POLARAIR

GLOBAL FAN COIL

TECHNICAL CATALOGUE

POLARGlobal
HVAC SYSTEMS

COOKE INDUSTRIES

POLAR AIR

TABLE OF **CONTENTS**

"Our vision is to enable the **highest level of comfort** through **intelligent, efficient and competitive indoor climate solutions**"

OUR COMPANY

Polar Global HVAC Systems is a multinational company with the vision to become the worldwide HVAC comfort solutions expert. Our mission is to design, develop and provide to worldwide markets integral and efficient HVAC comfort solutions, through intelligently controlled, high-quality and sustainable systems.

We are proud of our multilingual and multicultural international team who provide professional and personalized engineering, technical, commercial and logistical local services, through our global offices in Hong Kong, China, Europe and North America. We also have warehouses in Spain, Canada and China, to service fast deliveries to our EMEA, NA, and APEC markets.

Over the years, we have developed excellent professional and personal synergies with companies and people worldwide, allowing us to have specialized market knowledge and a valuable international network to overcome challenges and develop new alliances.

GLOBAL OFFICES IN:

We proudly promote our **POLAR AIR** brand worldwide, as the standard for **high quality, energy-efficient and intelligent water-based systems.**

We believe in the people we work with, and we consider our customers as a significant part of our lives and the most valuable part of our business. For this reason, we aim to offer them the service and the quality that exceeds their expectations, with integrity, professionalism, and teamwork approach.

+35 YEARS EXPERIENCE

100% CUSTOMER-ORIENTED APPROACH

+500 PROJECTS INSTALLED

+1800 PRODUCT CONFIGURATIONS

+27 COUNTRIES WORLDWIDE

+15% GROWTH EVOLUTION

OUR EXPERTISE

WHY WATER?

Water transportation consumes less than 2% of the energy consumption of the total system.

In a refrigerant-based system, as much as 30% of the energy consumption of the system is used to transport the refrigerant (along with the lubricating oils) to the terminal unit.

It's a renewable resource, non-toxic, and it is essential to all life on earth!

We all have some aspect of social responsibility, and part of that social responsibility is to do our part to protect the planet. We specialized in water systems because it does not have a negative impact on our planet. Pretty much all other alternatives are toxic, flammable or both. For example, common refrigerants like R-410A are not only toxic but they can potentially displace the air in a room in the event of a large leak leading to an extremely hazardous situation.

Water-based systems are much less technical and simpler to install, allowing a workforce with a more broad skillset to install them.

On the contrary, VRF systems are highly technical and require a workforce trained on each specific manufacturer and licensed for that type of work. This greatly reduces the available pool of qualified labour.

The flexibility available with water-based systems is truly unmatched by any other technology.

Whether it is a forced-air system, radiant system, convection, water-based systems have a solution. They all use the same fluid and can all work together. We can even integrate other building systems into the HVAC system (like plumbing systems, for example), just because they also use water.

OUR **SERVICES**

IT IS ALL ABOUT SERVICING OUR CUSTOMERS

Our international teams are focused on providing the best customer experience at every stage of the project process.

01. PRE-SALES & INSTALLATION SERVICES

- Product Marketing
- Product Selection Tools
- Quality control (Testing laboratory)
- Detailed Technical Literature

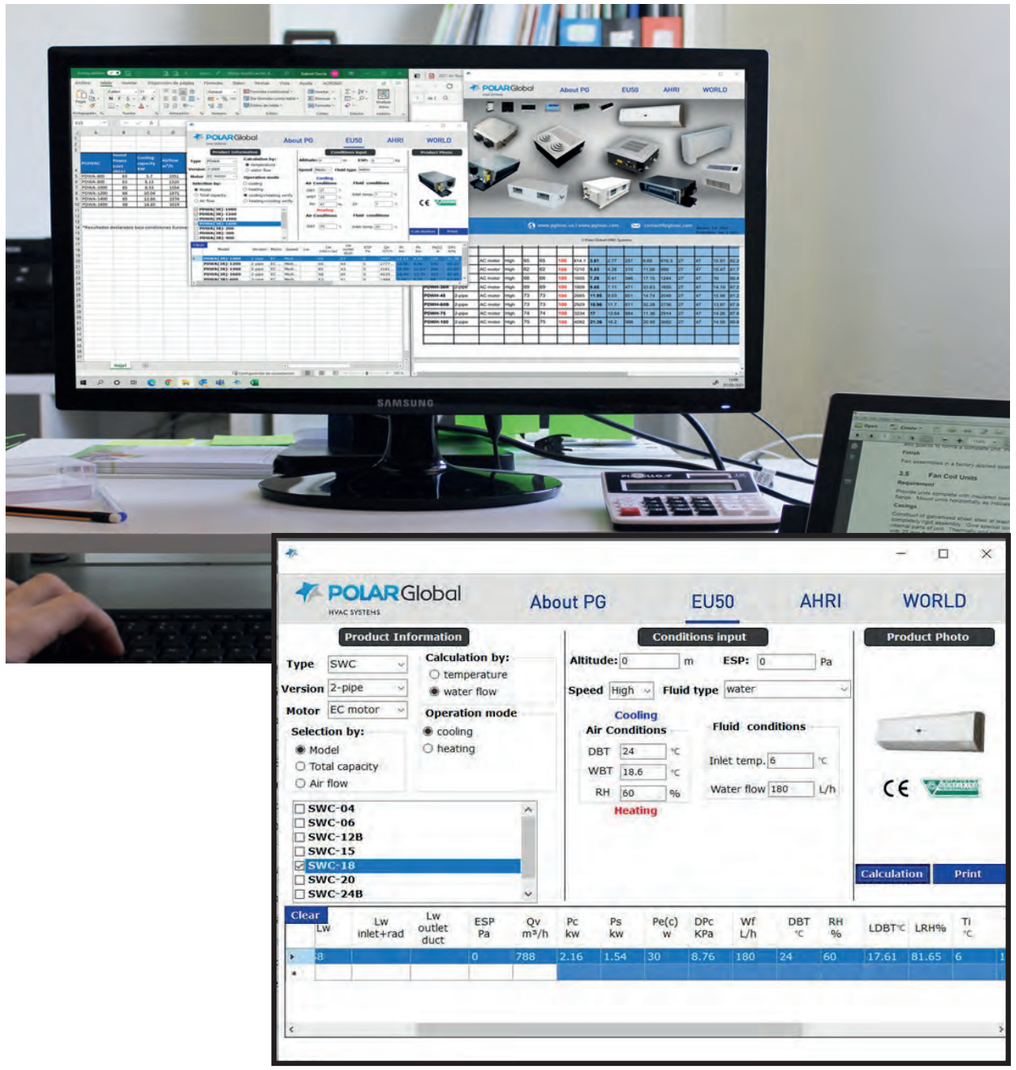
02. AFTER-SALES

- Maintenance
- Spare parts Supply
- Continous Technical Suport

SOFTWARE TO MAXIMIZE DESIGN EFFICIENCY

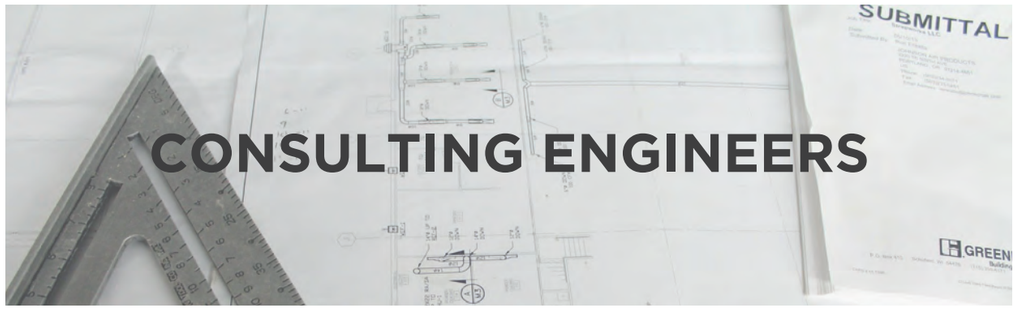
We have created intuitive software for our professional customers to have supportive tools that help them select the products and tailor the project design according to specific HVAC requirements.

The software provides accurate calculations, efficiency data and most competitive offers for each project case, allowing our customers to maximize efficiency during the HVAC system design stage.



OUR CUSTOMERS

IT ALL DEPENDS ON THE PERSPECTIVE



CONSULTING ENGINEERS

Polar Global HVAC Systems' technology maximizes flexibility and leads the way in customization to match individual building requirements in comfort and energy — all designed to reduce the total life cycle costs.

- Maximum flexibility to meet customer requirements.
- Advanced software tools to assist with system design.
- Preview and download 3D & 2D files, spec sheets and more.

ARCHITECTS

- Indoor units with a sleek and sophisticated design
- Space-efficient and low sound levels
- Wide range of indoor units and radiation systems to allow installation in most environments.

INSTALLERS

Polar Global HVAC Systems sets the standard with state-of-the-art technology and time-saving commissioning and servicing.

- One supplier equals one point of contact
- Maximum flexibility to meet customer requirements
- Customized training to maximize expertise
- User-friendly tools to optimize the initial setup and configuration of the installation.
- Easier routine maintenance

BUILDING OWNERS

Polar Global HVAC Systems' customized intelligent control is tailored to the individual needs to maximize energy efficiency.

- Optimized life cycle costs, to reduce overall energy costs.
- Single point of contact for the design of your climate system.
- Multiple systems can be managed in exactly the same way for key accounts.
- Dedicated after-sales service to ensure fast on-site support.
- Real-time multi-channel alerts to prevent disasters and keep a good maintenance program.

OUR
FAN COILS

INTELLIGENT FAN COIL SYSTEMS

With more than 20 years specialized in the design, production and commercialization worldwide of hydronic products, we have the firm conviction that the fan coil terminals are one of the most critical parts of a water-based HVAC system, as they provide comfort and energy conditions directly demanded by the end-users.

This conviction led us to create the intelligent fan coils, a new fan coil generation conceived as an individual intelligent point of control, designed to provide reliable performance and the highest efficiency operation with ultimate design flexibility.

The Intelligent fan coils are produced with the highest quality materials, the most efficient components and best manufacturing practices to make them the best comfort and efficiency solution for water-based HVAC projects.

THE WIDEST RANGE

Polar Global HVAC Systems has the widest range of fan coils in the world, adapted to each specific market requirement with a wide variety of accessories and options.

We have a complete range of EC and AC hydronic fan coils, Eurovent and AHRI performance and sound listed, as well as CE and ETL approvals. Note within the +1800 models/sizes we produce, ducted unit designs vary between the USA, EU and the Middle East.

We understand the need that many projects require special solutions, and we do our best to offer the maximum levels of flexibility to customize products according to the project requirements.

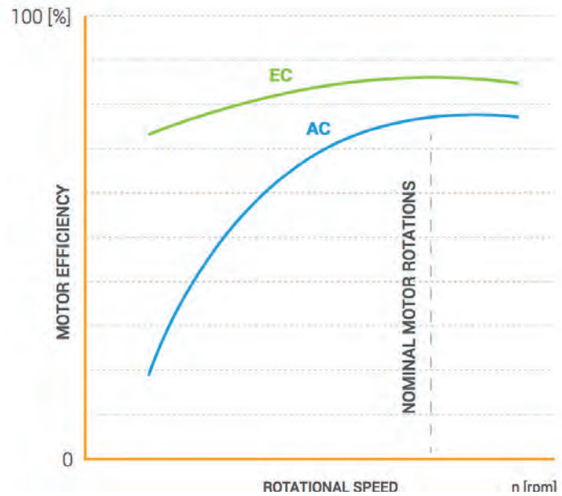
INTELLIGENT EFFICIENT MOTORS

The Intelligent fan coils offer energy-efficient products that use DC motors with variable speed modulation using an integrated EC motor driver.

The units with EC motors have energy savings at set H/M/L speeds between 30% to 50% compared to traditional on/off AC motors. In auto mode, as airflow continuously varies between 20% and 100% of the maximum high-speed airflow (step-less progression), energy savings are between 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 the heating and cooling requirements of the space will also result in reducing temperature fluctuations within the space and reducing fan noise.

COMPARISON OF MOTOR EFFICIENCY

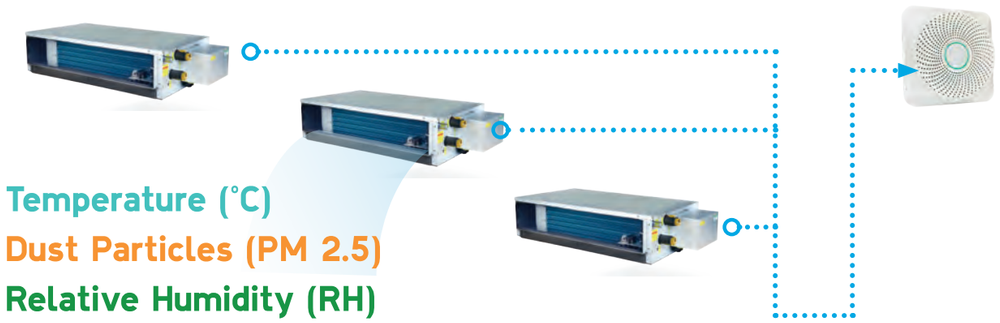


A 0-5VDC signal originated from an inverter board integrated into the onboard unit controller drives the motor, using PID logic to modulate within 0-10V speed RPMs in Energy Saving Auto - Mode (ESM).

INTELLIGENT AIR QUALITY CONTROL

The Intelligent fan coil system's integrated control logic continuously checks air quality data such as PM2.5 or CO^2 coming from the AQI transducer to provide the utmost air quality comfort.

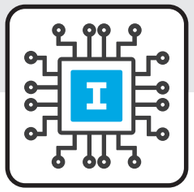
Polar Air fan coil systems also offer high-efficiency filter options to ensure efficient air cleaning and allow fresh air ducts to be connected directly to the units.



DIFFERENT CONTROL OPTIONS TO OFFER FLEXIBILITY

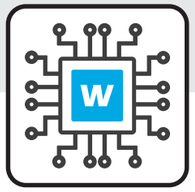
All Polar Air fan coil units offer maximum levels of control flexibility, allowing configuration by two types of control logic to satisfy specific application requirements.

Both types of controls are built-in. We offer user-friendly controllers, such as wall pads, remote handsets or thermostats as optional accessories to control the units, depending on the selected control type and project requirements.



[I-TYPE CONTROL]

CONTROLLED WITH POLAR AIR WALL PAD AND IR HANDSET



[W-TYPE CONTROL]

CONTROLLED WITH EXTERNAL 3RD PARTY THERMOSTAT.

TOTAL CONTROL PCB WITH INTELLIGENT FUNCTIONALITY [I-TYPE]

The PCB (printed circuit board) microprocessor intelligent control board controls the operation of the indoor fan motor, ON/OFF or modulating water valves, and electric heaters (if fitted) to maintain room conditions at a user-defined set point.

This control type is field programmable using easy to set configuration directly through the wired wall pad or dipswitches (on specific models) and controlled via infra-red handset and/or the wired wall pad (optional items).

- Full control logic connectivity via Modbus RTU with a BMS/PMS or using a gateway with other communication protocols, allowing local configurations.
- Auto Fan Speed control for EC motor adjusting motor signal input from O to 5VDC by PID calculation every IO seconds, and airflow adjustment from I5 to IOO%.
- Modulating Valve Control Under Energy Saving Mode to adjust the water flow IOO% according to the room temperature and set temperature. The controller adjusts the modulating valve signal via Modbus.
- Auto Restart function using non-volatile memory to save the set operation parameters when the system is turned off or in case of system failure or cessation of power supply.
- Master-Slave connectivity with up to 255 terminal units network connection using Modbus open protocol and controlled via our Wired Wall Pad controller. (Global or Addressable)
- Drain Pump control (If installed)
- Autodynamic balancing function for Variable Water Flow system installations. The water flow is controlled with temperature difference ΔT between the water inlet and outlet to ensure correct heat transfer from water to air.

FLEXIBLE CONTROL PCB [W-TYPE]

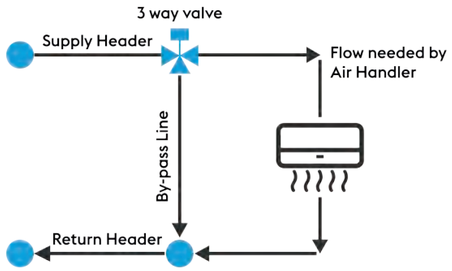
This control option features flexible functionality for external thermostat applications, allowing the independent control of drain pumps, offering zone control product operations, and limited LED diagnostics. In products where louvers are required, this control allows the stepping motors to open the louver at the maximum position or close them when the power of the unit is OFF.

- Independent control of drain pumps (if installed)
- Zone control operations
- Limited LED Diagnostics
- Louver control (when applicable).

CONSTANT VS VARIABLE FLOW APPLICATIONS

In Constant flow installations, typically using 3-way valves, the amount of water flowing through the system does not change as the load changes. When the load on the system is 100%, all of the water flows through the terminal unit coil. When less cooling or heating is needed, the 3-way valve starts to divert the water flow to the bypass and away from the terminal unit coil. As a result, there is less flow going through the terminal unit coil, but the total volume of water going through the fan coil "circuit" is the same. This system design negatively affects the overall energy efficiency of chillers and boilers because the differential temperature in the system remains low. The water leaving the coils blends with the water bypassed, which results in the low temperature differential (delta T). Furthermore, since the flow in the system remains constant at ALL loads, there is no opportunity to use a speed-controlled pump to save energy. Constant flow designs are not suitable for energy-efficient buildings with the current energy efficiency regulations.

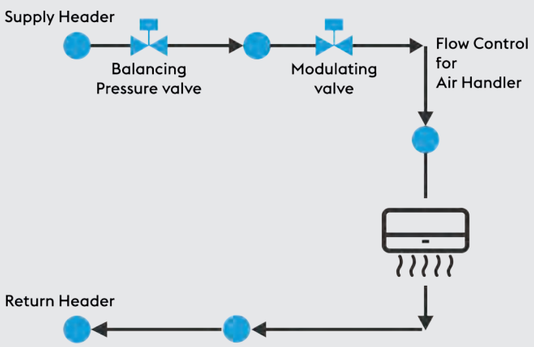
CONSTANT FLOW DIAGRAM



The suitable design for new installations requires the use of variable water flow systems.

In Variable flow installation, 2-way valves control the water through the terminal units. When the load is 100%, the valve is fully opened, and when less cooling or heating is needed, it closes to reduce the flow. Variable flow systems can be very energy efficient because there is a flow reduction in the installation when there is no need for full capacity. On average, an installation runs on 40 to 60% of its capacity most of the time, and pumping costs have significant savings when there is efficient pump speed control. Variable flow can also maximize the differential temperature in the system, which means that chillers and boilers run at optimal efficiency. Proper design and good commissioning (balancing) of a system with 2-way valves are critical to its operation. The system must be appropriately balanced to ensure the correct flows during full and partial load conditions using pressure compensating balancing valves (not manual circuit setters). This process adds additional components, added material cost and additional labour to install and balance.

VARIABLE FLOW DIAGRAM

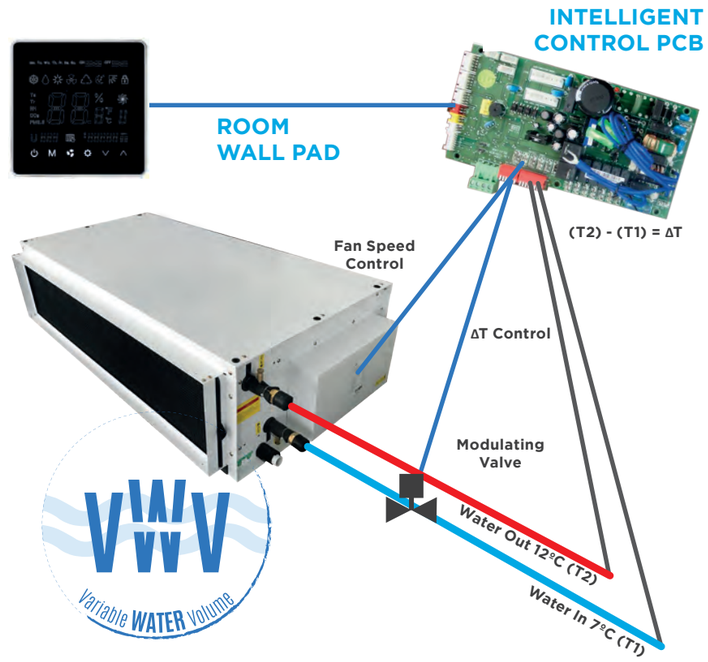


AUTODYNAMIC BALANCING SYSTEMS

Variable water flow system designs depend on differential pressure control valves (DPCV) to maximize energy savings and operational benefits. This type of system design aims to match the system's energy output to the building's load requirements in real-time. When a room thermostat indicates a comfort need in an area, the control system drives the valve actuators to open or close accordingly.

As the valves open or close, the flow rate changes, allowing the system pump to adjust the speed according to the new demand. With the variation of pump speed, the overall energy output of the entire system also changes, which affects the output of the heat pump or the chiller.

From the pump perspective, energy savings are easily understood since they represent about 6% of the total energy consumption of the HVAC system. Pumping energy is proportional to the cube of pump speed so reducing the speed of the pump to 50% can reduce the energy input by 87.5%! Characterized Modulating 2-way valves have been designed to operate on a direct linear relationship between the required energy output and valve position (50% open equals 50% output) but only when the differential pressure in the system is kept constant. This becomes difficult in a system with constantly variable pumping.



The Polar Air intelligent FCUs control logic includes auto dynamic-balancing function to compensate for the pressure differential by measuring the delta (Δ) at the inlet and outlet water temperature points. The water flow is controlled with temperature difference ΔT between the water inlet and outlet to ensure correct heat transfer from water to air. Keeping water temperature ΔT constant keeps the unit running efficiently and reduces the overall installation system's operating costs.

The autodynamic balancing function uses an inlet-outlet coil sensor that allows the unit to maintain a constant water temperature delta T and manage the water demand. The algorithms of the unit controller modify the fan motor speed and the opening of the valves accordingly. Therefore, the fan coil will adjust its operation most efficiently to reach comfort space requirements. This allows the optimization of the 2-way valve modulation and increases the energy efficiency of the variable flow system while eliminating the need to add expensive DPCVs.

WALL
MOUNTED

SWC-EC
[EC MOTOR]

HIGHWALL
FAN COILS

HIGHWALL
Intelligent Fan Coils

SWC-EC

PRODUCT PRESENTATION

Polar Air Intelligent Fan Coils Highwall units are the solution in applications with requirements for high wall-mount installation, designed to meet and exceed demanding requirements for efficiency, quiet operation and aesthetics. The unit design offers optimum comfort using intelligent microprocessors that ensure efficient environmental control, with elegant style casings that easily integrate with interior design themes. With a wide range of product sizes, simplicity of installation, stylish design and ease of maintenance, the SWC Highwall fan coils are a perfect solution for cooling and heating comfort of residential and commercial applications.

PRODUCT RANGE

The Intelligent Fan Coils Highwall units offer an EC motor 230V/50Hz range with the following capacities at H speed:

2 Pipe

- 1 - 5.93 kW
- 1.2 - 5.93 kW
- 370 - 1240 m³/h

COOLING HEATING AIR FLOW

PRODUCT FEATURES

Casing. Elegant, stylish and modern design, housed in one of two casing sizes, to allow consistency and uniformity on projects where multiple units are required 5 sizes: 876 x 228 x 300 mm | 3 sizes: 1063 x 240 x 310 mm.

Built of durable flame-resistant acrylonitrile-butadiene-styrene (ABS) plastic, in silver-white colour and rounded corners to provide modern aesthetics.

Integrated Valves and Hoses. 2-way modulating, or 2/3-way thermoelectric valves are integrated, as well as synthetic elastomer tubes with stainless steel outer braiding and brass connectors, to enable quick and low-cost connections with no brazing.

Water Coils. With a large heat transfer surface and the latest fin profile development, the water coil combines advanced technology with the security of traditional tube thickness designs.

The coils are built with seamless copper tubes and headers, with the tubes mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond We test the coils at 35 bar, and the maximum operating limit we recommend is at 20 bar. It includes manual air vent and water purge valves (excluding flexible hoses).

EC Motor and Fan Blower. Specially designed and tested EC motors, that allow the tangential blower wheel to provide optimum airflow performance, energy efficiency and quiet operation.

EC motors include driven control PCB, constant torque, permanent magnet, with 3 speeds pre-set to allow precise air balancing.

Flexibility. The control system allows configuration for the setting of 2 or 4-pipe settings. It also permits the configuration of EC motor speeds through the control wall pad interface, to add performance and noise level optimization.

OPTIONAL ACCESSORIES*

IR Handset + Wall Holder

Thermostat Controller

Wall Pad Controller

Electric heater
0.75 - 1.5 kW

Valve
2 or 3 way 1/2" on/off or 2-way 1/2" modulating

(*): Please refer to page 146 for further information on accessories

TECHNICAL SPECIFICATIONS

Hydronic Highwall, 2 pipe with **EC Motor**

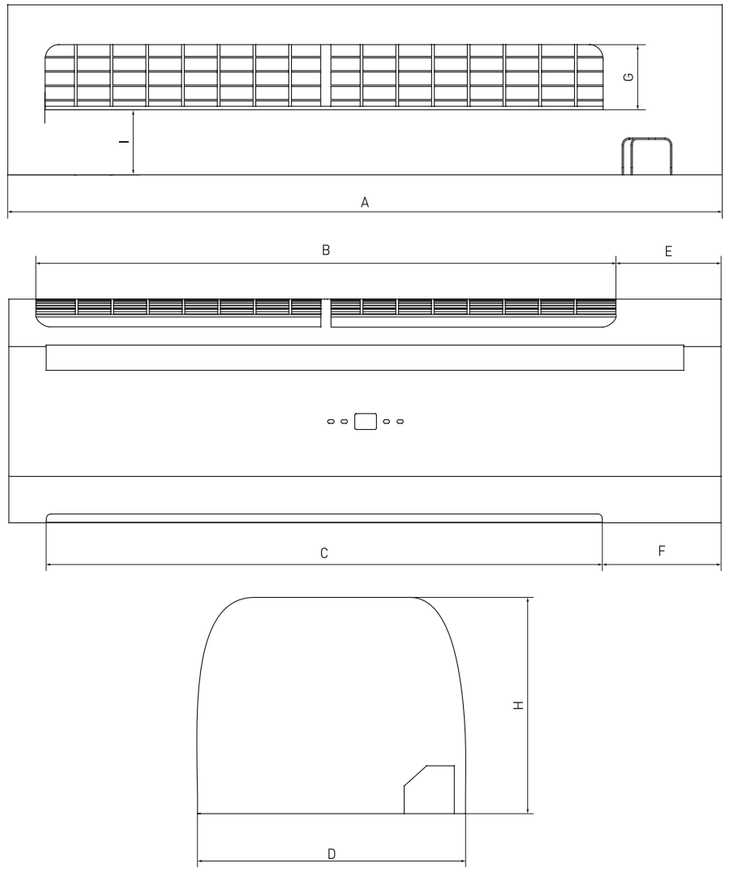
	SWC-[SIZE]-V-EC			04	06C	12B	15B	18	20	24B	30
UNIT GENERAL SPECS	Configuration			2 PIPE							
	Number of Fan Blowers			1							
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60							
AIR	Air Flow (E)	H	m³/h	370	500	500	645	788	980	1080	1240
		M		290	370	370	500	740	760	980	1080
		L		220	290	290	370	570	600	600	760
COOLING	Cooling Capacity (E)	H	kW	1	1.82	2.10	3.01	3.71	4.81	5.33	5.93
		M		0.84	1.43	1.62	2.47	3.26	3.90	4.78	5.12
		L		0.68	1.21	1.42	1.86	2.66	3.35	3.33	3.88
	Sensible Cooling Capacity (E)	H		0.85	1.53	1.81	2.22	2.74	3.46	3.88	4.34
		M		0.71	1.2	1.34	1.81	2.40	2.80	3.46	3.73
		L		0.57	1	1.15	1.35	1.94	2.38	2.38	2.80
HEATING	Heating Capacity (E)	H	kW	1.20	2.23	2.65	3.25	4.06	5.21	5.34	5.93
		M		1	1.76	2.07	2.65	3.86	4.23	4.95	5.34
		L		0.82	1.38	1.69	2.07	3.12	3.48	3.48	4.23
	Max. Electric Heater			1				1.2	1.5		
SOUND	Sound Pressure (Out)		db(A)	34/29/24	39/31/26	40/33/28	45/34/31	49/44/37	47/39/36	47/44/37	50/47/40
	Sound Power (Out)			42/38/33	45/35/33	49/42/37	54/43/40	58/53/46	56/48/45	56/53/46	58/56/49
ELECTRICAL (Fan Motor)	Power Input (E) 1	H	W	13	18	13	22	30	30	40	50
		M		10	13	10	15	20	20	30	40
		L		5	10	8	10	13	15	19	25
	Running Current	H	A	0.11	0.16	0.11	0.19	0.26	0.26	0.35	0.43
HYDRONIC	Cooling Water Flow Rate	H	L/h	171	313	361	517	638	827	917	1020
		M		143	246	279	423	559	671	822	881
		L		116	208	244	319	456	576	573	667
	Cooling Pressure Drop	H	kPa	22.8	28.8	27.5	38.5	50	59.5	52.5	63.3
		M		16.8	18.7	16.6	27.5	40	42.7	43.5	49.3
		L		11.8	11.8	13.2	15.6	28	32.2	23.5	30.5
	Heating Water Flow Rate	H	L/h	206	384	456	559	698	896	916	1012
		M		172	301	356	456	664	728	848	916
		L		141	237	291	356	537	599	599	728
	Heating Pressure Drop	H	kPa	18.4	29.4	29	38.9	51.5	58.4	26.7	32
		M		13.6	18.9	17.8	27.6	46.4	41.9	23.3	26.7
		L		9.4	11.7	12.8	16.5	32.1	31.6	22.6	31.3
	Water Content		L	0.05	0.08	0.12	0.12	0.19	0.25		

TESTING CONDITIONS

Cooling mode: *Return air temperature: 27°C DB / 19°C WB* *Inlet / outlet water temperature: 7°C / 12°C*
Heating mode: *Return air temperature: 20°C* *Inlet / outlet water temperature: 45°C / 40°C*

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Please visit www.eurovent-certification.com for more information.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS



Model	Unit Dimensions (mm)								
	A	B	C	D	E	F	G	H	I
SWC 04	875	665	710	300	170	125	105	220	105
SWC 06C	875	665	710	300	170	125	105	220	105
SWC 12B	875	665	710	300	170	125	105	220	105
SWC 15B	875	665	710	300	170	125	105	220	105
SWC 18	875	665	710	300	170	125	105	220	105
SWC 20	1050	855	820	310	155	175	90	235	90
SWC 24B	1050	855	820	310	155	175	90	235	90
SWC 30	1050	855	820	310	155	175	90	235	90

SWC				04	06C	12B	15B	18	20	24B	30
CONNECTIONS	Water	Type		Socket (Threaded Female)							
		In / Out	mm (in)	12.7 (1/2")							
	Condensate Drainage		mm (in)	16 (5/8")							
WEIGHT	Net	kg		11	12	13		14	16		

4 WAY CASSETTE	PCGH-3R-AC [AC MOTOR] PCGH-3R-EC [EC MOTOR]
1 WAY SLIM CASSETTE	PCSL-EC [EC MOTOR]
COANDA EFFECT CASSETTE	CHV2 [AC MOTOR] CHV2-EC [EC MOTOR]

CASSETTE **FAN COILS**

Cooke Industries - Phone: +64 9 579 2185 Email: sales@cookeindustries.co.nz Web: www.cookeindustries.co.nz

CASSETTE
Intelligent Fan Coils

PCGH-3R-EC
PCGH-3R-AC

PRODUCT PRESENTATION

The Intelligent 4 way Cassette units have been designed to maximize product flexibility on site and in stock offering easy to remove front panels, filters and integrated drain pumps. The cassettes also feature plug and play one 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.

PRODUCT RANGE

The Intelligent 4 way Cassette units offer the following EC and AC motor 230V/50Hz range with the following capacities at H speed:

	EC Motor	AC Motor		EC Motor	AC Motor
2 Pipe	3.61 - 11.82 kW	3.61 - 14.78 kW	4 Pipe	2.85 - 8.93 kW	2.85 - 11.10 kW
	3.47 - 11.77 kW	3.47 - 14.84 kW		2.97 - 9.43 kW	2.97 - 11.95 kW
	575 - 2210 m³/h	575 - 2750 m³/h		575 - 2210 m³/h	575 - 2750 m³/h

COOLING HEATING AIR FLOW

PRODUCT FEATURES

Casing. Cases made from galvanized sheet steel with integral fan mounting rails for added strength, with internally fitted fire-resistant insulation, to provide both thermal and acoustic insulation. Features high impact polystyrene RAL 9010 fascia.

Water Coils. Built with seamless copper tubes and headers, with the tubes mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. We test the coils at 35 bar, and the maximum operating limit we recommend is at 20 bar. It includes manual air vent and water purge valve.

Fan. Backward-curved centrifugal fan, statically and dynamically balanced for quiet operation. Fire-retardant plastic fan impellers for lightweight and corrosion-resistant operation.

Motors. EC motors with included driven controls PCB, constant torque, permanent magnet, with 3 speeds preset to allow precise air balancing.

AC motors are PSC, permanently lubricated type with internal thermal overload protection. The motors are 5-speed standard with 3 speeds preset to allow precise air balancing.

OPTIONAL ACCESSORIES*

Thermostat Controller

Wall Pad Controller

IR Handset + Wall Holder

Electric heater
1 - 4 kW

MERV8 | G4 HAF 3M Filter

Plastic fresh air flange

Plastic branch duct flange

Valve kit
2 or 3-way 3/4" on/off or modulating

(*): Please refer to page 146 for further information on accessories

TECHNICAL SPECIFICATIONS

Hydronic 4 way cassette, 2 pipe with **EC Motor**

UNIT GENERAL SPECS	PCG(H)-3R-[SIZE]-V-EC			04	08	12	20
	Configuration			2 PIPE			
	Number of Fan Blowers			1			
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60			
AIR	Air Flow (E)	H	m³/h	575	810	1300	2210
		M		380	722	1050	1970
		L		200	200	360	820
COOLING	Cooling Capacity (E)	H	kW	3.61	4.91	7.22	11.82
		M		2.64	4.56	6.21	10.95
		L		1.61	1.65	2.65	5.54
	Sensible Cooling Capacity (E)	H		2.53	3.45	5.13	8.44
		M		1.81	3.20	4.38	7.76
		L		1.08	1.13	1.82	3.79
HEATING	Heating Capacity (E)	H	kW	3.47	4.74	7.06	11.77
		M		2.56	4.36	6.03	10.85
		L		1.53	1.59	2.63	5.55
	Max. Electric Heater			1	2	3	4
SOUND	Sound Pressure (Out)		db(A)	43/39/27	50/40/26	56/53/32	58/53/57
	Sound Power (Out)			52/48/36	59/49/35	65/62/41	67/62/46
ELECTRICAL (Fan Motor)	Power Input (Cooling) (E) 1	H	W	21	47	82	224
		M		14.8	18	67	132
		L		11	11	16	27
	Power Input (Heating) (E) 1	H		16	42	77	219
		M		9.8	13	62	127
		L		6	6	11	22
	Running Current	H	A	0.18	0.41	0.71	1.95
HYDRONIC	Cooling Water Flow Rate	H	L/h	619	841	1238	2027
		M		452	782	1065	1877
		L		276	284	453	950
	Cooling Pressure Drop	H	kPa	37.89	42.05	51.17	42.19
		M		21.54	36.88	39.01	36.73
		L		8.85	5.94	8.39	10.79
	Heating Water Flow Rate	H	L/h	596	813	1210	2018
		M		438	747	1033	1860
		L		262	273	452	951
	Heating Pressure Drop	H	kPa	29.08	32.69	40.57	34.81
		M		16.74	28.05	30.5	30.05
		L		6.64	4.58	6.88	8.98
	Water Content		L	1.25	1.56	1.78	2.41

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45°C / 40°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Please visit www.eurovent-certification.com for more information.

