

FAN COIL

METRIC TECHNICAL
CATALOGUE 2024



POLARAIR

POLARAIR

The logo for POLARAIR features the word "POLARAIR" in a bold, blue, sans-serif font. The letters "AIR" are white and are contained within a blue speech bubble shape that has a small tail pointing downwards and to the right.

OUR COMPANY	5
WHY POLAR AIR	6
OUR SERVICES	8
OUR SELECTION SOFTWARE	9
OUR FAN COILS	10
PRODUCT OVERVIEW	12
CONTROL OPTIONS	14
Highwall	
PHW - Highwall fan coil	16
Cassettes	
PCGH-3R - 4 Way Cassette	22
PCSL - 1 Way Slim Cassette	28
Ducted	
• PDWSL - Slim Ducted	32
• PDWA - Medium ESP Ducted	38
• PDWC - High ESP Ducted	44
Specialty Application Ducted	
• PDWD - Double Skin High ESP Ducted	50
• HAHU - Horizontal Mini Air Handling Unit	56
• VAHU - Vertical Mini Air Handling Unit	62
Floorstanding	
• PFWBC - Universal Floorstanding	68
• PFWSLN - Slim Floorstanding	74
OUR ACCESSORIES	80

Since 1998, Polar Air has been dedicated to developing and delivering **customer-oriented, effective, and sustainable indoor climate solutions** worldwide. With three strategically located offices in **Boston, Murcia, and Hong Kong**, we have a global reach to serve your needs.

As part of the Polar Global group, Polar Air aligns with Polar Global's **vision of making every indoor space ideal for the well-being of all, while contributing to environmental sustainability**. Our mission prioritizes energy savings and environmental responsibility, utilizing innovative and intelligent approaches to help our clients achieve the perfect indoor climate.

At Polar Air, we've cultivated vital partnerships and personal connections worldwide, providing us with specialized insights and market knowledge. This knowledge drives constant improvements in our product designs, manufacturing processes, and quality assurance procedures, ensuring that our solutions evolve with the market.

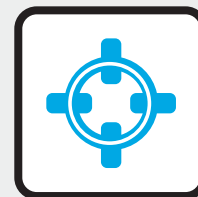
Our multicultural team of professionals is dedicated to delivering not only effective but also efficient, intelligent, and environmentally responsible products. **We're proud to be part of the Polar Global group, sharing its values of integrity, innovation, sustainability, and an unwavering focus on our customers.**

Committed to a sustainable future, we aim to reduce energy consumption and carbon emissions through our innovative and intelligent indoor climate solutions. Our most valuable resource is our people, including Polar Air team members and our industry partners, working together to deliver top-quality, sustainable indoor climate solutions tailored to your unique requirements from our vast selection of over 1800 configurations.



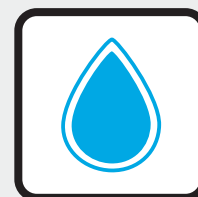
+25
YEARS
EXPERIENCE

100%
CUSTOMER-ORIENTED
APPROACH



+27
COUNTRIES
WORLDWIDE

+1800
PRODUCT
CONFIGURATIONS



IT'S NOT JUST ABOUT HVAC; IT'S ABOUT THE ULTIMATE INDOOR CLIMATE EXPERIENCE.

We redefine the HVAC experience by combining innovation, sustainability, and unparalleled customer service.

We are more than just an HVAC provider; we are your trusted partner in delivering the ultimate indoor climate experience. When you choose Polar Air, you choose an extraordinary customer experience. We offer services that are second to none, a team of dedicated professionals, unwavering professionalism, personalized attention, and an irresistible product offering.

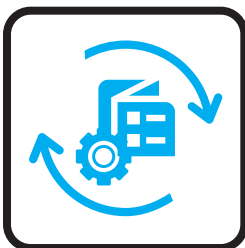


ENERGY EFFICIENCY

We're obsessed with efficiency. Our wide product range enables precise load match efficiency. Our Delta T management ensures optimized water flow, leading to enhanced efficiency and reduced energy costs.

TOP-LEVEL CUSTOMER SERVICE

We're not just here to sell; we're here to support you. Our top-level customer service extends beyond the sale, offering technical training and access to the power of PG Modbus, ensuring you are empowered to make informed decisions.

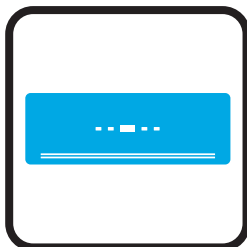
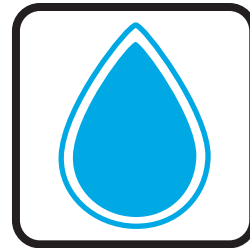


COMPREHENSIVE PRODUCT RANGE

Our product portfolio is a testament to our dedication to meeting every HVAC need. From our diverse product offerings to the myriad options and accessories available, we ensure your unique requirements are met with precision.

WATER-BASED HVAC SYSTEMS

At Polar Air, we specialize in water-based HVAC systems, seamlessly integrating this renewable source to drive efficient climate control while reducing environmental impact.

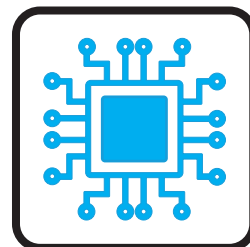


AESTHETIC EXCELLENCE

We understand the importance of aesthetics in your space. Our products boast a modern, plastic design that seamlessly integrates with your environment, ensuring that form complements function.

USER-FRIENDLY CONTROLS

Say goodbye to expensive in-field installations and programming. Our onboard controls eliminate the need for complex setups, ensuring ease of use and substantial cost savings.



As you browse through the catalogue, you will see that every product is a testament to our dedication to innovation, customer satisfaction, and environmental responsibility. At Polar Air, we believe that everyone deserves to experience elevated comfort while contributing to a sustainable world.

Thank you for considering Polar Air, and we look forward to partnering with you to create a world of exceptional comfort and sustainability.

IT IS ALL ABOUT **SERVICING OUR CUSTOMERS**

We pride ourselves on being more than just a provider; we're your partner in creating the ideal indoor climate for your well-being and sustainability goals. With a deep commitment to your satisfaction and comfort, we offer a range of services designed to make your experience seamless.

01. PRE-SALES

- **Product Consultation and Needs Assessment:** Collaborating closely with clients to comprehensively assess their unique requirements, ensuring a precise understanding of their needs.
- **Product System Design and Engineering Consultancy:** Crafting tailored product system designs that precisely match client specifications, coupled with expert technical support and responses to client inquiries about our product offerings.
- **Budget Estimation:** Furnishing clients with meticulous and transparent cost estimates for all necessary equipment, enabling them to make informed budgeting decisions.
- **Logistics Consultation:** Offering **container loading and freight calculation** to recommend the optimal logistics strategies to ensure efficient and timely delivery of the equipment to project locations.
- **Financing Options:** Empowering clients with financial guidance and assistance in exploring a range of payment options, facilitating project funding in alignment with their budgetary preferences.
- **Technical Support:** Providing ongoing technical expertise, guidance, and assistance to address client inquiries, troubleshoot issues, and optimize the performance of our systems, thus ensuring their continued satisfaction and success.

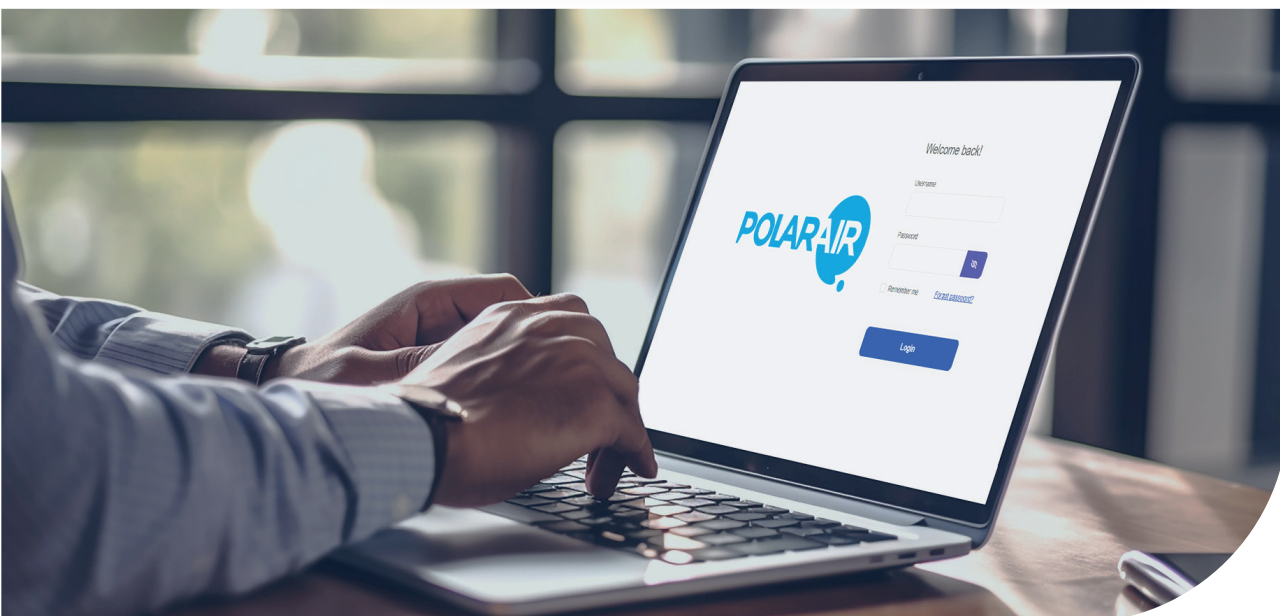
02. AFTER-SALES

- **Spare Part Supply:** Offering a comprehensive inventory of replacement components and parts, ensuring the equipment's consistent performance and prolonged lifespan.
- **Warranty Support:** Going the extra mile in assisting clients with warranty claims, we ensure that they not only avail themselves of the full benefits of manufacturer warranties but also experience a seamless and hassle-free warranty process.
- **Extended Warranty Options:** Providing clients with the flexibility to choose extended warranty options, granting them added peace of mind and long-term protection for their Polar Air systems.
- **Training and Education:** Empowering client personnel with in-depth training programs, equipping them with the knowledge and skills to operate and maintain Polar Air systems efficiently. This investment in education enhances system performance, reduces operational downtime, and optimizes the overall experience with our products.

PASELECT SOFTWARE TO MAXIMIZE DESIGN EFFICIENCY

Our intuitive software is designed to empower HVAC professionals in the field. It provides precise calculations, efficiency data, and competitive project-specific offers, enabling you to optimize your HVAC system design for maximum efficiency. With the ability to filter and search units based on specific conditions and requirements for your space, our software streamlines the decision-making process, saving you time and effort.

The screenshot displays the PASELECT software interface. At the top, there is a navigation bar with options like 'Calculate Form', 'Help', 'Requested Calculations', 'FAQ Management', 'Users', 'Roles', 'Permissions', and 'Enterprise'. Below this, a 'Metric' toggle is set to 'Imperial'. The main section is titled 'Product information' and includes several dropdown menus: 'District' (North of America), 'Type' (PDWA), 'Version' (2-pipe), 'Motor' (115/220V-AECM), and 'Speed' (High). There are three radio button groups: 'Selection by:' with options 'Model' (selected), 'Total capacity', and 'Air flow'; 'Calculation by:' with options 'Temperature' (selected) and 'Water flow'; and 'Operation mode:' with options 'Cooling', 'Heating', 'Cooling + heating verify' (selected), and 'Heating + cooling verify'. A list of models is shown, with 'PDWA(GR)-800', 'PDWA(GR)-500', and 'PDWA(GR)-400' selected. An image of a PDWA unit is displayed on the right. Below the product information is the 'Conditions input' section, which includes 'FluidType' (water), 'Altitude' (M), and 'Static pressure' (PA). The 'Cooling' section is partially visible at the bottom.





OUR FAN COILS

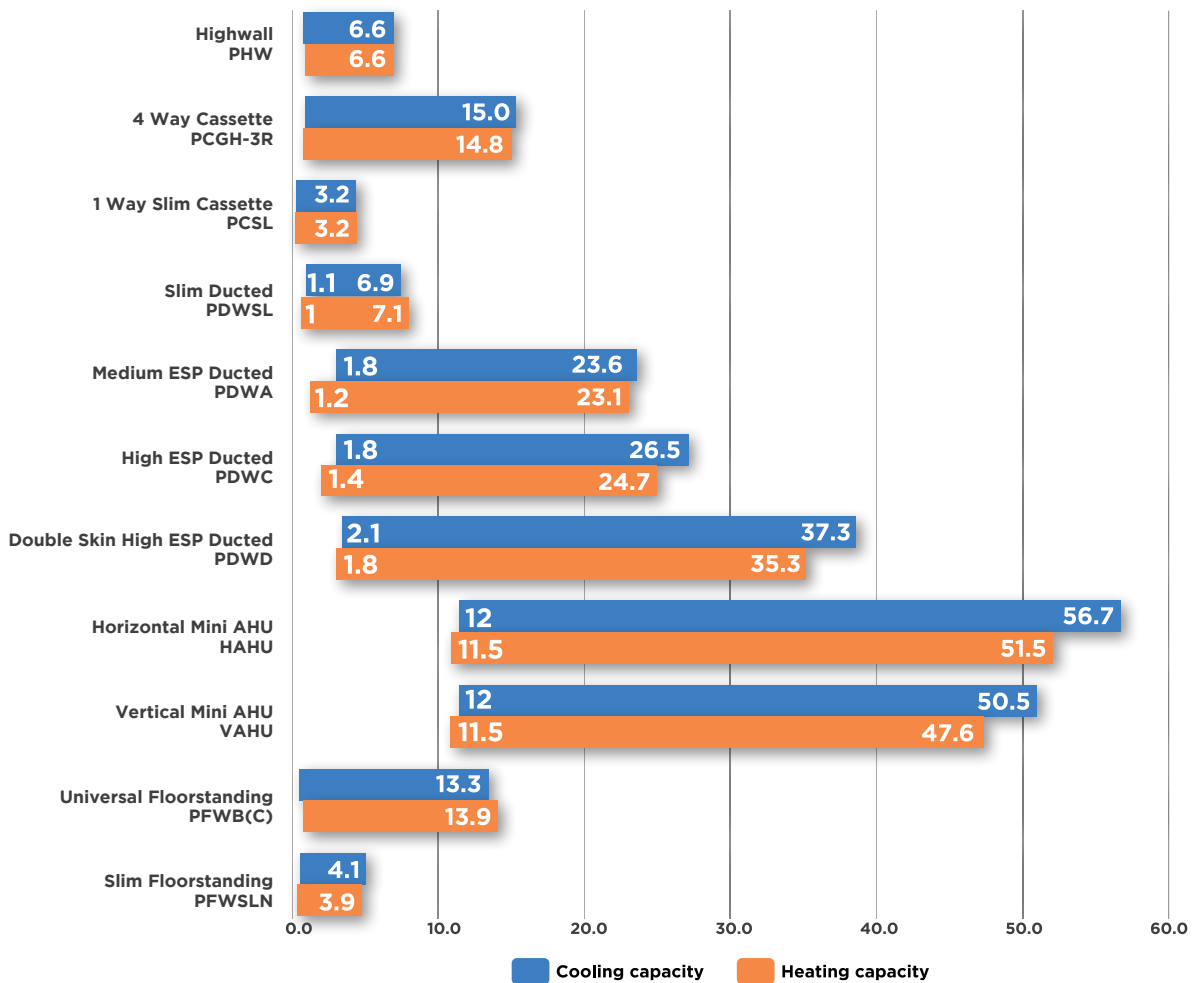


Polar Air offers the broadest range of fan coils in the world. Our fan coils are designed to meet specific market requirements and come with a wide range of accessories and options. You can choose from over 1800 models/sizes of EC and AC motor hydronic fan coils. Our products are CE and ETL certified, and most of them are also Eurovent certified.

To help you select the right product for your project, we have created a comprehensive table that provides a clear overview of the cooling and heating capacities (in KW) of our entire product range. We understand that projects often require customized solutions, and we strive to offer maximum flexibility in customizing our products based on unique project requirements.

Total Capacity (kW)*

PRODUCT OVERVIEW

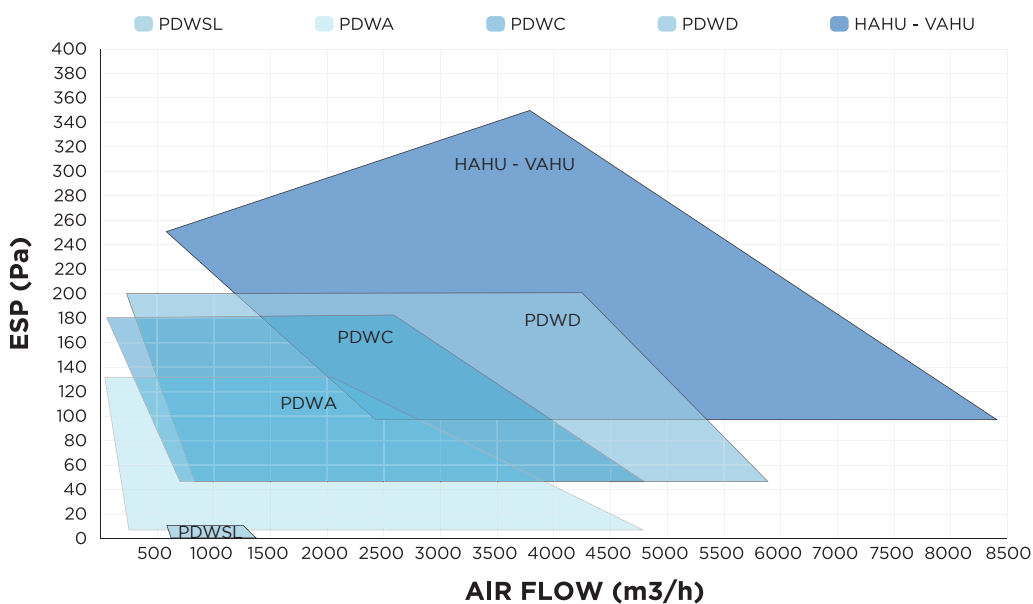
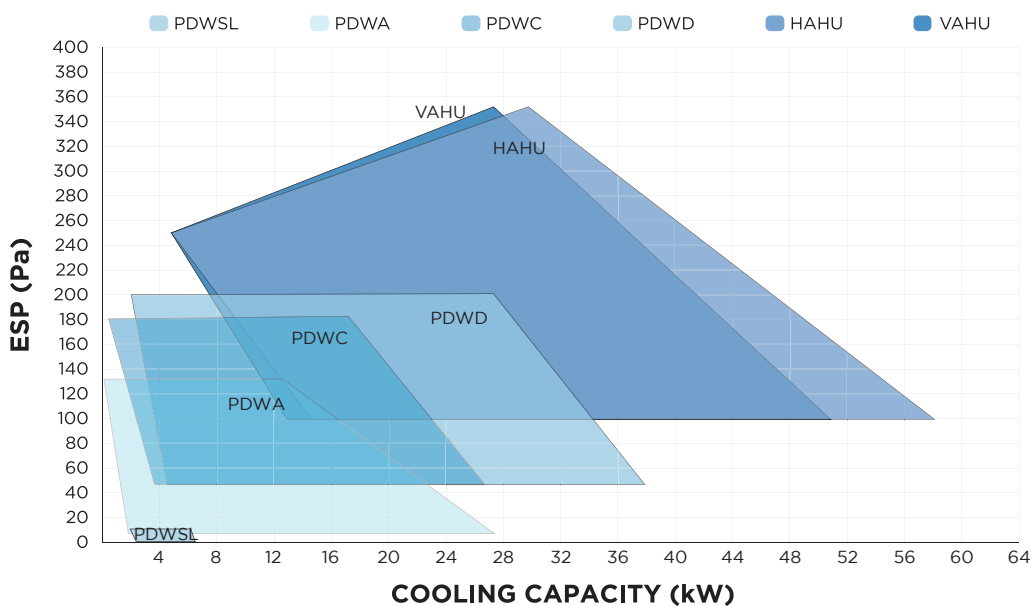


*Data above calculated under Eurovent Conditions.
 *Ducted at 50Pa ESP (PDWSL at 12Pa ESP)

WHICH DUCTED SHOULD I CHOOSE?

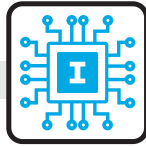
These tables assist customers in finding the most suitable model for their needs, providing indicative performance values under Eurovent standard conditions. For a more detailed view, refer to the specifications tables or utilize our Selection Software for customized project conditions.

Ducted units are commonly selected based on Airflow or Cooling Capacity with consideration for external static pressure (ESP). The first table compares Cooling Capacity based on ESP, while the second table compares airflow based on ESP. These tables guide users in choosing the appropriate ducted unit type (PDWC, PDWA, HAHU, etc.). However, for precise unit size and configuration details, use one of the methods mentioned above.*



*Data above calculated under Eurovent Conditions and High fan speed.

