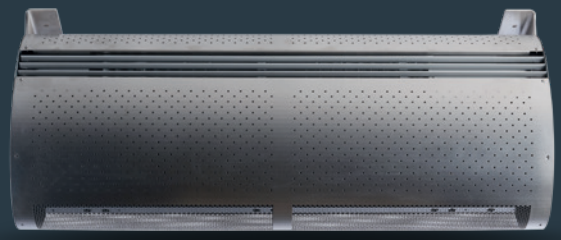
Thermoscreens

PHV Series Designer.

Combining contemporary design with outstanding performance.



Stylish, yet very powerful, **Thermoscreens PHV Designer** air curtains are a smart choice for applications where appearances matter. Available in a range of bespoke finishes with a choice of mounting options, they fit in anywhere – and go with anything.

Sizes

Horizontal: 1m, 1.5m and 2m
Vertical: 1.5m, 2m, 2.5m (Stacked) and 3m (Stacked)

Mounting Height

Surface mounted - up to 3.5m

Colour

Stainless steel finish
RAL colour matching available

Warranty

2 years

Key features.

Water | Electric | Ambient | ErP compliant | Custom Paint

- Stylish, contemporary design
- Ambient, water heated or electric heated
- Surface mounted
- Ecopower energy saving controls (water heated and electric heated units)
- ErP compliant and BMS ready
- Heating coils for low or high-grade water temperatures (60°C to 90°C)
- Operate up to eight units with one control
- Water heated units supplied with motorised three-port valve factory fitted inside unit
- 82/71 coils (water heated units)
- Choice of mounting options: horizontal or vertical
- Downrated single phase output (electric units)
- Choice of wall, ceiling, and goalpost brackets

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Horizontal.

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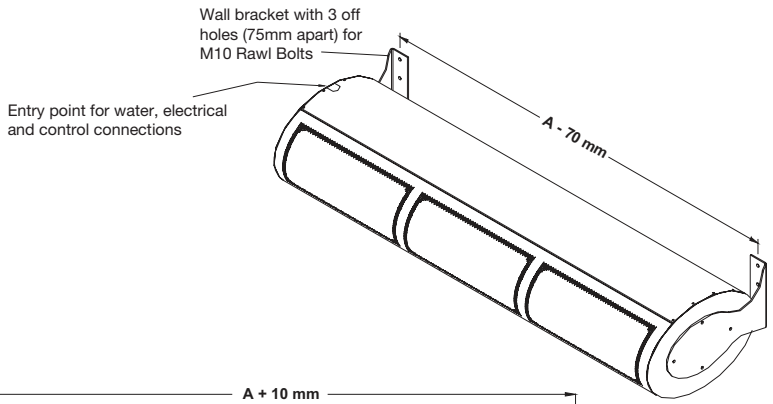
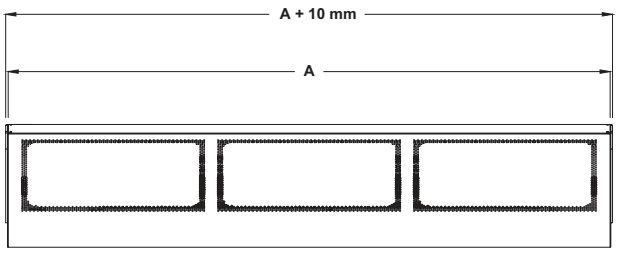
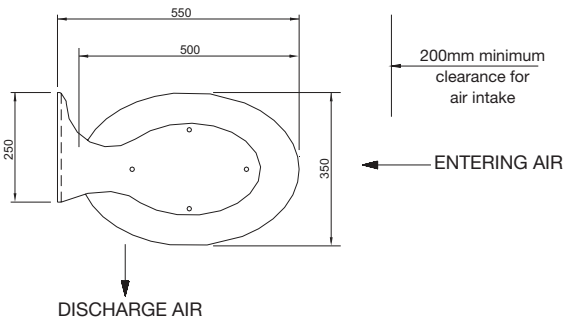
PHV Series Designer | Horizontal										
Model	**Dimensions** (L x W x D) (mm)	**Supply** (50Hz)	**Loading** (A) **per phase**	**Heat output** (kW)	**Max velocity** (m/s)	**Max air volume** (m^3/h)	**Weight** (kg)	**Noise output** dB(A) @3m **H**	**M**	**L**
Electric										
PHVD1000E	1260x500x350	400V~3P&N	18.7	6/12	10.5	1870	57	59	57	56
PHVD1500E	1722x500x350	400V~3P&N	27.9	9/18	10.5	3325	71	60	57	53
PHVD2000E	2355x500x350	400V~3P&N	37.5	12/24	10.5	3780	99	61	59	58
Water 2 row 82/71										
PHVD1000W	1260x500x350	230V~1P&N	1.3	6/12	9.5	1710	61	59	57	56
PHVD1500W	1722x500x350	230V~1P&N	1.8	9/18	9.5	3040	82	60	57	53
PHVD2000W	2355x377x255	230V~1P&N	2.7	12/24	9.5	3455	107	61	59	58
Water 3 row 60/40										
PHVD1000W	1260x500x350	230V~3P&N	1.3	6/12	9.0	1540	61	59	57	56
PHVD1500W	1722x500x350	230V~3P&N	1.8	9/18	9.0	2740	82	60	57	53
PHVD2000W	2355x500x350	230V~3P&N	2.7	12/24	9.0	3110	107	61	59	58
Ambient										
PHVD1000A	1260x500x350	230V~1P&N	1.5	-	11.0	2050	54	59	57	56
PHVD1500A	1722x500x350	230V~1P&N	1.8	-	11.0	3645	67	60	57	53
PHVD2000A	2355x500x350	230V~1P&N	2.9	-	11.0	4145	93	61	59	58