TECHNICAL SPECIFICATIONS

Hydronic 4 way cassette, (Auxiliary Heating coil), 4 pipe with **EC Motor**

UNIT GENERAL SPECS	PCG(H)-3R-[SIZE]-P-EC			04	08	12	20
	Configuration			4 PIPE			
	Number of Fan Blowers			1			
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60			
AIR	Air Flow (E)	H	m³/h	575	810	1300	2210
		M		380	722	1050	1970
		L		200	200	360	820
COOLING	Cooling Capacity (E)	H	kW	2.85	3.82	5.51	8.93
		M		2.08	3.55	4.74	8.27
		L		1.27	1.29	2.02	4.19
	Sensible Cooling Capacity (E)	H		2.03	2.74	4.01	6.50
		M		1.45	2.54	3.42	5.98
		L		0.87	0.90	1.42	2.93
HEATING	Heating Capacity (E)	H	kW	2.97	4	5.79	9.43
		M		2.18	3.68	4.94	8.69
		L		1.31	1.34	2.16	4.44
SOUND	Sound Pressure (Out)		db(A)	43/39/27	50/40/26	56/53/32	58/53/57
	Sound Power (Out)			52/48/36	59/49/35	65/62/41	67/62/46
ELECTRICAL (Fan Motor)	Power Input (Cooling) (E) 1	H	W	21	47	82	224
		M		14.8	18	67	132
		L		11	11	16	27
	Power Input (Heating) (E) 1	H		16	42	77	219
		M		9.80	13	62	127
		L		6	6	11	22
	Running Current	H	A	0.18	0.41	0.71	1.95
HYDRONIC	Cooling Water Flow Rate	H	L/h	488	655	945	1531
		M		357	609	813	1417
		L		218	221	346	718
	Cooling Pressure Drop	H	kPa	36.72	33.42	35.06	31.83
		M		20.88	29.30	26.73	27.71
		L		8.57	4.72	5.75	8.14
	Heating Water Flow Rate	H	L/h	254	343	496	809
		M		187	315	423	745
		L		112	115	185	381
	Heating Pressure Drop	H	kPa	13.09	26.95	53.29	59.70
		M		7.54	23.12	40.07	51.53
		L		2.99	3.77	9.04	15.40
	Chilled Water Content		L	0.83	1.04	1.19	1.61
	Hot Water Content			0.42	0.52	0.59	0.80

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65°C / 55°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
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TECHNICAL SPECIFICATIONS

Hydronic 4 way cassette, 2 pipe with **AC Motor**

UNIT GENERAL SPECS	PCG(H)-3R-[SIZE]-V			04	08	12	20	24
	Configuration			2 PIPE				
	Number of Fan Blowers			1				
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60				
AIR	Air Flow (E)	H: 5th (E)	m³/h	575	810	1300	2250	2750
		M: 4th (E)		380	722	1050	2130	2540
		3rd		290	617	960	1970	2000
		2nd		240	522	820	1640	1850
		L: 1st (E)		190	450	700	1380	1530
COOLING	Cooling Capacity (E)	H: 5th (E)	kW	3.61	4.91	7.22	12	14.78
		M: 4th (E)		2.64	4.56	6.21	11.56	14.12
		3rd		2.16	4.20	6.07	11.60	12.40
		2nd		1.84	3.65	5.34	9.98	11.40
		L: 1st (E)		1.54	3.15	4.50	8.29	9.60
	Sensible Cooling Capacity (E)	H: 5th (E)		2.53	3.45	5.13	8.57	10.51
		M: 4th (E)		1.81	3.20	4.38	8.24	10.01
		3rd		1.40	2.75	4.01	7.69	8.22
		2nd		1.19	2.39	3.52	6.62	7.54
		L: 1st (E)		1.04	2.16	3.12	5.79	6.67
HEATING	Heating Capacity (E)	H: 5th (E)	kW	3.47	4.74	7.06	11.94	14.84
		M: 4th (E)		2.56	4.36	6.03	11.44	13.90
		3rd		1.96	3.85	5.62	10.80	11.50
		2nd		1.66	3.34	4.93	9.32	10.90
		L: 1st (E)		1.46	3.05	4.43	8.25	9.53
	Max. Electric Heater			1	2	3	4	
SOUND	Sound Pressure (Out)		db(A)	43/39/36 /33/27	49/47/43 /38/28	58/54/51 /45/42	61/58/56 /48/47	64/61/57 /53/48
	Sound Power (Out)			52/48/45 /42/36	58/56/52 /47/37	67/63/60 /54/51	70/67/65 /58/56	73/70/66 /62/57
ELECTRICAL (Fan Motor)	Power Input (E) 1	H: 5th (E)	W	63	78	138	311	372
		M: 4th (E)		51	67	113	273	330
		3rd		35	54	105	260	270
		2nd		29	48	83	173	230
		L: 1st (E)		23	30	52	135	180
	Running Current	H	A	0.22	0.34	0.60	1.35	1.62
	Starting Current			0.65	1.02	1.80	4.06	4.85
HYDRONIC	Cooling Water Flow Rate	H: 5th (E)	L/h	619	841	1238	2057	2533
		M: 4th (E)		452	782	1065	1982	2421
		3rd		371	720	1042	2113	2134
		2nd		316	627	918	1983	1959
		L: 1st (E)		264	540	772	1421	1646
	Cooling Pressure Drop	H: 5th (E)	kPa	37.89	42.05	51.17	43.32	48.05
		M: 4th (E)		21.54	36.88	39.01	40.51	44.28
		3rd		15.5	31.5	37	40	35
		2nd		11.8	24.8	29.9	31	30.2
		L: 1st (E)		8.16	14.81	21.86	22.27	22.11
	Heating Water Flow Rate	H: 5th (E)	L/h	596	813	1210	2047	2545
		M: 4th (E)		438	747	1033	1960	2384
		3rd		338	663	968	1867	1987
		2nd		287	575	850	1606	1871
		L: 1st (E)		251	524	759	1415	1634
	Heating Pressure Drop	H: 5th (E)	kPa	29.08	32.69	40.57	35.71	40.10
		M: 4th (E)		6.74	28.05	30.50	33.04	35.64
		3rd		10.70	22.60	27	30	25.7
		2nd		8.08	17.60	21.60	23	23.10
		L: 1st (E)		6.13	14.81	17.51	8.36	18.07
	Water Content		L	1.25	1.56	1.78	2.41	3

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45°C / 40°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
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TECHNICAL SPECIFICATIONS

Hydronic 4 way cassette, (Auxiliary Heating coil), 4 pipe with **AC Motor**

UNIT GENERAL SPECS	PCG(H)-3R-[SIZE]-P			04	08	12	20	24
	Configuration			4 PIPE				
	Number of Fan Blowers			1				
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60				
AIR	Air Flow (E)	H: 5th (E)	m³/h	575	810	1300	2250	2750
		M: 4th (E)		380	722	1050	2130	2540
		3rd		290	617	960	1970	2000
		2nd		240	522	820	1640	1850
		L: 1st (E)		190	450	700	1380	1530
COOLING	Cooling Capacity (E)	H: 5th (E)	kW	2.85	3.82	5.51	9.06	11.10
		M: 4th (E)		2.08	3.55	4.74	8.73	10.70
		3rd		1.76	3.31	4.68	8.78	9.53
		2nd		1.51	2.90	4.15	7.64	8.75
		L: 1st (E)		1.21	2.45	3.44	6.26	7.24
	Sensible Cooling Capacity (E)	H: 5th (E)		2.03	2.74	4.01	6.61	8.12
		M: 4th (E)		1.45	2.54	3.42	6.35	7.73
		3rd		1.16	2.20	3.14	5.94	6.42
		2nd		0.99	1.92	2.78	5.16	5.88
		L: 1st (E)		0.83	1.72	2.43	4.47	5.15
HEATING	Heating Capacity (E)	H: 5th (E)	kW	2.97	4	5.79	9.57	11.95
		M: 4th (E)		2.18	3.68	4.94	9.16	11.19
		3rd		1.38	2.54	3.58	6.70	7.29
		2nd		1.19	2.25	3.20	5.87	6.94
		L: 1st (E)		1.25	2.58	3.63	6.61	7.68
SOUND	Sound Pressure (Out)		db(A)	43/39/ 36/33 /26	49/47/43/38/28	58/54/51/45/42	61/58/56/48/47	64/61/57/53/48
	Sound Power (Out)			52/48/ 45/42 /35	58/56/52/47/37	67/63/60/54/51	70/67/65/58/56	73/70/66/62/57
ELECTRICAL (Fan Motor)	Power Input (E) 1	H: 5th (E)	W	63	78	138	311	372
		M: 4th (E)		51	67	113	273	330
		3rd		35	54	105	260	270
		2nd		29	48	83	173	230
		L: 1st (E)		23	30	52	135	180
	Running Current	H	A	0.22	0.34	0.6	1.35	1.62
	Starting Current			0.65	1.02	1.8	4.06	4.85
HYDRONIC	Cooling Water Flow Rate	H: 5th (E)	L/h	488	655	945	1553	1910
		M: 4th (E)		357	609	813	1496	1825
		3rd		302	567	803	1508	1636
		2nd		259	497	712	1312	1503
		L: 1st (E)		208	420	589	1073	1241
	Cooling Pressure Drop	H: 5th (E)	kPa	36.72	33.40	35.10	32.70	32.30
		M: 4th (E)		20.88	29.30	26.70	30.60	29.80
		3rd		15.70	25.50	25.80	30.40	24.20
		2nd		12.10	20.40	21.10	23.90	20.90
		L: 1st (E)		7.91	15.10	15	16.80	14.90
	Heating Water Flow Rate	H: 5th (E)	L/h	254	343	496	820	1024
		M: 4th (E)		187	315	423	786	960
		3rd		118	219	308	577	628
		2nd		103	193	275	505	597
		L: 1st (E)		107	21	311	567	658
	Heating Pressure Drop	H: 5th (E)	kPa	13.09	26.95	53.29	61.24	51.74
		M: 4th (E)		7.54	23.12	40.07	56.67	46
		3rd		3.70	12.90	24	33.80	22.60
		2nd		2.90	10.40	19.80	26.80	20.70
		L: 1st (E)		2.76	12.21	23	31.50	23.32
	Chilled Water Content		L	0.83	1.04	1.19	1.61	2
	Hot Water Content			0.42	0.52	0.59	0.80	1

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65°C / 55°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
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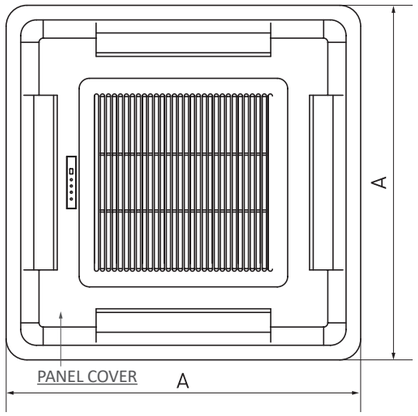
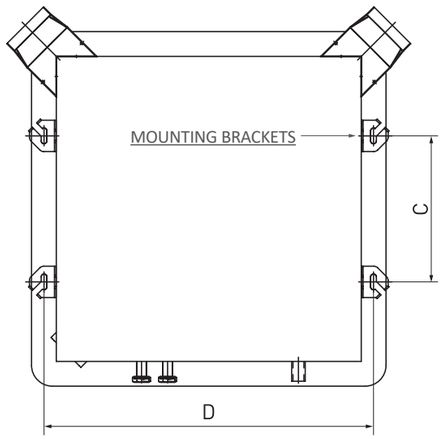
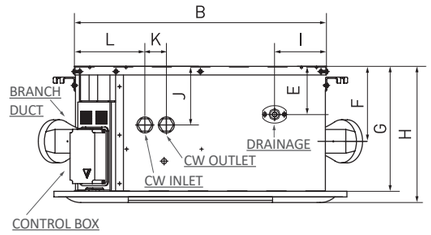
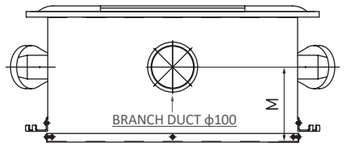
DIMENSIONAL DRAWINGS, DATA & WEIGHTS



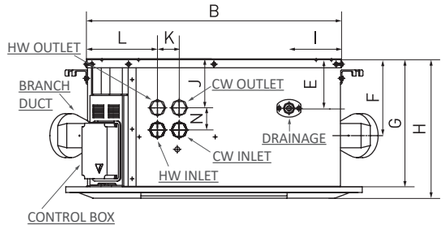


2 PIPE





4 PIPE



Model	Unit Dimensions (mm)													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N (1)
PCG-3R-04	680	582	280	627	62	124	255	283	118	110	50	162	124	50
PCG-3R-08	680	582	280	627	112	174	290	318	118	136	50	162	174	50
PCH-3R-12	830	730	344	775	84	149	260	288	125	163	50	162	132	50
PCH-3R-20	980	830	487	875	106	177	290	318	118	146	50	155	146	50
PCH-3R-24	1140	960	617	1005	106	177	290	318	118	146	50	155	146	50

PCGH-3R				04	08	12	20	24
CONNECTIONS	Water	Type		Socket (Threaded Female)				
		In / Out	mm (in)	19.05 (3/4")				
	Condensate Drainage		mm (in)	25.4 (1")				
WEIGHT	Net	kg		28	30	36	50	54

(1): Value only valid for 4-pipe units.

CASSETTE
Intelligent Fan Coils

PCSL-EC

PRODUCT PRESENTATION

The Polar Air One Way Slim Cassette Intelligent Fan Coil has an innovative design, high control flexibility, and easy maintenance. It uses tangential fans and is equipped with condensate water pump and energy efficient EC motors. With a sophisticated temperature regulator, this product guarantees thermal comfort in every season. It heats and cools extremely quickly, and once the desired temperature is reached it maintains it silently.

PRODUCT RANGE

The Intelligent One Way Slim Cassette units offer an EC motor 230V/50Hz range with the following capacities at H speed:

2 Pipe

- 2.56 - 3.19 kW
- 2.60 - 3.21 kW
- 450 - 600 m³/h

COOLING HEATING AIR FLOW

PRODUCT FEATURES

Casing. Cases made from galvanized sheet steel with integral fan mounting rails for added strength, with internally fitted fire-resistant insulation, to provide both thermal and acoustic insulation. Cases made from galvanized sheet steel with integral fan mounting rails for added strength, with internally fitted fire-resistant insulation, to provide both thermal and acoustic insulation. The special height of 152mm is meant for reduced space installations in hotels, apartments, offices, etc.

Water Coils. Built with seamless copper tubes and headers, with the tubes mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond.

We test the coils at 35 bar, and the maximum operating limit we recommend is at 20 bar. It includes manual air vent and water purge valve.

Fan. Backward-curved centrifugal fan, statically and dynamically balanced for quiet operation. Fire-retardant plastic fan impellers for lightweight and corrosion-resistant operation.

Filtration. Easy to remove and washable filters made of self-extinguishing acrylic with an efficiency of class G2 (EU2).

Motors. EC motors include driven control PCB, constant torque, permanent magnet, with 3 speeds pre-set to allow precise air balancing.

OPTIONAL ACCESSORIES*

IR Handset +
Wall Holder

Thermostat Controller

Wall Pad Controller

Electric heater
0.5 - 1 kW

Valve kits
2 or 3 way 1/2" on/off or modulating

(*): Please refer to page 146 for further information on accessories

TECHNICAL SPECIFICATIONS

Hydronic One Way Slim cassette, 2 pipe with **EC Motor**

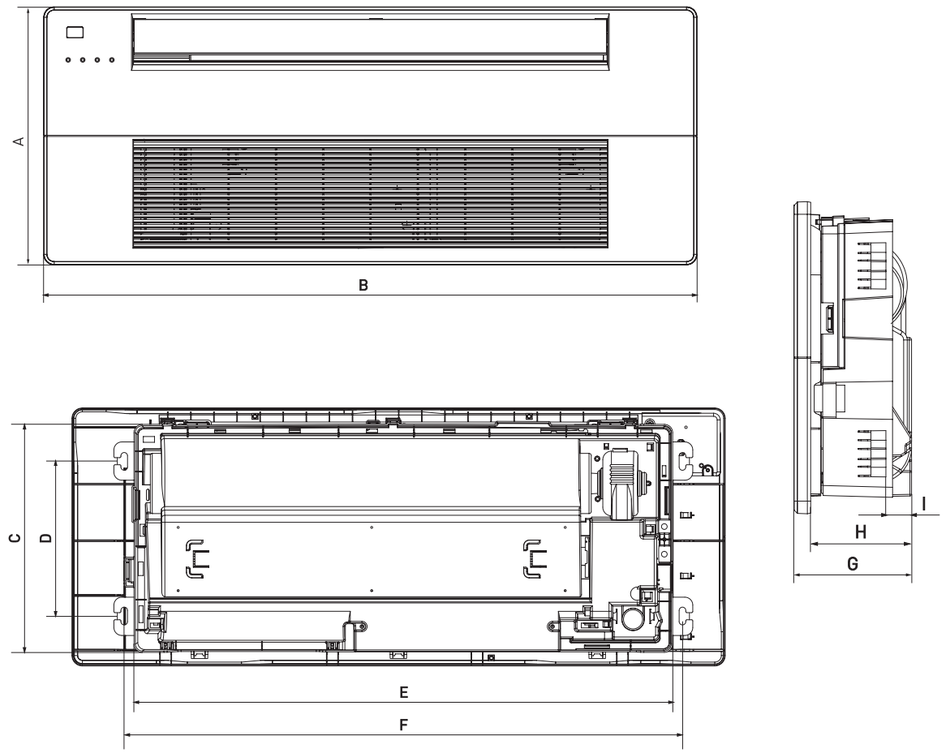
	PCSL-[SIZE]-V-EC			01	02
UNIT GENERAL SPECS	Configuration			2 PIPE	
	Number of Fan Blowers			1	
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60	
AIR	Air Flow (E)	H	m³/h	450	600
		M		350	450
		L		150	250
COOLING	Cooling Capacity (E)	H	kW	2.56	3.19
		M		2.12	2.56
		L		1.05	1.62
	Sensible Cooling Capacity (E)	H		1.79	2.27
		M		1.47	1.79
		L		0.73	1.11
HEATING	Heating Capacity (E)	H	kW	2.60	3.21
		M		2.15	2.60
		L		1.08	1.65
	Max. Electric Heater			0.5	1.0
SOUND	Sound Pressure (Out)		db(A)	35/31/26	38/35/29
	Sound Power (Out)			50/45/35	50/47/38
ELECTRICAL (Fan Motor)	Power Input (Cooling) (E) 1	H	W	18	27
		M		13	18
		L		9	10
	Power Input (Heating) (E) 1	H		25	22
		M		15	13
		L		8	5
	Running Current	H	A	0.16	0.23
HYDRONIC	Cooling Water Flow Rate	H	L/h	439	547
		M		363	439
		L		180	278
	Cooling Pressure Drop	H	kPa	30.90	36.90
		M		22.40	25.40
		L		6.80	11.71
	Heating Water Flow Rate	H	L/h	445	551
		M		368	445
		L		185	283
	Heating Pressure Drop	H	kPa	28.50	31.27
		M		20.70	21.76
		L		6.40	10.10
	Water Content		L	0.64	0.64

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45°C / 40°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Please visit www.eurovent-certification.com for more information.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS



Model	Unit Dimensions (mm)								
	A	B	C	D	E	F	G	H	I
PCSL 01	467	1182	412	280	975	1010	176	151	38
PCSL 02	467	1182	412	280	975	1010	176	151	38

PCSL				01	02
CONNECTIONS	Water	Type		Internal Thread	
		In / Out	mm (in)	12.7 (1/2")	
	Condensate Drainage		mm (in)	25.4 (1")	
WEIGHT	Net	kg		13.5	

CASSETTE
Intelligent Fan Coils

CHV2-EC
CHV2-AC

PRODUCT PRESENTATION

The Intelligent Polar Air Coanda Cassette units generates airflow with Coanda effect due to its exclusive air diffuser design. This effect helps to create an excellent circulation of air inside the room. The air intake comes from the bottom, while the air distribution goes parallel to the ceiling or the wall, through its practical and functional outlet grills.
The Coanda Fan coil cassettes suit horizontal installation in a suspended ceiling or in a vertical wall.

PRODUCT RANGE

The Intelligent Coanda Cassette units offer the following EC and AC motor 230V/50Hz range with the following capacities at H speed:

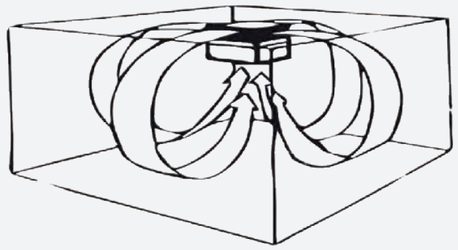
	EC Motor	AC Motor		EC Motor	AC Motor
2 Pipe	1.64 - 3.03 kW	1.54 - 3.26 kW	4 Pipe	1.64 - 3.23 kW	1.55 - 3.26 kW
	1.62 - 3.09 kW	1.57 - 3.23 kW		1.35 - 1.80 kW	1.31 - 2.61 kW
	287 - 524 m³/h	275 - 545 m³/h		287 - 524 m³/h	275 - 545 m³/h

COOLING HEATING AIR FLOW

PRODUCT FEATURES

Casing. Cases made from galvanized sheet steel with integral fan mounting rails for added strength, with internally fitted fire-resistant insulation, to provide both thermal and acoustic insulation.

Round diffuser. Designed to generate the "Coanda" effect, the diffuser direction can be manually adjusted to drive the airflow as per user requirements.



"Coanda effect" airflow in a room.

When the air is diffused in contact with a flat surface such as a dropped ceiling, it determines a depression between the flow and the surface, which causes the tendency of the fluid to adhere to the surface avoiding its immediate dropping below. This phenomenon, known as the Coanda effect, is of great interest for the correct diffusion of cold air.

Water Coils. Built with seamless copper tubes and headers, with the tubes mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. We test the coils at 35 bar, and the maximum operating limit we recommend is at 20 bar. It includes manual air vent and water purge valve.

Fan. Backward-curved centrifugal fan, statically and dynamically balanced for quiet operation. Fire-retardant plastic fan impellers for lightweight and corrosion-resistant operation.

Filtration. Easy to remove and washable filters made of self-extinguishing acrylic with an efficiency of class G2 (EU2).

Motors. EC motors include driven control PCB, constant torque, permanent magnet, with 3 speeds pre-set to allow precise air balancing.

AC motors are PSC, permanently lubricated type with internal thermal overload protection.

OPTIONAL ACCESSORIES*

Thermostat Controller

Wall Pad Controller

IR Handset + Wall Holder

G4 (MERV8) Filter 3M HAF

Plastic branch duct flange

Electric heater 0.75 - 1.5 kW

Valve kit 2 or 3-way 1/2" on/off or modulating

(*): Please refer to page 146 for further information on accessories

TECHNICAL SPECIFICATIONS

Hydronic Coanda Effect Cassette, 2 pipe with **EC Motor**

UNIT GENERAL SPECS	CHV2-[SIZE]-V-EC			01	02	03
	Configuration			2 PIPE		
	Number of Fan Blowers			1	2	
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60		
AIR	Air Flow (E)	H	m³/h	287	365	524
		M		220	288	373
		L		150	230	290
COOLING	Cooling Capacity (E)	H	kW	1.64	2.07	3.03
		M		1.26	1.73	2.36
		L		0.98	1.50	1.99
	Sensible Cooling Capacity (E)	H		1.17	1.46	2.13
		M		0.88	1.21	1.63
		L		0.67	1.04	1.36
HEATING	Heating Capacity (E)	H	kW	1.62	2.13	3.09
		M		1.33	1.80	2.41
		L		0.99	1.51	1.97
	Max. Electric Heater			0.75	1	1.5
SOUND	Sound Pressure (Out)		db(A)	40/34/30	36/33/27	44/35/28
	Sound Power (Out)			52/46/41	47/42/37	54/46/38
ELECTRICAL (Fan Motor)	Power Input (Cooling) (E) 1	H	W	25	20	28
		M		14	12	15
		L		9.5	10	10
	Power Input (Heating) (E) 1	H		25	20	28
		M		14	12	15
		L		9.5	10	10
	Running Current	H	A	0.22	0.17	0.24
HYDRONIC	Cooling Water Flow Rate	H	L/h	281	355	520
		M		217	296	404
		L		167	257	341
	Cooling Pressure Drop	H	kPa	12.71	10.75	22.40
		M		9.78	8.99	17.40
		L		7.56	7.81	14.70
	Heating Water Flow Rate	H	L/h	277	366	530
		M		228	309	413
		L		169	259	338
	Heating Pressure Drop	H	kPa	10.01	7.87	18.30
		M		8.24	6.64	14.30
		L		6.12	5.56	11.70
	Water Content		L	0.22	0.35	0.49

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45°C / 40°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Please visit www.eurovent-certification.com for more information.

TECHNICAL SPECIFICATIONS

Hydronic Coanda Effect Cassette, (Auxiliary Heating coil), 4 pipe with **EC Motor**

UNIT GENERAL SPECS	CHV2-[SIZE]-P-EC			01	02	03B
	Configuration			4 PIPE		
	Number of Fan Blowers			1	2	
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60		
AIR	Air Flow (E)	H	m³/h	287	365	524
		M		220	288	373
		L		150	230	290
COOLING	Cooling Capacity (E)	H	kW	1.64	2.07	3.23
		M		1.26	1.73	2.52
		L		0.98	1.50	2.12
	Sensible Cooling Capacity (E)	H		1.17	1.46	2.07
		M		0.88	1.21	1.58
		L		0.67	1.04	1.32
HEATING	Heating Capacity (E)	H	kW	1.35	1.88	1.80
		M		1.11	1.58	1.40
		L		0.83	1.34	1.15
SOUND	Sound Pressure (Out)		db(A)	40/34/30	36/33/27	44/35/28
	Sound Power (Out)			52/46/41	47/42/37	54/46/38
ELECTRICAL (Fan Motor)	Power Input (Cooling) (E) 1	H	W	25	20	28
		M		14	12	15
		L		10	10	10
	Power Input (Heating) (E) 1	H		20	30	34
		M		9	14	14
		L		5	10	7
	Running Current	H	A	0.22	0.17	0.24
HYDRONIC	Cooling Water Flow Rate	H	L/h	59	74	108
		M		45	62	84
		L		35	53	71
	Cooling Pressure Drop	H	kPa	12.70	10.80	22.40
		M		8.10	7.90	14.60
		L		5.30	6.20	10.90
	Heating Water Flow Rate	H	L/h	115	161	217
		M		96	136	169
		L		71	115	138
	Heating Pressure Drop	H	kPa	5	12.50	19.70
		M		3.60	9.30	12.80
		L		2.20	7	9.20
	Chilled Water Content		L	0.22	0.35	0.49
	Hot Water Content			0.07	0.12	0.16

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65°C /55°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
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TECHNICAL SPECIFICATIONS

Hydronic Coanda Effect Cassette, 2 pipe with AC Motor

UNIT GENERAL SPECS	CHV2-[SIZE]-V			01B	02	03
	Configuration			2 PIPE		
	Number of Fan Blowers			1	2	
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60		
AIR	Air Flow (E)	H	m³/h	275	451	545
		M		219	346	413
		L		195	307	365
COOLING	Cooling Capacity (E)	H	kW	1.54	2.55	3.26
		M		1.29	2.06	2.60
		L		1.17	1.87	2.35
	Sensible Cooling Capacity (E)	H		1.10	1.82	2.29
		M		0.92	1.46	1.82
		L		0.83	1.32	1.64
HEATING	Heating Capacity (E)	H	kW	1.57	2.58	3.23
		M		1.30	2.07	2.56
		L		1.18	1.88	2.31
	Max. Electric Heater			0.75	1	1.5
SOUND	Sound Pressure (Out)		db(A)	42/36/33	45/36/33	42/36/32
	Sound Power (Out)			53/45/42	56/51/48	57/54/46
ELECTRICAL (Fan Motor)	Power Input (Cooling) (E) 1	H	W	36.8	56	62
		M		27.6	40	47
		L		24	35	41
	Power Input (Heating) (E) 1	H		32.2	51	57
		M		23	36	42
		L		18	31	36.1
	Running Current	H	A	0.16	0.22	0.22
	Starting Current			0.48	0.66	0.67
HYDRONIC	Cooling Water Flow Rate	H	L/h	267	432	555
		M		226	355	456
		L		204	325	413
	Cooling Pressure Drop	H	kPa	12.20	13.20	25.50
		M		9	9.20	17.40
		L		7.56	7.81	14.50
	Heating Water Flow Rate	H	L/h	269	431	545
		M		226	353	444
		L		208	324	405
	Heating Pressure Drop	H	kPa	10.40	11.20	21
		M		7.50	7.60	14.20
		L		6.40	6.40	11.70
	Water Content		L	0.22	0.35	0.49

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45°C / 40°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
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TECHNICAL SPECIFICATIONS

Hydronic Coanda Effect Cassette, (Auxiliary Heating coil), 4 pipe with AC Motor

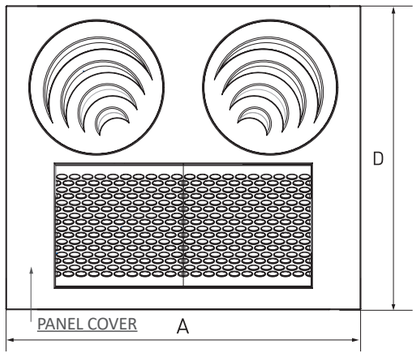
UNIT GENERAL SPECS	CHV2-[SIZE]-P			01B	02	03
	Configuration			4 PIPE		
	Number of Fan Blowers			1	2	
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60		
AIR	Air Flow (E)	H	m³/h	275	451	545
		M		219	346	413
		L		195	307	365
COOLING	Cooling Capacity (E)	H	kW	1.55	2.52	3.26
		M		1.32	2.07	2.60
		L		1.19	1.89	2.35
	Sensible Cooling Capacity (E)	H		1.10	1.80	2.29
		M		0.92	1.46	1.82
		L		0.83	1.33	1.64
HEATING	Heating Capacity (E)	H	kW	1.31	2.21	2.61
		M		1.10	1.81	2.12
		L		1.01	1.67	1.93
SOUND	Sound Pressure (Out)		db(A)	42/36/33	45/36/33	42/36/32
	Sound Power (Out)			53/45/42	56/51/48	57/54/46
ELECTRICAL (Fan Motor)	Power Input (Cooling) (E) 1	H	W	37	56	62
		M		28	40	47
		L		24	35	41
	Power Input (Heating) (E) 1	H		32	51	57
		M		23	36	42
		L		18	30	36
	Running Current	H	A	0.16	0.22	0.22
	Starting Current			0.48	0.66	0.67
HYDRONIC	Cooling Water Flow Rate	H	L/h	267	432	555
		M		226	355	456
		L		204	325	413
	Cooling Pressure Drop	H	kPa	11.60	15.10	25.50
		M		8.80	10.80	17.40
		L		7.40	9.30	14.50
	Heating Water Flow Rate	H	L/h	112	189	223
		M		95	155	181
		L		87	143	165
	Heating Pressure Drop	H	kPa	4.70	16.40	20.70
		M		3.60	11.70	14.50
		L		3.10	10.20	12.40
	Chilled Water Content		L	0.22	0.35	0.50
	Hot Water Content			0.07	0.12	0.16

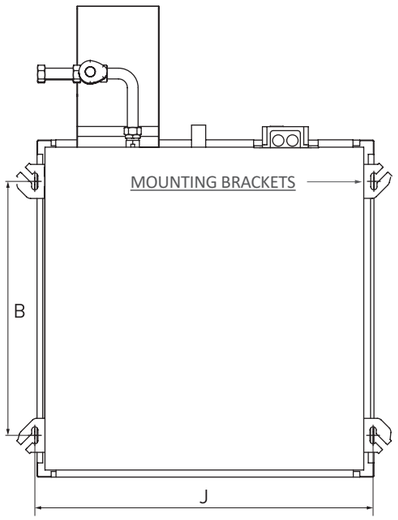
TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65°C / 55°C

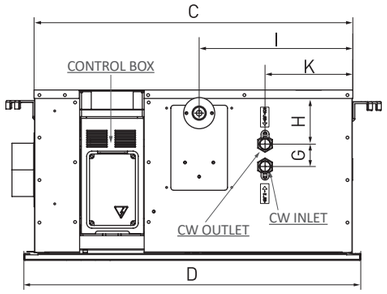
(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Please visit www.eurovent-certification.com for more information.

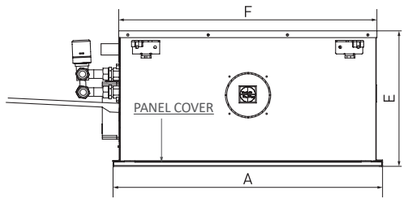
DIMENSIONAL DRAWINGS, DATA & WEIGHTS



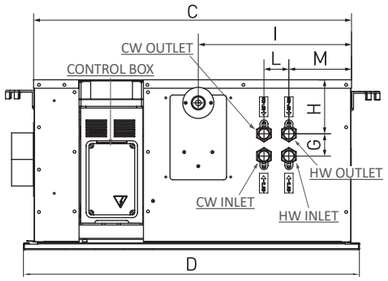


2 PIPE





4 PIPE



Model	Unit Dimensions (mm)												
	A	B	C	D	E	F	G	H	I	J	K	L (1)	M (1)
CHV2-01 / 01B	595	450	560	595	277	567	40	96	270	606	155	44	111
CHV2-02	895	750	560	595	277	867	40	96	270	606	155	44	111
CHV2-03 / 03B	1195	1050	560	595	277	1167	40	96	270	606	155	44	111

CHV2				01 / 01B	02	03 / 03B
CONNECTIONS	Water	Type		Socket (Threaded Female)		
		In / Out	mm (in)	12.7 (1/2")		
	Condensate Drainage		mm (in)	25.4 (1")		
WEIGHT	Net	kg		21	31	37

(1): Value only valid for 4-pipe units.

LOW ESP DUCTED	PDWA [AC MOTOR] PDWA-EC [EC MOTOR]
LOW ESP DUCTED	PDL-EC [EC MOTOR]
LOW ESP SLIM DUCTED	PDWSL-EC [EC MOTOR]

LOW STATIC DUCTED **FAN COILS**

LOW STATIC DUCTED
Intelligent Fan Coils

PDWA-EC
PDWA-AC

PRODUCT PRESENTATION

The Polar Air Intelligent Low Static Ducted units have been specifically designed to satisfy high cooling capacity at low external static pressure 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 Intelligent Low Static Ducted units offer the following EC and AC motor 230V/50Hz range with the following capacities at H speed:

	EC Motor	AC Motor		EC Motor	AC Motor
2 Pipe	1.85 - 15.54 kW	1.92 - 15.54 kW	4 Pipe	1.85 - 14.85 kW	1.74 - 14.97 kW
	2.43 - 15.30 kW	2.43 - 15.30 kW		2.41 - 17.34 kW	2.16 - 18.48 kW
	325 - 3198 m³/h	372 - 3198 m³/h		325 - 3027 m³/h	372 - 3046 m³/h

COOLING HEATING AIR FLOW

PRODUCT FEATURES

Structure. Made from heavy-gauge galvanized steel panels with couplings for the connection of ducting and gravity drain pan with insulation for condensation. Insulation fitted on the top coil. Low height dimensions for perfect low height ceiling concealed installations. Optional fire-resistant internal NBR insulation to provide both thermal and acoustic insulation.

Water Coils. Built with seamless copper tubes and headers, with the tubes mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. We test the coils at 35 bar, and the maximum operating limit we recommend is at 20 bar. It includes manual air vent and water purge valve.

Fan Blowers. Heavy-gauge galvanized steel with die-formed inlet cones housings, inlet forward curved centrifugal type, statically and dynamically balanced for smooth and quiet operation.

Filtration. Easily removable and washable filters made from self-extinguishing acrylic with EU2 (G2) (Merv 2-4) efficiency class. G4 (Merv 8) efficiency filters are optional.

Condensate Pans. Steel drain pans positively sloped, coated with self-extinguishing closed cell expanded polyethylene with thermal properties. The drain pan outlet is 3/4" (standard on the same side of coil connections).

Performance. Built with optimized water circuit designs and tested in accredited thermal test rooms to guarantee dependable performance and low water pressure drops. These series can supply more airflow at higher External Static Pressure (ESP), with airflow ranges varying from 429 to 3019 m3/h at medium speed at 50Pa ESP.

Motors. EC motors include driven control PCB, constant torque, permanent magnet, with 3 speeds pre-set to allow precise air balancing.

