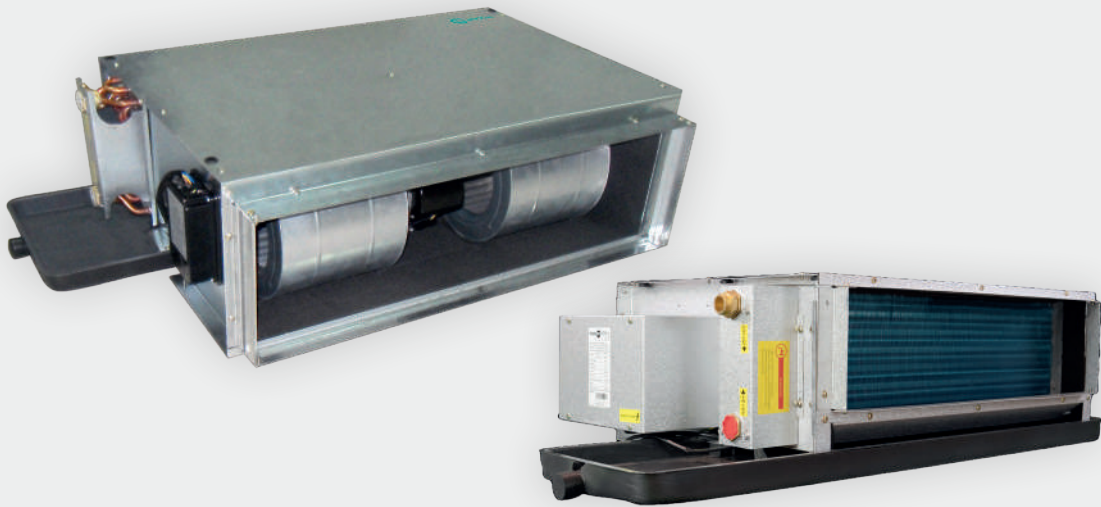
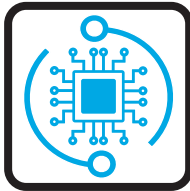


PDWA - MEDIUM ESP DUCTED



FEATURES

CONTROL FLEXIBILITY



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

Please refer to page 14 for further information on controls.

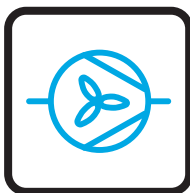
ENERGY EFFICIENT MOTORS



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

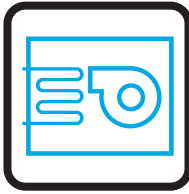
Please refer to page 42 for further information about configurations.

FAN BLOWER



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

STRUCTURE



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

WATER COILS



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

READY TO INSTALL



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

KEY POINTS

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



ACCESSORIES

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

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

TECHNICAL SPECIFICATIONS

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

UNIT GENERAL SPECS	PDWA-3R-[Size]-V-ECM			200	300	400B	500	600	800B	1000	1200	1400	1600
	Configuration			2-pipe									
	Number of Fan Blowers			Single		Twin			Three		Four	Three	Four
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60									
AIR	Total Air Flow	H	m3/h	433	607	795	937	1074	1572	1829	1974	2850	3867
		M		376	561	729	763	1010	1262	1608	1974	2839	3785
		L		382	504	654	779	950	1352	1497	1814	2203	3042
	External Static Pressure	H	Pa	58	54	59	55	62	56	52	60	60	57
		M		50									
		L		35	35	30	32	39	31	35	40	43	39
COOLING	Total Cooling Capacity	H	kW	2.47	3.36	4.18	4.95	5.51	8.63	9.16	9.93	13.99	16.98
		M		2.23	3.17	3.92	4.25	5.27	7.30	8.30	9.93	13.99	16.79
		L		2.25	2.91	3.60	4.33	5.03	7.73	7.90	9.33	11.47	14.22
	Sensible Cooling Capacity	H		1.77	2.40	3.04	3.56	3.92	6.18	6.67	7.19	10.12	12.27
		M		1.58	2.26	2.84	3.02	3.74	5.16	6.00	7.19	10.12	12.11
		L		1.60	2.06	2.58	3.08	3.56	5.49	5.68	6.72	8.19	10.17
HEATING	Heating Capacity	H	kW	2.32	3.16	4.01	4.75	5.48	7.96	9.01	9.75	13.59	17.62
		M		2.10	2.97	3.76	4.08	5.23	6.74	8.23	9.75	13.50	17.32
		L		2.12	2.75	3.48	4.12	4.98	7.14	7.80	9.20	11.15	14.70
	Max. Electric Heater Capacity			2	3	4	5		6				
SOUND	Pressure Level (outlet)		dB(A)	48/47/43	50/49/46	52/50/44	52/51/46	54/52/49	53/52/47	56/54/50	58/55/52	58/54/50	59/57/55
	Pressure Level (Inlet + Radiated)			50/49/45	52/51/48	54/52/46	54/53/48	56/54/51	55/54/49	58/56/52	60/57/54	60/56/52	61/59/57
	Power Level (outlet)			57/56/52	59/58/55	61/59/53	61/60/55	63/61/58	62/61/56	65/63/59	67/64/61	67/63/59	68/66/64
	Power Level (Inlet + Radiated)			59/58/54	61/60/57	63/61/55	63/62/57	65/63/60	64/63/58	67/65/61	69/66/63	69/65/61	70/68/66
ELECTRICAL	Power Input	H	W	53	63	83	96	102	150	180	224	363	380
		M		43	52	58	68	84	128	147	190	286	310
		L		26	31	35	49	62	84	94	113	170	190
	Running Current (H)		A	0.46	0.55	0.72	0.83	0.89	1.30	1.57	1.95	3.16	3.30
HYDRONIC	Cooling Water Flow Rate	H	L/h	424	576	717	849	944	1480	1570	1702	2398	2911
		M		382	544	672	729	903	1252	1423	1702	2398	2878
		L		385	499	617	742	862	1325	1354	1600	1967	2437
	Cooling Pressure Drop	H	kPa	25.8	49.5	26.5	38.7	50.4	66.8	26.0	31.4	67.8	103.3
		M		21.4	44.6	23.6	29.4	46.6	49.4	21.8	31.4	67.8	101.2
		L		21.7	38.3	20.2	30.4	42.9	54.7	19.9	28.1	47.4	75.0
	Heating Water Flow Rate	H	L/h	397	542	687	814	939	1364	1544	1672	2330	3021
		M		359	509	645	699	897	1155	1412	1672	2314	2970
		L		363	471	596	706	853	1223	1337	1577	1912	2520
	Heating Pressure Drop	H	kPa	17.5	33.9	18.6	27.5	38.4	44.5	19.3	23.4	49.8	85.8
		M		14.6	30.3	16.6	20.9	35.4	33.0	16.4	23.4	49.2	83.2
		L		14.8	26.3	14.4	21.3	32.3	36.6	14.9	21.1	34.9	61.9