All Polar Air fan coil units offer maximum levels of control flexibility, by selecting from two types of controllers depending on application needs.



[I-CONTROL]

CONTROLLED WITH BMS OR POLAR AIR WALL PAD AND IR HANDSET



[W-CONTROL]

CONTROLLED WITH EXTERNAL THERMOSTAT APPLICATIONS OR EXTERNAL CONTROLLER



[I-CONTROL] PCB WITH INTELLIGENT FUNCTIONALITY

The PCB 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.

- Full control logic connectivity via Modbus RTU or using a gateway with other communication protocols.
- Auto Fan Speed control for EC.
- Modulating Valve Control to adjust the water flow 100% according to the room temperature and set temperature.
- Auto Restart function.
- Drain Pump control (If installed)
- Autodynamic balancing function for Variable Water Flow system installations.

[W-CONTROL] FLEXIBLE CONTROL PCB

This control option features flexible functionality for external thermostat applications, allowing the independent control of drain pumps and limited LED diagnostics.

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

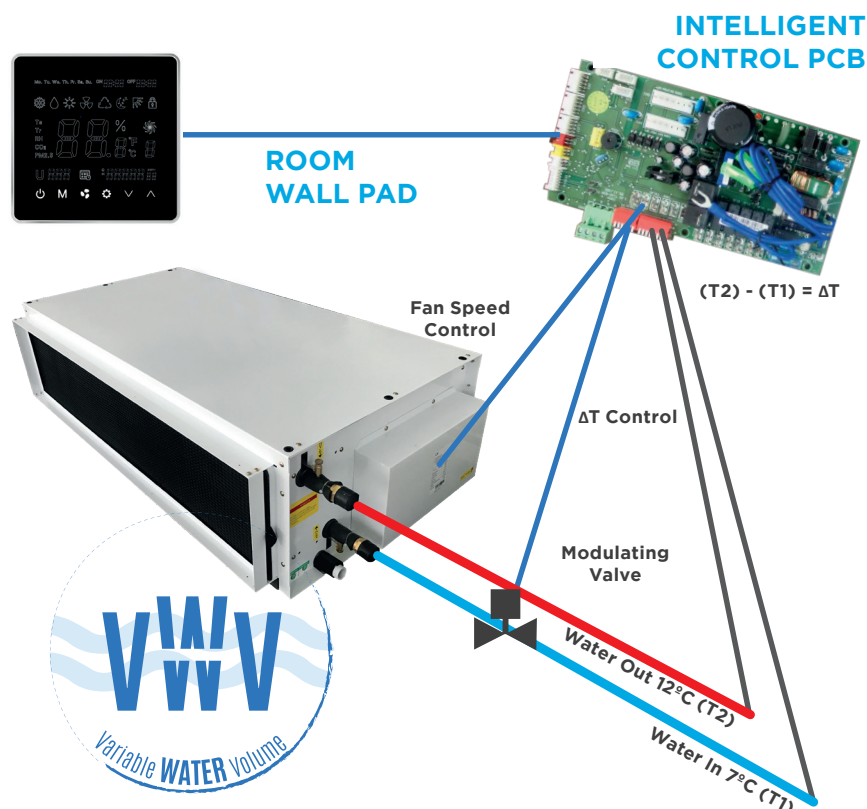
WHAT DO WE CALL INTELLIGENT FUNCTIONALITY? EXPLAINING THE AUTODYNAMIC BALANCING FUNCTION

The I-Control, also known as the Intelligent control, goes a step further than your typical control PCB.

There is a certain calculated load for every space that a fan coil will serve, but this of course, is not constant. Occupancy, lighting, even an open window, can affect the required load for a space. The typical solution for this is a PICV (pressure independent control valve), but that comes at quite a cost premium.

With our Intelligent control, we do away with the PICV and simply install temperature sensors within the water inlet and outlet, air inlet, and in the space from our own Wired Wall Pad, to monitor those points.

With that data, the “intelligence” of the unit is able to modulate the valve and fan speed to maintain the delta T setpoint this is what we call “Auto Dynamic Balancing” providing optimal cooling to the space at all times. All of this coming in one package at a much lower cost than going with a 3rd party PICV.



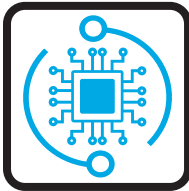
PHW - HIGHWALL FAN COIL

**NEW
PRODUCT**



FEATURES

CONTROL FLEXIBILITY



Two types of control system: Intelligent control board (I-Control) controlled via Infra-red handset and/or Intelligent wired wall pad or Flexible control (W-Control) permitting operation with external thermostat applications both controls allows configuration for 2 or 4-pipe settings.

Please refer to page 14 for further information on controls.

INTEGRATED VALVES



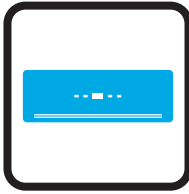
Optional 2 or 3-way both On/Off and modulating thermoelectric integrated valves located in a new position for easier maintenance. Synthetic elastomer tubes with stainless steel outer braiding and brass connectors, to enable quick and low-cost connections with no brazing.

ENERGY EFFICIENT MOTORS



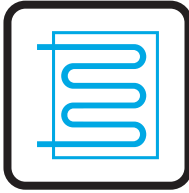
EC motors allow the tangential blower wheel to operate at optimum airflow performance, energy efficiency and quiet operation. EC motors include driven control PCB, constant torque, permanent magnet and 3 speeds pre-set or modulating with a 0-10 VDC signal for precise air balancing control.

CASING



New stylish design built of durable flame-resistant ABS white color plastic, with rounded corners to give modern aesthetics and integrated LED display. Housed in only two casing sizes, to allow consistency and uniformity on projects where multiple units are required.

WATER COILS



Built with seamless copper tubes and headers, mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. Tested at 35 bar, with maximum operating limits at 20 bar.

READY TO INSTALL



The PHW range is offered as a complete package including standard items such as internal drain pan, NBR insulation, and MERV 4 filter.

Furthermore, we offer multiple optional accessories.

KEY POINTS

- High latent performance- dehumidification
- Auto Dynamic Balancing with I-Control
- Easy maintenance accessibility
- 4 Pipe design



ACCESSORIES

- IR Handset or Wired Wall Pad (Available with I-Control)
- Thermostat Controller (Available with W-Control)
- 2 or 3 Way On/Off & Modulating Valves
- Integrated Sauermann Condensate Pump
- Electric heater up to 1.5kW

*Please refer to page 80 for further information and accessories.

TECHNICAL SPECIFICATIONS

Hydronic Highwall, 2 Pipe with EC Motor

UNIT GENERAL SPECS	PHW-[Size]-V-ECM			200	300	400	500	600	750
	Configuration			2-pipe					
	Number of Fan Blowers			Single					
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60					
AIR	Total Air Flow	H	m ³ /h	380	550	680	788	1050	1250
		M		270	380	550	600	850	1020
		L		200	270	340	380	510	600
COOLING	Total Cooling Capacity	H	kW	1.85	2.51	3.3	4.37	5.03	6.57
		M		1.43	1.92	2.84	3.58	4.25	5.6
		L		1.12	1.46	1.94	2.52	2.89	3.72
	Sensible Cooling Capacity	H		1.33	1.84	2.39	3.12	3.62	4.73
		M		1.01	1.37	2.04	2.52	3.02	3.97
		L		0.78	1.03	1.36	1.73	2.01	2.58
HEATING	Heating Capacity	H	kW	1.9	2.62	3.4	4.39	5.1	6.64
		M		1.48	1.99	2.91	3.57	4.35	5.7
		L		1.16	1.52	2	2.51	2.94	3.77
	Max. Electric Heater Capacity			1		1.5			
SOUND	Pressure Level (H/M/L)		dB(A)	33/27/25	42/33/27	47/42/30	50/45/33	51/46/32	53/48/36
	Power Level (H/M/L)			42/36/34	51/42/36	56/51/39	59/54/42	60/55/41	62/57/45
ELECTRICAL	Power Input	H	W	13	20	30	38	50	65
		M		9	13	20	25	31	40
		L		7	9	11	13	12	16
	Running Current (H)		A		0.11	0.17	0.26	0.33	0.43
HYDRONIC	Cooling Water Flow Rate	H	L/h	316	431	565	749	863	1126
		M		244	329	487	614	729	960
		L		193	251	333	432	496	638
	Cooling Pressure Drop	H	kPa	10	9.6	14.8	20	32.5	56.1
		M		6.3	5.9	11.3	14	24	42.1
		L		4.1	3.6	5.7	7.4	12	20.2
	Heating Water Flow Rate	H	L/h	326	449	583	753	874	1138
		M		253	342	498	612	745	977
		L		199	261	343	431	504	647
	Heating Pressure Drop	H	kPa	8.6	8.5	9.2	20.1	30.7	57.3
		M		5.5	5.2	7	13.9	23.1	43.5
		L		3.6	3.2	3.6	7.4	11.4	20.7

EUROVENT TESTING CONDITIONS:

a. Cooling mode (2-pipe):

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

b. Heating mode (2-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 45°C/40°C

* Please refer to www.eurovent-certification.com for further information.

TECHNICAL SPECIFICATIONS

Hydronic Highwall, 4 Pipe with EC Motor

UNIT GENERAL SPECS	PHW-[Size]-P-ECM			500	750
	Configuration			4-pipe	
	Number of Fan Blowers			Single	
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60	
AIR	Total Air Flow	H	m3/h	788	1250
		M		600	1020
		L		380	600
COOLING	Total Cooling Capacity	H	kW	3.15	4.91
		M		2.58	4.18
		L		1.81	2.78
	Sensible Cooling Capacity	H		2.21	3.45
		M		1.79	2.9
		L		1.23	1.88
HEATING	Heating Capacity	H	kW	2.3	3.3
		M		1.87	2.8
		L		1.32	1.87
SOUND	Pressure Level (H/M/L)		dB(A)	50/45/33	
	Power Level (H/M/L)			59/54/42	
ELECTRICAL	Power Input	H	W	38	65
		M		25	40
		L		13	16
	Running Current (H)		A	0.33	0.57
HYDRONIC	Cooling Water Flow Rate	H	L/h	539	841
		M		442	717
		L		311	477
	Cooling Pressure Drop	H	kPa	21.1	53.2
		M		14.8	39.9
		L		7.8	19.1
	Heating Water Flow Rate	H	L/h	197	283
		M		161	240
		L		113	161
	Heating Pressure Drop	H	kPa	6.5	12.4
		M		4.5	9.2
		L		2.4	4.5

EUROVENT TESTING CONDITIONS:

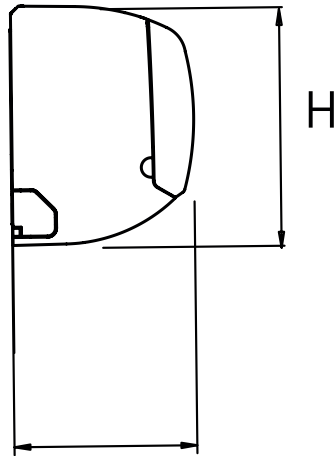
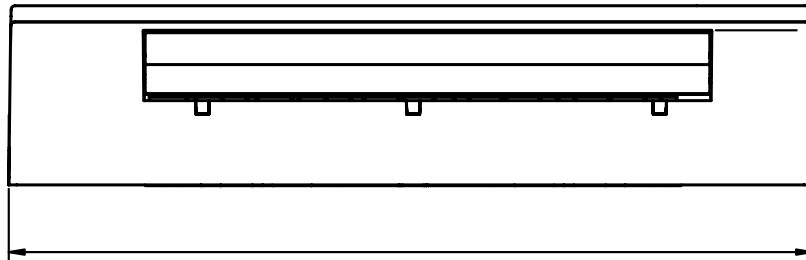
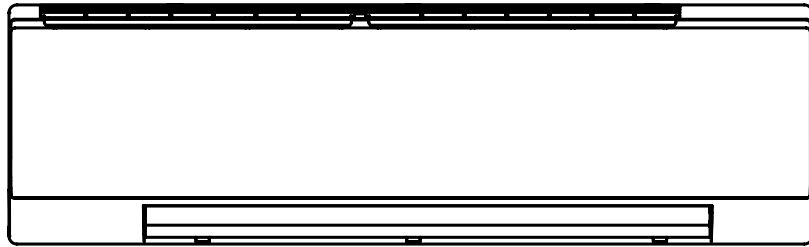
a. Cooling mode (4-pipe):

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

b. Heating mode (4-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 65°C/55°C

DIMENSIONAL DRAWINGS, DATA & WEIGHTS



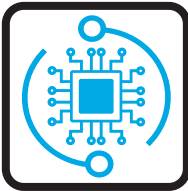
PHW				200	300	400	500	600	750
CONSTRUCTION AND PACKING DATA	Water Connections	Type		PT Threaded Male (from the hose)					
		In	mm [inch]	12.7 [1/2]					
	Out	16 [5/8]							
	Dimensions	L		1010			1175		
		W		230					
H		300							
WEIGHT	Net	kg	12	14	15	17	18	19	



PCGH-3R - 4 WAY CASSETTE



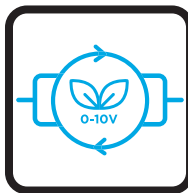
FEATURES



CONTROL FLEXIBILITY

Two types of control system: Intelligent control board (I-Control) controlled via Infra-red handset and/or Intelligent wired wall pad or Flexible control (W-Control) permitting operation with external thermostat applications both controls allows configuration for 2 or 4-pipe settings.

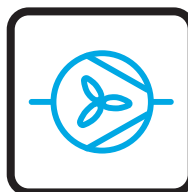
Please refer to page 14 for further information on controls.



ENERGY EFFICIENT MOTORS

EC motors allow the centrifugal fan to operate at optimum airflow performance, energy efficiency and quiet operation. EC motors include driven control PCB, constant torque, permanent magnet and 3 speeds pre-set or modulating with a 0-10 VDC signal for precise air balancing control. A 5-Speed motor with 3 speeds fixed also available.

Please refer to page 26 for further information about configurations.



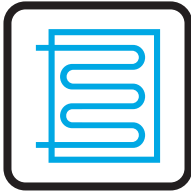
FAN BLOWER

Backward-curved centrifugal fan, statically and dynamically balanced to operate at optimum 4 way airflow performance, energy efficiency and quiet operation. Fire-retardant plastic fan impellers for lightweight and corrosion-resistant operation.



CASING

Enclosure constructed from galvanized steel, integral fan mounting rails, and internal fire resistant insulation. Front panel is made from high impact polystyrene RAL 9010 ensuring durability and a sleek appearance.



WATER COILS

Built with seamless copper tubes and headers, mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. Tested at 35 bar, with maximum operating limits at 20 bar.



READY TO INSTALL

The PCGH-3R range is offered as a complete package including as standard items such as an integrated condensate pump, Internal drain pan, NBR insulation and G2 (MERV 4) filter. Furthermore, we offer multiple optional accessories.

KEY POINTS

- Plug and play control box
- Auto Dynamic Balancing with I-Control
- High Cooling capacity up to 15kW
- Integrated Sauermann condensate pump



ACCESSORIES

- IR Handset or Wired Wall Pad (Only with I-Control)
- Thermostat Controller
- Electric heater up to 3kW
- 2 or 3 Way On/Off & Modulating Valves
- Belimo Valve Kit
- Plastic Fresh Air Intake Flange
- G4 (MERV 8) filter

*Please refer to page 80 for further information and accessories.

TECHNICAL SPECIFICATIONS

Hydronic 4 way Cassette, 3R, 2 Pipe with EC Motor

UNIT GENERAL SPECS			PCG(H)-3R-[Size]-V-ECM	04	08	12	20	24
Configuration			2-pipe					
Number of Fan Blowers			Single					
Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60					
AIR	Total Air Flow	H	m ³ /h	575	810	1300	2040	2750
		M		380	722	1050	1600	2540
		L		200	200	360	820	1020
COOLING	Total Cooling Capacity	H	kW	3.61	4.91	7.22	11.12	15
		M		2.64	4.56	6.21	9.28	14.23
		L		1.61	1.65	2.65	5.54	6.93
	Sensible Cooling Capacity	H		2.53	3.45	5.13	7.89	10.68
		M		1.81	3.2	4.38	6.51	10.1
		L		1.08	1.13	1.82	3.79	4.73
HEATING	Heating Capacity	H	kW	3.47	4.74	7.06	11.1	14.84
		M		2.56	4.36	6.03	9.28	13.9
		L		1.53	1.59	2.63	5.54	6.89
	Max. Electric Heater Capacity			1	2	3	4	4
SOUND	Pressure Level (H/M/L)		dB(A)	43/39/27	50/40/26	56/53/32	58/54/35	64/61/41
	Power Level (H/M/L)			52/48/36	59/49/35	65/62/41	67/63/44	73/70/50
ELECTRICAL	Power Input	H	W	21	47	82	140	220
		M		15	18	67	100	178
		L		11	11	16	27	50
	Running Current (H)		A	0.18	0.41	0.71	1.22	1.91
HYDRONIC	Cooling Water Flow Rate	H	L/h	619	841	1238	1907	2571
		M		452	782	1057	1591	2440
		L		276	284	453	950	1188
	Cooling Pressure Drop	H	kPa	47.37	52.57	63.97	47.24	61.67
		M		26.9	46.1	48.1	34.1	56.12
		L		11.1	7.42	10.49	13.49	15.36
	Heating Water Flow Rate	H	L/h	596	813	1210	1902	2545
		M		438	747	1033	1860	2384
		L		262	273	452	951	1182
	Heating Pressure Drop	H	kPa	29.08	32.69	40.57	31.32	40.1
		M		16.74	28.05	30.5	22.7	35.64
		L		6.64	4.58	6.88	8.98	10.08

EUROVENT TESTING CONDITIONS:

a. Cooling conditions

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

b. Heating conditions

- Return air temperature: 20°C
- Inlet/Outlet water temperature: 45°C/40°C

* Please refer to www.eurovent-certification.com for further information.

TECHNICAL SPECIFICATIONS

Hydronic 4 way Cassette, 3R, 4 Pipe with EC Motor

UNIT GENERAL SPECS	PCG(H)-3R-[Size]-P-ECM			04	08	12	20	24
	Configuration			4-pipe				
	Number of Fan Blowers			Single				
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60				
AIR	Total Air Flow	H	m ³ /h	575	810	1300	2040	2750
		M		380	722	1050	1600	2540
		L		200	200	360	820	1020
COOLING	Total Cooling Capacity	H	kW	2.85	3.82	5.51	8.4	11.31
		M		2.08	3.55	4.74	7.01	10.73
		L		1.27	1.29	2.02	4.19	5.22
	Sensible Cooling Capacity	H		2.03	2.74	4.01	6.09	8.25
		M		1.45	2.54	3.42	5.02	7.8
		L		0.87	0.9	1.42	2.93	3.65
HEATING	Heating Capacity	H	kW	2.97	4	5.79	8.9	11.95
		M		2.18	3.68	4.94	7.44	11.19
		L		1.31	1.34	2.16	4.44	5.55
SOUND	Pressure Level (H/M/L)		dB(A)	43/39/27	50/40/26	56/53/32	58/54/35	64/61/41
	Power Level (H/M/L)			52/48/36	59/49/35	65/62/41	67/63/44	73/70/50
ELECTRICAL	Power Input	H	W	21	47	82	140	220
		M		15	18	67	100	178
		L		11	11	16	27	50
	Running Current (H)		A	0.18	0.41	0.71	1.22	1.91
HYDRONIC	Cooling Water Flow Rate	H	L/h	488	655	945	1440	1939
		M		357	609	813	1201	1840
		L		218	221	346	718	896
	Cooling Pressure Drop	H	kPa	45.9	41.77	43.83	35.65	41.49
		M		26.09	36.63	33.42	25.73	37.75
		L		10.72	5.9	7.19	10.18	10.33
	Heating Water Flow Rate	H	L/h	254	343	496	762	1024
		M		187	315	423	638	960
		L		112	115	185	381	476
	Heating Pressure Drop	H	kPa	17.68	36.38	71.94	72.5	69.85
		M		10.18	31.21	54.09	52.55	62.09
		L		4.03	5.09	12.2	20.79	17.57

EUROVENT TESTING CONDITIONS:

a. Cooling mode (4-pipe):

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

b. Heating mode (4-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 65°C/55°C

LOOKING FOR DIFFERENT CONFIGURATIONS?

While the most common configurations are specified in the previous sections, we have many more available with over +2,500 product configurations in our portfolio.

Here is a sneak peak of different configurations available for this range.

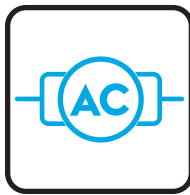
Further information can be accessed through:

PASelect Selection software

Polar Air CS website

By **contacting your sales representative**

AC MOTOR CONFIGURATIONS



All of the above configurations are also available with a 5-speed PSC Motor, where you can pre-configure 3 fixed speeds for H/M/L.

