



Your hydronic partner

Hydronic fan coils

Heat & cool (metric)



Creating ideal indoor climates that last.

Contents

Experience the future of HVAC with Polar Air hydronic fan coils. We believe in the power of hydronics, **utilizing water's natural properties for better performance, responsive climate control, and lower environmental impact.** Our fan coils are essential to HVAC systems, directly enhancing indoor air quality, occupant comfort, and energy efficiency.

It's not just about heating and cooling; **it's about creating ideal indoor climates that last.**



35+
Years HVAC
experience



1,800+
Product
configurations



25+
Countries
worldwide



10,000+
Installations
in 5 years

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About **Polar Air**

Creating ideal indoor climates
for over 35 years.

The mission we champion:

Creating ideal indoor climates that last, focusing on efficient hydronic solutions that meet each project's specific needs.

We firmly believe that when each and every indoor climate is ideal, meaning **adapted to serve its best purpose**, it will not only deliver long-lasting value and a better performance, but also contribute to a more sustainable future for the planet.

How do we achieve it?

Focusing on **understanding the specific requirements of every customer, project, and market** to design solutions that ensure the space works at its best.

This way, we can adapt our fan coils to meet those needs, whilst staying fully committed to sustainability, **and providing an exceptional service from start to finish.**

Polar Air milestones:

1990–1992
Foundation



Founded Sonkor International, focusing on highwalls and cassettes from Taiwan.

1993–1995
Hydronics



Began developing hydronic highwall and EU style cassette fan coils for international OEM clients.

1996–2000
Expansion



Created the Polar Air brand, opened the first EU office, and expanded OEM business worldwide.

2001–2006
Scaling



Moved production to China and secured exclusive distribution rights, focusing solely on hydronic fan coils.

2007–2012
Certification



Developed EU business, achieving Eurovent Certification and redesigned the brand to lay the groundwork for expansion.

The values we live by:



360° customer service

We put **our customers first**, working closely with them to create efficient solutions that meet their specific needs.



Integrity & accountability

We operate with honesty and transparency, ensuring that **every relationship** we have is built on trust and accountability.



Excellence & innovation

We strive for excellence and foster innovation to create **long-lasting, reliable, and sustainable** hydronic solutions.



Global mindset

We adapt to the challenges and opportunities of different regions and markets, **embracing diversity and a global outlook**.



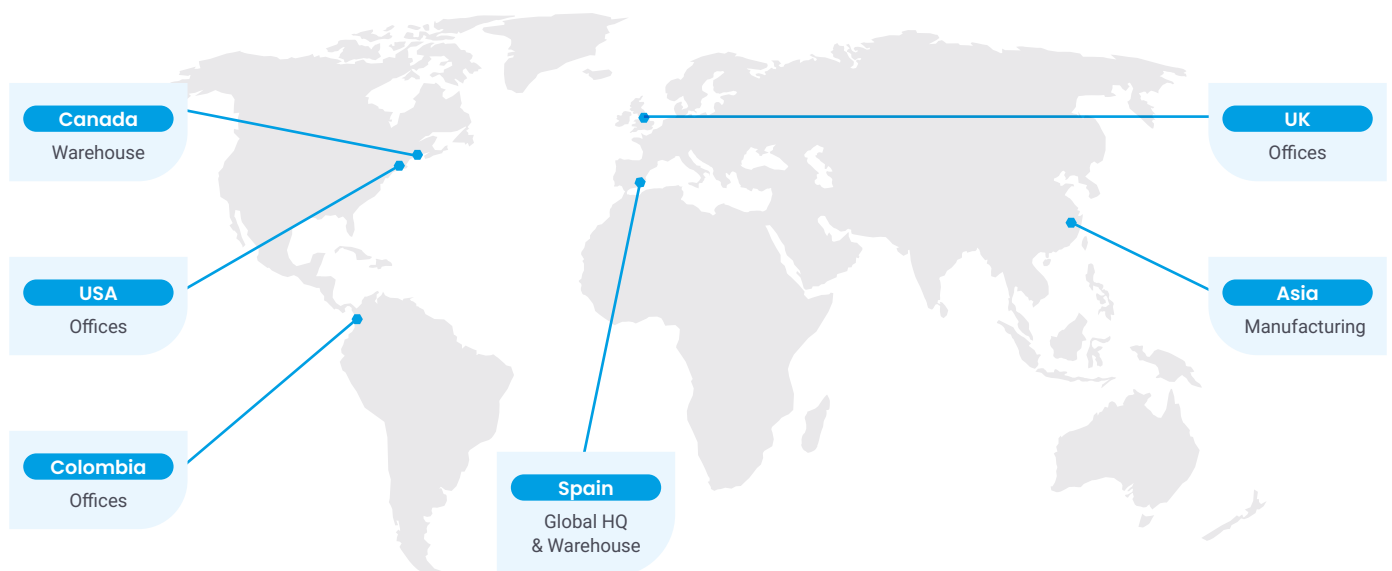
Environmental sustainability

We are committed to minimizing environmental impact and creating energy-efficient solutions that contribute to **a greener future**.



Focusing on people

We work **with people, for people**, whether it's our team, partners or users of our solutions, to create environments that enhance lives.



2013-2018 Global



Expanded into Australasia, North America, Africa, and Europe with over 1,800 fan coil models and AC/EC motors.

2018-2020 Strategy



Moved HQ operations to Murcia in Spain, to enhance efficiency and support for global clients.

2020-2022 Growth



Opened Polar Air North America Inc and expanded into new markets for Latin America.

2023-2024 Vision



Focus on customer needs by developing a new highwall unit with a 4-pipe model and integrated valves, plus a slim floorstanding/console model.

2025 Future



Committed to sustainability, product development and customer-focused solutions to create ideal indoor climates that last, worldwide.

Why choose **hydronic systems**?



We don't just believe in hydronic systems, we champion them.

Water is a far better medium for energy transfer, **delivering unparalleled efficiency, lower operational costs, and a dramatically reduced carbon footprint** compared to refrigerant-based (VRF) systems. It's a technology that not only optimizes climate control, but also aligns with modern sustainability goals.

The future of HVAC isn't about making compromises — it's about achieving the perfect balance of comfort, efficiency, and responsibility. Hydronic fan coil systems do just that. **Embrace the future of HVAC with Polar Air water-based technology.**

01 **Energy efficient**

Water is a better medium for transporting energy compared to VRF systems.

It carries **significantly more thermal energy** per unit volume than air, so less energy is needed to heat or cool the space.

Reducing operational costs and energy consumption.



02 **Flexible**

Water-based fan coils offer exceptional flexibility, as HVAC system **components can be sourced from different manufacturers**, making design and replacement easier.

Meaning greater customization and adaptability, across all types of applications.



03 **Easy to install & maintain**

Hydronic fan coils follow standard installation and maintenance practices, **which removes the need for VRF-certified technicians**. This keeps things **simple and cost-effective**, which is ideal for large projects, new construction, or remote sites.

Plus, they are **easier to replace, repair, and maintain.**



04 Sustainable

Using water eliminates the need for refrigerants inside the building, reducing greenhouse gas emissions.

Plus, water is non-toxic, non-flammable, and renewable, with **no environmental regulations, making it safer and more sustainable.**



05 Reliable

Water-based systems have fewer moving parts, resulting in **less wear and tear**. They are less susceptible to corrosion, **extending equipment lifespan and reducing maintenance costs.**

Water is infinite. It does not change, ensuring **long-lasting, reliable solutions.**



06 Indoor air quality

Water-based systems improve indoor air quality by **minimizing the circulation of dust and allergens**. This results in a healthier and cleaner environment.

Additionally, they help **maintain consistent humidity levels**, further enhancing comfort and air quality.



Polar Air 360° Services

From concept to comfort, we've got you covered.

Our 360° service ensures expert guidance from **pre-sales consultation to precision engineering, and ongoing after-sales support**. Our deep understanding of your challenges drives us to deliver solutions engineered to meet and exceed your standards. We don't just deliver HVAC solutions — **we're with you every step of the way to ensure we create your ideal indoor climate.**

Pre-Sales

01

Consultation & advice

Thorough consultations and detailed analysis with our expert team to **understand your project needs and goals**.

02

Customization options

Multiple customization options available* including different **connection configurations, unit dimensions and color options**.

03

Advanced tools

Including PASELECT software for precise product selections, **Revit/BIM files for planning**, and technical data sheets.

04

Polar Air academy

Product, installation and maintenance training programs to **equip your team with knowledge and skills** needed for success.



05

Sales & engineering experts

Specialist teams to support your project from start to finish, offering valuable **selection and application assistance**.

06

In-house procurement

Supply chain control direct from factory, with competitive pricing and **logistics to reduce complexity and lead times**.

After-Sales

Submit a Helpdesk ticket:
SCAN QR CODE



01

Technical support

Dedicated technical support team, **available via Helpdesk** or on-site, to resolve any product or installation issues.

02

Warranty & spare parts

Warranty **coverage and readily available spare parts** means that your fan coils remain in top condition.

03

Maintenance advice

Troubleshooting and maintenance advice to keep your fan coils running at **their optimal performance**.

(*) Minimum order quantities apply.

Our technologies



Our Auto-Dynamic Balancing System intelligently maintains constant ΔT , optimizes energy use, and reduces inefficiencies without external controllers or complex configurations.
Only included in the Polar Air I-Type Control.



Our hydronic fan coils are ideal for use with low-temperature systems, like **solar thermal collectors and heat pumps**, to maximize energy efficiency across the whole HVAC system for **sustainable heating and cooling in all building types.**

Polar Air laboratory

We operate **advanced testing and lab facilities** at our manufacturing sites across the world, along with 3rd party certifications. These in-house capabilities allow us to rigorously validate and certify every component under real-world conditions.

Ensuring every unit meets strict quality standards before it leaves production.



PASELECT SOFTWARE

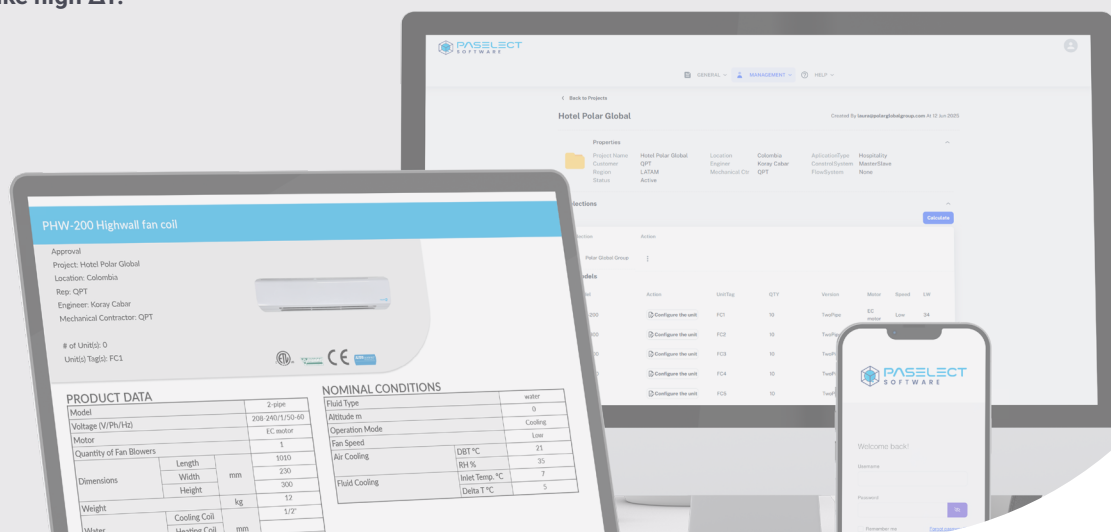
Discover PASELECT:
SCAN QR CODE



Built for HVAC professionals who demand precision.

PASELECT software streamlines your fan coil selection and quoting for any project, from small installations to large industrial facilities.

An intuitive interface and customizable parameters help you find the perfect Polar Air unit - **even under non-standard conditions like high ΔT .**



Application types: solutions for every space

Polar Air fan coils are **versatile solutions designed for a wide range of applications**. Whether it's multi-family homes, hospitals, or industrial spaces such as manufacturing, **experience the reliability and performance of Polar Air in any setting**.

Business

Working environments equipped with computers and tech

Offices · Data Server Rooms · Banks · Call Centers · Showrooms



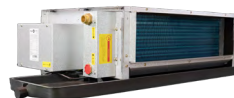
PCGH-3R
4-Way Cassette



PHW
Highwall



PFWB(C) Universal
Console



PDWA
Medium ESP Ducted



Government

Owned or controlled by public authorities

Post Offices · Courthouses · Town Halls · Embassies · Prisons · Military & Emergency



PCGH-3R
4-Way Cassette



PDWC
High ESP Ducted



PDWD
Double Skin Ducted



HAHU-B
Horizontal Mini AHU

Commercial

Retail and service-orientated businesses for recreation

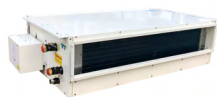
Airports · Museums/Galleries/Theaters · Stores & Shopping Malls · Supermarkets · Gyms/Sports Facilities · Places of Worship



PCGH-3R
4-Way Cassette



PDWC
High ESP Ducted



PDWD
Double Skin Ducted



HAHU-B
Horizontal Mini AHU



Educational

Learning and academic spaces for students and staff

Academies · Schools · Universities · Colleges · Libraries · Campus Buildings



PCGH-3R
4-Way Cassette



PDWC
High ESP Ducted



PFWB(C) Universal
Console



PDWB Built-in Pan
High ESP Ducted



Need help with your Polar Air fan coil selection?
SCAN QR CODE



Healthcare

Deliver medical related services or promote wellness

Hospitals · Clinics · Nursing Homes · Wellness Centers · Laboratories · Morgues



PCGH-3R
4-Way Cassette



PHW
Highwall



HAHU-B
Horizontal Mini AHU



VAHU
Vertical Mini AHU



Hospitality

Provide lodging, food, and entertainment for guests

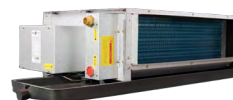
Hotels · Restaurants · Cafes · Bistros



PHW
Highwall



PCGH-3R
4-Way Cassette



PDWA
Medium ESP Ducted



PDWB Built-in Pan
High ESP Ducted

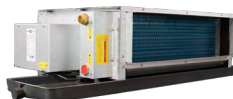
Residential

Housing and living for individuals and families

Houses · Apartments/Condos · High-Rise · Assisted Living · Villas · Air BnBs ·
Student Accommodation/Residence Halls



PHW
Highwall



PDWA
Medium ESP Ducted



PFWB(C) Universal
Console



PDWB Built-in Pan
High ESP Ducted



Industrial

Focused on manufacturing or professional processes

Factories · Plants · Warehouses/Distribution Centers · Data Centers · Agricultural



PDWC
High ESP Ducted



PDWD
Double Skin Ducted



HAHU-B
Horizontal Mini AHU



VAHU
Vertical Mini AHU

Project References **Worldwide**

We don't just meet the demands of any application, we exceed them.

Whether it's a small residential project or a large industrial application, our hydronic fan coils are designed to deliver high performance. See our featured references to discover **how Polar Air is making a real difference and why so many trust in us.**



See all References:
SCAN QR CODE



Hotel Qawra

2024 · Malta
Hospitality (Hotel Facilities)

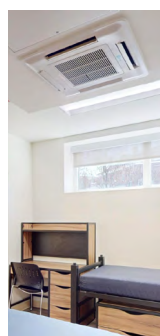
PCGH-3R 4-Way Cassette
PFWB Universal Console
VAHU Vertical Mini AHU



Office HQ

2025 · Costa Rica
Business (Offices)

PCGH-3R 4-Way Cassette
PDWA Medium ESP Ducted
HAHU Horizontal Mini AHU



Olivia Davidson Hall

2024 · USA (Alabama)
Residential (Student Accommodation)

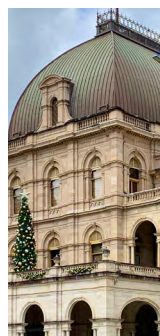
PHW Highwall
PCGH-3R 4-Way Cassette



Alpha Mega

2024 · Cyprus
Commercial (Supermarket)

PCGH-3R 4-Way Cassette



QLD Parliament

2019 · Australia
Business (Offices)

PCGH-3R 4-Way Cassette



Lesedi Hospital

2017 · South Africa
Healthcare (Hospital)

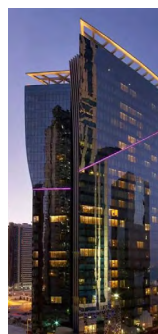
PDWC High ESP Ducted



DFT Data Centre

2017 · Canada (Toronto)
Specialty Application

PFWBC Universal Console



W Hotel

2016 · Qatar
Hospitality (Hotel Facilities)

PDWA Medium ESP Ducted
PFWBC Universal Console





Sisak Hospital

2023 · Croatia
Healthcare (Hospital)

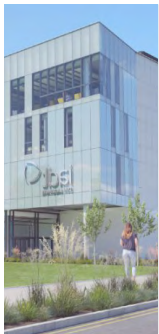
PDWA Medium ESP Ducted
PFWSL Slim Console



Serena Del Mar

2022-2025 · Colombia
Residential (Multi-family Housing)

SWC Highwall
PHW Highwall



HEB 1

2024 · Ireland
Educational (IT Classrooms)

PDWA Medium ESP Ducted



Rock Lititz Studios

2025 · USA (Pennsylvania)
Business (Offices)

PCGH-3R 4-Way Cassette
PDWA Medium ESP Ducted
PHW Highwall



200 Elgin Street

2025 · Canada (Ontario)
Residential (Condos/Apartments)

PDWB Built-In Pan High ESP Ducted



TAFE Mount Gravatt

2024 · Australia
Educational (Vocational School)

PCGH-3R 4-Way Cassette



Correctional Facility

2022 · Australia
Government (Prison)

PCGH-3R 4-Way Cassette



Microsoft HQ

2022 · USA (Washington)
Business (Offices)

SWC Highwall



W Residences

2016 · United Arab Emirates
Residential (Luxury)

PDWA Medium ESP Ducted
PDWC High ESP Ducted
PFWBC Universal Console



Hilton Hotel

2017 · Swaziland
Hospitality (Hotel Facilities)

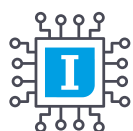
PDWA Medium ESP Ducted
PDWC High ESP Ducted



Polar Air **control logic technologies**

Polar Air fan coils provide exceptional control flexibility that enhances your space and helps reduce operational costs by optimizing energy usage. Our control technologies provide precise and reliable climate management to meet various application needs.

Choose between two PCBs:



I-Type Control

Developed by Polar Air for intelligent control that includes ADBS technology for ΔT management and group control. Available through Modbus, or **compatible with Polar Air Wired Wallpad or Infrared Handset**.

See I-Type Controllers on page 56.



24/7 programming



Auto & 3-Speed functions



Sleep function



Auto-Restart function



Dehumidification mode



Adjustable swing louver position



Condensate drain pump control



Error diagnostics on unit LED display or Wired Wallpad



Valve control



Dry contact for On/Off applications



Auto-Dynamic Balancing System



Electric heater control



BMS compatible via Modbus



2 24V auxiliary contacts for ERVS or dampers



255 units group control via Modbus



32 units group control via Wired Wallpad MS



W-Type Control

Simple yet flexible functionality that is easy to use, allowing for limited LED diagnostics and RPM configuration. **Compatible with external thermostats.**

External thermostat compatibility.
[Ask us for more details.](#)



Choose your own external thermostats



Configure the motor RPMs to your choice



Contact alarm for condensate drain pump and motor



Limited error diagnostics on unit LED display or Wired Wallpad

Auto-Dynamic Balancing System for ideal indoor climates

Our ADBS regulates system pressure by **dynamically adjusting air and water flow rates via constant ΔT management** within the unit.

