

PHV

The PHV range of air curtains offers a powerful solution for applications where a higher air velocity is required (i.e. exposed aspects)



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The PHV range of air curtains offers a wide range of heating and mounting options and provides climate separation for doorways up to 4m in height.

The PHV is perfect for applications such as hotels, airports and commercial buildings and is available in recessed and surface mounted options.

The PHV is finished in RAL 9010 (white) as standard but other RAL colours are available on request.

PHV is available in three widths: 1m, 1.5m and 2m. Surface mounted units can be joined to cover wider openings.

Water versions are available as either 2 row coils for water temperatures of greater than 70°C or 3 row coils for water temperatures of less than 70°C. All water units are supplied with a motorised three port valve.

Key Features



- 2 year warranty
- Supplied complete with Ecopower controls as standard (heated versions)
- Recessed or Surface mounted
- Recessed unit fitted with hinged grille for easy access
- LPHW versions supplied with a motorised three port valve
- 2 row or 3 row heating coil options to cover a wide range of water temperatures
- Available in RAL 9010 as standard
- Colour match service available on request
- Optional filters (ambient and water)
- Fixings provided for ceiling hanging (drop rods not provided)
- Wall brackets supplied as standard
- Joining kits available for joining multiple surface mounted units
- Electrical units can be downrated from three phase to single phase operation with reduced heat output (available on request)

Water flow rate and pressure drop

PHV Range Surface	2 row coil (based on 82/71°C)			3 row coil (based on 60/40°C)		
	Water Flow (l/min)	Valve ΔP (kPa)	Coil ΔP (kPa)	Water Flow (l/min)	Valve ΔP (kPa)	Coil ΔP (kPa)
PHV1000W / PHV1000WR	15.6	1.0	4.0	8.6	7.2	2.5
PHV1500W / PHV1500WR	23.4	2.5	7.0	12.9	6.5	3.5
PHV2000W / PHV2000WR	31.2	4.7	10.0	17.1	13.8	4.5

A control valve is supplied loose with PHV series air curtains which can be fitted into the pipework during installation if required by the customer.

Water flow rate and pressure drop calculations for different water temperatures

To calculate water flow rate and pressure drop for coil and valve at different water temperatures than 82/71°C :-

For the new water temperatures use the Thermoscreens coil calculation programme to get the new water flow rate and the new water pressure drop (coil). Then calculate the new water pressure drop (valve) using the following formula:

$$\text{New Water Pressure Drop (valve)} = 82/71 \text{ Water Pressure Drop (valve)} \times \left(\frac{\text{New Water Flow Rate}}{82/71 \text{ Water Flow Rate}} \right)^2$$

Example: PHV1500W at 85/65°C, EAT = 20°C

82/71 Water flow rate = 23.4 l/min (from water flow rate and pressure drop table above)

New water flow rate = 5.8 l/min (from Thermoscreens coil calculation programme)

New water pressure drop (coil) = 2.2 kPa (from Thermoscreens coil calculation programme)

Therefore:

$$\text{New water pressure drop (valve)} = 3.0 \times \left(\frac{5.8}{11.7} \right)^2 = 0.7 \text{ kPa}$$

Conversion factors:

1 kPa = 0.102m Water column

10 l per minute = 0.6 m³/h

Accessories

Description	Part Number
Master and slave lead: 3m	T5951001
Ecopower extension lead: 10m	T5951050
Ecopower extension lead: 15m	T5951060
Ecopower extension lead: 30m	T5951020
Extension lead coupler	T5951030
Filters (Water/Ambient)	T7402510
Joining kit	T7308200