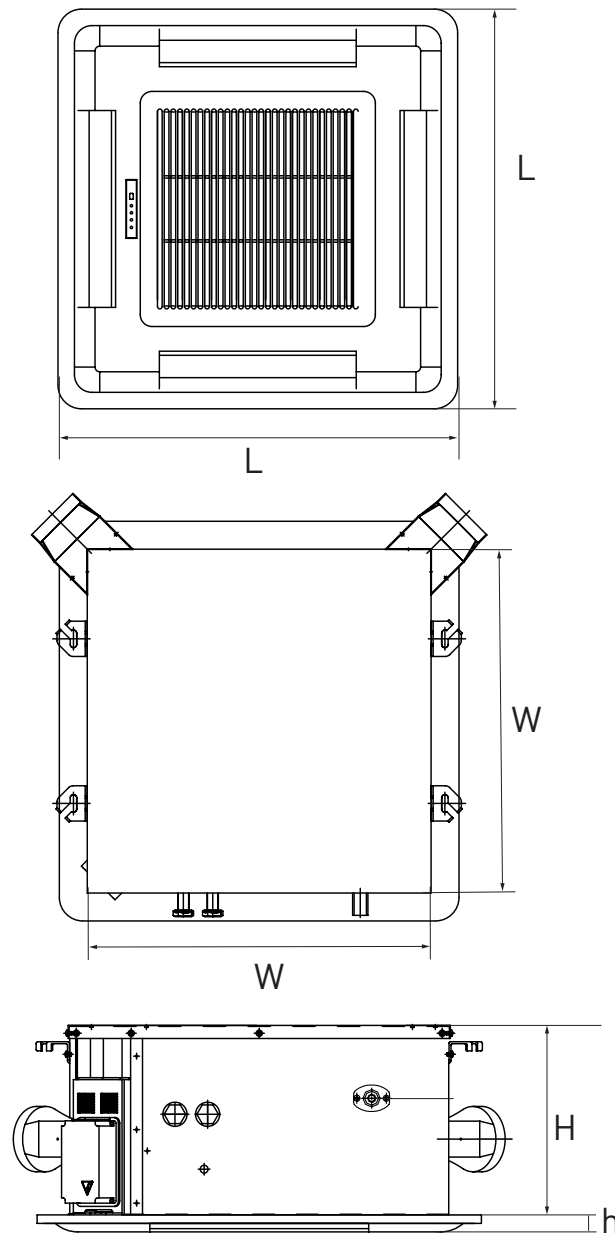
The AC motor configurations are available with two types of control systems to adapt to the project needs:

- **Intelligent Control (I-control)** offers complete control with integral Modbus RTU protocol or local control via IR handset or Wired Wall Pad.
- **Flexible Control (W-Control)** offers a control for external thermostat applications, including control of drain pump, louvers, zone control product operations and limited LED diagnosis.



* AC Motor Configurations are Eurovent Certified.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS



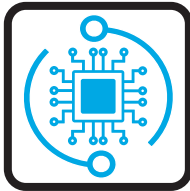
PCGH			04	08	12	20	24
CONSTRUCTION AND PACKING DATA	Water Connections	Type	PT (Threaded Female)				
		In	19.05 [3/4]				
	Out	25.4 (1)					
	Condensate Drainage	mm [in]					
	Unit Dimensions	W	582	730	830	960	
		H	260	290	260	290	
Panel Dimensions	L	680	830	980	1140		
	h	28	28	28	28		
WEIGHT	Net	kg	28	30	36	50	54

PCSL - 1 WAY SLIM CASSETTE



FEATURES

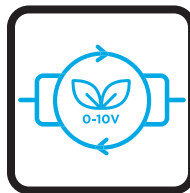
CONTROL FLEXIBILITY



Two types of control system: Intelligent control board (I-Control) controlled via Infra-red handset and/or Intelligent wired wall pad or Flexible control (W-Control) permitting operation with external thermostat applications both controls allows configuration for 2 or 4-pipe settings.

Please refer to page 14 for further information on controls.

ENERGY EFFICIENT MOTORS

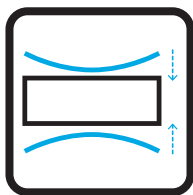


EC motors allow the tangential blower wheel to operate at optimum airflow performance, energy efficiency and quiet operation. EC motors include driven control PCB, constant torque, permanent magnet and 3 speeds pre-set or modulating with a 0-10 VDC signal for precise air balancing control.

QUIET OPERATION



Tangential fans mounted on anti-vibration supports provide smoother and consistent airflows, resulting in optimal acoustic comfort. This setup reduces noise and vibration, creating a quieter and more pleasant environment.



SLIM DESIGN CASING

With only 152mm high, it is especially recommended for residential and hospitality applications with lower fake ceilings to maximize the spaces. The front panel is made from high impact polystyrene RAL 9010 ensuring durability and a sleek appearance.



WATER COILS

Built with seamless copper tubes and headers, mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. Tested at 35 bar, with maximum operating limits at 20 bar.



READY TO INSTALL

The one way cassette is offered as a complete package including as standard items such as an integrated condensate pump, Internal drain pan, NBR insulation and G2 (MERV 4) filter. Furthermore, we offer multiple optional accessories.

KEY POINTS

- Auto Dynamic Balancing with I-Control
- Integrated Sauermann Condensate Pump
- Low energy consumption
- Compact design 152mm height



ACCESSORIES

- IR Handset or Wired Wall Pad (Only with I-Control)
- Thermostat Controller
- Electric heater up to 1kW
- 2 or 3 Way On/Off & Modulating Valves

*Please refer to page 80 for further information and accessories.

TECHNICAL SPECIFICATIONS

Hydronic 1 way Slim Cassette, 2 Pipe with EC Motor

UNIT GENERAL SPECS	PCSL-[Size]-V-ECM			01	02
	Configuration			2-pipe	
	Number of Fan Blowers			Single	
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60	
AIR	Total Air Flow	H	m ³ /h	450	600
		M		350	450
		L		150	250
COOLING	Total Cooling Capacity	H	kW	2.56	3.19
		M		2.12	2.56
		L		1.05	1.62
	Sensible Cooling Capacity	H		1.79	2.27
		M		1.47	1.79
		L		0.73	1.11
HEATING	Heating Capacity	H	kW	2.6	3.21
		M		2.15	2.6
		L		1.08	1.65
	Max. Electric Heater Capacity			0.5	1
SOUND	Pressure Level (H/M/L)		dB(A)	35/31/26	
	Power Level (H/M/L)			44/40/35	
ELECTRICAL	Power Input	H	W	13	22
		M		8	13
		L		4	5
	Running Current (H)		A	0.11	0.19
HYDRONIC	Cooling Water Flow Rate	H	L/h	439	547
		M		363	439
		L		180	278
	Cooling Pressure Drop	H	kPa	30.9	61.1
		M		29.3	41.2
		L		8.3	18.1
	Heating Water Flow Rate	H	L/h	445	551
		M		368	445
		L		185	283
	Heating Pressure Drop	H	kPa	26.7	39.2
		M		19	26.7
		L		6.4	11.8

EUROVENT TESTING CONDITIONS:

a. Cooling mode (2-pipe):

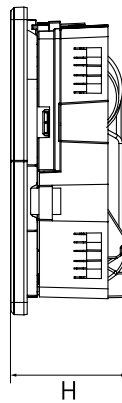
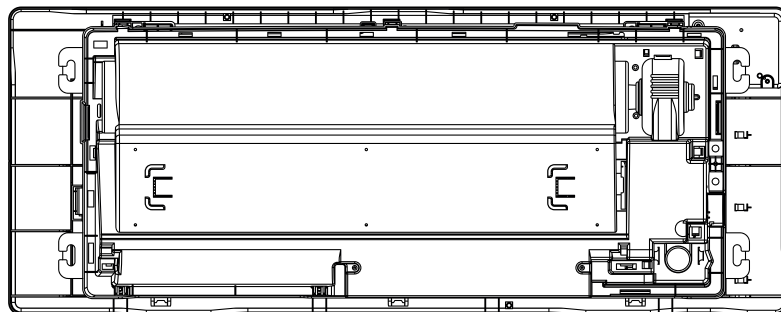
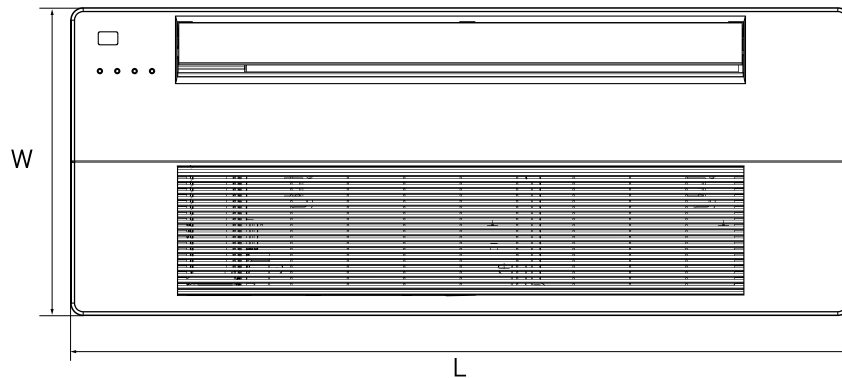
- Return air temperature: 27°C DB/19°C WB
- Inlet/ outlet water temperature: 7°C/ 12°C

b. Heating mode (2-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 45°C/40°C

* Please refer to www.eurovent-certification.com for further information.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS



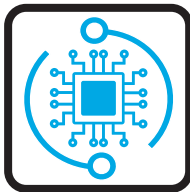
PCSL			01	02
CONSTRUCTION AND PACKING DATA	Water Connections	Type		PT (Threaded Female)
		In	mm [in]	12.7 [1/2]
	Out	25.4 (1)		
	Dimensions	L	mm	1182
		W		427
H		152		
WEIGHT	Net	kg	13.5	

PDWSL - SLIM DUCTED



FEATURES

CONTROL FLEXIBILITY



Two types of control system: Intelligent control board (I-Control) controlled via Infra-red handset and/or Intelligent wired wall pad or Flexible control (W-Control) permitting operation with external thermostat applications both controls allows configuration for 2 or 4-pipe settings.

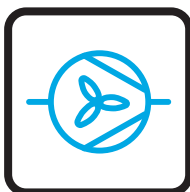
Please refer to page 14 for further information on controls.

ENERGY EFFICIENT MOTORS

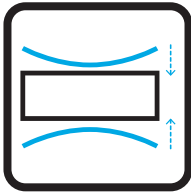


EC motors allow the centrifugal fans to operate at optimum airflow performance, energy efficiency and quiet operation. EC motors include driven control PCB, constant torque, permanent magnet and 3 speeds pre-set or modulating with a 0-10 VDC signal for precise air balancing control

FAN BLOWER

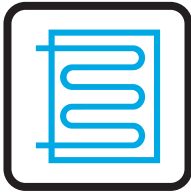


Optimized forward-curved metal centrifugal fans made from heavy-gauge galvanized steel with die-formed inlet cones housings, statically and dynamically balanced for smooth and quiet operation.



SLIM DESIGN

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.



WATER COILS

Built with seamless copper tubes and headers, mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. Tested at 35 bar, with maximum operating limits at 20 bar.



READY TO INSTALL

The PDWSL range is offered as a complete package including standard items such as an integrated Condensate Pump, 5 mm NBR Insulation, and G2 (MERV 4) filter. Furthermore, we offer multiple optional accessories.

KEY POINTS

- Slim design with 200mm height
- Integrated Sauermann condensate pump
- Auto Dynamic Balancing with I-Control
- Bottom or downwards air return



ACCESSORIES

- IR Handset or Wired Wall Pad (Available with I-Control)
- Thermostat Controller (Available with W-Control)
- G4 (MERV 8) filter
- Electric heater up to 3kW
- Additional NBR Insulation up to 25mm
- Stainless Steel drain pan
- 2 or 3 Way On/Off & Modulating Valves
- Belimo Valve Kit

*Please refer to page 80 for further information and accessories.

TECHNICAL SPECIFICATIONS

Hydronic Slim Ducted Unit, 3R, 2 Pipe with **EC Motor**

UNIT GENERAL SPECS	PDWSL-3R-[Size]-V-ECM			01	02	03
	Configuration			2-pipe		
	Number of Fan Blowers			2	3	4
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60		
AIR	Total Air Flow	H	m3/h	668	1018	1369
		M		1044	778	516
		L		552	389	253
COOLING	Total Cooling Capacity	H	kW	3.24	5.13	6.87
		M		5.58	4.16	2.66
		L		3.33	2.39	1.49
	Sensible Cooling Capacity	H		2.32	3.67	4.92
		M		3.95	2.94	1.89
		L		2.31	1.66	1.05
HEATING	Heating Capacity	H	kW	3.36	5.27	7.07
		M		5.80	4.27	2.76
		L		3.42	2.45	1.55
	Max. Electric Heater Capacity			1	2	3
SOUND	Pressure Level (Outlet)		dB(A)	43/37/22	45/40/25	46/41/26
	Pressure Level (Inlet + Radiated)			46/40/25	48/43/28	49/44/29
	Power Level (Outlet)			52/46/31	54/49/34	55/50/35
	Power Level (Inlet + Radiated)			55/49/34	57/52/37	58/53/38
ELECTRICAL	Power Input	H	w	42	70	84
		M		23	40	43
		L		11	15	17
	Running Current (H)			A	0.37	0.61
HYDRONIC	Cooling Water Flow Rate	H	L/h	555	879	1178
		M		457	712	957
		L		256	409	570
	Cooling Pressure Drop	H	kPa	41.3	44.3	41.6
		M		29.1	30.3	28.6
		L		10.3	11.2	11.3
	Heating Water Flow Rate	H	L/h	576	903	1211
		M		474	732	995
		L		266	420	586
	Heating Pressure Drop	H	kPa	33.5	35.3	33.3
		M		23.6	24.2	23.3
		L		8.3	8.9	9.0

EUROVENT TESTING CONDITIONS:

a. Cooling mode (2-pipe):

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

b. Heating mode (2-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 45°C/40°C

* Please refer to www.eurovent-certification.com for further information.

TECHNICAL SPECIFICATIONS

Hydronic Slim Ducted Unit, 3R+1 (Auxiliary Heating Coil), 4 Pipe with **EC Motor**

UNIT GENERAL SPECS	PDWSL-3R+1-[Size]-P-ECM			01	02	03
	Configuration			4-pipe		
	Number of Fan Blowers			2	3	4
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60		
AIR	Total Air Flow	H	m ³ /h	680	1026	1370
		M		523	783	1044
		L		273	412	551
COOLING	Total Cooling Capacity	H	kW	3.29	5.13	6.87
		M		2.69	4.20	5.58
		L		1.60	2.50	3.33
	Sensible Cooling Capacity	H		2.36	3.67	4.92
		M		1.92	2.97	3.95
		L		1.12	1.74	2.31
HEATING	Heating Capacity	H	kW	2.70	4.18	5.66
		M		2.24	3.46	4.65
		L		1.32	2.04	2.74
SOUND	Pressure Level (Outlet)		dB(A)	43/37/22	45/40/25	46/41/26
	Pressure Level (Inlet + Radiated)			46/40/25	48/43/28	49/44/29
	Power Level (Outlet)			52/46/31	54/49/34	55/50/35
	Power Level (Inlet + Radiated)			55/49/34	57/52/37	58/53/38
ELECTRICAL	Power input	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	564	879	1178
		M		462	720	957
		L		275	429	570
	Cooling Pressure Drop	H	kPa	42.6	44.3	41.6
		M		29.7	30.9	28.6
		L		11.7	12.2	11.3
	Heating Water Flow Rate	H	L/h	232	359	485
		M		192	297	399
		L		113	175	235
	Heating Pressure Drop	H	kPa	14.6	6.8	14.6
		M		10.4	4.8	10.2
		L		4.0	1.9	3.9

EUROVENT TESTING CONDITIONS:

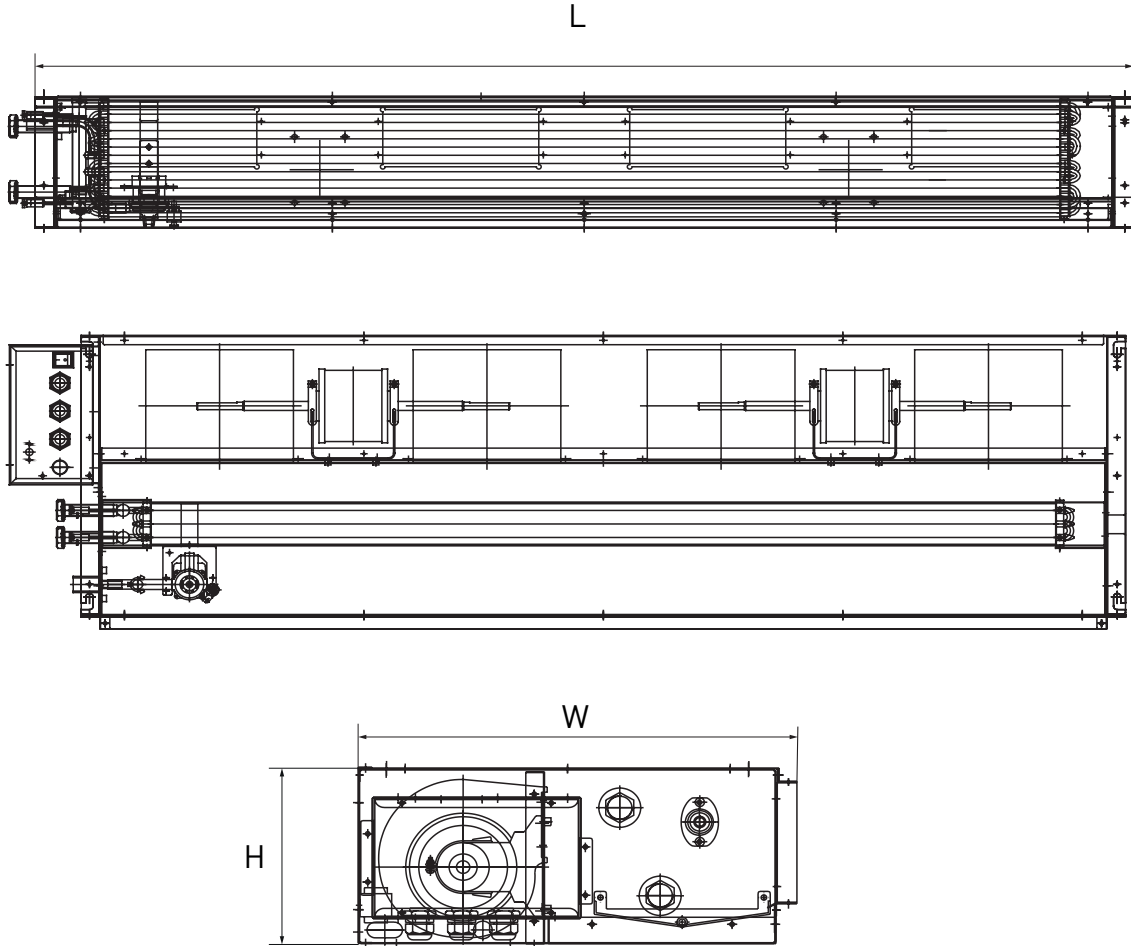
a. Cooling mode (4-pipe):

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

b. Heating mode (4-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 65°C/55°C

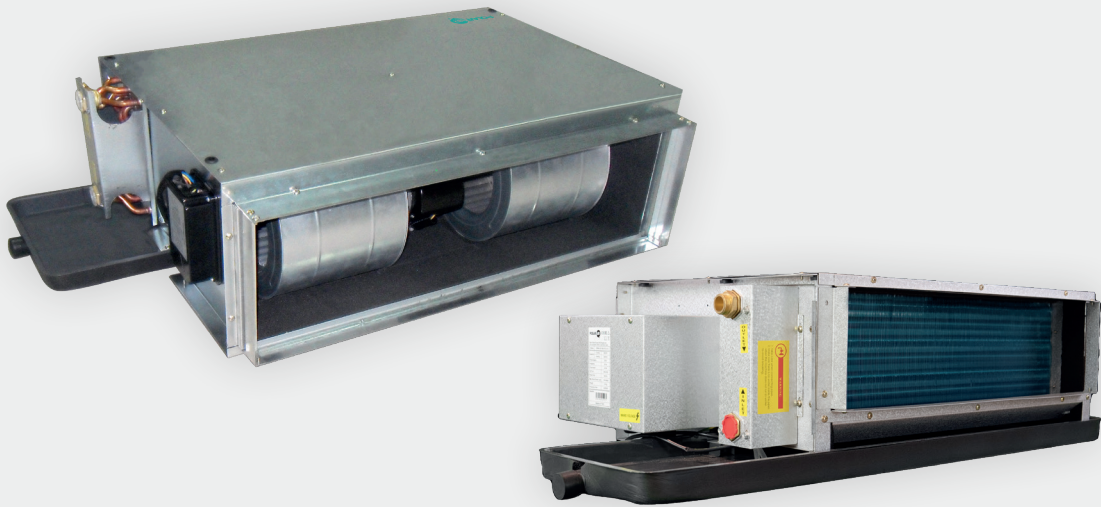
DIMENSIONAL DRAWINGS, DATA & WEIGHTS



PDWSL				01	02	03
CONSTRUCTION AND PACKING DATA	Cooling Water Connections ^T	Type		PT (Threaded Female)		
		In	mm[in]	19.05 [3/4]		
	Out	25.4 (1)				
	Condensate Drainage			800	1235	1570
Dimensions	L	mm				
	W		470			
	H		200			
WEIGHT	Net	kg	20	28	35	

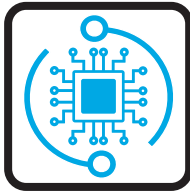


PDWA - MEDIUM ESP DUCTED



FEATURES

CONTROL FLEXIBILITY



Two types of control system: Intelligent control board (I-Control) controlled via Infra-red handset and/or Intelligent wired wall pad or Flexible control (W-Control) permitting operation with external thermostat applications both controls allows configuration for 2 or 4-pipe settings.