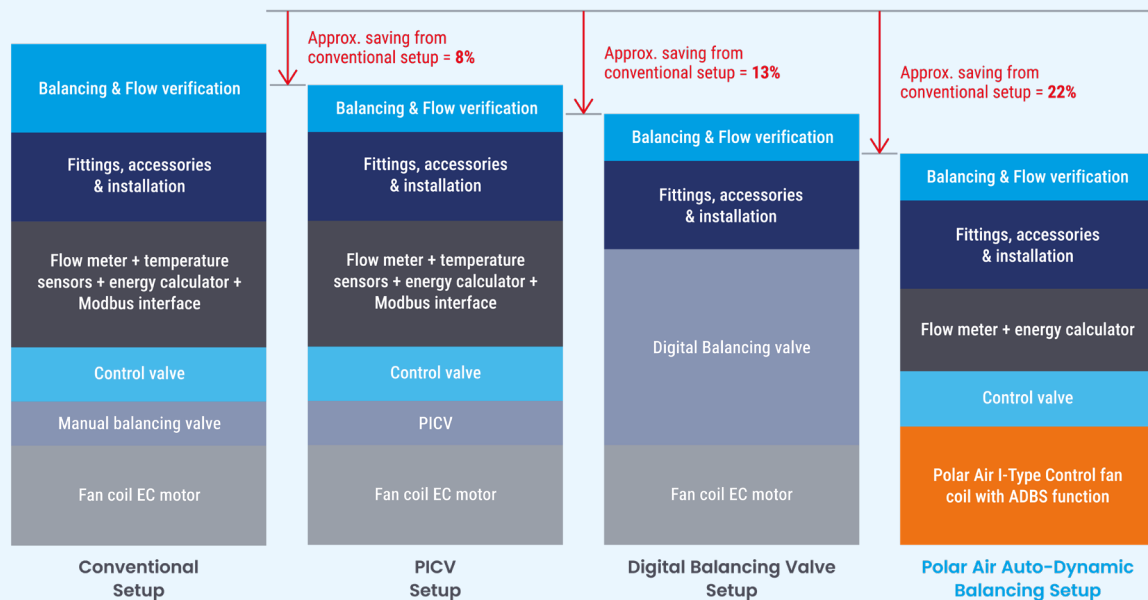
This eliminates hot or cold spots and enhances overall comfort, **whilst optimizing system performance for maximum efficiency.**

ADBS is only available with Polar Air I-Type Control.



Saves on installation and energy costs

Polar Air ADBS removes balancing pressure valves, avoids oversizing and reduces installation and maintenance costs.



How does ADBS work?

Integrated within our I-Type Control PCB and used by 2-way modulating valves, ADBS eliminates the need for expensive balancing pressure valves.

1. The system monitors inlet and outlet water temperatures and air temperatures.
2. An internal algorithm modulates the control valve to maintain a constant ΔT .
3. When system pressure fluctuates, affecting the flow rate and ΔT , the I-Type Controller adjusts the valve accordingly.

This method of balancing pressure by measuring temperature is simpler and more cost-effective.

Why choose ADBS?

ADBS addresses common issues like low ΔT syndrome in hydronic HVAC systems, which leads to higher pump consumption, low operating efficiency and early start up.

By maintaining a constant ΔT , ADBS optimizes energy usage and overall system performance, not just that of the fan coil.

Discover our latest whitepaper about ADBS:

SCAN QR CODE



At a glance: fan coil guide

Polar Air has the widest range of hydronic fan coils in the world, with over 1,800 configurations.

Most of our product range adheres to AHRI performance and Eurovent Certita, and are also approved with CE, CB and cETLus certifications. To help you select the best fan coil for your projects, we've created this **handy guide to provide a clear overview of the total capacities, plus an overview to choose the appropriate ducted fan coil.**

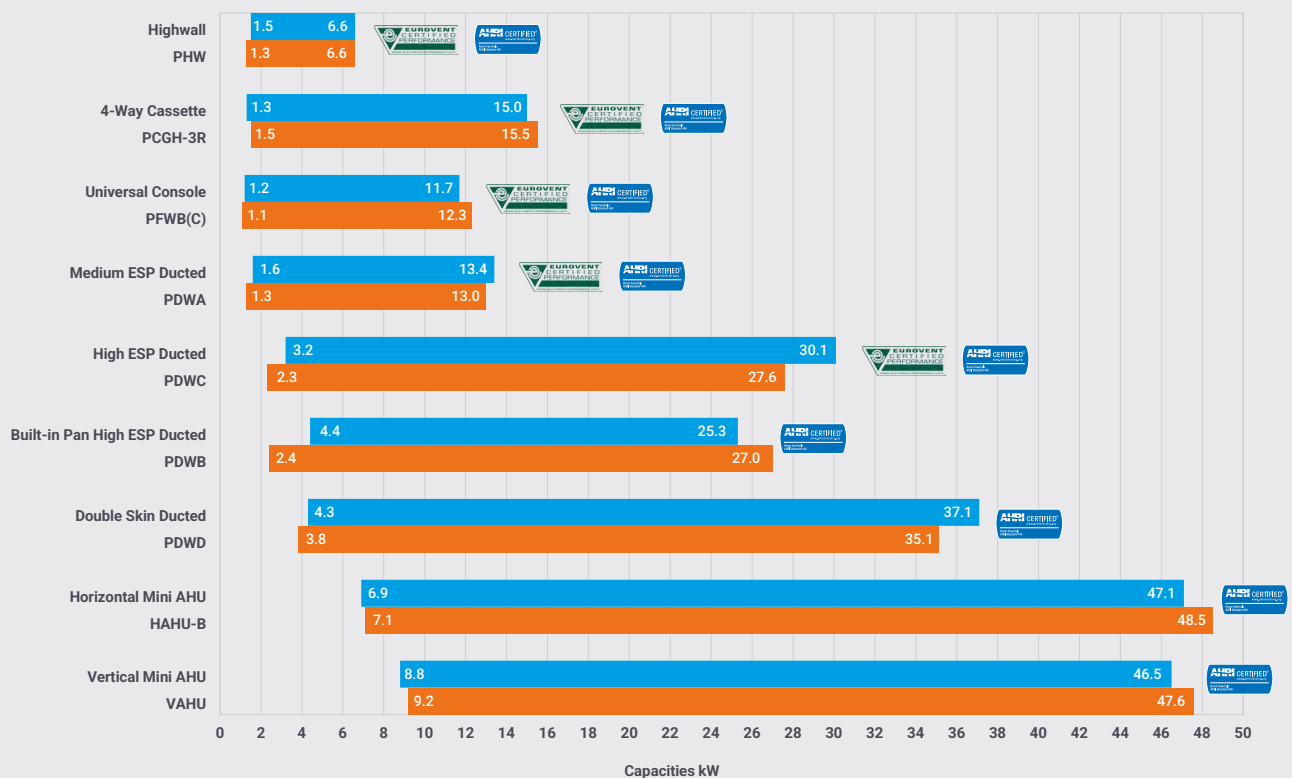
For precise unit configuration, our [PASELECT software offers customized parameters](#) to ensure you make the best choice.



Total capacity kW*

COOLING

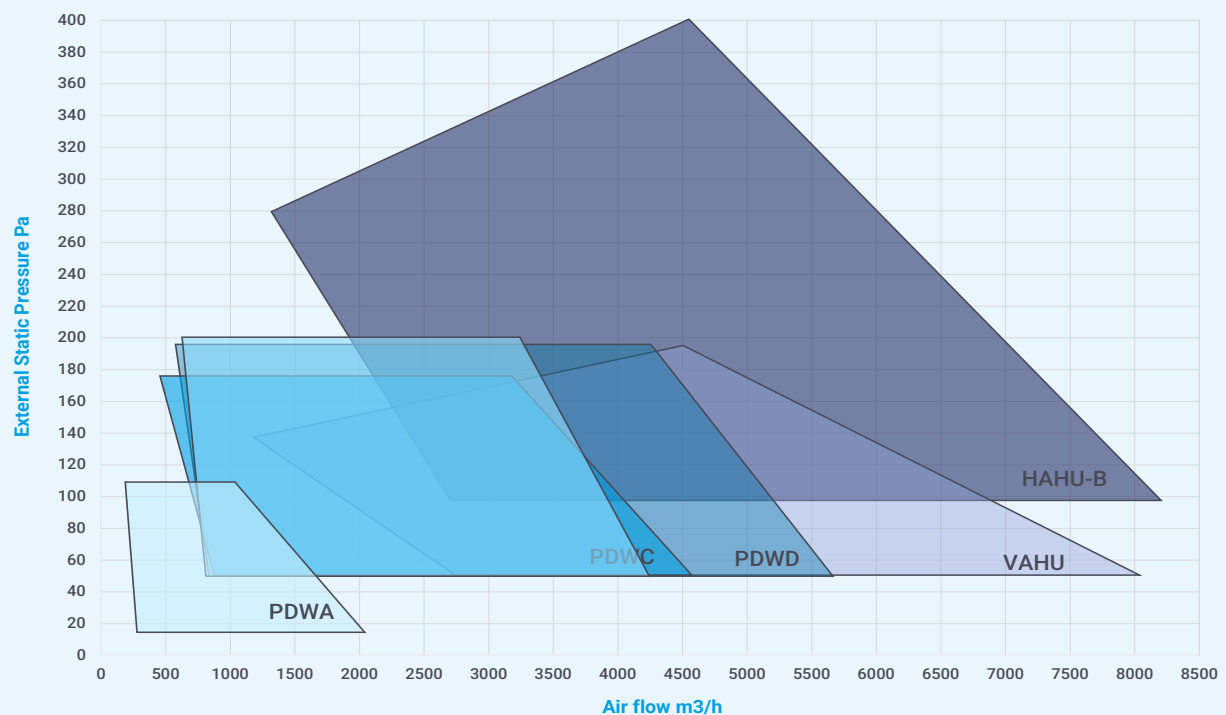
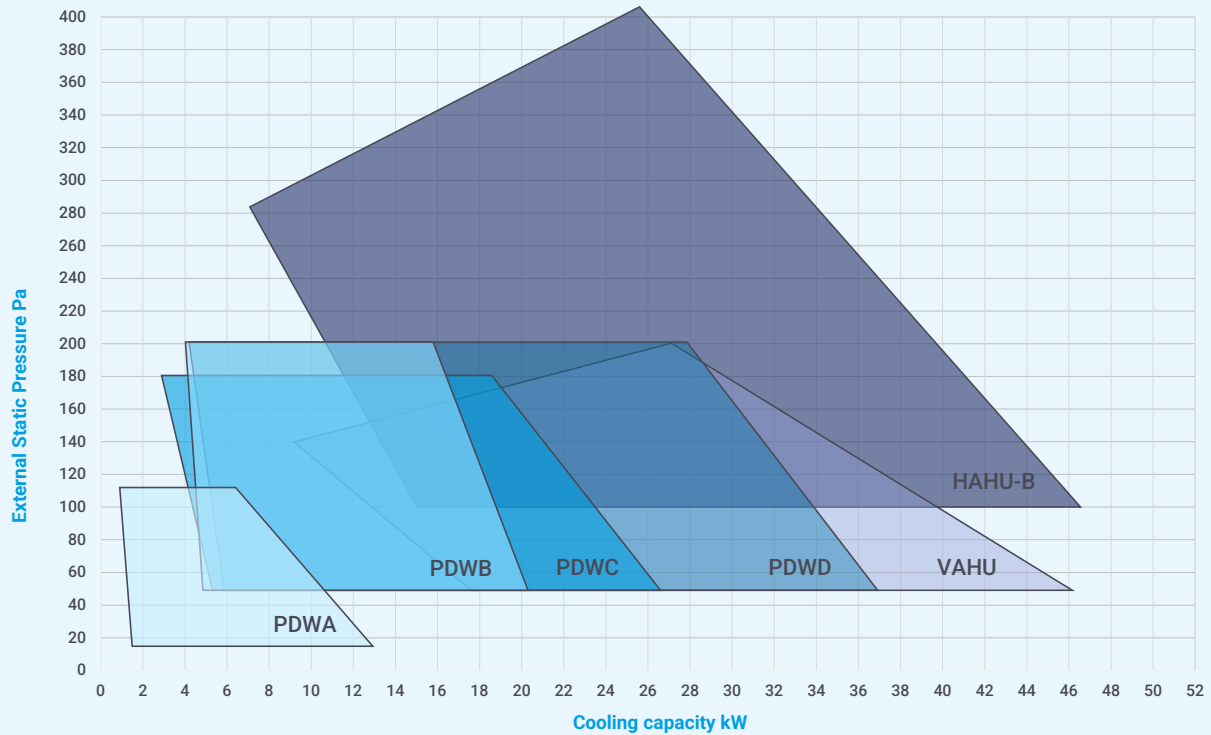
HEATING



* Data calculated under Eurovent Standard Conditions. For non-standard conditions, please refer to our PASELECT Software.

Ducted capacity & air flow*

Ducted units are commonly selected based on **Air flow or Total Cooling Capacity** with consideration for external static pressure (ESP). These tables can assist you in finding the most suitable ducted model for your needs.



* Data calculated under Eurovent Standard Conditions. For non-standard conditions, please refer to our PASELECT Software.

Polar Air **hydronic fan coil range**

Explore our **extensive range of hydronic fan coils**, including **medium to high static pressure** ducted designs, **decorative options** like highwalls, cassettes, and floorstanding/console units, as well as specialty mini air handling units, and a variety of optional **accessories to upgrade your system**.

Ideal for **both retrofit and new construction projects**, our fan coils deliver maximum performance with minimal space and energy consumption to **create ideal indoor climates that last**.



Decorative	20
PHW Highwall	20
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PHW

Highwall

Sizes: **4 sizes**
 Models: **2-pipe · 4-pipe**
 Cooling: **1.5 - 6.6 kW**
 Heating: **1.3 - 6.6 kW**
 Air Flow: **270 - 1250 m3/h**



Download IOMs & Revits
 SCAN QR CODE



Model shown: PHW · size 300

Discreet design with 4-pipe model and the **highest certified capacity on the market with integrated valves.**
Customization options¹: casing color, tropicalization, flexible hoses and more.



FRONT



UNDER



TOP



SIDES

Project Applications & References



Residential: Houses · Apartments/Condos · Assisted Living · Student Accommodation/Residence Halls



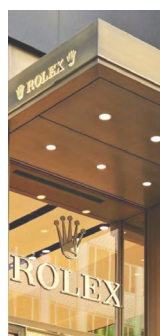
Educational: Academies · Schools · Universities · Colleges · Libraries · Campus Buildings



Hospitality: Hotel Bedrooms · Hotel Reception Areas · Banquet Halls · Restaurants · Cafes · Bistros



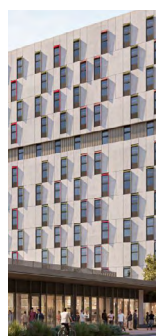
Business: Offices · Data Server Rooms · Banks · Call Centers · Showrooms



The Rolex Building

2024 · USA (New York)
Business (Offices)

Retrofit
EC motor



Griffith Park Village

2025 · Australia
Residential (Student Accommodation)

New construction
EC motor
Customization



Key Features & Components



High cooling and heating capacity (up to 6.6 kW) that's ideal for residential and hospitality spaces.



Preinstalled **valves integrated in the casing** for a **discreet appearance** and reduced labor costs.



Improved latent cooling for more effective **dehumidification** that helps prevent mold.



Quiet operation with a sound pressure level ² from 25 dBA.



Ideal for low temperature heat sources like **solar thermal collectors and heat pumps**.



4-pipe model for **simultaneous heating and cooling** throughout the year.



Non-intrusive **LED display** that can be turned off for a more peaceful environment.



Energy-efficient 0-10 VDC EC motor (**up to 30% energy savings** compared to AC motors).



Copper tubes/headers, mechanically expanded into corrugated aluminum fins tested up to 35-bar ³.



Ready to install package:

Infrared Handset ⁵, internal drain pan, 5 mm (0.2") NBR insulation, G2 (MERV 4) filter, manual air vent + water purge valve and flexible hoses.

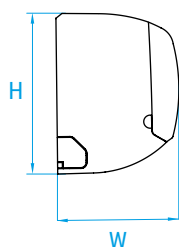
Optional Accessories

- **I-Type Controllers:** Infrared Handset, Wired Wallpad
- **Valves:** **HYDRON+VALVE KIT** ⁴
- **Condensate pump:** integrated Sauermann/Standard
- **Electric heater:** up to 1.5 kW
- **Integrated transformer:** converts from 230V-115V to 24V for valve and thermostat compatibility
- **Disconnect switch:** integrated in control box
- **Customization:** available upon request ¹

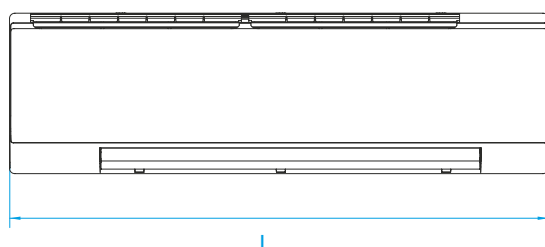
Dimensions, Weights & Drawings

PHW SIZES*			300	400	500	750
Unit Dimensions	L	mm	1010 [39 3/4]	1010 [39 3/4]	1010 [39 3/4]	1175 [46 1/4]
	W	mm	230 [9 1/16]	230 [9 1/16]	230 [9 1/16]	230 [9 1/16]
	H	mm	300 [11 3/16]	300 [11 3/16]	300 [11 3/16]	300 [11 3/16]
Net Weight			kg [lbs]	13 [29]	13 [29]	14 [31]

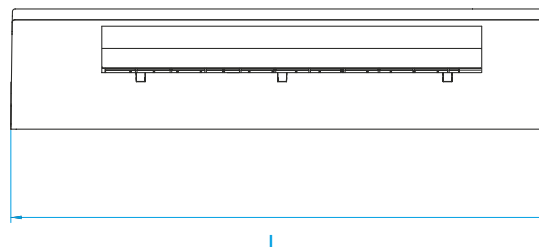
Side



Front



Bottom



(1) Minimum order quantities apply. (2) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. (3) Tested between 25-35 bar with a max operating limit of 16-bar. (4) HYDRON+ VALVE KIT includes 2/3-way body valve, on-off/modulating actuator (24V or 110-240V), BSPT or NPT connectors, connection piping kit, 2x shut-off valves, strainer and manual balancing valve. (5) Only available with I-Type control. (*) Indicated dimensions approximate within 5 mm or 1/16 ". Weights approximate within 1 kg (2.2 lbs).

Technical Specifications

Hydronic Highwall, 2-pipe with EC Motor

UNIT GENERAL SPECS	PHW-[SIZE]-V-EC			300B	400	500	750
	Configuration			2-pipe			
	Number of Fan Blowers			1			
	Power Supply (V/Ph/Hz)			208-240/1/50-60			
	Water Connections	Type		BSPT (Threaded Male)			
		In/Out	mm ["]	12.7 [1/2]			
	Condensate Drainage			mm ["]	16 [5/8]		
AIR	Total Air Flow	H	m3/h	550	680	788	1250
		M		380	550	600	1020
		L		270	340	380	600
COOLING	Total Cooling Capacity [Ⓔ]	H	kW	2.6	3.3	4.4	6.6
		M		1.9	2.8	3.6	5.6
		L		1.5	1.9	2.5	3.7
	Sensible Cooling Capacity [Ⓔ]	H	kW	1.8	2.4	3.1	4.7
		M		1.4	2.0	2.5	4.0
		L		1.0	1.4	1.7	2.6
		HEATING		Total Heating Capacity [Ⓔ]	H	kW	2.6
M	2.0		2.9		3.6		5.7
L	1.5		2.0		2.5		3.8
Recommended Electric Heater Capacity			kW	1.0	1.5	1.5	1.5
SOUND *	Pressure Level H/M/L		dBA	42/33/26	47/42/30	50/45/33	53/48/36
	Power Level H/M/L [Ⓔ]			51/42/36	56/51/39	59/54/42	62/57/45
ELECTRICAL	Power Input ^{Ⓔ1}	H	W	20	30	38	65
		M		13	20	25	40
		L		9	11	13	16
	Running Current ² (H)			A	0.2	0.3	0.3
HYDRONIC	Cooling Water Flow Rate	H	L/h	431	565	750	1126
		M		329	483	608	960
		L		251	333	425	638
	Cooling Pressure Drop [Ⓔ]	H	kPa	9.6	14.8	20.0	56.1
		M		5.9	11.1	13.7	42.1
		L		3.6	5.7	7.2	20.2
	Heating Water Flow Rate	H	L/h	449	583	753	1138
		M		342	498	612	977
		L		261	343	431	647
	Heating Pressure Drop [Ⓔ]	H	kPa	8.5	9.2	20.1	57.3
		M		5.2	7.0	13.9	43.5
		L		3.2	3.6	7.4	20.7
	Water Content			L	0.5	0.8	1.1

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB

Inlet/Outlet water temperature: 7°C/12°C

Heating mode (2-pipe): Return Air Temperature 20°C

Inlet/Outlet water temperature: 45°C/40°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.