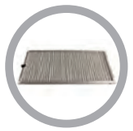
AC motors are PSC, permanently lubricated type with internal thermal overload protection.

Flexibility. This Low Static Ducted range is available with left or right-hand water connections or easily exchanged on site.

OPTIONAL ACCESSORIES*

Thermostat Controller

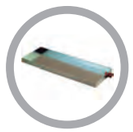
Wall Pad Controller



G4 (Merv 8) Filter

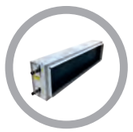
NBR Insulation
5, 10, 15 or 25mm

ABS LED RECEIVER



Stainless steel drain pan

Electric heater module
Contact or Solid State Relays (1 - 6 kW)



Auxiliary 4 Pipe Heating Coil

Valve kit
2 or 3-way 3/4" on/off or modulating

Condensate Pump

(*): Please refer to page 146 for further information on accessories

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 3 row, 2 pipe with **EC Motor**

UNIT GENERAL SPECS	PDWA-3R-[SIZE]-V-EC			200	300	400	500	600	800B	1000	1200	1400	1600
	Configuration			2 PIPE									
	Number of Fan Blowers			1		2			3		4	3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60									
AIR	Air Flow (E)	H	m³/h	512	625	905	960	1192	1611	1858	2132	2621	3316
		M		419	561	762	891	1013	1322	1569	1965	2379	2963
		L		287	411	465	546	827	744	1413	1767	2247	2912
	Available ESP Pressure	H	Pa	50									
		M											
		L											
COOLING	Cooling Capacity (E)	H	kW	3.04	3.63	4.84	5.33	6.27	9.53	9.78	11.15	13.84	15.88
		M		2.6	3.34	4.25	5.02	5.55	8.2	8.6	10.45	12.86	14.62
		L		1.94	2.62	2.91	3.45	4.72	5.21	5.92	8.35	11.57	13.22
	Sensible Cooling Capacity (E)	H		2.2	2.6	3.54	3.84	4.5	6.84	7.12	8.1	9.99	11.4
		M		1.86	2.38	3.08	3.6	3.93	5.83	6.2	7.57	9.25	10.44
		L		1.37	1.84	2.07	2.43	3.32	3.6	4.19	5.95	8.23	9.35
HEATING	Heating Capacity (E)	H	kW	2.64	3.23	4.43	4.86	5.95	8.14	9.15	10.37	12.73	15.7
		M		2.26	2.97	3.88	4.6	5.23	7	8.02	9.75	11.86	14.37
		L		1.68	2.35	2.65	3.13	4.45	4.46	5.52	7.78	10.64	13
	Max. Electric Heater			2	3	4	5		6				
SOUND	Pressure Level (E)	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
		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
	Power Level (E)	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
		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 Input(E) 1	H	W	53	63	95	120	137	150	180	224	363	380
		M		43	52	85	110	112	128	140	190	286	310
		L		26	36	35	50	89	84	85	113	170	190
	Running Current	H	A	0.46	0.55	0.72	0.83	0.89	1.3	1.78	1.95	3.16	3.3
HYDRONIC	Cooling Water Flow Rate	H	L/h	522	623	830	913	1075	1634	1677	1911	2373	2722
		M		446	572	728	861	951	1405	1475	1791	2205	2507
		L		333	449	500	591	809	893	1016	1431	1983	2266
	Cooling Pressure Drop	H	kPa	27.37	41.59	25.2	32.19	46.47	58.26	21.3	28.28	48.52	66.78
		M		20.64	35.69	19.9	28.94	37.25	44.42	16.91	25.16	42.51	57.57
		L		12.2	23.08	10.1	14.73	27.83	19.62	8.64	16.8	35.11	48
	Heating Water Flow Rate	H	L/h	453	554	760	833	1020	1395	1568	1778	2181	2692
		M		387	509	666	788	897	1201	1374	1672	2033	2463
		L		288	403	454	537	763	764	946	1333	1824	2229
	Heating Pressure Drop	H	kPa	17.74	28.25	17.86	22.96	35.65	37.08	15.83	20.94	35.41	55.76
		M		13.34	24.24	14.07	20.77	28.28	28.3	12.49	18.75	31.19	47.52
		L		7.85	15.91	7.06	10.4	21.17	12.54	6.37	12.47	25.66	39.7
	Water Content		L	0.72	0.87	1.02	1.17	1.32	1.92	2.07	2.22	2.59	2.84

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45°C / 40°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Please visit www.eurovent-certification.com for more information.

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 3 + 1 row (Auxiliary Heating coil), 4 pipe with **EC Motor**

UNIT GENERAL SPECS	PDWA-3+1R-[SIZE]-P-EC			200	300	400	500	600	800	1000	1200	1400	1600
	Configuration			4 PIPE									
	Number of Fan Blowers			1		2			3		4	3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60									
AIR	Air Flow (E)	H	m³/h	555	689	923	956	1173	1653	1768	1875	2849	3170
		M		449	588	797	847	1077	1392	1614	1699	2571	2992
		L		415	530	719	726	833	1289	810	1227	1931	2505
	Available ESP Pressure	H	Pa	58	54	59	55	62	56	52	55	60	57
		M		50	50	50	50	50	50	50	50	50	50
		L		35	35	30	32	39	31	35	38	43	39
COOLING	Cooling Capacity (E)	H	kW	3.22	3.89	4.93	5.33	6.18	9.71	9.36	10.06	14.73	15.42
		M		2.74	3.46	4.4	4.83	5.8	8.51	8.74	9.35	13.65	14.74
		L		2.01	2.62	3.02	3.27	4.06	6.09	5.1	7.29	10.95	12.86
	Sensible Cooling Capacity (E)	H		2.34	2.8	3.6	3.84	4.42	6.98	6.81	7.27	10.65	11.06
		M		1.97	2.47	3.2	3.45	4.12	6.08	6.31	6.7	9.84	10.53
		L		1.41	1.84	2.15	2.29	2.84	4.26	3.56	5.17	7.75	9.07
HEATING	Heating Capacity (E)	H	kW	1.31	1.63	2.12	2.26	2.62	3.82	4.07	4.33	5.88	6.56
		M		1.11	1.44	1.9	2.06	2.45	3.35	3.8	4.02	5.45	6.31
		L		0.82	1.09	1.31	1.37	1.7	2.4	2.23	3.13	4.36	5.52
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
		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
	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
		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 Input1	H	W	53	63	83	96	102	150	205	224	363	380
		M		43	52	58	68	84	128	174	190	286	310
		L		26	31	35	49	62	84	121	113	170	190
	Running Current	H	A	0.46	0.55	0.72	0.83	0.89	1.3	1.78	1.95	3.16	3.3
HYDRONIC	Cooling Water Flow Rate	H	L/h	552	667	845	913	1059	1665	1605	1724	2524	2644
		M		469	593	755	828	993	1460	1498	1603	2339	2526
		L		344	449	518	561	695	1044	874	1250	1877	2204
	Cooling Pressure Drop	H	kPa	30.33	47.02	25.98	32.19	45.21	60.3	19.7	23.49	54.23	63.36
		M		22.64	38.1	21.21	26.98	40.33	47.56	17.4	20.59	47.29	58.38
		L		12.95	23.08	10.77	13.4	21.22	26.01	6.6	13.16	31.8	45.67
	Heating Water Flow Rate	H	L/h	224	279	363	387	449	655	698	743	1007	1124
		M		190	247	325	353	419	575	652	688	934	1082
		L		140	187	225	235	292	411	502	598	791	1022
	Heating Pressure Drop	H	kPa	11.25	18.5	32.64	40.06	8.39	21.86	25.78	30.43	4.95	6.47
		M		8.37	14.87	26.72	34.02	7.41	17.28	22.79	26.53	4.32	6.05
		L		4.81	9.02	13.8	16.37	3.86	9.47	8.72	16.92	2.89	4.74
	Chilled Water Content		L	0.72	0.87	1.02	1.17	1.32	1.92	2.07	2.22	2.59	2.84
	Hot Water Content			0.24	0.29	0.34	0.39	0.44	0.64	0.69	0.74	0.86	0.95

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65°C / 55°C

(1): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 4 row, 2 pipe with **EC Motor**

UNIT GENERAL SPECS	PDWA-4R-[SIZE]-V-EC			200	300	400	500	600	800	1000	1200	1400	1600
	Configuration			2 PIPE									
	Number of Fan Blowers			1		2			3		4	3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60									
AIR	Air Flow	H	m³/h	420	575	781	888	1086	1641	1665	1910	2537	3031
		M		338	520	638	693	946	1399	1488	1829	2253	2704
		L		255	376	378	507	788	888	1183	1548	1765	2013
	Available ESP Pressure	H	Pa	50									
		M											
		L											
COOLING	Cooling Capacity	H	kW	2.7	3.53	4.7	5.73	6.65	10.67	10.74	12.18	15.46	16.95
		M		2.29	3.25	4.02	4.76	5.97	9.5	9.86	11.81	14.13	15.62
		L		1.83	2.55	2.7	3.74	5.21	6.71	8.23	10.38	11.7	12.43
	Sensible Cooling Capacity	H		1.89	2.46	3.28	4.82	4.66	7.53	7.49	8.48	10.91	11.92
		M		1.58	2.26	2.77	3.94	4.15	6.66	6.82	8.2	9.91	10.93
		L		1.25	1.74	1.82	3.07	3.59	4.6	5.64	7.13	8.1	8.57
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
		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
	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
		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 Input [1]	H	W	53	63	83	96	102	150	205	224	363	380
		M		43	52	58	68	84	128	174	190	286	310
		L		26	31	35	49	62	84	121	113	170	190
	Running Current	H	A	0.46	0.55	0.72	0.83	0.89	1.3	1.57	1.95	3.16	3.3
HYDRONIC	Cooling Water Flow Rate	H	L/h	462	604	806	982	1140	1829	1842	2088	2650	2905
		M		393	558	690	816	1024	1628	1691	2025	2423	2677
		L		314	437	462	641	893	1150	1411	1780	2006	2130
	Cooling Pressure Drop	H	kPa	32.15	57.38	105.21	53.46	75.3	104.57	110.14	145.45	86.06	109.21
		M		24.03	49.63	79.41	38.29	62.13	84.81	94.41	137.62	73.25	94.26
		L		16.02	32	38.63	24.79	48.59	45.38	68.18	109.15	52.13	62.48
	Water Content		L	0.96	1.16	1.36	1.56	1.76	2.56	2.76	2.96	3.45	3.79

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19C WB Inlet / outlet water temperature: 7°C / 12°C

(1): Fan motor power includes PCB power input.

For High ΔT Condition Requirements, please refer to Selection Software.

Electric reheat is available for this range.

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 6 row, 2 pipe with **EC Motor**

UNIT GENERAL SPECS	PDWA-6R-[SIZE]-V-EC			200	300	400	500	600	800	1000	1200	1400	1600
	Configuration			2 PIPE									
	Number of Fan Blowers			1		2			3		4	3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60									
AIR	Air Flow	H	m³/h	325	477	625	728	910	1235	1309	1483	2172	2469
		M		239	416	482	512	767	952	1094	1390	1780	2112
		L		161	271	218	339	619	422	747	1081	1249	1383
	Available ESP Pressure	H	Pa	50									
		M											
		L											
COOLING	Cooling Capacity	H	kW	2.6	3.8	4.85	5.75	6.95	9.71	10.43	11.85	16.43	18.55
		M		2.07	3.42	3.97	4.34	6.09	7.93	9.02	11.21	14.15	16.41
		L		1.52	2.44	2.09	3.16	5.18	4.11	6.73	9.23	10.63	11.8
	Sensible Cooling Capacity	H		1.77	2.58	3.3	3.9	4.74	6.58	7.04	8.01	11.16	12.68
		M		1.39	2.3	2.68	2.91	4.13	5.32	6.06	7.57	9.53	11.17
		L		1	1.61	1.4	2.08	3.49	2.74	4.43	6.14	7.04	7.87
SOUND	Pressure Level	Outlet	db(A)	43/40/36	47/44/39	47/44/41	49/46/42	51/49/46	51/47/45	55/53/49	55/52/50	54/51/48	57/55/52
		Inlet + Radiated		46/43/39	50/47/42	50/47/44	52/49/45	54/52/49	54/50/48	58/56/52	58/55/53	57/54/51	60/58/55
	Power Level	Outlet		52/49/45	56/53/48	56/53/50	58/55/51	60/58/55	60/56/54	64/62/58	64/61/59	63/60/57	66/64/61
		Inlet + Radiated		55/52/48	59/56/51	59/56/53	61/58/54	63/61/58	63/59/57	67/65/61	67/64/62	66/63/60	69/67/64
ELECTRICAL (Fan Motor)	Power Input [1]	H	W	40	60	60	82	105	136	189	224	322	436
		M		24	40	40	56	82	95	133	165	193	265
		L		17	24	31	38	55	73	77	87	127	143
	Running Current	H	A	0.46	0.55	0.72	0.83	0.89	1.3	1.57	1.95	3.16	3.3
HYDRONIC	Cooling Water Flow Rate	H	L/h	447	651	832	985	1192	1664	1788	2032	2816	3181
		M		354	587	681	743	1045	1359	1546	1922	2426	2812
		L		261	417	359	541	887	705	1153	1582	1823	2023
	Cooling Pressure Drop	H	kPa	42.05	90.16	50.39	73.78	51.04	120.28	78.36	103.56	131.85	79.73
		M		27.72	74.81	35.17	44.43	40.22	83.52	60.28	93.67	100.82	63.89
		L		15.98	40.5	11.11	25.08	30	25.66	35.55	66	60.27	35.32
	Water Content		L	0.96	1.16	1.36	1.56	1.76	2.56	2.76	2.96	3.45	3.79

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12C

(1): Fan motor power includes PCB power input.

For High ΔT Condition Requirements, please refer to Selection Software.

Electric reheat is available for this range.

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 3 + 2 row (Auxiliary Heating coil),4 pipe with **EC Motor**

UNIT GENERAL SPECS	PDWA-3+2R-[SIZE]-P-EC			200	300	400	500	600	800	1000	1200	1400	1600
	Configuration			4 PIPE									
	Number of Fan Blowers			1		2			3		4	3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60									
AIR	Air Flow	H	m³/h	372	526	703	808	998	1371	1428	1625	2294	2656
		M		294	474	569	612	866	1111	1225	1537	1937	2309
		L		224	341	324	451	732	609	903	1248	1433	1608
	Available ESP Pressure	H	Pa	50									
		M											
		L											
COOLING	Cooling Capacity	H	kW	2.27	3.01	3.80	4.44	5.22	7.97	7.62	8.57	11.85	12.78
		M		1.89	2.79	3.23	3.57	4.68	6.79	6.76	8.26	10.40	11.50
		L		1.52	2.14	2.08	2.81	4.06	4.29	5.32	7.01	8.18	8.64
	Sensible Cooling Capacity	H		1.61	2.13	2.75	3.16	3.70	5.68	5.47	6.13	8.49	9.05
		M		1.33	1.97	2.30	2.52	3.30	4.78	4.83	5.89	7.37	8.10
		L		1.06	1.49	1.44	1.95	2.85	2.94	3.74	4.98	5.75	5.98
HEATING	Heating Capacity	H	kW	2.74	3.77	4.91	5.6	6.82	9.59	9.99	11.22	15.21	17.34
		M		2.30	3.50	4.18	4.51	6.11	8.13	8.85	10.73	13.33	15.65
		L		1.86	2.71	2.69	3.58	5.36	5.06	7.02	9.11	10.45	11.72
SOUND	Pressure Level	Outlet	db(A)	48/47/43	50/49/46	52/50/44	52/51/46	54/52/49	53/52/47	56/55/50	58/55/52	58/54/50	59/57/55
		Inlet + Radiated		50/49/45	52/51/48	54/52/46	54/53/48	56/54/51	55/54/49	58/57/52	60/57/54	60/56/52	61/59/57
	Power Level	Outlet		57/56/52	59/58/55	61/59/53	61/60/55	63/61/58	62/61/56	65/64/59	67/64/61	67/63/59	68/66/64
		Inlet + Radiated		59/58/54	61/60/57	63/61/55	63/62/57	65/63/60	64/63/58	67/66/61	69/66/63	69/65/61	70/68/66
ELECTRICAL (Fan Motor)	Power Input (Cooling) [1]	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
	Power Input (Heating) [1]	H		53	63	95	120	137	150	180	224	363	380
		M		43	52	85	110	112	128	140	190	286	310
		L		26	36	35	50	89	84	85	113	170	298
	Running Current	H	A	0.46	0.55	0.72	0.83	0.89	1.30	1.57	1.95	3.16	3.30
HYDRONIC	Cooling Water Flow Rate	H	L/h	389	515	652	761	895	1366	1307	1469	2031	2192
		M		324	479	553	612	803	1165	1160	1416	1783	1972
		L		261	367	356	482	696	735	913	1202	1403	1481
	Cooling Pressure Drop	H	kPa	17.67	32.43	17.87	25.46	36.65	46.29	14.92	19.31	40.20	49.58
		M		12.70	28.38	13.31	17.20	30.13	34.74	12.03	18.07	31.80	40.98
		L		8.63	17.61	6.02	11.20	23.34	15.16	7.82	13.46	20.65	24.50
	Heating Water Flow Rate	H	L/h	235	323	421	480	585	822	856	961	1304	1486
		M		197	300	358	387	524	697	758	920	1142	1341
		L		159	232	231	307	459	434	602	781	896	1004
	Heating Pressure Drop	H	kPa	3.31	6.53	11.61	5.20	8.06	19.68	10.08	13.15	8.67	11.85
		M		2.41	5.70	8.70	3.53	6.61	14.62	8.10	12.15	6.83	9.85
		L		1.64	3.60	3.95	2.33	5.22	6.22	5.34	9.04	4.41	5.85
	Chilled Water Content		L	0.72	0.87	1.02	1.17	1.32	1.92	2.07	2.22	2.59	2.84
	Hot Water Content			0.24	0.29	0.34	0.39	0.44	0.64	0.69	0.74	0.86	0.95

TESTING CONDITIONS

Cooling mode: *Return air temperature: 27°C DB / 19°C WB* *Inlet / outlet water temperature: 7°C / 12°C*
Heating mode: *Return air temperature: 20°C* *Inlet / outlet water temperature: 65°C / 55°C*

(1): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 4 + 2 row (Auxiliary Heating coil),4 pipe with **EC Motor**

UNIT GENERAL SPECS	PDWA-4+2R-[SIZE]-P-EC			200	300	400	500	600	800	1000	1200	1400	1600
	Configuration			4 PIPE									
	Number of Fan Blowers			1		2			3		4	3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60									
AIR	Air Flow	H	m³/h	325	477	625	728	910	1235	1309	1483	2172	2469
		M		239	416	482	512	767	952	1094	1390	1780	2112
		L		161	271	218	339	619	422	747	1081	1249	1383
	Available ESP Pressure	H	Pa	50									
		M											
		L											
COOLING	Cooling Capacity	H	kW	2.23	3.05	3.96	4.93	5.78	8.61	8.94	10.08	13.8	14.51
		M		1.76	2.74	3.26	3.74	5.11	7.06	7.77	9.57	11.82	12.96
		L		1.28	1.98	1.74	2.69	4.28	3.74	5.79	7.88	8.92	9.21
	Sensible Cooling Capacity	H		1.54	2.11	2.72	4.1	4	6.01	6.13	6.91	9.66	10.08
		M		1.2	1.88	2.22	3.07	3.51	4.85	5.32	6.55	8.19	8.95
		L		0.86	1.33	1.17	2.16	2.93	2.52	3.88	5.35	6.08	6.22
HEATING	Heating Capacity	H	kW	2.47	3.5	4.51	5.2	6.35	8.87	9.37	10.48	14.55	16.5
		M		1.95	3.15	3.66	3.91	5.55	7.17	8.1	9.98	12.49	14.59
		L		1.44	2.26	1.91	2.85	4.71	3.78	5.97	8.22	9.4	10.36
SOUND	Pressure Level	Outlet	db(A)	43/40/36	47/44/39	47/44/41	49/46/42	51/49/46	51/47/45	55/53/49	55/52/50	54/51/48	57/55/52
		Inlet + Radiated		46/43/39	50/47/42	50/47/44	52/49/45	54/52/49	54/50/48	58/56/52	58/55/53	57/54/51	60/58/55
	Power Level	Outlet		52/49/45	56/53/48	56/53/50	58/55/51	60/58/55	60/56/54	64/62/58	64/61/59	63/60/57	66/64/61
		Inlet + Radiated		55/52/48	59/56/51	59/56/53	61/58/54	63/61/58	63/59/57	67/65/61	67/64/62	66/63/60	69/67/64
ELECTRICAL (Fan Motor)	Power Input (Cooling) [1]	H	W	40	60	60	82	105	136	189	224	322	436
		M		24	40	40	56	82	95	133	165	193	265
		L		17	24	31	38	55	73	77	87	127	143
	Power Input (Heating) [1]	H		0.46	0.55	0.72	0.83	0.89	1.3	1.57	1.95	3.16	3.3
		M		383	524	679	846	990	1476	1532	1728	2366	2488
		L		302	470	559	641	875	1210	1333	1641	2026	2222
	Running Current	H	A	220	339	298	460	734	642	993	1351	1529	1578
HYDRONIC	Cooling Water Flow Rate	H	L/h	22.87	44.31	77.12	40.86	58.48	71.11	79.1	103.53	70.19	82.63
		M		14.95	36.47	54.34	24.79	46.81	49.73	61.54	94.3	53.12	67.4
		L		8.44	20.26	17.5	13.67	34.11	15.87	36.24	66.43	31.99	36.41
	Cooling Pressure Drop	H	kPa	3	6	10	5	7	17	9	12	8	11
		M		2	5	7	3	6	12	7	11	6	9
		L		1	3	2	2	4	4	4	8	4	5
	Heating Water Flow Rate	H	L/h	40	60	60	82	105	136	189	224	322	436
		M		24	40	40	56	82	95	133	165	193	265
		L		17	24	31	38	55	73	77	87	127	143
	Heating Pressure Drop	H	kPa	0.72	0.87	1.02	1.17	1.32	1.92	2.07	2.22	2.59	2.84
		M		0.24	0.29	0.34	0.39	0.44	0.64	0.69	0.74	0.86	0.95
		L		0.24	0.29	0.34	0.39	0.44	0.64	0.69	0.74	0.86	0.95
	Chilled Water Content		L	0.72	0.87	1.02	1.17	1.32	1.92	2.07	2.22	2.59	2.84
	Hot Water Content			0.24	0.29	0.34	0.39	0.44	0.64	0.69	0.74	0.86	0.95

TESTING CONDITIONS

Cooling mode: *Return air temperature: 27°C DB / 19°C WB* *Inlet / outlet water temperature: 7°C / 12°C*
Heating mode: *Return air temperature: 20°C* *Inlet / outlet water temperature: 65°C / 55°C*

(1): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 3 row, 2 pipe with **AC Motor**

UNIT GENERAL SPECS	PDWA-3R-[SIZE]-V-AC			200B	300	400	500	600	800	1000	1200	1400	1600B
	Configuration			2 PIPE									
	Number of Fan Blowers			1		2			3		4	3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 (E) | 220/1/60									
AIR	Air Flow (E)	H	m³/h	497	593	840	948	1174	1426	1634	2049	2584	3311
		M		429	553	746	892	1051	1310	1554	1871	2374	3019
		L		350	457	562	659	887	1000	1273	1655	2178	2760
	Available ESP Pressure	H	Pa	50									
		M											
		L											
COOLING	Cooling Capacity (E)	H	kW	2.97	3.49	4.59	5.29	6.18	8.64	8.88	10.76	13.65	15.88
		M		2.66	3.29	4.19	5.02	5.7	8.13	8.53	10.06	12.86	14.85
		L		2.26	2.86	3.36	3.98	4.98	6.59	7.27	9.18	11.98	13.82
	Sensible Cooling Capacity (E)	H		2.14	2.49	3.34	3.81	4.42	6.17	6.43	7.81	9.84	11.4
		M		1.91	2.34	3.03	3.6	4.05	5.78	6.15	7.27	9.25	10.62
		L		1.6	2.01	2.4	2.81	3.52	4.62	5.19	6.58	8.54	9.8
HEATING	Heating Capacity (E)	H	kW	2.57	3.11	4.19	4.79	5.86	7.39	8.31	10.06	12.63	15.7
		M		2.32	2.95	3.82	4.6	5.38	6.94	8.02	9.36	11.9	14.6
		L		1.97	2.54	3.07	3.61	4.72	5.62	6.8	8.54	11.05	13.7
	Max. Electric Heater			2	3	4	5		6				
SOUND	Pressure Level (E)	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
		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
	Power Level (E)	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
		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 Input (E) 1	H	W	67	82	120	123	167	204	222	314	430	554
		M		66	80	120	122	166	203	220	310	365	494
		L		58	78	116	117	163	194	216	307	345	424
	Running Current	H	A	0.29	0.36	0.52	0.53	0.73	0.89	0.97	1.37	1.87	2.41
	Starting Current			0.87	1.07	1.57	1.6	2.18	2.66	2.9	4.1	5.61	7.23
HYDRONIC	Cooling Water Flow Rate	H	L/h	509	598	786	906	1059	1481	1522	1844	2339	2722
		M		456	564	718	861	976	1394	1463	1724	2205	2546
		L		388	490	577	682	854	1130	1247	1575	2054	2369
	Cooling Pressure Drop	H	kPa	26.24	38.59	22.84	31.78	45.21	48.84	17.9	26.52	47.29	66.78
		M		21.49	34.74	19.38	28.94	39.09	43.8	16.75	23.52	42.65	59.2
		L		16.06	27.03	13.08	19.02	30.71	30.01	12.5	19.95	37.4	51.99
	Heating Water Flow Rate	H	L/h	440	534	718	821	1004	1268	1424	1725	2165	2692
		M		397	505	655	788	922	1190	1374	1605	2033	2501
		L		337	435	527	619	809	964	1165	1465	1895	2348
	Heating Pressure Drop	H	kPa	16.8	26.4	16.1	22.3	34.7	31.2	13.3	19.8	34.9	55.8
		M		14.2	24.1	13.8	21.0	30.2	28.4	12.7	17.6	31.6	49.1
		L		10.4	18.3	9.2	13.4	23.5	19.1	9.3	14.8	27.5	43.6
	Water Content		L	0.72	0.87	1.02	1.17	1.32	1.92	2.07	2.22	2.59	2.87

TESTING CONDITIONS

Cooling mode: *Return air temperature: 27°C DB / 19°C WB* *Inlet / outlet water temperature: 7°C / 12°C*
Heating mode: *Return air temperature: 20°C* *Inlet / outlet water temperature: 45°C / 40°C*

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Please visit www.eurovent-certification.com for more information.

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 3 + 1 row (Auxiliary Heating coil),4 pipe with **AC Motor**

UNIT GENERAL SPECS	PDWA-3+1R-[SIZE]-P-AC			200	300	400	500	600	800	1000	1200	1400	1600
	Configuration			4 PIPE									
	Number of Fan Blowers			1		2			3		4	3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60									
AIR	Air Flow (E)	H	m³/h	478	573	801	905	1134	1361	1563	1974	2553	3160
		M		411	531	709	849	1010	1243	1485	1798	2342	2878
		L		332	432	529	626	851	949	1213	1588	2143	2629
	Available ESP Pressure	H	Pa	50									
		M											
		L											
COOLING	Cooling Capacity (E)	H	kW	2.88	3.39	4.43	5.1	6.03	8.39	8.53	10.45	13.55	15.31
		M		2.56	3.19	4.03	4.87	5.55	7.82	8.24	9.75	12.67	14.28
		L		2.18	2.73	3.23	3.85	4.82	6.38	7.04	8.86	11.88	13.34
	Sensible Cooling Capacity (E)	H		2.07	2.42	3.22	3.66	4.31	5.98	6.15	7.57	9.77	10.97
		M		1.83	2.27	2.92	3.48	3.93	5.53	5.92	7.01	9.09	10.16
		L		1.54	1.91	2.3	2.72	3.4	4.47	5.03	6.32	8.46	9.89
HEATING	Heating (E) Capacity	H	kW	2.29	2.77	3.7	4.17	5.02	6.43	7.2	8.78	10.86	13.08
		M		2.05	2.6	3.36	3.99	4.59	5.97	6.93	8.17	10.16	12.21
		L		1.73	2.22	2.7	3.13	4.06	4.85	5.93	7.39	9.52	11.41
SOUND	Pressure Level (E)	Outlet	db(A)	48/47/43	50/49/46	52/50/44	46/41/23	54/52/49	53/52/47	56/54/50	58/55/52	58/54/50	59/57/55
		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
	Power Level (E)	Outlet		57/56/52	59/58/55	61/59/53	55/50/32	63/61/58	62/61/56	65/63/59	67/64/61	67/63/59	68/66/64
		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 Input (E) 1	H	W	67	82	120	123	167	204	222	314	430	554
		M		66	80	120	122	166	203	220	310	365	494
		L		58	78	116	117	163	194	216	307	345	424
	Running Current	H	A	0.29	0.36	0.52	0.53	0.73	0.89	0.97	1.37	1.87	2.41
	Starting Current			0.87	1.07	1.57	1.6	2.18	2.66	2.9	4.1	5.61	7.23
HYDRONIC	Cooling Water Flow Rate	H	L/h	493	581	760	874	1034	1438	1463	1791	2323	2624
		M		439	547	691	834	951	1340	1413	1671	2171	2448
		L		374	468	553	660	827	1094	1208	1518	2036	2286
	Cooling Pressure Drop	H	kPa	24.71	36.64	21.48	29.74	43.35	46.29	16.66	25.16	46.68	62.52
		M		20.1	32.93	18.1	27.42	37.66	41.07	15.8	22.3	41.55	55.39
		L		15.03	24.84	12.14	17.94	28.98	28.31	11.8	18.68	36.82	48.78
	Heating Water Flow Rate	H	L/h	197	237	317	357	430	551	617	752	931	1121
		M		156	199	257	306	351	456	530	627	773	931
		L		148	190	231	268	348	416	508	633	816	978
	Heating Pressure Drop	H	kPa	7.94	12.48	23.47	32.05	7	14.58	19.07	28.93	3.81	5.8
		M		7.04	12.17	21.45	32.52	6.53	13.95	19.63	27.99	3.71	5.57
		L		4.78	8.38	13.26	19.13	4.78	8.78	13.43	21.2	3.01	4.54
	Chilled Water Content		L	0.72	0.87	1.02	1.17	1.32	1.92	2.07	2.22	2.59	2.84
	Hot Water Content			0.24	0.29	0.34	0.39	0.44	0.64	0.69	0.74	0.86	0.95

TESTING CONDITIONS

Cooling mode: *Return air temperature: 27°C DB / 19°C WB* *Inlet / outlet water temperature: 7°C / 12°C*
Heating mode: *Return air temperature: 20°C* *Inlet / outlet water temperature: 70°C / 60°C*

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Please visit www.eurovent-certification.com for more information.

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 4 row, 2 pipe with **AC Motor**

UNIT GENERAL SPECS	PDWA-4R-[SIZE]-V-AC			200	300	400	500	600	800	1000	1200	1400	1600
	Configuration			2 PIPE									
	Number of Fan Blowers			1		2			3		4	3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60									
AIR	Air Flow	H	m³/h	421	516	775	922	1146	1325	1607	2054	2345	3019
		M		351	473	678	849	1010	1207	1509	1854	2129	2731
		L		280	365	503	623	847	944	1227	1630	1942	2486
	Available ESP Pressure	H	Pa	50									
		M											
		L											
COOLING	Cooling Capacity	H	kW	2.72	3.23	4.67	5.89	6.89	9.05	10.42	12.92	14.57	16.95
		M		2.36	3.03	4.22	5.52	6.26	8.48	9.94	11.9	13.58	15.74
		L		1.99	2.47	3.37	4.35	5.47	6.99	8.5	10.87	12.66	14.64
	Sensible Cooling Capacity	H		1.9	2.24	3.26	4.97	4.84	6.34	7.25	9.02	10.26	11.92
		M		1.63	2.09	2.92	4.64	4.37	5.92	6.88	8.27	9.48	11.02
		L		1.37	1.68	2.3	3.59	3.78	4.8	5.82	7.48	8.79	10.17
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
		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
	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
		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 Input [1]	H	W	67	82	120	123	167	204	222	314	430	554
		M		66	80	120	122	166	203	220	310	365	494
		L		58	78	116	117	163	194	216	307	345	424
	Running Current	H	A	0.29	0.36	0.52	0.53	0.73	0.89	0.97	1.37	1.87	2.41
	Starting Current			0.87	1.07	1.57	1.6	2.18	2.66	2.9	4.1	5.61	7.23
HYDRONIC	Cooling Water Flow Rate	H	L/h	466	553	801	1010	1181	1552	1787	2214	2498	2905
		M		404	519	723	946	1074	1455	1704	2040	2328	2698
		L		342	423	577	746	938	1198	1456	1863	2170	2510
	Cooling Pressure Drop	H	kPa	32.58	48.95	103.91	56.28	80.28	77.82	104.3	161.68	77.42	109.21
		M		25.23	43.67	86.45	50.03	67.64	69.24	95.8	139.56	68.18	95.58
		L		18.63	30.14	57.61	32.61	53.05	48.84	72.19	118.51	60.07	83.94
	Water Content		L	0.96	1.16	1.36	1.56	1.76	2.56	2.76	2.96	3.45	3.79

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45°C / 40°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Electric reheat is available for this range.
Please visit www.eurovent-certification.com for more information.

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 6 row, 2 pipe with **AC Motor**

UNIT GENERAL SPECS	PDWA-6R-[SIZE]-V-AC			200	300	400	500	600	800	1000	1200	1400	1600
	Configuration			2 PIPE									
	Number of Fan Blowers			1		2			3		4	3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60									
AIR	Air Flow	H	m³/h	372	458	696	829	1048	1186	1448	1871	2161	2736
		M		318	431	626	785	946	1113	1401	1729	2006	2543
		L		262	344	476	592	813	900	1172	1561	1854	2358
	Available ESP Pressure	H	Pa	50									
		M											
		L											
COOLING	Cooling Capacity [(E)]	H	kW	2.89	3.68	5.24	6.29	7.76	9.38	11.26	14.17	16.43	20.09
		M		2.56	3.52	4.85	6.05	7.19	8.96	10.95	13.34	15.45	19.07
		L		2.2	2.92	3.93	4.9	6.41	7.56	9.58	12.36	14.6	18.03
	Sensible Cooling Capacity	H		1.98	2.49	3.6	4.31	5.35	6.34	7.63	9.67	11.16	13.81
		M		1.74	2.37	3.3	4.12	4.92	6.04	7.41	9.06	10.44	13.05
		L		1.48	1.96	2.65	3.3	4.35	5.07	6.45	8.36	9.84	12.3
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
		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
	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
		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 Input [1]	H	W	67	82	120	123	167	204	222	314	430	554
		M		66	80	120	122	166	203	220	310	365	494
		L		58	78	116	117	163	194	216	307	345	424
	Running Current	H	A	0.29	0.36	0.52	0.53	0.73	0.89	0.97	1.37	1.78	1.8
	Starting Current			0.87	1.07	1.57	1.6	2.18	2.66	2.9	4.1	5.44	5.4
HYDRONIC	Cooling Water Flow Rate	H	L/h	495	630	899	1079	1331	1608	1930	2429	2816	3444
		M		440	603	832	1037	1232	1537	1878	2286	2649	3269
		L		377	501	674	840	1099	1296	1642	2119	2502	3091
	Cooling Pressure Drop	H	kPa	50.68	85.08	57.94	86.89	62.19	113.07	89.89	142.74	131.85	92.01
		M		40.88	78.59	50.39	80.93	54.15	104.22	85.57	128.06	118.09	83.76
		L		31.06	56.28	34.49	55.38	44.07	76.73	67.16	111.63	106.56	75.72
	Water Content		L	0.96	1.16	1.36	1.56	1.76	2.56	2.76	2.96	3.45	3.79

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45°C / 40°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Electric reheat is available for this range.
Please visit www.eurovent-certification.com for more information.