Please refer to page 14 for further information on controls.

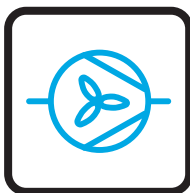
ENERGY EFFICIENT MOTORS



EC motors allow the centrifugal fan to operate at optimum airflow performance, energy efficiency and quiet operation. EC motors include driven control PCB, constant torque, permanent magnet and 3 speeds pre-set or modulating with a 0-10 VDC signal for precise air balancing control. AC motors with 3 speed fixed also available.

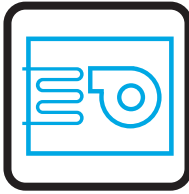
Please refer to page 42 for further information about configurations.

FAN BLOWER



Optimized forward-curved metal centrifugal fans made from heavy-gauge galvanized steel with die-formed inlet cones housings, statically and dynamically balanced for smooth and quiet operation.

STRUCTURE



Made from heavy-gauge galvanized steel panels with couplings for the connection of ducting and gravity drain pan with insulation for condensation. Compact dimensions with optimum thermal and electrical efficiency for all types of applications.

WATER COILS



Built with seamless copper tubes and headers, mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. Tested at 35 bar, with maximum operating limits at 20 bar.

READY TO INSTALL



The PDWA range is offered as a complete package including standard items such as the Galvanized Steel external drain pan, NBR insulation of 5mm, and G2 (MERV 4) filter. Furthermore, we offer multiple optional accessories.

KEY POINTS

- Auto Dynamic Balancing with I-Control
- External Static Pressure up to 130 Pa
- Coil interchangeable on field
- 3, 4 and 6 Row configurations available



ACCESSORIES

- IR Handset or Wired Wall Pad (Available with I-Control)
- Thermostat Controller (Available with W-Control)
- G4 (MERV 8) filter
- Electric heater up to 6kW
- Additional NBR Insulation up to 25mm
- Stainless Steel Drain Pan
- 2 or 3 Way On/Off & Modulating Valves
- Belimo Valve Kit
- Integrated Sauermann Condensate Pump
- Supply/Return air Plenum

*Please refer to page 80 for further information and accessories.

TECHNICAL SPECIFICATIONS

Hydronic Medium ESP Ducted Unit, 3R, 2 Pipe with **EC Motor**

UNIT GENERAL SPECS	PDWA-3R-[Size]-V-ECM		200	300	400B	500	600	800B	1000	1200	1400	1600	
	Configuration		2-pipe										
	Number of Fan Blowers		Single		Twin			Three		Four	Three	Four	
	Power Supply (V/Ph/Hz)		220 - 240/1/50 - 60										
AIR	Total Air Flow	H	m ³ /h	433	607	795	937	1074	1572	1829	1974	2850	3867
		M		376	561	729	763	1010	1262	1608	1974	2839	3785
		L		382	504	654	779	950	1352	1497	1814	2203	3042
	External Static Pressure	H	Pa	58	54	59	55	62	56	52	60	60	57
		M		50									
		L		35	35	30	32	39	31	35	40	43	39
COOLING	Total Cooling Capacity	H	kW	2.47	3.36	4.18	4.95	5.51	8.63	9.16	9.93	13.99	16.98
		M		2.23	3.17	3.92	4.25	5.27	7.30	8.30	9.93	13.99	16.79
		L		2.25	2.91	3.60	4.33	5.03	7.73	7.90	9.33	11.47	14.22
	Sensible Cooling Capacity	H		1.77	2.40	3.04	3.56	3.92	6.18	6.67	7.19	10.12	12.27
		M		1.58	2.26	2.84	3.02	3.74	5.16	6.00	7.19	10.12	12.11
		L		1.60	2.06	2.58	3.08	3.56	5.49	5.68	6.72	8.19	10.17
HEATING	Heating Capacity	H	kW	2.32	3.16	4.01	4.75	5.48	7.96	9.01	9.75	13.59	17.62
		M		2.10	2.97	3.76	4.08	5.23	6.74	8.23	9.75	13.50	17.32
		L		2.12	2.75	3.48	4.12	4.98	7.14	7.80	9.20	11.15	14.70
	Max. Electric Heater Capacity	2		3	4	5			6				
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
	Pressure Level (Inlet + Radiated)			50/49/45	52/51/48	54/52/46	54/53/48	56/54/51	55/54/49	58/56/52	60/57/54	60/56/52	61/59/57
	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
	Power Level (Inlet + Radiated)			59/58/54	61/60/57	63/61/55	63/62/57	65/63/60	64/63/58	67/65/61	69/66/63	69/65/61	70/68/66
ELECTRICAL	Power Input	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
	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	424	576	717	849	944	1480	1570	1702	2398	2911
		M		382	544	672	729	903	1252	1423	1702	2398	2878
		L		385	499	617	742	862	1325	1354	1600	1967	2437
	Cooling Pressure Drop	H	kPa	25.8	49.5	26.5	38.7	50.4	66.8	26.0	31.4	67.8	103.3
		M		21.4	44.6	23.6	29.4	46.6	49.4	21.8	31.4	67.8	101.2
		L		21.7	38.3	20.2	30.4	42.9	54.7	19.9	28.1	47.4	75.0
	Heating Water Flow Rate	H	L/h	397	542	687	814	939	1364	1544	1672	2330	3021
		M		359	509	645	699	897	1155	1412	1672	2314	2970
		L		363	471	596	706	853	1223	1337	1577	1912	2520
	Heating Pressure Drop	H	kPa	17.5	33.9	18.6	27.5	38.4	44.5	19.3	23.4	49.8	85.8
		M		14.6	30.3	16.6	20.9	35.4	33.0	16.4	23.4	49.2	83.2
		L		14.8	26.3	14.4	21.3	32.3	36.6	14.9	21.1	34.9	61.9

EUROVENT TESTING CONDITIONS:

a. Cooling mode (2-pipe):

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

b. Heating mode (2-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 45°C/40°C

* Please refer to www.eurovent-certification.com for further information.

TECHNICAL SPECIFICATIONS

Hydronic Medium ESP Ducted Unit, 3R+1 (Auxiliary Heating Coil), 4 Pipe with **EC Motor**

UNIT GENERAL SPECS	PDWA-3R+1-[Size]-P-ECM		200	300	400	500	600	800	1000	1200	1400	1600
	Configuration		4-pipe									
	Number of Fan Blowers		Single		Twin			Three		Four	Three	Four
	Power Supply (V/Ph/Hz)		220 - 240/1/50 - 60									
AIR	Total Air Flow	H	440	594	815	924	1125	1563	1774	2020	2907	3877
		M	349	535	685	713	963	1176	1546	1907	2756	3675
		L	263	393	385	541	795	928	1247	1595	2009	2679
	External Static Pressure	H	50									
		M	50									
		L	50									
COOLING	Total Cooling Capacity	H	2.51	3.31	4.27	4.91	5.69	8.63	8.96	10.15	14.26	17.08
		M	2.09	3.05	3.74	4.02	5.08	6.92	8.04	9.70	13.62	16.39
		L	1.67	2.41	2.40	3.24	4.38	5.78	6.84	8.49	10.69	12.90
	Sensible Cooling Capacity	H	1.80	2.37	3.10	3.53	4.06	6.18	6.52	7.36	10.33	12.34
		M	1.48	2.17	2.70	2.84	3.59	4.87	5.79	7.02	9.84	11.80
		L	1.17	1.69	1.68	2.27	3.08	4.05	4.88	6.07	7.59	9.14
HEATING	Heating Capacity	H	1.91	2.52	3.35	3.78	4.47	6.37	7.13	7.98	10.64	13.57
		M	1.61	2.34	2.93	3.11	3.95	5.13	6.42	7.65	10.26	13.10
		L	1.29	1.83	1.87	2.52	3.43	4.28	5.42	6.61	8.03	10.25
SOUND	Pressure Level (outlet)		48/47/43	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
	Pressure Level (Inlet + Radiated)		50/49/45	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
	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
	Power Level (Inlet + Radiated)		59/58/54	61/60/57	63/61/55	63/62/57	65/63/60	64/63/58	67/65/61	69/66/63	69/65/61	70/68/66
ELECTRICAL	Power Input	H	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
	Running Current (H)		A	0.46	0.55	0.72	0.83	0.89	1.30	1.57	1.95	3.16
HYDRONIC	Cooling Water Flow Rate	H	430	568	732	842	975	1480	1536	1740	2444	2927
		M	359	524	642	689	871	1186	1378	1663	2334	2809
		L	287	413	411	555	750	992	1172	1456	1833	2211
	Cooling Pressure Drop	H	26.5	48.2	27.5	38.2	53.4	66.8	25.0	32.7	70.2	104.3
		M	19.1	41.7	21.7	26.6	43.6	44.9	20.5	30.2	64.6	96.9
		L	12.8	27.2	9.7	18.0	33.3	32.5	15.3	23.7	41.8	63.0
	Heating Water Flow Rate	H	164	216	287	324	383	546	611	684	912	1163
		M	138	200	251	266	339	440	551	656	879	1123
		L	111	157	160	216	294	367	464	566	688	878
	Heating Pressure Drop	H	7.8	14.5	26.9	36.6	7.8	19.6	25.5	33.1	5.1	8.5
		M	5.7	12.6	21.1	25.7	6.2	13.3	21.1	30.7	4.8	7.9
		L	3.9	8.2	9.4	17.6	4.8	9.6	15.6	23.6	3.1	5.1

EUROVENT TESTING CONDITIONS:

a. Cooling mode (4-pipe):

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

b. Heating mode (4-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 65°C/55°C

LOOKING FOR DIFFERENT CONFIGURATIONS?

While the most common configurations are specified in the previous sections, we have many more available with over +2,500 product configurations in our portfolio.

Here is a sneak peak of different configurations available for this range.

Further information can be accessed through:

PASelect Selection software

Polar Air CS website

By **contacting your sales representative**

+2 PIPE CONFIGURATIONS AVAILABLE

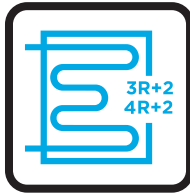


4 Row or 6 Row Coil configurations are available for applications requiring higher capacity. Other advantages include:

Enhanced Heat Transfer Efficiency: Larger surface area ensures better heat exchange and allows for operating with warmer chilled water temperatures typical with air to water heat pumps.

Improved Latent Capacity: Increasing the coil surface area allows the air to flow across the coil longer and increase the amount of moisture removed from the air.

+4 PIPE CONFIGURATIONS AVAILABLE

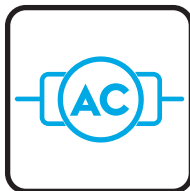


3 Rows Cooling +1R Heating or or 4 Rows Cooling + 2R Heating Coils configurations are available for 4 pipe systems where more heating is required. Other advantages include:

Enhanced Heat Transfer Efficiency: Larger surface area ensures better heat exchange and allows for operating with lower hot water temperatures typical with air to water heat pumps.

Active Humidity Control: The higher capacity 2-row heating coil provides more reheating of the air which allows the cooling coil to achieve lower dewpoint temperatures and lower space humidity without sacrificing comfort.

AC MOTOR AVAILABLE



All of the above configurations are also available with a 3-speed PSC motor. The AC motor configurations are available with two types of control systems to adapt to the project needs:

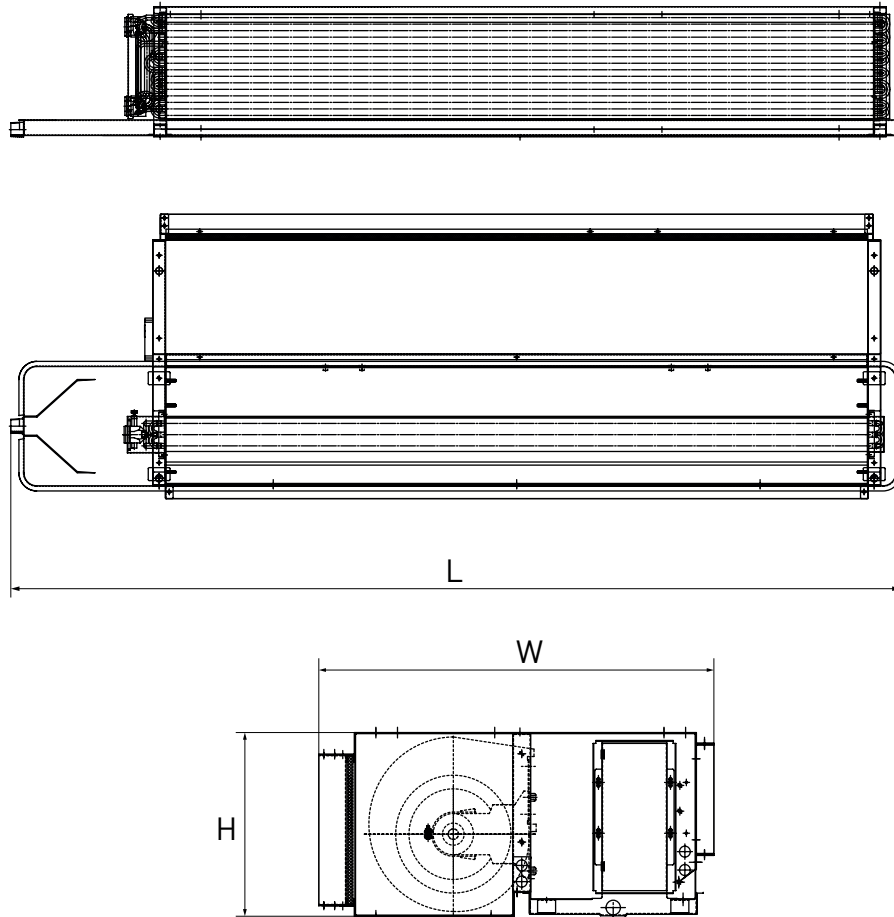
- **Intelligent Control (I-control)** offers complete control with integral Modbus RTU protocol or local control via IR handset or Wired Wall Pad.

- **Flexible Control (W-Control)** offers a control for external thermostat applications, including control of drain pump, louvers, zone control product operations and limited LED diagnosis.



* AC Motor Configurations are Eurovent Certified.

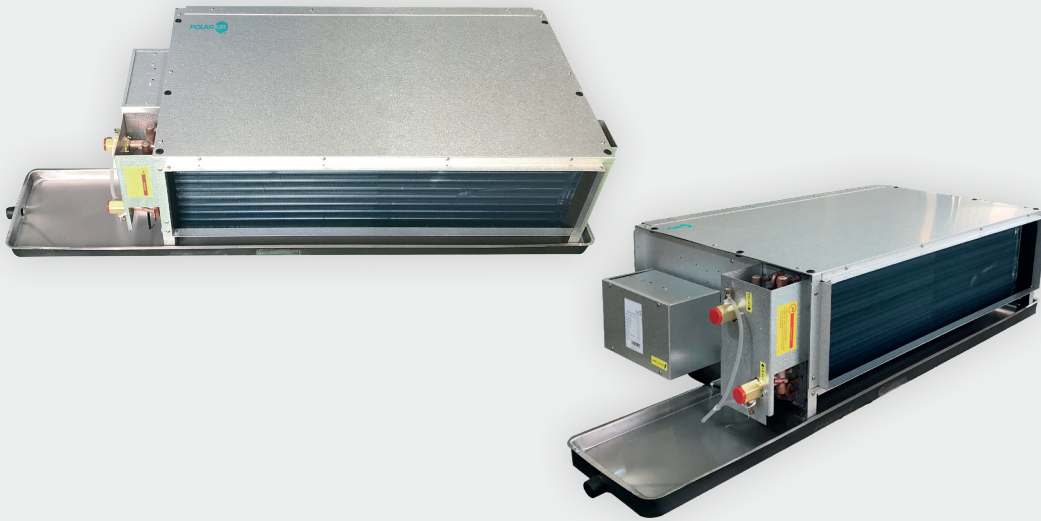
DIMENSIONAL DRAWINGS, DATA & WEIGHTS



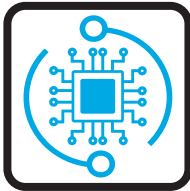
PDWA			200	300	400	500	600	800	1000	1200	1400	1600	
CONSTRUCTION AND PACKING DATA	Water Connections	Type	PT (Threaded Female)										
		In	19.05 [3/4]										
	Condensate Drainage	Out	19.05 [3/4]										
		Dimensions (3R, 4R and 3+1R)	L	755	855	955	1055	1155	1555	1655	1795	1655	2015
			W	550									620
	H		250									300	
	Dimensions (6R, 3+2R and 4+2R)	L	755	855	955	1055	1155	1555	1655	1795	1655	2015	
		W	590									660	
H		250									300		
NET WEIGHTS	3R, 4R and 3+1R	kg	17	23	24	28	31	36	43	45	51	60	
	6R, 3+2R and 4+2R		21	29	30	35	42	49	62	64	69	79	

Note: For I-control models only, dimension "L" adds 100 mm.

PDWC - HIGH ESP DUCTED



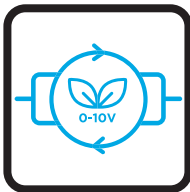
FEATURES



CONTROL FLEXIBILITY

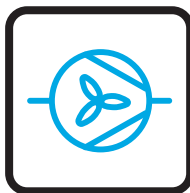
Two types of control system: Intelligent control board (I-Control) controlled via Infra-red handset and/or Intelligent wired wall pad or Flexible control (W-Control) permitting operation with external thermostat applications both controls allows configuration for 2 or 4-pipe settings.

Please refer to page 14 for further information on controls.



ENERGY EFFICIENT MOTORS

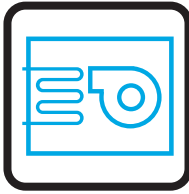
EC motors allow the centrifugal fan to operate at optimum airflow performance, energy efficiency and quiet operation. EC motors include driven control PCB, constant torque, permanent magnet and 3 speeds pre-set or modulating with a 0-10 VDC signal for precise air balancing control. AC motors with 3 speed fixed also available. Please refer to page 48 for further information about configurations.



FAN BLOWER

Optimized forward-curved metal centrifugal fans made from heavy-gauge galvanized steel with die-formed inlet cones housings, statically and dynamically balanced for smooth and quiet operation

STRUCTURE



Made from heavy-gauge galvanized steel panels with couplings for the connection of ducting and gravity drain pan with insulation for condensation. Compact dimensions with optimum thermal and electrical efficiency for all types of applications.

WATER COILS



Built with seamless copper tubes and headers, mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. Tested at 35 bar, with maximum operating limits at 20 bar.

READY TO INSTALL



The PDWC range is offered as a complete package including standard items such as the Galvanized Steel external drain pan, NBR insulation of 5mm, and G2 (MERV 4) filter. Furthermore, we offer multiple optional accessories.

KEY POINTS

- Auto Dynamic Balancing with I-Control
- External Static Pressure up to 180 Pa
- Coil interchangeable on field
- 3 and 4 Row configurations available



ACCESSORIES

- IR Handset or Wired Wall Pad (Available with I-Control)
- Thermostat Controller (Available with W-Control)
- G4 (MERV 8) filter
- Electric heater up to 9kW
- Additional NBR Insulation up to 25mm.
- Stainless Steel Drain Pan
- 2 or 3 Way On/Off & Modulating Valves
- Belimo Valve Kit
- Integrated Sauermann Condensate Pump
- Supply/Return air Plenum

*Please refer to page 80 for further information and accessories.

