fan control via 0-10 VDC signal provided by BMS (BMS by others).*

ECO H-STAT AMV SERIES DUCTED EC MOTOR FAN COILS

MODEL PDWB AECM

Product Accessories

CONTROL ACCESSORIES

INFRA-RED HANDSET CONTROLLER + WALL HOLDER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

With Global Control functionality for Main and Secondary Unit groups.

ABS EXTERNAL LED RECEIVER

IR receiver in ABS housing with 70 inches length prewiring, which can be connected with S Type controls only. LED lights show working mode or error code.

UNLIMITED WIRED WALL PAD CONTROLLER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

Features: 7 day ON/OFF timer program. Addressable Main and Secondary units allowing control of up to 32 Secondary units via a single Main Unit with set or check of each unit parameters individually. Error display with addressable error diagnostic (Main unit Wall Pad displays Secondary unit address and error type). One Touch Global Control (Global Control Main Unit Wall Pad controls all units in the group). Onboard Room Air Temperature Sensor.

DIP SWITCH CONFIGURATION SERVICE

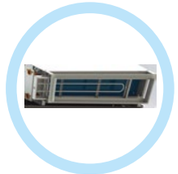
Preset Dip switch configuration for addressing Main Unit to Secondary Units. Dip Switch configuration labelled with carton tag.

UNIVERSAL EC THERMOSTAT

(FOR FLEXI CONTROL BOARD)

Main functions: 2-pipe, 4-pipe, 2-pipe +floor heating mode, floor heating, cooling. AC/EC motor 3-speed control. Motorized valve control. 0~10 VDC Modulating valve. EC motor RPM control. Low temperature protection. Remote ON/OFF function. Cooling and heating contact. Modbus protocol. Power supply: 24 Vac or VDC. Working environment: 0~50°C, 5~95%RH (no condensate). Self-power consumption: <2W. Protection class: IP30.

MORE ACCESSORIES



ELECTRICAL HEATERS

The electrical heater module is supplied for winter heating as an alternative to the auxiliary hot water heating coil.

For stock business, this electrical heater module, with tube electrical heaters is easy to install on-site.

VALVES AND VALVE KITS

2-way On/Off or 3-way bypass ball valves, ¾" size, with motorized or modulating 24VAC actuators.

Stainless Steel Hose and Copper Piping Connection Kits for 2-way and 3-way valve options. Distance between inlet and outlet pipe connections standardized at 1.6 inches (40mm) for hot water circuit, and 2 inches (50mm) for cold water circuit.

ISOLATION FOR SOUND ATTENUATION

0.20inches, 0.40inches or 0.60inches NBR material insulation for sound attenuation.

ECO H-STAT AMV SERIES DUCTED EC MOTOR FAN COILS

MODEL PDWB AECM

Technical Specifications (AHRI Standards)

PDWB (3R) AECM-V - Hydronic Ductable Unit 3-row coil, 2-pipe with EC Motor.

UNIT CONFIGURATION		PDWB (3R) AECM-[Size]-V				1000	1200	1600	1800	2400
		Configuration				2-pipe				
		Number of Fan Blowers				Twin				
		Power Supply			(V/Ph/Hz)	220 / 1 / 60				
		Operation Control				S Type: Total control version. W Type: Flexible control version.				
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	932	1012	1831	1914	2412
			M	2		752	923	1618	1654	2083
			L	1		465	697	1127	1246	1657
		External Static Pressure	H	3	in.wg	0.4				
			M	2		0.4				
			L	1		0.4				
	Cooling	Cooling Capacity	H	3	BTU/Hr	24216	25803	45726	51654	64915
			M	2		20569	24050	41344	46197	57735
			L	1		14167	19366	31461	36967	48473
		Sensible Cooling Capacity	H	3		17072	18259	32899	35074	44507
			M	2		14333	16950	29615	31170	39146
			L	1		9685	13428	22138	24722	32611
	Heating	Heating Capacity	H	3	BTU/H	37644	40113	71083	80299	100913
			M	2		31976	37387	64272	71815	89752
			L	1		22023	30105	48908	57467	75353
		Max. Elec. Heater Capacity			kW	6			9	
	Sound	Sound Pressure Level (outlet)			dB(A)	57/53/47	60/57/54	63/61/57	59/57/55	62/60/58
		Sound Pressure Level (Inlet+Radiated)				57/53/47	60/57/54	63/61/57	59/57/55	62/60/58
		Sound Power Level (outlet)				66/62/56	69/66/63	72/70/66	68/66/64	71/69/67
		Sound Power Level (Inlet+Radiated)				66/62/56	69/66/63	72/70/66	68/66/64	71/69/67
	Electrical	Fan Motor Power	H		W	276	384	525	461	540
			M			244	347	453	356	520
			L			140	240	265	278	329
		Fan Motor Running Current	H		A	2.51	3.49	4.77	4.19	4.91
	Hydraulic	Water Flow Rate	3		GPM	4.78	5.10	9.03	10.2	12.82
			2			4.06	4.75	8.16	9.12	11.4
			1			2.8	3.82	6.21	7.3	9.57
		Cooling Pressure Drop	3		Ft.Hd	4.5	5.1	5.0	5.9	6.3
			2			3.4	4.5	4.2	4.9	5.2
			1			1.8	3.1	2.6	3.4	3.8
		Heating Water Flow			GPM	Same as "Water Flow Rate"				
		Heating Pressure Drop	3		Ft.Hd	4.1	4.6	4.5	5.3	5.7
			2			3.1	4.0	3.8	4.4	4.6
			1			1.6	2.8	2.4	3.0	3.4
		Water Content			Gal	0.45	0.51	0.76	1.02	1.25
CONSTRUCTION AND PACKING DATA		Water Connections	Type			NPT Threaded male				
			In		in.	3/4"			1"	
			Out							
		Condensate Drainage Connection				3/4"				
		Dimensions	L		in.	39 3/4	43 11/16	57 1/4	57 1/2	69 5/16
			W			24 13/16		25 5/16	29 1/2	
			H			11 13/16		14 15/16	16 15/16	
		Net Weight			lbs	99	110	128	143	165

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

Return air temperature: 70F.
Inlet water temperature: 140F.
Water flow-rate: same as 2-pipe cooling.

Technical Specifications (AHRI Standards)

PDWB (4R) AECM-V - Hydronic Ductable Unit 4-row coil, 2-pipe with EC Motor.

UNIT CONFIGURATION		PDWB (4R) AECM-[Size]-V				1000	1200	1600	1800	2400
		Configuration				2-pipe				
		Number of Fan Blowers				Twin				
		Power Supply			(V/Ph/Hz)	220 / 1 / 60				
		Operation Control				S Type: Total control version. W Type: Flexible control version.				
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	1010	1076	1881	1914	2412
			M	2		838	987	1707	1654	2083
			L	1		571	767	1232	1246	1657
		External Static Pressure	H	3	in.wg	0.3				
			M	2		0.3				
			L	1		0.3				
	Cooling	Cooling Capacity	H	3	BTU/Hr	20109	21987	37387	42557	52111
			M	2		17379	20436	34756	38720	47241
			L	1		12953	16923	27030	32361	40557
		Sensible Cooling Capacity	H	3		16154	17566	29920	33532	41366
			M	2		13783	16201	27724	30262	37214
			L	1		10132	13310	21191	25140	31606
	Heating	Heating Capacity	H	3	BTU/Hr	40292	44055	74912	85269	104413
			M	2		34822	40948	69640	77582	94655
			L	1		25953	33908	54158	64842	81263
		Max. Elec. Heater Capacity			kW	6			9	
	Sound	Sound Pressure Level (outlet)			dB(A)	57/53/47	60/57/54	63/61/57	59/57/55	62/60/58
		Sound Pressure Level (Inlet+Radiated)				57/53/47	60/57/54	63/61/57	59/57/55	62/60/58
		Sound Power Level (outlet)				66/62/56	69/66/63	72/70/66	68/66/64	71/69/67
		Sound Power Level (Inlet+Radiated)				66/62/56	69/66/63	72/70/66	68/66/64	71/69/67
	Electrical	Fan Motor Power	H		W	276	384	525	461	540
			M			244	347	453	356	520
			L			140	240	265	278	329
		Fan Motor Running Current	H		A	2.51	3.49	4.77	4.19	4.91
	Hydraulic	Water Flow Rate	3		GPM	2.5	2.73	4.65	5.29	6.48
			2			2.16	2.54	4.32	4.81	5.87
			1			1.61	2.1	3.36	4.02	5.04
		Cooling Pressure Drop	3		Ft.Hd	1.4	1.8	2.9	2.6	2.7
			2			1.1	1.6	2.6	2.2	2.3
			1			0.7	1.2	1.7	1.7	1.8
		Heating Water Flow			GPM	Same as "Water Flow Rate"				
		Heating Pressure Drop	3		Ft.Hd	1.3	1.7	2.6	2.4	2.4
			2			1	1.5	2.3	2	2
			1			0.6	1.1	1.5	1.5	1.6
		Water Content			Gal	0.61	0.68	1.02	1.36	1.67
CONSTRUCTION AND PACKING DATA		Water Connections	Type			NPT Threaded male				
			In		in.	3/4"			1"	
			Out							
		Condensate Drainage Connection				3/4"				
		Dimensions	L		in.	39 3/4	43 11/16	57 1/2		69 5/16
			W			24 13/16		25 5/16	29 1/2	
			H			11 13/16		14 15/16	16 15/16	
		Net Weight			lbs	99	110	127.6	143	165

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

Return air temperature: 70F.
Inlet water temperature: 140F.
Water flow-rate: same as 2-pipe cooling.