Technical Specifications

Hydronic Highwall, 4-pipe with EC Motor

UNIT GENERAL SPECS	PHW-[SIZE]-P-EC			500	750
	Configuration			4-pipe	
	Number of Fan Blowers			1	
	Power Supply (V/Ph/Hz)			208-240/1/50-60	
	Water Connections	Type		BSPT (Threaded Male)	
		In/Out	mm ["]	12.7 [1/2]	
	Condensate Drainage		mm ["]	16 [5/8]	
AIR	Total Air Flow	H	m3/h	788	1250
		M		600	1020
		L		380	600
COOLING	Total Cooling Capacity ^E	H	kW	3.1	4.9
		M		2.6	4.2
		L		1.8	2.8
	Sensible Cooling Capacity ^E	H	kW	2.2	3.5
		M		1.8	2.9
		L		1.2	1.9
HEATING	Total Heating Capacity ^E	H	kW	2.3	3.3
		M		1.9	2.8
		L		1.3	1.9
SOUND *	Pressure Level H/M/L		dBA	50/45/33	56/51/36
	Power Level H/M/L ^E			59/54/42	62/57/45
ELECTRICAL	Power Input ^{E1}	H	W	38	65
		M		25	40
		L		13	16
	Running Current ² (H)		A	0.3	0.6
HYDRONIC	Cooling Water Flow Rate	H	L/h	539	841
		M		437	717
		L		306	477
	Cooling Pressure Drop ^E	H	kPa	21.1	53.2
		M		14.5	40.0
		L		7.6	19.1
	Heating Water Flow Rate	H	L/h	197	283
		M		161	240
		L		113	161
	Heating Pressure Drop ^E	H	kPa	6.5	12.4
		M		4.5	9.2
		L		2.4	4.5
	Water Content (Cooling)		L	0.8	1.0
	Water Content (Heating)			0.3	0.4

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB

Inlet/Outlet water temperature: 7°C/12°C

Heating mode (4-pipe): Return Air Temperature 20°C

Inlet/Outlet water temperature: 65°C/55°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.





PCGH-3R

4-Way Cassette

Sizes: **5 sizes**
Models: **2-pipe · 4-pipe**
Cooling: **1.3 - 15 kW**
Heating: **1.5 - 15.5 kW**
Air Flow: **200 - 2750 m3/h**



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Model shown: PCGH-3R · size 08

Powerful cooling with one of the highest capacities on the market and a “plug & play” control box.
Customization options¹: casing color, tropicalization, and more.



PANEL (BOTTOM)



TOP



SIDE



SIDE

Project Applications & References



Healthcare: Hospitals · Clinics · Nursing Homes · Treatment Centers · Laboratories · Morgues



Educational: Academies · Schools · Universities · Colleges · Libraries · Campus Buildings



Commercial: Supermarkets · Stores · Shopping Malls · Gyms/Sports Facilities · Museums/Theaters · Airports



Business: Offices · Data Server Rooms · Banks · Call Centers · Showrooms



McClure Library

2024 · USA (Alabama)
Educational (Library)

Retrofit
EC motor
Open Reading Spaces & Offices



Rolleston College

2025 · New Zealand
Educational (College)

New construction
EC motor
Classrooms & Offices



Key Features & Components



High cooling and heating capacity (up to 15 kW) that's ideal for healthcare and commercial spaces.



Adjustable louvers only available with I-Type Control.



Direct front panel access for quick installation, saving time and costs.



Quiet operation with a sound pressure level ² from 26 dBA.



Ideal for low temperature heat sources like **solar thermal collectors and heat pumps**.



Integrated Sauer mann condensate drain pump with **nominal 1200mm (47") rated lift**.



4-way air distribution ensures uniform airflow for consistent comfort.



Energy-efficient 0-10 VDC EC motor (**up to 30% energy savings** compared to AC motors).



Copper tubes/headers, mechanically expanded into corrugated aluminum fins tested up to 35-bar ³.



Ready to install package:

Infrared Handset ⁵, internal + external drain pan, 5 mm (0.2") NBR insulation, integrated Sauer mann condensate pump + float switch, manual air vent + water purge valve and G2 (MERV 4) filter.

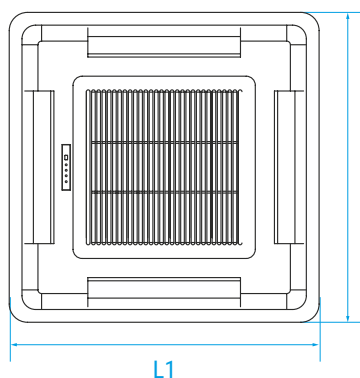
Optional Accessories

- **I-Type Controllers:** Infrared Handset, Wired Wallpad
- **Valves:** pre-assembled **HYDRIC+VALVE KIT** ⁴
- **Filter:** G4 (MERV 8)
- **Electric heater:** up to 4 kW
- **Ducts:** ABS branch duct flange
- **Flanges:** ABS fresh air intake (**up to 30%**) for sensitive spaces where IAQ is important
- **Integrated transformer:** converts from 230V-115V to 24V for valve and thermostat compatibility
- **Disconnect switch:** integrated in control box
- **Customization:** available upon request ¹

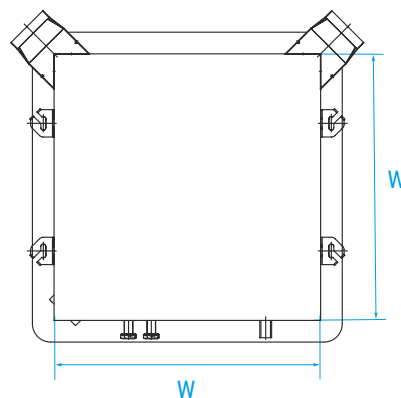
Dimensions, Weights & Drawings

PCGH-3R SIZES*			04	08	12	20	24
Unit Dimensions	L	mm ["]	582 [22 15/16]	582 [22 15/16]	730 [28 3/4]	830 [32 11/16]	960 [37 13/16]
	W	mm ["]	582 [22 15/16]	582 [22 15/16]	730 [28 3/4]	830 [32 11/16]	960 [37 13/16]
	H	mm ["]	255 [10 1/16]	290 [11 7/16]	260 [10 1/4]	290 [11 7/16]	290 [11 7/16]
Panel Dimensions	L1	mm ["]	680 [26 3/4]	680 [26 3/4]	830 [32 11/16]	980 [38 9/16]	1140 [44 7/8]
	H1	mm ["]	28 [1 1/8]	28 [1 1/8]	28 [1 1/8]	28 [1 1/8]	28 [1 1/8]
Net Weight	kg [lbs]		28 [62]	30 [66]	36 [79]	50 [110]	54 [119]

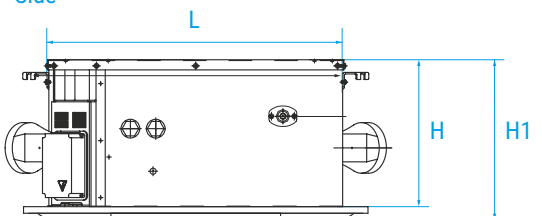
Panel (Bottom)



Unit (Top)



Side



(1) Minimum order quantities apply. (2) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. (3) Tested between 25-35 bar with a max operating limit of 16-bar. (4) HYDRIC+ VALVE KIT includes 2/3-way body valve, on-off/modulating actuator (24V or 110-240V), BSPT or NPT connectors, connection piping kit, 2x shut-off valves, strainer and manual balancing valve. (5) Only available with I-Type control. (*) Indicated dimensions approximate within 5 mm or 1/16 ". Weights approximate within 1 kg (2.2 lbs).

PCGH-3R 4-Way Cassette

Technical Specifications

Hydronic 4-Way Cassette, 2-pipe with EC Motor

UNIT GENERAL SPECS	PCGH-3R-[SIZE]-V-EC			04	08	12	20B	24
	Configuration			2-pipe				
	Number of Fan Blowers			1				
	Power Supply (V/Ph/Hz)			208-240/1/50-60				
	Water Connections	Type		BSPT (Threaded Female)				
		In/Out	mm ["]	19.05 [3/4]				
	Condensate Drainage		mm ["]	25.4 [1]				
AIR	Total Air Flow	H	m3/h	575	810	1300	2040	2750
		M		380	722	1050	1600	2540
		L		200	200	360	820	1020
COOLING	Total Cooling Capacity ^E	H	kW	3.6	5.5	7.2	11.1	15.0
		M		2.6	5.1	6.2	9.3	14.2
		L		1.6	1.8	2.6	5.5	6.9
	Sensible Cooling Capacity ^E	H	kW	2.5	3.9	5.1	7.9	10.7
		M		1.8	3.5	4.4	6.5	10.1
		L		1.1	1.3	1.8	3.8	4.7
		HEATING		Total Heating Capacity ^E	H	kW	3.5	5.5
M	2.5		5.0		6.0		9.3	13.9
L	1.5		1.6		2.6		7.0	6.9
HEATING	Recommended Electric Heater Capacity		kW	1.0	2.0	3.0	4.0	4.0
	SOUND *	Pressure Level H/M/L		dBA	43/39/30	50/47/26	56/53/32	57/53/34
Power Level H/M/L ^E		52/48/36	59/56/35		65/62/41	67/63/44	73/70/50	
ELECTRICAL	Power Input ^{E1}	H	W	21	47	82	140	220
		M		15	35	67	100	178
		L		11	11	16	27	50
	Running Current ² (H)		A	0.2	0.4	0.7	1.2	1.9
HYDRONIC	Cooling Water Flow Rate	H	L/h	619	940	1238	1907	2571
		M		452	868	1057	1591	2440
		L		276	315	453	950	1188
	Cooling Pressure Drop ^E	H	kPa	47.4	61.2	64.0	60.0	73.2
		M		26.9	53.0	48.1	43.1	66.6
		L		11.1	8.5	10.5	17.1	18.2
	Heating Water Flow Rate	H	L/h	596	813	1210	1903	2545
		M		434	859	1033	1591	2384
		L		262	273	452	951	1182
	Heating Pressure Drop ^E	H	kPa	36.3	40.2	40.6	44.2	54.0
		M		20.5	34.5	30.5	32.1	48.0
		L		6.6	5.6	9.4	13.6	10.1
	Water Content		L	1.3	1.6	1.8	2.4	3.0

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB

Inlet/Outlet water temperature: 7°C/12°C

Heating mode (2-pipe): Return Air Temperature 20°C

Inlet/Outlet water temperature: 45°C/40°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.



Technical Specifications

Hydronic 4-Way Cassette, 4-pipe with EC Motor

UNIT GENERAL SPECS	PCGH-3R-[SIZE]-P-EC			04	08	12	20	24B
	Configuration			4-pipe				
	Number of Fan Blowers			1				
	Power Supply (V/Ph/Hz)			208-240/1/50-60				
	Water Connections	Type		BSPT (Threaded Female)				
		In/Out	mm ["]	19.05 [3/4]				
	Condensate Drainage		mm ["]	25.4 [1]				
AIR	Total Air Flow	H	m3/h	575	810	1300	2040	2750
		M		380	722	1050	1600	2540
		L		200	200	360	820	1020
COOLING	Total Cooling Capacity ^E	H	kW	2.8	3.8	5.5	8.4	12.4
		M		2.1	3.6	4.7	7.0	11.8
		L		1.3	1.3	2.0	4.2	5.7
	Sensible Cooling Capacity ^E	H	kW	2.0	2.7	4.0	6.1	9.1
		M		1.5	2.5	3.4	5.0	8.6
		L		0.9	0.9	1.4	2.9	4.0
HEATING	Total Heating Capacity ^E	H	kW	3.9	5.2	7.5	11.6	15.5
		M		2.8	4.8	6.4	9.7	14.6
		L		1.7	1.7	2.8	5.8	7.2
SOUND *	Pressure Level H/M/L		dBA	43/39/27	50/40/26	56/53/32	58/53/37	58/54/41
	Power Level H/M/L ^E			52/48/36	59/56/35	65/62/41	67/63/44	73/70/50
ELECTRICAL	Power Input ^{E1}	H	W	21	47	82	140	220
		M		15	32	67	100	178
		L		11	11	16	27	50
	Running Current ² (H)		A	0.2	0.4	0.7	1.2	1.9
HYDRONIC	Cooling Water Flow Rate	H	L/h	488	660	945	1440	2132
		M		357	609	807	1201	2024
		L		218	221	346	718	986
	Cooling Pressure Drop ^E	H	kPa	68.8	42.3	50.0	35.6	62.9
		M		39.1	36.6	37.6	25.7	57.2
		L		16.1	5.9	8.2	10.2	15.7
	Heating Water Flow Rate	H	L/h	330	446	645	991	1332
		M		241	410	550	829	1247
		L		145	150	241	495	619
	Heating Pressure Drop ^E	H	kPa	28.3	26.8	52.0	67.2	33.7
		M		16.0	23.0	39.1	48.7	30.0
		L		6.5	3.7	8.8	19.3	8.5
	Water Content (Cooling)		L	0.8	1.0	1.2	1.6	2.0
	Water Content (Heating)			0.4	0.5	0.6	0.8	1.0

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB

Inlet/Outlet water temperature: 7°C/12°C

Heating mode (4-pipe): Return Air Temperature 20°C

Inlet/Outlet water temperature: 65°C/55°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.



PFWB(C) Universal Console

Sizes: **5 sizes**
 Models: **2-pipe · 4-pipe**
 Rows: **3R · 3R+1 · 4R**
 Cooling: **1.2 - 11.7 kW**
 Heating: **1.1 - 12.3 kW**
 Air Flow: **210 - 1988 m3/h**

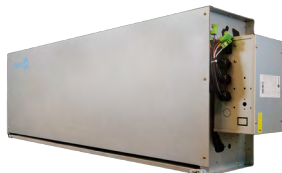


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POLAR AIR

Model shown: PFWBC Exposed Cased · size 18

PFWB Uncased: install **vertically/horizontally** within a wall, or on/within the ceiling. **PFWBC Cased:** install **horizontally/vertically** on a wall, below ceiling or on the floor with **supporting feet (optional)**.



**PFWB UNCASED
VERTICAL**



**PFWB UNCASED
HORIZONTAL**



**PFWBC CASED
VERTICAL AIR RETURN**



**PFWBC CASED
HORIZONTAL AIR RETURN**

Project Applications & References



Residential: Houses · Apartments/Condos · Assisted Living · Student Accommodation/Residence Halls



Educational: Academies · Schools · Universities · Colleges · Libraries · Campus Buildings



Hospitality: Hotel Bedrooms · Hotel Reception Areas · Banquet Halls · Restaurants · Cafes · Bistros



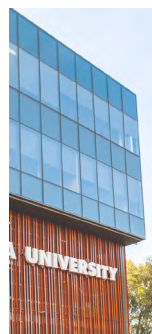
Business: Offices · Data Server Rooms · Banks · Call Centers · Showrooms



Occidental Railspur

2024 · USA (Washington)
Business (Offices)

**Retrofit
EC motor
Cased model**



Victoria University

2024 · Australia
Residential (Student Accommodation)

**Retrofit
EC motor
Cased model**



Key Features & Components



High cooling and heating capacity (up to 12 kW) that's ideal for residential and educational spaces.



Decorative casing with optional ABS feet for design-conscious spaces.



Quiet operation with a sound pressure level ² from 29 dBA.



Ideal for low temperature heat sources like solar thermal collectors and heat pumps.



Multiple rows: More coil surface **improves latent capacity and heat exchange** for better efficiency and humidity control.



Optional pre-installed valves on cased models for a discreet appearance and to reduce labor costs.



Installation flexibility with **interchangeable sides on water coil connections.**



Energy-efficient 0-10 VDC EC motor (**up to 30% energy savings** compared to AC motors).



Copper tubes/headers, mechanically expanded into corrugated aluminum fins tested up to 35-bar ³.



Ready to install package:

V-shape internal drain pan (horizontal/vertical installation), 5 mm (0.2") NBR insulation, manual air vent + water purge valve and G2 (MERV 4) filter.

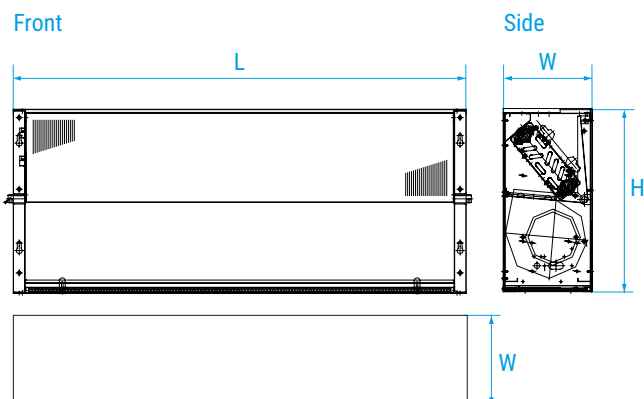
Optional Accessories

- **I-Type Controllers:** Infrared Handset, Wired Wallpad
- **Valves:** pre-assembled **HYDRIC+VALVE KIT** ⁴
- **Drain pan:** stainless steel
- **Supporting feet:** ABS for floor installations
- **Electric heater:** up to 3 kW
- **Elbow kit:** 90° for vertical built-in wall installations
- **Filters:** G4 (MERV 8)
- **Integrated transformer:** converts from 230V-115V to 24V for valve and thermostat compatibility
- **Disconnect switch:** integrated in control box
- **Customization:** available upon request ¹

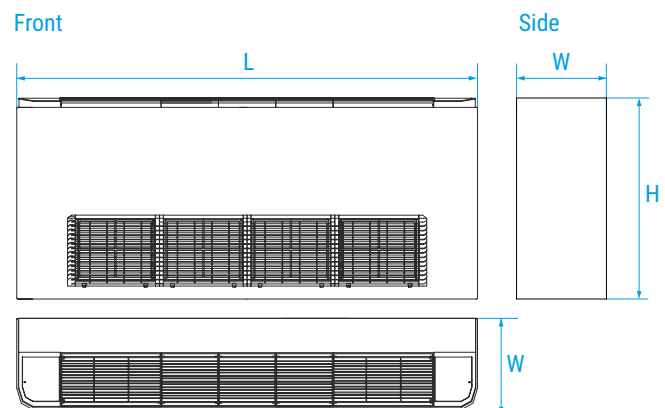
Dimensions, Weights & Drawings

PFWB(C) SIZES*			06	12	18	24	36
PFWB UNCASED Dimensions	L	mm [""]	608 [23 15/16]	808 [31 13/16]	1008 [39 11/16]	1308 [53 7/16]	1608 [65 1/4]
	W		230 [9 1/16]	230 [9 1/16]	230 [9 1/16]	230 [9 1/16]	230 [9 1/16]
	H		460 [18 1/8]	460 [18 1/8]	460 [18 1/8]	460 [18 1/8]	460 [18 1/8]
Net Weight	kg [lbs]		16 [35]	19 [42]	23 [51]	31 [68]	37 [82]
PFWBC CASED Dimensions	L	mm [""]	858 [33 3/4]	1058 [41 5/8]	1258 [49 1/2]	1608 [63 5/16]	1908 [75 1/8]
	W		250 [9 13/16]	250 [9 13/16]	250 [9 13/16]	250 [9 13/16]	250 [9 13/16]
	H		495 [19 1/2]	495 [19 1/2]	495 [19 1/2]	495 [19 1/2]	495 [19 1/2]
Net Weight	kg [lbs]		22 [49]	26 [57]	32 [71]	43 [95]	49 [108]

PFWB UNCASED



PFWBC CASED



(1) Minimum order quantities apply. (2) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. (3) Tested between 25-35 bar with a max operating limit of 16-bar. (4) HYDRO+ VALVE KIT includes 2/3-way body valve, on-off/modulating actuator (24V or 110-240V), BSPT or NPT connectors, connection piping kit, 2x shut-off valves, strainer and manual balancing valve. (*) Indicated dimensions approximate within 5 mm or 1/16 ". Weights approximate within 1 kg (2.2 lbs).