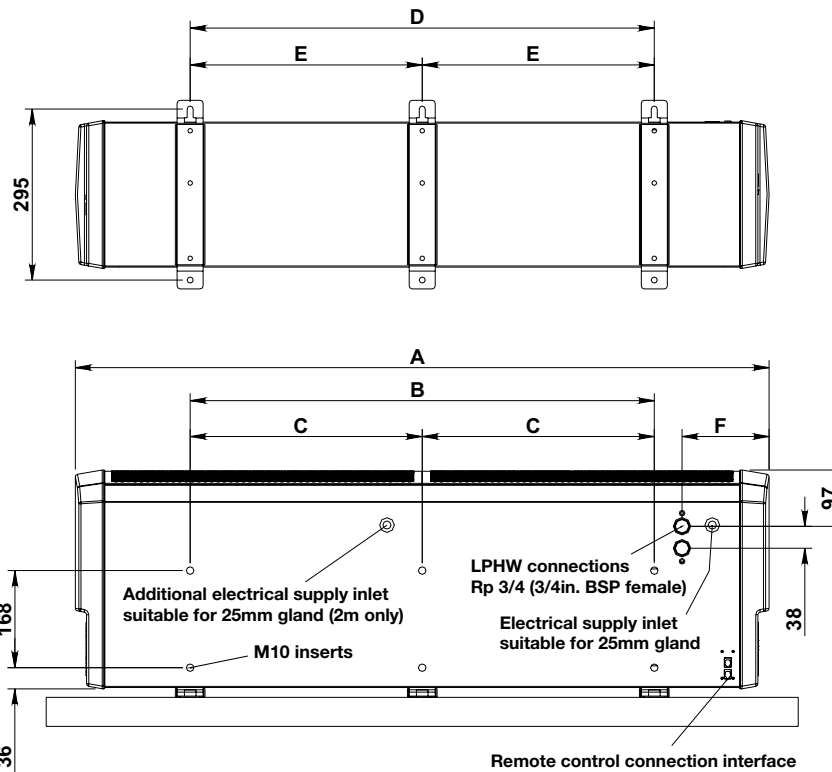
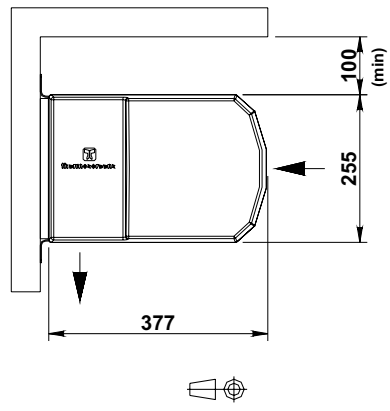
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Surface Mounted

Model	Dimensions (L x D x H) (mm)	Supply (50Hz)	Loading (A) per phase	Heat output (kW)	Max velocity (m/s)	Max air volume (m³/h)	Weight (kg)	Noise output dB(A) @3m		
								H	M	L
Electric										
PHV1000E	1196 x 377 x 255	400V~3P&N	18.7	6/12	12.0	2880	32	59	57	56
PHV1500E	1746 x 377 x 255		27.9	9/18		4020	45	60	57	53
PHV2000E	2246 x 377 x 255		37.5	12/24		5760	62	61	59	58
Water 2 row 82/71										
PHV1000W	1196 x 377 x 255	230V~1P&N	1.3	12	11.0	2630	35	59	57	56
PHV1500W	1746 x 377 x 255		1.8	18		3670	47	60	57	53
PHV2000W	2246 x 377 x 255		2.7	24		5260	64	61	59	58
Water 3 row 60/40										
PHV1000W	1196 x 377 x 255	230V~1P&N	1.3	12	10.5	2370	35	59	57	56
PHV1500W	1746 x 377 x 255		1.8	18		3300	47	60	57	53
PHV2000W	2246 x 377 x 255		2.7	24		4730	64	61	59	58
Ambient										
PHV1000A	1196 x 377 x 255	230V~1P&N	1.3	-	12.0	2880	29	59	57	56
PHV1500A	1746 x 377 x 255		1.8	-		4020	43	60	57	53
PHV2000A	2246 x 377 x 255		2.7	-		5760	58	61	59	58

