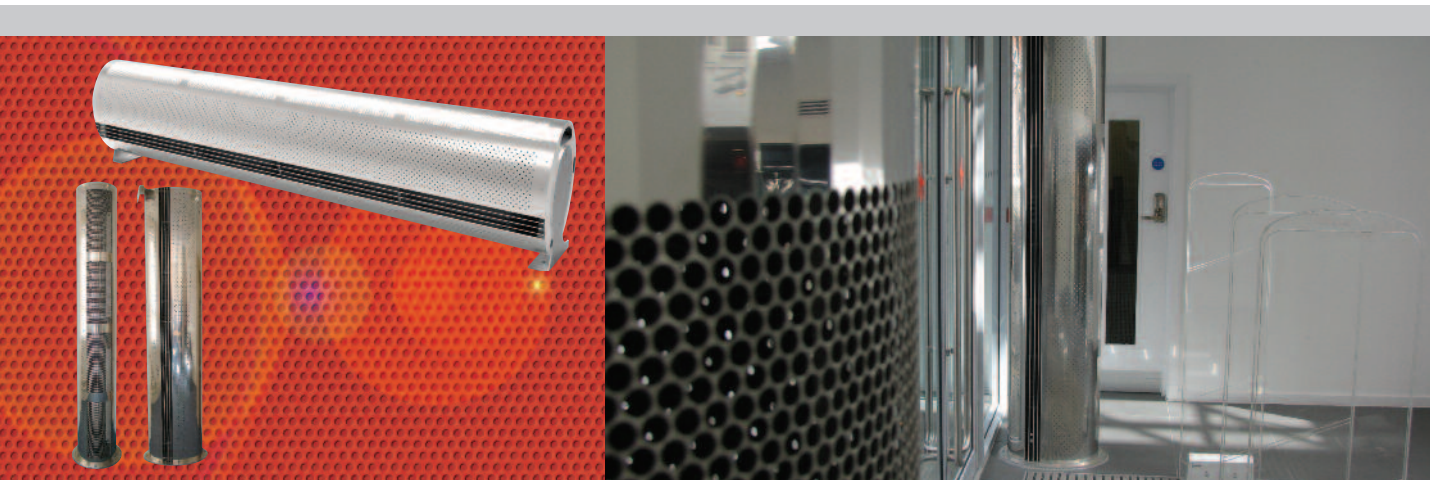


# Designer PHV Range

Where aesthetics are important combined with optimum performance



thermoscreens®



When you need great looks and the power to offer climate separation for entrances up to 3.5m high, look no further than Designer PHV. Designer PHV takes the powerful PHV functionality and adds contemporary design.

In addition a vertical version of Designer PHV is available giving a different mounting option and look to your entrance.

There are a number of mounting options for vertical units including wall mounted, ceiling mounted and goalpost style support brackets.

The Designer PHV is available in bright stainless steel as standard or can be colour matched to any RAL colour upon request. It is also possible to manufacture the Designer PHV in a galvanised finish or brushed stainless steel. Contact us for more details.

The Designer PHV is available as either an ambient version or electrical or water heated versions.

## Key Features



- 2 year warranty
- Supplied with Ecopower control
- Available in 1, 1.5 and 2m width
- Vertical mounting option
- Joining kits available for wider openings
- Bright stainless steel as standard
- RAL colour match available on request
- Designer finishes available on request (e.g. galvanised steel)
- Horizontal versions 2 row and 3 row heating coil options to cover a wide range of water temperatures. Only 2 row coils should be used when mounting the unit vertically
- Electrical units can be downrated from three phase to single phase operation with reduced heat output (available on request)
- Water heated versions supplied with a motorised three port valve

## Water flow rate and pressure drop

| Designer PHV Horizontal | 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) |
| PHVD1000W               | 15.6                          | 0.9            | 4.0           | 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           |

| Designer PHV Vertical | 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) |
| PHVD1000WV            | 15.6                          | 0.9            | 4.0           | 8.6                           | 7.3            | 2.5           |
| PHVD1500WV            | 23.4                          | 2.3            | 7.0           | 12.9                          | 6.5            | 3.5           |
| PHVD2000WV            | 31.2                          | 4.9            | 10.0          | 17.1                          | 13.9           | 4.5           |

A control valve is supplied loose with Designer 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: PHVD1000WV at 85/65°C, EAT = 20°C

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

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:

$$\text{New water pressure drop (valve)} = 2.5 \times \left( \frac{8}{15.6} \right)^2 = 0.65 \text{ kPa}$$

Conversion factors:

1 kPa = 0.102m Water column

10 l per minute = 0.6 m³/h

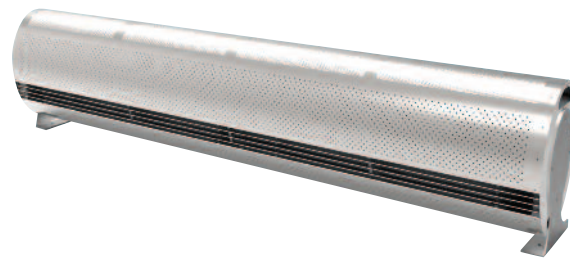
## Accessories

| 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    |
| Joining Kit (1m, 1.5 and 2m) | T7308185    |



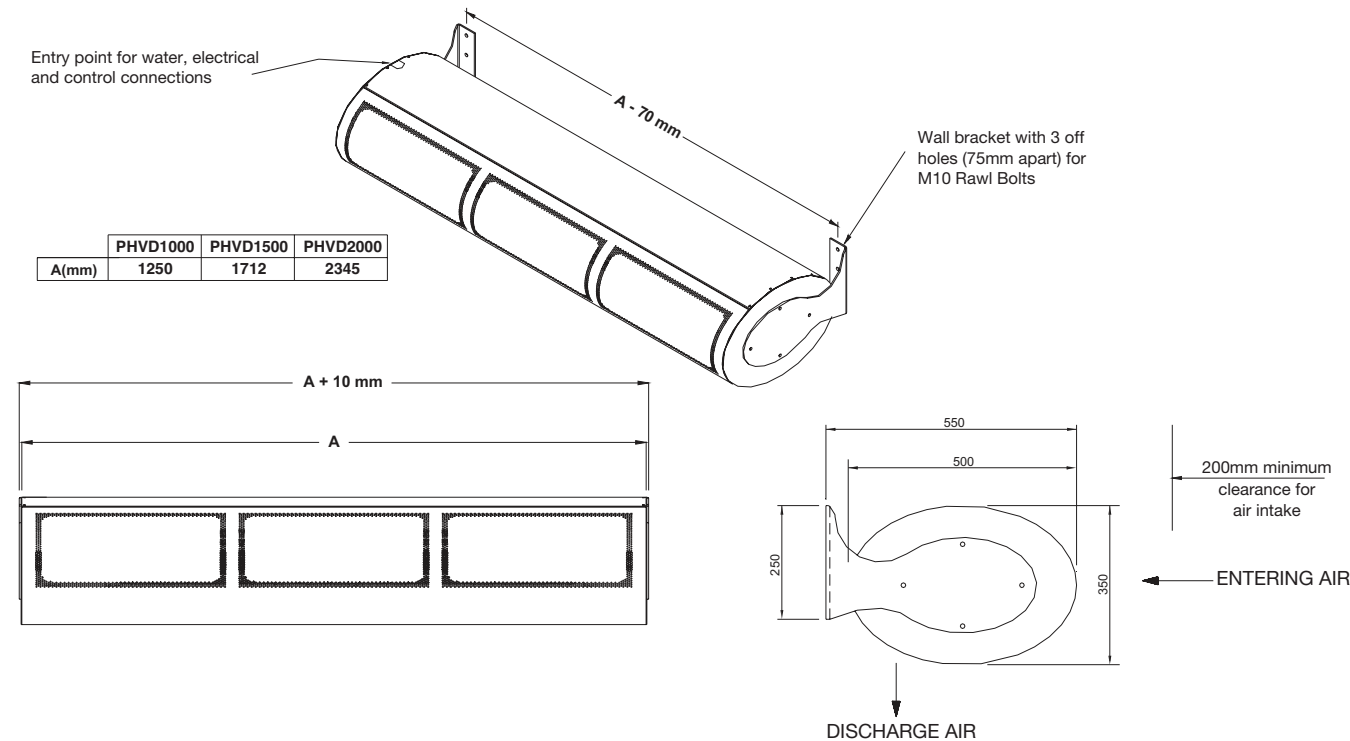
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# Designer PHV Range