TECHNICAL SPECIFICATIONS

Hydronic High ESP Ducted Unit, 3R, 2 Pipe with **EC Motor**

UNIT GENERAL SPECS	PDWC-3R-[Size]-V-ECM			400	500	600	800	1000	1400	1600	2000
	Configuration			2-pipe							
	Number of Fan Blowers			Single				Twin			Four
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60							
AIR	Total Air Flow	H	m ³ /h	604	835	1660	1918	2261	2677	2996	4422
		M		584	716	1540	1955	2107	2487	2717	4143
		L		635	556	993	1063	1203	1788	2036	3059
	External Static Pressure	H	Pa	89	68	65	67	72	69	63	69
		M		50	50	50	50	50	50	50	50
		L		22	15	9	7	7	12	18	14
COOLING	Total Cooling Capacity	H	kW	3.21	4.34	7.90	9.29	10.84	13.00	14.43	19.51
		M		3.13	3.85	7.47	9.40	10.28	12.33	13.38	18.53
		L		3.32	3.16	5.37	5.93	6.63	9.49	10.70	14.75
	Sensible Cooling Capacity	H		2.27	3.06	5.72	6.69	7.76	9.28	10.37	14.40
		M		2.21	2.70	5.39	6.77	7.32	8.77	9.56	13.65
		L		2.36	2.20	3.79	4.15	4.60	6.64	7.54	10.71
HEATING	Heating Capacity	H	kW	3.30	4.43	8.03	9.42	12.16	13.29	14.87	20.45
		M		3.21	3.93	7.59	9.54	11.57	12.61	13.84	19.42
		L		3.41	3.23	5.47	6.01	7.50	9.82	11.09	15.46
	Max. Electric Heater Capacity	kW		3			6				
SOUND	Pressure Level (outlet)	dB(A)	55/50/45	56/53/43	56/54/47	58/56/47	56/52/45	59/57/47	60/58/50	64/62/52	
	Pressure Level (Inlet + Radiated)		57/53/48	59/56/46	59/57/50	61/59/50	59/55/48	62/60/50	63/61/53	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	
	Power Level (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	Power Input	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	1.70	2.44	2.70	3.59	4.15	5.54
HYDRONIC	Cooling Water Flow Rate	H	L/h	550	744	1355	1593	1859	2229	2474	3344
		M		536	659	1280	1611	1762	2114	2294	3176
		L		569	542	920	1016	1136	1627	1834	2529
	Cooling Pressure Drop	H	kPa	17.1	31.8	54.9	48.6	39.8	61.2	41.0	43.2
		M		16.3	25.6	49.5	49.6	36.1	55.6	35.8	39.4
		L		18.2	18.0	27.3	21.6	16.4	34.7	23.9	26.1
	Heating Water Flow Rate	H	L/h	566	759	1377	1616	2084	2278	2549	3505
		M		551	673	1301	1635	1984	2161	2372	3329
		L		584	553	937	1031	1285	1683	1902	2651
	Heating Pressure Drop	H	kPa	14.9	27.7	37.5	32.1	40.7	53.9	33.4	28.3
		M		14.2	22.3	33.8	32.8	37.2	49.0	29.3	25.8
		L		15.9	15.7	18.7	14.3	17.0	31.2	19.7	17.1

EUROVENT TESTING CONDITIONS:

a. Cooling mode (2-pipe):

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

b. Heating mode (2-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 45°C/40°C

* Please refer to www.eurovent-certification.com for further information.

TECHNICAL SPECIFICATIONS

Hydronic High ESP Ducted Unit, 3R+1 (Auxiliary Heating Coil), 4 Pipe with **EC Motor**

UNIT GENERAL SPECS	PDWC-3R+1-[Size]-P-ECM		400	500	600	800	1000	1400	1600	2000
	Configuration		4-pipe							
	Number of Fan Blowers		Single			Twin				Four
	Power Supply (V/Ph/Hz)		220 - 240/1/50 - 60							
AIR	Total Air Flow	H	702	854	1693	1967	2350	2727	3005	4534
		M	536	674	1440	1846	1983	2383	2616	3964
		L	301	349	566	650	707	1078	1506	1935
	External Static Pressure	H	50							
		M	50							
		L	50							
COOLING	Total Cooling Capacity	H	3.58	4.41	8.03	9.46	11.17	13.19	14.43	19.84
		M	2.93	3.69	7.13	9.03	9.79	11.95	12.96	18.01
		L	1.85	2.20	3.47	4.03	4.33	6.43	8.51	10.27
	Sensible Cooling Capacity	H	2.56	3.12	5.81	6.81	8.00	9.42	10.37	14.65
		M	2.06	2.58	5.13	6.49	6.93	8.46	9.22	13.23
		L	1.27	1.51	2.39	2.76	3.02	4.40	5.91	7.32
HEATING	Heating Capacity	H	3.05	3.67	6.69	7.84	9.27	10.68	11.94	16.86
		M	2.49	3.07	5.91	7.53	8.10	9.67	10.74	15.14
		L	1.58	1.83	2.88	3.44	3.63	5.30	6.93	8.72
SOUND	Pressure Level (outlet)		55/50/45	56/53/43	56/54/47	58/56/47	56/52/45	59/57/47	60/58/50	64/62/52
	Pressure Level (Inlet + Radiated)		57/53/48	59/56/46	59/57/50	61/59/50	59/55/48	62/60/50	63/61/53	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
	Power Level (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	Power Input	H	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	1.70	2.44	2.70	3.59	4.15
HYDRONIC	Cooling Water Flow Rate	H	614	756	1376	1621	1914	2262	2474	3401
		M	502	633	1223	1548	1678	2049	2222	3087
		L	317	377	595	690	742	1101	1459	1761
	Cooling Pressure Drop	H	20.9	32.8	56.5	50.1	41.9	62.8	41.0	44.5
		M	14.5	23.8	45.6	46.2	33.1	52.6	33.8	37.4
		L	6.4	9.4	12.5	10.8	7.6	17.2	15.8	13.6
	Heating Water Flow Rate	H	261	315	574	672	794	915	1023	1445
		M	214	263	507	646	694	829	920	1298
		L	135	157	247	295	311	454	594	748
	Heating Pressure Drop	H	25.7	39.9	21.9	35.9	51.1	24.1	33.4	68.7
		M	17.9	29.0	17.5	33.4	40.1	20.2	27.6	56.6
		L	7.8	11.4	4.8	8.1	9.4	6.8	12.5	21.0

EUROVENT TESTING CONDITIONS:

a. Cooling mode (4-pipe):

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

b. Heating mode (4-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 65°C/55°C

LOOKING FOR DIFFERENT CONFIGURATIONS?

While the most common configurations are specified in the previous sections, we have many more available with over +2,500 product configurations in our portfolio.

Here is a sneak peak of different configurations available for this range.

Further information can be accessed through:

PASelect Selection software

Polar Air CS website

By **contacting your sales representative**

+2 PIPE CONFIGURATIONS AVAILABLE

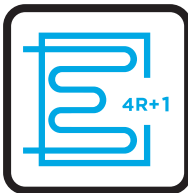


4 Row Coil configurations are available for applications requiring higher capacity. Other advantages include:

Enhanced Heat Transfer Efficiency: Larger surface area ensures better heat exchange and allows for operating with warmer chilled water temperatures typical with air to water heat pumps.

Improved Latent Capacity: Increasing the coil surface area allows the air to flow across the coil longer and increase the amount of moisture removed from the air.

+4 PIPE CONFIGURATIONS AVAILABLE

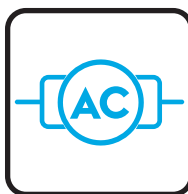


4 Rows Cooling +1 Row Heating Coil configurations are available for 4 pipe systems where more heating is required. Other advantages include:

Enhanced Heat Transfer Efficiency: Larger surface area ensures better heat exchange and allows for operating with lower hot water temperatures typical with air to water heat pumps.

Active Humidity Control: The higher capacity 2-row heating coil provides more reheating of the air which allows the cooling coil to achieve lower dewpoint temperatures and lower space humidity without sacrificing comfort.

AC MOTOR AVAILABLE



All of the above configurations are also available with a 3-speed PSC motor. The AC motor configurations are available with two types of control systems to adapt to the project needs:

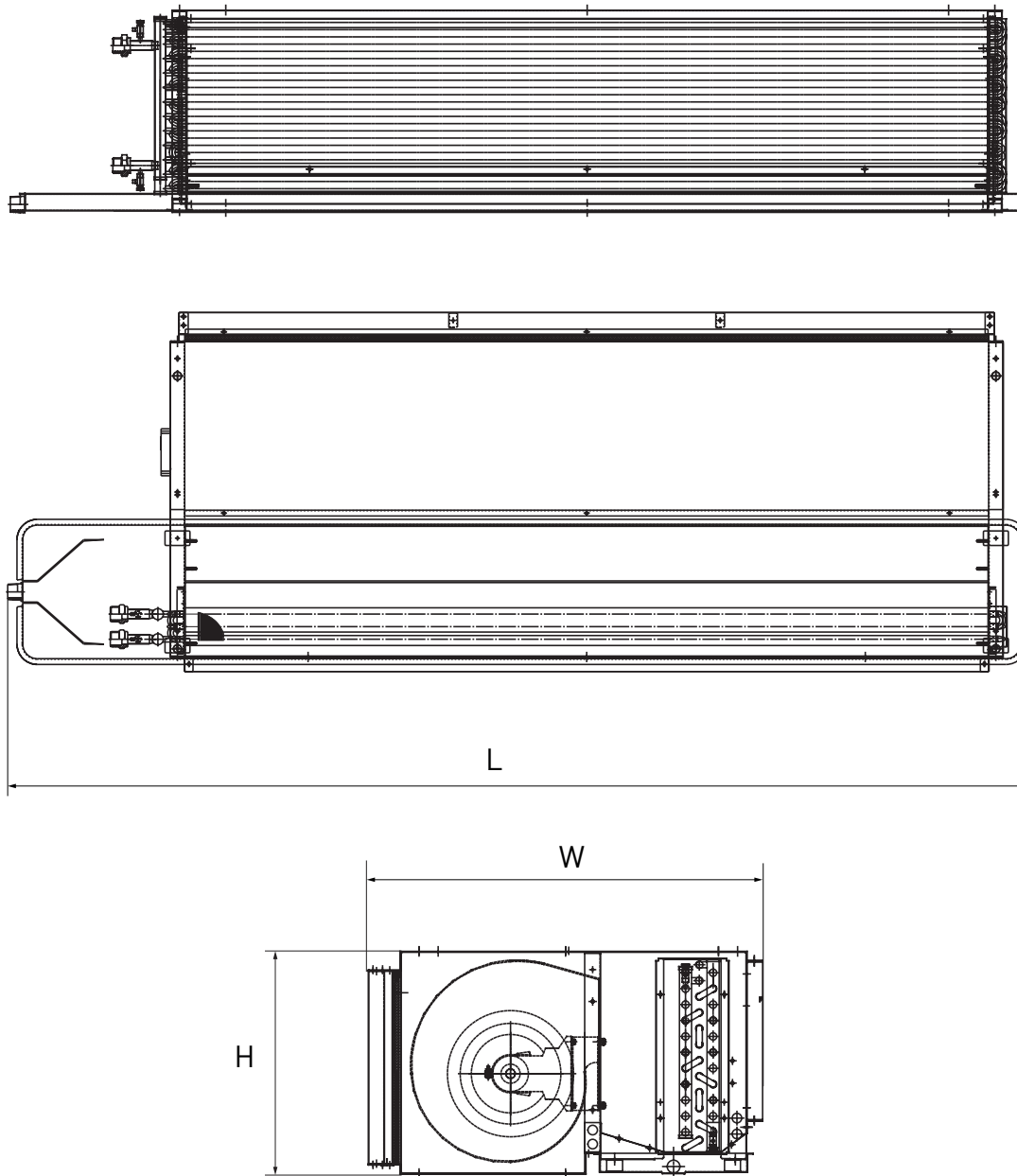
- **Intelligent Control (I-control)** offers complete control with integral Modbus RTU protocol or local control via IR handset or Wired Wall Pad.

- **Terminal Strip Control (T-Control)** provides a terminal block to allow operation of the fan from external thermostats or controllers provided by a third party.



* AC Motor Configurations are Eurovent Certified.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS

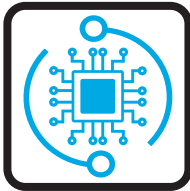


PDWC			400	500	600	800	1000	1400	1600	2000
CONSTRUCTION AND PACKING DATA	Water Connections	Type	PT (Threaded Female)							
		In	19.05 [3/4]							
	Out	19.05 [3/4]								
	Dimensions	L	1055	1155	1355	1355	1455	1655	1855	2215
		W	620							
H		300			350					
WEIGHT	Net	kg	28	37	44	46	48	55	63	83

PDWD - DOUBLE SKIN HIGH ESP DUCTED



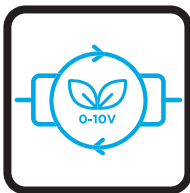
FEATURES



CONTROL FLEXIBILITY

Two types of control system: Intelligent control board (I-Control) controlled via Infra-red handset and/or Intelligent wired wall pad or Flexible control (W-Control) permitting operation with external thermostat applications both controls allows configuration for 2 or 4-pipe settings.

Please refer to page 14 for further information on controls.



ENERGY EFFICIENT MOTORS

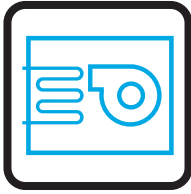
EC motors allow the centrifugal fans to operate at optimum airflow performance, energy efficiency and quiet operation. EC motors include driven control PCB, constant torque, permanent magnet and 3 speeds pre-set or modulating with a 0-10 VDC signal for precise air balancing control



FAN BLOWER

Optimized forward-curved metal centrifugal fans made from heavy-gauge galvanized steel with die-formed inlet cones housings, statically and dynamically balanced for smooth and quiet operation.

STRUCTURE



Casing is double skin with inner wall and outer wall coated steel panels in RAL 9010 colour with high pressure PU foam insulation sandwiched in between. It has couplings for the connection of ducting and gravity drain pan with insulation for condensation. The unit has an easy access to fans, motors and filters

WATER COILS



Built with seamless copper tubes and headers, mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. Tested at 35 bar, with maximum operating limits at 20 bar.

READY TO INSTALL



The PDWD double-skin range is offered as a complete package including standard items such as the internal drain pan, double sandwich panel insulation of 15 + 25mm, and a G2 (MERV 4) filter. Furthermore, we offer multiple optional accessories.

KEY POINTS

- Auto Dynamic Balancing with I-Control
- External Static Pressure up to 200 Pa
- Formidable insulation
- Internal drain pan
- 3, 4 and 6 Rows configurations available



ACCESSORIES

- IR Handset or Wired Wall Pad (Available with I-Control)
- Thermostat Controller (Available with W-Control)
- G4 (MERV 8) filter
- Electric heater up to 9kW
- Stainless Steel Drain Pan
- 2 or 3 Way On/Off & Modulating Valves
- Belimo Valve Kit
- Supply/Return air Plenum

*Please refer to page 80 for further information and accessories.

TECHNICAL SPECIFICATIONS

Hydronic Double Skin High ESP Ducted, 3R, 2 Pipe with EC Motor **EC Motor**

UNIT GENERAL SPECS	PDWD-3R-[Size]-V-ECM			400	800	1200	1600	2000
	Configuration			2-pipe				
	Number of Fan Blowers			Single	Twin			Four
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60				
AIR	Total Air Flow	H	m ³ /h	892	2064	2799	3062	6125
		M		727	1955	2487	2717	5434
		L		402	741	1249	1650	3300
	External Static Pressure	H	Pa	50				
		M						
		L						
COOLING	Total Cooling Capacity	H	kW	4.53	9.51	12.66	14.34	25.55
		M		3.86	9.09	11.59	13.04	23.34
		L		2.43	4.31	6.78	8.83	16.03
	Sensible Cooling Capacity	H		3.25	6.91	9.18	10.34	18.82
		M		2.74	6.59	8.36	9.31	17.10
		L		1.68	2.98	4.74	6.18	11.46
HEATING	Heating Capacity	H	kW	4.59	9.77	13.05	14.91	26.58
		M		3.91	9.33	11.95	13.56	24.26
		L		2.46	4.43	6.99	9.19	16.66
	Max. Electric Heater Capacity			3	3	6	9	9
SOUND	Pressure Level (Outlet)		dB(A)	56/53/43	58/56/47	56/52/45	60/58/50	65/63/60
	Pressure Level (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
	Power Level (Inlet + Radiated)			68/65/55	70/68/59	68/64/57	72/70/62	74/72/69
ELECTRICAL	Power Input	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	2.70	4.15	5.84
HYDRONIC	Cooling Water Flow Rate	H	L/h	777	1630	2170	2458	4379
		M		661	1558	1986	2235	4002
		L		416	740	1162	1514	2748
	Cooling Pressure Drop	H	kPa	38.6	49.4	56.6	38.4	70.5
		M		28.9	45.5	48.2	32.4	59.9
		L		12.6	11.9	18.4	16.1	30.5
	Heating Water Flow Rate	H	L/h	787	1674	2238	2556	4556
		M		669	1600	2048	2325	4158
		L		422	760	1198	1575	2856
	Heating Pressure Drop	H	kPa	29.7	39.5	45.8	31.6	57.9
		M		22.2	36.4	39.1	26.6	49.1
		L		9.7	9.5	14.9	13.2	25.0

EUROVENT TESTING CONDITIONS:

a. Cooling mode (2-pipe):

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

b. Heating mode (2-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 45°C/40°C

TECHNICAL SPECIFICATIONS

Hydronic Double Skin High ESP Ducted, 3R+1 (Auxiliary Heating Coil), 4 Pipe with **EC Motor**

UNIT GENERAL SPECS	PDWD-3R+1-[Size]-P-ECM			400	800	1200	1600	2000
	Configuration			4-pipe				
	Number of Fan Blowers			Single	Twin			Four
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60				
AIR	Total Air Flow	H	m ³ /h	862	1967	2727	3005	6010
		M		685	1846	2383	2616	5233
		L		349	650	1078	1506	3012
	External Static Pressure	H	Pa	50				
		M		50				
		L		50				
COOLING	Total Cooling Capacity	H	kW	4.42	9.14	12.45	14.12	25.06
		M		3.71	8.73	11.18	12.70	22.73
		L		2.18	3.89	6.12	8.20	14.89
	Sensible Cooling Capacity	H		3.16	6.63	9.01	10.17	18.53
		M		2.62	6.32	8.06	9.05	16.62
		L		1.49	2.68	4.24	5.69	10.59
HEATING	Heating Capacity	H	kW	3.73	7.63	10.26	11.69	20.85
		M		3.13	7.29	9.22	10.52	18.93
		L		1.84	3.25	5.04	6.79	12.40
SOUND	Pressure Level (Outlet)		dB(A)	56/53/43	58/56/47	56/52/45	60/58/50	65/63/60
	Pressure Level (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
	Power Level (Inlet + Radiated)			68/65/55	70/68/59	68/64/57	72/70/62	74/72/69
ELECTRICAL	Power Input	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	2.70	4.15	5.84
HYDRONIC	Cooling Water Flow Rate	H	L/h	757	1567	2133	2421	4295
		M		635	1497	1917	2177	3896
		L		374	667	1049	1406	2552
	Cooling Pressure Drop	H	kPa	36.9	46.0	54.9	37.4	68.1
		M		26.9	42.4	45.3	30.9	57.1
		L		10.3	9.9	15.3	14.1	26.7
	Heating Water Flow Rate	H	L/h	320	654	879	1002	1787
		M		268	625	790	901	1622
		L		158	279	432	582	1063
	Heating Pressure Drop	H	kPa	41.3	30.8	61.7	30.2	103.6
		M		30.1	28.4	50.9	25.0	87.0
		L		11.6	6.6	17.2	11.4	40.6

EUROVENT TESTING CONDITIONS:

a. Cooling mode (4-pipe):

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

b. Heating mode (4-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 65°C/55°C

LOOKING FOR DIFFERENT CONFIGURATIONS?

While the most common configurations are specified in the previous sections, we have many more available with over +2,500 product configurations in our portfolio.

Here is a sneak peak of different configurations available for this range.

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+2 PIPE CONFIGURATIONS AVAILABLE

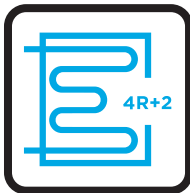


4 Row or 6 Row Coil configurations are available for applications requiring higher capacity. Other advantages include:

Enhanced Heat Transfer Efficiency: Larger surface area ensures better heat exchange and allows for operating with warmer chilled water temperatures typical with air to water heat pumps.

Improved Latent Capacity: Increasing the coil surface area allows the air to flow across the coil longer and increase the amount of moisture removed from the air.