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 3 + 2 row (Auxiliary Heating coil), 4 pipe with **AC Motor**

UNIT GENERAL SPECS	PDWA-3+2R-[SIZE]-P			200	300	400	500	600	800	1000	1200	1400	1600
	Configuration			4 PIPE									
	Number of Fan Blowers			1		2			3		4	3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60									
AIR	Air Flow	H	m³/h	397	487	736	875	1097	1255	1528	1963	2253	2878
		M		335	452	652	817	978	1160	1455	1792	2067	2637
		L		271	354	490	608	830	922	1200	1595	1898	2422
	Available ESP Pressure	H	Pa	50									
		M											
		L											
COOLING	Cooling Capacity	H	kW	2.38	2.84	3.95	4.73	5.60	7.49	7.97	9.93	11.66	13.57
		M		2.09	2.69	3.60	4.48	5.13	7.05	7.69	9.26	10.99	12.67
		L		1.78	2.22	2.87	3.57	4.48	5.92	6.62	8.49	10.30	11.98
	Sensible Cooling Capacity	H		1.70	2	2.86	3.39	3.99	5.30	5.73	7.19	8.34	9.66
		M		1.48	1.89	2.58	3.19	3.63	4.97	5.52	6.66	7.81	8.96
		L		1.25	1.55	2.04	2.52	3.16	4.15	4.72	6.07	7.29	8.45
HEATING	Heating Capacity	H	kW	2.87	3.56	5.10	5.98	7.33	8.96	10.58	13.08	14.95	18.48
		M		2.54	3.37	4.63	5.65	6.71	8.38	10.19	12.17	14.02	17.34
		L		2.14	2.78	3.70	4.51	5.93	6.99	8.74	11.10	13.05	16.16
SOUND	Pressure Level	Outlet	db(A)	48/47/43	50/49/46	52/50/46	52/51/46	54/52/49	53/52/47	56/54/50	58/55/52	58/54/50	59/57/55
		Inlet + Radiated		50/49/45	52/51/48	54/52/48	54/53/48	56/54/51	55/54/49	58/56/52	60/57/54	60/56/52	61/59/57
	Power Level	Outlet		57/56/52	59/58/55	61/59/55	61/60/55	63/61/58	62/61/56	65/63/59	67/64/61	67/63/59	68/66/64
		Inlet + Radiated		59/58/54	61/60/57	63/61/57	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 Input[1]	H	W	67	82	120	123	167	204	222	314	430	554
		M		66	80	120	122	166	203	220	310	365	494
		L		58	78	116	117	163	194	216	307	345	424
	Running Current	H	A	0.29	0.36	0.52	0.53	0.73	0.89	0.97	1.37	1.78	1.80
	Starting Current			0.87	1.07	1.57	1.60	2.18	2.66	2.90	4.10	5.35	5.4
HYDRONIC	Cooling Water Flow Rate	H	L/h	408	487	677	811	959	1283	1366	1702	1999	2326
		M		359	462	617	768	879	1208	1319	1587	1884	2172
		L		305	381	492	612	768	1016	1135	1456	1765	2054
	Cooling Pressure Drop	H	kPa	19.27	29.29	19.13	28.54	41.53	41.37	16.17	25.16	39.07	55.17
		M		15.28	26.59	16.18	25.84	35.46	37.11	15.17	22.20	35.11	48.78
		L		11.44	18.84	10.77	17.20	27.83	27.15	11.57	19	31.23	44.10
	Heating Water Flow Rate	H	L/h	246	305	437	513	628	768	907	1121	1281	1584
		M		218	289	397	484	575	718	873	1043	1202	1486
		L		184	238	317	387	508	600	749	951	1118	1385
	Heating Pressure Drop	H	kPa	3.58	5.89	12.45	5.86	9.17	17.4	11.19	17.33	8.40	13.29
		M		2.87	5.34	10.47	5.28	7.82	15.45	10.45	15.22	7.49	11.85
		L		2.11	3.76	6.99	3.53	6.26	11.15	7.93	12.90	6.58	10.44
	Chilled Water Content		L	0.72	0.87	1.02	1.17	1.32	1.92	2.07	2.22	2.59	2.84
	Hot Water Content			0.24	0.29	0.34	0.39	0.44	0.64	0.69	0.74	0.86	0.95

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65C / 55°C

(1): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 4 + 2 row (Auxiliary Heating coil),4 pipe with **AC Motor**

UNIT GENERAL SPECS	PDWA-4+2R-[SIZE]-P-AC			200	300	400	500	600	800	1000	1200	1400	1600
	Configuration			4 PIPE									
	Number of Fan Blowers			1		2			3		4	3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60									
AIR	Air Flow	H	m³/h	372	458	696	829	1048	1186	1448	1871	2161	2736
		M		318	431	626	785	946	1113	1401	1729	2006	2543
		L		262	344	476	592	813	900	1172	1561	1854	2358
	Available ESP Pressure	H	Pa	50									
		M											
		L											
COOLING	Cooling Capacity	H	kW	2.46	2.95	4.32	5.44	6.46	8.36	9.61	11.99	13.69	15.74
		M		2.19	2.82	3.99	5.23	5.97	7.98	9.36	11.35	12.89	14.89
		L		1.88	2.35	3.22	4.22	5.32	6.78	8.14	10.48	12.19	14.01
	Sensible Cooling Capacity	H		1.7	2.03	3	4.56	4.52	5.83	6.63	8.34	9.57	11.02
		M		1.5	1.93	2.75	4.37	4.15	5.53	6.44	7.84	8.96	10.36
		L		1.28	1.6	2.2	3.48	3.66	4.65	5.58	7.2	8.45	9.7
HEATING	Heating Capacity	H	kW	2.74	3.4	4.87	5.75	7.1	8.55	10.09	12.51	14.55	17.83
		M		2.43	3.24	4.51	5.5	6.53	8.13	9.88	11.81	13.74	16.84
		L		2.1	2.71	3.61	4.4	5.8	6.91	8.53	10.86	12.91	15.82
SOUND	Pressure Level	Outlet	db(A)	48/47/43	50/49/46	52/50/46	52/51/46	54/52/49	53/52/47	56/54/50	58/55/52	58/54/50	59/57/55
		Inlet + Radiated		50/49/45	52/51/48	54/52/48	54/53/48	56/54/51	55/54/49	58/56/52	60/57/54	60/56/52	61/59/57
	Power Level	Outlet		57/56/52	59/58/55	61/59/55	61/60/55	63/61/58	62/61/56	65/63/59	67/64/61	67/63/59	68/66/64
		Inlet + Radiated		59/58/54	61/60/57	63/61/57	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 Input[1]	H	W	67	82	120	123	167	204	222	314	430	554
		M		66	80	120	122	166	203	220	310	365	494
		L		58	78	116	117	163	194	216	307	345	424
	Running Current	H	A	0.29	0.36	0.52	0.53	0.73	0.89	0.97	1.37	1.78	1.8
	Starting Current			0.87	1.07	1.57	1.6	2.18	2.66	2.9	4.1	5.35	5.4
HYDRONIC	Cooling Water Flow Rate	H	L/h	422	506	740	932	1107	1433	1648	2056	2347	2698
		M		375	484	684	897	1024	1368	1605	1946	2210	2553
		L		322	403	552	723	912	1162	1396	1797	2089	2401
	Cooling Pressure Drop	H	kPa	27.23	41.66	90.07	48.68	71.42	67.39	90.17	141.51	69.18	95.58
		M		22.08	38.4	78.26	45.39	62.13	61.98	85.94	128.1	62.07	86.52
		L		16.75	27.66	53.22	30.78	50.39	46.24	66.86	111	56.11	77.49
	Heating Water Flow Rate	H	L/h	3	5	11	5	9	16	10	16	8	12
		M		3	5	10	5	7	15	10	14	7	11
		L		2	4	7	3	6	11	8	12	6	10
	Heating Pressure Drop	H	kPa	67	82	120	123	167	204	222	314	430	554
		M		66	80	120	122	166	203	220	310	365	494
		L		58	78	116	117	163	194	216	307	345	424
	Chilled Water Content		L	0.72	0.87	1.02	1.17	1.32	1.92	2.07	2.22	2.59	2.84
	Hot Water Content			0.24	0.29	0.34	0.39	0.44	0.64	0.69	0.74	0.86	0.95

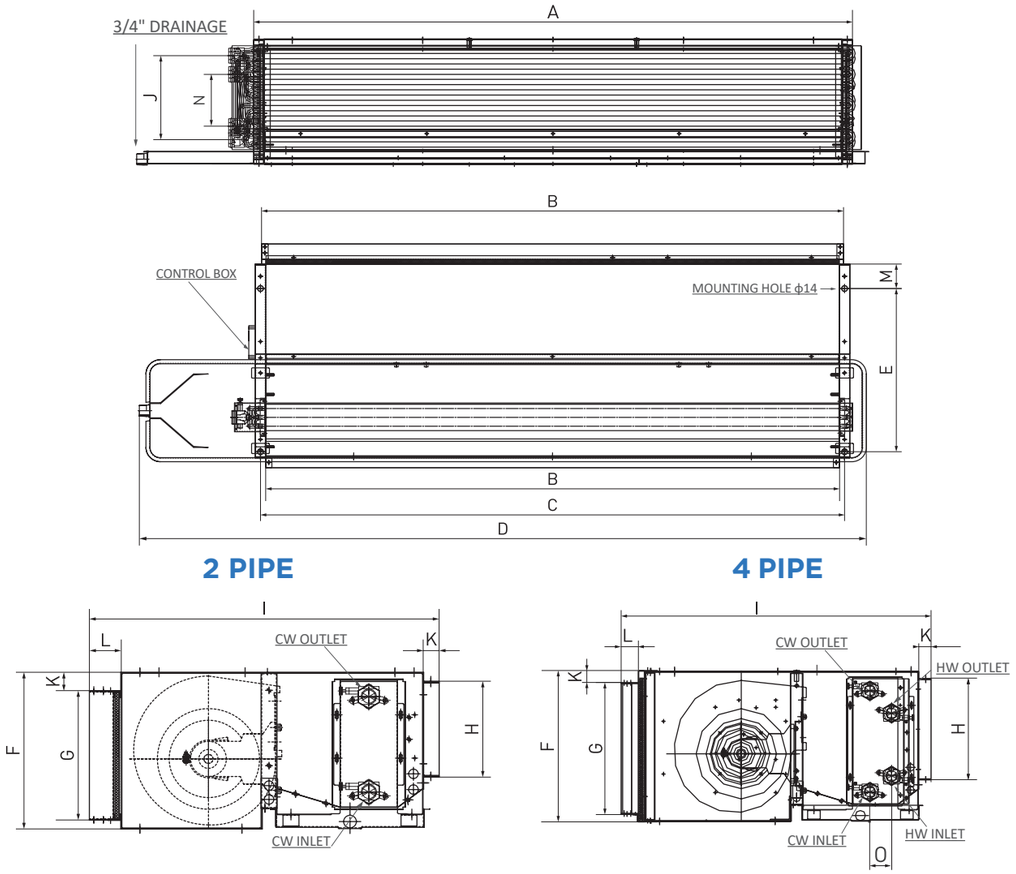
TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65C / 55°C

(1): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS

3 Row / 4 Row and 3 + 1 row (Auxiliary Heating coil)



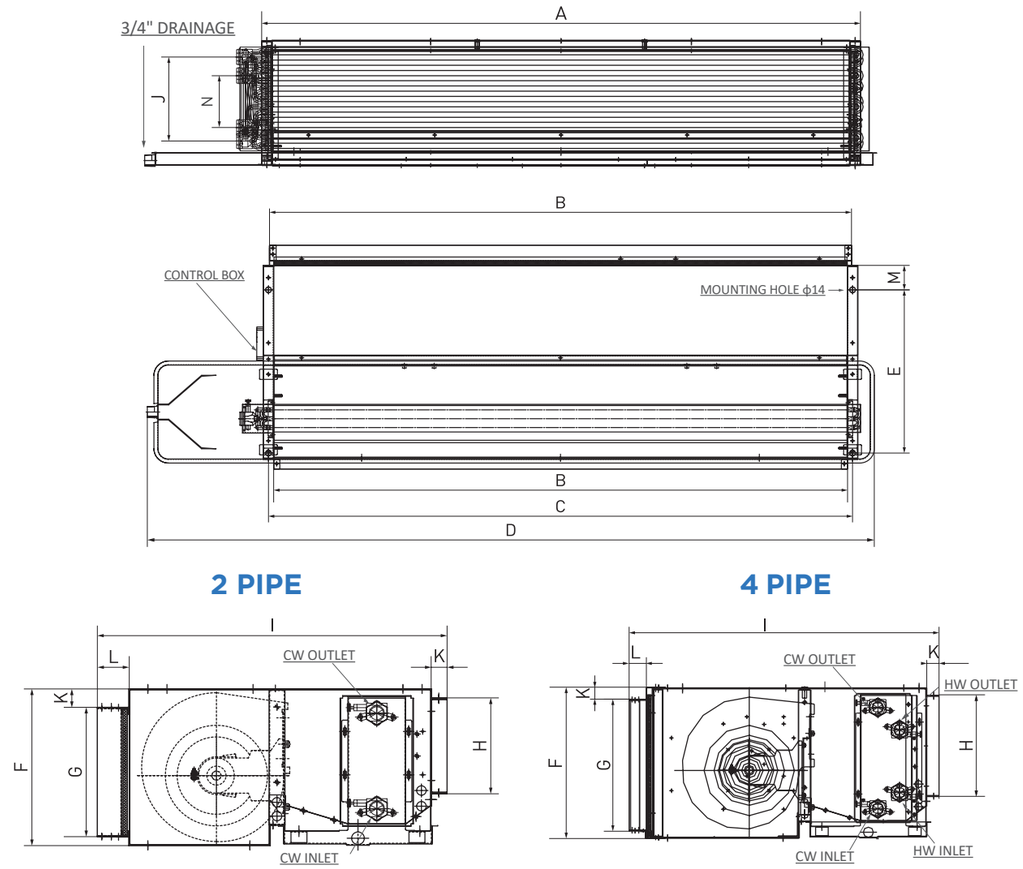
Model	Unit Dimensions (mm)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N (1)	O (1)
PDWA-200	535	485	510	755	400	250	213	153	546	152	25	35	60	75	43.3
PDWA-300	635	585	610	855	400	250	213	153	546	152	25	35	60	75	43.3
PDWA-400	735	685	710	955	400	250	213	153	546	152	25	35	60	75	43.3
PDWA-500	835	785	810	1055	400	250	213	153	546	152	25	35	60	75	43.3
PDWA-600	935	885	910	1155	400	250	213	153	546	152	25	35	60	75	43.3
PDWA-800	1335	1285	1310	1555	400	250	213	153	546	152	25	35	60	75	43.3
PDWA-1000	1435	1385	1410	1655	400	250	213	153	546	152	25	35	60	75	43.3
PDWA-1200	1575	1525	1550	1790	400	250	213	153	546	152	25	35	60	75	43.3
PDWA-1400	1435	1385	1410	1655	470	300	263	203	616	202	25	35	60	75	43.3
PDWA-1600	1695	1645	1670	1915	470	300	263	203	616	202	25	35	60	75	43.3

PDWA				200	300	400	500	600	800	1000	1200	1400	1600
CONNECTIONS	Water	Type		Socket (Threaded Female)									
		In / Out	mm (in)	19.05 (3/4")									
	Condensate Drainage		mm (in)										
WEIGHT	Net		kg	17	23	24	28	31	36	43	45	51	60

(1): Value only valid for 4-pipe units.

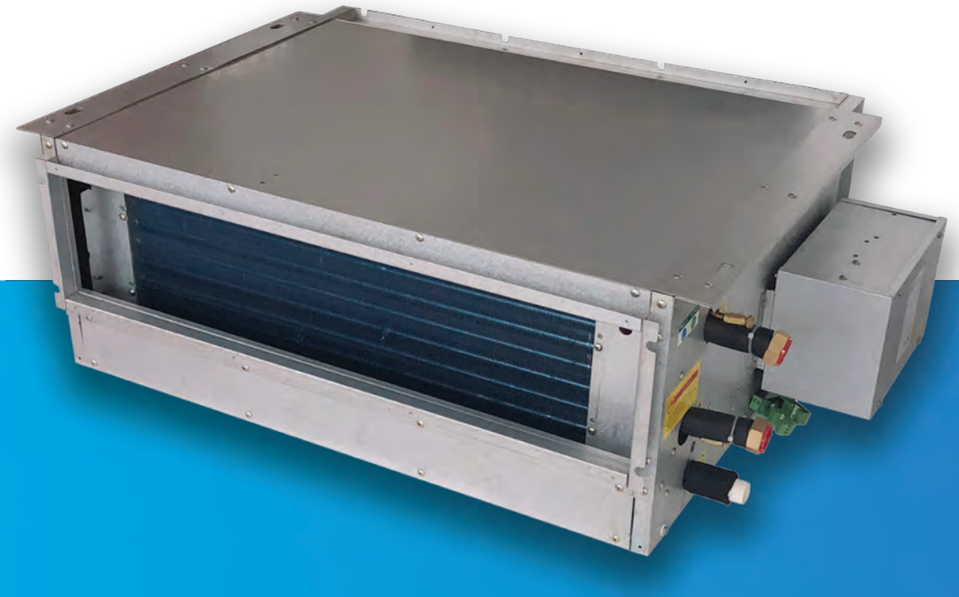
DIMENSIONAL DRAWINGS, DATA & WEIGHTS

6 Row / 3 + 2 row (Auxiliary Heating coil) and 4 + 2 row (Auxiliary Heating coil)



Model	Unit Dimensions (mm)													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N (1)
PDWA-200	535	485	510	755	444	250	213	153	590	152	25	35	60	75
PDWA-300	635	585	610	855	444	250	213	153	590	152	25	35	60	75
PDWA-400	735	685	710	955	444	250	213	153	590	152	25	35	60	75
PDWA-500	835	785	810	1055	444	250	213	153	590	152	25	35	60	75
PDWA-600	935	885	910	1155	444	250	213	153	590	152	25	35	60	75
PDWA-800	1335	1285	1310	1555	444	250	213	153	590	152	25	35	60	75
PDWA-1000	1435	1385	1410	1655	444	250	213	153	590	152	25	35	60	75
PDWA-1200	1575	1525	1550	1795	444	250	213	153	590	152	25	35	60	75
PDWA-1400	1435	1385	1410	1655	514	300	263	203	660	202	25	35	60	75
PDWA-1600	1695	1645	1670	1915	514	300	263	203	660	202	25	35	60	75

PDWA				200	300	400	500	600	800	1000	1200	1400	1600
CONNECTIONS	Water	Type		Socket (Threaded Female)									
		In / Out	mm (in)	19.05 (3/4")									
	Condensate Drainage		mm (in)										
WEIGHT	Net		kg	17	23	24	28	31	36	43	45	51	60



LOW STATIC DUCTED
Intelligent Fan Coils

PDL-EC

PRODUCT PRESENTATION

The Polar Air Intelligent Low Static Ducted units have been specifically designed to satisfy very demanding markets such as Australia or New Zealand. This range is smaller in construction, desgined for light commercial and residential applications. The main difference with our PDWA range is merely constructional. This range has a lower profile.

PRODUCT RANGE

The Intelligent Low Static Ducted units offer the following EC motor 230V/50Hz range with the following capacities at H speed:

2 Pipe	3.40 - 11.35 kW	COOLING
	4.13 - 14.92 kW	HEATING
	864 - 3110 m³/h	AIR FLOW
4 Pipe	4.40 - 13.68 kW	COOLING
	3.36 - 10.86 kW	HEATING
	869 - 2888 m³/h	AIR FLOW

COOLING HEATING AIR FLOW

PRODUCT FEATURES

Structure. Made from heavy-gauge galvanized steel panels with couplings for the connection of ducting and gravity drain pan with insulation for condensation. Insulation fitted on the top coil. Low height dimensions for perfect low height ceiling concealed installations. Optional fire-resistant internal NBR insulation to provide both thermal and acoustic insulation. Single skin casing made from special grade GI steel with Al + Zn coating, known as Galvalume. The unit comes with gravity drain pan with insulation for condensation. Insulation fitted on the top coil. Optional fire-resistant internal NBR insulation to provide both thermal and acoustic insulation.

Water Coils. Built with seamless copper tubes and headers, with the tubes mechanically expanded into corrugated aluminum fin material for a permanent primary to secondary surface bond. We test the coils at 35 bar, and the maximum operating limit we recommend is at 20 bar. It includes manual air vent and water purge valve.

Fan Blowers. Heavy-gauge galvanized steel with die-formed inlet cones housings, double inlet forward curved centrifugal type, statically and dynamically balanced for smooth and quiet operation.

Filtration. Easily removable and washable filters made from self-extinguishing acrylic with EU2 (G2) (Merv 2-4) efficiency class. G4 (Merv 8) efficiency filters are optional.

Condensate Pans. Painted seel drain pans with powder finish positively sloped, coated with self-extinguishing closed cell expanded polyethylene with thermal properties. The drain pan outlet is 3/4" (standard on the same side of coil connections).

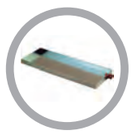
Motors. EC motors include driven control PCB, constant torque, permanent magnet, with 3 speeds pre-set to allow precise air balancing.

Flexibility. This Low Static Ducted range is available with left or right-hand water connections, which cannot be exchanged on site.

OPTIONAL ACCESSORIES*

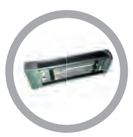
Thermostat Controller

Wall Pad Controller



Stainless steel drain pan

MERV8 | G4 Filter



Electric heater module
3 - 9 kW

Plenum
Discharge/Return Round

Valve kit
2 or 3-way 3/4" on/off or modulating

(*): Please refer to page 146 for further information on accessories

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 3 row, 2 pipe with **EC Motor**

	PDL-3R-[SIZE]-V-EC				400	600	1000	1400	1600
UNIT GENERAL SPECS	Configuration				2PIPE				
	Number of Fan Blowers				1	2		3	4
	Power Supply (V/Ph/Hz)				230 / 1 / 50 | 220/1/60				
AIR	Air Flow		H	m³/h	968	1504	1911	2720	3311
			M		846	1306	1710	2411	2902
			L		429	617	971	1894	2171
	Available ESP Pressure		H	Pa	50				
			M						
			L		50	40	50	50	60
COOLING	Cooling Capacity		H	kW	4.84	7.1	10.29	13.52	15.09
			M		4.32	6.36	9.44	12.31	13.68
			L		2.59	3.59	6.13	10.3	10.9
	Sensible Cooling Capacity		H		3.49	5.14	7.43	9.77	10.83
			M		3.13	4.58	6.8	8.86	9.74
			L		1.82	2.49	4.3	7.29	7.67
HEATING	Heating Capacity		H	kW	4.51	7.11	9.25	13.11	15.7
			M		4.08	6.37	8.51	11.95	14.14
			L		2.43	3.59	5.48	9.9	11.31
	Max. Electric Heater				3	3	6	9	9
SOUND	Pressure Level	Outlet		db(A)	51/49/42	52/50/44	56/54/49	54/51/47	59/57/55
		Inlet + Radiated			54/52/45	55/53/47	59/57/52	57/54/50	61/59/57
	Power Level	Outlet			60/58/51	61/59/53	65/63/56	63/60/56	68/66/64
		Inlet + Radiated			63/61/54	64/62/56	68/66/59	66/63/59	70/68/66
ELECTRICAL (Fan Motor)	Power Input (Cooling) [1]		H	W	375	501	505	1001	1005
			M		341	385	429	770	854
			L		291	270	330	539	657
	Power Input (Heating) [1]		H		1.15	1.48	2.35	3.08	3.3
			M		829	1217	1763	2318	2586
			L		740	1091	1619	2111	2344
	Running Current		H	A	445	616	1051	1765	1869
HYDRONIC	Cooling Water Flow Rate		H	L/h	76.29	63.75	73.29	51.03	66.78
			M		62.19	52.32	62.86	43.09	55.97
			L		24.84	18.71	28.87	31.23	37.21
	Cooling Pressure Drop		H	kPa	773	1218	1586	2247	2692
			M		700	1092	1459	2049	2425
			L		417	616	940	1696	1939
	Heating Water Flow Rate		H	L/h	51.41	49.08	46.67	37.36	55.76
			M		42.96	40.29	40.17	31.64	46.2
			L		16.92	14.38	18.2	22.52	30.89
	Heating Pressure Drop		H	kPa	0.87	1.32	1.92	2.59	2.84
			M		35	28.80	33.10	17.95	29.15
			L		21.80	20.70	18.20	15.75	18.22
	Water Content			L	0.87	1.32	1.92	2.59	2.84

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45C / 40°C

(1): Fan motor power includes PCB power input.

For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 4 row, 2 pipe with **EC Motor**

	PDL-4R-[SIZE]-V-EC				400	600	1000	1400	1600
UNIT GENERAL SPECS	Configuration				2PIPE				
	Number of Fan Blowers				1	2		3	4
	Power Supply (V/Ph/Hz)				230 / 1 / 50 | 220/1/60				
AIR	Air Flow		H	m³/h	869	1291	1721	2404	2826
			M		748	1075	1526	2081	2489
			L		575	946	1105	1961	1769
	Available ESP Pressure		H	Pa	50				
			M						
			L						
COOLING	Cooling Capacity		H	kW	3.58	5.67	8.16	10.94	11.95
			M		3.21	5.11	7.56	10	11.01
			L		1.9	2.83	4.85	8.28	8.76
	Sensible Cooling Capacity		H		2.5	3.98	5.74	7.64	8.34
			M		2.25	3.56	5.28	6.94	7.65
			L		1.29	1.91	3.3	5.67	6
SOUND	Pressure Level	Outlet		db(A)	51/49/42	52/50/44	56/54/47	54/51/47	59/57/55
		Inlet + Radiated			54/52/45	55/53/47	59/57/52	57/54/50	61/59/57
	Power Level	Outlet			60/58/51	61/59/53	65/63/56	63/60/56	68/66/64
		Inlet + Radiated			63/61/54	64/62/56	68/66/59	66/63/59	70/68/66
ELECTRICAL (Fan Motor)	Power Input (Cooling) [1]		H	W	132	170	270	355	380
			M		98	122	208	220	310
			L		43	61	118	126	190
	Running Current		H	A	1.15	1.48	2.35	3.08	3.3
HYDRONIC	Cooling Water Flow Rate		H	L/h	341	540	777	1042	1138
			M		306	486	720	953	1049
			L		181	269	462	789	835
	Cooling Pressure Drop		H	kPa	20.89	19.97	22.75	16.25	20.64
			M		17.15	16.53	19.8	13.83	17.81
			L		6.66	5.71	8.92	9.85	11.81
	Chilled Water Content			L	1.16	1.76	2.26	3.45	3.79

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45C / 40°C

(1): Fan motor power includes PCB power input.

For High ΔT Condition and Hot Water Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 3 + 1 row (Auxiliary Heating coil),4 pipe with EC Motor

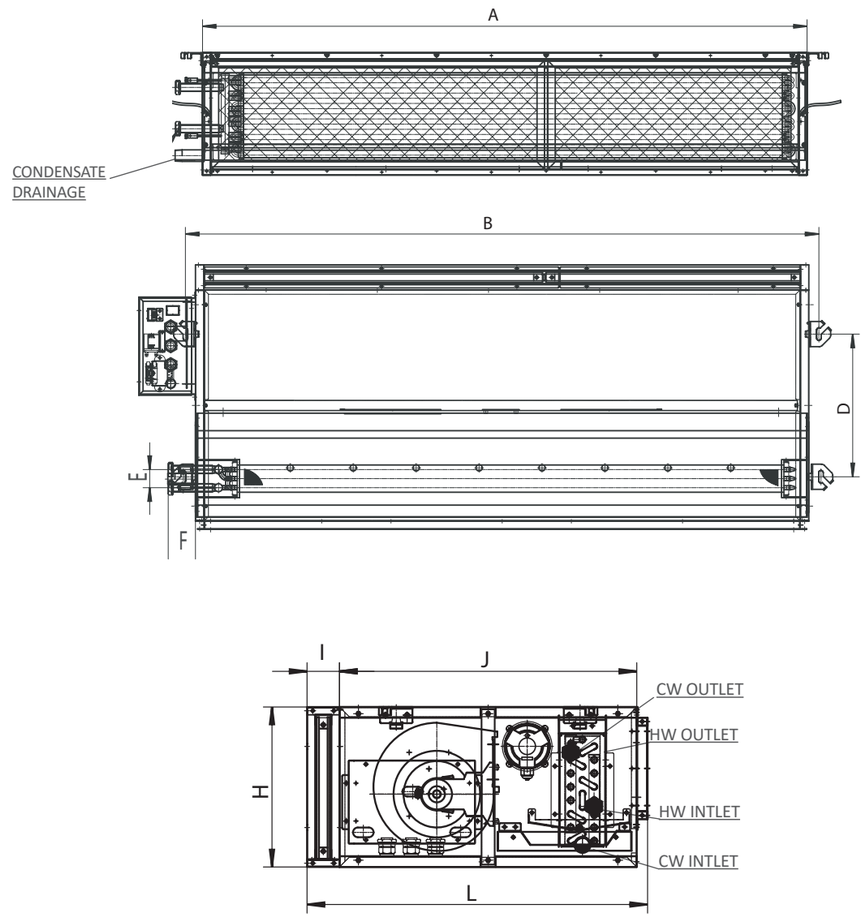
UNIT GENERAL SPECS	PDL-3R+1-[SIZE]-P-EC			400	600	1000	1400	1600
	Configuration			4PIPE				
	Number of Fan Blowers			1	2		3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60				
AIR	Air Flow	H	m³/h	869	1291	1721	2404	2888
		M		748	1075	1526	2081	2704
		L		575	946	1105	1961	2275
	Available ESP Pressure	H	Pa	60	60	60	60	57
		M		60	60	60	60	50
		L		30	30	40	40	39
COOLING	Cooling Capacity	H	kW	4.40	6.32	9.50	12.31	13.68
		M		3.94	5.51	8.69	10.99	13.01
		L		3.22	4.98	6.79	10.50	11.38
	Sensible Cooling Capacity	H		3.20	4.55	6.84	8.86	9.74
		M		2.84	3.92	6.23	7.81	9.22
		L		2.30	3.52	4.78	7.44	8.01
HEATING	Heating Capacity	H	kW	3.36	4.95	6.87	9.26	10.86
		M		3.01	4.30	6.24	8.28	10.34
		L		2.46	3.91	4.89	7.86	9.04
SOUND	Pressure Level	Outlet	db(A)	51/49/42	52/50/44	56/54/47	54/51/47	59/57/55
		Inlet + Radiated		54/52/45	55/53/47	59/57/52	57/54/50	61/59/57
	Power Level	Outlet		60/58/51	61/59/53	65/63/56	63/60/56	68/66/64
		Inlet + Radiated		63/61/54	64/62/56	68/66/59	66/63/59	70/68/66
ELECTRICAL (Fan Motor)	Power Input[1]	H	W	132	170	270	355	380
		M		98	122	208	220	310
		L		43	61	118	126	190
	Running Current	H	A	1.15	1.48	2.35	3.08	3.30
HYDRONIC	Cooling Water Flow Rate	H	L/h	755	1083	1628	2111	2344
		M		675	944	1490	1884	2231
		L		552	854	1165	1800	1951
	Cooling Pressure Drop	H	kPa	64.40	51.70	63.50	43.1	55.97
		M		52.70	40.30	54.10	35.1	51.18
		L		36.60	33.70	34.70	32.3	40.21
	Heating Water Flow Rate	H	L/h	288	424	589	793	931
		M		258	369	535	710	886
		L		211	336	419	673	775
	Heating Pressure Drop	H	kPa	18	6.90	16.60	2.90	4.20
		M		14.80	5.40	14	2.40	3.80
		L		10.30	4.50	9	2.20	3
	Chilled Water Content		L	0.87	1.32	1.92	2.59	2.84
	Hot Water Content			0.29	0.44	0.64	0.86	0.95

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65C / 55°C

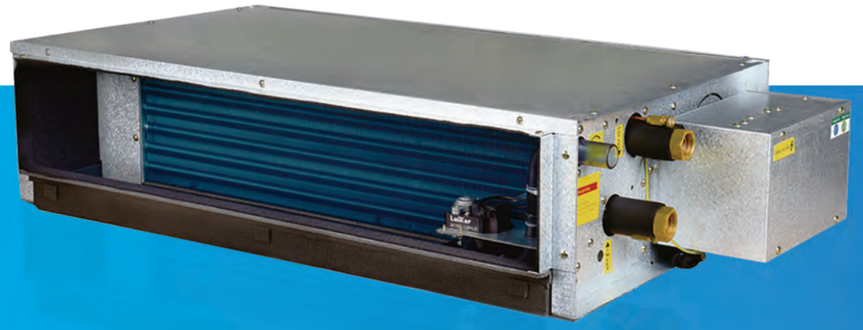
(1): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS



Model	Unit Dimensions (mm)							
	A	B	D	E	F	H	I	L
PDL-400	762	810	340	43.3	65	296	60	630
PDL-600	1062	1110	340	43.3	65	296	60	630
PDL-800	1462	1510	340	43.3	65	296	60	630
PDL-1400	1562	1610	430	43.3	65	350	60	720
PDL-1600	1702	1610	430	43.3	65	350	60	720

PDL				400	600	800	1400	1600
CONNECTIONS	Water	Type		Socket (Threaded Female)				
		In / Out	mm (in)	19.05 (3/4")				
	Condensate Drainage		mm (in)					
WEIGHT	NET		KG	43	54	67	83	-



LOW STATIC DUCTED
Intelligent Fan Coils

PDWSL-EC

PRODUCT PRESENTATION

The Polar Air Low ESP Slim ducted range has been designed to meet the specific demands of performance, size, acoustics, low energy usage, ease of installation, and maintenance for low height concealed applications in buildings with limited ceiling spaces. This product represents one of the most cost-effective solutions to provide a comfortable environment for both commercial and residential applications.

PRODUCT RANGE

The Intelligent Low ESP Slim ducted range offers the following EC motor 230V/50Hz range with the following capacities at H speed:

	COOLING	HEATING	AIR FLOW
2 Pipe	2.98 - 6.36 kW	2.98 - 6.35 kW	600 - 1240 m³/h
4 Pipe	3.07 - 6.42 kW	2.52 - 5.29 kW	622 - 1255 m³/h

COOLING HEATING AIR FLOW

PRODUCT FEATURES

Structure. 200mm low height design perfect for reduced space concealed installations, Made from heavy-gauge galvanized steel panels with couplings for the connection of ducting and gravity drain pan with insulation for condensation. Optional fire-resistant internal NBR insulation to provide both thermal and acoustic insulation. Insulation also fitted on the top coil.

Water Coils. Built with seamless copper tubes and headers, with the tubes mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. We test the coils at 35 bar, and the maximum operating limit we recommend is at 20 bar. It includes manual air vent and water purge valve.

Fan Blowers. Heavy-gauge galvanized steel with die-formed inlet cones housings, inlet forward curved centrifugal type, statically and dynamically balanced for smooth and quiet operation.

Condensate Pans. Steel drain pans positively sloped, with powder finish, coated with self-extinguishing closed cell expanded polyethylene with thermal properties. The drain pan outlet is 3/4" (standard on the same side of coil connections).

Filtration. Easily removable and washable filters made from self-extinguishing acrylic with EU2 (G2) (Merv 2-4) efficiency class. G4 (Merv 8) efficiency filters are optional.

Performance. Built with optimized forward-curved metal centrifugal fans to achieve minimum noise levels as well as an integral condensate pump with a maximum head of 700mm. The water circuit designs have been tested in accredited thermal test rooms to guarantee dependable performance and low water pressure drops.

Motors. EC motors with included driven controls PCB, constant torque, permanent magnet, with 3 speeds pre-set to allow precise air balancing. The driven PCB needs to communicate with a thermostat.

Flexibility. This Low Static Ducted range is available with left or right-hand water connections, which cannot be exchanged on site.

