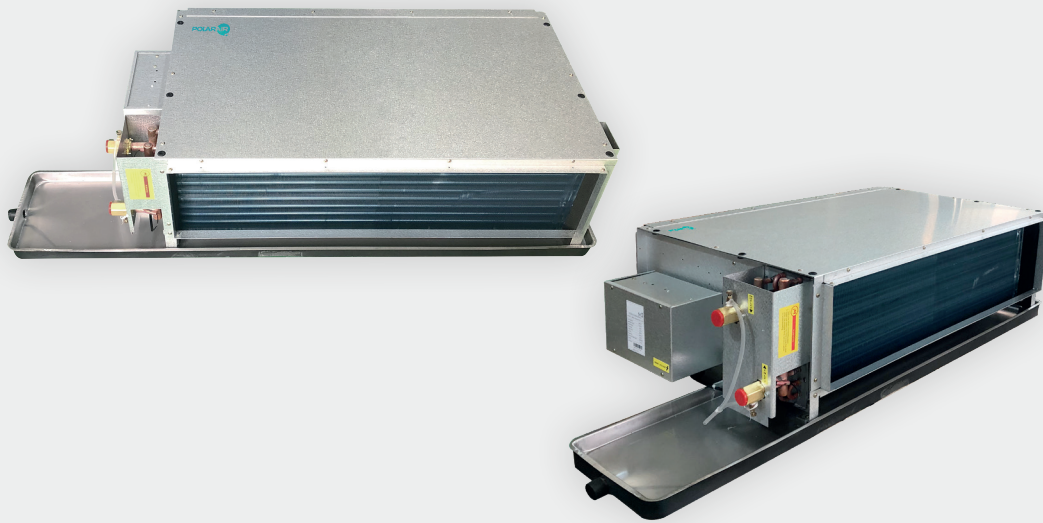
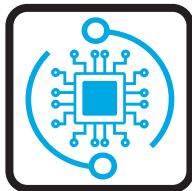


PDWC - HIGH ESP DUCTED



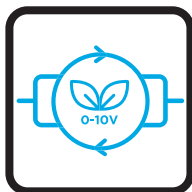
FEATURES



CONTROL FLEXIBILITY

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

Please refer to page 14 for further information on controls.



ENERGY EFFICIENT MOTORS

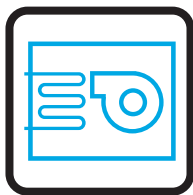
EC motors allow the centrifugal fan to operate at optimum airflow performance, energy efficiency and quiet operation. EC motors include driven control PCB, constant torque, permanent magnet and 3 speeds pre-set or modulating with a 0-10 VDC signal for precise air balancing control. AC motors with 3 speed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



FAN BLOWER

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

STRUCTURE



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

WATER COILS



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

READY TO INSTALL



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

KEY POINTS

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



ACCESSORIES

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

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

TECHNICAL SPECIFICATIONS

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

UNIT GENERAL SPECS	PDWC-3R-[Size]-V-ECM			400	500	600	800	1000	1400	1600	2000
	Configuration			2-pipe							
	Number of Fan Blowers			Single		Twin					Four
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60							
AIR	Total Air Flow	H	m3/h	604	835	1660	1918	2261	2677	2996	4422
		M		584	716	1540	1955	2107	2487	2717	4143
		L		635	556	993	1063	1203	1788	2036	3059
	External Static Pressure	H	Pa	89	68	65	67	72	69	63	69
		M		50	50	50	50	50	50	50	50
		L		22	15	9	7	7	12	18	14
COOLING	Total Cooling Capacity	H	kW	3.21	4.34	7.90	9.29	10.84	13.00	14.43	19.51
		M		3.13	3.85	7.47	9.40	10.28	12.33	13.38	18.53
		L		3.32	3.16	5.37	5.93	6.63	9.49	10.70	14.75
	Sensible Cooling Capacity	H		2.27	3.06	5.72	6.69	7.76	9.28	10.37	14.40
		M		2.21	2.70	5.39	6.77	7.32	8.77	9.56	13.65
		L		2.36	2.20	3.79	4.15	4.60	6.64	7.54	10.71
HEATING	Heating Capacity	H	kW	3.30	4.43	8.03	9.42	12.16	13.29	14.87	20.45
		M		3.21	3.93	7.59	9.54	11.57	12.61	13.84	19.42
		L		3.41	3.23	5.47	6.01	7.50	9.82	11.09	15.46
	Max. Electric Heater Capacity		kW	3			6				
SOUND	Pressure Level (outlet)		dB(A)	55/50/45	56/53/43	56/54/47	58/56/47	56/52/45	59/57/47	60/58/50	64/62/52
	Pressure Level (Inlet + Radiated)			57/53/48	59/56/46	59/57/50	61/59/50	59/55/48	62/60/50	63/61/53	67/65/55
	Power Level (outlet)			63/59/54	65/62/52	65/63/56	67/65/56	65/61/54	68/66/56	69/67/59	73/71/61
	Power Level (Inlet + Radiated)			66/62/57	68/65/55	68/66/59	70/68/59	68/64/57	71/69/59	72/70/62	76/74/64
ELECTRICAL	Power Input	H	W	152	202	195	281	310	413	477	637
		M		84	121	137	208	151	246	304	461
		L		32	34	62	65	70	72	108	142
	Running Current (H)		A	1.32	1.76	1.70	2.44	2.70	3.59	4.15	5.54
HYDRONIC	Cooling Water Flow Rate	H	L/h	550	744	1355	1593	1859	2229	2474	3344
		M		536	659	1280	1611	1762	2114	2294	3176
		L		569	542	920	1016	1136	1627	1834	2529
	Cooling Pressure Drop	H	kPa	17.1	31.8	54.9	48.6	39.8	61.2	41.0	43.2
		M		16.3	25.6	49.5	49.6	36.1	55.6	35.8	39.4
		L		18.2	18.0	27.3	21.6	16.4	34.7	23.9	26.1
	Heating Water Flow Rate	H	L/h	566	759	1377	1616	2084	2278	2549	3505
		M		551	673	1301	1635	1984	2161	2372	3329
		L		584	553	937	1031	1285	1683	1902	2651
	Heating Pressure Drop	H	kPa	14.9	27.7	37.5	32.1	40.7	53.9	33.4	28.3
		M		14.2	22.3	33.8	32.8	37.2	49.0	29.3	25.8
		L		15.9	15.7	18.7	14.3	17.0	31.2	19.7	17.1