| Horizontal               |                             |               |                       |                  |                    |                       |             |                              |
|--------------------------|-----------------------------|---------------|-----------------------|------------------|--------------------|-----------------------|-------------|------------------------------|
| 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 |
| <b>Electric</b>          |                             |               |                       |                  |                    |                       |             |                              |
| PHVD1000E                | 1260 x 500 x 350            | 400V~3P&N     | 18.7                  | 6/12             | 10.5               | 1870                  | 57          | 59 57 56                     |
| PHVD1500E                | 1722 x 500 x 350            |               | 27.9                  | 9/18             |                    | 3325                  | 71          | 60 57 53                     |
| PHVD2000E                | 2355 x 500 x 350            |               | 37.5                  | 12/24            |                    | 3780                  | 99          | 61 59 58                     |
| <b>Water 2 row 82/71</b> |                             |               |                       |                  |                    |                       |             |                              |
| PHVD1000W                | 1260 x 500 x 350            | 230V~1P&N     | 1.3                   | 12               | 9.5                | 1710                  | 61          | 59 57 56                     |
| PHVD1500W                | 1722 x 500 x 350            |               | 1.8                   | 18               |                    | 3040                  | 82          | 60 57 53                     |
| PHVD2000W                | 2355 x 500 x 350            |               | 2.7                   | 24               |                    | 3455                  | 107         | 61 59 58                     |
| <b>Water 3 row 60/40</b> |                             |               |                       |                  |                    |                       |             |                              |
| PHVD1000W                | 1260 x 500 x 350            | 230V~3P&N     | 1.3                   | 12               | 9.0                | 1540                  | 61          | 59 57 56                     |
| PHVD1500W                | 1722 x 500 x 350            |               | 1.8                   | 18               |                    | 2740                  | 82          | 60 57 53                     |
| PHVD2000W                | 2355 x 500 x 350            |               | 2.7                   | 24               |                    | 3110                  | 107         | 61 59 58                     |
| <b>Ambient</b>           |                             |               |                       |                  |                    |                       |             |                              |
| PHVD1000A                | 1260 x 500 x 350            | 230V~1P&N     | 1.5                   | -                | 11.0               | 2050                  | 54          | 59 57 56                     |
| PHVD1500A                | 1722 x 500 x 350            |               | 2.0                   | -                |                    | 3645                  | 67          | 60 57 53                     |
| PHVD2000A                | 2355 x 500 x 350            |               | 2.9                   | -                |                    | 4145                  | 93          | 61 59 58                     |

## Horizontal



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# Designer PHV Range



| Vertical                 |                             |               |                         |                  |                    |                       |             |                              |
|--------------------------|-----------------------------|---------------|-------------------------|------------------|--------------------|-----------------------|-------------|------------------------------|
| 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 |
| <b>Electric</b>          |                             |               |                         |                  |                    |                       |             |                              |
| PHVD1000E V              | 1260 x 500 x 350            | 400V~3P&N     | 18.7                    | 6/12             | 10.5               | 1870                  | 57          | 59 57 56                     |
| PHVD1500E V              | 1722 x 500 x 350            |               | 27.9                    | 9/18             |                    | 3325                  | 71          | 60 57 53                     |
| PHVD2000E V              | 2355 x 500 x 350            |               | 37.5                    | 12/24            |                    | 3780                  | 99          | 61 59 58                     |
| PHVD2500E V Stacked unit | 2972 x 500 x 350            | 230V~1P&N     | 18.7 top<br>27.9 bottom | 6/12<br>9/18     | 9.5                | 1870<br>3325          | 128         | 62 60 59                     |
| PHVD3000E V Stacked unit | 3619 x 500 x 350            |               | 18.7 top<br>37.5 bottom | 6/12<br>12/24    |                    | 1870<br>3780          | 156         | 63 61 60                     |
| <b>Water 2 row 82/71</b> |                             |               |                         |                  |                    |                       |             |                              |
| PHVD1000W V              | 1260 x 500 x 350            | 230V~1P&N     | 1.3                     | 12               | 9.5                | 1710                  | 61          | 59 57 56                     |
| PHVD1500W V              | 1722 x 500 x 350            |               | 1.8                     | 18               |                    | 3040                  | 82          | 60 57 53                     |
| PHVD2000W V              | 2355 x 500 x 350            |               | 2.7                     | 24               |                    | 3455                  | 107         | 61 59 58                     |
| PHVD2500W V Stacked unit | 2972 x 500 x 350            | 230V~1P&N     | 1.3 top<br>1.8 bottom   | 12<br>18         | 11.0               | 1710<br>3040          | 143         | 62 60 59                     |
| PHVD3000W V Stacked unit | 3619 x 500 x 350            |               | 1.3 top<br>2.7 bottom   | 12<br>24         |                    | 1710<br>3455          | 168         | 63 61 60                     |
| <b>Ambient</b>           |                             |               |                         |                  |                    |                       |             |                              |
| PHVD1000A V              | 1260 x 500 x 350            | 230V~1P&N     | 1.5                     | -                | 11.0               | 2050                  | 54          | 59 57 56                     |
| PHVD1500A V              | 1722 x 500 x 350            |               | 1.8                     | -                |                    | 3645                  | 67          | 60 57 53                     |
| PHVD2000A V              | 2355 x 500 x 350            |               | 2.9                     | -                |                    | 4145                  | 93          | 61 59 58                     |
| PHVD2500A V Stacked unit | 2972 x 500 x 350            | 230V~1P&N     | 1.5 top<br>2 bottom     | -                | 11.0               | 2050<br>3645          | 121         | 62 60 59                     |
| PHVD3000A V Stacked unit | 3619 x 500 x 350            |               | 1.5 top<br>2.9 bottom   | -                |                    | 2050<br>4145          | 147         | 63 61 60                     |

## Vertical