OPTIONAL ACCESSORIES*

Thermostat Controller

Wall Pad Controller

PTC Electric heater
1.5 - 3 kW

Valve kit
2 or 3-way 3/4" on/off or modulating

(*): Please refer to page 146 for further information on accessories

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 3 row, 2 pipe with **EC Motor**

UNIT GENERAL SPECS	PDWSL-3R-[Size]-V-EC			01	02	03
	Configuration			2PIPE		
	Number of Fan Blowers			1	3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50		
AIR	Air Flow	H	m³/h	600	920	1240
		M		435	650	868
		L		175	269	390
	Available ESP Pressure	H	Pa	12		
		M				
		L				
COOLING	Cooling Capacity	H	kW	2.98	4.74	6.36
		M		2.33	3.63	4.82
		L		1.12	1.74	2.47
	Sensible Cooling Capacity	H		2.13	3.37	4.52
		M		1.64	2.55	3.39
		L		0.79	1.22	1.74
HEATING	Heating Capacity	H	kW	3.1	4.87	6.54
		M		2.41	3.73	4.96
		L		1.16	1.79	2.54
	Max. Electric Heater			1	2	3
SOUND	Pressure Level	Outlet	db(A)	43/37/22	45/40/25	46/41/26
		Inlet + Radiated		46/40/25	48/43/28	49/44/29
	Power Level	Outlet		52/46/31	54/49/34	55/50/35
		Inlet + Radiated		55/49/34	57/52/37	58/53/38
ELECTRICAL (Fan Motor)	Power Input [1]	H	W	42	70	84
		M		23	40	43
		L		11	15	17
	Running Current	H	A	0.37	0.61	0.73
HYDRONIC	Cooling Water Flow Rate	H	L/h	512	813	1090
		M		399	622	826
		L		191	299	424
	Cooling Pressure Drop	H	kPa	28.6	30.79	28.98
		M		18.26	19.02	17.61
		L		4.87	5.07	5.29
	Heating Water Flow Rate	H	L/h	531	835	1121
		M		414	639	850
		L		199	307	436
	Heating Pressure Drop	H	kPa	23.20	24.53	23.16
		M		14.81	15.15	14.07
		L		3.95	4.04	4.23
	Chilled Water Content		L	0.79	1.36	1.80

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45C / 40°C

(1): Fan motor power includes PCB power input.

TECHNICAL SPECIFICATIONS

Hydronic Low Static Ducted, 3 + 1 row (Auxiliary Heating coil),4 pipe with **EC Motor**

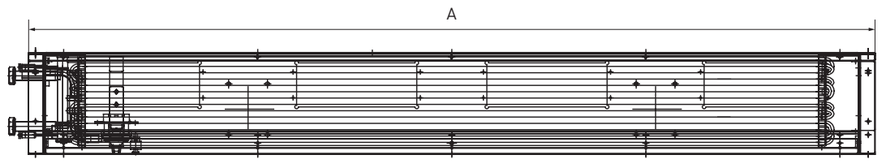
UNIT GENERAL SPECS	PDWSL-3+1R-[Size]-P-EC			01	02	03
	Configuration			4PIPE		
	Number of Fan Blowers			1	3	4
	Power Supply (V/Ph/Hz)			230 / 1 / 50		
AIR	Air Flow	H	m³/h	622	944	1255
		M		456	680	897
		L		180	251	319
	Available ESP Pressure	H	Pa	12		
		M				
		L				
COOLING	Cooling Capacity	H	kW	3.07	4.83	6.42
		M		2.42	3.72	4.95
		L		1.12	1.68	2.16
	Sensible Cooling Capacity	H		2.19	3.43	4.57
		M		1.71	2.62	3.49
		L		0.79	1.18	1.51
HEATING	Heating Capacity	H	kW	2.52	3.94	5.29
		M		1.99	3.04	4.08
		L		0.92	1.37	1.78
SOUND	Pressure Level	Outlet	db(A)	43/37/22	45/40/25	46/41/26
		Inlet + Radiated		46/40/25	48/43/28	49/44/29
	Power Level	Outlet		52/46/31	54/49/34	55/50/35
		Inlet + Radiated		55/49/34	57/52/37	58/53/38
ELECTRICAL (Fan Motor)	Power Input [1]	H	W	42	70	84
		M		23	40	43
		L		11	15	17
	Running Current	H	A	0.37	0.61	0.73
HYDRONIC	Cooling Water Flow Rate	H	L/h	526	828	1100
		M		414	638	848
		L		191	288	370
	Cooling Pressure Drop	H	kPa	30.06	31.82	29.46
		M		19.58	19.93	18.45
		L		4.87	4.77	4.14
	Heating Water Flow Rate	H	L/h	216	338	453
		M		170	260	350
		L		79	118	152
	Heating Pressure Drop	H	kPa	9.53	4.52	9.55
		M		6.21	2.83	5.98
		L		1.54	0.68	1.34
	Heating Water Content		L	0.79	1.36	1.80
	Cooling Water Content			0.26	0.45	0.60

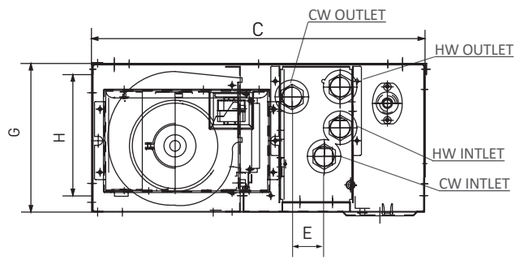
TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65°C / 55°C

(1): Fan motor power includes PCB power input.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS





Model	Unit Dimensions (mm)						
	A	B	C	D	E	G	H
PDWSL 01	800	388	450	165	43.3	200	170
PDWSL 02	1235	388	450	165	43.3	200	170
PDWSL 03	1570	388	450	165	43.3	200	170

PDWSL				01	02	03
CONNECTIONS	Water	Type		Socket (Threaded Female)		
		In / Out	mm (in)	19.05 (3/4")		
	Condensate Drainage		mm (in)	Outside diameter: 25.4 (1") Inside diameter: 20.6 (13/16")		
WEIGHT	Net		Kg	20	28	35

MEDIUM/HIGH ESP DOUBLE SKIN DUCTED	PDWD-EC [EC MOTOR]
MEDIUM/HIGH ESP DUCTED	PDWC [AC MOTOR] PDWC-EC [EC MOTOR]
MEDIUM/ HIGH ESP DUCTED	PDWB [AC MOTOR] PDWB-EC [EC MOTOR]

MEDIUM/ HIGH STATIC DUCTED **FAN COILS**

DUCTED MEDIUM/HIGH STATIC

Intelligent Fan Coils

PDWD-EC

PRODUCT PRESENTATION

The Polar Air Intelligent Medium & High static Ducted units have been specifically designed to satisfy very demanding markets such as the Middle East or Australia. This range has a double skin casing, which differentiates it from our PDWC and PDWB ranges.

PRODUCT RANGE

The Polar Air Intelligent Medium/ High Static Double Skin Ducted units offer the following EC motor 230V/50Hz range with the following capacities at H speed:

2 Pipe	3.08 - 23.54 kW	4 Pipe 2.86 - 22.73kW
	3.78 - 24.13 kW	3.03 - 30.79 kW
	602 - 5389 m³/h	602 - 5264 m³/h

COOLING HEATING AIR FLOW

PRODUCT FEATURES

Structure. The casing is made with steel panels painted in RAL 9010. It consists of a **double skin**, using a sandwich panel, consisting of two walls: inner and outer wall with inner insulation. The inner wall is made of plane galvanized steel of 1mm thickness, and the outer wall is made of pre-coated steel of 1mm thickness. The insulation consists of high-pressure PU foam sandwiched in between, thus producing a rigid and robust panel. The unit includes a gravity drain pan within the casing for drain pipe connection.

Water Coils. Built with seamless copper tubes and headers, the tubes mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. We test the coils at 35 bar, and the maximum operating limit we recommend is at 20 bar. It includes a manual air vent and water purge valve.

Fan Blowers. Heavy-gauge galvanized steel with die-formed inlet cones housings, double inlet forward curved centrifugal type, statically and dynamically balanced for smooth and quiet operation.

Motors. EC motors with driven controls PCB, constant torque, permanent magnet, and 3 speeds pre-set to allow precise air balancing. Filtration. Easily removable and washable filters made from self-extinguishing acrylic with EU2 (G2) (Merv 2-4) efficiency class. G4 (Merv 8) efficiency filters are optional.

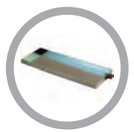
Condensate Pans. Painted steel drain pans with powder finish positively sloped, coated with self-extinguishing closed cell expanded polyethene with thermal properties. The drain pan outlet is 3/4" (standard on the same side of coil connections).

Flexibility. This Medium/ High Static Ducted range is available with left or right-hand water connections, which cannot be exchanged on site.

OPTIONAL ACCESSORIES*

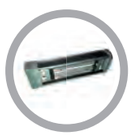
Thermostat Controller

Wall Pad Controller



Stainless steel drain pan

MERV8 | G4 Filter



Electric heater module
3 - 9 kW

Plenum
Discharge/Return Round

Valve kit
2/3 way Ball 3/4"
motorized or modulating

(*): Please refer to page 146 for further information on accessories

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted Double Skin, 3 row, 2 pipe with **EC Motor**

	PDWD-3R-[SIZE]-V-EC				400	800	1200	1600	2000
UNIT GENERAL SPECS	Configuration				2 PIPE				
	Number of Fan Blowers				1	2			4
	Power Supply (V/Ph/Hz)				230 / 1 / 50 | 220/1/60				
AIR	Air Flow	H		m³/h	593	1116	2092	2510	5020
		M			445	1230	1795	2047	4094
		L			209	409	624	1122	2245
	Available ESP Pressure	H		Pa	150				
		M							
		L			90				
COOLING	Cooling Capacity	H		kW	3.31	5.98	10.14	12.25	21.96
		M			1.99	4.96	7.71	9.21	16.59
		L			1.42	2.67	3.85	6.52	11.83
	Sensible Cooling Capacity	H			2.31	4.22	7.25	8.71	16.05
		M			1.36	3.48	5.43	6.47	11.89
		L			0.99	1.87	2.7	4.53	8.35
HEATING	Heating Capacity	H		kW	3.35	6.14	10.45	12.74	22.82
		M			2.02	5.09	7.95	9.58	17.24
		L			1.44	2.74	3.97	6.78	12.29
	Max. Electric Heater				3		6	9	
SOUND	Pressure Level	Outlet		db(A)	56/53/43	58/56/47	56/52/45	60/58/50	65/63/60
		Inlet + Radiated			59/56/46	61/59/50	57/55/48	63/61/53	65/63/60
	Power Level	Outlet			65/62/52	67/65/56	65/61/54	69/67/59	74/72/69
		Inlet + Radiated			68/65/55	70/68/59	68/64/57	72/70/62	74/72/69
ELECTRICAL (Fan Motor)	Power Input[1]	H		W	202	281	310	477	672
		M			121	208	151	304	546
		L			34	65	70	108	280
	Running Current	H		A	1.76	2.44	2.7	4.15	5.84
HYDRONIC	Cooling Water Flow Rate	H		L/h	567	1024	1738	2099	3764
		M			342	850	1322	1578	2844
		L			243	458	660	1118	2028
	Cooling Pressure Drop	H		kPa	17.51	17.12	30.36	23.15	42.94
		M			7.04	12.25	18.54	13.85	25.92
		L			3.82	4.02	5.32	7.45	14.1
	Heating Water Flow Rate	H		L/h	574	1052	1792	2183	3912
		M			346	873	1363	1642	2955
		L			246	470	681	1163	2108
	Heating Pressure Drop	H		kPa	13.46	13.71	24.59	19.03	35.22
		M			5.41	9.8	15.02	11.39	21.26
		L			2.94	3.22	4.31	6.12	11.57
	Water Content			L	1.24	1.787	2.364	3.239	3.677

TESTING CONDITIONS

Cooling mode: *Return air temperature: 27°C DB / 19°C WB* *Inlet / outlet water temperature: 7°C / 12°C*
Heating mode: *Return air temperature: 20°C* *Inlet / outlet water temperature: 45C / 40°C*

(1): Fan motor power includes PCB power input.
(2): Sound Power in compliance with EN9614-2.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted Double Skin, 4 row, 2 pipe with **EC Motor**

	PDWD-4R-[SIZE]-V-EC				400	800	1200	1600	2000
UNIT GENERAL SPECS	Configuration				2 PIPE				
	Number of Fan Blowers				1	2			4
	Power Supply (V/Ph/Hz)				230 / 1 / 50 | 220/1/60				
AIR	Air Flow	H		m³/h	558	1006	2011	2445	4890
		M			262	757	1343	1610	3220
		L			154	314	445	971	1943
	Available ESP Pressure	H		Pa	150				
		M							
		L			90				
COOLING	Cooling Capacity	H		kW	2.72	4.72	8.67	10.54	19.22
		M			1.47	3.78	6.35	7.64	14.03
		L			0.96	1.82	2.56	5.06	9.43
	Sensible Cooling Capacity	H			1.84	3.2	5.94	7.2	13.43
		M			0.97	2.52	4.29	5.13	9.58
		L			0.64	1.21	1.71	3.42	6.29
SOUND	Pressure Level	Outlet		db(A)	56/53/43	58/56/47	56/52/45	60/58/50	65/61/51
		Inlet + Radiated			59/56/46	61/59/50	59/55/48	63/61/53	67/63/53
	Power Level	Outlet			65/62/52	67/65/56	65/61/54	69/67/59	74/70/60
		Inlet + Radiated			68/65/55	70/68/59	68/64/57	72/70/62	74/72/69
ELECTRICAL (Fan Motor)	Power Input (Cooling)[1]	H		W	202	281	310	477	672
		M			121	208	151	304	546
		L			34	65	70	108	280
	Running Current	H		A	1.76	2.44	2.7	4.15	5.84
HYDRONIC	Cooling Water Flow Rate	H		L/h	259	450	826	1004	1831
		M			140	360	605	728	1336
		L			92	173	244	482	898
	Cooling Pressure Drop	H		kPa	17.26	9.59	32.7	18.24	64.29
		M			5.67	6.41	18.65	10.21	36.44
		L			2.65	1.72	3.64	4.87	17.82
	Water Content			L	1.65	2.38	3.15	4.31	4.90

TESTING CONDITIONS

Cooling mode: *Return air temperature: 27°C DB / 19°C WB* *Inlet / outlet water temperature: 7°C / 12°C*
Heating mode: *Return air temperature: 20°C* *Inlet / outlet water temperature: 45C / 40°C*

(1): Fan motor power includes PCB power input.
(2): Sound Power in compliance with EN9614-2.
For High ΔT Condition and Hot Water Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted Double Skin, 6 row, 2 pipe with **EC Motor**

UNIT GENERAL SPECS	PDWD-6R-[SIZE]-V-EC			400	800	1200	1600	2000
	Configuration			2 PIPE				
	Number of Fan Blowers			1	2			4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60				
AIR	Air Flow	H	m³/h	500	823	1876	2336	4673
		M		206	612	1205	1477	2954
		L		305	575	937	1386	2773
	Available ESP Pressure	H	Pa	150				
		M						
		L		80				
COOLING	Cooling Capacity	H	kW	2.85	4.77	9.61	12.29	22.23
		M		1.39	3.73	6.75	8.64	15.71
		L		1.1	2.22	3.11	6.08	11.44
	Sensible Cooling Capacity	H		1.91	3.16	6.5	8.28	15.28
		M		0.93	2.44	4.48	5.7	10.54
		L		0.72	1.47	2.06	4.06	7.55
SOUND	Pressure Level	Outlet	db(A)	56/53/43	58/56/47	56/52/45	62/59/48	65/63/60
		Inlet + Radiated		59/56/46	61/59/50	59/55/48	64/61/50	65/63/60
	Power Level	Outlet		65/62/52	67/65/56	65/61/54	71/68/57	74/72/69
		Inlet + Radiated		68/65/55	70/68/59	68/64/57	73/70/59	74/72/69
ELECTRICAL (Fan Motor)	Power Input[1]	H	W	202	281	310	477	672
		M		121	208	151	304	546
		L		34	65	70	108	280
	Running Current	H	A	1.76	2.44	2.7	4.15	5.84
HYDRONIC	Cooling Water Flow Rate	H	L/h	272	454	916	1170	2117
		M		133	355	643	823	1496
		L		105	211	296	579	1090
	Cooling Pressure Drop	H	kPa	4.21	4.76	8.75	16.1	55.95
		M		1.16	3.06	4.62	8.54	29.94
		L		0.76	1.2	1.15	4.54	16.94
	Water Content		L	1.65	2.38	3.15	4.31	4.90

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65°C / 55°C

(1): Fan motor power includes PCB power input.
For High ΔT Condition and Hot Water Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted Double Skin, 3+1 row, (Auxiliary Heating coil), 4 pipe with **EC Motor**

UNIT GENERAL SPECS	PDWD-3+1R-[SIZE]-P-EC			400	800	1200	1600	2000
	Configuration			4 PIPE				
	Number of Fan Blowers			1	2			4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60				
AIR	Air Flow	H	m³/h	558	1006	2011	2445	4890
		M		262	757	1343	1610	3220
		L		349	650	1078	1506	3012
	Available ESP Pressure	H	Pa	150				
		M						
		L		90				
COOLING	Cooling Capacity	H	kW	3.17	5.48	9.9	12.02	21.58
		M		1.71	4.38	7.24	8.71	15.75
		L		1.12	2.11	2.92	5.77	10.58
	Sensible Cooling Capacity	H		2.22	3.86	7.05	8.53	15.76
		M		1.18	3.03	5.09	6.08	11.24
		L		0.77	1.46	2.03	4.05	7.38
HEATING	Heating Capacity	H	kW	2.68	4.57	8.16	9.95	17.98
		M		1.45	3.66	5.97	7.21	13.12
		L		0.95	1.76	2.41	4.78	8.82
	Max. Electric Heater			3		6	9	
SOUND	Pressure Level	Outlet	db(A)	57/53/43	58/56/47	56/52/45	60/58/50	65/63/60
		Inlet + Radiated		59/56/46	61/59/50	59/55/48	63/61/53	65/63/60
	Power Level	Outlet		66/62/52	67/65/56	65/61/54	69/67/59	74/72/69
		Inlet + Radiated		68/65/55	70/68/59	68/64/57	72/70/62	74/72/69
ELECTRICAL (Fan Motor)	Power Input[1]	H	W	202	281	310	477	672
		M		121	208	151	304	546
		L		34	65	70	108	280
	Running Current	H	A	1.76	2.44	2.7	4.15	5.84
HYDRONIC	Cooling Water Flow Rate	H	L/h	544	939	1697	2061	3700
		M		293	751	1242	1493	2699
		L		192	362	501	989	1814
	Cooling Pressure Drop	H	kPa	16.28	14.64	29.07	22.38	41.62
		M		5.35	9.79	16.58	12.53	23.6
		L		2.5	2.63	3.24	5.98	11.54
	Heating Water Flow Rate	H	L/h	230	392	699	853	1541
		M		124	313	512	618	1124
		L		81	151	207	410	756
	Heating Pressure Drop	H	kPa	16.88	9.09	30.26	16.75	58.75
		M		5.55	6.08	17.25	9.38	33.31
		L		2.59	1.63	3.37	4.47	16.29
	Cooling Water Content		L	1.24	1.787	2.364	3.239	3.677
	Heating Water Content			0.413	0.596	0.788	1.08	1.226

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65°C / 55°C

(1): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted Double Skin, 4+2 row, (Auxiliary Heating coil),4 pipe with **EC Motor**

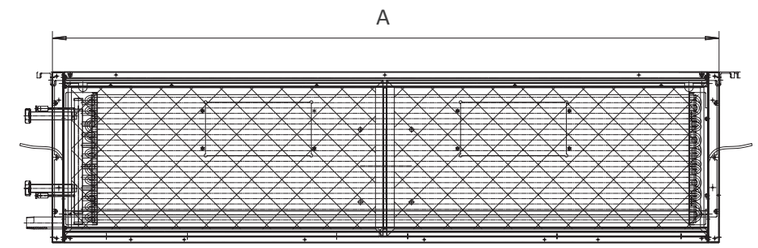
	PDWD-4+2R-[SIZE]-P-EC				400	800	1200	1600	2000
UNIT GENERAL SPECS	Configuration				4 PIPE				
	Number of Fan Blowers				1	2			4
	Power Supply (V/Ph/Hz)				230 / 1 / 50 | 220/1/60				
AIR	Air Flow		H	m³/h	500	823	1876	2336	4673
			M		206	612	1205	1477	2954
			L		159	323	462	985	1971
	Available ESP Pressure		H	Pa	150				
			M						
			L		80				
COOLING	Cooling Capacity		H	kW	2.5	4.05	8.23	10.23	18.58
			M		1.22	3.17	5.78	7.19	13.13
			L		0.96	1.98	2.66	5.06	9.57
	Sensible Cooling Capacity		H		1.68	2.72	5.62	6.98	12.94
			M		0.82	2.1	3.87	4.8	8.93
			L		0.64	1.26	1.78	3.42	6.39
HEATING	Heating Capacity		H	kW	4	6.46	12.96	16.15	29.08
			M		1.95	5.06	9.09	11.36	20.55
			L		1.54	3.01	4.19	7.99	14.97
	Max. Electric Heater				3		6	9	
SOUND	Pressure Level	Outlet		db(A)	56/53/43	58/56/47	56/52/45	60/58/50	65/63/60
		Inlet + Radiated			59/56/46	61/59/50	59/55/48	63/61/53	65/63/60
	Power Level	Outlet			65/62/52	67/65/56	65/61/54	69/67/59	74/72/69
		Inlet + Radiated			68/65/55	70/68/59	68/64/57	72/70/62	74/72/69
ELECTRICAL (Fan Motor)	Power InpuT		H	W	202	281	310	477	672
			M		121	208	151	304	546
			L		34	65	70	108	280
	Running Current @H Speed		H	A	1.76	2.44	2.7	4.15	5.84
HYDRONIC	Cooling Water Flow Rate		H	L/h	238	386	784	974	1770
			M		116	302	550	685	1250
			L		92	180	254	482	911
	Cooling Pressure Drop		H	kPa	14.75	7.29	29.77	17.27	60.46
			M		4.05	4.69	15.74	9.16	32.35
			L		2.65	1.84	3.91	4.87	18.3
	Heating Water Flow Rate		H	L/h	343	554	1111	1385	2493
			M		167	434	780	973	1761
			L		132	258	359	685	1283
	Heating Pressure Drop		H	kPa	10.07	4.95	19.97	11.55	40.46
			M		2.77	3.18	10.56	6.12	21.65
			L		1.81	1.25	2.62	3.26	12.25
	Cooling Water Content			L	1.65	2.38	3.15	4.31	4.90
	Heating Water Content				0.41	0.59	0.78	1.08	1.22

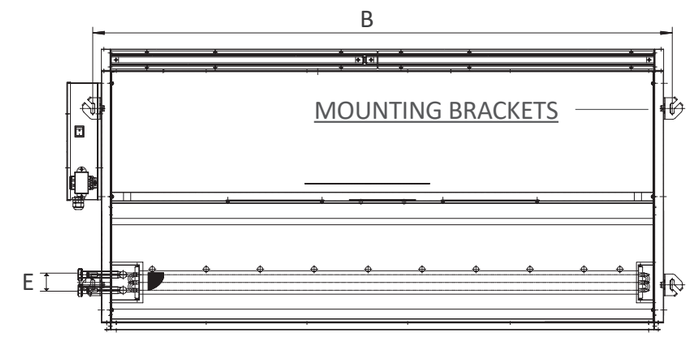
TESTING CONDITIONS

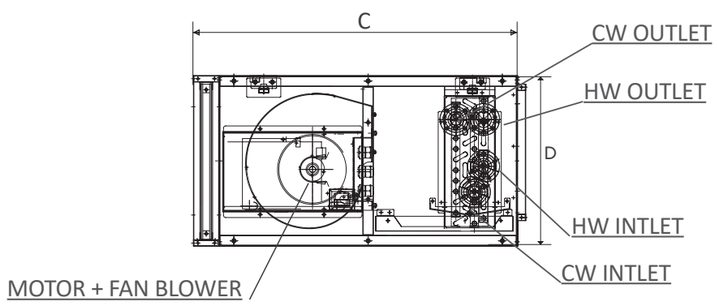
Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65°C / 55°C

(1): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS







Model	Unit Dimensions (mm)							
	A	B	C	D	E(1)	E(2)	E(3)	E(4)
PDWD-400	862	910	720	350	43.3	65	108.3	#
PDWD-800	1062	1110	780	400	43.3	65	108.3	#
PDWD-1200	1262	1310	780	400	43.3	65	108.3	#
PDWD-1600	1562	1610	780	400	43.3	65	108.3	#
PDWD-2000	1928	1976	780	400	43.3	65	108.3	54,95

PDWD				400	800	1200	1600	2000
CONNECTIONS	Water	Type		Socket (Threaded Female)				
		In / Out	mm (in)	19.05 (3/4")				1"
	Condensate Drainage		mm (in)	19.05 (3/4")				
WEIGHT	Net		kg	17	72	24	28	120

E(1): valid for PDWD 3R and PDWD 3+1R only.
E(2): valid for PDWD 4R and PDWD-4+2R-800 to 1600 only.
E(3):valid for PDWD 6R only.
E(4): valid for PDWD-4+2R-2000 only.

DUCTED MEDIUM/ HIGH STATIC

Intelligent Fan Coils

PDWC-EC
PDWC-AC

PRODUCT PRESENTATION

The Polar Air Medium/ High ESP Fan coil ducted ranges have been specifically designed to satisfy medium cooling capacity at medium external static pressure applications. They represent one of the most cost-effective solutions to provide a comfortable environment for both commercial and residential applications. With 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 Polar Air Medium/ High ESP Fan coil ducted units offer the following EC and AC motor 230V/50Hz ranges:

	EC Motor	AC Motor		EC Motor	AC Motor
2 Pipe	3.45 - 16.86 kW	3.36 - 17.24 kW	4 Pipe	3.00 - 16.86 kW	3.00 - 16.86 kW
	2.23 - 10.80 kW	2.82 - 14.34 kW		3.44 - 17.67 kW	3.38 - 17.67 kW
	668 - 3642 m³/h	631 - 3668 m³/h		633 - 3651 m³/h	628 - 3668 m³/h

COOLING HEATING AIR FLOW

PRODUCT FEATURES

Structure. Made from heavy-gauge galvanized steel panels with couplings for the connection of ducting and gravity drain pan with insulation for condensation. Optional fire-resistant internal NBR insulation to provide both thermal and acoustic insulation. Insulation also fitted on the top coil. Low height dimensions for perfect low height ceiling concealed installations.

Water Coils. Built with seamless copper tubes and headers, with the tubes mechanically expanded into corrugated aluminum fin material for a permanent primary to secondary surface bond. We test the coils at 35 bar, and the maximum operating limit we recommend is at 20 bar. It includes manual air vent and water purge valve.

Fan Blowers. Galvanized steel with die-formed inlet cones housings, double inlet and double width centrifugal type, statically and dynamically balanced for smooth and quiet operation.

Condensate Pans. Steel drain pans with powder finish positively sloped, coated with self-extinguishing closed cell expanded polyethylene with thermal properties. The drain pan outlet is 3/4" (standard on the same side of coil connections).

Filtration. Easily removable and washable filters made from self-extinguishing acrylic with EU2 (G2) (Merv 2-4) efficiency class. G4 (Merv 8) efficiency filters are optional.

Performance. Built with optimized water circuit designs and tested in accredited thermal test rooms to guarantee dependable performance and low water pressure drops. These series can supply more airflow at higher External Static Pressure (ESP), with airflow ranges varying from 578 to 3160 m³/h at medium speed at 120Pa ESP.

Motors. EC motors with included driven controls PCB, constant torque, permanent magnet, with 3 speeds pre-set to allow precise air balancing.

AC motors are PSC with permanently split-capacitor with ball bearing with internal thermal overload protection.

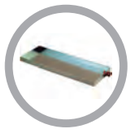
Flexibility. This Medium/ High Fan coil ducted range is available with left or right-hand water connections or easily exchanged on site.

OPTIONAL ACCESSORIES*

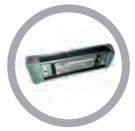
Thermostat Controller

Wall Pad Controller

MERV8 | G4 Filter



Stainless steel drain pan



Electric heater module
3 - 9 kW

Valve kit
2 or 3-way 3/4" on/off or modulating

(*): Please refer to page 146 for further information on accessories

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted, 3 row, 2 pipe with **EC Motor**

	PDWC-3R-[SIZE]-V-EC				400	500	600	800	1000	1400	1600	2000
UNIT GENERAL SPECS	Configuration				2 PIPE							
	Number of Fan Blowers				1		2					4
	Power Supply (V/Ph/Hz)				230 / 1 / 50 | 220/1/60							
AIR	Air Flow		H	m³/h	487	678	1128	1429	1830	2322	2694	3651
			M		264	438	872	1230	1284	1795	2047	2948
			L		213	308	489	579	621	944	1393	1713
	Available ESP Pressure		H	Pa	120							
			M									
			L		70							
COOLING	Cooling Capacity		H	kW	2.7	3.69	5.9	7.27	9.22	11.63	13.28	16.86
			M		1.66	2.61	4.86	6.49	7.01	9.52	10.82	14.29
			L		1.38	1.95	3.07	3.56	3.9	5.75	8.01	9.46
	Sensible Cooling Capacity		H		1.9	2.59	4.22	5.25	6.52	8.26	9.47	12.35
			M		1.14	1.79	3.42	4.63	4.91	6.67	7.62	10.33
			L		0.96	1.34	2.11	2.47	2.73	3.93	5.54	6.68
HEATING	Heating Capacity		H	kW	2.8	3.77	6	7.24	10.32	11.92	13.84	17.67
			M		1.73	2.67	4.94	6.46	7.88	9.82	11.09	14.97
			L		1.42	1.99	3.12	3.55	4.34	5.91	8.27	9.91
	Max. Electric Heater				3			6			9	
SOUND	Pressure Level	Outlet		db(A)	54/50/45	56/53/43	56/54/47	58/56/47	56/52/45	59/57/47	60/58/56	64/62/52
		Inlet + Radiated			57/53/48	59/56/46	59/57/50	61/59/50	59/55/48	62/60/50	63/61/59	67/65/55
	Power Level	Outlet			54/50/45	56/53/43	56/54/47	58/56/47	56/52/45	59/57/47	60/58/56	64/62/52
		Inlet + Radiated			57/53/48	59/56/46	59/57/50	61/59/50	59/55/48	62/60/50	63/61/59	67/65/55
ELECTRICAL (Fan Motor)	Power Input[1] (Cooling)		H	W	152	202	195	281	310	413	477	637
			M		84	121	137	208	151	246	304	461
			L		32	34	62	65	70	72	108	142
	Power Input[1] (Heating)		H		1.32	1.75	1.7	2.45	1.35	1.8	2.1	2.76
			M		463	633	1012	1246	1580	1993	2276	2890
			L		285	448	834	1112	1202	1633	1854	2449
	Runnig Current		H	A	237	334	527	611	669	985	1374	1622
HYDRONIC	Cooling Water Flow Rate		H	L/h	11	20.9	28.49	20.54	26.04	43.89	28.21	26.57
			M		4.6	11.21	20.1	16.73	15.91	30.65	19.51	19.72
			L		3.31	6.62	8.79	5.69	5.54	12.35	11.37	9.39
	Cooling Pressure Drop		H	kPa	480	645	1029	1240	1770	2044	2372	3029
			M		296	457	848	1108	1351	1683	1902	2567
			L		244	342	535	609	744	1014	1417	1700
	Heating Water Flow Rate		H	L/h	8.90	16.57	22.18	16.96	24.25	35.47	23.47	21.77
			M		3.73	8.91	15.65	13.84	14.92	24.99	15.77	16.16
			L		2.63	5.27	6.85	4.72	5.10	10.03	9.28	7.69
	Heating Pressure Drop		H	kPa	1.09	1.27	1.84	1.75	2.43	2.88	3.33	3.78
			M		8.03	14.04	15.65	13.84	14.92	24.99	15.77	16.16
			L		4.58	6.54	6.85	4.72	5.10	10.03	9.28	7.69
	Water Content			L	1.09	1.27	1.84	1.75	2.43	2.88	3.33	3.78

TESTING CONDITIONS

Cooling mode: *Return air temperature: 27°C DB / 19°C WB* *Inlet / outlet water temperature: 7°C / 12°C*
Heating mode: *Return air temperature: 20°C* *Inlet / outlet water temperature: 45C / 40°C*

[1]: Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted, 4 row, 2 pipe with **EC Motor**

	PDWC-4R-[SIZE]-V-EC				400	500	600	800	1000	1400	1600	2000
UNIT GENERAL SPECS	Configuration				2 PIPE							
	Number of Fan Blowers				1		2					4
	Power Supply (V/Ph/Hz)				230 / 1 / 50 | 220/1/60							
AIR	Air Flow		H	m³/h	446	643	1019	1322	1729	2244	2632	3474
			M		212	393	762	1111	1149	1681	1937	2752
			L		210	302	479	569	610	926	1377	1683
	Available ESP Pressure		H	Pa	120							
			M									
			L		60							
COOLING	Cooling Capacity		H	kW	3.22	4.53	6.94	8.84	11.15	14.05	16.60	21.60
			M		1.80	3.07	5.56	7.75	8.16	11.26	13.10	18.06
			L		1.76	2.49	3.83	4.54	4.91	7.13	10.07	12.24
	Sensible Cooling Capacity		H		2.20	3.10	4.79	6.13	7.79	9.87	11.61	15.17
			M		1.22	2.05	3.79	5.32	5.59	7.78	9.01	12.49
			L		1.19	1.68	2.56	3.03	3.32	4.80	6.83	8.27
HEATING	Heating Capacity		H	kW	2.98	4.18	6.40	8.20	10.34	13.19	15.46	20.13
			M		1.67	2.83	5.12	7.19	7.56	10.57	12.21	16.83
			L		1.62	2.30	3.53	4.21	4.56	6.69	9.38	11.40
	Max. Electric Heater				3			6			9	
SOUND	Pressure Level	Outlet		db(A)	54/50/45	56/53/43	56/54/47	58/56/47	56/52/45	59/57/47	60/58/56	64/62/52
		Inlet + Radiated			57/53/48	59/56/46	59/57/50	61/59/50	59/55/48	62/60/50	63/61/59	67/65/55
	Power Level	Outlet			63/59/54	65/62/52	65/63/56	67/65/56	65/61/54	68/66/56	69/67/59	73/71/61
		Inlet + Radiated			66/62/57	68/65/55	68/66/59	70/68/59	68/64/57	71/69/59	72/70/62	76/74/64
ELECTRICAL (Fan Motor)	Power Input[1] (Cooling)		H	W	152	202	195	281	310	413	477	637
			M		84	121	137	208	151	246	304	461
			L		32	34	62	65	70	72	108	142
	Power Input[1] (Heating)		H		1.32	1.75	1.7	2.45	1.35	1.8	2.1	2.76
			M		552	776	1190	1516	1911	2409	2845	3703
			L		309	526	952	1328	1398	1930	2246	3097
	Running Current		H	A	301	427	657	778	842	1222	1726	2098
	Starting Current				55.53	112.13	100.72	83.81	136.74	76.13	113.76	201.48
HYDRONIC	Cooling Water Flow Rate		H	L/h	19.54	55.57	67.51	66.04	77.88	51.1	74.36	146.03
			M		18.65	38.27	34.58	25.24	31.27	22.43	46.25	72.46
			L		1.45	1.69	2.45	2.33	3.24	3.84	4.44	5.04
	Cooling Pressure Drop		H	kPa	1.45	1.69	2.45	2.33	3.24	3.84	4.44	5.04
			M		10.74	19.28	15.22	14.35	17.01	10.57	15.44	30.11
			L		6.06	8.92	6.56	4.8	5.92	4.25	8.79	13.73
	Water Content			L	1.45	1.69	2.45	2.33	3.24	3.84	4.44	5.04

TESTING CONDITIONS

Cooling mode: *Return air temperature: 27°C DB / 19°C WB* *Inlet / outlet water temperature: 7°C / 12°C*
Heating mode: *Return air temperature: 20°C* *Inlet / outlet water temperature: 45C / 40°C*

(I): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted, 3+1 row, (Auxiliary Heating coil), 4 pipe with **EC Motor**