+4 PIPE CONFIGURATIONS AVAILABLE

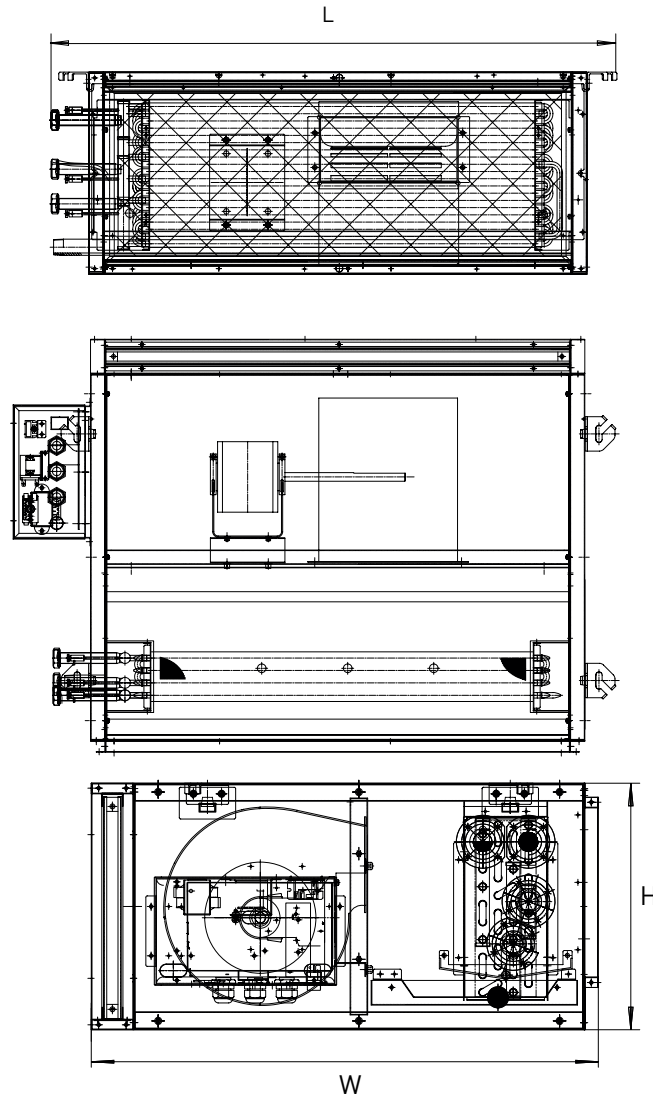


4 Rows Cooling +2 Row Heating Coil configurations are available for 4 pipe systems where more heating is required. Other advantages include:

Enhanced Heat Transfer Efficiency: Larger surface area ensures better heat exchange and allows for operating with lower hot water temperatures typical with air to water heat pumps.

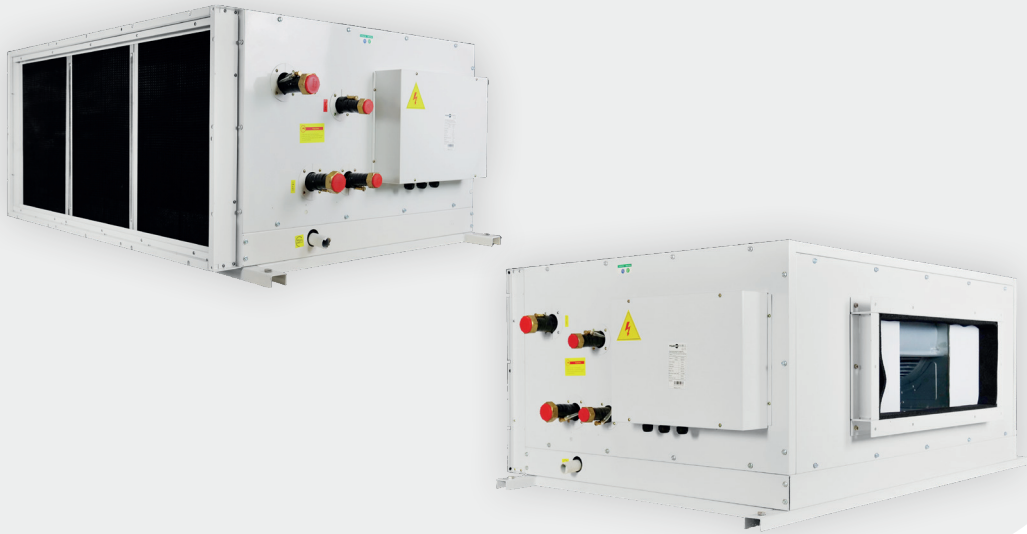
Active Humidity Control: The higher capacity 2-row heating coil provides more reheating of the air which allows the cooling coil to achieve lower dewpoint temperatures and lower space humidity without sacrificing comfort.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS



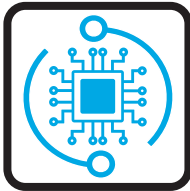
PDWD			400	800	1200	1600	2000
CONSTRUCTION AND PACKING DATA	Water Connections	Type	PT (Threaded Female)				
		In	19.05 [3/4]				25.4 (1)
	Out	19.05 [3/4]					
	Condensate Drainage	L	945	1145	1345	1645	2005
		W	720	780			
H		350	400				
NET WEIGHTS	3R, 4R and 3+1R	kg	52	57	66	73	84
	6R and 4+2R	kg	57	63	73	81	91

HAHU - HORIZONTAL MINI AIR HANDLING UNIT



FEATURES

CONTROL FLEXIBILITY



Two types of control system: Intelligent control board (I-Control) controlled via Infra-red handset and/or Intelligent wired wall pad or Flexible control (W-Control) permitting operation with external thermostat applications both controls allows configuration for 2 or 4-pipe settings.

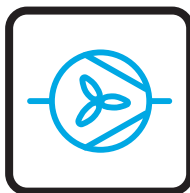
Please refer to page 14 for further information on controls.

ENERGY EFFICIENT MOTORS



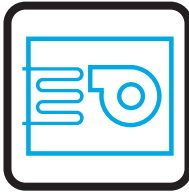
EC motors allow the centrifugal fans to operate at optimum airflow performance, energy efficiency and quiet operation. EC motors include driven control PCB, constant torque, permanent magnet and 3 speeds pre-set or modulating with a 0-10 VDC signal for precise air balancing control.

FAN BLOWER



Galvanized steel housing center plate fixed impeller, with riveting compression on the end ring and galvanized steel sheet mounting feet to ensure adequate strength, All impellers and motors are fully balanced according to ANSI/AMCA-204 standard for smooth and quiet operation.

STRUCTURE



Made from frameless integrated folded steel structure, it uses a sandwich panel consisting of two walls with high-pressure PU foam inner insulation. It has couplings for the connection of ducting and gravity drain pan with insulation for condensation. The unit has an easy access to fans, motors and filters.

WATER COILS



Built with seamless copper tubes and headers, mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. Tested at 35 bar, with maximum operating limits at 20 bar.

READY TO INSTALL



The Horizontal Mini Air Handling unit range is offered as a complete package including standard items such as the internal drain pan, double sandwich panel insulation of 10mm + 25mm, and a G2 (MERV 4) filter. Furthermore, we offer multiple optional accessories.

KEY POINTS

- Auto Dynamic Balancing with I-Control
- External Static Pressure up to 350 Pa.
- Compact dimension with Cooling capacity more than 60 kW and 9000 m³/h of airflow available.
- Internal Drain Pan



ACCESSORIES

- IR Handset or Wired Wall Pad (Available with I-Control)
- Thermostat Controller (Available with W-Control)
- G4 (Merv 8) or F8 (MERV 14) Filters
- Electric heater up to 9kW
- 2 or 3 Way On/Off & Modulating Valves
- Belimo Valve Kit
- Integrated Condensate Pump
- Supply/Return air Plenum
- Stainless Steel Drain Pan

*Please refer to page 80 for further information and accessories.

TECHNICAL SPECIFICATIONS

Hydronic Horizontal Mini Air Handling Unit, 5R, 2 Pipe with **EC Motor**

UNIT GENERAL SPECS	HAHU-5R-[Size]-V-ECM			200	300	400	600	800
	Configuration			2-pipe				
	Number of Fan Blowers			1			2	
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60				
AIR	Total Air Flow	H	m ³ /h	2222	3160	4093	6321	8186
		M		1912	2703	3495	5407	6990
		L		1361	1916	2475	3833	4950
	External Static Pressure	H	Pa	120				
M								
L								
COOLING	Total Cooling Capacity	H	kW	14.67	20.89	26.13	40.34	50.83
		M		13.06	18.51	23.07	35.74	44.88
		L		10.09	14.13	17.62	27.28	34.27
	Sensible Cooling Capacity	H		10.27	14.50	18.40	28.29	35.80
		M		9.09	12.72	16.06	24.81	31.25
		L		6.91	9.59	12.13	18.70	23.60
HEATING	Heating Capacity	H	kW	13.66	19.36	24.70	37.81	48.10
		M		12.16	17.15	21.81	33.49	42.47
		L		9.40	13.09	16.65	25.57	32.43
	Max. Electric Heater Capacity		kW	4.5	6	7.5	9	
SOUND	Pressure Level (Outlet)		dB(A)	73/68/64	78/73/69	80/75/71	81/76/72	83/78/73
	Pressure Level (Inlet + Radiated)			70/65/61	75/70/66	77/72/68	78/73/69	80/75/70
	Power Level (Outlet)			82/77/73	87/82/78	89/84/80	90/85/81	92/87/82
	Power Level (Inlet + Radiated)			79/74/70	84/79/75	86/81/77	87/82/78	89/84/79
ELECTRICAL	Power Input	H	W	412	850	1015	1700	2030
		M		375	650	850	1,300	1,530
		L		320	350	500	700	1000
	Running Current (H)		A	3.58	7.39	8.83	14.78	17.65
HYDRONIC	Cooling Water Flow Rate	H	L/h	2514	3582	4480	6916	8714
		M		2239	3173	3955	6126	7694
		L		1730	2422	3020	4677	5874
	Cooling Pressure Drop	H	kPa	29.9	64.2	30.1	48.5	43.5
		M		24.3	51.6	24.0	39.0	34.7
		L		15.3	31.7	14.8	24.0	21.4
	Heating Water Flow Rate	H	L/h	2342	3318	4234	6482	8246
		M		2085	2939	3739	5741	7281
		L		1611	2244	2854	4383	5559
	Heating Pressure Drop	H	kPa	22.1	47.1	22.8	36.3	33.2
		M		17.9	37.9	18.2	29.2	26.5
		L		11.3	23.3	11.2	17.9	16.3

EUROVENT TESTING CONDITIONS:

a. Cooling mode (2-pipe):

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

b. Heating mode (2-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 45°C/40°C

TECHNICAL SPECIFICATIONS

Hydronic Horizontal Mini AHU, 5R+2 (Auxiliary Heating Coil), 4 Pipe with **EC Motor**

UNIT GENERAL SPECS	HAHU-5R+2-[Size]-P-ECM			200	300	400	600	800
	Configuration			4-pipe				
	Number of Fan Blowers			1			2	
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60				
AIR	Total Air Flow	H	m ³ /h	1999	3000	3942	6000	7884
		M		1773	2603	3400	5206	6801
		L		1286	1862	2424	3724	4847
	External Static Pressure	H	Pa	120				
		M		120				
		L		120				
COOLING	Total Cooling Capacity	H	kW	13.46	20.00	25.37	38.62	49.35
		M		12.36	18.05	22.67	34.86	44.10
		L		9.63	13.78	17.40	26.61	33.84
	Sensible Cooling Capacity	H		9.39	13.86	17.84	27.02	34.71
		M		8.54	12.38	15.76	24.14	30.67
		L		6.58	9.35	11.97	18.23	23.29
HEATING	Heating Capacity	H	kW	13.28	19.15	24.65	37.25	47.26
		M		12.19	17.28	22.03	33.62	42.23
		L		9.50	13.20	16.90	25.67	32.40
SOUND	Pressure Level (Outlet)		dB(A)	73/68/64	78/73/69	80/75/71	81/76/72	83/78/73
	Pressure Level (Inlet + Radiated)			70/65/61	75/70/66	77/72/68	78/73/69	80/75/70
	Power Level (Outlet)			82/77/73	87/82/78	89/84/80	90/85/81	92/87/82
	Power Level (Inlet + Radiated)			79/74/70	84/79/75	86/81/77	87/82/78	89/84/79
ELECTRICAL	Power Input	H	W	412	850	1015	1700	2030
		M		375	650	850	1,300	1,530
		L		320	350	500	700	1000
	Running Current (H)		A	3.58	7.39	8.83	14.78	17.65
HYDRONIC	Cooling Water Flow Rate	H	L/h	2308	3428	4349	6620	8460
		M		2118	3095	3887	5976	7560
		L		1650	2363	2982	4562	5801
	Cooling Pressure Drop	H	kPa	25.7	59.3	28.5	44.8	41.2
		M		22.0	49.3	23.3	37.3	33.7
		L		14.0	30.4	14.5	22.9	20.9
	Heating Water Flow Rate	H	L/h	1138	1641	2113	3193	4051
		M		1045	1481	1888	2882	3620
		L		814	1131	1448	2200	2778
	Heating Pressure Drop	H	kPa	15.0	34.4	16.6	48.8	26.7
		M		12.9	28.6	13.6	40.6	21.8
		L		8.2	17.6	8.4	25.0	13.5

EUROVENT TESTING CONDITIONS:

a. Cooling mode (4-pipe):

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

b. Heating mode (4-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 65°C/55°C

LOOKING FOR DIFFERENT CONFIGURATIONS?

While the most common configurations are specified in the previous sections, we have many more available with over +2,500 product configurations in our portfolio.

Here is a sneak peak of different configurations available for this range.

Further information can be accessed through:

PASelect Selection software

Polar Air CS website

By **contacting your sales representative**

+2 PIPE CONFIGURATIONS AVAILABLE



6 Row Coil configurations are available for applications requiring higher capacity. Other advantages include:

Enhanced Heat Transfer Efficiency: Larger surface area ensures better heat exchange and allows for operating with warmer chilled water temperatures typical with air to water heat pumps.

Improved Latent Capacity: Increasing the coil surface area allows the air to flow across the coil longer and increase the amount of moisture removed from the air.

+4 PIPE CONFIGURATIONS AVAILABLE

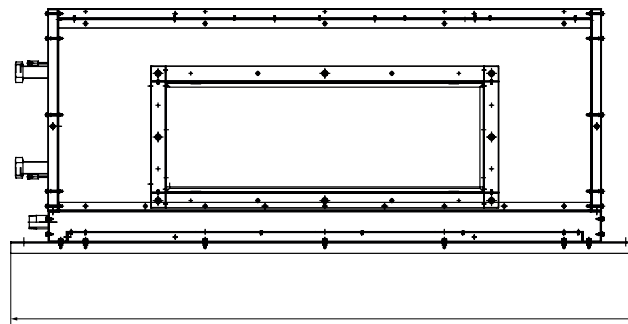


6 Rows Cooling +2 Row Heating Coil configurations are available for 4 pipe systems where more heating is required. Other advantages include:

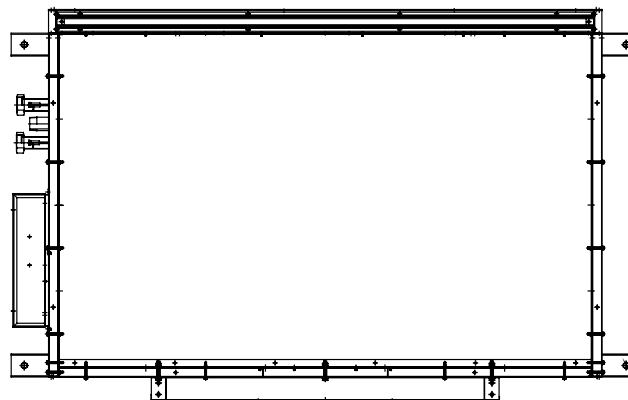
Enhanced Heat Transfer Efficiency: Larger surface area ensures better heat exchange and allows for operating with lower hot water temperatures typical with air to water heat pumps.

Active Humidity Control: The higher capacity 2-row heating coil provides more reheating of the air which allows the cooling coil to achieve lower dewpoint temperatures and lower space humidity without sacrificing comfort.

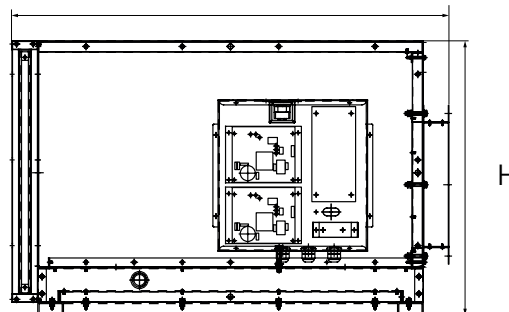
DIMENSIONAL DRAWINGS, DATA & WEIGHTS



L



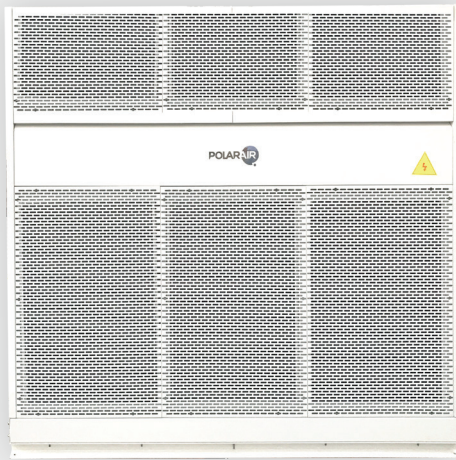
W



H

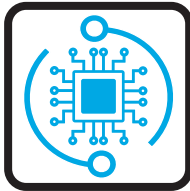
HAHU			200	300	400	600	800
CONSTRUCTION AND PACKING DATA	Water Connections	Type	PT (Threaded Female)				
		In	31.75 (1 1/4)				
	Condensate Drainage Connection	Out	25.4 (1)				
		mm [in]					
	Heating Water Connections (4P Only)	In	25.4 (1)				
		Out	25.4 (1)				
Dimensions	L	mm	1280	1480	1680	1930	2130
	W	mm	1120				1190
	H	mm	640			754	
WEIGHT	Net	kg	From 150 to 165	From 175 to 185	From 186 to 210	From 223 to 250	From 225 to 283

VAHU - VERTICAL MINI AIR HANDLING UNIT



FEATURES

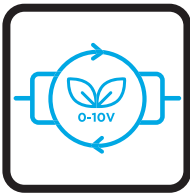
CONTROL FLEXIBILITY



Two types of control system: Intelligent control board (I-Control) controlled via Infra-red handset and/or Intelligent wired wall pad or Flexible control (W-Control) permitting operation with external thermostat applications both controls allows configuration for 2 or 4-pipe settings.

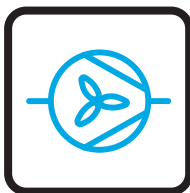
Please refer to page 14 for further information on controls.

ENERGY EFFICIENT MOTORS



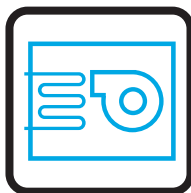
EC motors allow the centrifugal fans to operate at optimum airflow performance, energy efficiency and quiet operation. EC motors include driven control PCB, constant torque, permanent magnet and 3 speeds pre-set or modulating with a 0-10 VDC signal for precise air balancing control.

FAN BLOWER



Galvanized steel housing center plate fixed impeller, with riveting compression on the end ring and galvanized steel sheet mounting feet to ensure adequate strength, All impellers and motors are fully balanced according to ANSI/AMCA-204 standard for smooth and quiet operation.

STRUCTURE



Made from frameless integrated folded steel structure, it uses a sandwich panel consisting of two walls with high-pressure PU foam inner insulation. It has couplings for the connection of ducting and gravity drain pan with insulation for condensation. The unit has an easy access to fans, motors and filters.

WATER COILS



Built with seamless copper tubes and headers, mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. Tested at 35 bar, with maximum operating limits at 20 bar.

READY TO INSTALL



The Vertical Mini Air Handling unit range is offered as a complete package including standard items such as the internal drain pan, double sandwich panel insulation of 10mm + 25mm, and a G2 (MERV 4) filter. Furthermore, we offer multiple optional accessories.

KEY POINTS

- Auto Dynamic Balancing with I-Control
- External Static Pressure up to 350 Pa
- Suitable for special applications with Cooling capacity up to 55 kW and 9000 m³/h of airflow available
- Upflow or downflow discharge
- Internal Drain Pan



ACCESSORIES

- IR Handset or Wired Wall Pad (Available with I-Control)
- Thermostat Controller (Available with W-Control)
- G4 (Merv 8) or F8 (MERV 14) Filters
- Electric heater up to 9kW
- 2 or 3 Way On/Off & Modulating Valves
- Belimo Valve Kit
- Stainless Steel Drain Pan

*Please refer to page 80 for further information and accessories.