Technical Specifications

Hydronic Universal Console, 3R, 2-pipe with EC Motor

For other row configuration technical data, please contact us at hello@polaraircs.com.

UNIT GENERAL SPECS	PFWB(C)-3R-[SIZE]-V-EC			06B	12B	18	24B	36B
	Configuration			2-pipe				
	Number of Fan Blowers			1	2		4	
	Power Supply (V/Ph/Hz)			208-240/1/50-60				
	Water Connections	Type		BSPT (Threaded Female)				
		In/Out	mm ["]	19.05 [3/4]				
	Condensate Drainage			mm ["]	19.05 [3/4]			
AIR	Total Air Flow	H	m3/h	350	677	970	1350	1988
		M		280	540	827	1170	1710
		L		210	380	492	676	890
COOLING	Total Cooling Capacity ^E	H	kW	1.8	3.3	4.9	6.7	9.3
		M		1.6	2.8	4.3	6.1	8.4
		L		1.2	2.1	2.9	3.9	5.0
	Sensible Cooling Capacity ^E	H	kW	1.3	2.4	3.5	4.8	6.8
		M		1.1	2.0	3.0	4.3	6.0
		L		0.9	1.5	2.0	2.7	3.5
		HEATING		Total Heating Capacity ^E	H	kW	2.0	3.7
M	1.7		3.2		4.8		6.7	9.5
L	1.4		2.4		3.2		4.4	5.8
HEATING	Recommended Electric Heater Capacity		kW	1.0	2.0	2.0	3.0	3.0
	SOUND *	Pressure Level H/M/L		dBA	41/39/32	43/40/37	51/48/44	50/46/44
Power Level H/M/L ^E			50/44/38		56/49/42	60/55/42	61/57/42	66/63/44
ELECTRICAL	Power Input ^{E1}	H	W	17	38	52	87	128
		M		13	23	36	60	92
		L		8	12	14	22	28
	Running Current ² (H)			A	0.1	0.3	0.5	0.8
HYDRONIC	Cooling Water Flow Rate	H	L/h	314	569	839	1156	1599
		M		269	485	740	1038	1440
		L		214	368	498	676	860
	Cooling Pressure Drop ^E	H	kPa	11.8	13.5	31.7	32.3	22.6
		M		8.9	10.1	25.3	26.6	18.7
		L		5.9	6.2	12.4	12.3	7.4
	Heating Water Flow Rate	H	L/h	347	640	920	1278	1795
		M		296	544	814	1151	1620
		L		238	410	546	760	985
	Heating Pressure Drop ^E	H	kPa	13.2	15.9	36.0	36.4	26.0
		M		9.9	11.8	8.9	30.2	21.7
		L		6.7	7.1	14.1	14.3	8.8
	Water Content			L	0.7	1.0	1.3	1.7

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB

Inlet/Outlet water temperature: 7°C/12°C

Heating mode (2-pipe): Return Air Temperature 20°C

Inlet/Outlet water temperature: 45°C/40°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low..



Technical Specifications

Hydronic Universal Console, 3R+1, 4-pipe with **EC Motor**

For other row configuration technical data, please contact us at hello@polaraircs.com.

UNIT GENERAL SPECS	PFWB(C)-3R+1-[SIZE]-P-EC			06	12	18	24	36
	Configuration			4-pipe				
	Number of Fan Blowers			1	2		4	
	Power Supply (V/Ph/Hz)			208-240/1/50-60				
	Water Connections	Type		BSPT (Threaded Female)				
		In/Out	mm ["]	Cooling: 19.05 [3/4] · Heating: 12.7 [1/2]				
	Condensate Drainage		mm ["]	19.05 [3/4]				
AIR	Total Air Flow	H	m3/h	350	677	970	1350	1988
		M		280	540	827	1170	1710
		L		210	380	492	676	890
COOLING	Total Cooling Capacity	H	kW	1.8	3.3	4.9	6.7	9.3
		M		1.6	2.8	4.3	6.1	8.4
		L		1.3	2.2	2.9	3.9	5.0
	Sensible Cooling Capacity	H	kW	1.3	2.4	3.5	4.8	6.8
		M		1.1	2.0	3.0	4.3	6.1
		L		0.9	1.5	2.0	2.7	3.5
HEATING	Total Heating Capacity	H	kW	1.7	3.1	4.3	5.9	8.4
		M		1.4	2.6	3.8	5.4	7.5
		L		1.1	2.0	2.6	3.5	4.6
SOUND *	Pressure Level H/M/L		dBA	41/35/29	47/49/33	51/46/33	52/48/33	57/54/35
	Power Level H/M/L			50/44/38	56/49/42	60/55/42	61/57/42	66/63/44
ELECTRICAL	Power Input ¹	H	W	17	38	52	87	128
		M		13	23	36	60	92
		L		8	12	14	22	28
	Running Current ² (H)		A	0.1	0.3	0.5	0.8	1.1
HYDRONIC	Cooling Water Flow Rate	H	L/h	314	569	839	1156	1599
		M		269	485	740	1038	1440
		L		214	368	498	676	860
	Cooling Pressure Drop	H	kPa	11.8	13.5	31.7	32.3	22.6
		M		8.9	10.1	25.3	26.6	18.7
		L		5.9	6.2	12.4	12.3	7.4
	Heating Water Flow Rate	H	L/h	145	262	366	506	720
		M		122	223	329	458	645
		L		98	169	221	300	392
	Heating Pressure Drop	H	kPa	6.0	21.8	48.3	15.8	35.9
		M		4.4	16.3	39.7	13.2	29.5
		L		3.0	10.0	19.4	6.2	12.1
	Water Content (Cooling)		L	0.7	1.0	1.3	1.7	2.2
Water Content (Heating)		0.2		0.3	0.4	0.6	0.7	

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB Inlet/Outlet water temperature: 7°C/12°C

Heating mode (4-pipe): Return Air Temperature 20°C Inlet/Outlet water temperature: 65°C/55°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.

PDWA

Medium ESP Ducted

Sizes: **5 sizes**
 Models: **2-pipe · 4-pipe**
 Rows: **3R · 3R+1 · 3R+2 · 4R · 4R+2 · 6R**
 Cooling: **1.6 - 13.4 kW**
 Heating: **1.3 - 13.0 kW**
 Air Flow: **225 - 2020 m3/h**



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 SCAN QR CODE

Model shown: PDWA Medium ESP · size 400

Our most adaptable ducted unit designed for all application types with high performance, efficient heat transfer, and seamless installation in concealed or challenging spaces.



BACK + TOP



FRONT + TOP



SIDE LEFT

Project Applications & References



Residential: Houses · Apartments/Condos · Assisted Living · Student Accommodation/Residence Halls



Healthcare: Hospitals · Clinics · Nursing Homes · Treatment Centers · Laboratories · Morgues



Commercial: Supermarkets · Stores · Shopping Malls · Gyms/Sports Facilities · Museums/Theaters · Airports



Hospitality: Hotel Bedrooms · Hotel Reception Areas · Banquet Halls · Restaurants · Cafes · Bistros



Parks & Yards

2024 · Canada (British Columbia)
 Residential (Condos/Apartments)

New construction
 EC motor
 2-pipe & 4-pipe models



Sisak Hospital

2023 · Croatia
 Healthcare (Hospital)

New construction
 AC motor
 2-pipe & 4-pipe models



Key Features & Components



Compact, blow-through design that's ideal for concealed spaces with reduced dimensions.



Installation flexibility with **interchangeable sides on water coil connections**.



Ideal for low temperature heat sources like **solar thermal collectors and heat pumps**.



Multiple rows available (2- and 4-pipe): More rows and coil surface area **improves heat exchange and latent capacity** for better efficiency and humidity control.



For medium external static pressures up to 110 Pa / 0.44 in.wg. **Recommended: 75 Pa / 0.3 in.wg.**



Energy-efficient 0-10 VDC EC motor (**up to 30% energy savings** compared to AC motors).



Copper tubes/headers, mechanically expanded into corrugated aluminum fins tested up to 35-bar ².



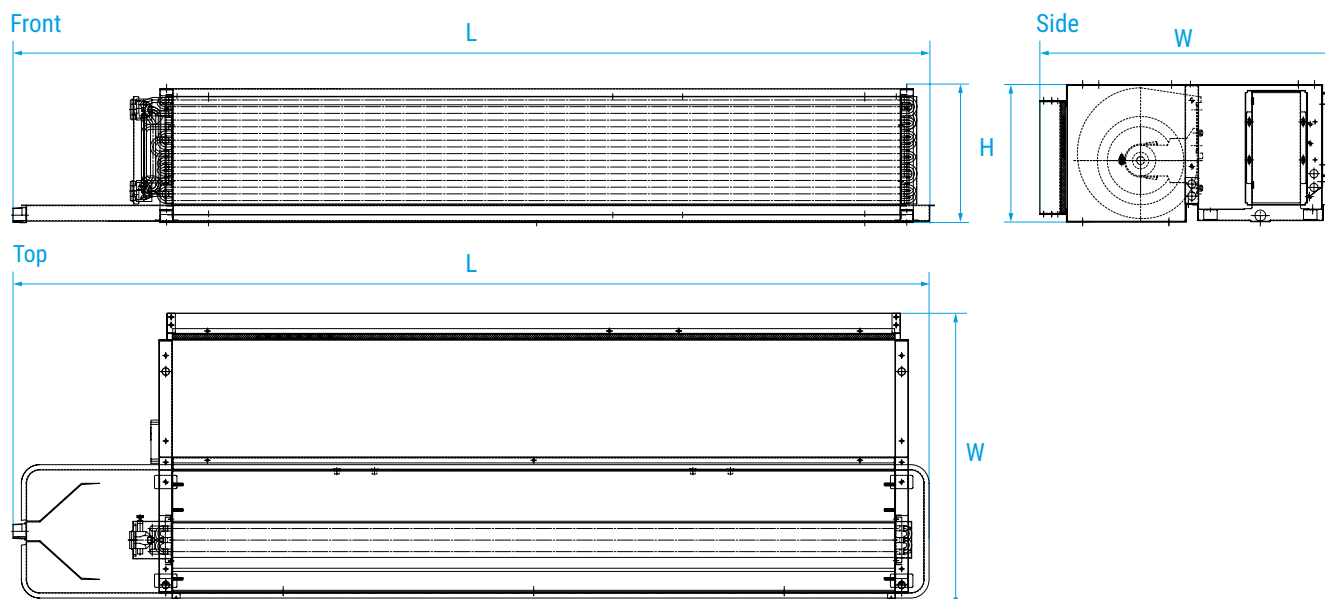
Ready to install package: External painted steel drain pan, 5 mm (0.2") NBR insulation, manual air vent + water purge valve, G2 (MERV 4) filter & 25.4 mm (1") toolless filter rack.

Optional Accessories

- **I-Type Controllers:** Wired Wallpad
- **Valves:** pre-assembled **HYDR+VALVE KIT** ³
- **Condensate pump:** Sauermann with float switch
- **Insulation:** 10mm (0.3"), 15 mm (0.6") or 25 mm (1") NBR
- **Electric heater:** up to 6 kW
- **Air:** Supply/return plenum, damper, diffuser & manual louver
- **Filter:** G4 (MERV 8)
- **Integrated transformer:** converts from 230V-115V to 24V for valve and thermostat compatibility
- **Disconnect switch:** integrated in control box
- **Customization:** available upon request ¹

Dimensions, Weights & Drawings

PDWA SIZES*			200	300	400	600	1200
Unit Dimensions	L	mm ["	755 [29 3/4]	855 [33 11/16]	955 [37 5/8]	1255 [49 7/16]	1855 [73]
	W		550 [21 5/8]	550 [21 5/8]	550 [21 5/8]	550 [21 5/8]	550 [21 5/8]
	H		250 [9 13/16]	250 [9 13/16]	250 [9 13/16]	250 [9 13/16]	250 [9 13/16]
Net Weight	kg [lbs]	22 [49]	24 [53]	27 [60]	31 [68]	50 [110]	



(1) Minimum order quantities apply. (2) Tested between 25-35 bar with a max operating limit of 16-bar. (3) HYDR+ VALVE KIT includes 2/3-way body valve, on-off/modulating actuator (24V or 110-240V), BSPT or NPT connectors, connection piping kit, 2x shut-off valves, strainer and manual balancing valve. (*) Indicated dimensions approximate within 5 mm or 1/16". Weights approximate within 1 kg (2.2 lbs). Based on 3R configuration. For other row configuration dimensions/weights, please contact us.

PDWA Medium ESP Ducted

Technical Specifications

Hydronic Medium ESP Ducted, 3R, 2-pipe with **EC Motor**

For other row configuration technical data, please contact us at hello@polaraircs.com.

UNIT GENERAL SPECS	PDWA-3R-[SIZE]-V-EC			200	300	400B	600	1200
	Configuration			2-pipe				
	Number of Fan Blowers			1		2		4
	Power Supply (V/Ph/Hz)			208-240/1/50-60				
	Water Connections	Type		BSPT (Threaded Female)				
		In/Out	mm ["]	19.05 [3/4]				
	Condensate Drainage			19.05 [3/4]				
AIR	Total Air Flow	H	m3/h	433	607	795	1074	1974
		M		376	561	729	1010	1974
		L		382	504	654	950	1814
	External Static Pressure ^E	H	Pa	58	54	59	62	60
		M ^E		50	50	50	50	50
		L		35	35	30	39	40
COOLING	Total Cooling Capacity ^E	H	kW	2.5	3.4	4.2	5.5	9.9
		M		2.2	3.2	3.9	5.3	9.9
		L		2.2	2.9	3.6	5.0	9.3
	Sensible Cooling Capacity ^E	H	kW	1.8	2.4	3.0	3.9	7.2
		M		1.6	2.3	2.8	3.7	7.2
		L		1.6	2.1	2.6	3.6	6.7
HEATING	Total Heating Capacity ^E	H	kW	2.3	3.2	4.0	5.5	9.8
		M		2.1	3.0	3.8	5.2	9.8
		L		2.1	2.7	3.5	5.0	9.2
	Recommended Electric Heater Capacity		kW	1.5	2.0	2.5	3.0	6.0
SOUND *	Pressure Level (Outlet)		dBA	48/47/43	50/49/46	52/50/44	54/52/49	58/55/52
	Pressure Level (Inlet + Radiated)			50/49/45	52/51/48	54/52/46	56/54/51	60/57/54
	Power Level (Outlet)			57/56/52	59/58/55	61/59/53	63/61/58	67/64/61
	Power Level (Inlet + Radiated)			59/58/54	61/60/57	63/61/55	65/63/60	69/66/63
ELECTRICAL	Power Input ^{E 1}	H	W	53	63	83	102	224
		M		43	52	58	84	190
		L		26	31	35	62	113
	Running Current ² (H)		A	0.5	0.5	0.7	0.9	1.9
HYDRONIC	Cooling Water Flow Rate	H	L/h	424	576	720	944	1702
		M		382	544	672	903	1702
		L		385	499	617	862	1600
	Cooling Pressure Drop ^E	H	kPa	25.8	49.5	26.5	50.4	31.4
		M		21.4	44.6	23.6	46.6	31.4
		L		21.7	38.3	20.2	42.9	28.1
	Heating Water Flow Rate	H	L/h	397	542	687	939	1672
		M		359	509	645	897	1672
		L		363	471	596	853	1577
	Heating Pressure Drop ^E	H	kPa	17.5	33.9	18.6	38.3	23.4
		M		14.6	30.3	16.6	35.4	23.4
		L		14.8	26.3	14.4	32.3	21.1
	Water Content		L	0.7	0.9	1.0	1.3	2.2

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB

Inlet/Outlet water temperature: 7°C/12°C

Heating mode (2-pipe): Return Air Temperature 20°C

Inlet/Outlet water temperature: 45°C/40°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.



Technical Specifications

Hydronic Medium ESP Ducted, 3R+1, 4-pipe with EC Motor

For other row configuration technical data, please contact us at hello@polarairs.com.

UNIT GENERAL SPECS	PDWA-3R+1-[SIZE]-P-EC			200	300	400	600	1200	
	Configuration			4-pipe					
	Number of Fan Blowers			1		2		4	
	Power Supply (V/Ph/Hz)			208-240/1/50-60					
	Water Connections	Type		BSPT (Threaded Female)					
		In/Out	mm ["]	19.05 [3/4]					
	Condensate Drainage			mm ["]	19.05 [3/4]				
AIR	Total Air Flow	H	m3/h	440	594	815	1125	2020	
		M		349	535	685	963	1907	
		L		263	393	385	795	1595	
	External Static Pressure	H	Pa	50					
		M							
		L							
COOLING	Total Cooling Capacity	H	kW	2.5	3.3	4.3	5.7	10.2	
		M		2.1	3.1	3.7	5.1	9.7	
		L		1.7	2.4	2.4	4.4	8.5	
	Sensible Cooling Capacity	H	kW	1.8	2.4	3.1	4.1	7.4	
		M		1.5	2.2	2.7	3.6	7.0	
		L		1.2	1.7	1.7	3.1	6.1	
HEATING	Total Heating Capacity	H	kW	1.9	2.5	3.4	4.5	8.0	
		M		1.6	2.3	2.9	4.0	7.7	
		L		1.3	1.8	1.9	3.4	6.6	
SOUND *	Pressure Level (Outlet)		dBA	48/47/43	50/49/46	52/50/44	54/52/49	58/55/52	
	Pressure Level (Inlet + Radiated)			50/49/45	52/51/48	54/52/46	56/54/51	60/57/54	
	Power Level (Outlet)			57/56/52	59/58/55	61/59/53	63/61/58	67/64/61	
	Power Level (Inlet + Radiated)			59/58/54	61/60/57	63/61/55	65/63/60	69/66/63	
ELECTRICAL	Power Input ¹	H	W	53	63	83	102	224	
		M		43	52	58	84	190	
		L		26	31	35	62	113	
	Running Current ² (H)			A	0.5	0.5	0.7	0.9	1.9
HYDRONIC	Cooling Water Flow Rate	H	L/h	430	568	732	975	1740	
		M		359	524	642	871	1663	
		L		287	413	411	750	1456	
	Cooling Pressure Drop	H	kPa	26.5	48.2	27.5	53.4	32.7	
		M		19.1	41.7	21.7	43.6	30.2	
		L		12.8	27.3	9.7	33.3	23.8	
	Heating Water Flow Rate	H	L/h	164	216	287	383	684	
		M		138	200	251	339	656	
		L		111	157	160	294	566	
	Heating Pressure Drop	H	kPa	7.8	14.5	26.9	7.8	33.1	
		M		5.7	12.7	21.1	6.2	30.7	
		L		3.9	8.2	9.4	4.8	23.6	
	Water Content (Cooling)			L	0.7	0.9	1.0	1.3	2.2
	Water Content (Heating)				0.2	0.3	0.3	0.4	0.7

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB Inlet/Outlet water temperature: 7°C/12°C

Heating mode (4-pipe): Return Air Temperature 20°C Inlet/Outlet water temperature: 65°C/55°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.

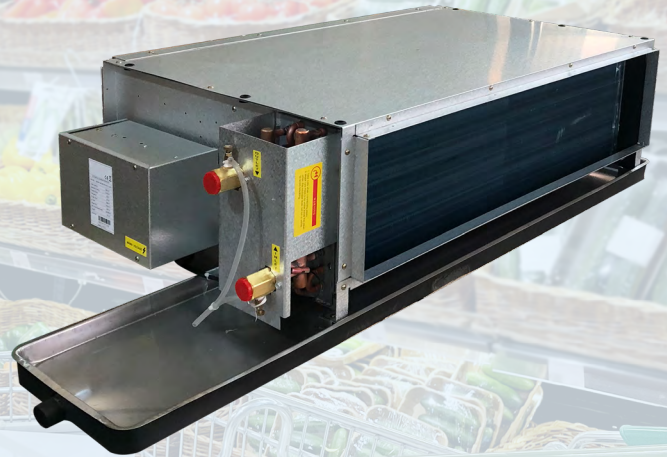
PDWC

High ESP Ducted

Sizes: **5 sizes**
 Models: **2-pipe · 4-pipe**
 Rows: **3R · 3R+1 · 3R+2 · 4R · 4R+2 · 6R**
 Cooling: **3.2 - 30.1 kW**
 Heating: **2.3 - 27.6 kW**
 Air Flow: **445 - 4534 m3/h**

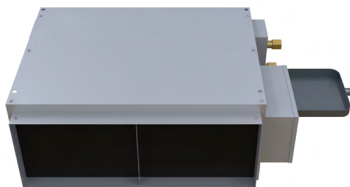


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SCAN QR CODE



Model shown: PDWC High ESP · size 800

High performance in a compact unit ensures heat transfer efficiency and year-round heating and cooling with easy installation, especially in concealed spaces.