	PHVD1000	PHVD1500	PHVD2000
A (mm)	1250	1712	2345





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Vertical.

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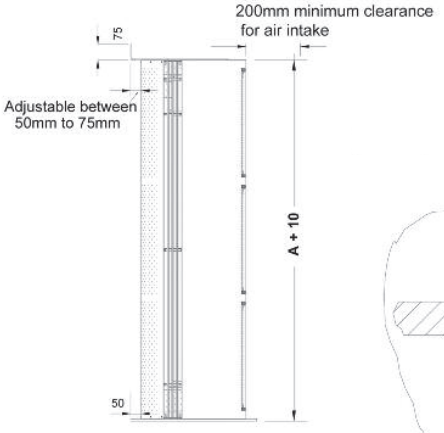
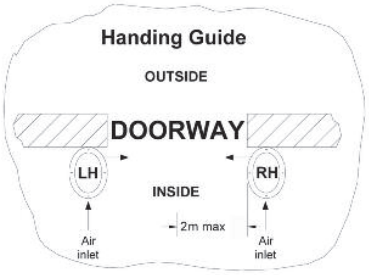
PHV Series Designer | Vertical

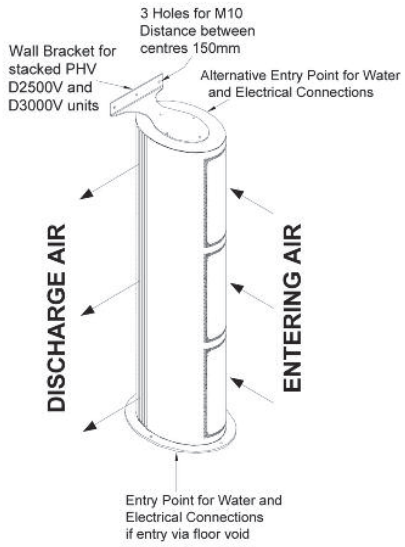
Model	Dimensions (L x W x D) (mm)	Supply (50Hz)	Loading (A) per phase	Heat output (kW)	Max velocity (m/s)	Max air volume (m^3/h)	Weight (kg)	Noise output dB(A) @3m H	M	L
Electric										
PHVD1000E V	1260x500x350	400V~3P&N	18.7	6/12	10.5	1870	57	59	57	56
PHVD1500E V	1722x500x350	400V~3P&N	27.9	9/18	10.5	3325	71	60	57	53
PHVD2000E V	2355x500x350	400V~3P&N	37.5	12/24	10.5	3780	99	61	59	58
PHVD2500E V Stacked Unit	2972x500x350	400V~3P&N	18.7 top 27.9 bottom	6/12 9/18	10.5	1870 3325	128	62	60	59
PHVD3000E V Stacked Unit	3619x500x350	400V~3P&N	18.7 top 37.5 bottom	6/12 12/24	10.5	1870 3780	156	63	61	60
Water 82/71										
PHVD1000W V	1260x500x350	230V~1P&N	1.3	6/12	9.5	1710	61	59	57	56
PHVD1500W V	1722x500x350	230V~1P&N	1.8	9/18	9.5	3040	82	60	57	53
PHVD2000W V	2355x500x350	230V~1P&N	2.7	12/24	9.5	3455	107	61	59	58
PHVD2500W V Stacked Unit	2972x500x350	230V~1P&N	1.3 top 1.8 bottom	6/12 9/18	9.5	1710 3040	143	62	60	59
PHVD3000W V Stacked Unit	3619x500x350	230V~1P&N	1.3 top 2.7 bottom	6/12 12/24	9.5	1710 3455	168	63	61	60
Ambient										
PHVD1000A V	1260x500x350	230V~1P&N	1.5	-	11.0	2050	54	59	57	56
PHVD1500A V	1722x500x350	230V~1P&N	1.8	-	11.0	3645	67	60	57	53
PHVD2000A V	2355x500x350	230V~1P&N	2.9	-	11.0	4145	93	61	59	58
PHVD2500A V Stacked Unit	2972x500x350	230V~1P&N	1.5 top 1.8 bottom	-	11.0	2050 3645	121	62	60	59
PHVD3000A V Stacked Unit	3619x500x350	230V~1P&N	1.5 top 2.9 bottom	-	11.0	2050 4145	147	63	61	60