ECO H-STAT AMV SERIES DUCTED EC MOTOR FAN COILS

MODEL PDWB AECM

Technical Specifications (AHRI Standards)

PDWB (6R) AECM-V - Hydronic Ductable Unit 6-row coil, 2-pipe with EC Motor.

UNIT CONFIGURATION		PDWB (6R) AECM-[Size]-V				1000	1200	1600	1800	2400
		Configuration				2-pipe				
		Number of Fan Blowers				Twin				
		Power Supply			(V/Ph/Hz)	220 / 1 / 60				
		Operation Control				S Type: Total control version. W Type: Flexible control version.				
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	905	990	1814	1879	2386
			M	2		723	901	1587	1609	2045
			L	1		429	673	1091	1189	1612
		External Static Pressure	H	3	in.wg	0.3				
			M	2		0.3				
			L	1		0.3				
	Cooling	Cooling Capacity	H	3	BTU/Hr	23653	26173	45972	50457	63891
			M	2		19759	24352	41644	44987	56747
			L	1		13124	19232	31150	35276	46991
		Sensible Cooling Capacity	H	3		18236	20119	35665	38598	49144
			M	2		15124	18627	32041	34221	43156
			L	1		9814	14598	23630	26497	35456
	Heating	Heating Capacity	H	3	BTU/Hr	47392	52443	92112	101098	128016
			M	2		39591	48794	83442	90138	113703
			L	1		26296	38534	62415	70681	94154
		Max. Elec. Heater Capacity			kW	6			9	
	Sound	Sound Pressure Level (outlet)			dB(A)	57/53/47	60/57/54	63/61/57	59/57/55	62/60/58
		Sound Pressure Level (Inlet+Radiated)				57/53/47	60/57/54	63/61/57	59/57/55	62/60/58
		Sound Power Level (outlet)				66/62/56	69/66/63	72/70/66	68/66/64	71/69/67
		Sound Power Level (Inlet+Radiated)				66/62/56	69/66/63	72/70/66	68/66/64	71/69/67
	Electrical	Fan Motor Power	H		W	276	384	525	461	540
			M			244	347	453	356	520
			L			140	240	265	278	329
		Fan Motor Running Current	H		A	2.51	3.49	4.77	4.19	4.91
	Hydraulic	Water Flow Rate	3		GPM	2.94	3.25	5.71	6.27	7.94
			2			2.46	3.03	5.17	5.59	7.05
			1			1.63	2.39	3.87	4.38	5.84
		Cooling Pressure Drop	3		Ft.Hd	2.9	3.7	6.2	5.3	9.4
			2			2.1	3.3	5.3	4.4	7.7
			1			1.1	2.2	3.2	2.9	5.6
		Heating Water Flow			GPM	Same as "Water Flow Rate"				
		Heating Pressure Drop	3		Ft.Hd	2.6	3.4	5.6	4.8	8.5
			2			1.9	3.0	4.7	4.0	7.0
			1			1.0	2.0	2.9	2.6	5.0
		Water Content			Gal	0.9	1.0	1.5	2.0	2.5
CONSTRUCTION AND PACKING DATA		Water Connections	Type			NPT Threaded male				
			In		in.	3/4"			1"	
			Out							
		Condensate Drainage Connection				3/4"				
		Dimensions	L		in.	39 3/4	43 11/16	57 1/2		69 5/16
			W			24 13/16		25 9/16	29 1/2	
			H			11 13/16		14 15/16	16 15/16	
		Net Weight			lbs	99	110	127.6	143	165

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

Return air temperature: 70F.
Inlet water temperature: 140F.
Water flow-rate: same as 2-pipe cooling.

Technical Specifications (AHRI Standards)

PDWB (4+2R) AECM-P - Hydronic Ductable Unit 4+2-row coil, 4-pipe with EC Motor.

UNIT CONFIGURATION		PDWB (4+2R) AECM-[Size]-P				1000	1200	1600	1800	2400
		Configuration				4-pipe				
		Number of Fan Blowers				Twin				
		Power Supply			(V/Ph/Hz)	220 / 1 / 60				
		Operation Control				S Type: Total control version. W Type: Flexible control version.				
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	984	1055	1864	1982	2464
			M	2		809	966	1678	1743	2157
			L	1		536	744	1197	1359	1745
		External Static Pressure	H	3	in.wg	0.24				
			M	2		0.24				
			L	1		0.24				
	Cooling	Cooling Capacity	H	3	BTU/Hr	30774	33599	57587	64899	80226
			M	2		26480	31442	53098	58899	72674
			L	1		19294	25655	41026	48330	61607
		Sensible Cooling Capacity	H	3		20822	22640	39009	43259	53914
			M	2		17712	21049	35800	38966	48436
			L	1		12676	17035	27220	31779	40639
	Heating	Heating Capacity	H	3	BTU/Hr	38254	41272	70583	79110	98033
			M	2		32685	38632	64920	71269	88942
			L	1		23664	31419	49963	58387	75168
	Sound	Sound Pressure Level (outlet)			dB(A)	57/53/47	60/57/54	63/61/57	59/57/55	62/60/58
		Sound Pressure Level (Inlet+Radiated)				57/53/47	60/57/54	63/61/57	59/57/55	62/60/58
		Sound Power Level (outlet)				66/62/56	69/66/63	72/70/66	68/66/64	71/69/67
		Sound Power Level (Inlet+Radiated)				66/62/56	69/66/63	72/70/66	68/66/64	71/69/67
	Electrical	Fan Motor Power	H		W	276	384	525	461	540
			M			244	347	453	356	520
			L			140	240	265	278	329
		Fan Motor Running Current	H		A	2.51	3.49	4.77	4.19	4.91
	Hydraulic	Cooling Water Flow Rate	3		GPM	6.08	6.63	11.37	12.82	15.84
			2			5.23	6.21	10.49	11.63	14.35
			1			3.81	5.07	8.1	9.54	12.17
		Cooling Pressure Drop	3		Ft.Hd	6.5	8.2	13.1	11.7	12.1
			2			5.0	7.3	11.4	9.9	10.3
			1			2.9	5.2	7.4	7.1	7.7
		Hot Water Flow Rate	3		GPM	1.91	2.06	3.52	3.94	4.88
			2			1.63	1.92	3.23	3.55	4.43
			1			1.18	1.57	2.49	2.91	3.74
		Hot Pressure Drop	3		Ft.Hd	2.4	3.0	4.9	2.6	4.5
			2			1.9	2.7	4.3	2.2	3.8
			1			1.1	1.9	2.7	1.6	2.9
		Cooling Water Content			Gal	0.61	0.68	1.02	1.36	1.67
		Heating Water Content				0.3	0.34	0.51	0.68	0.84
CONSTRUCTION AND PACKING DATA		Water Connections	Type			NPT Threaded male				
			In		in.	3/4"			1"	
			Out							
		Condensate Drainage Connection				3/4"				
		Dimensions	L		in.	39 3/4	43 11/16	57 1/2		69 5/16
			W			24 13/16		25 9/16	29 1/2	
			H			11 13/16		14 15/16	16 15/16	
		Net Weight			lbs	99	110	128	143	165

*** Product dimensions are within ± 1/16 inches.**

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

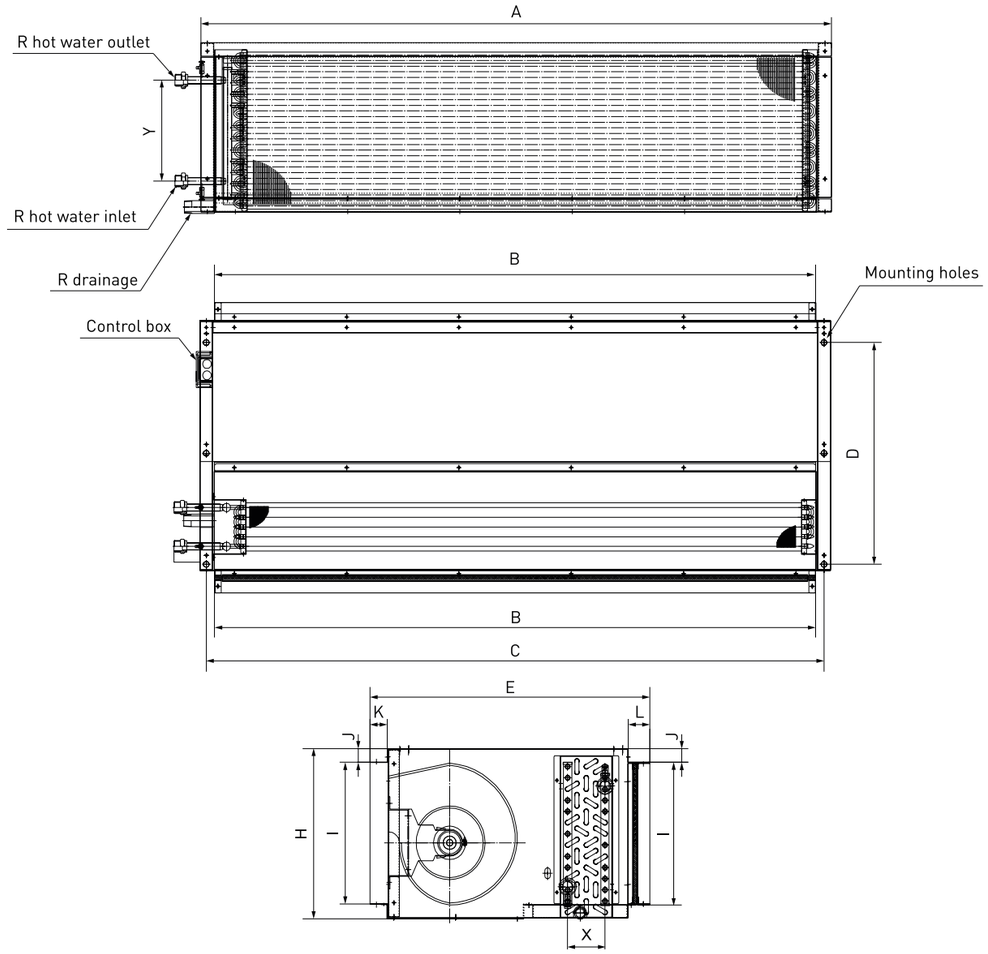
Heating mode (4-pipe):