BACK + TOP



FRONT + TOP



SIDE LEFT

Project Applications & References



Government: Post Offices · Courthouses · Town Halls · Embassies · Prisons · Military & Emergency Spaces



Healthcare: Hospitals · Clinics · Nursing Homes · Treatment Centers · Laboratories · Morgues



Commercial: Supermarkets · Stores · Shopping Malls · Gyms/Sports Facilities · Museums/Theaters · Airports



Industrial: Factories · Plants · Data Centers · Warehouses/Distribution Centers · Agricultural



Municipal Pool

2024 · New Zealand
Commercial (Swimming Pool Facilities)

Retrofit
AC motor
2-pipe model



Ontario Power Gen

2024 · Canada (Ontario)
Industrial (Generation Station)

Retrofit
EC motor
2-pipe model



Key Features & Components



Compact, blow through design that's ideal for concealed spaces with reduced dimensions.



Installation flexibility with **interchangeable sides on water coil connections**.



Ideal for low temperature heat sources like **solar thermal collectors and heat pumps**.



Multiple rows available (2- and 4-pipe): More rows and coil surface area **improves heat exchange and latent capacity** for better efficiency and humidity control.



For high external static pressures up to 180 Pa / 0.8 in.wg. **Recommended: 120 Pa / 0.5 in.wg.**



Energy-efficient 0-10 VDC EC motor (**up to 30% energy savings** compared to AC motors).



Copper tubes/headers, mechanically expanded into corrugated aluminum fins tested up to 35-bar ².



Ready to install package:

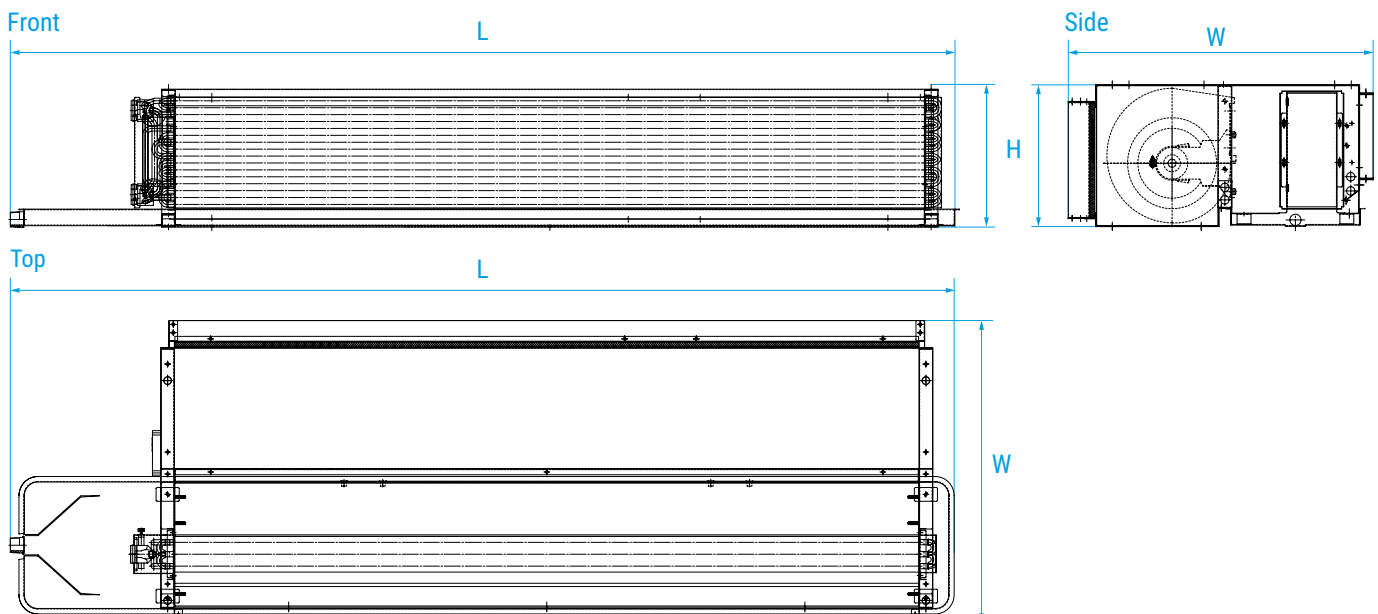
External painted steel drain pan, 5 mm (0.2") NBR insulation, manual air vent + water purge valve, G2 (MERV 4) filter & 25.4 mm (1") toolless filter rack.

Optional Accessories

- **I-Type Controllers:** Wired Wallpad
- **Valves:** pre-assembled **HYDRC+VALVE KIT** ³
- **Condensate pump:** integrated Sauermann with float switch
- **Insulation:** 10mm (0.3"), 15 mm (0.6") or 25 mm (1") NBR
- **Electric heater:** up to 6kW
- **Air:** Supply/return plenum, damper, diffuser & manual louver
- **Filter:** G4 (MERV 8)
- **Integrated transformer:** converts from 230V-115V to 24V for valve and thermostat compatibility
- **Disconnect switch:** integrated in control box
- **Customization:** available upon request ¹

Dimensions, Weights & Drawings

PDWC SIZES*			600	800	1000	1600	2000
Unit Dimensions	L	mm ["]	1255 [49 7/16]	1255 [49 7/16]	1355 [53 3/8]	1755 [69 1/16]	2055 [80 15/16]
	W		620 [24 7/16]	620 [24 7/16]	620 [24 7/16]	620 [24 7/16]	620 [24 7/16]
	H		300 [11 13/16]	350 [13 3/4]	350 [13 3/4]	350 [13 3/4]	350 [13 3/4]
Net Weight		kg [lbs]	34 [75]	39 [86]	45 [99]	55 [121]	75 [165]



(1) Minimum order quantities apply. (2) Tested between 25-35 bar with a max operating limit of 16-bar. (3) HYDRC+ VALVE KIT includes 2/3-way body valve, on-off/modulating actuator (24V or 110-240V), BSPT or NPT connectors, connection piping kit, 2x shut-off valves, strainer and manual balancing valve. (*) Indicated dimensions approximate within 5 mm or 1/16". Weights approximate within 1 kg (2.2 lbs). Based on 3R configuration. For other row configuration dimensions/weights, please contact us.

PDWC High ESP Ducted

Technical Specifications

Hydronic High ESP Ducted, 3R, 2-pipe with EC Motor

For other row configuration technical data, please contact us at hello@polaraircs.com.

UNIT GENERAL SPECS	PDWC-3R-[SIZE]-V-EC			600	800	1000	1600	2000
	Configuration			2-pipe				
	Number of Fan Blowers			2				4
	Power Supply (V/Ph/Hz)			208-240/1/50-60				
	Water Connections	Type		BSPT (Threaded Female)				
		In/Out	mm ["]	19.05 [3/4]				
	Condensate Drainage			mm ["]	19.05 [3/4]			
AIR	Total Air Flow	H	m3/h	1651	2014	2311	2996	4495
		M		1540	1792	2107	2717	4143
		L		993	1702	1203	2036	3059
	External Static Pressure ^E	H	Pa	66	55	66	63	64
		M ^E		50	50	50	50	50
		L		9	7	7	18	14
COOLING	Total Cooling Capacity ^E	H	kW	7.9	9.6	11.0	14.4	19.8
		M ^E		7.5	8.8	10.3	13.4	18.5
		L		5.4	8.5	6.6	10.7	14.8
	Sensible Cooling Capacity ^E	H	kW	5.7	6.9	7.9	10.4	14.6
		M		5.4	6.3	7.3	9.6	13.7
		L		3.8	6.1	4.6	7.5	10.7
HEATING	Total Heating Capacity ^E	H	kW	8.0	9.8	12.4	14.9	20.7
		M		7.6	9.0	11.6	13.8	19.4
		L		5.5	8.6	7.5	11.1	15.5
	Recommended Electric Heater Capacity			kW	3.0	5.0	6.0	6.0
SOUND [*]	Pressure Level (Outlet)		dBA	56/54/47	58/56/47	56/52/45	60/58/50	64/62/52
	Pressure Level (Inlet + Radiated)			59/57/50	61/59/50	59/55/48	63/61/53	67/65/55
	Power Level (Outlet)			65/63/56	67/65/57	65/61/54	69/67/59	73/71/61
	Power Level (Inlet + Radiated)			68/66/59	70/68/59	68/64/56	72/70/62	76/74/64
ELECTRICAL	Power Input ^{E 1}	H	W	195	281	310	477	637
		M		137	208	151	304	461
		L		62	65	70	108	142
	Running Current ² (H)			A	1.7	2.4	2.7	4.1
HYDRONIC	Cooling Water Flow Rate	H	L/h	1355	1649	1886	2474	3382
		M		1280	1513	1762	2294	3176
		L		920	1455	1136	1834	2529
	Cooling Pressure Drop ^E	H	kPa	54.9	51.7	40.8	41.0	44.1
		M		49.5	44.3	36.1	35.8	39.4
		L		27.3	41.3	16.4	19.7	26.1
	Heating Water Flow Rate	H	L/h	1371	1673	2126	2549	3545
		M		1301	1535	1984	2372	3329
		L		937	1476	1285	1902	2651
	Heating Pressure Drop ^E	H	kPa	37.2	34.2	42.2	33.4	28.9
		M		33.9	29.3	37.2	29.3	25.8
		L		18.7	27.3	17.0	19.7	17.1
	Water Content			L	1.8	1.8	2.4	3.3

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB

Inlet/Outlet water temperature: 7°C/12°C

Heating mode (2-pipe): Return Air Temperature 20°C

Inlet/Outlet water temperature: 45°C/40°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.



Technical Specifications

Hydronic High ESP Ducted, 3R+1, 4-pipe with **EC Motor**

For other row configuration technical data, please contact us at hello@polarairs.com.

UNIT GENERAL SPECS	PDWC-3R+1-[SIZE]-P-EC			600	800	1000	1600	2000	
	Configuration			4-pipe					
	Number of Fan Blowers			2				4	
	Power Supply (V/Ph/Hz)			208-240/1/50-60					
	Water Connections	Type		BSPT (Threaded Female)					
		In/Out	mm ["]	19.05 [3/4]					
	Condensate Drainage			mm ["]	19.05 [3/4]				
AIR	Total Air Flow	H	m3/h	1693	1982	2350	3005	4534	
		M		1440	1736	1983	2616	3964	
		L		566	786	707	1506	1935	
	External Static Pressure	H	Pa	50					
		M							
		L							
COOLING	Total Cooling Capacity	H	kW	8.0	9.5	11.2	14.4	19.8	
		M		7.1	8.6	9.8	13.0	18.0	
		L		3.5	4.7	4.3	8.5	10.3	
	Sensible Cooling Capacity	H	kW	5.8	6.8	8.0	10.4	14.7	
		M		5.1	6.2	6.9	9.2	13.2	
		L		2.4	3.2	3.0	5.9	7.3	
HEATING	Total Heating Capacity	H	kW	6.7	7.9	9.3	11.9	16.9	
		M		5.9	7.2	8.1	10.7	15.1	
		L		2.9	3.9	3.6	6.9	8.7	
SOUND *	Pressure Level (Outlet)		dBA	56/54/47	58/56/47	56/52/45	60/58/50	64/62/52	
	Pressure Level (Inlet + Radiated)			59/57/50	61/59/50	59/55/48	63/61/53	67/65/55	
	Power Level (Outlet)			65/63/56	67/65/56	65/61/54	69/67/59	73/71/61	
	Power Level (Inlet + Radiated)			68/66/59	70/68/59	68/64/57	72/70/62	76/74/64	
ELECTRICAL	Power Input ¹	H	W	195	281	310	477	637	
		M		137	208	151	304	461	
		L		62	65	70	108	142	
	Running Current ² (H)			A	1.7	2.4	2.7	4.1	5.5
HYDRONIC	Cooling Water Flow Rate	H	L/h	1376	1630	1914	2474	3401	
		M		1223	1548	1678	2222	3087	
		L		595	800	742	1459	1761	
	Cooling Pressure Drop	H	kPa	56.5	50.7	41.9	41.0	44.5	
		M		45.6	42.3	33.1	33.8	37.4	
		L		12.5	14.1	7.6	15.8	13.6	
	Heating Water Flow Rate	H	L/h	574	679	794	1023	1445	
		M		507	617	694	920	1298	
		L		247	336	311	594	748	
	Heating Pressure Drop	H	kPa	21.9	36.7	51.1	33.4	68.7	
		M		17.5	30.8	40.1	27.6	56.6	
		L		4.8	10.3	9.4	12.5	21.0	
	Water Content (Cooling)			L	1.8	1.8	2.4	3.3	3.8
	Water Content (Heating)				0.6	0.6	0.8	1.1	1.3

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB Inlet/Outlet water temperature: 7°C/12°C

Heating mode (4-pipe): Return Air Temperature 20°C Inlet/Outlet water temperature: 65°C/55°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.

PDWB Built-In Pan High ESP Ducted

Sizes: 3 sizes
Models: 2-pipe · 4-pipe
Rows: 3R · 3R+1 · 3R+2 · 4R · 4R+2 · 6R
Cooling: 4.9 - 25.3 kW
Heating: 2.4 - 27.0 kW
Air Flow: 612 - 4359 m3/h



Download IOMs & Revits
SCAN QR CODE



Model shown: PDWB High ESP · size 1200

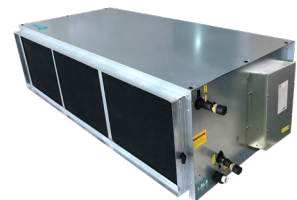
Designed for efficient heating and cooling with **reliable condensate management** and enhanced dehumidification, **ideal for industrial, commercial and healthcare applications.**



BACK



FRONT + TOP



BACK + TOP

Project Applications & References



Business: Offices · Data Server Rooms · Banks · Call Centers · Showrooms



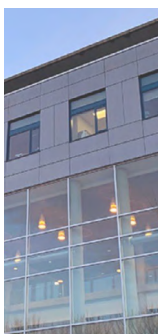
Healthcare: Hospitals · Clinics · Nursing Homes · Treatment Centers · Laboratories · Morgues



Commercial: Supermarkets · Stores · Shopping Malls · Gyms/Sports Facilities · Museums/Theaters · Airports



Industrial: Factories · Plants · Data Centers · Warehouses/Distribution Centers · Agricultural



Community College

2026 · Canada (British Columbia)
Educational (Campus Buildings)

Retrofit
EC motor
4-pipe model



Office HQ

2025 · Costa Rica
Business (Large Office Headquarters)

Retrofit
EC motor
2-pipe model



Key Features & Components



Draw-through design that keeps coil under negative pressure for more efficient dehumidification.



Sealed internal drain pan that maintains airtightness and **prevents condensate leakage**.



Ideal for low temperature heat sources like **solar thermal collectors and heat pumps**.



Multiple rows available (2- and 4-pipe): More rows and coil surface area **improves heat exchange and latent capacity** for better efficiency and humidity control.



For high external static pressures up to 200 Pa / 0.8 in.wg. **Recommended: 150 Pa / 0.6 in.wg.**



Energy-efficient 0-10 VDC EC motor (**up to 30% energy savings** compared to AC motors).



Copper tubes/headers, mechanically expanded into corrugated aluminum fins tested up to 35-bar ².



Ready to install package:

Internal painted steel drain pan, 5 mm (0.2") NBR insulation, manual air vent + water purge valve, G2 (MERV 4) filter & 25.4 mm (1") toolless filter rack.

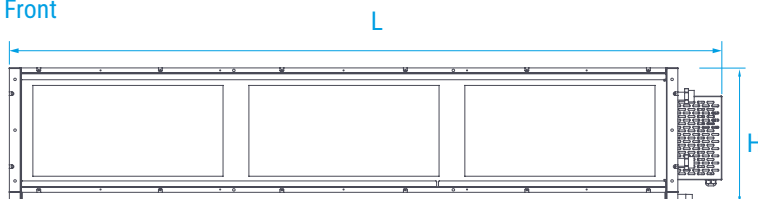
Optional Accessories

- **I-Type Controllers:** Wired Wallpad
- **Valves:** pre-assembled **HYDR-C+VALVE KIT** ³
- **Condensate pump:** integrated Sauermann with float switch
- **Drain pan:** stainless steel
- **Insulation:** 10mm (0.3") or 15 mm (0.6") NBR
- **Electric heater:** up to 9kW
- **Air:** Supply/return plenum, damper, diffuser & manual louver
- **Filter:** G4 (MERV 8) or F8 (MERV 14)
- **Integrated transformer:** converts from 230V-115V to 24V for valve and thermostat compatibility
- **Disconnect switch:** integrated in control box
- **Customization:** available upon request ¹

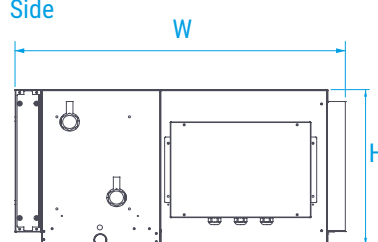
Dimensions, Weights & Drawings

PDWB SIZES*			1200	1600	2400
Unit Dimensions	L	mm ["]	1100 [43 11/16]	1461 [57 1/2]	1761 [69 5/16]
	W		630 [24 13/16]	650 [25 9/16]	750 [29 1/2]
	H		300 [11 13/16]	380 [14 15/16]	430 [16 15/16]
Net Weight			55 [120]	64 [140]	79 [175]

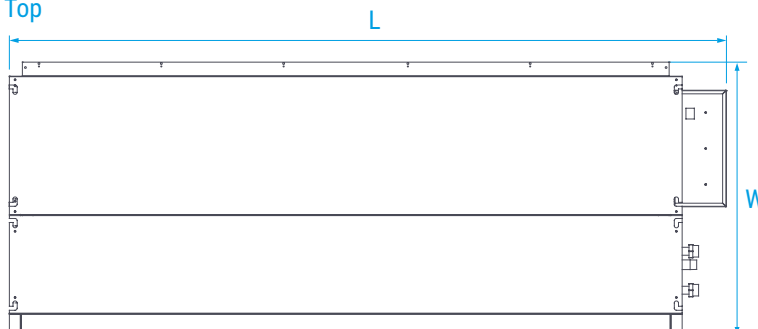
Front



Side



Top



(1) Minimum order quantities apply. (2) Tested between 25-35 bar with a max operating limit of 16-bar. (3) HYDR-C+ VALVE KIT includes 2/3-way body valve, on-off/modulating actuator (24V or 110-240V), BSPT or NPT connectors, connection piping kit, 2x shut-off valves, strainer and manual balancing valve. (*) Indicated dimensions approximate within 5 mm or 1/16". Weights approximate within 1 kg (2.2 lbs). Based on 3R configuration. For other row configuration dimensions/weights, please contact us.

PDWB Built-in Pan High ESP Ducted

Technical Specifications

Hydronic High ESP Ducted, 3R, 2-pipe with EC Motor

For other row configuration technical data, please contact us at hello@polaraircs.com.