EUROVENT TESTING CONDITIONS:

a. Cooling mode (2-pipe):

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

b. Heating mode (2-pipe):

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

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

TECHNICAL SPECIFICATIONS

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

UNIT GENERAL SPECS	PDWC-3R+1-[Size]-P-ECM			400	500	600	800	1000	1400	1600	2000
	Configuration			4-pipe							
	Number of Fan Blowers			Single		Twin					Four
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60							
AIR	Total Air Flow	H	m3/h	702	854	1693	1967	2350	2727	3005	4534
		M		536	674	1440	1846	1983	2383	2616	3964
		L		301	349	566	650	707	1078	1506	1935
	External Static Pressure	H	Pa	50							
		M									
		L									
COOLING	Total Cooling Capacity	H	kW	3.58	4.41	8.03	9.46	11.17	13.19	14.43	19.84
		M		2.93	3.69	7.13	9.03	9.79	11.95	12.96	18.01
		L		1.85	2.20	3.47	4.03	4.33	6.43	8.51	10.27
	Sensible Cooling Capacity	H		2.56	3.12	5.81	6.81	8.00	9.42	10.37	14.65
		M		2.06	2.58	5.13	6.49	6.93	8.46	9.22	13.23
		L		1.27	1.51	2.39	2.76	3.02	4.40	5.91	7.32
HEATING	Heating Capacity	H	kW	3.05	3.67	6.69	7.84	9.27	10.68	11.94	16.86
		M		2.49	3.07	5.91	7.53	8.10	9.67	10.74	15.14
		L		1.58	1.83	2.88	3.44	3.63	5.30	6.93	8.72
SOUND	Pressure Level (outlet)		dB(A)	55/50/45	56/53/43	56/54/47	58/56/47	56/52/45	59/57/47	60/58/50	64/62/52
	Pressure Level (Inlet + Radiated)			57/53/48	59/56/46	59/57/50	61/59/50	59/55/48	62/60/50	63/61/53	67/65/55
	Power Level (outlet)			63/59/54	65/62/52	65/63/56	67/65/56	65/61/54	68/66/56	69/67/59	73/71/61
	Power Level (Inlet + Radiated)			66/62/57	68/65/55	68/66/59	70/68/59	68/64/57	71/69/59	72/70/62	76/74/64
ELECTRICAL	Power Input	H	W	152	202	195	281	310	413	477	637
		M		84	121	137	208	151	246	304	461
		L		32	34	62	65	70	72	108	142
	Running Current (H)		A	1.32	1.76	1.70	2.44	2.70	3.59	4.15	5.54
HYDRONIC	Cooling Water Flow Rate	H	L/h	614	756	1376	1621	1914	2262	2474	3401
		M		502	633	1223	1548	1678	2049	2222	3087
		L		317	377	595	690	742	1101	1459	1761
	Cooling Pressure Drop	H	kPa	20.9	32.8	56.5	50.1	41.9	62.8	41.0	44.5
		M		14.5	23.8	45.6	46.2	33.1	52.6	33.8	37.4
		L		6.4	9.4	12.5	10.8	7.6	17.2	15.8	13.6
	Heating Water Flow Rate	H	L/h	261	315	574	672	794	915	1023	1445
		M		214	263	507	646	694	829	920	1298
		L		135	157	247	295	311	454	594	748
	Heating Pressure Drop	H	kPa	25.7	39.9	21.9	35.9	51.1	24.1	33.4	68.7
		M		17.9	29.0	17.5	33.4	40.1	20.2	27.6	56.6
		L		7.8	11.4	4.8	8.1	9.4	6.8	12.5	21.0

EUROVENT TESTING CONDITIONS:

a. Cooling mode (4-pipe):

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

b. Heating mode (4-pipe):

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

LOOKING FOR DIFFERENT CONFIGURATIONS?