EUROVENT TESTING CONDITIONS:

a. Cooling mode (2-pipe):

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

b. Heating mode (2-pipe):

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

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

TECHNICAL SPECIFICATIONS

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

UNIT GENERAL SPECS	PDWA-3R+1-[Size]-P-ECM			200	300	400	500	600	800	1000	1200	1400	1600
	Configuration			4-pipe									
	Number of Fan Blowers			Single		Twin			Three		Four	Three	Four
	Power Supply (V/Ph/Hz)			220 - 240/1/50 - 60									
AIR	Total Air Flow	H	m3/h	440	594	815	924	1125	1563	1774	2020	2907	3877
		M		349	535	685	713	963	1176	1546	1907	2756	3675
		L		263	393	385	541	795	928	1247	1595	2009	2679
	External Static Pressure	H	Pa	50									
		M											
L													
COOLING	Total Cooling Capacity	H	kW	2.51	3.31	4.27	4.91	5.69	8.63	8.96	10.15	14.26	17.08
		M		2.09	3.05	3.74	4.02	5.08	6.92	8.04	9.70	13.62	16.39
		L		1.67	2.41	2.40	3.24	4.38	5.78	6.84	8.49	10.69	12.90
	Sensible Cooling Capacity	H		1.80	2.37	3.10	3.53	4.06	6.18	6.52	7.36	10.33	12.34
		M		1.48	2.17	2.70	2.84	3.59	4.87	5.79	7.02	9.84	11.80
		L		1.17	1.69	1.68	2.27	3.08	4.05	4.88	6.07	7.59	9.14
HEATING	Heating Capacity	H	kW	1.91	2.52	3.35	3.78	4.47	6.37	7.13	7.98	10.64	13.57
		M		1.61	2.34	2.93	3.11	3.95	5.13	6.42	7.65	10.26	13.10
		L		1.29	1.83	1.87	2.52	3.43	4.28	5.42	6.61	8.03	10.25
SOUND	Pressure Level (outlet)		dB(A)	48/47/43	48/47/43	50/49/46	52/50/44	52/51/46	54/52/49	53/52/47	56/54/50	58/55/52	58/54/50
	Pressure Level (Inlet + Radiated)			50/49/45	50/49/45	52/51/48	54/52/46	54/53/48	56/54/51	55/54/49	58/56/52	60/57/54	60/56/52
	Power Level (outlet)			57/56/52	59/58/55	61/59/53	61/60/55	63/61/58	62/61/56	65/63/59	67/64/61	67/63/59	68/66/64
	Power Level (Inlet + Radiated)			59/58/54	61/60/57	63/61/55	63/62/57	65/63/60	64/63/58	67/65/61	69/66/63	69/65/61	70/68/66
ELECTRICAL	Power Input	H	W	53	63	83	96	102	150	180	224	363	380
		M		43	52	58	68	84	128	147	190	286	310
		L		26	31	35	49	62	84	94	113	170	190
	Running Current (H)			A	0.46	0.55	0.72	0.83	0.89	1.30	1.57	1.95	3.16
HYDRONIC	Cooling Water Flow Rate	H	L/h	430	568	732	842	975	1480	1536	1740	2444	2927
		M		359	524	642	689	871	1186	1378	1663	2334	2809
		L		287	413	411	555	750	992	1172	1456	1833	2211
	Cooling Pressure Drop	H	kPa	26.5	48.2	27.5	38.2	53.4	66.8	25.0	32.7	70.2	104.3
		M		19.1	41.7	21.7	26.6	43.6	44.9	20.5	30.2	64.6	96.9
		L		12.8	27.2	9.7	18.0	33.3	32.5	15.3	23.7	41.8	63.0
	Heating Water Flow Rate	H	L/h	164	216	287	324	383	546	611	684	912	1163
		M		138	200	251	266	339	440	551	656	879	1123
		L		111	157	160	216	294	367	464	566	688	878
	Heating Pressure Drop	H	kPa	7.8	14.5	26.9	36.6	7.8	19.6	25.5	33.1	5.1	8.5
		M		5.7	12.6	21.1	25.7	6.2	13.3	21.1	30.7	4.8	7.9
		L		3.9	8.2	9.4	17.6	4.8	9.6	15.6	23.6	3.1	5.1