Return air temperature: 70F.
Inlet water temperature: 180F.
Outlet water temperature: 140F.

ECO H-STAT AMV SERIES
DUCTED EC
MOTOR FAN COILS

MODEL PDWB AECM

Dimensional Drawings **PDWB AECM (3R/4R/6R), 2-Pipe Models**



Model	Unit Dimensions (inches)							
	A	B	C	D	E	G	H	I
PDWB-1000-V	39-3/4	37-1/16	38-9/16	18-11/16	24-13/16	Ø9/16	11-13/16	9-7/16
PDWB-1200-V	43-11/16	41	42-1/2	18-11/16	24-13/16	Ø9/16	11-13/16	9-7/16
PDWB-1600-V	57-1/2	54-13/16	56-5/16	19-1/2	25-9/16	Ø9/16	14-15/16	12-5/8
PDWB-1800-V	57-1/2	54-13/16	56-5/16	23-7/16	29-1/2	Ø9/16	16-15/16	14-9/16
PDWB-2400-V	69-5/16	66-5/8	68-1/8	23-7/16	29-1/2	Ø9/16	16-15/16	14-9/16

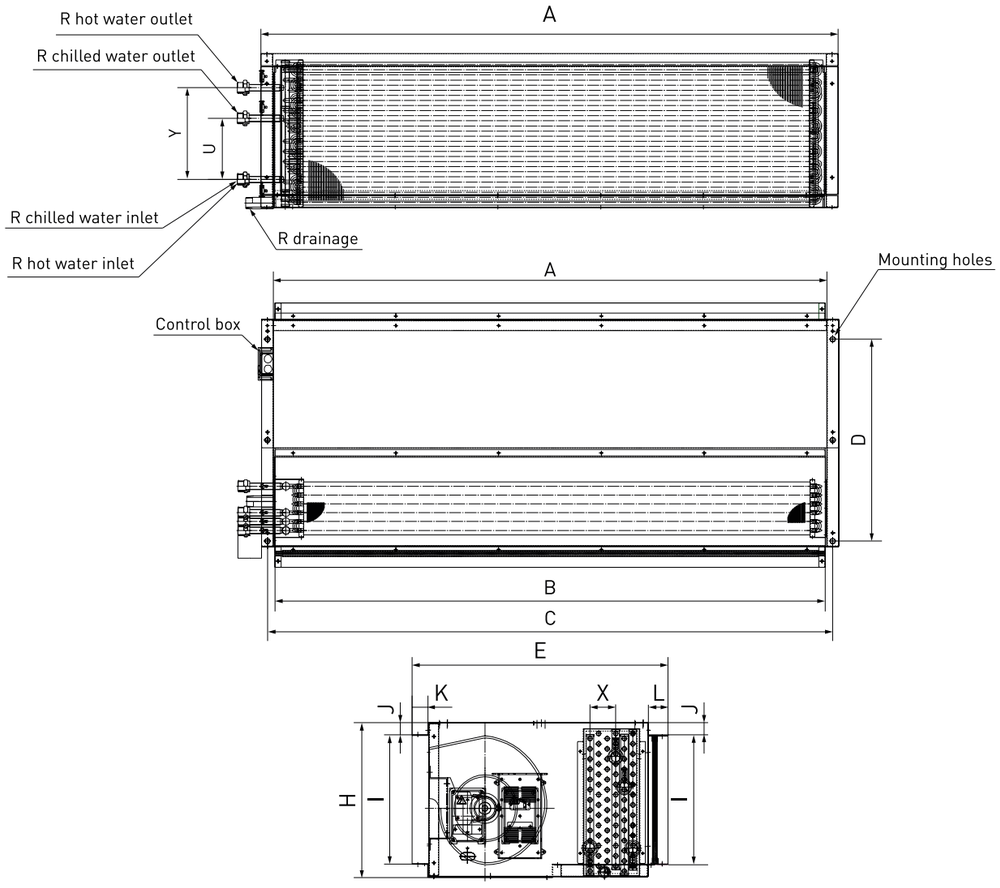
Model	Unit Dimensions (inches)							
	J	K	L	X(3R)	X(4R)	X(6R)	Y	R
PDWB-1000-V	1-3/16	1-9/16	2	1-11/16	2-9/16	3-7/16	5-15/16	3/4
PDWB-1200-V	1-3/16	1-9/16	2	1-11/16	2-9/16	3-7/16	5-15/16	3/4
PDWB-1600-V	1-3/16	1-9/16	2	1-11/16	2-9/16	3-7/16	8-7/8	3/4
PDWB-1800-V	1-3/16	1-9/16	2	1-11/16	2-9/16	3-7/16	10-13/16	1
PDWB-2400-V	1-3/16	1-9/16	2	1-11/16	2-9/16	3-7/16	10-13/16	1

*** Product dimensions are within ± 1/16 inches.**

ECO H-STAT AMV SERIES
DUCTED EC
MOTOR FAN COILS

MODEL PDWB AECM

Dimensional Drawings **PDWB AECM (4R+2), 4-Pipe Models**



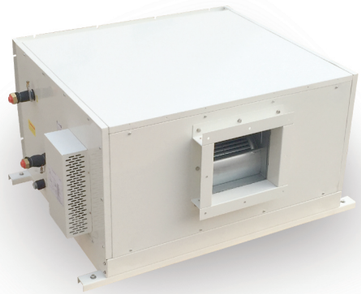
Model	Unit Dimensions (inches)							
	A	B	C	D	E	G	H	I
PDWB-1000-P	39-3/4	37-1/16	38-9/16	18-11/16	24-13/16	Ø9/16	11-13/16	9-7/16
PDWB-1200-P	43-11/16	41	42-1/2	18-11/16	24-13/16	Ø9/16	11-13/16	9-7/16
PDWB-1600-P	57-1/2	54-13/16	56-5/16	19-1/2	25-9/16	Ø9/16	14-15/16	12-5/8
PDWB-1800-P	57-1/2	54-13/16	56-5/16	23-7/16	29-1/2	Ø9/16	16-15/16	14-9/16
PDWB-2400-P	69-5/16	66-5/8	68-1/8	23-7/16	29-1/2	Ø9/16	16-15/16	14-9/16

Model	Unit Dimensions (inches)						
	J	K	L	X	Y	U	R
PDWB-1000-P	1-3/16	1-9/16	2	2-9/16	5-15/16	3-1/8	3/4
PDWB-1200-P	1-3/16	1-9/16	2	2-9/16	5-15/16	3-1/8	3/4
PDWB-1600-P	1-3/16	1-9/16	2	2-9/16	8-7/8	5-15/16	3/4
PDWB-1800-P	1-3/16	1-9/16	2	2-9/16	10-13/16	7-7/8	1
PDWB-2400-P	1-3/16	1-9/16	2	2-9/16	10-13/16	7-7/8	1

*** Product dimensions are within ± 1/16 inches.**

ECO H-STAT SERIES HORIZONTAL MINI AIR HANDLING UNIT DUCTED FAN COILS

MODEL HAHU AECM



ECO H-STAT SERIES HORIZONTAL MINI AIR HANDLING UNIT DUCTED FANCOILS

HAHU AECM

Product Presentation

The ECO H-STAT Series Horizontal Mini Air Handling Unit Ducted Fan coils have been designed for installation in suspended ceilings or any application where high CFM, ductable units are needed.

With internal insulation panel, this product range is distinguished by its compact design and low noise level.

Product Range

The ECO H-STAT Series Horizontal Mini Air Handling Unit Ducted Fan coils are available in the following capacities:

- **5 sizes of 2 pipe, 4 row models from 54100 BTU/H to 182100 BTU/H (15.85kW to 53.37kW) cooling capacity and84100 BTU/H to 283100 BTU/H (24.64kW to 82.96kW) heating capacity.**
- **5 sizes of 2 pipe, 6 row models from 54850 BTU/H to 198800 BTU/H (16.07kW to 58.28kW) cooling capacity and 85300 BTU/H to 309150 BTU/H (25kW to 90.6kW) heating capacity.**
- **5 sizes of 4 pipe models from 4100 BTU/H to 182100 BTU/H (15.85kW to 53.37kW) cooling capacity and 76725 BTU/H to 252450 BTU/H (22.5kW to 77.1kW) heating capacity.**

Product Features

- **Energy Efficiency.** The ECO H-STAT Series Horizontal Mini Air Handling Unit Ducted Fan coils incorporate a DC motor with step-less speed modulation using an integrated EC motor driver.