UNIT GENERAL SPECS	PDWB-3R-[SIZE]-V-EC			1200	1600	2400
	Configuration			2-pipe		
	Number of Fan Blowers			2		4
	Power Supply (V/Ph/Hz)			208-240/1/50-60		
	Water Connections	Type		BSPT (Threaded Male)		
		In/Out	mm ["]	19.05 [3/4]		25.4 [1]
	Condensate Drainage		mm ["]	19.05 [3/4]		
AIR	Total Air Flow	H	m3/h	2379	2879	4359
		M		1992	2272	3824
		L		1048	1546	2438
	External Static Pressure	H	Pa	120	120	120
		M		120	120	120
		L		70	70	70
COOLING	Total Cooling Capacity	H	kW	10.8	13.6	20.5
		M		9.5	11.3	18.6
		L		5.7	8.4	13.1
	Sensible Cooling Capacity	H	kW	7.8	9.7	14.6
		M		6.8	8.0	13.1
		L		4.0	5.9	9.1
HEATING	Total Heating Capacity	H	kW	11.6	14.5	21.7
		M		10.2	12.0	19.6
		L		6.1	9.0	13.8
	Recommended Electric Heater Capacity		kW	5.0	6.0	6.0
SOUND *	Pressure Level (Outlet)		dBA	65/63/53	67/64/56	71/69/60
	Pressure Level (Inlet + Radiated)			62/60/50	64/61/53	68/66/57
	Power Level (Outlet)			74/72/62	76/73/65	80/78/69
	Power Level (Inlet + Radiated)			71/69/59	73/70/62	77/75/66
ELECTRICAL	Power Input ¹	H	W	360	480	780
		M		260	350	650
		L		66	120	160
	Running Current ² (H)		A	3.3	4.4	7.1
HYDRONIC	Cooling Water Flow Rate	H	L/h	1857	2327	3510
		M		1630	1936	3181
		L		982	1446	2244
	Cooling Pressure Drop	H	kPa	59.8	53.6	60.3
		M		47.3	38.5	50.5
		L		19.0	22.8	26.9
	Heating Water Flow Rate	H	L/h	1986	2482	3714
		M		1743	2065	3366
		L		1050	1542	2374
	Heating Pressure Drop	H	kPa	48.9	43.3	48.7
		M		38.7	31.1	40.8
		L		15.6	18.4	21.8
	Water Content		L	2.8	3.8	5.4

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB Inlet/Outlet water temperature: 7°C/12°C

Heating mode (2-pipe): Return Air Temperature 20°C Inlet/Outlet water temperature: 45°C/40°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.

Technical Specifications

Hydronic High ESP Ducted, 3R+1, 4-pipe with EC Motor

For other row configuration technical data, please contact us at hello@polarairs.com.

UNIT GENERAL SPECS	PDWB-3R+1-[SIZE]-P-EC			1200	1600	2400
	Configuration			4-pipe		
	Number of Fan Blowers			2		4
	Power Supply (V/Ph/Hz)			208-240/1/50-60		
	Water Connections	Type		BSPT (Threaded Male)		
		In/Out	mm ["]	19.05 [3/4]		Cooling: 25.4 [1] Heating: 19.05 [3/4]
	Condensate Drainage			mm ["]	19.05 [3/4]	
AIR	Total Air Flow	H	m3/h	2267	2769	4232
		M		1866	2150	3678
		L		854	1382	2225
	External Static Pressure	H	Pa	120	120	120
		M		120	120	120
		L		70	70	70
	COOLING	Total Cooling Capacity	H	kW	10.4	13.2
M			9.0		10.8	18.1
L			4.9		7.7	12.2
Sensible Cooling Capacity		H	kW	7.5	9.4	14.2
		M		6.4	7.6	12.7
		L		3.4	5.3	8.4
HEATING		Total Heating Capacity	H	kW	5.1	6.4
	M		4.4		5.3	8.8
	L		2.4		3.7	5.9
SOUND *	Pressure Level (Outlet)		dBA	65/63/53	67/64/56	71/69/60
	Pressure Level (Inlet + Radiated)			62/60/50	64/61/53	68/66/57
	Power Level (Outlet)			74/72/62	76/73/65	80/78/69
	Power Level (Inlet + Radiated)			71/69/59	73/70/62	77/75/66
ELECTRICAL	Power Input ¹	H	W	360	480	780
		M		260	350	650
		L		66	120	160
	Running Current ² (H)		A	3.3	4.4	7.1
HYDRONIC	Cooling Water Flow Rate	H	L/h	1790	2255	3429
		M		1545	1857	3096
		L		845	1316	2087
	Cooling Pressure Drop	H	kPa	55.9	50.6	57.8
		M		43	35.7	48.1
		L		14.5	19.2	23.7
	Heating Water Flow Rate	H	L/h	868	1096	1667
		M		750	902	1505
		L		410	639	1015
	Heating Pressure Drop	H	kPa	20.7	18.8	53.3
		M		15.9	13.2	44.3
		L		5.4	7.1	21.8
	Water Content (Cooling)		L	2.8	3.8	5.4
	Water Content (Heating)			0.9	1.3	1.8

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB Inlet/Outlet water temperature: 7°C/12°C

Heating mode (4-pipe): Return Air Temperature 20°C Inlet/Outlet water temperature: 65°C/55°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.

PDWD

Double Skin Ducted

Sizes: 4 sizes
Models: 2-pipe · 4-pipe
Rows: 3R · 3R+1 · 4R · 4R+2 · 6R
Cooling: 4.3 - 37.1 kW
Heating: 3.8 - 35.1 kW
Air Flow: 575 - 5820 m3/h



Download IOMs & Revits
SCAN QR CODE



Model shown: PDWD High ESP · size 800

Applications needing **superior insulation benefit** from double skin casing that creates a **thermal barrier**, maintaining coolness or warmth depending on the active mode. **Ideal for tropical climates.**



FRONT RIGHT



BACK LEFT



SIDE RIGHT

Project Applications & References



Government: Post Offices · Courthouses · Town Halls · Embassies · Prisons · Military & Emergency Spaces



Healthcare: Hospitals · Clinics · Nursing Homes · Treatment Centers · Laboratories · Morgues



Commercial: Supermarkets · Stores · Shopping Malls · Gyms/Sports Facilities · Museums/Theaters · Airports



Industrial: Factories · Plants · Data Centers · Warehouses/Distribution Centers · Agricultural



Pharmascience

2024 · Canada (Quebec)
Industrial (Laboratory & Offices)

New construction
EC motor
2-pipe model



College Hill

2024 · New Zealand
Industrial (Warehouse)

Retrofit
EC motor
2-pipe model



Key Features & Components

-  **Unique double skin casing** that creates a thermal barrier for efficient cooling and heating.
-  Insulated drain pan, quick duct couplings, and accessible components mean **easy installation**.
-  Ideal for low temperature heat sources like **solar thermal collectors and heat pumps**.
-  **Multiple rows available (2- and 4-pipe):** More rows and coil surface area **improves heat exchange and latent capacity** for better efficiency and humidity control.

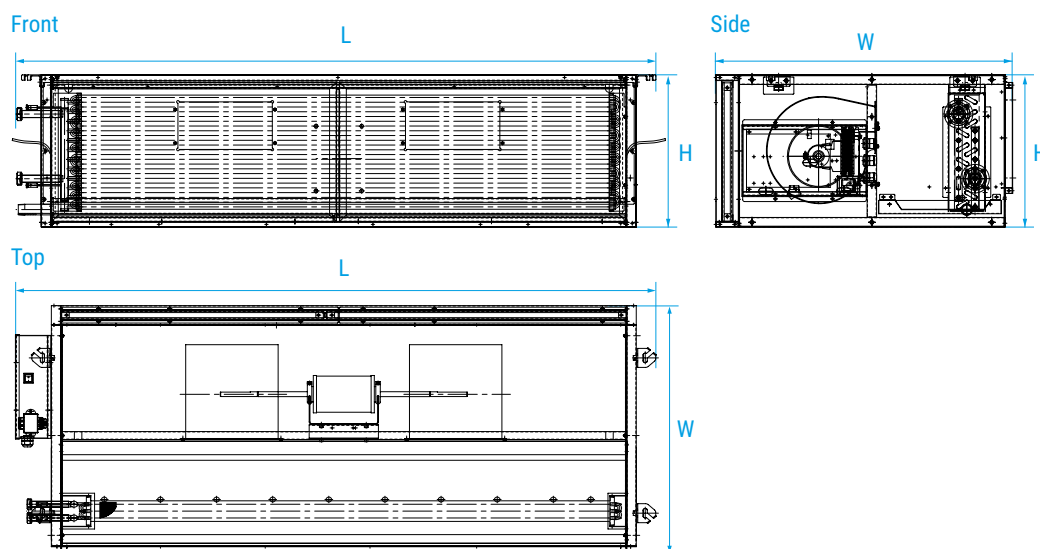
-  For high external static pressures up to 200 Pa / 0.8 in.wg. **Recommended: 150 Pa / 0.6 in.wg.**
-  Energy-efficient 0-10 VDC EC motor (**up to 30% energy savings** compared to AC motors).
-  **Copper tubes/headers**, mechanically expanded into corrugated aluminum fins tested up to 35-bar ².
-  **Ready to install package:** Internal painted steel drain pan, thick 25 mm (1") NBR insulation, manual air vent + water purge valve, G2 (MERV 4) filter & 25.4 mm (1") toolless filter rack.

Optional Accessories

- **I-Type Controllers:** Wired Wallpad
- **Valves:** pre-assembled **HYDR+VALVE KIT** ³
- **Drain pan:** stainless steel
- **Electric heater:** up to 6 kW
- **Filter:** G4 (MERV 8) or F8 (MERV 14)
- **Air:** Supply/return plenum, damper, diffuser & manual louver
- **Integrated transformer:** converts from 230V-115V to 24V for valve and thermostat compatibility
- **Disconnect switch:** integrated in control box
- **Customization:** available upon request ¹

Dimensions, Weights & Drawings

PDWD SIZES*			800	1200	1600	2000
Unit Dimensions	L	mm ["]	1252 [49 5/16]	1462 [57 9/16]	1762 [69 3/8]	2128 [83 3/4]
	W		780 [30 11/16]	780 [30 11/16]	780 [30 11/16]	780 [30 11/16]
	H		400 [14 15/16]	400 [14 15/16]	400 [14 15/16]	400 [14 15/16]
Net Weight		kg [lbs]	71 [157]	82 [181]	95 [209]	121 [267]



(1) Minimum order quantities apply. (2) Tested between 25-35 bar with a max operating limit of 16-bar. (3) HYDR+ VALVE KIT includes 2/3-way body valve, on-off/modulating actuator (24V or 110-240V), BSPT or NPT connectors, connection piping kit, 2x shut-off valves, strainer and manual balancing valve. (*) Indicated dimensions approximate within 5 mm or 1/16 ". Weights approximate within 1 kg (2.2 lbs). Based on 3R configuration. For other row configuration dimensions/weights, please contact us.

PDWD Double Skin Ducted

Technical Specifications

Hydronic Double Skin High ESP Ducted, 3R, 2-pipe with EC Motor

For other row configuration technical data, please contact us at hello@polaraircs.com.

UNIT GENERAL SPECS	PDWD-3R-[SIZE]-V-EC			800	1200	1600	2000
	Configuration			2-pipe			
	Number of Fan Blowers			2			4
	Power Supply (V/Ph/Hz)			208-240/1/50-60			
	Water Connections	Type		BSPT (Threaded Female)			
		In/Out	mm ["]	19.05 [3/4]			25.4 [1]
	Condensate Drainage			mm ["]	19.05 [3/4]		
AIR	Total Air Flow	H	m3/h	2050	2799	3062	5275
		M		1792	2487	2717	4876
		L		881	1249	1650	2880
	External Static Pressure	H	Pa	50			
		M					
		L					
COOLING	Total Cooling Capacity	H	kW	9.5	12.7	14.3	22.9
		M		8.5	11.6	13.0	21.5
		L		5.0	6.8	8.8	14.4
	Sensible Cooling Capacity	H	kW	6.9	9.2	10.3	16.7
		M		6.2	8.4	9.3	15.7
		L		3.5	4.7	6.2	10.3
HEATING	Total Heating Capacity	H	kW	9.8	13.1	14.9	23.7
		M		8.8	12.0	13.6	22.3
		L		5.1	7.0	9.2	15.0
	Recommended Electric Heater Capacity		kW	3.0	6.0	9.0	9.0
SOUND *	Pressure Level (Outlet)		dBA	58/56/47	56/52/45	60/58/50	65/63/60
	Pressure Level (Inlet + Radiated)			61/59/50	59/55/48	63/61/53	65/63/60
	Power Level (Outlet)			67/65/56	65/61/54	69/67/59	74/72/69
	Power Level (Inlet + Radiated)			70/68/59	68/64/57	72/70/62	74/72/69
ELECTRICAL	Power Input ¹	H	W	281	310	477	672
		M		208	151	304	546
		L		65	70	108	280
	Running Current ² (H)		A	2.4	2.7	4.1	5.8
HYDRONIC	Cooling Water Flow Rate	H	L/h	1621	2170	2458	3918
		M		1463	1986	2235	3679
		L		850	1162	1514	2476
	Cooling Pressure Drop	H	kPa	48.9	56.6	38.4	57.7
		M		40.6	48.3	32.4	51.5
		L		15.3	18.4	16.1	25.2
	Heating Water Flow Rate	H	L/h	1665	2238	2556	4071
		M		1502	2048	2325	3823
		L		873	1198	1575	2573
	Heating Pressure Drop	H	kPa	39.2	45.9	31.6	47.3
		M		32.5	39.1	26.6	42.3
		L		12.3	14.9	13.2	20.7
	Water Content		L	1.8	2.4	3.2	3.7

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB Inlet/Outlet water temperature: 7°C/12°C

Heating mode (2-pipe): Return Air Temperature 20°C Inlet/Outlet water temperature: 45°C/40°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.

Technical Specifications

Hydronic Double Skin High ESP Ducted, 3R+1, 4-pipe with EC Motor

For other row configuration technical data, please contact us at hello@polarairs.com.

UNIT GENERAL SPECS	PDWD-3R+1-[SIZE]-P-EC			800	1200	1600	2000	
	Configuration			4-pipe				
	Number of Fan Blowers			2			4	
	Power Supply (V/Ph/Hz)			208-240/1/50-60				
	Water Connections	Type		BSPT (Threaded Female)				
		In/Out	mm ["]	19.05 [3/4]			Cooling: 25.4 [1] Heating: 19.05 [3/4]	
	Condensate Drainage			mm ["]	19.05 [3/4]			
AIR	Total Air Flow	H	m3/h	1982	2727	3005	5159	
		M		1736	2383	2616	4743	
		L		786	1078	1506	2672	
	External Static Pressure	H	Pa	50				
		M						
		L						
COOLING	Total Cooling Capacity	H	kW	9.2	12.5	14.1	22.5	
		M		8.3	11.2	12.7	21.1	
		L		4.5	6.1	8.2	13.5	
	Sensible Cooling Capacity	H	kW	6.6	9.0	10.2	16.4	
		M		6.0	8.1	9.1	15.4	
		L		3.1	4.2	5.7	9.6	
HEATING	Total Heating Capacity	H	kW	7.7	10.3	11.7	18.7	
		M		6.9	9.2	10.5	17.6	
		L		3.8	5.0	6.8	11.3	
SOUND *	Pressure Level (Outlet)		dBA	58/56/47	56/52/45	60/58/50	65/63/60	
	Pressure Level (Inlet + Radiated)			61/59/50	59/55/48	63/61/53	65/63/60	
	Power Level (Outlet)			67/65/56	65/61/54	69/67/59	74/72/69	
	Power Level (Inlet + Radiated)			70/68/59	68/64/57	72/70/62	74/72/69	
ELECTRICAL	Power Input ¹	H	W	281	310	477	672	
		M		208	151	304	546	
		L		65	70	108	280	
	Running Current ² (H)			A	2.4	2.7	4.1	5.8
HYDRONIC	Cooling Water Flow Rate	H	L/h	1576	2133	2421	3852	
		M		1425	1917	2177	3617	
		L		773	1049	1406	2322	
	Cooling Pressure Drop	H	kPa	46.5	54.9	37.4	55.9	
		M		38.8	45.3	30.9	50.0	
		L		12.9	15.3	14.1	22.5	
	Heating Water Flow Rate	H	L/h	658	879	1002	1604	
		M		595	790	901	1507	
		L		323	432	582	967	
	Heating Pressure Drop	H	kPa	31.2	61.7	30.2	85.3	
		M		26.0	50.9	25.0	76.2	
		L		8.6	17.2	11.4	34.3	
	Water Content (Cooling)			L	1.8	2.4	3.2	3.7
	Water Content (Heating)				0.6	0.8	1.1	1.2

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB Inlet/Outlet water temperature: 7°C/12°C

Heating mode (4-pipe): Return Air Temperature 20°C Inlet/Outlet water temperature: 65°C/55°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.

HAHU-B Horizontal Mini Air Handling Unit

Sizes: 5 sizes
Models: 2-pipe · 4-pipe
Rows: 5R · 5R+2 · 6R · 6R+2
Cooling: 6.9 - 47.1 kW
Heating: 7.1 - 48.5 kW
Air Flow: 1319 - 8257 m3/h

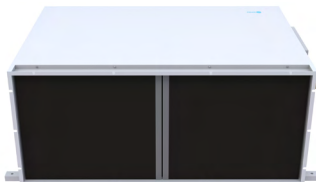


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SCAN QR CODE



Model shown: HAHU-B Horizontal AHU · size 800 · Agricultural application

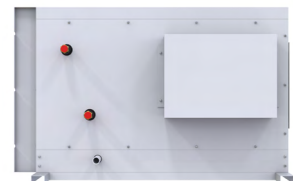
Designed for horizontal setups in **high-pressure environments**, this **hybrid AHU-fan coil unit** serves **niche applications** requiring customizable airflow and temperature control.



BACK



FRONT



SIDE

Project Applications & References



Government: Post Offices · Courthouses · Town Halls · Embassies · Prisons · Military & Emergency Spaces



Healthcare: Hospitals · Clinics · Nursing Homes · Treatment Centers · Laboratories · Morgues



Commercial: Supermarkets · Stores · Shopping Malls · Gyms/Sports Facilities · Museums/Theaters · Airports



Industrial: Factories · Plants · Data Centers · Warehouses/Distribution Centers · Agricultural



Taranaki Hospital

2023 · New Zealand
Healthcare (Hospital)

New construction
EC motor
4-pipe model



Office HQ

2025 · Costa Rica
Business (Large Office Headquarters)

Retrofit
EC motor
PCGH-3R & PDWA combination



Key Features & Components

-  **Unique double skin casing** that creates a thermal barrier for efficient cooling and heating.
-  **Access to components from bottom** with a lift down panel for easy maintenance.
-  **Airflow-diverting ductwork** and VAV boxes mean customizable temperatures across different zones.
-  **Ideal for low temperature heat sources like solar thermal collectors and heat pumps.**
-  **Multiple rows available (2- and 4-pipe):** More rows and coil surface area **improves heat exchange and latent capacity** for better efficiency and humidity control.

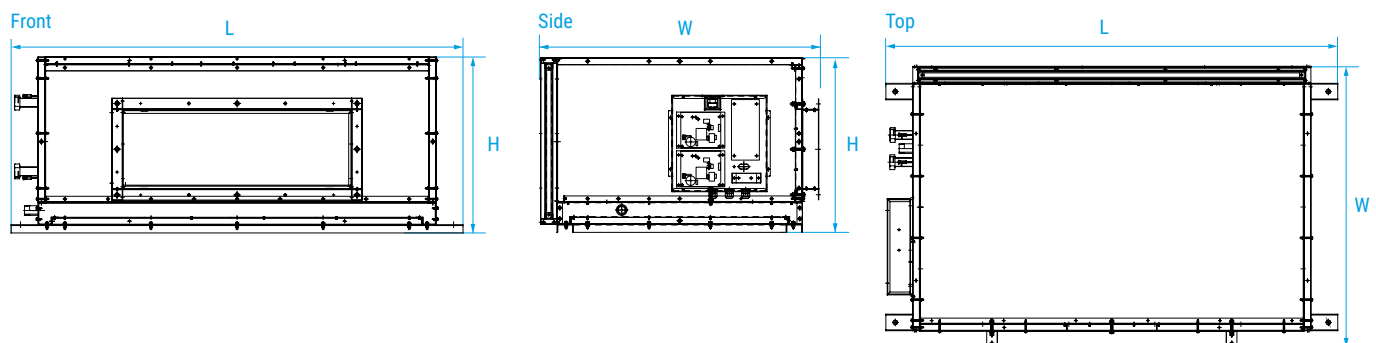
-  For high external static pressures up to 400 Pa / 1.60 in.wg. **Recommended: 250 Pa / 1 in.wg.**
-  4-pipe model for **simultaneous heating and cooling** throughout the year.
-  Energy-efficient 0-10 VDC EC motor (**up to 30% energy savings** compared to AC motors).
-  **Copper tubes/headers**, mechanically expanded into corrugated aluminum fins tested up to 35-bar ².
-  **Ready to install package:** Internal painted steel drain pan, thick 25 mm (1") NBR insulation, manual air vent + water purge valve, G2 (MERV 4) filter & 25.4 mm (1") toolless filter rack.