PHVD2500 and PHVD3000V units consist of 2 air curtains joined together as a stack on site. Each separate air curtain needs its own electrical power supply to the electrical terminal block inside the unit. Control cables can be wired master / salve inside the units with one remote control to operate both units.





As Drawn for R.H.
Opposite Hand for L.H.



	PHVD1500V	PHVD2000V	PHVD2500V	PHVD3000V
A (mm)	1712	2345	2962	3609

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Water flow rate and pressure drop calculations for different water temperatures.

To calculate water flow rate and coil pressure drop, use our coil calculation programme. Then calculate the new water drop (valve) using the following formula:

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

Example:

PHVD1500WV at 85/65°C, EAT = 20°C

82/71 Water flow rate = 15.6 l/min
(from water flow rate and pressure drop table below)

New water flow rate = 8.0 l/min
(from Thermoscreens coil calculation programme)

New water pressure drop (coil) = 0.3 kPa
(from Thermoscreens coil calculation programme)

Therefore:

New water pressure drop (valve) =

$$5.5 \times \left(\frac{8}{15.6} \right)^2 = 1.5 \text{ kPa}$$

Conversion factors:
1 kPa = 0.102m Water column
10 l per minute = 0.6 m^3/h

Water flow rate and pressure drop.

PHV Series Designer Horizontal	2 row coil (based on 82/71°C)			3 row coil (based on 60/40°C)		
	Water flow rate (l/min)	Water pressure drop (coil) ΔP (kPa)	Water pressure drop (valve) ΔP (kPa)	Water flow rate (l/min)	Water pressure drop (coil) ΔP (kPa)	Water pressure drop (valve) ΔP (kPa)
PHVD1000W	15.6	0.9	5.5	8.6	7.3	2.5
PHVD1500W	23.4	2.3	7.0	12.9	6.5	3.5
PHVD2000W	31.2	4.9	10.0	17.1	13.9	4.5

PHV Series Designer Vertical	2 row coil (based on 82/71°C)		
	Water flow rate (l/min)	Water pressure drop (coil) ΔP (kPa)	Water pressure drop (valve) ΔP (kPa)
PHVD1000WV	15.6	0.9	5.5
PHVD1500WV	23.4	2.3	7.0
PHVD2000WV	31.2	4.9	10.0

Accessories.

Description	Part number
Master and slave lead: 6m	T5951001
Ecopower extension lead: 10m	T5951050
Ecopower extension lead: 15m	T5951060
Ecopower extension lead: 30m	T5951020
Extension lead coupler	T5951030
Joining kit (1m, 1.5 and 2m)	T7308185

A 3-port motorised control valve is factory fitted inside each water heated Designer PHV air curtain. PHVD2500 and PHVD3000V units consist of 2 air curtains joined together as a stack on site. Each separate air curtain needs its own electrical power supply to the electrical terminal block inside the unit. Control cables can be wired master / salve inside the units with one remote control to operate both units. Each separate air curtain needs its own Flow / Return pipework to be installed on site. Use the data from the table on the next page for each unit in the stack.
PHVD2500V = PHVD1500V + PHVD1000V
PHVD3000 = PHVD2000+PHVD1000

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Your environment is our expertise.

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