Energy saving or unit power input at set H/M/L speeds is reduced by 30 - 50% when compared to traditional on/off AC motors. Moreover, in Energy Saving Auto – Mode (ESM), as airflow is continuously varied (step-less progression) between 15% and 100% of the maximum high speed airflow, energy saving will be 50 – 70% while precisely meeting the required cooling and heating loads of the space.

This innovation eliminates the need for the motor to turn off and on periodically to maintain the desired temperature of the environment, leading to total energy savings of up to 50% on an installation/project basis. Modulation of airflow to meet heating and cooling requirements of the space will also result in reducing temperature fluctuations within the space, as well as reducing fan noise.

The motor is driven by a 0 – 10 VDC signal originating from an inverter board integrated into the unit onboard controller, which utilizes PID logic in order to modulate motor RPMs in Energy Saving Auto - Mode (ESM).

- **Filter**. G4 filters for air filtration compliant with EN779 standard positioned at intake.
- **Framework**. The ECO H-STAT Series Horizontal Mini Air Handling Unit Ducted Fan coils have been designed with a 1 inch (25mm) thickness sandwich panel with 2.5lbs/ft^3 (40kg/m^3) density polyurethane. The intake panel is equipped with a flange for connection to ducting.
- **Drain Pump and fan motor**. Double intake centrifugal fans with forward blades and directly matched to EC or AC motor.

Condensate drain pan interior isolated in aluminum alloy.

- **Flexibility for maintenance.** The ECO H-STAT Series Horizontal Mini Air Handling Unit Ducted Fan coils are available with left or right side coil connections to maximize product flexibility and easiness of maintenance.

Standard Configuration

The ECO H-STAT Series Horizontal Mini Air Handling Unit Ducted Fan coils offer as standard 1 inch (25mm) Nylon Mesh Filter, and option of left or right side coil connections.

Control Options *

Two control configuration options are offered for the ECO H-STAT Series Horizontal Mini Air Handling Unit Ducted Fan coils.

- **Total Control Board (S type)** – Field Programmable using easy to set dipswitches and controlled via Infra-red handset and/or wired wall pad. It offers the following control options: continuous with modulation or On/Off fan, 2 or 4 Pipe configuration, with or without valves, with or without electrical heater, preheat configuration, complete diagnostics.

Our S type controller also allows control of up to 32 Secondary units via a single Main Unit with IR Handset or Wall Pad controller, and up to 2048 units via BMS (Building Management System) with Modbus platform.

- **Flexi Control Board (W type)** – 24 VAC controller compatible with wired wall mounted thermostat, and on-off or modulating fan control. Control of integral condensate pump (pump is optional), zone valves (24V or modulating), and limited LED diagnostics is included.*

** Modulating fan control via 0-10 VDC signal provided by BMS (BMS by others).*

ECO H-STAT SERIES HORIZONTAL MINI AIR HANDLING UNIT DUCTED FAN COILS

MODEL HAHU AECM

Product Accessories

CONTROL ACCESSORIES

INFRA-RED HANDSET CONTROLLER + WALL HOLDER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

With Global Control functionality for Main and Secondary Unit groups.

ABS EXTERNAL LED RECEIVER

IR receiver in ABS housing with 70 inches length prewiring, which can be connected with S Type controls only. LED lights show working mode or error code.

UNLIMITED WIRED WALL PAD CONTROLLER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

Features: 7 day ON/OFF timer program. Addressable Main and Secondary units allowing control of up to 32 Secondary units via a single Main Unit with set or check of each unit parameters individually. Error display with addressable error diagnostic (Main unit Wall Pad displays Secondary unit address and error type). One Touch Global Control (Global Control Main Unit Wall Pad controls all units in the group). Onboard Room Air Temperature Sensor.

DIP SWITCH CONFIGURATION SERVICE

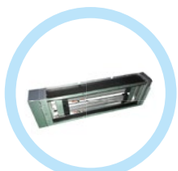
Preset Dip switch configuration for addressing Main Unit to Secondary Units. Dip Switch configuration labelled with carton tag.

UNIVERSAL EC THERMOSTAT

(FOR FLEXI CONTROL BOARD)

Main functions: 2-pipe, 4-pipe, 2-pipe +floor heating mode, floor heating, cooling. AC/EC motor 3-speed control. Motorized valve control. 0~10 VDC Modulating valve. EC motor RPM control. Low temperature protection. Remote ON/OFF function. Cooling and heating contact. Modbus protocol. Power supply: 24 Vac or VDC. Working environment: 0~50°C, 5~95%RH (no condensate). Self-power consumption: <2W. Protection class: IP30.

MORE ACCESSORIES



ELECTRICAL HEATERS

Modular electrical heater is available.

Please see Technical Manual for further information.

VALVES AND VALVE KITS

2-way On/Off or 3-way bypass ball valves, 1" or 1 ¼" motorized or 24VAC modulating actuators.

Stainless Steel Hose and Copper Piping Connection Kits for 2-way and 3-way valve options.

ECO H-STAT SERIES HORIZONTAL MINI AIR HANDLING UNIT DUCTED FAN COILS

MODEL HAHU AECM

Technical Specifications (AHRI Standards)

HAHU (4R) V-AECM - Hydronic Horizontal Mini Air Handling Ducted Unit 4-row coil, 2-pipe with EC Motor.

UNIT CONFIGURATION		HAHU(4R)-[Size]-V-AECM				200	300	400	600	800
		Configuration				2-pipe				
		Number of Fan Blowers				Single			Twin	
		Power Supply			[V/Ph/Hz]	220 / 1 / 60				
		Operation Control				S Type: Total control version. W Type: Flexible control version.				
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	1339	1882	2429	3764	4858
			M	2		1138	1600	2065	3199	4130
			L	1		803	1129	1458	2258	2915
		External Static Pressure	H	3	in.wg	0.5				
			M	2		0.5				
			L	1		0.5				
	Cooling	Cooling Capacity	H	3	BTU/Hr	54088	73377	95657	144596	182100
			M	2		47794	64937	84962	127964	161741
			L	1		36357	49362	64616	97272	123008
		Sensible Cooling Capacity	H	3		35966	49326	63881	95903	122522
			M	2		31558	43195	56096	84858	107592
			L	1		23625	32437	42196	63723	80931
	Heating	Heating Capacity	H	3	BTU/Hr	84082	114068	148703	224780	283083
			M	2		74299	100948	132078	198926	251434
			L	1		56519	76736	100449	151214	191222
		Max. Elec. Heater Capacity			kW	4.5	6	7.5	9	
	Sound	Sound Pressure Level (outlet)			dB(A)	70	75	77	78	80
		Sound Power Level (outlet)*1				79	84	86	87	89
	Electrical	Maximum Power Input			W	412	650	765	1300	1530
		Maximum Current			A	1.63	2.17	2.17	4.34	4.34
	Hydraulic	Water Flow Rate	3		GPM	10.7	14.5	18.9	28.6	36
			2			9.44	12.8	16.8	25.3	31.9
			1			7.18	9.75	12.8	19.2	24.3
		Cooling Pressure Drop	3		Ft.Hd	6.3	4.0	7.2	16.4	12.8
			2			5.1	3.3	5.9	13.3	10.4
			1			3.2	2.1	3.7	8.4	6.5
		Heating Water Flow Rate			GPM	Same as " Water Flow Rate"				
		Heating Pressure Drop	3		Ft.Hd	5.7	3.6	6.4	14.8	11.5
			2			4.6	3.0	5.3	12	9.4
			1			2.9	1.9	3.3	7.5	5.9
		Water Content			Gal	1.6	2.0	2.4	2.8	3.3
CONSTRUCTION AND PACKING DATA		Water Connections	Type	In	in	NPT Threaded female				
				Out		1 ¼"				
		Condensate Drainage Connection			in	1"				
		Dimensions	L		in	50 3/8	58 1/4	66 1/8	74	85 13/16
			W			40 9/16				
			H			25 1/16				

*** Product dimensions are within ± 1/16 inches.**

****1 Sound Power in compliance with EN9614-2***

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

Return air temperature: 70F.
Inlet water temperature: 140F.
Water flow-rate: same as 2-pipe cooling.

Technical Specifications (AHRI Standards)

HAHU (6R) V-AECM - Hydronic Horizontal Mini Air Handling Ducted Unit 6-row coil, 2-pipe with EC Motor.