Optional Accessories

- I-Type Controllers:** Wired Wallpad
- Valves:** pre-assembled **HYDRC+VALVE KIT** ³
- Drain pan:** stainless steel
- Electric heater:** up to 9 kW
- Filter:** G4 (MERV 8) or F8 (MERV 14)
- Air:** Supply/return plenum, damper, diffuser & manual louver
- Integrated transformer:** converts from 230V-115V to 24V for valve and thermostat compatibility
- Disconnect switch:** integrated in control box
- Customization:** available upon request ¹

Dimensions, Weights & Drawings

HAHU-B SIZES*			200	300	400	600	800
Unit Dimensions	L	mm ["]	1280 [50 3/8]	1480 [58 1/4]	1680 [66 1/8]	1930 [76]	2130 [83 7/8]
	W		1120 [44 1/8]	1120 [44 1/8]	1120 [44 1/8]	1120 [44 1/8]	1190 [46 7/8]
	H		640 [25 3/16]	640 [25 3/16]	640 [25 3/16]	754 [29 11/16]	754 [29 11/16]
Net Weight	kg [lbs]		187 [412]	203 [448]	214 [472]	269 [593]	333 [734]



(1) Minimum order quantities apply. (2) Tested between 25-35 bar with a max operating limit of 16-bar. (3) HYDRC+ VALVE KIT includes 2/3-way body valve, on-off/modulating actuator (24V or 110-240V), BSPT or NPT connectors, connection piping kit, 2x shut-off valves, strainer and manual balancing valve. (*) Indicated dimensions approximate within 5 mm or 1/16". Weights approximate within 1 kg (2.2 lbs). Based on 5R configuration. For other row configuration dimensions/weights, please contact us.

HAHU-B Horizontal Mini Air Handling Unit

Technical Specifications

Hydronic Horizontal Mini AHU, 5R, 2-pipe with **EC Motor**

For other row configuration technical data, please contact us at hello@polaraircs.com.

UNIT GENERAL SPECS	HAHU-5R-[SIZE]-V-EC			200B	300B	400B	600B	800B
	Configuration			2-pipe				
	Number of Fan Blowers			1			2	1
	Power Supply (V/Ph/Hz)			208-240/1/50-60				380-460/3/50-60
	Water Connections	Type		BSPT (Threaded Female)				
		In/Out	mm ["]	31.75 [1 1/4]				
	Condensate Drainage			mm ["]	25.4 [1]			
AIR	Total Air Flow	H	m3/h	2114	2959	4235	6021	8257
		M		1939	2406	3610	4990	7558
		L		1372	1703	2553	3532	5340
	External Static Pressure	H	Pa	250				
		M						
		L						
COOLING	Total Cooling Capacity	H	kW	12.9	18.3	24.6	35.8	47.1
		M		12.1	15.6	21.8	31.0	44.0
		L		9.3	11.9	16.6	23.6	33.5
	Sensible Cooling Capacity	H	kW	9.0	12.6	17.3	25.1	33.2
		M		8.4	10.7	15.2	21.4	30.9
		L		6.4	8.0	11.5	16.1	23.1
HEATING	Total Heating Capacity	H	kW	13.1	18.4	25.2	36.5	48.5
		M		12.3	15.7	22.4	31.5	45.3
		L		9.4	12.0	17.1	24.0	33.5
	Recommended Electric Heater Capacity		kW	4.5	6.0	7.5	9.0	9.0
SOUND *	Pressure Level (Outlet)		dBA	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 ¹	H	W	445	551	800	1400	2580
		M		321	369	578	1011	1864
		L		111	127	200	350	645
	Running Current ² (H)		A	2.1	2.5	5.1	6.5	3.9
HYDRONIC	Cooling Water Flow Rate	H	L/h	2218	3130	4212	6136	8076
		M		2075	2674	3731	5306	7549
		L		1591	2037	2848	4039	5743
	Cooling Pressure Drop	H	kPa	27.8	58.5	31.3	45.4	44
		M		24.6	44.1	25.1	35	39
		L		15.3	27	15.5	21.4	23.8
	Heating Water Flow Rate	H	L/h	2245	3152	4327	6250	8307
		M		2101	2692	3833	5405	7765
		L		1611	2052	2926	4115	5907
	Heating Pressure Drop	H	kPa	20.5	43	23.7	34	33.6
		M		18.1	32.3	19	26.2	29.8
		L		11.3	19.8	11.7	16	34.5
	Water Content		L	7.4	9.1	10.9	12.6	15.2

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB

Inlet/Outlet water temperature: 7°C/12°C

Heating mode (2-pipe): Return Air Temperature 20°C

Inlet/Outlet water temperature: 45°C/40°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low..

Technical Specifications

Hydronic Horizontal Mini AHU, 5R+2, 4-pipe with EC Motor

For other row configuration technical data, please contact us at hello@polaraircs.com.

UNIT GENERAL SPECS	HAHU-5R+2-[SIZE]-P-EC			200B	300B	400B	600B	800B
	Configuration			4-pipe				
	Number of Fan Blowers			1			2	1
	Power Supply (V/Ph/Hz)			208-240/1/50-60				380-460/3/50-60
	Water Connections	Type		BSPT (Threaded Female)				
		In/Out	mm ["]	Cooling: 31.75 [1 1/4] · Heating: 25.4 [1]				
	Condensate Drainage			mm ["]	25.4 [1]			
AIR	Total Air Flow	H	m3/h	2019	2800	4082	5704	8111
		M		1874	2309	3512	4793	7457
		L		1336	1650	2500	3424	5285
	External Static Pressure	H	Pa	250				
		M						
		L						
COOLING	Total Cooling Capacity	H	kW	12.5	17.4	23.9	34.2	46.4
		M		11.8	15.2	21.4	30.1	43.4
		L		9.1	11.6	16.4	23.0	33.5
	Sensible Cooling Capacity	H	kW	8.7	12.1	16.8	24.1	32.7
		M		8.2	10.3	14.9	20.8	30.4
		L		6.2	7.8	11.3	15.7	23.1
HEATING	Total Heating Capacity	H	kW	13.4	18.1	25.2	35.9	48.3
		M		12.7	15.8	22.6	31.6	45.1
		L		9.7	12.0	17.3	24.1	34.9
SOUND *	Pressure Level (Outlet)		dBA	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 ¹	H	W	445	551	800	1400	2580
		M		321	369	578	1011	1864
		L		111	127	200	350	645
	Running Current ² (H)		A	2.1	2.5	5.1	6.5	3.91
HYDRONIC	Cooling Water Flow Rate	H	L/h	2139	2989	4091	5863	7959
		M		2028	2598	3671	5163	7432
		L		1555	1983	2813	3934	5743
	Cooling Pressure Drop	H	kPa	26.0	53.9	29.7	41.9	42.9
		M		23.6	41.9	24.4	33.3	37.9
		L		14.6	25.7	15.1	20.4	23.8
	Heating Water Flow Rate	H	L/h	1147	1555	2160	3074	4142
		M		1087	1352	1938	2706	3868
		L		834	1032	1485	2062	2989
	Heating Pressure Drop	H	kPa	15.2	31.3	17.3	45.6	27.8
		M		13.9	24.3	14.2	36.3	24.6
		L		8.6	14.9	8.8	22.2	15.5
	Water Content (Cooling)		L	7.4	9.1	10.9	12.6	15.2
	Water Content (Heating)			3.7	4.5	5.5	6.3	7.6

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB

Inlet/Outlet water temperature: 7°C/12°C

Heating mode (4-pipe): Return Air Temperature 20°C

Inlet/Outlet water temperature: 65°C/55°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low..

VAHU Vertical Mini Air Handling Unit

Sizes: 5 sizes
Models: 2-pipe · 4-pipe
Rows: 5R · 5R+2
Cooling: 8.8 - 46.5 kW
Heating: 9.2 - 47.6 kW
Air Flow: 1286- 8186 m3/h



Download IOMs & Revits
SCAN QR CODE

Designed for vertical setups in **high-pressure environments**, this **hybrid AHU-fan coil unit** serves **niche applications** requiring top and down flow distribution and customizable temperature control.



BACK



TOP



FRONT



SIDE RIGHT + LEFT

Project Applications & References



Government: Post Offices · Courthouses · Town Halls · Embassies · Prisons · Military & Emergency Spaces



Healthcare: Hospitals · Clinics · Nursing Homes · Treatment Centers · Laboratories · Morgues



Commercial: Supermarkets · Stores · Shopping Malls · Gyms/Sports Facilities · Museums/Theaters · Airports



Industrial: Factories · Plants · Data Centers · Warehouses/Distribution Centers · Agricultural



Occidental Railspur

2024 · USA (Washington)
Business (Offices)

Retrofit
EC motor
4-pipe model



Hotel Qawra

2024 · Malta
Hospitality (Hotel Facilities)

Retrofit
EC motor
2-pipe model



Key Features & Components

- 
Unique double skin casing that creates a thermal barrier for efficient cooling and heating.
- 
Top or down flow distribution options to adapt to ducting layouts and specific air delivery needs.
- 
Airflow-diverting ductwork and VAV boxes mean customizable temperatures across different zones.
- 
Ideal for low temperature heat sources like solar thermal collectors and heat pumps.
- 
Multiple rows available (2- and 4-pipe): More rows and coil surface area **improves heat exchange and latent capacity** for better efficiency and humidity control.
- 
For high external static pressures up to 200 Pa / 0.8 in.wg. Recommended: 150 Pa / 0.6 in.wg.
- 
4-pipe model for simultaneous heating and cooling throughout the year.
- 
Energy-efficient 0-10 VDC EC motor (up to 30% energy savings compared to AC motors).
- 
Copper tubes/headers, mechanically expanded into corrugated aluminum fins tested up to 35-bar ².
- 
Ready to install package: Internal steel drain pan, thick PU insulation 25 mm (1"), manual air vent + water purge valve, G2 (MERV 4) filter & 25.4 mm (1") toolless filter rack.

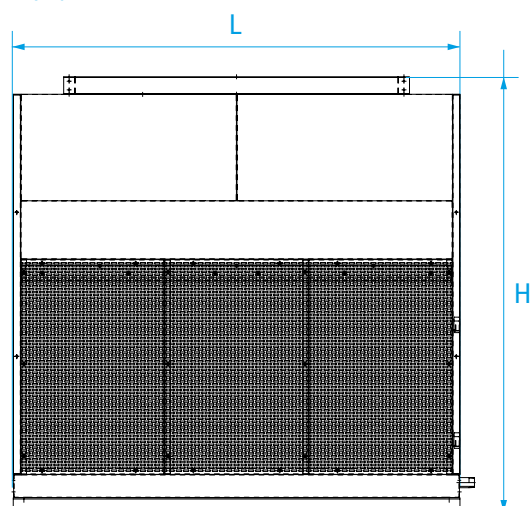
Optional Accessories

- **I-Type Controllers:** Wired Wallpad
- **Valves:** pre-assembled **HYDR+VALVE KIT** ³
- **Drain pan:** stainless steel
- **Electric heater:** up to 9 kW
- **Filter:** G4 (MERV 8) or F8 (MERV 14)
- **Air:** Supply/return plenum
- **Integrated transformer:** converts from 230V-115V to 24V for valve and thermostat compatibility
- **Disconnect switch:** integrated in control box
- **Customization:** available upon request ¹

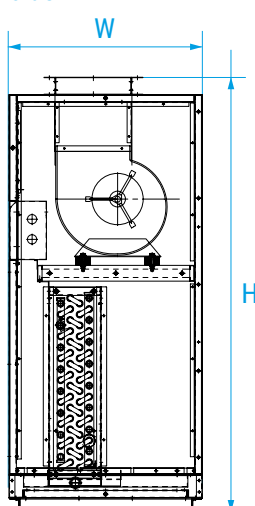
Dimensions, Weights & Drawings

VAHU SIZES*			200	300	400	600	800
Unit Dimensions	L	mm ["]	850 [33 7/16]	1050 [41 5/16]	1250 [49 3/16]	1550 [61]	1880 [74]
	W		670 [26 3/8]	670 [26 3/8]	670 [26 3/8]	670 [26 3/8]	670 [26 3/8]
	H		1490 [58 11/16]	1490 [58 11/16]	1490 [58 11/16]	1490 [58 11/16]	1490 [58 11/16]
Net Weight		kg [lbs]	194 (428)	224 (494)	279 (615)	350 (772)	391 (862)

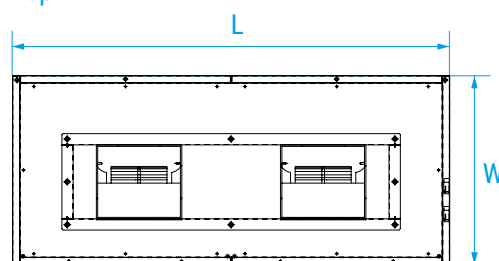
Front



Side



Top



(1) Minimum order quantities apply. (2) Tested between 25-35 bar with a max operating limit of 16-bar. (3) HYDR+ VALVE KIT includes 2/3-way body valve, on-off/modulating actuator (24V or 110-240V), BSPT or NPT connectors, connection piping kit, 2x shut-off valves, strainer and manual balancing valve. (*) Indicated dimensions approximate within 5 mm or 1/16 ". Weights approximate within 1 kg (2.2 lbs).

VAHU Vertical Mini Air Handling Unit

Technical Specifications

Hydronic Vertical Mini AHU, 5R, 2-pipe with **EC Motor**

UNIT GENERAL SPECS	VAHU-5R-[SIZE]-V-EC			200	300	400	600	800	
	Configuration			2-pipe					
	Number of Fan Blowers			1			2		
	Power Supply (V/Ph/Hz)			208-240/1/50-60					
	Water Connections	Type		BSPT (Threaded Female)					
		In/Out	mm ["]	31.75 [1 1/4]					
	Condensate Drainage			mm ["]	25.4 [1]				
AIR	Total Air Flow	H	m3/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	13.5	19.0	24.2	35.4	46.5	
		M		12.0	16.9	21.4	31.3	41.0	
		L		9.3	12.9	16.3	23.9	31.3	
	Sensible Cooling Capacity	H	kW	9.4	13.3	17.0	25.0	32.7	
		M		8.3	11.7	14.8	21.9	28.5	
		L		6.3	8.8	11.2	16.5	21.5	
HEATING	Total Heating Capacity	H	kW	13.6	19.2	24.7	36.6	47.6	
		M		12.1	17.0	21.8	32.5	42.1	
		L		9.3	13.0	16.7	24.8	32.1	
	Recommended Electric Heater Capacity		kW	4.5	6.0	7.5	9.0	9.0	
SOUND *	Pressure Level (Outlet)		dBA	73/77/73	78/82/78	80/84/80	81/85/81	83/87/82	
	Pressure Level (Inlet + Radiated)			70/74/70	75/79/75	77/81/77	78/82/78	80/84/79	
	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 ¹	H	W	412	850	1015	1700	2030	
		M		375	650	850	1300	1530	
		L		320	350	500	700	1000	
	Running Current ² (H)		A	3.6	7.4	8.8	14.8	17.7	
HYDRONIC	Cooling Water Flow Rate	H	L/h	2306	3262	4154	6065	7968	
		M		2053	2889	3668	5372	7035	
		L		1587	2205	2800	4101	5371	
	Cooling Pressure Drop	H	kPa	54.0	64.9	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	23.8	44.9	
		L		20.3	23.7	14.0	14.6	27.6	
	Water Content		L	5.1	6.8	8.5	10.3	12.8	

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB Inlet/Outlet water temperature: 7°C/12°C

Heating mode (2-pipe): Return Air Temperature 20°C Inlet/Outlet water temperature: 45°C/40°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.

Technical Specifications

Hydronic Vertical Mini AHU, 5R+2, 4-pipe with EC Motor

UNIT GENERAL SPECS	VAHU-5R+2-[SIZE]-P-EC			200	300	400	600	800	
	Configuration			4-pipe					
	Number of Fan Blowers			1			2		
	Power Supply (V/Ph/Hz)			208-240/1/50-60					
	Water Connections	Type		BSPT (Threaded Female)					
		In/Out	mm ["]	Cooling: 31.75 [1 1/4] · Heating: 25.4 [1]					
	Condensate Drainage			mm ["]	25.4 [1]				
AIR	Total Air Flow	H	m3/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							
		L							
COOLING	Total Cooling Capacity	H	kW	12.3	18.2	23.5	33.9	45.1	
		M		11.3	16.4	21.0	30.6	40.3	
		L		8.8	12.6	16.1	23.3	30.9	
	Sensible Cooling Capacity	H	kW	8.6	12.7	16.5	23.9	31.7	
		M		7.8	11.4	14.5	21.3	28.0	
		L		6.0	8.6	11.0	16.1	21.2	
HEATING	Total Heating Capacity	H	kW	12.9	21.4	24.8	35.5	46.5	
		M		11.8	19.3	22.2	32.0	41.5	
		L		9.2	14.7	17.0	24.5	31.9	
SOUND *	Pressure Level (Outlet)		dBA	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 ¹	H	W	412	850	1015	1700	2030	
		M		375	650	850	1300	1530	
		L		320	350	500	700	1000	
	Running Current ² (H)			A	3.6	7.4	8.8	14.8	17.7
HYDRONIC	Cooling Water Flow Rate	H	L/h	2117	3122	4033	5805	7736	
		M		1943	2818	3604	5240	6913	
		L		1513	2152	2765	4001	5304	
	Cooling Pressure Drop	H	kPa	46.3	59.9	36.1	35.4	69.7	
		M		39.7	49.9	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		7.4	17.7	32.0	32.1	61.1	
		L		4.7	10.9	19.8	19.8	37.9	
	Water Content (Cooling)			L	5.1	6.8	8.5	10.3	12.8
	Water Content (Heating)				2.1	2.7	3.4	4.1	5.1

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB Inlet/Outlet water temperature: 7°C/12°C

Heating mode (4-pipe): Return Air Temperature 20°C Inlet/Outlet water temperature: 65°C/55°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low.

Our Accessories

01 Controllers (only available with I-Type Control)

Wired Wallpad

WWP-V3 Standalone Control: Control each main unit's parameter settings and checks individually. Ideal for large applications with BMS where units need to be controlled independently.

WWP-V3-MS Group Control: Control up to 32 secondary units with a single main unit, allowing individual or grouped parameter settings and checks. Ideal for small applications where BMS is not feasible and simultaneous control of multiple units is needed.



Common Features: Touch control screen · Error display with addressable diagnostics (main unit Wallpad displays secondary unit address and error type) · Onboard room air temperature sensor

MODEL NAME	WWP V3 MS	WWP V3
Supply voltage	24 VAC / VDC	5 VDC
Control device	2-pipe / 2-pipe + electric heater / 4-pipe	
Functionality	Group Control up to 32 units	1 to 1
Installation	Flush mounting *	Surface mounting
Power source	24V transformer or an external source	Polar Air I-Type control PCB
Temperature setpoint range	16 - 30°C (60.8 - 86°F)	
Fan control	Low / Medium / High / AUTO fan speed	
Valve control	On/off or modulating / 2-way or 3-way / 6-way	
Mode control	Cooling / Dehumidification / Heating / Ventilation / AUTO mode / Sleep mode	
Key lock	Yes	
Louver swing	Yes	
Programmable	7 Days On/Off Timer	
Communication protocol	Modbus	Low voltage signal
BMS parameter settings	-	Read and/or write
Backlight	White	
Front color	Black	Black
Back color	White	Metal
Housing material	Flame-retardant ABS + Aluminum alloy	
Dimensions (W x D x H)	95 x 64.5 x 95 mm (3 3/4 x 2 9/16 x 3 3/4")	95 x 15 x 95 mm (3 3/4 x 9/16 x 3 3/4")

*Requires a flush mounting box for installation.

IRHS-V1 Infrared Handset

Global control functionality for all main and secondary units in a single installation.