EUROVENT TESTING CONDITIONS:

a. Cooling mode (4-pipe):

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

b. Heating mode (4-pipe):

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

LOOKING FOR DIFFERENT CONFIGURATIONS?

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

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

Further information can be accessed through:

PASelect Selection software

Polar Air CS website

By **contacting your sales representative**

+2 PIPE CONFIGURATIONS AVAILABLE

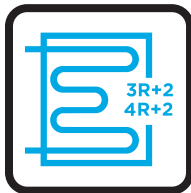


4 Row or 6 Row Coil configurations are available for applications requiring higher capacity. Other advantages include:

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

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

+4 PIPE CONFIGURATIONS AVAILABLE

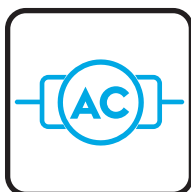


3 Rows Cooling +1R Heating or or 4 Rows Cooling + 2R Heating Coils configurations are available for 4 pipe systems where more heating is required. Other advantages include:

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

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

AC MOTOR AVAILABLE



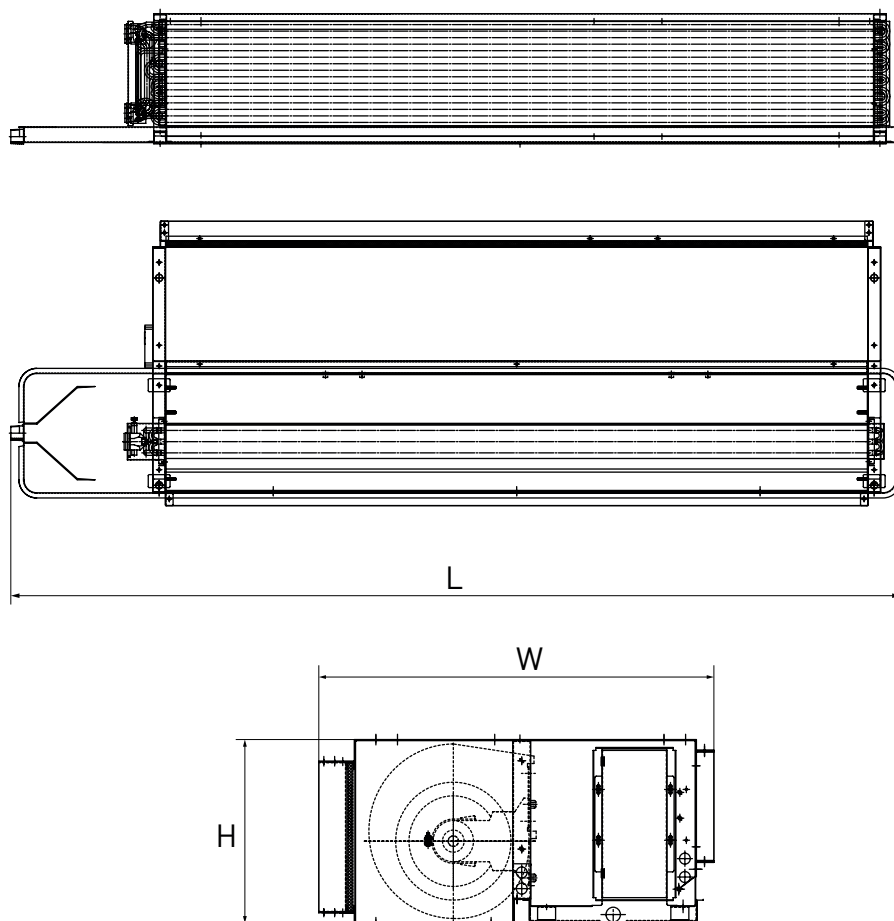
All of the above configurations are also available with a 3-speed PSC motor. The AC motor configurations are available with two types of control systems to adapt to the project needs:

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



* AC Motor Configurations are Eurovent Certified.

DIMENSIONAL DRAWINGS, DATA & WEIGHTS



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

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