UNIT CONFIGURATION		HAHU(6R)-[Size]-V-AECM				200	300	400	600	800
		Configuration				2-pipe				
		Number of Fan Blowers				Single			Twin	
		Power Supply			[V/Ph/Hz]	220 / 1 / 60				
		Operation Control				S Type: Total control version. W Type: Flexible control version.				
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	1209	1789	2341	3577	4683
			M	2		1028	1520	1990	3041	3980
			L	1		726	1073	1405	2146	2810
		External Static Pressure	H	3	in.wg	0.5				
			M	2		0.5				
			L	1		0.5				
	Cooling	Cooling Capacity	H	3	BTU/Hr	54859	80713	107061	148861	198866
			M	2		48298	71490	94692	131850	175889
			L	1		37057	54639	72085	100771	133898
		Sensible Cooling Capacity	H	3		35709	52622	69539	98948	131553
			M	2		31064	46057	60761	86604	114946
			L	1		23587	34840	45786	65512	86616
	Heating	Heating Capacity	H	3	BTU/Hr	85280	125472	166432	231410	309146
			M	2		75081	111134	147203	204966	273428
			L	1		57606	84938	112060	156653	208150
		Max. Elec. Heater Capacity			kW	4.5	6	7.5	9	
	Sound	Sound Pressure Level (outlet)			dB(A)	70	75	77	78	80
		Sound Power Level (outlet)*1				79	84	86	87	89
	Electrical	Maximum Power Input			W	412	650	765	1300	1530
		Maximum Current			A	1.63	2.17	2.17	4.34	4.34
	Hydraulic	Water Flow Rate	3		GPM	10.8	15.9	21.1	29.4	39.3
			2			9.54	14.1	18.7	26	34.7
			1			7.32	10.8	14.2	19.9	26.4
		Cooling Pressure Drop	3		Ft.Hd	3.2	7.2	13.2	3.9	7.3
			2			2.6	5.8	10.7	3.1	6.0
			1			1.7	3.7	6.7	2.0	3.7
		Heating Water Flow Rate			GPM	Same as "Water Flow Rate"				
		Heating Pressure Drop	3		Ft.Hd	5.7	3.6	6.4	14.8	11.5
			2			4.6	3.0	5.3	12	9.4
			1			2.9	1.9	3.3	7.5	5.9
		Water Content			Gal	1.6	2.0	2.4	2.8	3.3
CONSTRUCTION AND PACKING DATA		Water Connections	Type	In	in	NPT Threaded female				
				Out		1 ¼"				
		Condensate Drainage Connection			in	1"				
		Dimensions	L		in	50 3/8	58 1/4	66 1/8	74	85 13/16
			W			40 9/16				
			H			25 1/16				

*** Product dimensions are within ± 1/16 inches.**

****1 Sound Power in compliance with EN9614-2***

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

Return air temperature: 70F.
Inlet water temperature: 140F.
Water flow-rate: same as 2-pipe cooling.

ECO H-STAT SERIES HORIZONTAL MINI AIR HANDLING UNIT DUCTED FAN COILS

MODEL HAHU AECM

Technical Specifications (AHRI Standards)

HAHU (4R+2) P-AECM - Hydronic Horizontal Mini Air Handling Ducted Unit 4+2-row coil, 4-pipe with EC Motor.

UNIT CONFIGURATION		HAHU(4R+2)-[Size]-P-AECM				200	300	400	600	800
		Configuration				4-pipe				
		Number of Fan Blowers				Single			Twin	
		Power Supply			(V/Ph/Hz)	220 / 1 / 60				
		Operation Control				S Type: Total control version. W Type: Flexible control version.				
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	1339	1882	2429	3764	4858
			M	2		1138	1600	2065	3199	430
			L	1		803	1129	1458	2258	2915
		External Static Pressure	H	3	in.wg	0.5				
			M	2		0.5				
			L	1		0.5				
	Cooling	Cooling Capacity	H	3	BTU/Hr	54088	73377	95657	144596	182100
			M	2		47794	64937	84962	127964	161741
			L	1		36357	49362	64616	97272	123008
		Sensible Cooling Capacity	H	3		35966	49326	63881	96903	122522
			M	2		31558	43195	56096	84858	107592
			L	1		23625	32437	42196	63723	80931
	Heating	Heating Capacity	H	3	BTU/Hr	76725	105471	134486	198076	252457
			M	2		67742	93013	119172	174679	223710
			L	1		51720	71167	90438	133653	169771
	Sound	Sound Pressure Level (outlet)			dB(A)	70	75	77	78	80
		Sound Power Level (outlet)*1				79	84	86	87	89
	Electrical	Fan Motor Power			W	412	650	765	1300	1530
		Fan Motor Running Current			A	1.63	2.17	2.17	4.34	4.34
	Hydraulic	Cooling Water Flow Rate	3		GPM	10.7	14.5	18.9	28.6	36
			2			9.44	12.8	16.8	25.3	31.9
			1			7.18	9.75	12.8	19.2	24.3
		Cooling Pressure Drop	3		Ft.Hd	6.3	4.0	7.2	16.4	12.8
			2			5.1	3.3	5.9	13.3	10.4
			1			3.2	2.1	3.7	8.4	6.5
		Hot Water Flow Rate	3		GPM	3.82	5.25	6.7	9.87	12.6
			2			3.37	4.63	5.94	8.7	11.1
			1			2.58	3.55	4.51	6.66	8.46
		Hot Pressure Drop	3		Ft.Hd	2.6	1.7	1.3	2.9	1.6
			2			2.1	1.3	1.1	2.3	1.3
			1			1.3	0.9	0.7	1.5	0.8
		Cooling Water Content			Gal	1.6	2.0	2.4	2.8	3.3
		Hot Water Content				0.8	1.0	1.2	1.4	1.7
CONSTRUCTION AND PACKING DATA		Cooling Water Connections	Type			Threaded female				
			In		in	1 ¼"				
			Out							
		Heating Water Connections	In			1"				
			Out							
		Condensate Drainage Connection			in	1"				
		Dimensions	L		in	50 3/8	58 1/4	66 1/8	74	85 13/16
			W			40 9/16				
			H			25 3/				

*** Product dimensions are within ± 1/16 inches.**

[1] Sound Power in compliance with EN9614-2

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

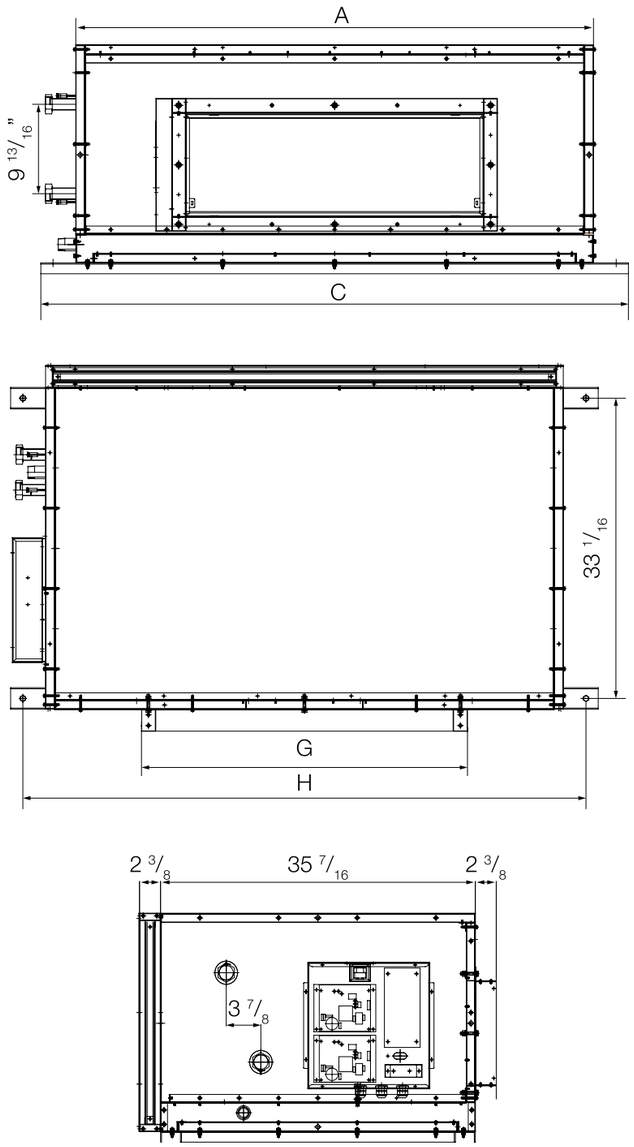
Heating mode (4-pipe):

Return air temperature: 70F.
Inlet water temperature: 180F.
Outlet water temperature: 140F.