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

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

Further information can be accessed through:

PASelect Selection software

Polar Air CS website

By **contacting your sales representative**

+2 PIPE CONFIGURATIONS AVAILABLE

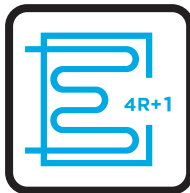


4 Row Coil configurations are available for applications requiring higher capacity. Other advantages include:

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

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

+4 PIPE CONFIGURATIONS AVAILABLE

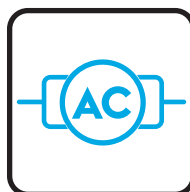


4 Rows Cooling +1 Row Heating Coil configurations are available for 4 pipe systems where more heating is required. Other advantages include:

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

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

AC MOTOR AVAILABLE



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

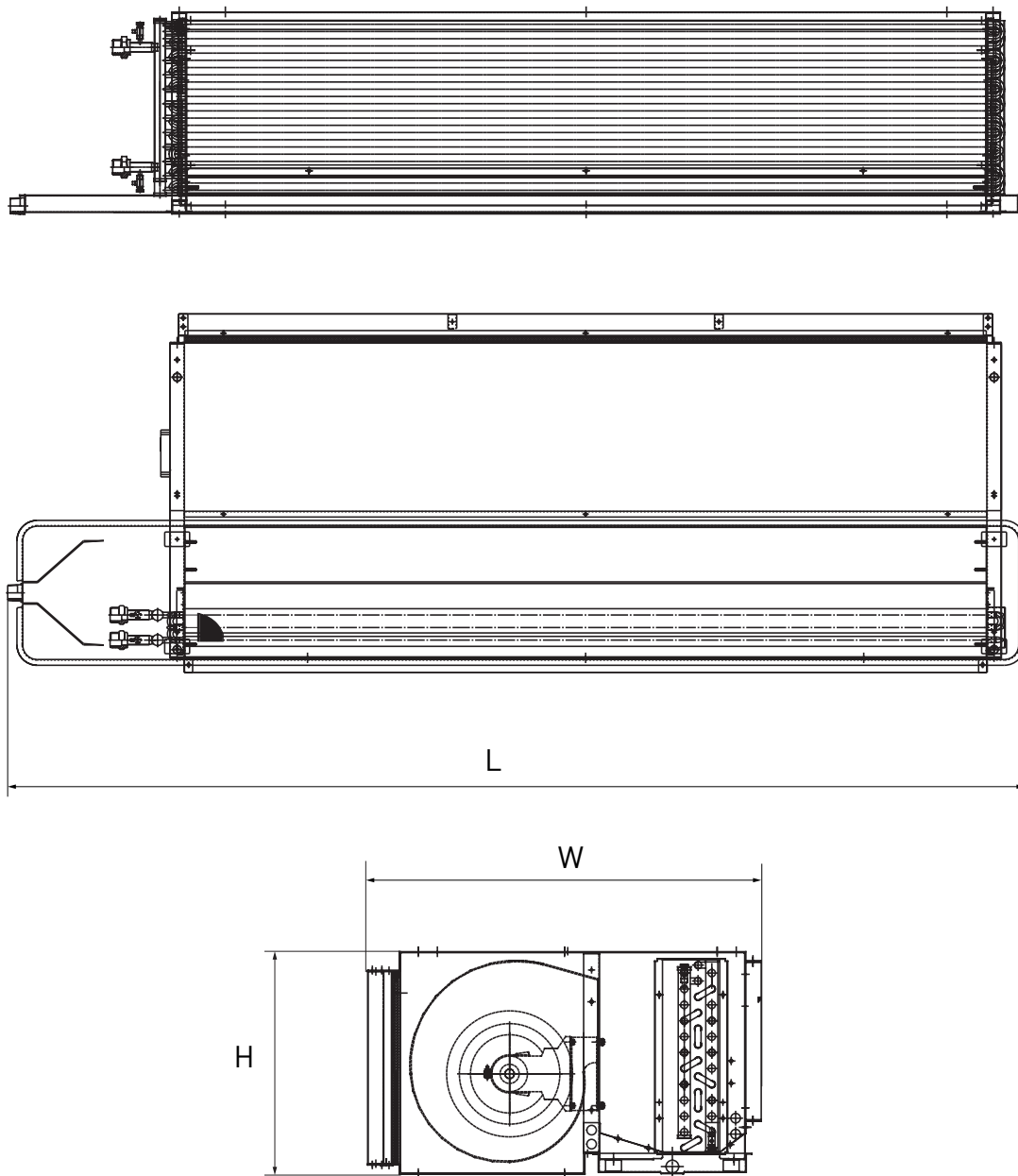
- **Intelligent Control (I-control)** offers complete control with integral Modbus RTU protocol or local control via IR handset or Wired Wall Pad.

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



* AC Motor Configurations are Eurovent Certified.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS



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