TECHNICAL SPECIFICATIONS

Hydronic Vertical Mini Air Handling Unit, 5R, 2 pipe with **EC Motor**

UNIT GENERAL SPECS	VAHU-5R-[Size]-V-ECM			200	300	400	600	800
	Configuration			2-pipe				
	Number of Fan Blowers			1			2	
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60				
AIR	Total Air Flow	H	m ³ /h	2222	3160	4093	6321	8186
		M		1912	2703	3495	5407	6990
		L		1361	1916	2475	3833	4950
	External Static Pressure	H	Pa	120				
		M		120				
		L		120				
COOLING	Total Cooling Capacity	H	kW	14.62	20.68	26.34	38.46	50.52
		M		13.02	18.32	23.26	34.06	44.61
		L		10.06	13.98	17.76	26.00	34.06
	Sensible Cooling Capacity	H		10.20	14.46	18.44	27.16	35.49
		M		9.02	12.68	16.10	23.82	30.98
		L		6.86	9.56	12.16	17.95	23.39
HEATING	Heating Capacity	H	kW	13.55	19.20	24.70	36.64	47.64
		M		12.07	17.00	21.81	32.46	42.06
		L		9.32	12.98	16.65	24.78	32.11
	Max. Electric Heater Capacity			4.5	6	7.5	9	
SOUND	Pressure Level (Outlet)		dB(A)	73/68/64	78/73/69	80/75/71	81/76/72	83/78/73
	Pressure Level (Inlet + Radiated)			70/65/61	75/70/66	77/72/68	78/73/69	80/75/70
	Power Level (Outlet)			82/77/73	87/82/78	89/84/80	90/85/81	92/87/82
	Power Level (Inlet + Radiated)			79/74/70	84/79/75	86/81/77	87/82/78	89/84/79
ELECTRICAL	Power Input	H	W	412	850	1015	1700	2030
		M		375	650	850	1300	1530
		L		320	350	500	700	1000
	Running Current (H)		A	3.58	7.39	8.83	14.78	17.65
HYDRONIC	Cooling Water Flow Rate	H	L/h	2506	3545	4516	6592	8661
		M		2232	3140	3987	5840	7647
		L		1725	2397	3044	4458	5838
	Cooling Pressure Drop	H	kPa	54.0	64.8	38.0	38.3	73.6
		M		43.8	52.1	30.4	30.8	58.8
		L		27.5	32.1	18.7	18.9	36.2
	Heating Water Flow Rate	H	L/h	2323	3291	4234	6282	8166
		M		2068	2915	3739	5564	7210
		L		1598	2225	2854	4247	5505
	Heating Pressure Drop	H	kPa	39.8	47.9	28.5	29.5	56.1
		M		32.3	38.5	22.8	23.7	44.9
		L		20.3	23.7	14.0	14.6	27.6

EUROVENT TESTING CONDITIONS:

a. Cooling mode (2-pipe):

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

b. Heating mode (2-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 45°C/40°C

TECHNICAL SPECIFICATIONS

Hydronic Vertical Air Handling Unit, 5R+2 (Auxiliary Heating Coil), 4 Pipe with **EC Motor**

UNIT GENERAL SPECS	VAHU-5R+2-[Size]-P-ECM			200	300	400	600	800
	Configuration			4 pipe				
	Number of Fan Blowers			1			2	
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60				
AIR	Total Air Flow	H	m ³ /h	1999	3000	3942	6000	7884
		M		1773	2603	3400	5206	6801
		L		1286	1862	2424	3724	4847
	External Static Pressure	H	Pa	120				
		M		120				
		L		120				
COOLING	Total Cooling Capacity	H	kW	13.42	19.80	25.57	36.81	49.05
		M		12.32	17.87	22.85	33.23	43.83
		L		9.60	13.64	17.53	25.37	33.63
	Sensible Cooling Capacity	H		9.32	13.82	17.88	25.95	34.41
		M		8.48	12.34	15.80	23.18	30.41
		L		6.53	9.32	12.00	17.50	23.09
HEATING	Heating Capacity	H	kW	12.87	21.38	24.78	35.47	46.45
		M		11.82	19.30	22.15	32.02	41.51
		L		9.20	14.73	16.99	24.45	31.85
SOUND	Pressure Level (Outlet)		dB(A)	73/68/64	78/73/69	80/75/71	81/76/72	83/78/73
	Pressure Level (Inlet + Radiated)			70/65/61	75/70/66	77/72/68	78/73/69	80/75/70
	Power Level (Outlet)			82/77/73	87/82/78	89/84/80	90/85/81	92/87/82
	Power Level (Inlet + Radiated)			79/74/70	84/79/75	86/81/77	87/82/78	89/84/79
ELECTRICAL	Power Input	H	W	412	850	1015	1700	2030
		M		375	650	850	1300	1530
		L		320	350	500	700	1000
	Running Current (H)		A	3.58	7.39	8.83	14.78	17.65
HYDRONIC	Cooling Water Flow Rate	H	L/h	2301	3393	4384	6310	8408
		M		2112	3063	3918	5696	7514
		L		1645	2339	3006	4349	5765
	Cooling Pressure Drop	H	kPa	46.3	59.9	36.1	35.4	69.7
		M		39.7	49.8	29.5	29.4	57.0
		L		25.3	30.7	18.3	18.1	35.4
	Heating Water Flow Rate	H	L/h	1103	1832	2124	3041	3981
		M		1013	1654	1898	2745	3558
		L		789	1263	1456	2095	2730
	Heating Pressure Drop	H	kPa	8.6	21.3	39.1	38.6	74.8
		M		7.3	17.7	32.0	32.1	61.1
		L		4.7	10.9	19.8	19.8	37.9

EUROVENT TESTING CONDITIONS:

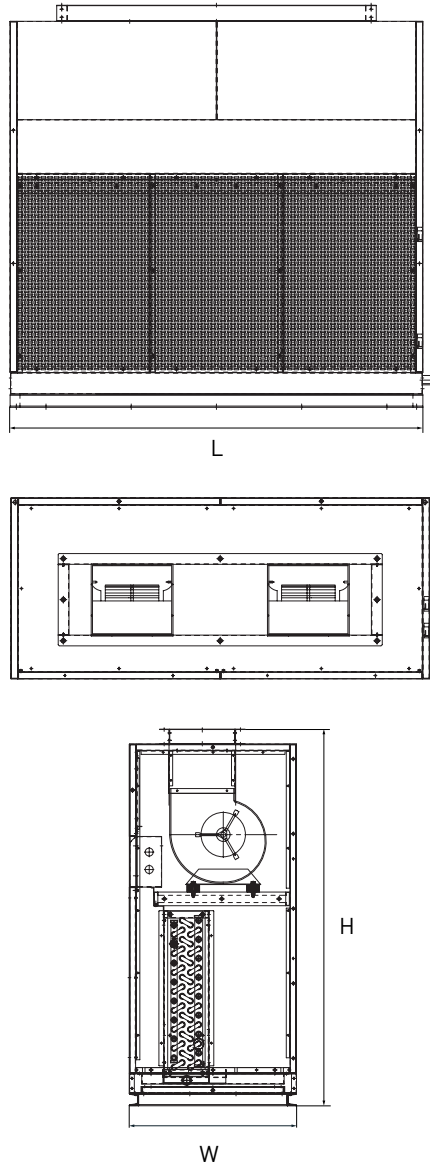
a. Cooling mode (4-pipe):

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

b. Heating mode (4-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 65°C/55°C

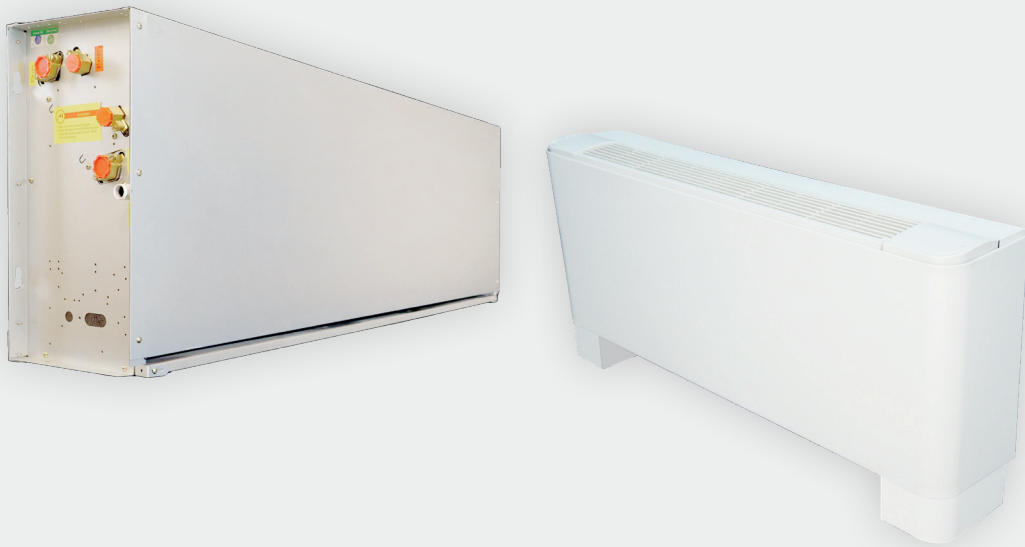
DIMENSIONAL DRAWINGS, DATA & WEIGHTS



VAHU			200	300	400	600	800
CONSTRUCTION AND PACKING DATA	Cooling Water Connections	Type	PT (Threaded Female)				
		In	31.75 1 [1/4]				
	Condensate Drainage Connection	Out	25.4 [1]				
		mm [in]					
	Heating Water Connections (4P Only)	In	25.4 [1]				
		Out	25.4 [1]				
	Dimensions	L	850	1050	1250	1550	1880
W		670					
H		1510					

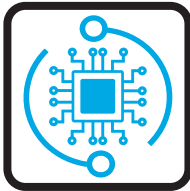


PFWBC - UNIVERSAL FLOORSTANDING



FEATURES

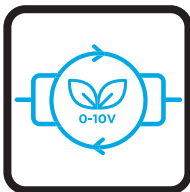
CONTROL FLEXIBILITY



Two types of control system: Intelligent control board (I-Control) controlled via Infra-red handset and/or Intelligent wired wall pad or Flexible control (W-Control) permitting operation with external thermostat applications both controls allows configuration for 2 or 4-pipe settings.

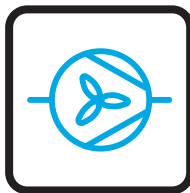
Please refer to page 14 for further information on controls.

ENERGY EFFICIENT MOTORS



EC motors allow the centrifugal fan to operate at optimum airflow performance, energy efficiency and quiet operation. EC motors include driven control PCB, constant torque, permanent magnet and 3 speeds pre-set or modulating with a 0-10 VDC signal for precise air balancing control. AC motors with 3 speed fixed also available. Please refer to page 72 for further information about configurations.

FAN BLOWER

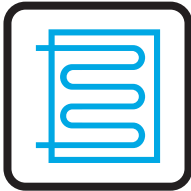


Centrifugal type with double air inlet blades made of forward-curving metal fins, and with large diameters to create high airflow and high static pressure with fewer revolutions offering lower noise levels.



STRUCTURE

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.



WATER COILS

Built with seamless copper tubes and headers, mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. Tested at 35 bar, with maximum operating limits at 20 bar.



READY TO INSTALL

The PFWB(C) range is offered as a complete package including standard items such as a cabinet with air grille distributions, a Galvanized Steel internal drain pan, 5mm NBR Insulation and G2 (MERV 4) filter. Furthermore, we offer multiple optional accessories.

KEY POINTS

- Auto Dynamic Balancing with I-Control
- Coil interchangeable on field
- 3 and 4 Rows configurations available
- With or without cabinet
- Horizontal or Vertical air return



ACCESSORIES

- IR Handset or Wired Wall Pad (Available with I-Control)
- Thermostat Controller (Available with W-Control)
- 2 or 3 Way On/Off & Modulating Valves
- Stainless Steel Drain Pan
- Electric heater up to 3kW
- ABS Plastic Supporting Feet

*Please refer to page 80 for further information and accessories.

TECHNICAL SPECIFICATIONS

Hydronic Universal Floostanding, 3R, 2 Pipe with **EC Motor**

UNIT GENERAL SPECS		PFWB(C)-3R-[Size]-V-ECM		06	09	12	15	18	24	30	36	40		
		Configuration		2-pipe										
		Number of Fan Blowers		Single	Twin					Four				
		Power Supply (V/Ph/Hz)		220 - 240/1/50 - 60										
AIR	Total Air Flow	H	m ³ /h	350	504	677	840	970	1350	1624	1988	2266		
		M		280	432	540	697	827	1170	1440	1710	2034		
		L		210	342	380	434	492	676	740	890	950		
COOLING	Total Cooling Capacity	H	kW	1.83	2.56	3.32	4.22	4.90	6.74	8.04	9.33	10.67		
		M		1.57	2.28	2.83	3.68	4.31	6.05	7.43	8.40	9.91		
		L		1.25	1.91	2.15	2.56	2.90	3.94	4.40	5.02	5.55		
	Sensible Cooling Capacity	H		1.31	1.84	2.40	3.03	3.48	4.84	5.75	6.79	7.70		
		M		1.11	1.62	2.02	2.62	3.04	4.30	5.26	6.05	7.12		
		L		0.87	1.35	1.52	1.78	2.00	2.73	3.03	3.51	3.84		
HEATING	Heating Capacity	H	kW	2.02	2.82	3.73	4.66	5.37	7.45	8.79	10.47	11.84		
		M		1.73	2.52	3.17	4.08	4.75	6.71	8.08	9.45	11.00		
		L		1.39	2.10	2.39	2.81	3.19	4.43	4.79	5.75	6.13		
	Max. Electric Heater Capacity	1		1.5	2			3						
SOUND	Pressure Level (H/M/L)	W	41/35/29	43/38/33	47/40/33	49/44/33	51/46/33	52/48/33	54/50/33	57/54/35	60/58/35			
	Power Level (H/M/L)		50/44/38	52/47/42	56/49/42	58/53/42	60/55/42	61/57/42	63/59/42	66/63/44	69/67/44			
ELECTRICAL	Power Input	H	W	17	26	38	44	52	87	100	128	182		
		M		13	15	23	30	36	60	71	92	147		
		L		8	11	12	13	14	22	24	28	30		
	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	314	439	569	724	839	1156	1378	1599	1830		
		M		269	390	485	632	740	1038	1274	1440	1698		
		L		214	327	368	439	498	676	754	860	951		
	Cooling Pressure Drop	H	kPa	11.8	22.2	13.5	23.8	31.7	32.3	47.8	22.6	30.7		
		M		8.9	18.0	10.1	18.6	25.3	26.6	41.5	18.7	26.9		
		L		5.9	13.1	6.2	9.7	12.4	12.3	16.2	7.4	9.5		
	Heating Water Flow Rate	H	L/h	347	484	640	799	920	1278	1507	1795	2029		
		M		296	432	544	700	814	1151	1385	1620	1886		
		L		238	360	410	481	546	760	821	985	1051		
	Heating Pressure Drop	H	kPa	13.2	25.0	15.9	27.0	36.0	36.4	54.4	26.0	35.4		
		M		9.9	20.4	11.8	21.3	28.9	30.2	46.7	21.7	31.0		
		L		6.7	14.7	7.1	10.8	14.1	14.3	18.2	8.8	10.8		

EUROVENT TESTING CONDITIONS:

a. Cooling mode (2-pipe):

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

b. Heating mode (2-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 45°C/40°C

* Please refer to www.eurovent-certification.com for further information.

TECHNICAL SPECIFICATIONS

Hydronic Universal Floostanding, 3R+1 (Auxiliary Heating Coil), 4 Pipe with **EC Motor**

UNIT GENERAL SPECS		PFWBC)-3R+1-[Size]-P-ECM		06	09	12	15	18	24	30	36	40		
		Configuration		4-pipe										
		Number of Fan Blowers		Single	Twin					Four				
		Power Supply (V/Ph/Hz)		220 - 240/1/50 - 60										
AIR	Total Air Flow	H	m ³ /h	350	504	677	840	970	1350	1624	1988	2266		
		M		280	432	540	697	827	1170	1440	1710	2034		
		L		210	342	380	434	492	676	740	890	950		
COOLING	Total Cooling Capacity	H	kW	1.83	2.56	3.32	4.22	4.90	6.74	8.04	9.33	10.67		
		M		1.57	2.28	2.83	3.68	4.31	6.05	7.43	8.40	9.91		
		L		1.25	1.91	2.15	2.56	2.90	3.94	4.40	5.02	5.55		
	Sensible Cooling Capacity	H		1.31	1.84	2.40	3.03	3.48	4.84	5.75	6.79	7.70		
		M		1.11	1.62	2.02	2.62	3.04	4.30	5.26	6.05	7.12		
		L		0.87	1.35	1.52	1.78	2.00	2.73	3.03	3.51	3.84		
HEATING	Heating Capacity	H	kW	1.69	2.29	3.06	3.81	4.27	5.90	6.99	8.40	9.55		
		M		1.43	2.02	2.60	3.32	3.83	5.35	6.41	7.52	8.77		
		L		1.14	1.71	1.98	2.28	2.58	3.50	3.83	4.58	4.94		
SOUND	Pressure Level (H/M/L)	dB(A)	41/35/29	43/38/33	47/40/33	49/44/33	51/46/33	52/48/33	54/50/33	57/54/35	60/58/35			
	Power Level (H/M/L)		50/44/38	52/47/42	56/49/42	58/53/42	60/55/42	61/57/42	63/59/42	66/63/44	69/67/44			
ELECTRICAL	Power Input	H	W	17	26	38	44	52	87	100	128	182		
		M		13	15	23	30	36	60	71	92	147		
		L		8	11	12	13	14	22	24	28	30		
	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	314	439	569	724	839	1156	1378	1599	1830		
		M		269	390	485	632	740	1038	1274	1440	1698		
		L		214	327	368	439	498	676	754	860	951		
	Cooling Pressure Drop	H	kPa	11.8	22.2	13.5	23.8	31.7	32.3	47.8	22.6	30.7		
		M		8.9	18.0	10.1	18.6	25.3	26.6	41.5	18.7	26.9		
		L		5.9	13.1	6.2	9.7	12.4	12.3	16.2	7.4	9.5		
	Heating Water Flow Rate	H	L/h	145	196	262	326	366	506	599	720	819		
		M		122	173	223	285	329	458	549	645	752		
		L		98	147	169	196	221	300	328	392	424		
	Heating Pressure Drop	H	kPa	6.0	11.0	21.8	37.5	48.2	15.8	23.6	35.9	49.0		
		M		4.4	8.8	16.3	29.3	39.7	13.2	20.2	29.5	42.0		
		L		3.0	6.5	9.9	14.9	19.4	6.2	8.0	12.1	15.0		

EUROVENT TESTING CONDITIONS:

a. Cooling mode (4-pipe):

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

b. Heating mode (4-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 65°C/55°C

LOOKING FOR DIFFERENT CONFIGURATIONS?

While the most common configurations are specified in the previous sections, we have many more available with over +2,500 product configurations in our portfolio.

Here is a sneak peak of different configurations available for this range.

Further information can be accessed through:

PASelect Selection software

Polar Air CS website

By **contacting your sales representative**

+2 PIPE CONFIGURATIONS AVAILABLE

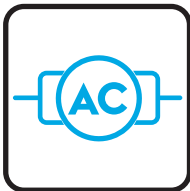


4 Row Coil configurations are available for applications requiring higher capacity. Other advantages include:

Enhanced Heat Transfer Efficiency: Larger surface area ensures better heat exchange and allows for operating with warmer chilled water temperatures typical with air to water heat pumps.

Improved Latent Capacity: Increasing the coil surface area allows the air to flow across the coil longer and increase the amount of moisture removed from the air.

AC MOTOR AVAILABLE



All of the above configurations are also available with a 3-speed PSC motor. The AC motor configurations are available with two types of control systems to adapt to the project needs:

- **Intelligent Control (I-control)** offers complete control with integral Modbus RTU protocol or local control via IR handset or Wired Wall Pad.

- **Terminal Strip Control (T-Control)** provides a terminal block to allow operation of the fan from external thermostats or controllers provided by a third party.