ECO H-STAT SERIES HORIZONTAL MINI AIR HANDLING UNIT DUCTED FAN COILS

MODEL HAHU AECM

Dimensional Drawings HAHU AECM (4R/6R), 2 Pipe Models



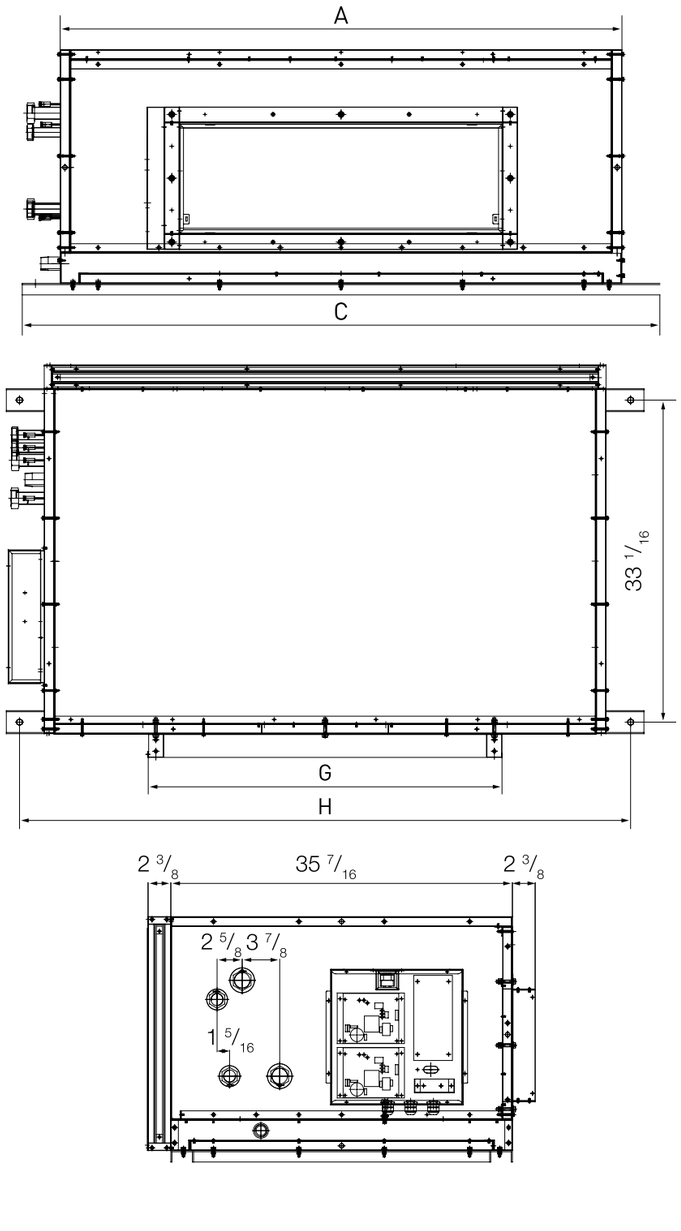
Model	Unit Dimensions (in)			
	A	C	G	H
HAHU-200-V	42-1/2	50-3/8	26-3/4	47-5/8
HAHU-300-V	50-3/8	58-1/4	30-11/16	55-1/2
HAHU-400-V	58-1/4	66-1/8	36-5/8	63-3/8
HAHU-600-V	66-1/8	74	52-3/8	71-1/4
HAHU-800-V	77-15/16	85-13/16	57-1/16	83-1/16

*** Product dimensions are within ± 1/16 inches.**

ECO H-STAT SERIES HORIZONTAL MINI AIR HANDLING UNIT DUCTED FAN COILS

MODEL HAHU AECM

Dimensional Drawings HAHU AECM (4+2R), 4 Pipe Models



Model	Unit Dimensions (in)			
	A	C	G	H
HAHU-200-P	42-1/2	50-3/8	26-3/4	47-5/8
HAHU-300-P	50-3/8	58-1/4	30-11/16	55-1/2
HAHU-400-P	58-1/4	66-1/8	36-5/8	63-3/8
HAHU-600-P	66-1/8	74	52-3/8	71-1/4
HAHU-800-P	77-15/16	85-13/16	57-1/16	83-1/16

*** Product dimensions are within ± 1/16 inches.**

ECO H-STAT SERIES VERTICAL MINI AIR HANDLING UNIT DUCTED FAN COILS

MODEL VAHU-AECM

VERTICAL M/H-STAT MINI AHU SERIES FAN COILS VAHU AECM

Product Presentation

The ECO H-STAT Series Vertical Mini Air Handling Unit Ducted Fan coils have been designed for installation in suspended ceilings or any application where high CFM, ductable units are needed.

With internal insulation panel, this product range is distinguished by its compact design and low noise level.

Product Range

The ECO H-STAT Series Vertical Mini Air Handling Unit Ducted Fan Coils are available in the following capacities:

• 5 sizes of 2 pipe, 4 row models from 54700 BTU/H to 190500 BTU/H (16kW to 55.82kW) cooling capacity, and 85000BTU/H to 296125 BTUH/H (24.9kW to 86.79kW) heating capacity.

• 5 sizes of 2 pipe, 6 row models from 54850 BTU/H to 198900 BTU/H (16.08kW to 58.28kW) cooling capacity, and 85300 BTU/H to 30150 BTU/H (25kW to 90.6kW) heating capacity.

• 5 sizes of 4 pipe models from 50550 BTU/H to 186250 BTU/H (14.82kW to 54.59kW) cooling capacity, and 66700 BTU/H to 237600 BTU/H (19.56kW to 69.63kW) heating capacity.

Product Features

• Energy Efficiency. The ECO H-STAT Series Vertical Mini Air Handling Unit Ducted Fan coils incorporate a DC motor with step-less speed modulation using an integrated EC motor driver.

Energy saving or unit power input at set H/M/L speeds is reduced by 30 - 50% when compared to traditional on/off AC motors. Moreover, in Energy Saving Auto – Mode (ESM), as airflow is continuously varied (step-less progression) between 15% and 100% of the maximum high speed airflow, energy saving will be 50 – 70% while precisely meeting the required cooling and heating loads of the space.

This innovation eliminates the need for the motor to turn off and on periodically to maintain the desired temperature of the environment, leading to total energy savings of up to 50% on an installation/project basis. Modulation of airflow to meet heating and cooling requirements of the space will also result in reducing temperature fluctuations within the space, as well as reducing fan noise.

The motor is driven by a 0 – 10 VDC signal originating from an inverter board integrated into the unit onboard controller, which utilizes PID logic in order to modulate motor RPMs in Energy Saving Auto - Mode (ESM).

• Filter. G4 filters for air filtration compliant with EN779 standard positioned at intake.

• Framework. The ECO H-STAT Series Vertical Mini Air Handling Unit Ducted Fan coils have been designed with a 1 inch (25mm) thickness sandwich panel with 2.5lbs/ft^3 (40kg/m^3) density polyurethane. The intake panel is equipped with a flange for connectionto ducting.

• Drain Pump and fan motor. Double intake centrifugal fans with forward blades matched to EC motor. Insulated aluminum condensate drain pan is standard.

• Flexibility for maintenance. The ECO H-STAT Series Vertical Mini Air Handling Unit Ducted Fan coils are available with left or right side coil connections to maximize product flexibility and easiness of installation.

Standard Configuration

The ECO H-STAT Series Vertical Mini Air Handling Unit Ducted Fan Coils offer as standard 1 inch (25mm) Nylon Mesh Filter, and option to choose left or right side coil connections.

Control Options *

Two control configuration options are offered for the ECO H-STAT Series Vertical Mini Air Handling Unit Ducted Fan Coils.

• Total Control Board (S type) – Field Programmable using easy to set dipswitches and controlled via Infra-red handset and/or wired wall pad. It offers the following control options: continuous with modulation or On/Off fan, 2 or 4 Pipe configuration, with or without valves, with or without electrical heater, preheat configuration, complete diagnostics.

Our S type controller also allows control of up to 32 Secondary units via a single Main Unit with IR Handset or Wall Pad controller, and up to 2048 units via BMS (Building Management System) with Modbus platform.

• Flexi Control Board (W type) – 24 VAC controller compatible with wired wall mounted thermostat, and on-off or modulating fan control. Control of supply air louvers, integral condensate pump (pump is optional), zone valves (24V or modulating), and limited LED diagnostics is included.*

** Modulating fan control via 0-10 VDC signal provided by BMS (BMS by others).*

ECO H-STAT SERIES VERTICAL MINI AIR HANDLING UNIT DUCTED FAN COILS

MODEL VAHU-AECM

Product Accessories

CONTROL ACCESSORIES

INFRA-RED HANDSET CONTROLLER + WALL HOLDER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

With Global Control functionality for Main and Secondary Unit groups.

ABS EXTERNAL LED RECEIVER

IR receiver in ABS housing with 70 inches length prewiring, which can be connected with S Type controls only. LED lights show working mode or error code.

UNLIMITED WIRED WALL PAD CONTROLLER

(AVAILABLE ONLY FOR TOTAL CONTROL BOARD)

Features: 7 day ON/OFF timer program. Addressable Main and Secondary units allowing control of up to 32 Secondary units via a single Main Unit with set or check of each unit parameters individually. Error display with addressable error diagnostic (Main unit Wall Pad displays Secondary unit address and error type). One Touch Global Control (Global Control Main Unit Wall Pad controls all units in the group). Onboard Room Air Temperature Sensor.

DIP SWITCH CONFIGURATION SERVICE

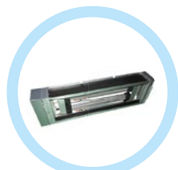
Preset Dip switch configuration for addressing Main Unit to Secondary Units. Dip Switch configuration labelled with carton tag.

UNIVERSAL EC THERMOSTAT

(FOR FLEXI CONTROL BOARD)

Main functions: 2-pipe, 4-pipe, 2-pipe +floor heating mode, floor heating, cooling. AC/EC motor 3-speed control. Motorized valve control. 0~10 VDC Modulating valve. EC motor RPM control. Low temperature protection. Remote ON/OFF function. Cooling and heating contact. Modbus protocol. Power supply: 24 Vac or VDC. Working environment: 0~50°C, 5~95%RH (no condensate). Self-power consumption: <2W. Protection class: IP30.