Features: 1-directional infrared communication · Transmission range of up to 3m · Compact mechanical keypad with flame-retardant ABS casing · Lightweight and easy to use · On/Off timer · Fan, mode, and louver swing control · Sleep mode to gradually reduce fan speed for quieter operation and energy optimization · Onboard room air temperature sensor · 16 – 30°C temperature setpoint range · Optional bracket for wall mounting included · Batteries: AAA (not included)



02 Electrical

LED Receiver

Infrared receiver in ABS casing with up to 180 cm (70 7/8") length pre-wiring, which can be connected with I-Type controls only. LED lights show working or error mode. **Available for all models.**



Integrated Transformer

Converts 230V-115V mains power to 24V, eliminating the need for external transformers. This simplifies installation, and ensures compatibility with standard 24V control systems. **Available for all models.**



Disconnect Switch

Provides a means to safely isolate electrical power during maintenance or emergency shutdowns. **Available for all models except PHW Highwall and PCGH-3R 4-Way Cassette (already included).**



03 Valves

We offer a wide variety of valve options to meet different project needs, divided in 3 main packages:

Basic Kit

Includes 2 or 3-way body valve + on-off or modulating actuators, both in 24V or 110-240V, + BSPT or NPT connectors.

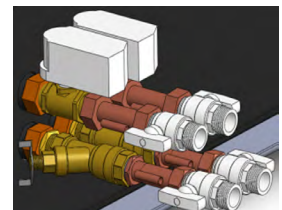
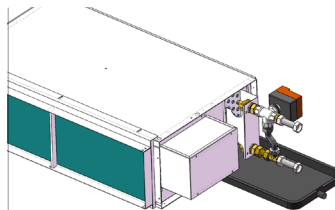
Standard Kit

Includes Basic Kit + connection piping kit to the unit.

Upgrade to HYDRO+VALVE KIT

Our new HYDRO+VALVE KIT is a **smart, cost-effective upgrade** that includes all components for an energy-efficient system. It's designed to make installation significantly faster and easier.

Includes Standard Kit + 2x shut off valves + strainer + manual balancing valve.



MODEL	BASIC	STANDARD	HYDRO+VALVE
PHW	✓ Integrated	-	✓ Outside of the casing
PCGH-3R	✓	-	✓
PFWB(C)	-	✓ Integrated in casing	✓
PDWA	✓	✓	✓
PDWC	✓	✓	✓
PDWB	✓	✓	✓
PDWD	✓	✓	✓
HAHU-B	✓	✓	✓
VAHU	✓	✓	✓

Belimo® valves are available for some models. Please contact us at hello@polaraircs.com.

Your **hydronic partner**: fan coils **57**

04 Drain Pans

All our hydronic fan coils come equipped with a **drain pan as part of the standard package**. These are made from either painted steel or ABS plastic (PHW and PCGH-3R models only).

Stainless steel drain pans are available as an optional accessory. They offer exceptional corrosion resistance in humid environments, structural integrity under thermal and mechanical stress, and a non-porous, easy-to-clean surface.



MODEL	ABS PLASTIC	PAINTED STEEL	STAINLESS STEEL
PHW	Standard	-	-
PCGH-3R	Standard integrated (inside unit)	-	-
PFWB(C)	-	Standard integrated	Optional
PDWA	-	Standard integrated	Optional
PDWC	-	Standard integrated	Optional
PDWB	-	Standard integrated (inside unit)	Optional
PDWD	-	Standard integrated (inside unit)	Optional
HAHU-B	-	Standard integrated (inside unit)	Optional
VAHU	-	Standard integrated (inside unit)	Optional

05 Condensate Pumps

Optional pre-installed **Sauermann or Standard condensate pumps with float switch** available for selected FCU models.

They ensure **safe condensate removal** in installations where gravity drainage isn't feasible - protecting both the unit and the space.



MODEL	STANDARD	OPTIONAL
PHW	-	✓
PCGH-3R	✓	-
PFWB(C)	-	-
PDWA	-	✓
PDWC	-	✓
PDWB	-	✓
PDWD	-	✓
HAHU-B	-	✓
VAHU	-	✓

06 Electric Heaters

We offer a wide variety of electric heater options to meet different project needs. Each Heater Kit includes an **auto-klixon thermal switch**, and a **fuse/contact relay** that is factory wired & tested.

Non-standard electric heater sizes are available upon request - please contact us at hello@polaraircs.com.

PTC Kit

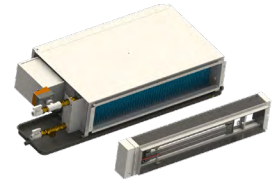
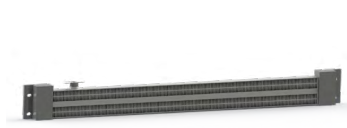
With 2-stage safety cut-out and can be configured as booster heaters or primary heaters.

Tube Kit

With 2-stage safety, cut-outs can be configured as booster heaters or primary heaters.

Module Kit

With 2-stage safety, cut-outs, our modules are easy to connect to the control box with mounting fixtures. The electric heater configuration is selectable by Modbus protocol.



MODEL	PTC EH KIT	TUBE EH KIT	MODULE EH KIT
PHW	From 1 to 1.5 kW	-	-
PCGH-3R	-	From 1 to 4 kW	-
PFWB(C)	From 1 to 3 kW	-	-
PDWA	-	-	From 1.5 to 6 kW
PDWC	-	-	From 2 to 6 kW
PDWB	-	-	From 3 to 6 kW
PDWD	-	-	From 3 to 9 kW
HAHU-B	-	-	From 4.5 to 9 kW
VAHU	-	-	From 4.5 to 9 kW

07 NBR Insulation

All our fan coils come standard with **NBR insulation**, with **upgrade options available**. Thicker insulation enhances thermal performance by reducing heat exchange through casing and piping for:

- **Better temperature stability** in conditioned spaces.
- **Reduced energy consumption**, as the system doesn't need to compensate for thermal losses.



MODEL	STANDARD	OPTIONAL (mm)
PHW	5 mm (0.2")	-
PCGH-3R	5 mm (0.2")	-
PFWB(C)	5 mm (0.2")	-
PDWA	5 mm (0.2")	10mm (0.4") / 15 mm (0.6") / 25 mm (1")
PDWC	5 mm (0.2")	
PDWB	5 mm (0.2")	10mm (0.4") / 15 mm (0.6")
PDWD	25 mm (1")	-
HAHU-B	25 mm (1")	-
VAHU	25 mm (1")	-

08 Filters

All our fan coils come equipped with standard filtration. Optional upgrades are available if your project requires enhanced air quality.

Toolless filter racks for Ducted models are included for easy and quick maintenance and installation.

Standard included

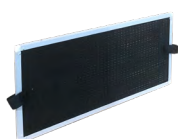
G2 (MERV 2) – Ideal for basic residential or light commercial environments where minimal filtration is sufficient.

Upgrade

G4 (MERV 8) – Captures finer particles such as mold spores and dust mites, making it suitable for hygiene-sensitive areas and improving overall indoor air quality.

Premium

F8 (MERV 14) – Designed for specialized or large-scale industrial applications, including cleanrooms and pharmaceutical facilities.



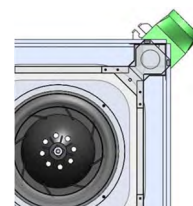
MODEL	STANDARD		UPGRADE	PREMIUM
	Toolless Filter Rack	G2 (MERV 4)	G4 (MERV 8)	F8 (MERV 14)
PHW	-	3 mm (1/8")	-	-
PCGH-3R	-	3 mm (1/8")	9.5 mm (3/8")	-
PFWB(C)	-	6.4 mm (1/4")	9.5 mm (3/8") on vertical air return only	-
PDWA	✓	7 mm (9/32")	50 mm (2")	100 mm (4")
PDWC	✓	7 mm (9/32")	50 mm (2")	100 mm (4")
PDWB	✓	25 mm (1")	50 mm (2")	100 mm (4")
PDWD	✓	25 mm (1")	50 mm (2")	100 mm (4")
HAHU-B	✓	25 mm (1")	50 mm (2")	100 mm (4")
VAHU	✓	25 mm (1")	50 mm (2")	100 mm (4")

09 others

Flanges for fresh air

Allows up to 30% of unit air flow up to a maximum of 100m³/h (59CFM) as fresh air intake (15% per connection with a maximum of 2 connections). Includes knock out fresh air connection holes. ABS plastic flanges use only two screws for fixture to unit.

Available for PCGH-3R 4-Way Cassette models.



Flanges for branch duct

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

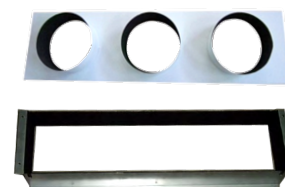
Available for PCGH-3R 4-Way Cassette models.



Supply/Return Air Plenum

Optional supply and return plenums allow ducted connection to the unit, improving air distribution, reducing noise, and supporting concealed or ceiling-integrated installations without compromising airflow or efficiency. There are 2 options available: modulating or on/off damper.

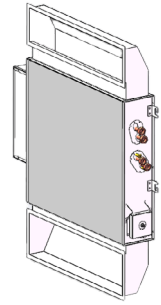
Available for Ducted and AHU models.



90° Elbow Kit

Designed to redirect airflow 90° (typically forward-facing) when the unit is installed within a wall or recessed space, improving circulation and supporting clean, flush-fit installations without compromising performance.

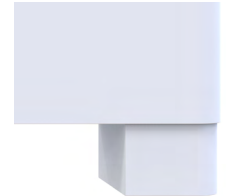
Available for uncased PFWB Universal Console.



Supporting Feet

Our Console fan coils offer two supporting feet options, designed for Exposed applications, enhancing aesthetics and flexibility in residential, hospitality, and retrofit settings.

Available for PFWBC Cased Universal Console.

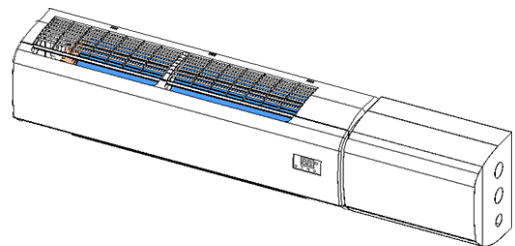


PFWBC Universal Plastic

10 Customization

We offer a wide range of customization options to meet specific project needs. Customizations are subject to **minimum order quantities**, so please contact us at hello@polaraircs.com to discuss feasibility.

- Row & Connection Configurations
- Unit Dimensions
- Casing Color
- Air Return & Supply Direction
- Electrical Connections
- Component Repositioning
- Hydraulic Connection Kit
- Horizontal to Vertical Application (vice versa)
- Tropicalization treatments for dehumidification



Polar Air fan coil customization generally has 3 phases:



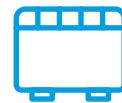
01 Study

We assess technical requirements, options, and minimum order quantities:
approx. 2–4 weeks



02 Approval

Technical drawings and specs are reviewed and confirmed with the client:
approx. 2–4 weeks



03 Mockup

A sample unit is produced and approved before mass production:
approx. 6–8 weeks



How we **support our clients**

Polar Air empowers engineers, designers, and contractors with precision-engineered HVAC solutions built to perform.

From concept to installation, we support professionals who demand **reliability, efficiency, and technical excellence**. Our deep **understanding of your challenges drives us** to deliver solutions to **meet and exceed your standards**.

01 **Engineers**

- Design with precision using **advanced selection tools**.
- **Customize systems** to exact project specs.
- Integrate seamlessly **with BMS**.
- Robust components for **long-term performance**.



02 **Contractors**

- Install fast and efficiently with **handy IOMs**.
- **Simplify logistics** with dedicated Polar Air team.
- Access **hands-on training** for install and service.
- Count on **responsive support and spare parts**.



03 **Architects**

- Elevate aesthetics with **sleek, discreet units**.
- Sustainability with **energy-efficiency functions**.
- **Maximize space** with compact, scalable solutions.
- Collaborate with **Polar Air engineering team**.



04 **Property Owners**

- **Cut utility costs** with energy-saving systems.
- **Boost property value** with advanced climate tech.
- Enjoy comfortable, **quiet indoor spaces**.
- Easily manage units with **user-friendly controls**.



Polar Air **professional tools**

From design to delivery, our suite of professional tools is built to **support your workflow every step of the way.**

Whether you're specifying equipment, accessing technical resources, or expanding your expertise, this section connects you with learning opportunities and **resources that make your job easier - and your results even better.**

01

Build better with BIM

Design ideal indoor climates with **our Revit files.**



SCAN QR CODE

02

Learn. Lunch. Level Up.

Book an **educational or training session** at your office.



SCAN QR CODE

03

Find your ideal fit

Configure fan coil models with our **PASELECT software.**



SCAN QR CODE

04

See us in action

Explore videos on our YouTube channel **@PolarAirHVAC.**



SCAN QR CODE

05

Connect. Follow. Share.

See what's new on our LinkedIn page: **company/polar-aircs.**



SCAN QR CODE

06

www.polaraircs.com

Explore. Discover. Decide.

Visit **www.polaraircs.com** for product info, IOMs and specs.



SCAN QR CODE

Find more **Project References**

Browse our project references to see real-world applications of our fan coil solutions. You can filter by location, product, year, or application, and export your list into a handy PDF.

Explore them all at **<https://polaraircs.com/project-references/>.**



See all References:
SCAN QR CODE

Frequently Asked Questions

To help you make the most informed decisions, we've compiled answers to the most common questions our customers ask.

Whether you're curious about customization options, stock availability, or manufacturing details, this section is designed to provide clear, concise information to support your project planning and purchasing process.



AVAILABILITY

Do you offer customization on fan coils?

Polar Air offers extensive customization options including:

- Row configurations for enhanced dehumidification
- Coil sequencing for higher heating capacity
- Connection and drainage side selection
- Unit dimension adjustments for retrofit projects
- Color customization for decorative units
- Airflow direction and plenum options
- Electrical connection modifications
- Tropicalization for dehumidification

Minimum order quantities apply. Please contact your Polar Air representative or email us at hello@polaraircs.com.

Do you manufacture in Spain? Where is the factory located?

Our fan coils are manufactured in our global quality-controlled facilities. From there, they are shipped using our extensive logistics network (using our dedicated in-house team) to our warehouses in Spain and Canada, or directly to the designated project location. This setup ensures both cost-efficiency and timely delivery for projects worldwide.

Which models do you have in stock in Spain and in Canada?

At our global warehouses, we stock the most in-demand models and configurations, including plastics like highwall and cassette (EC motor and 2-pipe models), and the most common spare parts. Please email us at hello@polaraircs.com for an up to date stock list or quote.

What is the production and delivery time?

Polar Air can deliver anywhere in the world. See below for our general manufacturing and transport times. For specific manufacturing or transport times, please contact your Polar Air representative or email us at hello@polaraircs.com.

Manufacturing:

For container volumes: 4 to 6 weeks

Transport:

SEA FREIGHT	AIR FREIGHT	STOCK
Up to 8 weeks	Up to 10 days	Up to 7 days

Where can I find a Polar Air representative?

The Polar Air website features a dedicated section for all Polar Air representatives worldwide:

<https://polaraircs.com/partner-rep-locator/>

If you do not see a representative in your area, please email us at hello@polaraircs.com and we'll be in touch to discuss your needs.

Are your products compliant with local regulations?

Polar Air fan coils are CE and cETLus certified, and many models are also CB, Eurovent and AHRI certified, ensuring compliance with global standards. To find out the specific certifications for each model, please see the product sections (pages 20-55) in this catalog, our PASELECT software, or contact your Polar Air representative.



PRODUCT

What **filter options are available?**

Standard units come with nylon MERV 4 filters, with MERV 8 or MERV 14 available as an upgrade. Filter type and availability depend on the product range. Please see the **accessories sections (pages 56-61)** in this catalog or **contact your Polar Air representative**.

What's the **lifespan of the motor?**

There are several conditions, including ambient temperature, maintenance, and temperature, that must be considered when determining the lifespan of a specific part. **In ideal working conditions, our EC motors can last up to 5-6 years of continuous 24-hour operation (40,000 hours).**

Are **Polar Air fan coils noisy?**

The sound pressure and power levels differ between models and sizes. To help you, please see the **product sections (pages 20-55)** in this catalog. We also have sound data tables available upon request. Please **contact your Polar Air representative** or email us at hello@polaraircs.com.

Do you offer **integrated valves or condensate pumps?**

Many models support optional 2/3-way valves and integrated condensate pumps, especially highwall and cassette units. Please see the **accessories section (pages 56-61)** in this catalog, or **contact your Polar Air representative**.

What **pressure does the coil stand?**

The maximum recommended working pressure of our coil is 16 bar (232 PSI). To ensure safety and reliability, all Polar Air coils undergo rigorous pressure testing from 25 bar (363 PSI) to 35 bar (508 PSI).



AFTER SALES

What is the **warranty period and what does it cover?**

Polar Air products are supported by a standard warranty, which may vary depending on the market. The warranty covers components that Polar Air confirms to have a manufacturing defect under normal operating and maintenance conditions. **All warranty-related issues and queries must be reported through the Helpdesk.**

For full conditions and exclusions, please refer to the official warranty document available on our website: <https://polaraircs.com/support-center/warranty/>

Do you have **spare parts available in stock?**

We stock the most common **spare parts in our global warehouses**, but availability is subject to change. If the item you need is not in stock, we can order it from our manufacturing facilities. Delivery estimates are up to 2 weeks.

How can **Polar Air After-Sales support you?**

Polar Air has a **dedicated ticketing system (through Polar Global Group)** to submit requests for after-sales support. Our response time is generally 1-2 working days. It includes options for product, installation, spare parts, and warranties.

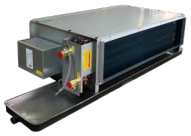


Submit a Helpdesk ticket:
[SCAN QR CODE](#)

Fan coil quick reference table

This quick reference table provides a clear, [at-a-glance overview of our complete fan coil unit range](#).

Designed to support fast and confident selection, it highlights key performance metrics - such as cooling and heating capacities, and configuration options - across our ducted and decorative models. Whether you're specifying for residential, commercial, or specialty applications, this table helps you quickly **identify the most suitable solution for your project**.

CATEGORY	MODEL	TYPE	IMAGE	PAGE NUMBER	SIZES	ROWS	VOLTAGE	ESP	RECOMMENDED CONDITIONS	
DECORATIVE	PHW	Highwall		20	4	2R, 2R+1	208 - 240	-	-	
DECORATIVE	PCGH-3R	Cassette		24	5	3R, 2R+1	208 - 240	-	-	
DECORATIVE	PFWB(C)	Universal Console		28	5	3R, 3R+1 4R	208 - 240	-	-	
DUCTED	PDWA	Medium ESP		32	5	3R, 3R+1, 3R+2 4R, 4R+2 6R	208 - 240	15 - 110 Pa 0.06 - 0.44 in.wg	75 Pa 0.30 in.wg	
DUCTED	PDWC	High ESP		36	5	3R, 3R+1, 3R+2 4R, 4R+2 6R	208 - 240	50 - 180 Pa 0.20 - 0.72 in.wg	120 Pa 0.50 in.wg	
DUCTED	PDWB	Built-In Pan High ESP		40	3	3R, 3R+1, 3R+2 4R, 4R+2 6R	208 - 240	50 - 200 Pa 0.20 - 0.80 in.wg	150 Pa 0.60 in.wg	
SPECIALTY	PDWD	Double Skin High ESP		44	4	3R, 3R+1, 3R+2 4R, 4R+2 6R	208 - 240	50 - 200 Pa 0.20 - 0.80 in.wg	150 Pa 0.60 in.wg	
SPECIALTY	HAHU-B	Horizontal AHU High ESP		48	5	5R, 5R+2 6R, 6R+2	208 - 240 380 - 460	100 - 400 Pa 0.40 - 1.60 in.wg	250 Pa 1.00 in.wg	
SPECIALTY	VAHU	Vertical AHU High ESP		52	5	5R, 5R+2	208 - 240	50 - 200 Pa 0.20 - 0.80 in.wg	150 Pa 0.60 in.wg	

Fan coil accessories

Explore our premium accessories range, designed to enhance your product and unlock its full potential.
See page 56-61 for the complete collection.



	CAPACITY (kW)	COOLING	HEATING	CERTIFICATIONS
	1.5 6.6 1.3 6.6			    
	1.3 15.0 1.5 15.5			   
	1.2 11.7 1.1 12.3			    
	1.6 13.4 1.3 13.0			    
	3.2 30.1 2.3 27.6			    
	4.4 25.3 2.4 27.0			 
	4.3 37.1 3.8 35.1			 
	6.9 47.1 7.1 48.5			 
	8.8 46.5 9.2 47.6			 



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