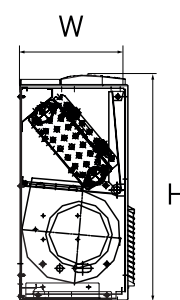
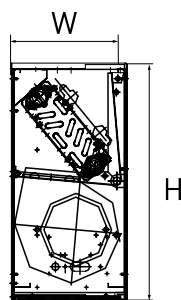
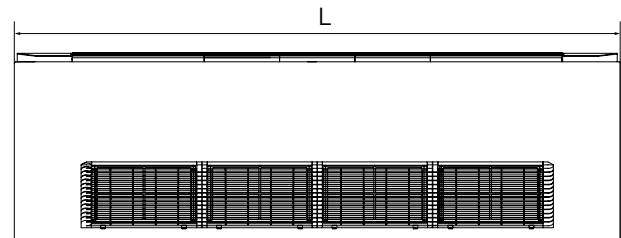
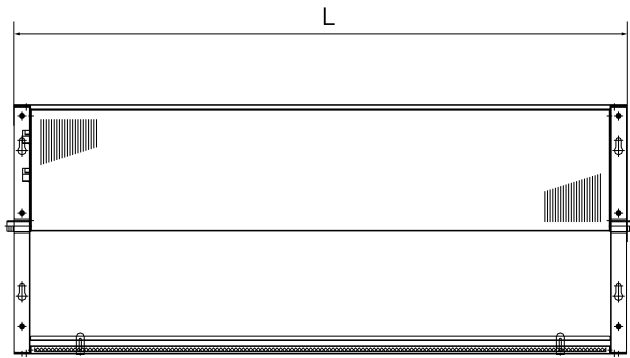


* AC Motor Configurations are Eurovent Certified.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS

WITHOUT CASING

WITH CASING



PFWB(C)			06	09	12	15	18	24	30	36	40
CONSTRUCTION AND PACKING DATA	Cooling Water Connections	Type	PT (Threaded Female)								
		In	19.05 [3/4]								
	Out										
	Condensate Drainage Connection	mm [in]	19.05 [3/4]								
	Heating Water Connections (4P Only)	In	12.7 [1/2]								
		Out									
	Dimensions Cased Unit	L	858	908	1058	1208	1258	1758	1758	1908	2058
W		250									
H		494									
Dimensions Uncased Unit	L	578	628	778	928	978	1478	1478	1628	1778	
	W	230									
	H	460									
NET WEIGHTS	3R and 4R	kg	22	24	26	30	32	47	47	49	54
	3R+1		23	26	28	32	34	45	49	52	57

**NEW
PRODUCT**



FEATURES



CONTROL FLEXIBILITY

Two types of control system: Intelligent control board (I-Control) with standard built-in control board or Flexible control (W-Control) permitting operation with external thermostat applications both controls allows configuration for 2 or 4-pipe settings.

Please refer to page 14 for further information on controls.



QUIET OPERATION

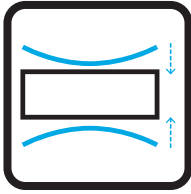
Tangential fans mounted on anti-vibration supports provide smoother and more steady airflows, resulting in optimal acoustic comfort. This setup with the number of speeds of the fan creates a quieter and more pleasant environment.



ENERGY EFFICIENT MOTORS

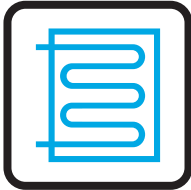
EC motors allow the tangential blower wheel to operate at optimum airflow performance, energy efficiency and quiet operation. EC motors include driven control PCB, constant torque, permanent magnet and 3 speeds pre-set or modulating with a 0-10 VDC signal for precise air balancing control.

SLIM DESIGN



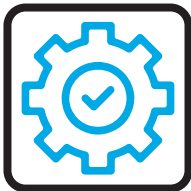
The structure is made of galvanized sheet-steel with holes for attaching the structure to the wall/ceiling. Fire resistant insulation is fitted internally to provide both thermal and acoustic insulation. It has an elegant and modern design, with only 135 mm width especially recommended for residential and hospitality applications.

WATER COILS



Built with seamless copper tubes and headers, mechanically expanded into corrugated aluminium fin material for a permanent primary to secondary surface bond. Tested at 25 bar, with recommended operating limits at 8 bar.

READY TO INSTALL



The slim floostanding range is offered as a complete package including standard items such as a steel casing with air grille distribution within an integrated built-in control (if choosing I-Control), a galvanized Steel internal drain pan, 5mm NBR Insulation and G2 (MERV 4) filter.

Furthermore, we offer multiple optional accessories.

KEY POINTS

- Auto Dynamic Balancing with I-Control
- New slim design (135 mm width)
- Radiators replacement
- Highest latent performance in the market
- Available with or without cabinet
- Horizontal or Vertical air return
- Squared or rounded corners design.



ACCESSORIES

- IR Handset or built in control (Available with I-Control)
- Thermostat Controller (Available with W-Control)
- 2 or 3 Way On/Off & Modulating Valves
- Stainless Steel Drain Pan
- Electric heater up to 1.5kW
- Metal supporting feet

*Please refer to page 80 for further information and accessories.

TECHNICAL SPECIFICATIONS

Hydronic Slim Floostanding, 2 Pipe with EC Motor

UNIT GENERAL SPECS		PFWSLN-[Size]-V-ECM		01	02	03	04	05
		Configuration		2-pipe				
		Number of Fan Blowers		1			2	
		Power Supply (V/Ph/Hz)		220 - 240/1/50 - 60				
AIR	Total Air Flow	H	m ³ /h	180	295	380	460	600
		M		140	245	330	370	500
		L		100	170	230	260	350
COOLING	Total Cooling Capacity	H	kW	1.21	1.98	2.65	3.20	4.08
		M		1.00	1.72	2.38	2.73	3.56
		L		0.77	1.30	1.79	2.06	2.71
	Sensible Cooling Capacity	H		0.83	1.37	1.82	2.20	2.83
		M		0.68	1.18	1.62	1.86	2.44
		L		0.52	0.88	1.20	1.39	1.83
HEATING	Heating Capacity	H	kW	1.16	1.90	2.49	3.02	3.89
		M		0.96	1.66	2.27	2.58	3.41
		L		0.74	1.25	1.71	1.96	2.61
	Max. Electric Heater Capacity			0.5		1		1.5
SOUND	Pressure Level (H/M/L)		dB(A)	43/37/29	43/38/30	45/43/31	46/42/33	47/43/33
	Power Level (H/M/L)			52/46/38	52/47/39	54/52/40	55/51/42	56/52/42
ELECTRICAL	Power Input	H	W	16	19	22	24	26
		M		13	15	17	18	20
		L		10	11	12	12	12
	Running Current (H)		A	0.14	0.17	0.19	0.21	0.23
HYDRONIC	Cooling Water Flow Rate	H	L/h	207	339	454	548	700
		M		171	295	408	469	611
		L		131	223	306	354	464
	Cooling Pressure Drop	H	kPa	26.3	27.9	57.7	44.1	20.8
		M		18.6	21.6	47.6	33.3	16.3
		L		11.7	13.0	28.4	20.1	10.0
	Heating Water Flow Rate	H	L/h	199	326	426	518	666
		M		165	285	388	443	584
		L		127	214	294	336	448
	Heating Pressure Drop	H	kPa	20.4	21.4	43.1	33.1	16.9
		M		14.5	16.8	36.4	24.9	13.4
		L		9.1	10.1	22.0	15.1	8.3

EUROVENT TESTING CONDITIONS:

a. Cooling mode (2-pipe):

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

b. Heating mode (2-pipe):

- Return air temperature: 20°C
- Inlet water temperature: 45°C/40°C

* Please refer to www.eurovent-certification.com for further information.

TECHNICAL SPECIFICATIONS

Hydronic Slim Floostanding, 4 Pipe with **EC Motor**

UNIT GENERAL SPECS	PFWSLN-[Size]-P-ECM			01	02	03	04	05
	Configuration			4-pipe				
	Number of Fan Blowers			1			2	
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60				
AIR	Total Air Flow	H	m ³ /h	180	295	380	460	600
		M		140	245	330	370	500
		L		100	170	230	260	350
COOLING	Total Cooling Capacity	H	kW	0.89	1.51	2	2.46	3.19
		M		0.74	1.31	1.8	2.06	2.78
		L		0.56	0.98	1.35	1.59	2.11
	Sensible Cooling Capacity	H		0.63	1.06	1.4	1.72	2.24
		M		0.52	1.31	1.25	1.43	1.93
		L		0.39	0.98	0.93	1.08	1.45
HEATING	Heating Capacity	H	kW	1.05	1.75	2.3	2.8	3.62
		M		0.86	1.51	2.06	2.38	3.16
		L		0.67	1.15	1.55	1.82	2.4
SOUND	Pressure Level (H/M/L)		dB(A)	43/37/29	43/38/30	45/43/31	46/42/33	47/43/33
	Power Level (H/M/L)			52/46/38	52/47/39	54/52/40	55/51/42	56/52/42
ELECTRICAL	Power Input	H	W	16	19	22	24	26
		M		13	15	17	18	20
		L		10	11	12	12	12
	Running Current (H)		A	0.14	0.17	0.19	0.21	0.23
HYDRONIC	Cooling Water Flow Rate	H	L/h	152	258	344	422	547
		M		126	224	309	354	477
		L		97	168	232	273	362
	Cooling Pressure Drop	H	kPa	11.0	36.7	25.0	19.4	35.8
		M		7.9	28.4	20.6	14.1	28.0
		L		4.9	16.9	12.3	8.9	17.0
	Heating Water Flow Rate	H	L/h	90	150	197	240	310
		M		74	130	177	204	271
		L		57	98	133	156	206
	Heating Pressure Drop	H	kPa	10.4	35.2	72.7	17.9	33.2
		M		7.4	27.1	59.6	13.3	26.1
		L		4.6	16.4	35.8	8.2	15.9

EUROVENT TESTING CONDITIONS:

a. Cooling mode (4-pipe):

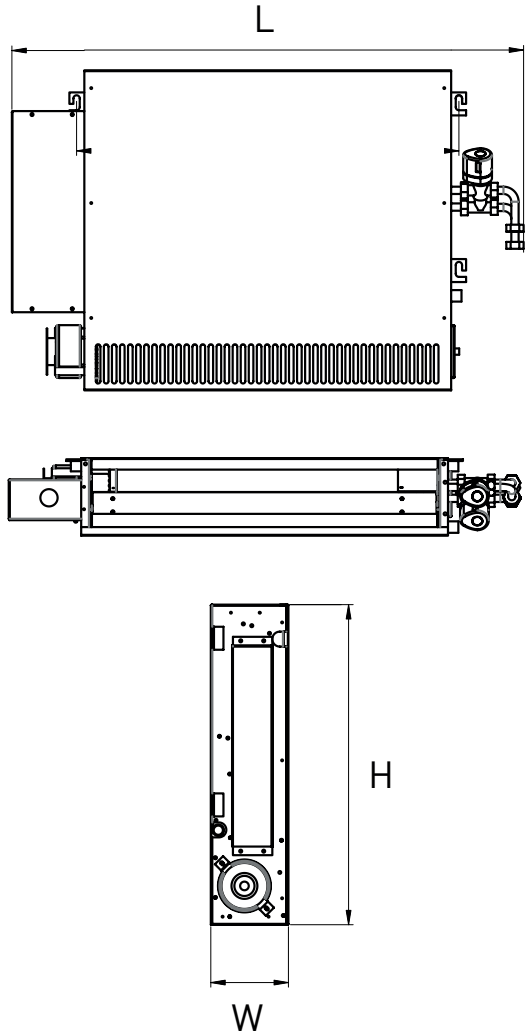
- Return air temperature: 27°C DB/19°C WB.
- Inlet/ outlet water temperature: 7°C/ 12°C

b. Heating mode (4-pipe):

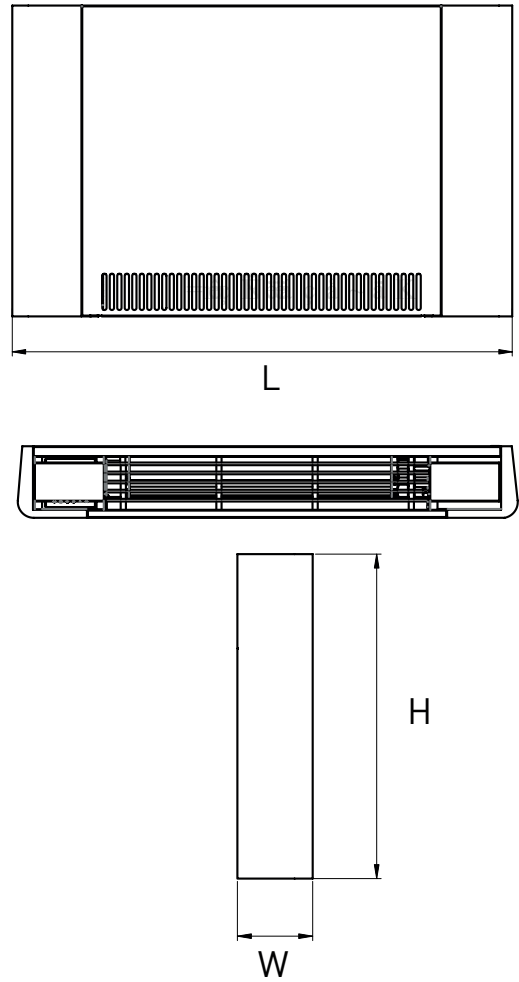
- Return air temperature: 20°C
- Inlet water temperature: 65°C/55°C

DIMENSIONAL DRAWINGS, DATA & WEIGHTS

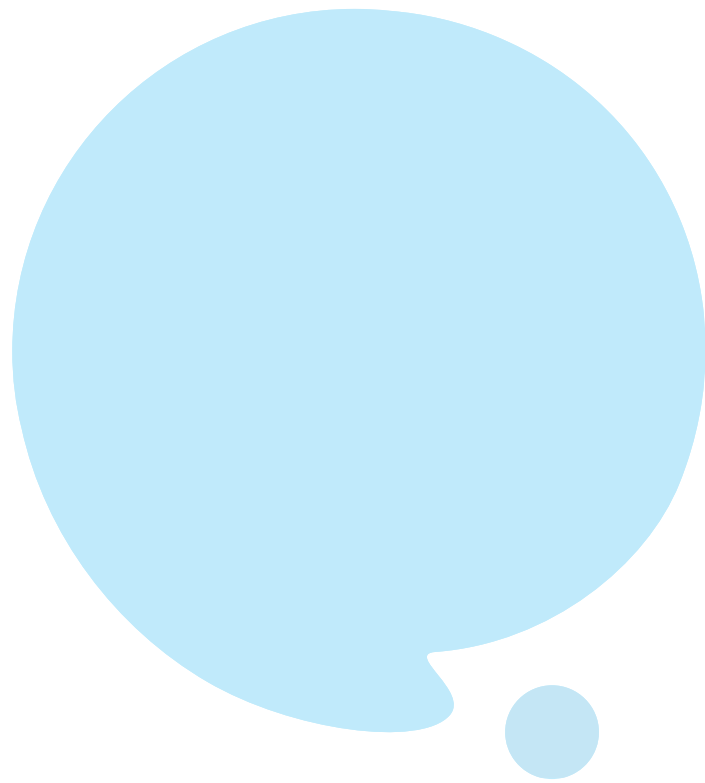
UNCASED UNIT



CASED UNIT



PFWSLN			01	02	03	04	05	
CONSTRUCTION AND PACKING DATA	Cooling Water Connections	Type	PT (Threaded Female)					
		In	19.05 [3/4]					
	Out							
	Condensate Drainage Connection	mm [in]						
		Dimensions Cased Unit	L	858	908	1058	1208	1258
			W	250				
	H		494					
Dimensions Uncased Unit	L	578	628	778	928	978		
	W	230						
	H	460						
NET WEIGHTS	3R and 4R	kg	22	24	26	30	32	
	3+1R		23	26	28	32	34	





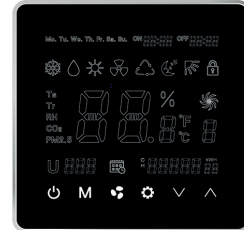
OUR ACCESSORIES



01. CONTROLLERS

[WWP-V3] WIRED WALL PAD CONTROL (AVAILABLE WITH I-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 (AVAILABLE WITH I-CONTROL)

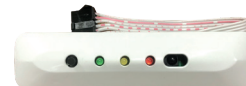
With Global Control functionality for Main and Secondary Unit groups.



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.

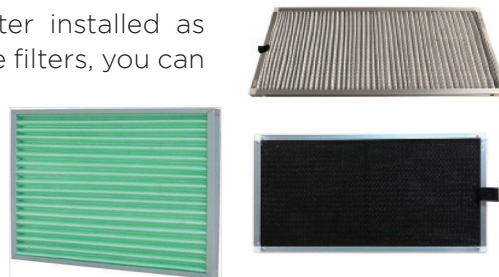
* Piping connection kits vary among the different ranges.



04. UPGRADED FILTERS

All our fan coils come with a 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)**



Model	Standard	Optional	
	G2- MERV 4	G4-MERV8	F8-MERV14
PHW	1/8"	-	-
PCGH-3R	1/8"	3/8"	-
PDWSL	1/4"	1/4"	-
PDWA	1/4"	1"	-
PDWC	1/4"	1"	-
PDWD	1"	1"	-
HAHU	1"	1"	2"
VAHU	1"	1"	2"
PFWBC-VAR	1/8"	-	-
PFWBC-HAR	1/4"	1/4"	-
PFWB	1/4"	-	-
PFWSLN	1/8"	-	-

05. ELECTRIC HEATERS

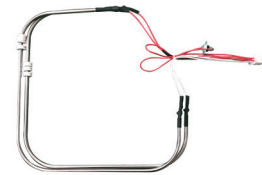
PTC ELECTRIC HEATER KIT

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



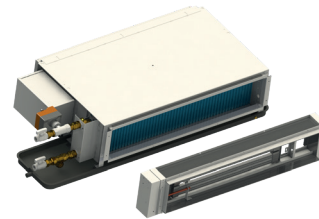
TUBE ELECTRIC HEATER KIT

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

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.



Model	EH KIT (kW)		
	Module	PTC	Tube
PHW	-	0.5 to 1.5	-
PCGH-3R	-	-	0.5 to 4
PCSL	-	0.5 to 1	-
PDWSL	0.75 to 3	-	-
PDWA	1 to 6	-	-
PDWC	1.5 to 9	-	-
PDWD	3 to 9	-	-
HAHU	4.5 to 9	-	-
VAHU	4.5 to 9	-	-
PFWB(C)	-	0.5 to 3	-
PFWSLN	-	0.5 to 1.5	-

* Non-standard electric heater sizes available under request. Contact us for further information.

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.

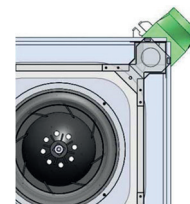
Model	ABS Plastic	Powder-coated Steel	Stainless Steel
PHW	Standard - Integrated	-	-
PCGH-3R	Standard - Integrated	-	-
PCSL	Standard - Integrated		
PDWSL	-	Standard - Integrated	Optional
PDWA	-	Standard - External	Optional
PDWC	-	Standard - External	Optional
PDWD	-	Standard - Integrated	Optional
HAHU	-	Standard - Integrated	Optional
VAHU	-	Standard - Integrated	Optional
PFWB(C)	-	Standard - Integrated	Optional
PFWSLN	-	Standard - Integrated	Optional

07. FLANGES

FOR FRESH AIR

Allows up to 15% of unit airflow up to a maximum of 100m³/h as fresh air intake (per connection).

The PCGH-3R Cassette comes with knock out fresh air connection holes. ABS plastic flanges use only two screws for fixture to unit.



FOR BRANCH DUCT

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



08. NBR INSULATION

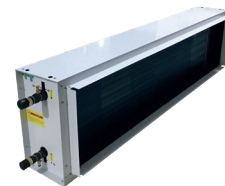
All of our fan coils are equipped with NBR plastic foam standard insulation. We do offer an optional upgrade for projects that require higher levels of insulation, which contributes to maintaining thermal performance and improves sound attenuation.



Model	Standard (mm)	Optional (mm)
PHW	5	-
PCGH-3R	5	-
PCSL	5	-
PDWSL	5	10
		15
		25
PDWA	5	10
		15
		25
PDWC	5	10
		15
		25
PDWD	15+25	-
HAHU	10+25	-
VAHU	10+25	-
PFWB(C)	5	-
PFWSLN	5	-

09. AUXILIARY HEATING COILS

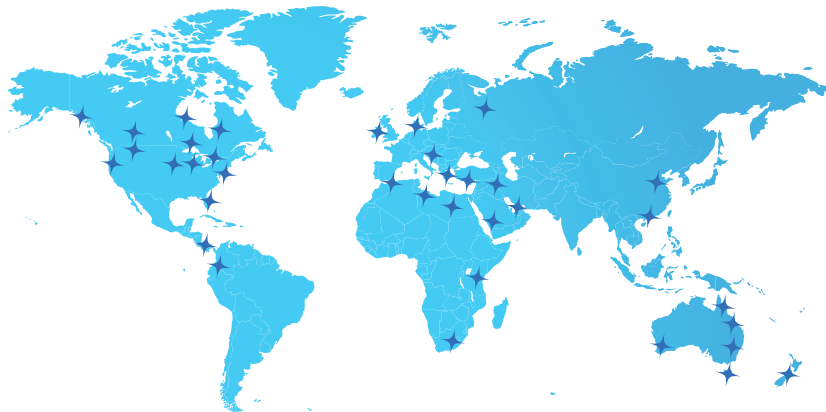
To choose for either one or two rows, depending on your specific heating project requirements.



Model	+ 1 Row	+ 2 Row
PDWSL	✓	-
PDWA	✓	✓
PDWC	✓	-
PDWD	✓	✓
HAHU	-	✓
VAHU	-	✓

All over the **WORLD!**

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Indoor Climate Solutions adapted for all kinds of
applications.



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