MORE ACCESSORIES



ELECTRICAL HEATERS

Modular electrical heater is available.

Please see Technical Manual for further information.

VALVES AND VALVE KITS

2-way On/Off or 3-way bypass ball valves, 24VAC modulating actuators.

Stainless Steel Hose and Copper Piping Connection Kits for 2-way and 3-way valve options.

ECO H-STAT SERIES VERTICAL MINI AIR HANDLING UNIT DUCTED FAN COILS

MODEL VAHU-AECM

Technical Specifications (AHRI Standards)

VAHU (4R) V-AECM - Hydronic Vertical Mini Air Handling Ducted Unit 4-row coil, 2-pipe with EC Motor.

UNIT CONFIGURATION		VAHU(4R)-[Size]-V-AECM				200	300	400	600	800
		Configuration				2-pipe				
		Number of Fan Blowers				Single			Twin	
		Power Supply			(V/Ph/Hz)	220 / 1 / 60				
		Operation Control				S Type: Total control version. W Type: Flexible control version.				
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	1339	1882	2429	3764	4858
			M	2		1138	1600	2065	3199	4130
			L	1		803	1129	1458	2258	2915
		External Static Pressure	H	3	in.wg	0.5				
			M	2		0.5				
			L	1		0.5				
	Cooling	Cooling Capacity	H	3	BTU/Hr	54677	72054	95037	145206	190490
			M	2		48313	63766	84412	128505	169192
			L	1		36752	48472	64198	97683	128675
		Sensible Cooling Capacity	H	3		36241	48876	63871	97516	127068
			M	2		31800	42801	56088	85395	111584
			L	1		23806	32141	42190	64126	83933
	Heating	Heating Capacity	H	3	BTU/Hr	84994	112011	147740	225730	296125
			M	2		75105	99128	131222	199766	263017
			L	1		57132	75352	99798	151853	200032
		Max. Elec. Heater Capacity			kW	4.5	6	7.5	9	
	Sound	Sound Pressure Level (outlet)			dB(A)	70	75	77	78	80
		Sound Power Level (outlet)*1				79	84	86	87	89
	Electrical	Maximum Power Input			W	412	650	765	1300	1530
		Fan Motor Running Current			A	1.63	2.17	2.17	4.34	4.34
	Hydraulic	Water Flow Rate		3	GPM	10.8	14.2	18.8	28.7	37.6
				2		9.54	12.6	16.7	25.4	33.4
				1		7.26	9.57	12.7	19.3	25.4
		Cooling Pressure Drop		3	Ft.Hd	7.4	2.1	3.9	9	1.7
				2		6	1.7	3.1	7.3	13.8
				1		3.8	1.1	2.0	4.6	8.7
		Heating Water Flow Rate			GPM	Same as "Water Flow Rate"				
		Heating Pressure Drop		3	Ft.Hd	6.7	1.9	3.5	8.1	15.2
				2		5.4	1.5	2.8	6.6	12.4
				1		3.4	1.0	1.8	4.1	7.8
		Water Content			Gal	1.7	2.2	2.7	3.2	3.9
CONSTRUCTION AND PACKING DATA		Water Connections	Type			NPT Threaded female				
			In		in	1 ¼"				
			Out							
		Condensate Drainage Connection			in	1"				
		Dimensions	L		in	33 7/16	41 5/16	49 7/16	61	74
			W			26 3/4				
			H			59 7/16				

*** Product dimensions are within ± 1/16 inches.**

**1 Sound Power in compliance with EN9614-2*

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

Return air temperature: 70F.
Inlet water temperature: 140F.
Water flow-rate: same as 2-pipe cooling.

Technical Specifications (AHRI Standards)

VAHU (6R) V-AECM - Hydronic Vertical Mini Air Handling Ducted Unit 6-row coil, 2-pipe with EC Motor.

UNIT CONFIGURATION		VAHU(6R)-[Size]-V-AECM				200	300	400	600	800
		Configuration				2-pipe				
		Number of Fan Blowers				Single			Twin	
		Power Supply			(V/Ph/Hz)	220 / 1 / 60				
		Operation Control				S Type: Total control version. W Type: Flexible control version.				
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	1209	1789	2341	3577	4683
			M	2		1028	1520	1990	3041	3980
			L	1		726	1073	1405	2146	2810
		External Static Pressure	H	3	in.wg	0.5				
			M	2		0.5				
			L	1		0.5				
	Cooling	Cooling Capacity	H	3	BTU/Hr	54859	80713	107061	148861	198866
			M	2		48298	71490	94692	131850	175889
			L	1		37057	54639	72085	100771	133898
		Sensible Cooling Capacity	H	3		35709	52622	69539	98948	131553
			M	2		31064	46057	60761	86604	114946
			L	1		23587	34840	45786	65512	86616
	Heating	Heating Capacity	H	3	BTU/Hr	85280	125472	166432	231410	309146
			M	2		75081	111134	147203	204966	273428
			L	1		57606	84938	112060	156653	208150
		Max. Elec. Heater Capacity			kW	4.5	6	7.5	9	
	Sound	Sound Pressure Level (outlet)			dB(A)	70	75	77	78	80
		Sound Power Level (outlet)*1				79	84	86	87	89
	Electrical	Maximum Power Input			W	412	650	765	1300	1530
		Maximum Current			A	1.63	2.17	2.17	4.34	4.34
	Hydraulic	Water Flow Rate		3	GPM	10.8	15.9	21.1	29.4	39.3
				2		9.54	14.1	18.7	26	34.7
				1		7.32	10.8	14.2	19.9	26.4
		Cooling Pressure Drop		3	Ft.Hd	3.2	7.2	13.2	3.9	7.3
				2		2.6	5.8	10.7	3.1	6.0
				1		1.7	3.7	6.7	2.0	3.7
		Heating Water Flow Rate			GPM	Same as "Water Flow Rate"				
		Heating Pressure Drop		3	Ft.Hd	2.9	6.5	11.8	3.5	6.6
				2		2.3	5.3	9.6	2.8	5.4
				1		1.5	3.3	6.0	1.8	3.4
		Water Content			Gal	2.5	3.3	4	4.8	5.9
CONSTRUCTION AND PACKING DATA		Water Connections	Type			NPT Threaded female				
			In		in	1 ¼"				
			Out							
		Condensate Drainage Connection			in	1"				
		Dimensions	L		in	33 7/16	41 5/16	49 7/16	61	74
			W			26 3/4				
			H			59 7/16				

*** Product dimensions are within ± 1/16 inches.**

**1 Sound Power in compliance with EN9614-2*

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

Heating mode (2-pipe):

Return air temperature: 70F.
Inlet water temperature: 140F.
Water flow-rate: same as 2-pipe cooling.

ECO H-STAT SERIES VERTICAL MINI AIR HANDLING UNIT DUCTED FAN COILS

MODEL VAHU-AECM

Technical Specifications (AHRI Standards)

VAHU (4R+2) P-AECM - Hydronic Vertical Mini Air Handling Ducted Unit 4+2-row coil, 4-pipe with EC Motor.

						200	300	400	600	800
UNIT CONFIGURATION		VAHU(4R+2)-[Size]-P-AECM								
		Configuration				4-pipe				
		Number of Fan Blowers				Single			Twin	
		Power Supply			(V/Ph/Hz)	220 / 1 / 60				
		Operation Control				S Type: Total control version. W Type: Flexible control version.				
PERFORMANCE DATA	Air	Total AirFlow	H	3	CFM	1209	1789	2341	3577	4683
			M	2		1028	1520	1990	3041	3980
			L	1		726	1073	1405	2146	2810
		External Static Pressure	H	3	in.wg	0.5				
			M	2		0.5				
			L	1		0.5				
	Cooling	Cooling Capacity	H	3	BTU/Hr	50558	68946	92927	138943	186260
			M	2		44512	61067	82191	123065	164740
			L	1		34152	46673	62569	94057	125410
		Sensible Cooling Capacity	H	3		33399	46675	62389	93125	124118
			M	2		29054	40852	54513	81507	108450
			L	1		22061	30903	41078	61656	81721
	Heating	Heating Capacity	H	3	BTU/Hr	66732	96685	126730	181216	237580
			M	2		58580	85378	111682	160022	209369
			L	1		44875	65163	84919	122135	159197
	Sound	Sound Pressure Level (outlet)			dB(A)	70	75	77	78	80
		Sound Power Level (outlet)*1				79	84	86	87	89
	Electrical	Maximum Power Input			W	412	650	765	1300	1530
		Fan Motor Running Current			A	1.63	2.17	2.17	4.34	4.34
	Hydraulic	Cooling Water Flow Rate	3		GPM	9.98	13.6	18.4	27.4	36.8
			2			8.79	12.1	16.2	24.3	32.5
			1			6.74	9.22	12.4	18.6	24.8
		Cooling Pressure Drop	3		Ft.Hd	6.5	1.9	3.7	8.4	16.3
			2			5.2	1.6	3.0	6.8	13.2
			1			3.3	1.0	1.9	4.3	8.3
		Hot Water Flow Rate	3		GPM	3.32	4.82	6.31	9.03	11.8
			2			2.92	4.25	5.56	7.97	10.4
			1			2.24	3.25	4.23	6.08	7.93
		Hot Pressure Drop	3		Ft.Hd	0.3	0.7	1.4	0.4	0.8
			2			0.3	0.6	1.1	0.3	0.6
			1			0.2	0.4	0.7	0.2	0.4
		Cooling Water Content			Gal	1.7	2.2	2.7	3.2	3.9
		Hot Water Content				0.8	1.1	1.3	1.6	2.0
CONSTRUCTION AND PACKING DATA		Cooling Water Connections	Type			NPT Threaded female				
			In		in	1 ¼"				
			Out							
		Heating Water Connections	In			1"				
			Out							
		Condensate Drainage Connection			in	1"				
		Dimensions	L		in	33 7/16	41 5/16	49 3/16	61	74
			W			26 3/8				
			H			59 7/16				

*** Product dimensions are within ± 1/16 inches.**

**1 Sound Power in compliance with EN9614-2*

Cooling mode (2-pipe/ 4-pipe):

Return air temperature: 80F DB/ 67F WB.
Inlet/ outlet water temperature: 45F/ 55F.