	PDWC-3R+1-[SIZE]-P-EC			400	500	600	800	1000	1400	1600	2000
UNIT GENERAL SPECS	Configuration			4 PIPE							
	Number of Fan Blowers			1		2					4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60							
AIR	Air Flow	H	m³/h	446	643	1019	1322	1729	2244	2632	3474
		M		212	393	762	1111	1149	1681	1937	2752
		L		210	302	479	569	610	926	1377	1683
	Available ESP Pressure	H	Pa	120							
		M									
		L		60							
COOLING	Cooling Capacity	H	kW	2.53	3.54	5.46	6.83	8.81	11.35	13.07	16.28
		M		1.38	2.4	4.38	6.02	6.39	9.12	10.34	13.55
		L		1.38	1.95	3.02	3.56	3.79	5.62	7.88	9.32
	Sensible Cooling Capacity	H		1.78	2.48	3.88	4.9	6.22	8.04	9.3	11.9
		M		0.96	1.64	3.07	4.28	4.44	6.39	7.28	9.76
		L		0.96	1.34	2.07	2.47	2.65	3.85	5.44	6.58
HEATING	Heating Capacity	H	kW	2.16	2.97	4.57	5.46	7.29	9.2	10.73	13.75
		M		1.18	2.03	3.63	4.77	5.31	7.33	8.52	11.52
		L		1.18	1.63	1.9	2.11	2.43	3.46	4.92	5.96
SOUND	Pressure Level	Outlet	db(A)	54/50/45	56/53/43	56/54/47	58/56/47	56/52/45	59/57/47	60/58/56	64/62/52
		Inlet + Radiated		57/53/48	59/56/46	59/57/50	61/59/50	59/55/48	62/60/50	63/61/59	67/65/55
	Power Level	Outlet		63/59/54	65/62/52	65/63/56	67/65/56	65/61/54	68/66/56	69/67/59	73/71/61
		Inlet + Radiated		66/62/57	68/65/55	68/66/59	70/68/59	68/64/57	71/69/59	72/70/62	76/74/64
ELECTRICAL (Fan Motor)	Power Input[1]	H	W	152	202	195	281	310	413	477	637
		M		84	121	137	208	151	246	304	461
		L		32	34	62	65	70	72	108	142
	Running Current	H	A	1.32	1.76	1.7	2.44	2.7	3.59	4.15	5.54
	Starting Current			434	607	937	1170	1511	1946	2240	2790
HYDRONIC	Cooling Water Flow Rate	H	L/h	237	411	750	1032	1095	1564	1773	2322
		M		237	334	517	611	650	964	1351	1598
		L		9.8	19.4	24.78	18.35	24.02	42.05	27.41	24.93
	Cooling Pressure Drop	H	kPa	3.31	9.61	16.61	14.62	13.46	28.37	17.99	17.92
		M		3.31	6.62	8.51	5.69	5.26	11.87	11.03	9.15
		L		186	255	391	468	625	788	920	1179
	Heating Water Flow Rate	H	L/h	101	174	311	409	455	628	730	988
		M		101	139	163	181	208	297	421	511
		L		10.26	20.24	8.15	11.5	24.59	13.64	20.42	35.26
	Heating Pressure Drop	H	kPa	3.43	10.15	5.39	9	13.9	9.05	13.47	25.64
		M		3.43	6.83	1.73	2.13	3.49	2.43	5.12	8.05
		L		1.09	1.27	1.84	1.75	2.43	2.88	3.33	3.78
	Cooling Water Content		L	0.36	0.42	0.61	0.58	0.81	0.96	1.11	1.26
	Heating water content			0.36	0.42	0.61	0.58	0.81	0.96	1.11	1.26

TESTING CONDITIONS

Cooling mode: *Return air temperature: 27°C DB / 19°C WB* *Inlet / outlet water temperature: 7°C / 12°C*
Heating mode: *Return air temperature: 20°C* *Inlet / outlet water temperature: 55°C / 45°C*

(1): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted, 3 row, 2 pipe with **AC Motor**

UNIT GENERAL SPECS	PDWC-3R-[SIZE]-V			400	500	600	800	1000	1400	1600	2000
	Configuration			2 PIPE							
	Number of Fan Blowers			1		2	1	2			4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60							
AIR	Air Flow	H	m³/h	457	606	1126	1438	1845	2331	2700	3652
		M		278	423	846	1214	1277	1782	2037	2927
		L		237	343	355	522	910	1018	1175	1344
	Available ESP Pressure	H	Pa	120							
		M									
		L									
COOLING	Cooling Capacity	H	kW	2.56	3.39	5.9	7.32	9.22	11.63	13.28	16.86
		M		1.73	2.57	4.72	6.43	6.92	9.52	10.7	14.29
		L		1.52	2.14	2.36	3.25	5.36	6.1	6.95	7.72
	Sensible Cooling Capacity	H		1.8	2.37	4.22	5.29	6.52	8.26	9.47	12.35
		M		1.19	1.76	3.32	4.59	4.84	6.67	7.54	10.33
		L		1.05	1.46	1.64	2.27	3.68	4.18	4.78	5.4
HEATING	Heating Capacity	H	kW	2.64	3.48	6	7.24	10.41	12.02	13.84	17.67
		M		1.8	2.62	4.8	6.4	7.88	9.7	11.09	14.97
		L		1.57	2.2	2.4	3.23	6.02	6.32	7.24	8.09
	Max. Electric Heater			3			6			9	
SOUND	Pressure Level	Outlet	db(A)	54/50/47	56/53/49	56/54/50	58/56/50	56/52/48	59/57/52	60/58/53	64/62/55
		Inlet + Radiated		57/53/51	59/56/52	59/57/53	61/59/53	59/55/51	62/60/55	63/61/56	67/65/58
	Power Level	Outlet		63/59/57	65/62/58	65/63/59	67/65/59	65/61/57	68/66/61	69/67/62	73/71/64
		Inlet + Radiated		66/62/60	68/65/61	68/66/62	70/68/62	68/64/60	71/69/64	72/70/65	76/74/67
ELECTRICAL (Fan Motor)	Power Input[1]	H	W	180	230	286	350	320	356	616	995
		M		162	207	258	315	288	320	542	855
		L		140	176	220	270	245	275	463	770
	Running Current	H	A	0.78	1	1.24	1.52	1.39	1.55	2.68	4.32
	Starting Current	H	A	2.35	3	3.73	4.57	4.17	4.64	8.03	12.98
HYDRONIC	Cooling Water Flow Rate	H	L/h	439	582	1012	1255	1580	1993	2276	2890
		M		296	440	809	1102	1186	1633	1834	2449
		L		261	367	404	558	919	1046	1191	1324
	Cooling Pressure Drop	H	kPa	10	17.95	28.49	20.82	26.04	43.89	28.21	26.57
		M		4.92	10.88	19.03	16.47	15.55	30.65	19.13	19.72
		L		3.94	7.82	5.46	4.84	9.82	13.76	8.8	6.52
	Heating Water Flow Rate	H	L/h	453	596	1029	1240	1784	2061	2372	3029
		M		308	450	822	1098	1351	1663	1902	2567
		L		270	376	411	554	1031	1084	1241	1387
	Heating Pressure Drop	H	kPa	8.0	14.4	22.2	17.0	24.6	36.0	23.5	21.8
		M		4.0	8.6	14.8	13.6	14.9	24.5	15.8	16.2
		L		3.2	6.3	4.3	4.0	9.2	11.3	7.3	5.3
	Water Content		L	1.09	1.27	1.84	1.75	2.43	2.88	3.33	3.78

TESTING CONDITIONS

Cooling mode: *Return air temperature: 27°C DB / 19°C WB* *Inlet / outlet water temperature: 7°C / 12°C*
Heating mode: *Return air temperature: 20°C* *Inlet / outlet water temperature: 45C / 40°C*

(1): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted, 4 row, 2 pipe with **AC Motor**

UNIT GENERAL SPECS	PDWC-4R-[SIZE]-V			400	500	600	800	1000	1400	1600	2000
	Configuration			2 PIPE							
	Number of Fan Blowers			1		2					4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60							
AIR	Air Flow	H	m³/h	417	561	1060	1405	1778	2263	2629	3539
		M		252	394	805	1194	1222	1721	1972	2818
		L		222	327	331	508	882	978	1132	1274
	Available ESP Pressure	H	Pa	120							
		M									
		L									
COOLING	Cooling Capacity	H	kW	3.07	4.04	7.16	9.19	11.41	14.16	16.60	21.93
		M		2.08	3.07	5.81	8.12	8.55	11.49	13.37	18.42
		L		1.85	2.67	2.84	4.15	6.68	7.39	8.6	9.9
	Sensible Cooling Capacity	H		2.09	2.75	4.96	6.4	7.98	9.95	11.61	15.41
		M		1.39	2.05	3.97	5.59	5.87	7.94	9.2	12.74
		L		1.25	1.79	1.93	2.79	4.51	4.99	5.78	6.7
SOUND	Pressure Level	Outlet	db(A)	54/50/47	56/53/49	56/54/50	58/56/50	56/52/48	59/57/52	60/58/53	64/62/55
		Inlet + Radiated		57/53/51	59/56/52	59/57/53	61/59/53	59/55/51	62/60/55	63/61/56	67/65/58
	Power Level	Outlet		63/59/57	65/62/58	65/63/59	67/65/59	65/61/57	68/66/61	69/67/62	73/71/64
		Inlet + Radiated		66/62/60	68/65/61	68/66/62	70/68/62	68/64/60	71/69/64	72/70/65	76/74/67
ELECTRICAL (Fan Motor)	Power Input (Cooling)[1]	H	W	180	230	286	350	320	356	616	995
		M		162	207	258	315	288	320	542	855
		L		140	176	220	270	245	275	463	770
	Running Current	H	A	0.78	1	1.24	1.52	1.39	1.55	2.68	4.33
	Starting Current			2.35	3	3.73	4.57	4.17	4.64	8.03	12.98
HYDRONIC	Cooling Water Flow Rate	H	L/h	526	692	1228	1576	1955	2427	2845	3759
		M		356	526	995	1392	1466	1970	2292	3157
		L		317	458	487	711	1145	1267	1474	1697
	Cooling Pressure Drop	H	kPa	50.9	91.2	106.6	89.9	142.4	77.2	113.8	207.0
		M		25.2	55.6	73.1	71.9	84.8	53.0	77.1	151.2
		L		20.44	43.41	20.17	21.46	54.36	23.94	34.84	49.48
	Water Content		L	1.45	1.69	2.45	2.33	3.24	3.84	4.44	5.04

TESTING CONDITIONS

Cooling mode: *Return air temperature: 27°C DB / 19°C WB* *Inlet / outlet water temperature: 7°C / 12°C*
Heating mode: *Return air temperature: 20°C* *Inlet / outlet water temperature: 45C / 40°C*

(1): Fan motor power includes PCB power input.
For High ΔT Condition and Hot Water Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted, 3+1 row, (Auxiliary Heating coil), 4 pipe with **AC Motor**

	PDWC-3+1R-[SIZE]-P			400	500	600	800	1000	1400	1600	2000
UNIT	Configuration			4 PIPE							
	Number of Fan Blowers			1		2	1	2			4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220/1/60							
AIR	Air Flow	H	m³/h	417	561	1060	1405	1778	2263	2629	3539
		M		252	394	805	1194	1222	1721	1972	2818
		L		222	327	331	508	882	978	1132	1274
	Available ESP Pressure	H	Pa	120							
		M									
		L									
COOLING	Cooling Capacity	H	kW	2.39	3.2	5.64	7.16	8.97	11.44	13.07	16.51
		M		1.6	2.4	4.57	6.31	6.74	9.22	10.46	13.79
		L		1.45	2.09	2.24	3.18	5.17	5.88	6.82	7.41
	Sensible Cooling Capacity	H		1.67	2.23	4.02	5.16	6.34	8.11	9.3	12.08
		M		1.1	1.64	3.21	4.5	4.71	6.46	7.37	9.95
		L		1.01	1.43	1.56	2.22	3.55	4.01	4.69	5.19
HEATING	Heating Capacity	H	kW	2.03	2.67	4.7	5.7	7.49	9.28	10.73	13.88
		M		1.37	2.03	3.77	5.02	5.6	7.5	8.63	11.65
		L		1.24	1.71	1.86	2.52	4.36	4.79	5.51	6.14
SOUND	Pressure Level	Outlet	db(A)	54/50/47	56/53/49	56/54/50	58/56/50	56/52/48	59/57/52	60/58/53	64/62/55
		Inlet + Radiated		57/53/51	59/56/52	59/57/53	61/59/53	59/55/51	62/60/55	63/61/56	67/65/58
	Power Level	Outlet		63/59/57	65/62/58	65/63/59	67/65/59	65/61/57	68/66/61	69/67/62	73/71/64
		Inlet + Radiated		66/62/60	68/65/61	68/66/62	70/68/62	68/64/60	71/69/64	72/70/65	76/74/67
ELECTRICAL (Fan Motor)	Power Input (Cooling) [1]	H	W	180	230	286	350	320	356	616	995
		M		162	207	258	315	288	320	542	855
		L		140	176	220	270	245	275	463	770
	Power Input (Heating) [1]	H		0.78	1	1.24	1.52	1.39	1.55	2.68	4.33
		M		2.35	3	3.73	4.57	4.17	4.64	8.03	12.98
		L		409	548	967	1227	1538	1962	2240	2830
	Running Current	H	A	273	411	784	1082	1156	1581	1793	2365
	Starting Current			249	358	383	545	886	1007	1168	1270
HYDRONIC	Cooling Water Flow Rate	H	L/h	8.81	16.14	26.24	19.98	24.82	42.66	27.41	25.58
		M		4.27	9.61	17.98	15.94	14.84	28.93	18.37	18.51
		L		3.62	7.51	4.96	4.63	9.19	12.85	8.49	6.05
	Cooling Pressure Drop	H	kPa	174	229	403	488	642	795	920	1189
		M		117	174	323	430	480	643	739	999
		L		106	146	159	216	373	411	473	526
	Heating Water Flow Rate	H	L/h	9.17	16.62	8.58	12.41	25.78	13.86	20.42	35.82
		M		4.48	10.15	5.78	9.89	15.26	9.46	13.77	26.15
		L		3.77	7.46	1.62	2.87	9.73	4.21	6.15	8.26
	Heating Pressure Drop	H	kPa	1.09	1.27	1.84	1.75	2.43	2.88	3.33	3.78
		M		0.36	0.42	0.61	0.58	0.81	0.96	1.11	1.26
		L		8.34	14.03	3.68	4.26	12.91	6.29	9.01	14.17
	Cooling water content		L	1.09	1.27	1.84	1.75	2.43	2.88	3.33	3.78
	Heating water content			0.36	0.42	0.61	0.58	0.81	0.96	1.11	1.26

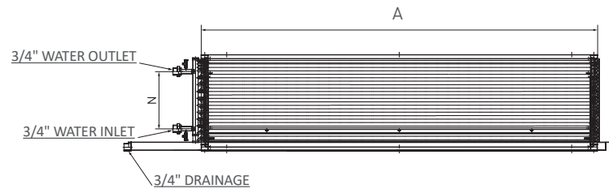
TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65C / 55°C

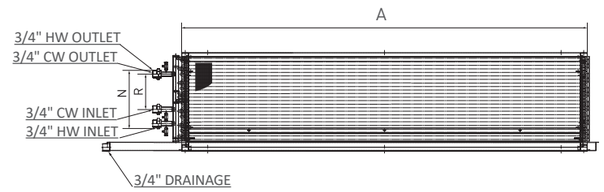
(1): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

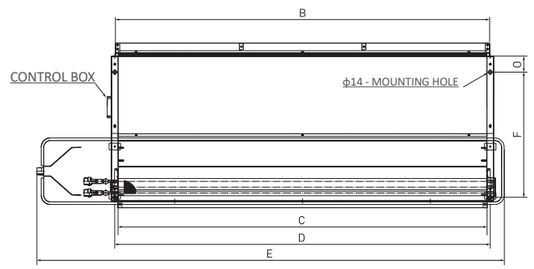
DIMENSIONAL DRAWINGS, DATA & WEIGHTS

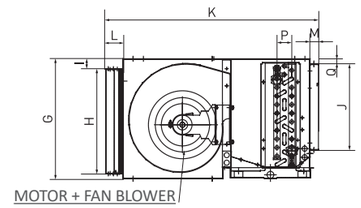
2 PIPE



4 PIPE



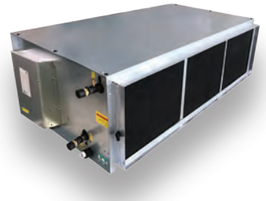




Model	Unit Dimensions (mm)																
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R[1]
PDWC 400	635	605	585	610	1055	470	300	256	30	202	620	50	25	150	60	43.3	15	100
PDWC 500	735	705	685	710	1155	470	300	256	30	202	620	50	25	150	60	43.3	15	100
PDWC 600	935	905	885	910	1355	470	300	256	30	202	620	50	25	150	60	43.3	15	100
PDWC 800	935	905	885	710	1355	470	350	306	30	252	620	50	25	175	60	65	15	125
PDWC 1000	1035	1005	985	1010	1455	470	350	306	30	252	620	50	25	175	60	65	15	125
PDWC 1400	1235	1205	1185	1210	1655	470	350	306	30	252	620	50	25	175	60	65	15	125
PDWC 1600	1435	1405	1385	1410	1855	470	350	306	30	252	620	50	25	175	60	65	15	125
PDWC 2000	1695	1665	1645	1670	2215	470	350	306	30	252	620	50	25	175	60	65	15	125

PDWC				400	500	600	800	1000	1400	1600	2000
CONNECTIONS	Water	Type		Socket (Female Threaded)							
		In / Out	mm (in)	19.05 (3/4")							
	Condensate Drainage		mm (in)								
WEIGHT	Net	kg		28	37	44	46	48	55	63	83

E[1]: valid for 4 pipe units only.



DUCTED MEDIUM STATIC

Intelligent Fan Coils

PDWB-EC
PDWB-AC

PRODUCT PRESENTATION

The Polar Air High ESP ducted fan coil units have been specifically designed to satisfy high cooling capacity at high external static pressure applications. They represent one of the most cost-effective solutions to provide a comfortable environment for both commercial and residential applications. With 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 Intelligent medium/ high Static Ducted units offer the following EC and AC motor 230V/50Hz range with the following capacities at H speed:

	EC Motor	AC Motor		EC Motor	AC Motor
2 Pipe	6.49 - 22.22 kW	6.49 - 22.22 kW	4 Pipe	5.09 - 24.06 kW	6.35 - 21.97 kW
	6.53 - 21.96 kW	6.53 - 21.96 kW		4.05 - 18.47 kW	5.06 - 19.96 kW
	1425 - 4998 m³/h	1425 - 4998 m³/h		1044 - 5533 m³/h	1396 - 4291 m³/h

COOLING HEATING AIR FLOW

PRODUCT FEATURES

Structure. Made from heavy-gauge galvanized steel panels with couplings for the connection of ducting and gravity drain pan with insulation for condensation. Optional fire-resistant internal NBR insulation to provide both thermal and acoustic insulation. Insulation also fitted on the top coil. Low height dimensions for perfect low height ceiling concealed installations.

Water Coils. Built with seamless copper tubes and headers, with tubes mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. We test the coils at 35 bar, and the maximum operating limit we recommend is at 20 bar. It includes manual air vent and water purge valve.

Fan Blowers. Galvanized steel with die-formed inlet cones housings, double inlet and double width centrifugal type, statically and dynamically balanced for smooth and quiet operation.

Condensate Pans. Steel drain pans with powder finish positively sloped, coated with self-extinguishing closed cell expanded polyethene with thermal properties. The drain pan outlet is 3/4" (standard on the same side of coil connections).

Filtration. Easily removable and washable filters made from self-extinguishing acrylic with EU2 (G2) (Merv 2-4) efficiency class. G4 (Merv 8) efficiency filters are optional.

Performance. Built with optimized water circuit designs and tested in accredited thermal test rooms to guarantee dependable performance and low water pressure drops. These series can supply more airflow at higher External Static Pressure (ESP), with airflow ranging from 1769 to 4044 m3/h at medium speed at 50 Pa ESP.

Motors. EC motors with driven controls PCB, constant torque, permanent magnet, and 3 speeds pre-set to allow precise air balancing. AC motors are PSC with a permanently split-capacitor with ball bearing with internal thermal overload protection.

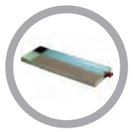
Flexibility. This Medium/ High Static Fan coil ducted range is available with left or right-hand water connections, which cannot be exchanged on site.

OPTIONAL ACCESSORIES*

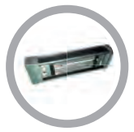
Thermostat Controller

Wall Pad Controller

MERV14 / MERV 8 Filter

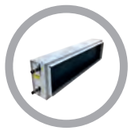


Stainless steel drain pan



Electric heater module
3 - 9 kW

Plenum
Return Air / Adjustable Damper / Round



1 or 2 row auxiliary heating coil

Valve kit
2 or 3-way 3/4" or 1" on/off or modulating

(*): Please refer to page 146 for further information on accessories

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted, 3 row, 2 pipe with **EC Motor**

	PDWB-3R-[SIZE]-V-EC				1000	1200	1600	1800	2400
UNIT GENERAL SPECS	Configuration				2 PIPE				
	Number of Fan Blowers				2				4
	Power Supply (V/Ph/Hz)				230 / 1 / 50 | 220 / 1 / 60				
AIR	Air Flow		H	m³/h	1569	1845	2602	3101	4857
			M		1088	1425	2181	2365	4053
			L		473	814	1563	1347	2921
	Available ESP Pressure		H	Pa	100				
			M						
			L						
COOLING	Cooling Capacity (E)		H	kW	6.97	8.19	11.62	14.74	21.84
			M		5.25	6.75	10.2	11.95	18.92
			L		2.71	4.39	7.82	7.64	14.81
	Sensible Cooling Capacity (E)		H		5.1	6.03	8.43	10.57	15.94
			M		3.77	4.92	7.32	8.51	13.71
			L		1.91	3.12	5.54	5.35	10.55
HEATING	Heating Capacity (E)		H	kW	7	8.46	12.28	14.68	21.59
			M		5.29	6.99	10.77	11.9	18.7
			L		2.78	4.51	8.25	7.61	14.64
SOUND	Pressure Level (E)	Outlet		db(A)	54/51/46	56/53/48	55/51/47	56/54/49	58/54/50
		Inlet + Radiated			57/54/49	59/56/51	58/54/50	59/57/52	61/57/53
	Power Level (E)	Outlet			63/60/55	65/62/57	64/60/56	65/63/58	67/63/59
		Inlet + Radiated			66/63/58	68/65/60	67/63/59	68/66/61	70/66/62
ELECTRICAL (Fan Motor)	Power Input[1]		H	W	276	384	420	480	840
			M		244	347	310	380	620
			L		110	140	160	210	320
	Running Current		H	A	2.51	3.49	3.82	4.36	7.64
HYDRONIC	Cooling Water Flow Rate		H	L/h	1195	1405	1992	2526	3744
			M		901	1158	1749	2048	3244
			L		464	752	1340	1309	2539
	Cooling Pressure Drop		H	kPa	11.22	16.21	14.33	20.14	29.05
			M		6.74	11.45	11.33	13.81	22.44
			L		2.05	5.27	7.01	6.17	14.43
	Heating Water Flow Rate		H	L/h	1199	1450	2105	2517	3701
			M		906	1199	1846	2041	3206
			L		476	774	1415	1304	2509
	Heating Pressure Drop		H	kPa	9.54	14.3	19.91	16.65	23.86
			M		5.76	10.16	15.71	11.41	18.43
			L		1.81	4.62	9.74	5.1	11.85
	Water Content			L	1.705	1.932	2.879	3.864	4.735

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45C / 40°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Please visit www.eurovent-certification.com for more information.

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted, 3+1 row, (Auxiliary Heating coil),4 pipe with **EC Motor**

	PDWB-3+1R-[SIZE]-P-EC				1000	1200	1600	1800	2400
UNIT GENERAL SPECS	Configuration				4 PIPE				
	Number of Fan Blowers				2				4
	Power Supply (V/Ph/Hz)				230 / 1 / 50 | 220 / 1 / 60				
AIR	Air Flow		H	m³/h	1489	1776	2514	2963	4700
			M		1018	1367	2111	2249	3926
			L		414	763	1504	1249	2814
	Available ESP Pressure		H	Pa	100				
			M						
			L						
COOLING	Cooling Capacity		H	kW	6.68	7.96	11.35	14.2	21.32
			M		4.99	6.5	9.9	11.36	18.5
			L		2.44	4.16	7.6	7.11	14.34
	Sensible Cooling Capacity		H		4.88	5.85	8.2	10.17	15.53
			M		3.57	4.72	7.09	8.07	13.39
			L		1.74	2.94	5.38	5.01	10.21
HEATING	Heating Capacity		H	kW	5.3	6.3	9.36	10.82	16.27
			M		3.97	5.17	8.19	8.75	14.19
			L		1.91	3.28	6.31	5.46	11.06
SOUND	Pressure Level	Outlet		db(A)	55/53/48	57/55/51	57/53/48	56/55/51	60/55/51
		Inlet + Radiated			58/56/51	60/58/54	60/56/51	59/58/54	63/58/54
	Power Level	Outlet			64/62/57	66/64/60	66/62/57	65/64/60	69/64/60
		Inlet + Radiated			67/65/60	69/67/63	69/65/60	68/67/63	72/67/63
ELECTRICAL (Fan Motor)	Power Input[1]		H	W	276	384	420	480	840
			M		244	347	310	380	620
			L		110	140	160	210	320
	Running Current		H	A	3	4.09	4.41	4.58	8.82
HYDRONIC	Cooling Water Flow Rate		H	L/h	1145	1365	1945	2435	3655
			M		855	1115	1697	1948	3171
			L		418	713	1303	1219	2458
	Cooling Pressure Drop		H	kPa	10.4	15.39	13.72	18.86	27.82
			M		6.14	10.7	10.73	12.62	21.54
			L		1.7	4.78	6.68	5.42	13.62
	Heating Water Flow Rate		H	L/h	454	540	802	928	1395
			M		340	443	702	750	1217
			L		163	281	541	468	948
	Heating Pressure Drop		H	kPa	10.5	15.49	16.49	11.04	27.09
			M		6.25	10.83	12.96	7.53	21.19
			L		1.67	4.78	8.1	3.22	13.52
	Chilled Water Content			L	1.705	1.932	2.879	3.864	4.735
	Hot Water Content				0.568	0.644	0.966	1.288	1.591

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65C / 55°C

(1): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted, 3 row, 2 pipe with **AC Motor**

	PDWB-3R-[SIZE]-V			1000	1200	1600	1800	2400
UNIT GENERAL SPECS	Configuration			2 PIPE				
	Number of Fan Blowers			2				4
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220 / 1 / 60				
AIR	Air Flow	H	m³/h	1365	1754	2807	3902	4565
		M		1258	1476	2463	2949	3803
		L		1094	1289	2163	2379	2283
	Available ESP Pressure	H	Pa	100				
		M						
		L						
COOLING	Cooling Capacity (E)	H	kW	6.25	7.87	12.35	17.54	20.76
		M		5.91	6.9	11.16	14.2	18.08
		L		5.31	6.25	10.1	11.95	12.22
	Sensible Cooling Capacity (E)	H		4.55	5.78	9.01	12.77	15.1
		M		4.27	5.03	8.06	10.17	13.05
		L		3.81	4.52	7.24	8.51	8.63
HEATING	Heating Capacity (E)	H	kW	6.32	8.13	13.01	17.48	20.52
		M		5.93	7.16	11.77	14.15	17.87
		L		5.33	6.44	10.68	11.9	12.08
SOUND	Pressure Level (E)	Outlet	db(A)	49/47/44	56/54/53	56/53/51	56/49/45	57/54/51
		Inlet + Radiated		51/49/46	58/56/55	58/55/53	58/51/47	59/56/53
	Power Level (E)	Outlet		58/56/53	65/63/62	65/62/60	65/58/54	66/63/60
		Inlet + Radiated		60/58/55	67/65/64	67/64/62	67/60/56	68/65/62
ELECTRICAL (Fan Motor)	Power Input[1]	H	W	310	471	611	884	988
		M		261	396	505	614	885
		L		223	370	448	495	745
	Running Current	H	A	1.35	2.05	2.66	3.84	4.3
	Starting Current	H		4.04	6.14	7.97	11.53	12.89
HYDRONIC	Cooling Water Flow Rate	H	L/h	1071	1350	2118	3007	3558
		M		1014	1184	1914	2435	3099
		L		910	1072	1732	2048	2096
	Cooling Pressure Drop	H	kPa	9.22	15.08	15.99	27.57	26.5
		M		8.34	11.91	13.33	18.86	20.66
		L		6.87	9.97	11.13	13.81	10.22
	Heating Water Flow Rate	H	L/h	1083	1393	2230	2997	3517
		M		1016	1227	2018	2426	3063
		L		913	1104	1831	2041	2071
	Heating Pressure Drop	H	kPa	7.94	13.31	22.09	22.79	21.77
		M		7.09	10.59	18.46	15.58	16.97
		L		5.85	8.76	15.49	11.41	8.39
	Water Content		L	1.705	1.932	2.879	3.864	4.735

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45C / 40°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Please visit www.eurovent-certification.com for more information.

TECHNICAL SPECIFICATIONS

Hydronic Medium/ High Static Ducted, 3+1 row, (Auxiliary Heating coil),4 pipe with **AC Motor**

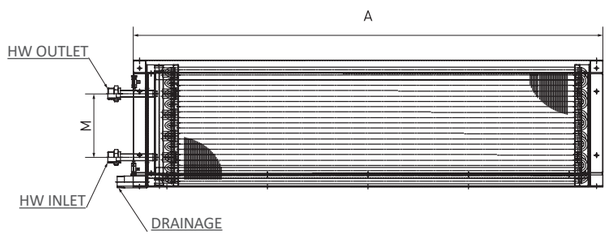
	PDWB-3+1R-[SIZE]-P			1000	1200	1600	1800	2400
UNIT GENERAL SPECS	Configuration			4 PIPE				
	Number of Fan Blowers			2				
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220 / 1 / 60				
AIR	Air Flow	H	m³/h	1272	1704	2739	3818	4483
		M		1213	1450	2423	2912	3744
		L		1062	1276	2138	2353	2251
	Available ESP Pressure	H	Pa	100				
		M						
		L						
COOLING	Cooling Capacity	H	kW	5.96	7.74	12.08	17.16	20.47
		M		5.71	6.8	10.97	14.07	17.93
		L		5.15	6.2	10	11.8	12.06
	Sensible Cooling Capacity	H		4.31	5.67	8.8	12.48	14.89
		M		4.12	4.96	7.91	10.06	12.93
		L		3.69	4.48	7.17	8.4	8.51
HEATING	Heating Capacity	H	kW	4.72	6.13	9.99	13.18	15.69
		M		4.55	5.41	9.11	10.73	13.72
		L		4.1	4.89	8.27	9.07	9.19
SOUND	Pressure Level	Outlet	db(A)	49/47/44	56/54/53	56/53/51	56/49/45	57/54/51
		Inlet + Radiated		51/49/46	58/56/55	58/55/53	58/51/47	59/56/53
	Power Level	Outlet		58/56/53	65/63/62	65/62/60	65/58/54	66/63/60
		Inlet + Radiated		60/58/55	67/65/64	67/64/62	67/60/56	68/65/62
ELECTRICAL (Fan Motor)	Power Input[1]	H	W	310	471	611	884	988
		M		261	396	505	614	885
		L		223	370	448	495	745
	Running Current	H	A	1.34	2.05	2.66	3.84	4.3
	Starting Current	H		4.02	6.14	7.97	11.53	12.9
HYDRONIC	Cooling Water Flow Rate	H	L/h	1022	1327	2071	2942	3510
		M		979	1166	1881	2412	3074
		L		882	1064	1714	2023	2068
	Cooling Pressure Drop	H	kPa	8.47	14.62	15.36	26.51	25.86
		M		7.84	11.6	12.92	18.54	20.37
		L		6.5	9.82	10.93	13.51	9.97
	Heating Water Flow Rate	H	L/h	404	525	856	1130	1345
		M		390	464	781	920	1176
		L		351	419	709	777	788
	Heating Pressure Drop	H	kPa	8.52	14.7	18.55	15.73	25.39
		M		8	11.75	15.72	10.86	19.92
		L		6.61	9.8	13.2	8.03	9.69
	Chilled Water Content		L	1.705	1.932	2.879	3.864	4.735
	Hot Water Content			0.568	0.644	0.966	1.288	1.591

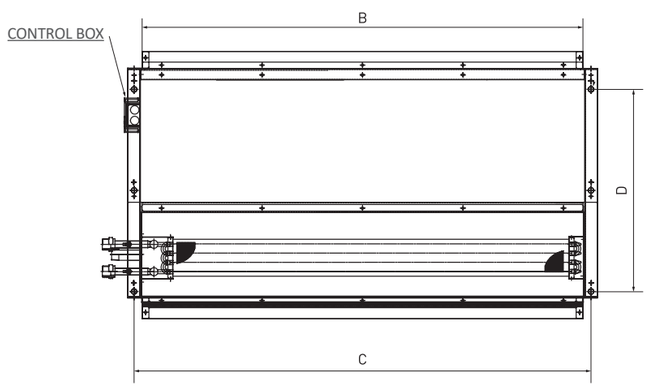
TESTING CONDITIONS

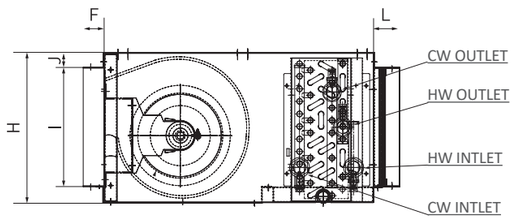
Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65C / 55°C

(1): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS







Model	Unit Dimensions (mm)										
	A	B	C	D	F	H	I	J	K	L	M
PDWB-1000	1010	942	980	475	60	300	240	30	40	50	630
PDWB-1200	1110	1042	1080	475	60	300	240	30	40	50	630
PDWB-1600	1460	1392	1430	495	60	380	320	30	40	50	650
PDWB-1800	1460	1392	1430	595	70	430	370	30	40	50	750
PDWB-2400	1760	1692	1730	595	70	430	370	30	40	50	750

PDWB				1000	1200	1600	1800	2400
CONNECTIONS	Water	Type		Socket (Threaded Male)				
		In / Out	mm (in)	19.05 (3/4")			25.4 (1")	
	Condensate Drainage		mm (in)	19.05 (3/4")				
WEIGHT	Net	kg		45	50	58	65	75

HORIZONTAL MINI AIR HANDLING UNIT	HAHU [AC MOTOR] HAHU-EC [EC MOTOR]
VERTICAL MINI AIR HANDLING UNIT	VAHU-EC [EC MOTOR]

MINI AHU DUCTED **FAN COILS**

MINI AHU DUCTED

Intelligent Fan Coils

HAHU-EC
HAHU-AC

PRODUCT PRESENTATION

The Polar Air Mini AHU ranges have been specifically designed for Vertical (VAHU) or Horizontal (HAHU) installation and suitable for ducted air distribution. With sandwich panels to achieve low noise levels, integrated control box and panels to access components, these units represent one of the most cost-effective solutions to provide a comfortable environment for both commercial and industrial applications. Their design also reduces on-site installation time and labor costs.

PRODUCT RANGE

The Polar Air Horizontal Mini AHU units offer the following EC motor 230V/50Hz and AC 380-415V/50Hz ranges:

	EC Motor	AC Motor		EC Motor	AC Motor
2 Pipe	16.26 - 60.7 kW	20.6 - 86.1 kW	4 Pipe	15.6 - 54.25kW	20.6 - 71.4 kW
	15.04 - 57.7 kW	24.8 - 103.3 kW		12.96 - 66.03 kW	25.6 - 89.4 kW
	2329 - 8332 m³/h	3000 - 11899 m³/h		2207 - 8332 m³/h	3000 - 11899 m³/h

COOLING HEATING AIR FLOW

PRODUCT FEATURES

Structure. Made from frameless integrated folded steel structure, it uses a sandwich panel consisting of two walls with inner insulation. Both walls are made of pre-coated steel 1" thickness. These units have been designed with a 25mm thickness sandwich panel with polyurethane (density 40kg/m3). The intake panel is equipped with a flange for fitting to any air channels.

Water Coils. Built with seamless copper tubes and headers, with the tubes mechanically expanded into corrugated aluminum fin material for a permanent primary to secondary surface bond. We test the coils at 35 bar, and the maximum operating limit we recommend is at 20 bar. It includes manual air vent and water purge valve.

Fan Blowers. Made of hot-dip galvanized steel housing center plate fixed impeller, riveting compression on the end ring; galvanized steel sheet mounting feet to ensure adequate strength and DC motor.

The side panel includes inlet cones whose inlet conditions are designed for optimum aerodynamics. The forward-curved blades feature an advanced aerodynamic design for maximum efficiency and minimum noise level.

