

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**



Download IOMs & Revits
 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:

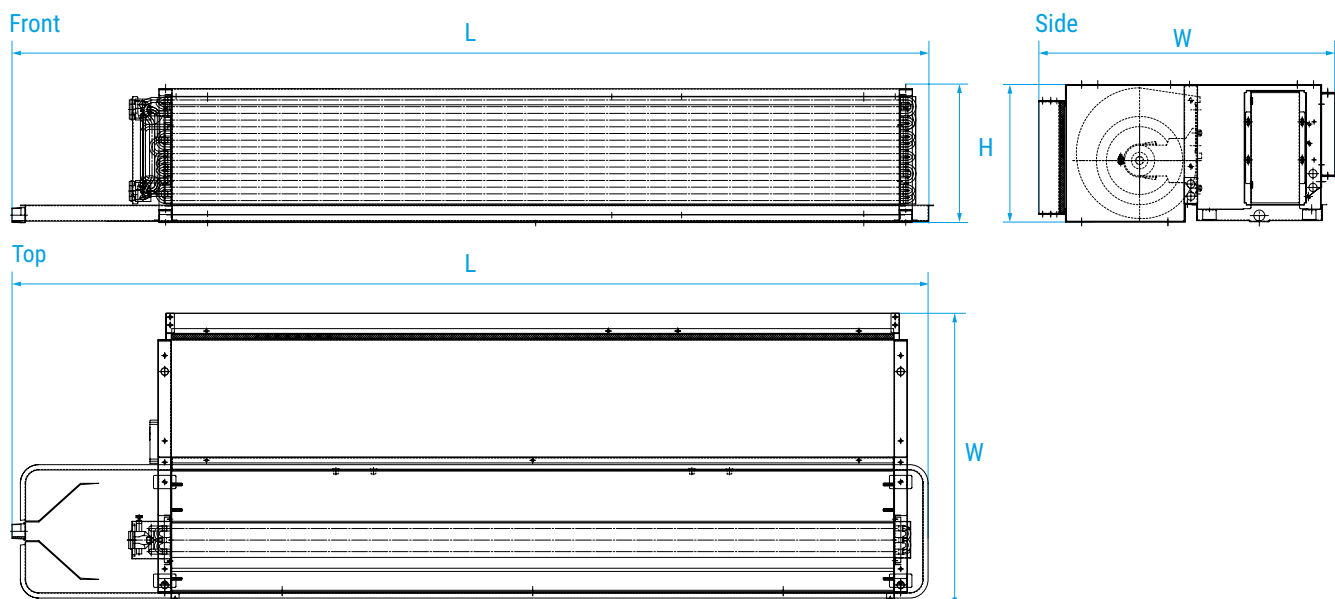
External painted steel drain pan, 5 mm (0.2") NBR insulation, manual air vent + water purge valve, G2 (MERV 4) filter & 25.4 mm (1") toolless filter rack.

Optional Accessories

- **I-Type Controllers:** Wired Wallpad
- **Valves:** pre-assembled **HYDRC+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) 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.

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.

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