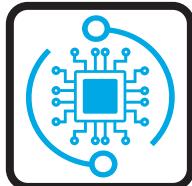


## PCGH-3R - 4 WAY CASSETTE



## 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.

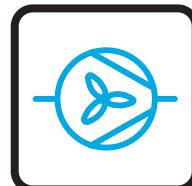
### ENERGY EFFICIENT MOTORS



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. A 5-Speed motor with 3 speeds fixed also available.

Please refer to page 26 for further information about configurations.

### FAN BLOWER



Backward-curved centrifugal fan, statically and dynamically balanced to operate at optimum 4 way airflow performance, energy efficiency and quiet operation. Fire-retardant plastic fan impellers for lightweight and corrosion-resistant operation.

## CASING



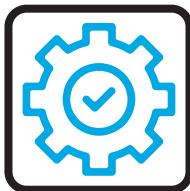
Enclosure constructed from galvanized steel, integral fan mounting rails, and internal fire resistant insulation. Front panel is made from high impact polystyrene RAL 9010 ensuring durability and a sleek appearance.

## 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 PCGH-3R range is offered as a complete package including as standard items such as an integrated condensate pump, Internal drain pan, NBR insulation and G2 (MERV 4) filter. Furthermore, we offer multiple optional accessories.

## KEY POINTS

- Plug and play control box
- Auto Dynamic Balancing with I-Control
- High Cooling capacity up to 15kW
- Integrated Sauermann condensate pump



## ACCESSORIES

- IR Handset or Wired Wall Pad (Only with I-Control)
- Thermostat Controller
- Electric heater up to 3kW
- 2 or 3 Way On/Off & Modulating Valves
- Belimo Valve Kit
- Plastic Fresh Air Intake Flange
- G4 (MERV 8) filter

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

# TECHNICAL SPECIFICATIONS

Hydronic 4 way Cassette, 3R, 2 Pipe with **EC Motor**

UNIT GENERAL SPECS	PCG(H)-3R-[Size]-V-ECM		04	08	12	20	24	
	Configuration		2-pipe					
	Number of Fan Blowers		Single					
	Power Supply (V/Ph/Hz)		220 - 240/1/50 - 60					
AIR	Total Air Flow	H	m <sup>3</sup> /h	575	810	1300	2040	2750
		M		380	722	1050	1600	2540
		L		200	200	360	820	1020
COOLING	Total Cooling Capacity	H	kW	3.61	4.91	7.22	11.12	15
		M		2.64	4.56	6.21	9.28	14.23
		L		1.61	1.65	2.65	5.54	6.93
	Sensible Cooling Capacity	H		2.53	3.45	5.13	7.89	10.68
		M		1.81	3.2	4.38	6.51	10.1
		L		1.08	1.13	1.82	3.79	4.73
HEATING	Heating Capacity	H	kw	3.47	4.74	7.06	11.1	14.84
		M		2.56	4.36	6.03	9.28	13.9
		L		1.53	1.59	2.63	5.54	6.89
	Max. Electric Heater Capacity			1	2	3	4	4
SOUND	Pressure Level (H/M/L)		dB(A)	43/39/27	50/40/26	56/53/32	58/54/35	64/61/41
	Power Level (H/M/L)			52/48/36	59/49/35	65/62/41	67/63/44	73/70/50
ELECTRICAL	Power Input	H	W	21	47	82	140	220
		M		15	18	67	100	178
		L		11	11	16	27	50
	Running Current (H)		A	0.18	0.41	0.71	1.22	1.91
HYDRONIC	Cooling Water Flow Rate	H	L/h	619	841	1238	1907	2571
		M		452	782	1057	1591	2440
		L		276	284	453	950	1188
	Cooling Pressure Drop	H	kPa	47.37	52.57	63.97	47.24	61.67
		M		26.9	46.1	48.1	34.1	56.12
		L		11.1	7.42	10.49	13.49	15.36
	Heating Water Flow Rate	H	L/h	596	813	1210	1902	2545
		M		438	747	1033	1860	2384
		L		262	273	452	951	1182
	Heating Pressure Drop	H	kPa	29.08	32.69	40.57	31.32	40.1
		M		16.74	28.05	30.5	22.7	35.64
		L		6.64	4.58	6.88	8.98	10.08

## EUROVENT TESTING CONDITIONS:

### a. Cooling conditions

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

### b. Heating conditions

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

\* Please refer to [www.eurovent-certification.com](http://www.eurovent-certification.com) for further information.