Condensate Pans. Painted Steel drain pans with 3/16" of insulation on the outer wall and isolated in aluminum in the inner wall, positively sloped, coated with self-extinguishing closed cell expanded polyethylene with thermal properties. The drain pan outlet is 3/4" (standard on the same side of coil connections).

Filtration. Washable filters, made of double-layer acrylic with an aluminum frame containing an G4 (Merv 8) efficiency class. F8 (Merv14) efficiency filters are optional.

Performance. Built with optimized water circuit designs and tested in accredited thermal test rooms to guarantee dependable performance and low water pressure drops. These series can supply up to 8000m3/h airflow at highest External Static Pressure (ESP), of up to 300Pa.

Motors. EC motors with included driven controls PCB, constant torque, permanent magnet, with 3 speeds pre-set to allow precise air balancing.

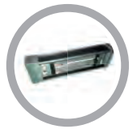
AC motors are 3-speed standard, permanently lubricated type with internal thermal overload protection.

Flexibility: This Hight Static range is available with left or right-hand water connections, which cannot be exchanged on site.

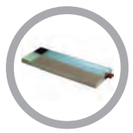
OPTIONAL ACCESSORIES*

Thermostat Controller

Wall Pad Controller



Electric Heater module
4.5 - 24 kW



Stainless steel drain pan

MERV8 | G4 Filter

MERV 14 | F8 Filter

Valve kit
2 or 3-way 1-1/4" or 1" on/off or modulating

(*): Please refer to page 146 for further information on accessories

TECHNICAL SPECIFICATIONS

Hydronic Horizontal Mini AHU Ductable Unit, 4 row, 2 pipe with **EC Motor**

	HAHU-4R-[Size]-V-EC			200	300	400	600	800
UNIT GENERAL SPECS	Configuration			2 PIPE				
	Number of Fan Blowers			1			2	
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220 / 1 / 60				
AIR	Air Flow	H	m^3/h	1396	2565	3533	5131	7065
		M		1187	2181	3003	4361	6005
		L		838	1539	2120	3079	4239
	Available ESP Pressure	H	Pa	200				
		M						
		L						
COOLING	Cooling Capacity	H	kW	11.03	18.4	25.16	36.29	47.83
		M		9.64	16.21	22.24	31.96	42.27
		L		7.38	12.26	16.95	24.17	32.23
	Sensible Cooling Capacity	H		7.55	12.88	17.48	25.27	33.57
		M		6.56	11.28	15.35	22.13	29.48
		L		4.94	8.38	11.52	16.43	22.13
HEATING	Heating Capacity	H	kW	13.24	22.08	30.2	43.55	57.41
		M		11.56	19.45	26.69	38.36	50.73
		L		8.86	14.71	20.34	29.01	38.68
	Max. Electric Heater			4.5	6	7.5	9	9
SOUND[1]	Max. sound pressure		db(A)	62	66	72	71	75
	Max. sound power			71	75	81	80	84
ELECTRICAL (Fan Motor)	Power Input[2]		W	375	501	504	1001	1005
	Running Current		A	1.63	2.17	2.17	4.34	4.34
HYDRONIC	Cooling Water Flow Rate	H	L/h	1892	3155	4313	6220	8200
		M		1652	2779	3812	5479	7247
		L		1266	2101	2906	4144	5525
	Cooling Pressure Drop	H	kPa	11.96	11.04	21.21	44.79	37.71
		M		9.37	8.78	16.98	35.64	30.19
		L		5.8	5.31	10.42	21.55	18.52
	Heating Water Flow Rate	H	L/h	1892	3155	4313	6220	8200
		M		1652	2779	3812	5479	7247
		L		1266	2101	2906	4144	5525
	Heating Pressure Drop	H	kPa	10.76	9.94	19.09	40.31	33.94
		M		8.43	7.91	15.28	32.08	27.17
		L		5.22	4.78	9.38	19.4	16.67
	Water Content		L	7.38	9.12	10.9	12.6	15.2

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Water temperature: 50°C
Water flow same to cooling mode

(1): Sound Power in compliance with EN96314-2.
(2): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Horizontal Mini AHU Ductable Unit, 6 row, 2 pipe with **EC Motor**

	HAHU-6R-[Size]-V-EC			200	300	400	600	800
UNIT GENERAL SPECS	Configuration			2 PIPE				
	Number of Fan Blowers			1			2	
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220 / 1 / 60				
AIR	Air Flow	H	m^3/h	1135	2377	3355	4755	6711
		M		965	2021	2852	4041	5704
		L		681	1426	2013	2853	4026
	Available ESP Pressure	H	Pa	200				
		M						
		L						
COOLING	Cooling Capacity	H	kW	10.27	19.87	27.85	36.56	51.64
		M		9	17.46	24.45	32.12	45.33
		L		6.78	13.46	18.61	24.77	34.51
	Sensible Cooling Capacity	H		6.83	13.37	18.73	25.18	35.46
		M		5.91	11.71	16.36	22.04	30.98
		L		4.48	8.86	12.21	16.68	23.13
HEATING	Heating Capacity	H	kW	12.33	23.85	33.43	43.88	61.98
		M		10.8	20.95	29.34	38.55	54.4
		L		8.13	16.16	22.34	29.73	41.41
	Max. Electric Heater			4.5	6	7.5	9	9
SOUND[1]	Max. sound pressure		db(A)	62	66	72	71	75
	Max. sound power			71	75	81	80	84
ELECTRICAL (Fan Motor)	Power Input[2]		W	375	501	505	1001	1005
	Running Current		A	1.63	2.17	2.17	4.34	4.34
HYDRONIC	Cooling Water Flow Rate	H	L/h	1761	3406	4775	6268	8853
		M		1542	2992	4191	5506	7771
		L		1162	2308	3191	4246	5915
	Cooling Pressure Drop	H	kPa	5.22	18.83	38.12	10.09	21.2
		M		4.11	14.91	30.14	7.99	16.76
		L		2.47	9.34	18.45	5.01	10.26
	Heating Water Flow Rate	H	L/h	1761	3406	4775	6268	8853
		M		1542	2992	4191	5506	7771
		L		1162	2308	3191	4246	5915
	Heating Pressure Drop	H	kPa	4.7	16.95	34.31	9.08	19.08
		M		3.7	13.42	27.13	7.19	15.09
		L		2.22	8.41	16.6	4.51	9.23
	Water Content		L	11.1	13.7	16.3	18.9	22.8

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Water temperature: 50°C
Water flow same to cooling mode

(1): Sound Power in compliance with EN96314-2.
(2): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Horizontal Mini AHU Ductable Unit, 4+1 row, (Auxiliary Heating coil), 4 pipe with **EC Motor**

	HAHU-4+1R-[Size]-P-EC			200	300	400	600	800
UNIT GENERAL SPECS	Configuration			4 PIPE				
	Number of Fan Blowers			1			2	
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220 / 1 / 60				
AIR	Air Flow	H	m³/h	1240	2453	3426	4905	6853
		M		1054	2085	2912	4169	5825
		L		744	1472	2056	2943	4112
	Available ESP Pressure	H	Pa	200				
		M						
		L						
COOLING	Cooling Capacity	H	kW	10.02	17.74	24.72	34.99	47
		M		8.87	15.51	21.77	30.58	41.39
		L		6.65	11.88	16.47	23.43	31.3
	Sensible Cooling Capacity	H		6.83	12.39	17.15	24.3	32.94
		M		5.99	10.78	15.02	21.15	28.86
		L		4.46	8.1	11.15	15.89	21.42
HEATING	Heating Capacity	H	kW	8.26	14.46	19.67	26.72	35.93
		M		7.23	12.76	17.28	23.58	31.56
		L		5.45	9.69	13.1	17.9	23.93
SOUND[1]	Max. sound pressure		db(A)	62	66	72	71	75
	Max. sound power			71	75	81	80	84
ELECTRICAL (Fan Motor)	Power Input[2]		W	375	501	505	1001	1005
	Running Current		A	1.63	2.17	2.17	4.34	4.34
HYDRONIC	Cooling Water Flow Rate	H	L/h	1717	3042	4238	5998	8056
		M		1521	2659	3733	5243	7096
		L		1139	2037	2823	4016	5366
	Cooling Pressure Drop	H	kPa	10.05	10.34	20.54	41.95	36.53
		M		8.08	8.11	16.35	32.92	29.07
		L		4.8	5.02	9.89	20.37	17.58
	Heating Water Flow Rate	H	L/h	708	1239	1686	2290	3080
		M		620	1094	1481	2021	2705
		L		467	830	1123	1535	2051
	Heating Pressure Drop	H	kPa	15.66	7.01	13.73	26.69	16.63
		M		12.33	5.6	10.87	21.31	13.17
		L		7.4	3.41	6.61	12.98	8
	Cooling Water Content		L	7.38	9.12	10.85	12.59	15.19
	Heating Water Content			1.845	2.28	2.715	3.15	3.8

TESTING CONDITIONS

Cooling mode: Return air temperature: 27C DB / 19C WB Inlet / outlet water temperature: 7C / 12C
Heating mode: Return air temperature: 20C Inlet / outlet water temperature: 65C / 55C

(1): Sound Power in compliance with EN9614-2.
(2): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Horizontal Mini AHU Ductable Unit, 4+2 row, (Auxiliary Heating coil), 4 pipe with **EC Motor**

	HAHU-4+2R-[Size]-P-EC			200	300	400	600	800
UNIT GENERAL SPECS	Configuration			4 PIPE				
	Number of Fan Blowers			1			2	
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220 / 1 / 60				
AIR	Air Flow	H	m³/h	1396	2565	3533	5131	7065
		M		1187	2181	3003	4361	6005
		L		838	1539	2120	3079	4239
	Available ESP Pressure	H	Pa	200				
		M						
		L						
COOLING	Cooling Capacity	H	kW	11.03	18.4	25.16	36.29	47.83
		M		9.64	16.21	22.24	31.96	42.27
		L		7.38	12.26	16.95	24.17	32.23
	Sensible Cooling Capacit	H		7.55	12.88	17.48	25.27	33.57
		M		6.56	11.28	15.35	22.13	29.48
		L		4.94	8.38	11.52	16.43	22.13
HEATING	Heating Capacity	H	kW	13.71	23.38	31.09	43.83	58.06
		M		12.18	20.54	27.43	38.51	51.22
		L		9.28	15.57	21.01	29.2	39.23
SOUND[1]	Max. sound pressure		db(A)	62	66	72	71	75
	Max. sound power			71	75	81	80	84
ELECTRICAL (Fan Motor)	Power Input[2]		W	375	501	505	1001	1005
	Running Current		A	1.63	2.17	2.17	4.34	4.34
HYDRONIC	Cooling Water Flow Rate	H	L/h	1892	3155	4313	6220	8200
		M		1652	2779	3812	5479	7247
		L		1266	2101	2906	4144	5525
	Cooling Pressure Drop	H	kPa	11.96	11.04	21.21	44.79	37.71
		M		9.37	8.78	16.98	35.64	30.19
		L		5.8	5.31	10.42	21.55	18.52
	Heating Water Flow Rate	H	L/h	1175	2004	2665	3757	4976
		M		1044	1760	2351	3301	4390
		L		795	1335	1801	2502	3363
	Heating Pressure Drop	H	kPa	11.36	10.86	9.06	18.77	11.44
		M		9.19	8.6	7.23	14.87	9.13
		L		5.63	5.23	4.48	9.03	5.65
	Cooling Water Content		L	7.38	9.12	10.85	12.59	15.19
	Heating Water Content			3.69	4.56	5.43	6.3	7.6

TESTING CONDITIONS

Cooling mode: Return air temperature: 27C DB / 19C WB Inlet / outlet water temperature: 7C / 12C
Heating mode: Return air temperature: 20C Inlet / outlet water temperature: 65C / 55C

(1): Sound Power in compliance with EN9614-2.
(2): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Horizontal Mini AHU Ductable Unit, 4 row, 2 pipe with **AC Motor**

	HAHU-4R-[Size]-V			300	510	680	950	1200
UNIT GENERAL SPECS	Configuration			2 PIPE				
	Number of Fan Blowers			1			2	
	Power Supply (V/Ph/Hz)			380-415 / 3 / 50 | 380-415 / 3 / 60				
AIR	Air Flow	H	m³/h	2574	4376	5834	8008	10209
	External Static Pressure	H	ESP	200				
COOLING	Maximum total capacity		kW	18.4	30.36	40.52	50.05	63.72
	Maximum sensible capacity		kW	12.88	21.3	28.35	36.38	46.08
HEATING	Maximum capacity		kW	22.08	36.44	48.62	60.06	76.47
	Max. Electric Heater		kW	6	9	12	18	24
SOUND	Sound pressure		db(A)	64	70	74	74	79
	Sound power		db(A)	73	79	83	83	88
ELECTRICAL	Max. Power Input		W	795	1450	2150	2900	4300
	Max. current		A	1.68	3.12	4.7	6.24	9.4
HYDRONIC	Cooling Water Flow Rate		L/h	3155	5205	6946	8580	10923
	Cooling Pressure Drop		kPa	9.2	24.68	32.87	8.14	13.52
	Heating Water Flow Rate		L/h	3155	5205	6946	8580	10923
	Heating Water Pressure Drop		kPa	8.28	22.21	29.58	7.33	12.17
	Water Content		L	9.12	10.9	13.7	16.7	18.7

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Water temperature: 50°C
Water flow same to cooling mode

(1): Sound Power in compliance with EN9614-2.
(2): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Horizontal Mini AHU Ductable Unit, 6 row, 2 pipe with **AC Motor**

	HAHU-6R-[Size]-V			300	510	680	950	1200
UNIT GENERAL SPECS	Configuration			2 PIPE				
	Number of Fan Blowers			1			2	
	Power Supply (V/Ph/Hz)			380-415 / 3 / 50 | 380-415 / 3 / 60				
AIR	Air Flow	H	m³/h	2390	4062	5416	7434	9478
	External Static Pressure	H	ESP	200				
COOLING	Maximum Total Capacity	H	kW	20.07	31.88	41.22	57.28	72.74
	Sensible Cooling Capacity	H	kW	13.49	22.24	28.53	39.55	49.97
HEATING	Maximum capacity		kW	24.08	38.26	49.47	68.75	87.3
SOUND	Max. sound pressure		db(A)	64	70	74	74	79
	Max. sound power		db(A)	73	79	83	83	88
ELECTRICAL	Fan Motor Power		W	795	1450	2150	2900	4300
	Max. current		A	1.68	3.12	4.7	6.24	9.4
HYDRONIC	Cooling water flow rate		L/h	3440	5464	7066	9820	12470
	Cooling water pressure drop		kPa	16.74	5.94	7.99	15.42	25.57
	Heating water flow rate		L/h	3440	5464	7066	9820	12470
	Heating water pressure drop		kPa	15.07	5.35	7.19	13.87	23.01
	Water content		L	13.7	16.3	20.5	25.1	28.1

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Water temperature: 50°C
Water flow same to cooling mode

(1): Sound Power in compliance with EN9614-2.
(2): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Horizontal Mini AHU Ductable Unit, 4+2 row, (Auxiliary Heating coil), 4 pipe with AC Motor

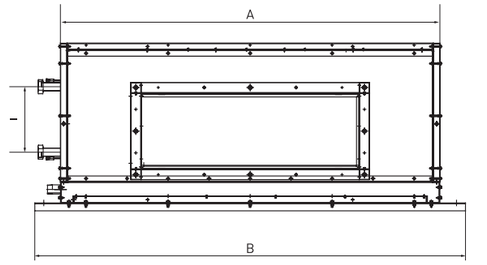
	HAHU-4+2R-[Size]-P			300	510	680	950	1200
UNIT GENERAL SPECS	Configuration			4 PIPE				
	Number of Fan Blowers			1			2	
	Power Supply (V/Ph/Hz)			380-415 / 3 / 50 | 380-415 / 3 / 60				
AIR	Air Flow	H	m^3/h	2390	4062	5416	7434	9478
	External Static Pressure	H	ESP	200				
COOLING	Maximum total capacity		kW	17.42	28.73	38.35	47.37	60.31
	Maximum sensible capacity		kW	12.14	20.08	26.73	34.3	43.45
HEATING	Maximum capacity		kW	21.45	34.07	44.37	60.08	74.83
SOUND	Sound pressure		db(A)	64	70	74	74	79
	Sound power		db(A)	73	79	83	83	88
ELECTRICAL	Max. Power Input		W	795	1450	2150	2900	4300
	Max. current		A	1.68	3.12	4.7	6.24	9.4
HYDRONIC	Cooling water flow rate		L/h	2986	4926	6574	8120	10338
	Cooling water pressure drop		kPa	8.33	22.35	29.77	7.37	12.25
	Cooling water content		L	9.12	10.9	13.7	16.7	18.7
	Heating water flow rate		L/h	1838	2920	3803	5150	6414
	Heating water pressure drop		kPa	9.29	10.72	4.42	8.83	14.36
	Heating water content		L	4.56	5.43	6.84	8.36	9.37

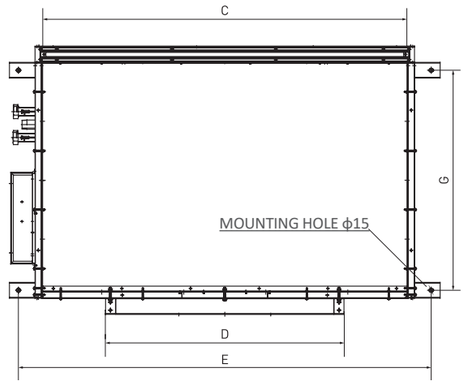
TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65°C/55°C

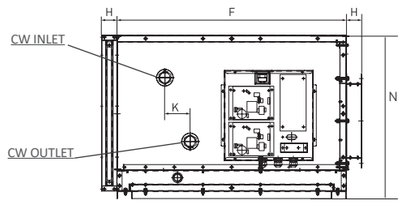
For High ΔT Condition Requirements, please refer to Selection Software.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS

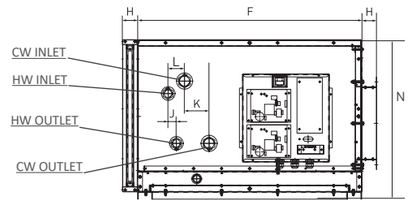




2 PIPE



4 PIPE



Model[1]	Unit Dimensions (mm)												
	A	B	C	D	E	F	G	H	I	J	K	L	N
HAHU-200	1080	1280	1020	680	1210	900	840	60	250	33	99	66	640
HAHU-300	1280	1480	1220	780	1410								
HAHU-400	1480	1680	1420	930	1610								
HAHU-600	1680	1880	1620	1330	1810								
HAHU-800	1980	2180	1920	1450	2110								

HAHU				200	300	400	600	800
CONNECTIONS	Water	Type		Socket (Threaded Female)				
		In / Out	mm (in)	31.75 (1-1/4") (CW) / 25.4 (1") (HW)				
	Condensate Drainage		mm (in)	25.4 (1")				
WEIGHT	Net		kg	from 175 to 273				

1.-For HAHU-AC unit dimensions, please refer to the correspondent Technical Manual.

VERTICAL MINI AHU

Intelligent Fan Coils

VAHU-EC

PRODUCT PRESENTATION

The Polar Air Mini AHU ranges have been specifically designed for Vertical (VAHU) or Horizontal (HAHU) installation and suitable for ducted air distribution. With sandwich panels to achieve low noise levels, integrated control box and panels to access components, these units represent one of the most cost-effective solutions to provide a comfortable environment for both commercial and industrial applications. Their design also reduces on-site installation time and labor costs. MVAHU range has been designed for exposed vertical installation directly in the room or required application spaces. With internal insulation panel, this product is distinguished by its compact design and low noise level.

PRODUCT RANGE

The Polar Air Vertical Mini AHU units offer the following EC motor 230V/50Hz range with the following capacities at H speed:

	COOLING	HEATING	AIR FLOW
2 Pipe	11.14 - 56.83 kW	10.52 - 54.37 kW	1398 - 8332 m³/h
4 Pipe	11.14 - 56.83 kW	12.77 - 63.69 kW	1398 - 8332 m³/h

PRODUCT FEATURES

Structure. Made from frameless integrated folded steel structure, it uses a sandwich panel consisting of two walls with inner insulation. Both walls are made of pre-coated steel 1" thickness.

These units have been designed with a 25mm thickness sandwich panel with polyurethane (density 40kg/m3). The intake panel is equipped with a flange for fitting to any air channels.

Water Coils. Built with seamless copper tubes and headers, with the tubes mechanically expanded into corrugated aluminum fin material for a permanent primary to secondary surface bond. It includes manual air vent and water purge valve.

Fan Blowers. Made of hot-dip galvanized steel housing center plate fixed impeller, riveting compression on the end ring; galvanized steel sheet mounting feet to ensure adequate strength and DC motor. All impellers and motors are fully balanced according to ANSI/AMCA-204 standard.

Condensate Pans. Painted Steel drain pans with 3/16" of insulation on the outer wall and isolated in aluminum in the inner wall, positively sloped, coated with self-extinguishing closed cell expanded polyethylene with thermal properties.

Filtration. Washable filters, made of double-layer acrylic with an aluminum frame containing an G4 (Merv 8) efficiency class. F8 (Merv14) efficiency filters are optional. The filter is compliant with the EN779 standard positioned at intake.

Performance. Built with optimized water circuit designs and tested in accredited thermal test rooms to guarantee dependable performance and low water pressure drops. These series can supply up to 8000m3/h airflow at highest External Static Pressure (ESP), of up to 300Pa.

Motors. EC motors with included driven controls PCB, constant torque, permanent magnet, with 3 speeds pre-set to allow precise air balancing.

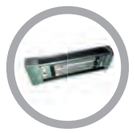
AC motors are 3-speed standard, permanently lubricated type with internal thermal overload protection.

Flexibility: This Hight Static range is available with left or right-hand water connections, which cannot be exchanged on site.

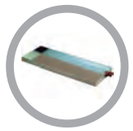
OPTIONAL ACCESSORIES*

Thermostat Controller

Wall Pad Controller



Electric Heater module
4.5 - 9 kW



Stainless steel drain pan

MERV8 | G4 Filter

MERV 14 | F8 Filter

Valve kit
24VAC 3/4" modulating
2 - 3 way ball

(*): Please refer to page 146 for further information on accessories

TECHNICAL SPECIFICATIONS

Hydronic Vertical Mini AHU Ductable Unit, 4 row, 2 pipe with **EC Motor**

UNIT GENERAL SPECS	VAHU-4R-[Size]-V-EC			200	300	400	600	800
	Configuration			2 PIPE				
	Number of Fan Blowers			1			2	
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220 /1 / 60				
AIR	Air Flow	H	m^3/h	1396	2565	3533	5131	7065
		M		1187	2181	3003	4361	6005
		L		838	1539	2120	3079	4239
	Available ESP Pressure	H	Pa	200				
		M						
		L						
COOLING	Total Cooling Capacity	H	kW	11.14	18.04	24.98	36.41	50.11
		M		9.73	15.89	22.08	32.07	44.28
		L		7.45	12.02	16.83	24.25	33.76
	Sensible Cooling Capacity	H		7.58	12.74	17.48	25.44	34.77
		M		6.58	11.16	15.35	22.29	30.54
		L		4.96	8.29	11.52	16.55	22.92
HEATING	Heating Capacity	H	kW	10.52	17.96	24.41	35.36	47.94
		M		9.19	15.82	21.57	31.15	42.37
		L		7.04	11.96	16.45	23.56	32.3
	Max. EH capacity			4	6	7.5	9	9
SOUND[1]	Max Sound Pressure		dB(A)	70	75	77	78	80
	Max Sound Power			79	84	86	87	89
ELECTRICAL	Max Power Input		W	375	501	505	1001	1005
	Max Current		A	3.26	5.65	6.65	11.3	13.3
HYDRONIC	Cooling Water Flow Rate	H	L/h	1910	3093	4282	6242	8590
		M		1668	2725	3785	5498	7591
		L		1278	2061	2885	4158	5787
	Cooling Pressure Drop	H	kPa	14.08	5.71	11.38	24.6	50.01
		M		11.03	4.54	9.11	19.58	40.04
		L		6.83	2.75	5.59	11.84	24.57
	Heating Water Flow Rate	H	L/h	1803	3079	4185	6062	8218
		M		1575	2712	3699	5340	7263
		L		1803	2474	3183	4871	6250
	Heating Pressure Drop	H	kPa	8.9	3.93	7.64	16.49	32.93
		M		6.97	3.13	6.12	13.12	26.37
		L		4.32	1.89	3.75	7.94	16.18
	Water content		L	7.52	9.84	12.16	14.47	17.94

TESTING CONDITIONS

Cooling mode: Return air temperature: 27C DB / 19C WB Inlet / outlet water temperature: 7C / 12C
Heating mode: Return air temperature: 20C Inlet / outlet water temperature: 45C / 40C

(1): Sound Power in compliance with EN9614-2.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Vertical Mini AHU Ductable Unit, 4+2 row, 4 pipe with **EC Motor**

UNIT GENERAL SPECS	VAHU-4R+2-[Size]-V-EC			200	300	400	600	800
	Configuration			2 PIPE				
	Number of Fan Blowers			1			2	
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220 /1 / 60				
AIR	Air Flow	H	m^3/h	1135	2377	3355	4755	6711
		M		1980	2752	3541	5504	7082
		L		681	1426	2013	2853	4026
	Available ESP Pressure	H	Pa	200				
		M						
		L						
COOLING	Total Cooling Capacity	H	kW	9.47	16.91	24.1	34.12	48.35
		M		8.29	14.85	21.16	29.97	42.44
		L		6.25	11.46	16.11	23.12	32.3
	Sensible Cooling Capacity	H		6.39	11.89	16.82	23.74	33.47
		M		5.53	10.41	14.7	20.79	29.24
		L		4.2	7.88	10.97	15.73	21.83
HEATING	Heating Capacity	H	kW	10.88	20.92	28.8	38.95	53.82
		M		9.53	18.38	25.51	34.23	47.68
		L		7.12	14.06	19.24	26.18	35.95
SOUND[1]	Max Sound Pressure		dB(A)	70	75	77	78	80
	Max Sound Power			79	84	86	87	89
ELECTRICAL	Max Power Input		W	412	650	765	1300	1530
	Max Current		A	3.58	5.65	6.65	11.3	13.3
HYDRONIC	Cooling Water Flow Rate	H	L/h	1624	2899	4132	5849	8288
		M		1422	2547	3627	5138	7275
		L		1071	1964	2761	3963	5538
	Cooling Pressure Drop	H	kPa	10.51	5.08	10.67	21.89	46.9
		M		8.28	4.02	8.44	17.33	37.09
		L		4.97	2.52	5.16	10.86	22.7
	Heating Water Flow Rate	H	L/h	932	1793	2469	3338	4614
		M		817	1576	2187	2934	4086
		L		610	1205	1649	2244	3082
	Heating Pressure Drop	H	kPa	1.25	4.67	9.45	2.62	5.44
		M		0.98	3.7	7.6	2.07	4.37
		L		0.58	2.28	4.57	1.28	2.63
	Cooling Water Content		L	7.52	9.84	12.16	14.47	17.94
	Heating Water Content			3.76	4.92	6.08	7.24	8.97

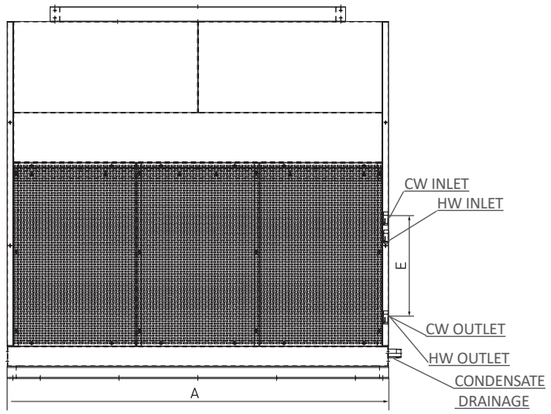
TESTING CONDITIONS

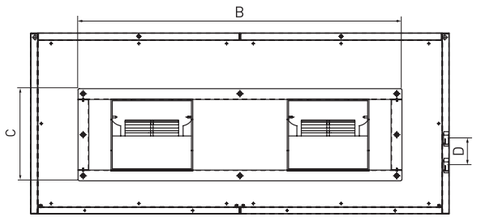
Cooling mode: Return air temperature: 27C DB / 19C WB Inlet / outlet water temperature: 7C / 12C
Heating mode: Return air temperature: 20C Inlet / outlet water temperature: 45C / 40C

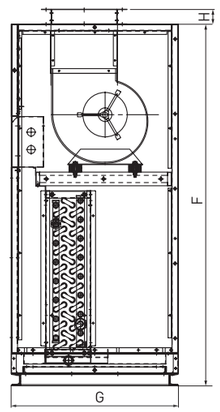
(1): Sound Power in compliance with EN9614-2.
For High ΔT Condition Requirements, please refer to Selection Software.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS

No decorative grille





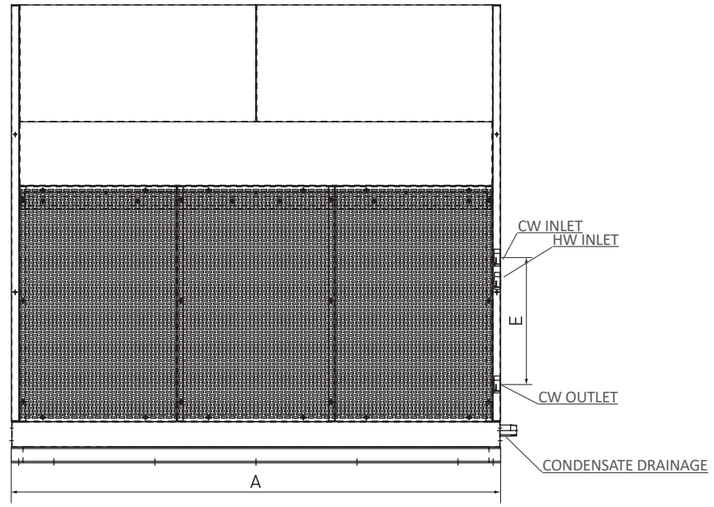


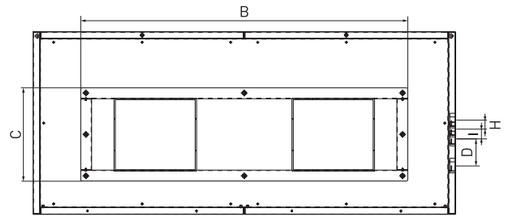
Model	Unit Dimensions (mm)							
	A	B	C	D	E	F	G	H
VAHU-200	850	540	342	99	402	1450	670	33
VAHU-300	1050	680	342	99	402	1450	670	33
VAHU-400	1250	780	371	99	402	1450	670	33
VAHU-600	1550	1200	342	99	402	1450	670	33
VAHU-800	1880	1350	371	99	402	1450	670	33

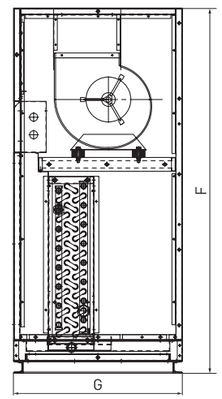
VAHU				200	300	400	600	800
CONNECTIONS	Water	Type		Socket (Threaded Male)				
		In / Out	mm (in)	31.75 (1-1/4") (CW) / 25.4 (1") (HW)				
	Condensate Drainage		mm (in)	25.4 (1")				
WEIGHT	Net		kg	176	188	219	263	304

DIMENSIONAL DRAWINGS, DATA & WEIGHTS

With decorative grille







Model	Unit Dimensions (mm)								
	A	B	C	D	E	F	G	H	I
MVAHU-200	850	50	342	99	402	1450	670	33	33
MVAHU-300	1050	680	342	99	402	1450	670	33	33
MVAHU-400	1250	780	371	99	402	1450	670	33	33
MVAHU-600	1550	1200	342	99	402	1450	670	33	33
MVAHU-800	1880	1350	371	99	402	1450	670	33	33

VAHU				200	300	400	600	800
CONNECTIONS	Water	Type		Socket (Threaded Male)				
		In / Out	mm (in)	31.75 (1-1/4") (CW) / 25.4 (1") (HW)				
	Condensate Drainage		mm (in)	25.4 (1")				
WEIGHT	Net		kg	45	50	58	65	75

UNIVERSAL WITH CABINET	PFWBC [AC MOTOR] PFWBC-EC [EC MOTOR]
UNIVERSAL WITHOUT CABINET	PFWB [AC MOTOR] PFWB-EC [EC MOTOR]
UNIVERSAL SLIM WITH CABINET	PSLF [EC MOTOR]

UNIVERSAL **FAN COILS**

UNIVERSAL
Intelligent Fan Coils

PFWB(C)-EC
PFWB(C)-AC

PRODUCT PRESENTATION

Designed to meet the requirements of the most worldwide demanding markets, the Polar Air Intelligent universal ranges suit applications that require units for floor standing or under-ceiling mount installation, with decorative casings or for ceiling concealed. The Universal Fan coil range offers 3-row coils for 2-pipe installations (3+1 row for 4-pipe through auxiliary heating coil accessory), as well as electrical heater accessory modules that can be easily mounted onsite. The universal ranges have easy access to the fan motor assemblies for maintenance without the need to remove the units once installed.

PRODUCT RANGE

The Intelligent Universal units offer the following EC and ACmotor 230V/50Hz range with the following capacities at H speed:

	EC Motor	AC Motor		EC Motor	AC Motor
2 Pipe	1.8 - 11.37 kW	1.70 - 11.37 kW	4 Pipe	1.84 - 9.59 kW	1.7 - 9.59 kW
	2 - 12.16kW	1.72 - 12.16 kW		0.46 - 2.64 kW	1.79 - 9.29 kW
	330 - 2204 m³/h	350 - 2204 m³/h		330 - 2204 m³/h	330 - 2204 m³/h

COOLING HEATING AIR FLOW

PRODUCT FEATURES

Structure. Units made of galvanized sheet steel designed to be attached to the wall or the ceiling, with fire-resistant thermo-acoustic insulation internally fitted. Installation can be vertical or horizontal, thanks to the "V" type drain pan accessory.

Cabinet. Made of thick steel sheet resistant to rust, corrosion, chemical agents, solvents, aliphatic compounds, and alcohols. The cabinet, designed to allow the unit structure to hang, is also internally insulated with thermo-acoustic insulation.

Air Grille Distribution. Built with fixed fins made of ABS plastic in color RAL9010. The metal cabinet has an ABS air discharge grille (only for PFWBC models), supplied with small side doors for easy access to the control panel.

Water Coils. Built with seamless copper headers and tubes mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. We test the coils at 35 bar, and the maximum operating limit we recommend is at 20 bar. It includes manual air vent and water purge valve.

Fan. The fan section includes one or two centrifugal fans, which consist of double air inlet blades made of forward-curving metal fins that are directly attached to the AC or EC motors. Statically and dynamically balanced fan section for smooth and quiet operation. Fans with large diameter to create high airflow and high static pressure with fewer revolutions to offer lower noise levels.

Filtration. Metal frame G2 efficient air filter, easy to remove and to clean by rinsing with water or by gently vacuuming it. G4 efficiency filter is optional

Flexibility. The Polar Air Universal Intelligent range offer configuration flexibility with interchangeable left to right-hand connections, front cover easy to remove for ease of maintenance, horizontal or vertical return air intake positions, auxiliary electric heater easily installed onsite, and auxiliary 1-row heating coil for 4-pipe applications.

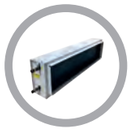
OPTIONAL ACCESSORIES*

Thermostat Controller

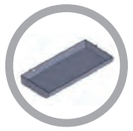
ABS Led Receiver

Wall Pad Controller

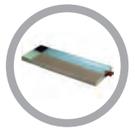
Electric heater 1 - 3 kW



1 row auxiliary heating coil



Horizontal drain pan



Stainless steel drain pan

ABS Plastic feet

MERV8 | G4 HAF 3M Filter

Valve kit
2 way Ball 3/4"
24VAC modulating

Vertical drain pan

(*): Please refer to page 146 for further information on accessories.

