

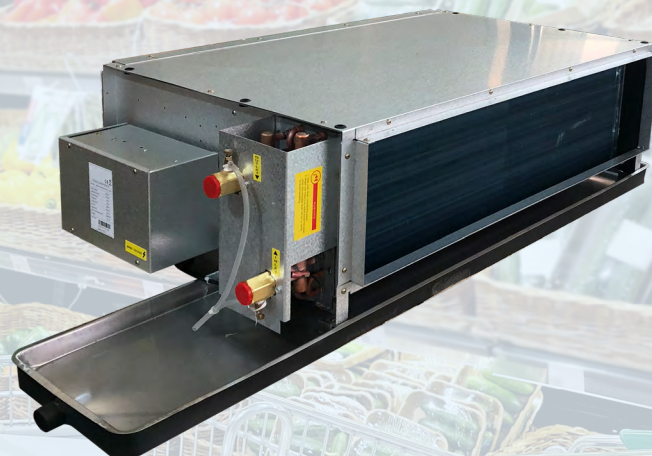
PDWC

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**

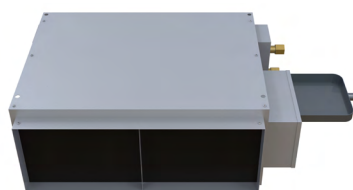


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SCAN QR CODE

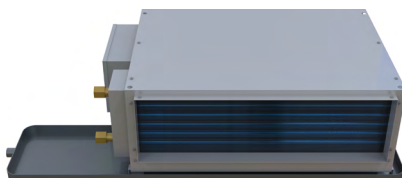


Model shown: PDWC High ESP · size 800

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:

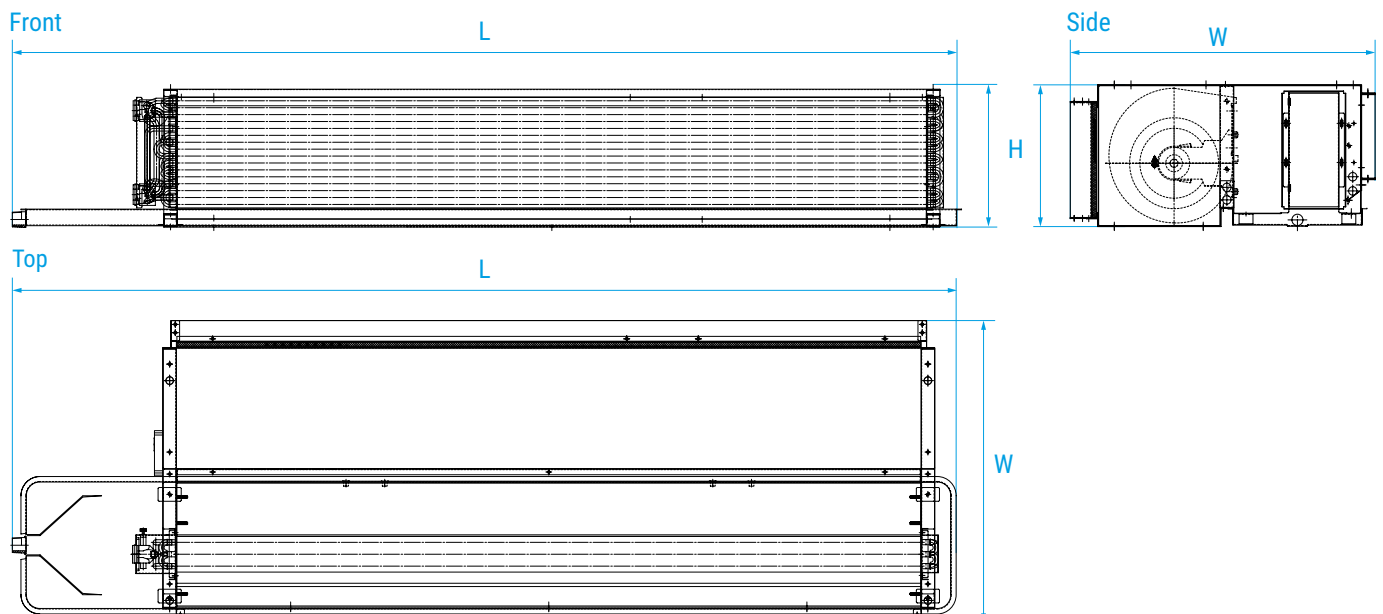
External painted steel drain pan, 5 mm (0.2") NBR insulation, manual air vent + water purge valve, G2 (MERV 4) filter & 25.4 mm (1") toolless filter rack.

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				
	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	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	5.5
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	3.8

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 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.