# TECHNICAL SPECIFICATIONS

Hydronic 4 way Cassette, 3R, 4 Pipe with **EC Motor**

UNIT GENERAL SPECS	PCG(H)-3R-[Size]-P-ECM		04	08	12	20	24	
	Configuration		4-pipe					
	Number of Fan Blowers		Single					
	Power Supply (V/Ph/Hz)		220 - 240/1/50 - 60					
AIR	Total Air Flow	H	m <sup>3</sup> /h	575	810	1300	2040	2750
		M		380	722	1050	1600	2540
		L		200	200	360	820	1020
COOLING	Total Cooling Capacity	H	kW	2.85	3.82	5.51	8.4	11.31
		M		2.08	3.55	4.74	7.01	10.73
		L		1.27	1.29	2.02	4.19	5.22
	Sensible Cooling Capacity	H		2.03	2.74	4.01	6.09	8.25
		M		1.45	2.54	3.42	5.02	7.8
		L		0.87	0.9	1.42	2.93	3.65
HEATING	Heating Capacity	H	kW	2.97	4	5.79	8.9	11.95
		M		2.18	3.68	4.94	7.44	11.19
		L		1.31	1.34	2.16	4.44	5.55
SOUND	Pressure Level (H/M/L)		dB(A)	43/39/27	50/40/26	56/53/32	58/54/35	64/61/41
	Power Level (H/M/L)			52/48/36	59/49/35	65/62/41	67/63/44	73/70/50
ELECTRICAL	Power Input	H	W	21	47	82	140	220
		M		15	18	67	100	178
		L		11	11	16	27	50
	Running Current (H)	A	A	0.18	0.41	0.71	1.22	1.91
HYDRONIC	Cooling Water Flow Rate	H	L/h	488	655	945	1440	1939
		M		357	609	813	1201	1840
		L		218	221	346	718	896
	Cooling Pressure Drop	H	kPa	45.9	41.77	43.83	35.65	41.49
		M		26.09	36.63	33.42	25.73	37.75
		L		10.72	5.9	7.19	10.18	10.33
	Heating Water Flow Rate	H	L/h	254	343	496	762	1024
		M		187	315	423	638	960
		L		112	115	185	381	476
	Heating Pressure Drop	H	kPa	17.68	36.38	71.94	72.5	69.85
		M		10.18	31.21	54.09	52.55	62.09
		L		4.03	5.09	12.2	20.79	17.57

## 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.**

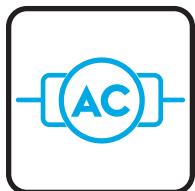
Further information can be accessed through:

**PASelect** Selection software

**Polar Air CS** website

By **contacting your sales representative**

## AC MOTOR CONFIGURATIONS



All of the above configurations are also available with a 5-speed PSC Motor, where you can pre-configure 3 fixed speeds for H/M/L.

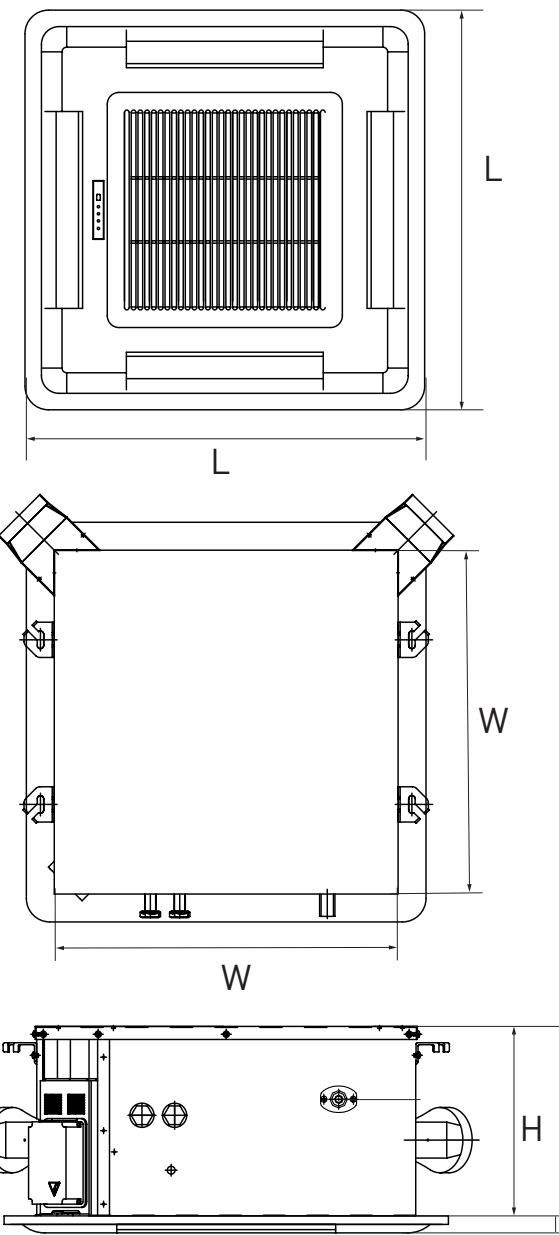
The AC motor configurations are available with two types of control systems to adapt to the project needs:

- **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 &amp; WEIGHTS



PCGH			04	08	12	20	24
CONSTRUCTION AND PACKING DATA	Water Connections	Type	PT (Threaded Female)				
		In	19.05 [3/4]				
	Condensate Drainage	25.4 (1)					
		W	mm [in]	582		730	830
	Unit Dimensions	H		260	290	290	
		L	mm	680		830	980
	Panel Dimensions	h		28		28	1140
				28		28	28
WEIGHT	Net	kg	28	30	36	50	54