TECHNICAL SPECIFICATIONS

Hydronic Universal (Cabinet), 3 row, 2 pipe with **EC Motor**

	PFWB(C)-3R-[SIZE]-V-EC			06B	09	12B	15B	18	24B	30B	36B	40C
UNIT GENERAL SPECS	Configuration			2 PIPE								
	Number of Fan Blowers			1	2				4			
	Power Supply (V/Ph/Hz)			230/1/50 | 220/1/60								
AIR	Air Flow (E)	H	m³/h	330	504	677	840	970	1350	1575	1935	2204
		M		280	432	540	697	827	1170	1440	1710	2034
		L		198	342	450	607	677	990	1224	1350	1700
COOLING	Cooling Capacity (E)	H	kW	1.84	2.36	3.09	3.90	4.49	6.45	6.95	8.47	9.59
		M		1.61	2.10	2.68	3.40	3.96	5.84	6.47	7.67	9.09
		L		1.20	1.76	2.33	3.06	3.39	5.30	5.73	6.39	7.93
	Sensible Cooling Capacity (E)	H		1.38	1.73	2.37	2.82	3.22	5.08	5.07	6.15	6.95
		M		1.21	1.53	2.06	2.43	2.81	4.58	4.68	5.52	6.56
		L		0.92	1.27	1.77	2.17	2.39	4.01	4.12	4.57	5.66
HEATING	Heating Capacity (E)	H	kW	1.95	2.48	3.13	3.92	4.49	6.50	7.11	8.65	9.72
		M		1.69	2.19	2.66	3.43	3.97	5.90	6.67	7.88	9.22
		L		1.29	1.82	2.30	3.07	3.41	5.40	5.88	6.54	8.00
	Max. Electric Heater			1.00	1.50	2.00	2.00	2.00	3.00	3.00	3.00	3.00
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	58/54/50
	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	67/63/59
ELECTRICAL (Fan Motor)	Power Input (Cooling) (E) 1	H	W	15	29	25	44	52	76	100	128	182
		M		12	20	18	30	36	52	68	92	147
		L		8	12	13	22	23	40	51	56	92
	Power Input (Heating) (E) 1	H		16	29	25	50	52	76	100	128	182
		M		12	20	18	33	36	52	68	92	147
		L		8	12	13	24	23	40	51	56	92
	Running Current	H	A	0.15	0.23	0.33	0.38	0.45	0.76	0.87	1.11	1.58
HYDRONIC	Cooling Water Flow Rate	H	L/h	280.80	404.90	526.30	668.30	770.10	1011	1192	1451	1643
		M		247.30	360.30	448.70	583.20	678.70	908.20	1109	1315	1559
		L		188.40	302.00	386.60	524.60	580.70	798.60	981.50	1096	1360
	Cooling Pressure Drop	H	kPa	8.57	18.00	9.50	19	25.20	9.79	12	17.50	23.20
		M		6.74	14.70	6.30	14.90	20.30	8.20	9.96	15.00	21.20
		L		4.20	10.80	5.90	10.30	15.60	5.70	8.70	10.70	16.90
	Heating Water Flow Rate	H	L/h	283	405	536	672	770	1046	1218	1473	1663
		M		251	361	456	589	681	942	1144	1350	1580
		L		191	301	395	526	585	831	1008	1121	1372
	Heating Pressure Drop	H	kPa	9.70	17.40	8.32	15.90	21.20	15.10	11.30	18.70	19.80
		M		7.60	14.10	5.50	12.50	17.20	12.60	9.96	26.40	18.20
		L		4.80	10.20	5.11	10.30	13.20	8.70	7.71	20.10	14.30
	Water Content		L	0.66	0.74	0.96	1.19	1.26	1.74	1.97	2.19	2.42

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45°C / 40°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Please visit www.eurovent-certification.com for more information.

TECHNICAL SPECIFICATIONS

Hydronic Universal (Cabinet), 4 row, 2 pipe with **EC Motor**

	PFWB(C)-4R-[SIZE]-V-EC			06	09	12	15	18	24	30	36	40
UNIT GENERAL SPECS	Configuration			2 PIPE								
	Number of Fan Blowers			1	2				4			
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220 /1 / 60								
AIR	Air Flow	H	m³/h	330	504	677	840	970	1350	1575	1935	2204
		M		280	432	540	697	827	1170	1440	1710	2034
		L		198	342	450	607	677	990	1224	1350	1700
COOLING	Cooling Capacity	H	kW	1.8	2.55	3.33	4.06	4.8	6.79	8.29	9.81	11.37
		M		1.59	2.27	2.84	3.54	4.23	6.1	7.72	8.89	10.79
		L		1.21	1.9	2.45	3.19	3.62	5.36	6.83	7.4	9.41
	Sensible Cooling Capacit	H		1.24	1.79	2.32	2.86	3.35	4.76	5.81	6.86	7.98
		M		1.08	1.57	1.95	2.46	2.93	4.23	5.37	6.15	7.54
		L		0.81	1.31	1.68	2.2	2.49	3.7	4.72	5.09	6.5
HEATING	Heating Capacity	H	kW	2	2.92	3.91	4.82	5.59	7.63	8.88	10.77	12.16
		M		1.78	2.6	3.32	4.22	4.94	6.91	8.36	9.9	11.49
		L		1.37	2.17	2.88	3.81	4.25	6.09	7.43	8.24	10.06
	Max. Electric Heater			1	1.5	2			3			
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
	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 Input (cooling mode)	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
	Power Input (heating mode)	H		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
	Running Current	H	A	0.15	0.23	0.33	0.38	0.45	0.76	0.87	1.11	1.58
HYDRONIC	Cooling Water Flow Rate	H	L/h	309	437	571	696	822	1164	1422	1681	1950
		M		272	389	487	607	725	1045	1323	1523	1850
		L		207	326	419	546	620	919	1171	1269	1614
	Cooling Pressure Drop	H	kPa	91.96	27	50.56	27.13	37.58	39.76	61.89	90.24	127.15
		M		73.14	21.89	37.94	21.23	29.93	32.76	54.35	75.57	115.63
		L		44.84	15.93	29.03	17.54	22.6	25.99	43.64	54.39	90.44
	Heating Water Flow Rate	H	L/h	343	500	670	827	958	1308	1522	1846	2085
		M		306	446	570	724	848	1184	1433	1698	1970
		L		234	372	493	652	729	1043	1273	1413	1725
	Heating Pressure Drop	H	kPa	13.94	28.60	56.34	30.74	41.42	41.08	59.06	90.55	122.01
		M		11.31	23.25	42.09	24.18	33.21	34.33	53.01	77.90	110.17
		L		7.01	16.79	32.44	20.06	25.33	27.35	42.86	55.97	86.67
	Water Content		L	0.88	0.99	1.28	1.59	1.68	2.32	2.63	2.92	3.23

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45°C / 40°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Please visit www.eurovent-certification.com for more information.

TECHNICAL SPECIFICATIONS

Hydronic Universal (Cabinet), 3+1 row (Auxiliary Heating coil) with **EC Motor**

	PFWB(C)-3+1R-[SIZE]-V-EC			06B	09	12B	15B	18	24B	30B	36B	40C
UNIT GENERAL SPECS	Configuration			2 PIPE								
	Number of Fan Blowers			1	2				4			
	Power Supply (V/Ph/Hz)			230/1/50 | 220/1/60								
AIR	Air Flow	H	m³/h	330	504	677	840	970	1350	1575	1935	2204
		M		280	432	540	697	827	1170	1440	1710	2034
		L		198	342	450	607	677	990	1224	1350	1700
COOLING	Cooling Capacity	H	kW	1.84	2.36	3.09	3.90	4.49	6.45	6.95	8.47	9.59
		M		1.61	2.10	2.68	3.40	3.96	5.84	6.47	7.67	9.09
		L		1.20	1.76	2.33	3.06	3.39	5.30	5.73	6.39	7.93
	Sensible Cooling Capacity	H		1.38	1.73	2.37	2.82	3.22	5.08	5.07	6.15	6.95
		M		1.21	1.53	2.06	2.43	2.81	4.58	4.68	5.52	6.56
		L		0.92	1.27	1.77	2.17	2.39	4.01	4.12	4.57	5.66
HEATING	Heating Capacity	H	kW	0.46	0.63	0.72	1.05	1.27	1.37	1.88	2.32	2.64
		M		0.40	0.57	0.62	1.10	1.15	1.26	1.79	2.15	2.53
		L		0.28	0.49	0.56	0.98	1.00	1.29	1.61	1.82	2.27
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
	Power Level (Outlet)			50/48/41	52/49/45	52/49/46	58/53/51	60/57/53	59/55/53	64/60/58	66/63/59	69/67/65
ELECTRICAL (Fan Motor)	Power Input (Cooling) [1]	H	W	15	29	25	44	52	76	100	128	182
		M		12	20	18	30	36	52	68	92	147
		L		8	12	13	22	23	40	51	56	92
	Power Input (Heating) [1]	H		16	29	25	50	52	76	100	128	182
		M		12	20	18	33	36	52	68	92	147
		L		8	12	13	24	23	40	51	56	92
	Running Current	H	A	0.15	0.23	0.33	0.38	0.45	0.76	0.87	1.11	1.58
HYDRONIC	Cooling Water Flow Rate	H	L/h	280.80	404.90	526.30	668.30	770.10	1011.00	1192.00	1451.00	1643.00
		M		247.30	360.30	448.70	583.20	678.70	908.20	1109.00	1315.00	1559.00
		L		188.40	302.00	386.60	524.60	580.70	798.60	981.50	1096.00	1360.00
	Cooling Pressure Drop	H	kPa	8.57	18.00	9.50	19.00	25.20	9.79	12.00	17.50	23.20
		M		6.74	14.70	6.30	14.90	20.30	8.20	9.96	15.00	21.20
		L		4.20	10.80	5.90	10.30	15.60	5.70	8.70	10.70	16.90
	Heating Water Flow Rate	H	L/h	138	196	262	326	366	506	590	705	796
		M		122	173	223	285	329	458	549	645	752
		L		93	147	193	254	282	401	486	541	662
	Heating Pressure Drop	H	kPa	4.09	8.14	16.14	27.75	35.74	11.7	17	25.63	34.51
		M		3.28	6.49	12.06	21.71	29.4	9.79	14.93	21.84	31.11
		L		2.01	4.82	9.3	17.69	22.38	7.69	11.99	15.91	24.74
	Water Content		L	0.88	0.99	1.28	1.59	1.68	2.32	2.63	2.92	3.23

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65°C / 55°C

(1): Fan motor power includes PCB power input.
For High ΔT Condition Requirements, please refer to Selection Software.

TECHNICAL SPECIFICATIONS

Hydronic Universal (Cabinet), 3row, 2 pipe with AC Motor

	PFWB(C)-3R-[Size]-V			06	09	12	15B	18	24B	30R	36R	40R
UNIT GENERAL SPECS	Configuration			2 PIPE								
	Number of Fan Blowers			1	2				4			
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220 / 1 / 60								
AIR	Air Flow (E)	H	m³/h	350	504	677	840	970	1350	1575	1935	2204
		M		280	432	540	697	827	1170	1440	1710	2034
		L		210	342	450	607	677	990	1224	1350	1700
COOLING	Cooling Capacity (E)	H	kW	1.7	2.34	2.98	3.8	4.49	5.9	6.95	8.47	9.59
		M		1.44	2.08	2.57	3.27	3.96	5.3	6.47	7.67	9.09
		L		1.16	1.73	2.23	2.92	3.39	4.66	5.73	6.39	7.93
	Sensible Cooling Capacity (E)	H		1.23	1.73	2.22	2.75	3.22	4.34	5.07	6.15	6.95
		M		1.03	1.53	1.91	2.35	2.81	3.83	4.68	5.52	6.56
		L		0.82	1.27	1.65	2.1	2.39	3.37	4.12	4.57	5.66
HEATING	Heating Capacity (E)	H	kW	1.72	2.48	3.21	3.92	4.49	6.1	7.11	8.65	9.7
		M		1.46	2.19	2.75	3.43	3.97	5.49	6.67	7.88	9.22
		L		1.17	1.82	2.37	3.07	3.41	4.85	5.88	6.54	8
	Max. Electric Heater			1	1.5	2	2	2	3	3	3	3
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
	Power Level (Outlet)e			50/48/42	52/49/45	55/52/48	60/55/52	60/57/53	61/57/55	64/60/58	66/63/59	69/67/65
ELECTRICAL (Fan Motor)	Power Input (Cooling) (E) 1	H	W	39	56	70	80	93	150	176	214	235
		M		34	49	60	72	86	130	163	201	224
		L		31	45	53	70	80	120	157	192	222
	Power Input (Heating) (E) 1	H		40	56	70	81	93	150	176	214	235
		M		34	49	60	72	86	130	163	201	224
		L		31	45	53	64	80	120	157	192	222
	Running Current	H	A	0.17	0.22	0.3	0.35	0.4	0.65	0.77	0.93	1.02
	Starting Current			0.51	0.65	0.91	1.06	1.21	1.96	2.3	2.79	3.07
HYDRONIC	Cooling Water Flow Rate	H	L/h	292	405	526	668	770	1011	1192	1451	1643
		M		247	360	449	583	679	908	1109	1315	1559
		L		199	302	387	525	581	799	982	1096	1360
	Cooling Pressure Drop	H	kPa	9.5	18	10.7	18	25.2	7.5	11.5	17.3	23.2
		M		7.3	14.7	8.4	13.9	20.3	6.5	9.96	14.6	21.2
		L		4.9	10.8	6.6	11.5	15.6	5.2	8.1	10.7	16.8
	Heating Water Flow Rate	H	L/h	294	405	536	672	770	1046	1218	1473	1663
		M		251	361	456	589	681	942	1144	1350	1580
		L		201	301	395	526	585	831	1008	1121	1372
	Heating Pressure Drop	H	kPa	8	17.7	10.8	15.9	21.2	6.8	9.8	14.9	19.8
		M		6	14.3	8.4	12.7	17.2	5.7	8.7	12.8	18.2
		L		4.2	10.5	6.5	10.5	13.3	4.9	7.1	9.3	14.3
	Water Content		L	0.66	0.74	0.96	1.19	1.26	1.74	1.97	2.19	2.42

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45°C / 40°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Please visit www.eurovent-certification.com for more information.

TECHNICAL SPECIFICATIONS

Hydronic Universal (Cabinet), 4 row, 2 pipe with AC Motor

	PFWB(C)-4R-[Size]-V			06	09	12	15B	18	24	30	36	40
UNIT GENERAL SPECS	Configuration			2 PIPE								
	Number of Fan Blowers			1	2				4			
	Power Supply (V/Ph/Hz)			230 / 1 / 50 | 220 /1 / 60								
AIR	Air Flow	H	m³/h	350	504	677	840	970	1350	1575	1935	2204
		M		280	432	540	697	827	1170	1440	1710	2034
		L		210	342	450	607	677	990	1224	1350	1700
COOLING	Cooling Capacity	H	kW	1.87	2.55	3.33	4.06	4.8	6.79	8.29	9.81	11.37
		M		1.59	2.27	2.84	3.54	4.23	6.1	7.72	8.89	10.79
		L		1.27	1.9	2.45	3.19	3.62	5.36	6.83	7.4	9.41
	Sensible Cooling Capacity	H		1.29	1.79	2.32	2.86	3.35	4.76	5.81	6.86	7.98
		M		1.08	1.57	1.95	2.46	2.93	4.23	5.37	6.15	7.54
		L		0.86	1.31	1.68	2.2	2.49	3.7	4.72	5.09	6.5
HEATING	Heating Capacity	H	kW	2.09	2.92	3.91	4.82	5.59	7.63	8.88	10.77	12.16
		M		1.78	2.6	3.32	4.22	4.94	6.91	8.36	9.9	11.49
		L		1.43	2.17	2.88	3.81	4.25	6.09	7.43	8.24	10.06
	Max. Electric Heater			1	1.5	2			3			
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
	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 Input[1]	H	W	39	50	70	81	93	150	176	214	235
		M		34	44	57	72	86	130	163	201	224
		L		31	40	51	64	80	120	157	192	222
	Power Input[1]	H		39	50	70	81	93	150	176	214	235
		M		34	44	57	72	86	130	163	201	224
		L		31	40	51	64	80	120	157	192	222
	Fan Motor Running Current	H	A	0.17	0.22	0.3	0.35	0.4	0.65	0.77	0.93	1.02
	Fan Motor Starting Current			0.51	0.65	0.91	1.06	1.21	1.96	2.3	2.79	3.07
HYDRONIC	Cooling Water Flow Rate	H	L/h	321	437	571	696	822	1164	1422	1681	1950
		M		272	389	487	607	725	1045	1323	1523	1850
		L		218	326	419	546	620	919	1171	1269	1614
	Cooling Pressure Drop	H	kPa	98.46	27	50.56	27.13	37.58	39.76	61.89	90.24	127.15
		M		73.14	21.89	37.94	21.23	29.93	32.76	54.35	75.57	115.63
		L		49.25	15.93	29.03	17.54	22.6	25.99	43.64	54.39	90.44
	Heating Water Flow Rate	H	L/h	358	500	670	827	958	1308	1522	1846	2085
		M		306	446	570	724	848	1184	1433	1698	1970
		L		246	372	493	652	729	1043	1273	1413	1725
	Heating Pressure Drop	H	kPa	15.05	28.60	56.34	30.74	41.42	41.08	59.06	90.55	122.01
		M		11.31	23.25	42.09	24.18	33.21	34.33	53.01	77.90	110.17
		L		7.64	16.79	32.44	20.06	25.33	27.35	42.86	55.97	86.67
	Water Content		L	0.88	0.99	1.28	1.59	1.68	2.32	2.63	2.92	3.23

TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 45°C / 40°C

(1): Fan motor power includes PCB power input.
(e): Specifications follow Eurovent test data for the year of publication.
For non-standard conditions (i.e: High ΔT requirements) please refer to Eurovent certified selection software.
Please visit www.eurovent-certification.com for more information.

TECHNICAL SPECIFICATIONS

Hydronic Universal (Cabinet), 3+1 row (Auxiliary Heating coil),4 pipe with **AC Motor**

	PFWB(C)-3+1R-[SIZE]-P			06B	09	12B	15B	18	24B	30B	36B	40C
UNIT GENERAL SPECS	Configuration			4 PIPE								
	Number of Fan Blowers			1	2				4			
	Power Supply (V/Ph/Hz)			230/1/50 | 220/1/60								
AIR	Air Flow	H	m^3/h	350	504	677	840	970	1350	1575	1935	2204
		M		280	432	540	697	827	1170	1440	1710	2034
		L		210	342	450	607	677	990	1224	1350	1700
COOLING	Cooling Capacity	H	kW	1.7	2.34	2.98	3.8	4.49	5.9	6.95	8.47	9.59
		M		1.44	2.08	2.57	3.27	3.96	5.3	6.47	7.67	9.09
		L		1.16	1.73	2.23	2.92	3.39	4.66	5.73	6.39	7.93
	Sensible Cooling Capacity	H		1.23	1.73	2.22	2.75	3.22	4.34	5.07	6.15	6.95
		M		1.03	1.53	1.91	2.35	2.81	3.83	4.68	5.52	6.56
		L		0.82	1.27	1.65	2.1	2.39	3.37	4.12	4.57	5.66
HEATING	Heating Capacity	H	kW	1.69	2.29	3.06	3.81	4.27	5.9	6.89	8.22	9.29
		M		1.43	2.02	2.6	3.32	3.83	5.35	6.41	7.52	8.77
		L		1.14	1.71	2.25	2.96	3.3	4.67	5.67	6.31	7.72
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
	Power Level (Outlet)			50/48/42	52/49/45	55/52/48	60/55/52	60/57/53	61/57/55	64/60/58	66/63/59	69/67/65
ELECTRICAL (Fan Motor)	Power Input (Cooling) [1]	H	W	39	56	70	80	93	150	176	214	235
		M		34	49	60	72	86	130	163	201	224
		L		31	45	53	70	80	120	157	192	222
	Power Input (Heating) [1]	H		40	56	70	81	93	150	176	214	235
		M		34	49	60	72	86	130	163	201	224
		L		31	45	53	64	80	120	157	192	222
	Running Current	H	A	0.17	0.22	0.3	0.35	0.4	0.65	0.77	0.93	1.02
HYDRONIC	Cooling Water Flow Rate	H	L/h	292	405	526	668	770	1011	1192	1451	1643
		M		247	360	449	583	679	908	1109	1315	1559
		L		199	302	387	525	581	799	982	1096	1360
	Cooling Pressure Drop	H	kPa	9.5	18	10.7	18	25.2	7.5	11.5	17.3	23.2
		M		7.3	14.7	8.4	13.9	20.3	6.5	9.96	14.6	21.2
		L		4.9	10.8	6.6	11.5	15.6	5.2	8.1	10.7	16.8
	Heating Water Flow Rate	H	L/h	145	196	262	326	366	506	590	705	796
		M		122	173	223	285	329	458	549	645	752
		L		98.1	147	193	254	282	401	486	541	662
	Heating Pressure Drop	H	kPa	4.79	8.71	17.4	30.2	38.6	12.6	18.5	27.6	37.2
		M		3.61	7.03	13.2	24	32.1	10.7	16.3	23.7	33.7
		L		2.47	5.31	10.3	19.7	24.8	8.5	13.3	17.6	27.1
	Water Content		L	0.88	0.99	1.28	1.59	1.68	2.32	2.63	2.92	3.23

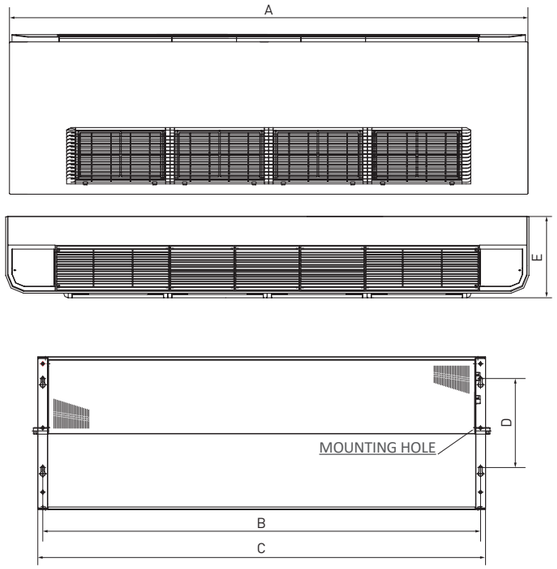
TESTING CONDITIONS

Cooling mode: Return air temperature: 27°C DB / 19°C WB Inlet / outlet water temperature: 7°C / 12°C
Heating mode: Return air temperature: 20°C Inlet / outlet water temperature: 65°C / 55°C

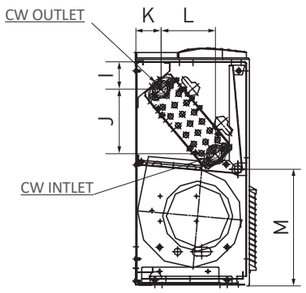
For High ΔT Condition Requirements, please refer to Selection Software.

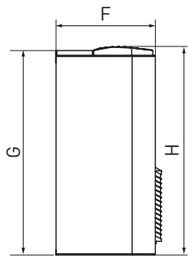
DIMENSIONAL DRAWINGS, DATA & WEIGHTS

With decorative cabinet

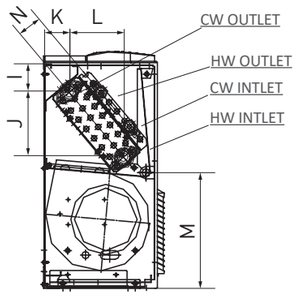


2 PIPE





4 PIPE



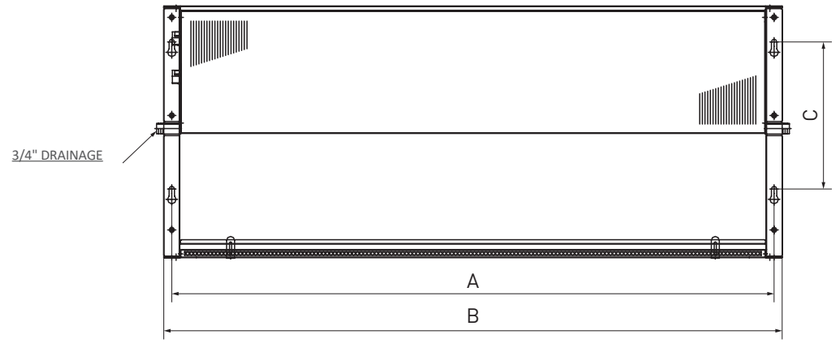
Model	Unit Dimensions (mm)													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N[1]
PFWBC 06	858	578	608	270	250	235	484	494	57	134	52	112.5	242	50
PFWBC 09	908	628	658	270	250	235	484	494	57	134	52	112.5	242	50
PFWBC 12	1058	778	808	270	250	235	484	494	57	134	52	112.5	242	50
PFWBC 15	1208	928	958	270	250	235	484	494	57	134	52	112.5	242	50
PFWBC 18	1258	978	1008	270	250	235	484	494	57	134	52	112.5	242	50
PFWBC 24	1608	1328	1358	270	250	235	484	494	57	134	52	112.5	242	50
PFWBC 30	1758	1478	1508	270	250	235	484	494	57	134	52	112.5	242	50
PFWBC 36	1908	1628	1658	270	250	235	484	494	57	134	52	112.5	242	50
PFWBC 40	2058	1778	1808	270	250	235	484	494	57	134	52	112.5	242	50

PFWBC				06	09	12	15	18	24	30	36	40
CONNECTIONS	Water	Type		Socket (Threaded Female)								
		In / Out	mm (in)	19.05 (3/4")								
	Condensate Drainage		mm (in)	19.05 (3/4") FOR 4 PIPE ONLY (1/2")								
WEIGHT	Net		kg	22	24	26	30	32	47	47	49	54

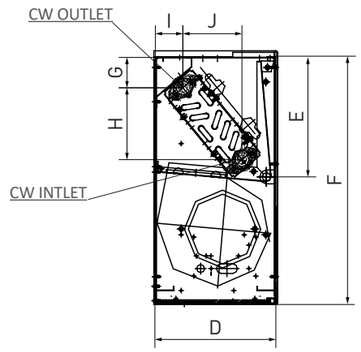
(1): Value only valid for 4-pipe units.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS

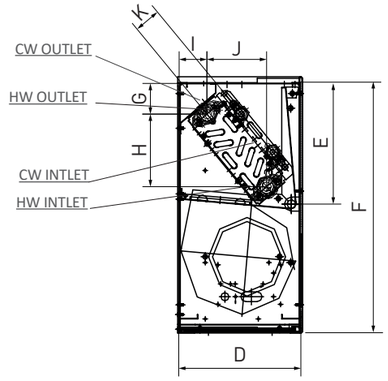
Without decorative cabinet



2 PIPE



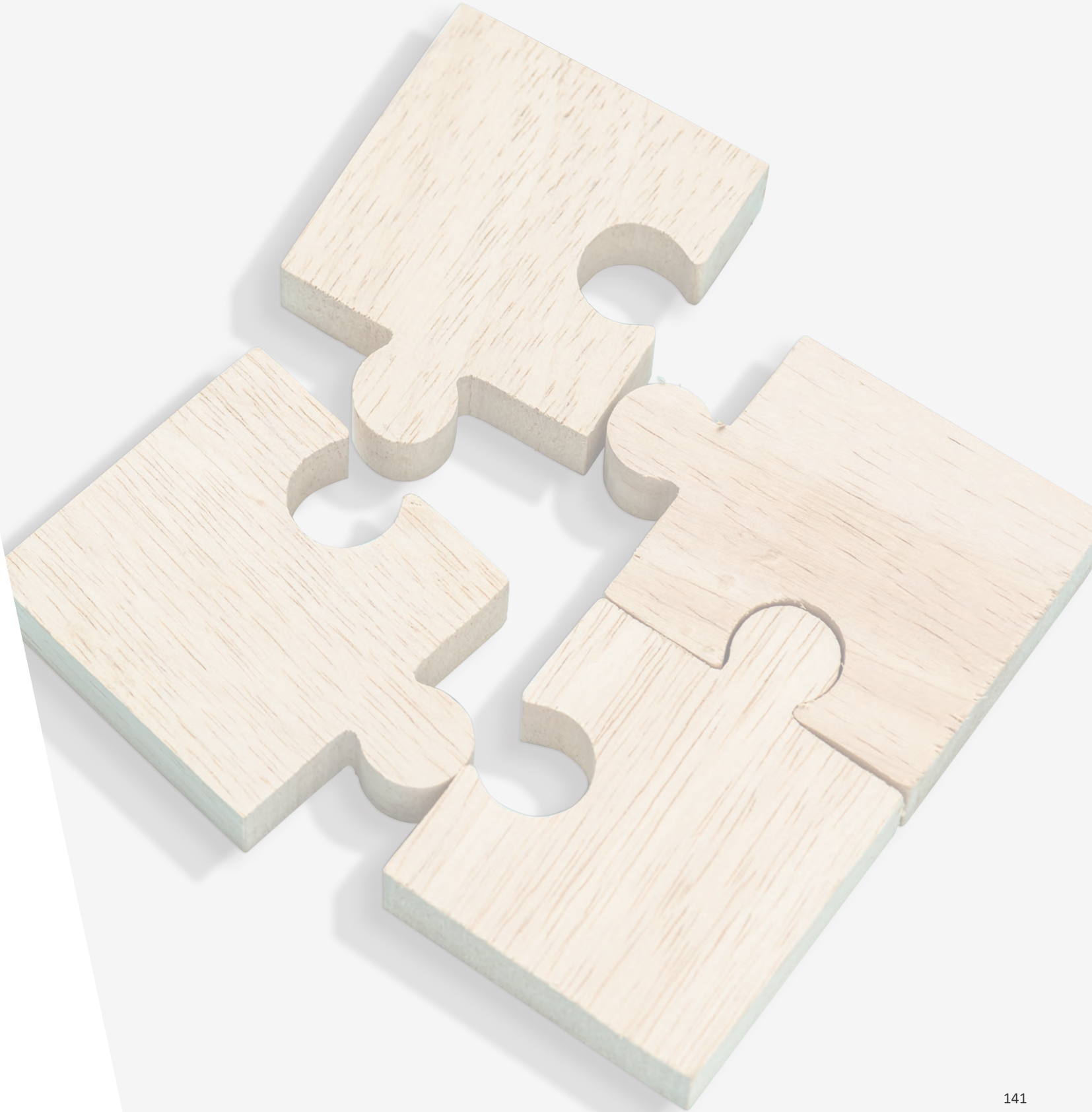
4 PIPE



Model	Unit Dimensions (mm)										
	A	B	C	D	E	F	G	H	I	J	K[1]
PFWB 06	578	608	270	230	223	460	57	134	52	112.5	50
PFWB 09	628	658	270	230	223	460	57	134	52	112.5	50
PFWB 12	778	808	270	230	223	460	57	134	52	112.5	50
PFWB 15	928	958	270	230	223	460	57	134	52	112.5	50
PFWB 18	978	1008	270	230	223	460	57	134	52	112.5	50
PFWB 24	1328	1358	270	230	223	460	57	134	52	112.5	50
PFWB 30	1478	1508	270	230	223	460	57	134	52	112.5	50
PFWB 36	1628	1658	270	230	223	460	57	134	52	112.5	50
PFWB 40	1778	1808	270	230	223	460	57	134	52	112.5	50

PFWB				06	09	12	15	18	24	30	36	40
CONNECTIONS	Water	Type		Socket (Threaded Female)								
		In / Out	mm (in)	19.05 (3/4")								
	Condensate Drainage		mm (in)									
WEIGHT	Net		kg	22	24	26	30	32	47	47	49	54

(1): Value only valid for 4-pipe units.



ACCESSORIES FOR **FAN COILS**

01. CONTROLLERS

[WWP-V3] WIRED WALL PAD CONTROL (FOR TOTAL CONTROL)

Features: 7 days 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.

[IRHS-V1] REMOTE INFRARED HANDSET (FOR TOTAL CONTROL)

With Global Control functionality for Main and Secondary Unit groups.

02. CONTROL OPTIONS

ABS LED RECEIVER

IR receiver in ABS housing with up to 180cm (70in) length prewiring, which can be connected with TOTAL controls only. LED lights show working mode or error mode.

DIFERENTIAL PRESSURE TRANSDUCER

This device converts the air pressure difference to a proportional electrical output (0-10 VDC/0-5 VDC/4-20 mA). It is suitable for detecting abnormal airflow at the fan coil unit for safety (cutting off electric heater) or maintenance (air filter cleaning) purposes.

03. VALVE KITS

2 or 3 WAY BYPASS THERMOELECTRIC VALVES

2-way or 3-way valve bodies with ON/OFF or modulating actuators integrated with copper piping connection kits.

** Piping connection kits vary among the different ranges.*

2 or 3 WAY BYPASS BALL VALVES

2-way or 3-way bypass ball valve bodies with motorized or 24VAC modulating actuators integrated with Copper Piping Connection Kits.

** Piping connection kits vary among the different ranges.*

04. UPGRADED FILTERS

All our fan coils come with an standard nylon filter installed as standard.
If you want an upgrade on those filters, you can choose between:

G4 (MERV 8)

Available with 3M HAF grade.

F8 (MERV 14)

Range	G4 (MERV 8)		F8 (MERV 14)
	STANDARD	WITH 3M HAF GRADE	
PCGH-3R EC and AC	X	X	
CHV2 EC and AC	X	X	
PDWA EC and AC	X	X	
PDL EC	X	X	
PDWD EC	X	X	
PDWC EC and AC	X	X	
PDWB EC and AC	X	X	X
HAHU EC and AC	X	X	X
VAHU EC	X	X	X
PFWB(C) EC and AC	X	X	

05. ELECTRIC HEATERS

PTC ELECTRIC HEATER KIT(1)

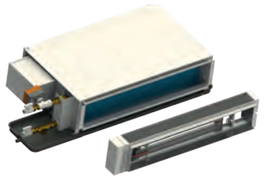
With 2-stage safety cut-out and can be configured as booster heaters or primary heaters.

TUBE ELECTRIC HEATER KIT(1)

With 2-stage safety, cut-outs can be configured as booster heaters or primary heaters. It can be easily installed on-site or in stock via plug-and-play wiring and brackets.

MODULE ELECTRIC HEATER KIT(1)

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 the DIP switch on the internal control board.



Range	Module EH Kit	PTC EH Kit	Tube EH Kit
SWC EC	-	From 0.75 to 1.5 KW	-
PCGH-3R EC	-	-	From 1 to 4 KW
PCSL EC	-	From 0.5 to 1 KW	-
PDWA EC	From 1 to 6 KW	-	-
PDL EC	From 3 to 9 KW	-	-
PDWSL EC	From 1.5 to 3 KW	-	-
PDWB EC	From 3 to 9 KW (380V/3Ph)	-	-
HAHU EC	From 4.5 to 24 KW (400V/3Ph)	-	-
VAHU EC	From 4.5 to 9 KW (400V/3Ph)	-	-
PFWB(C) EC	-	From 1 to 3 KW	-

** Non-standard electric heater sizes available under request. Contact us for further information.*
***The Electric Reheater Kits can be retrofited to the Ducted 4-Pipe ranges on special request.*

*(1) **ELECTRIC HEATER SAFETIES** Each Heater Kit includes an Auto-Klixon Thermal Switch, a Fuse & Contact Relay factory wired & tested. Additional Safeties including Manual Overheat Stat & Air Pressure Safety are available under request*

06. DRAIN PANS

STAINLESS STEEL DRAIN PAN

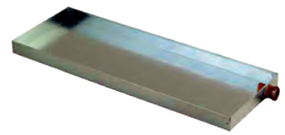
To choose between left or right side coil connections.

PAINTED STEEL DRAIN PAN

For Horizontal installations: Painted steel drain pans for built-in horizontal floor standing fixed wall installations with right or left-sided coil connections.

For Vertical installations: Painted steel drain pans for suspended ceiling installations with right or left-sided coil connections.

Range	Stainless Steel	Painted Steel for Horizontal Installations	Painted Steel for Vertical Installations
PDWA EC and AC	X		
PDL EC	X		
PDWSL EC	X		
PDWD EC	X		
PDWC EC and AC	X		
PDWB EC and AC	X		
HAHU EC and AC	X		
PFWB(C) EC and AC	X	X	X



07. FLANGES

FLANGES

For Fresh Air: Allows up to 15% of unit airflow up to a maximum of 100m³/h (59CFM) as fresh air intake (per connection). Cassette comes with knock out fresh air connection holes. ABS plastic flanges use only two screws for fixture to unit. Available for PCGH-3R Cassette range.

For Branch Duct: For delivery of treated air to adjacent spaces with 2 connectors per single fan model. Available for PCGH-3R Cassette ranges.

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