Surface Mounted



	PHV1000	PHV1500	PHV2000
A(mm)	1196	1746	2296
B(mm)	800	1400	1896
C(mm)	N/A	700	948
D(mm)	800	1300	1824
E(mm)	N/A	650	912
F(mm)	150	194	225



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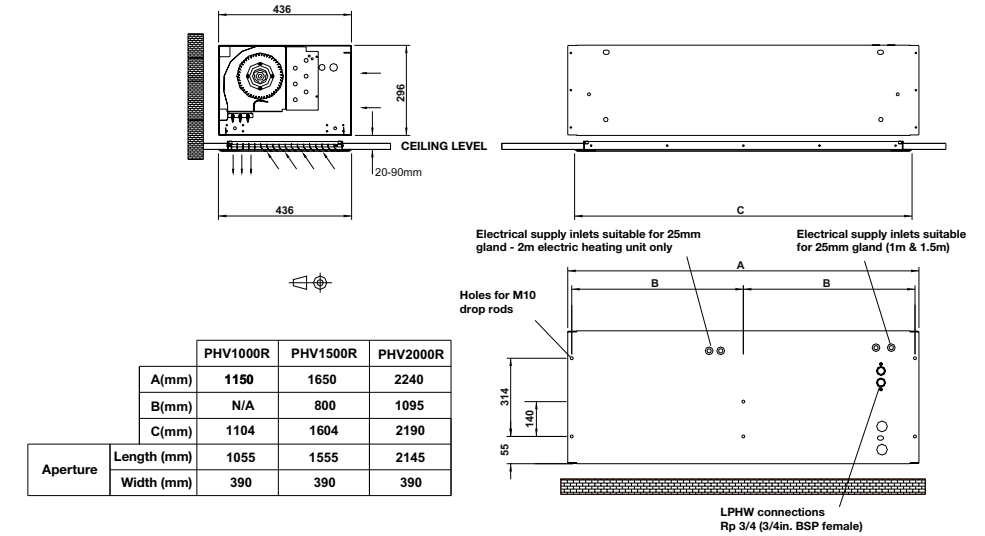


Recessed

Model	Overall dimensions (L x D x H) (mm)	Standard grille size (mm)	Supply (50Hz)	Loading (A) per phase	Heat output (kW)	Max velocity (m/s)	Max air volume (m³/h)	Weight (kg)	Noise output dB(A) @3m		
									H	M	L
Electric											
PHV1000ER	1150 x 436 x 296	1104 x 436	400V~3P&N	18.7	6/12	11.5	2750	37	59	57	56
PHV1500ER	1650 x 436 x 296	1604 x 436		27.9	9/18		3840	53	60	57	53
PHV2000ER	2240 x 436 x 296	2190 x 436		37.5	12/24		5500	71	61	59	58
Water 2 row 82/71											
PHV1000WR	1150 x 436 x 296	1104 x 436	230V~1P&N	1.3	12	10.5	2500	40	59	57	56
PHV1500WR	1650 x 436 x 296	1604 x 436		1.8	18		3500	55	60	57	53
PHV2000WR	2240 x 436 x 296	2190 x 436		2.7	24		5010	73	61	59	58
Water 3 row 60/40											
PHV1000WR	1150 x 436 x 296	1104 x 436	230V~3P&N	1.3	12	10.0	2250	40	59	57	56
PHV1500WR	1650 x 436 x 296	1604 x 436		1.8	18		3150	55	60	57	53
PHV2000WR	2240 x 436 x 296	2190 x 436		2.7	24		4510	73	61	59	58
Ambient											
PHV1000AR	1150 x 436 x 296	1104 x 436	230V~1P&N	1.3	-	11.5	2750	33	59	57	56
PHV1500AR	1650 x 436 x 296	1604 x 436		1.8	-		3840	47	60	57	53
PHV2000AR	2240 x 436 x 296	2190 x 436		2.7	-		5500	63	61	59	58

Aperture size for grille shown in the table below.

Standard Recessed Grille



Wider Recessed Grille