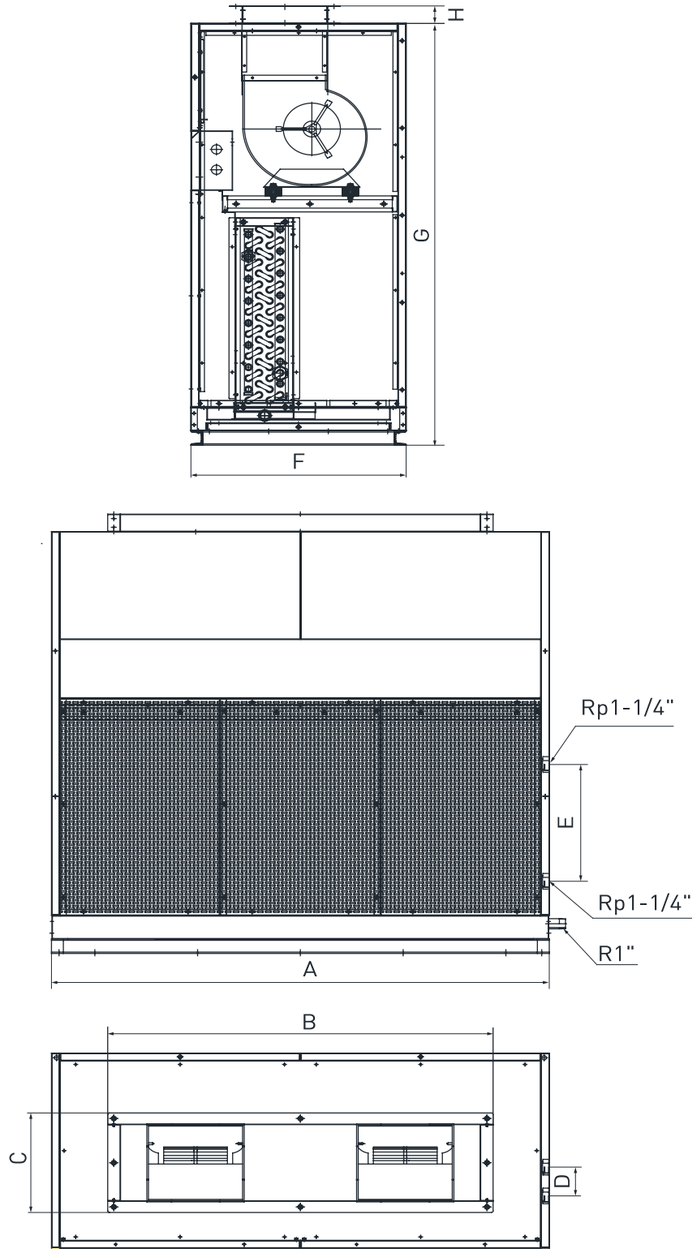
Heating mode (4-pipe):

Return air temperature: 70F.
Inlet water temperature: 180F.
Outlet water temperature: 140F.

ECO H-STAT SERIES VERTICAL MINI AIR HANDLING UNIT DUCTED FAN COILS

MODEL VAHU-AECM

Dimensional Drawings VAHU AECM (4R), 2 Pipe Models



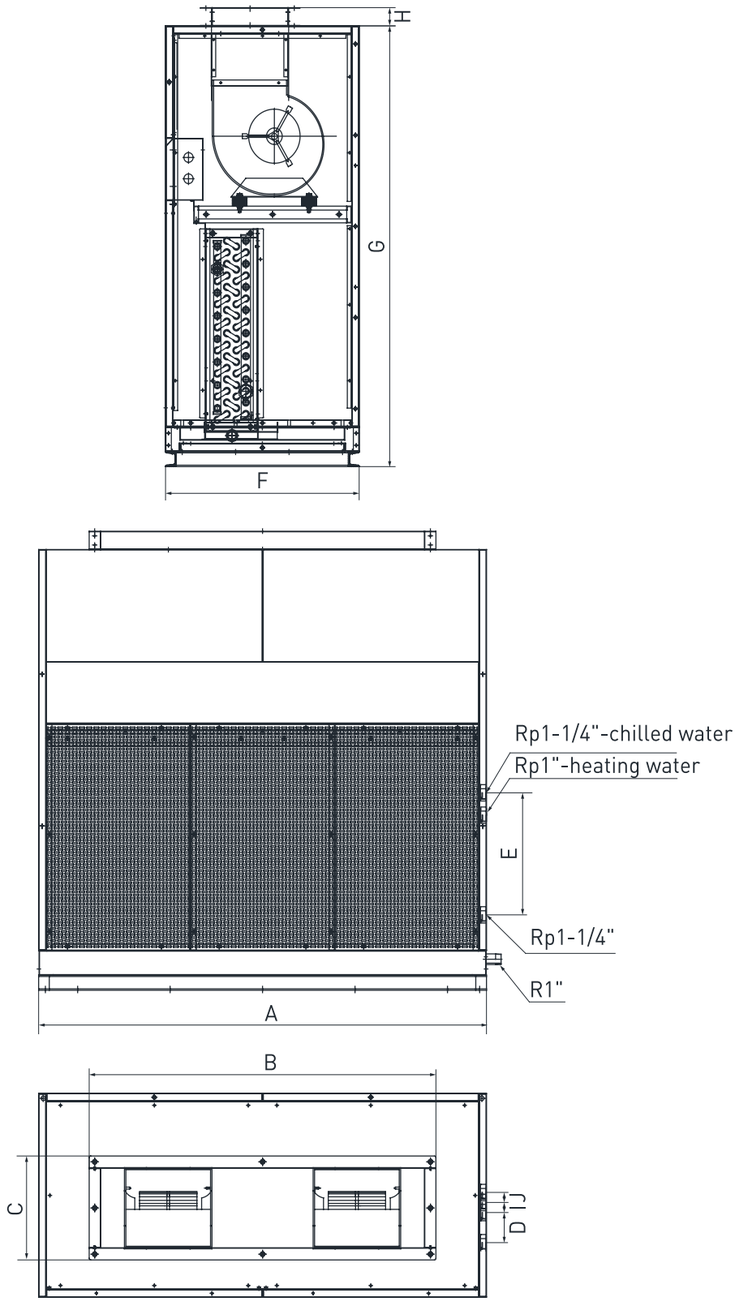
Model	Unit Dimensions (inches)							
	A	B	C	D	E	F	G	H
VAHU-200-V	33 7/16	21 4/16	13 7/16	3 7/8	15 13/16	26 3/8	57 1/16	2 3/8
VAHU-300-V	41 5/16	26 12/16	13 7/16	3 7/8	15 13/16	26 3/8	57 1/16	2 3/8
VAHU-400-V	49 3/16	30 11/16	14 10/16	3 7/8	15 13/16	26 3/8	57 1/16	2 3/8
VAHU-600-V	61	47 4/16	13 7/16	3 7/8	15 13/16	26 3/8	57 1/16	2 3/8
VAHU-800-V	74	53 2/16	14 10/16	3 7/8	15 13/16	26 3/8	57 1/16	2 3/8

*** Product dimensions are within ± 1/16 inches.**

ECO H-STAT SERIES VERTICAL MINI AIR HANDLING UNIT DUCTED FAN COILS

MODEL VAHU-AECM

Dimensional Drawings VAHU AECM (4+2R), 4 Pipe Models



Model	Unit Dimensions (inches)									
	A	B	C	D	E	F	G	H	I	J
VAHU-200-P	33 7/16	21 4/16	13 7/16	3 7/8	15 13/16	26 3/8	57 1/16	2 3/8	1 5/16	1 5/16
VAHU-300-P	41 5/16	26 12/16	13 7/16	3 7/8	15 13/16	26 3/8	57 1/16	2 3/8	1 5/16	1 5/16
VAHU-400-P	49 3/16	30 11/16	14 10/16	3 7/8	15 13/16	26 3/8	57 1/16	2 3/8	1 5/16	1 5/16
VAHU-600-P	61	47 4/16	13 7/16	3 7/8	15 13/16	26 3/8	57 1/16	2 3/8	1 5/16	1 5/16
VAHU-800-P	74	53 2/16	14 10/16	3 7/8	15 13/16	26 3/8	57 1/16	2 3/8	1 5/16	1 5/16

*** Product dimensions are within ± 1/16 inches.**

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