

Envirotec Air Barriers



envirotec

A range of powerful door curtains to suit applications where high heat and high air outputs are required

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Why use the Envirotec Air Barrier (EAB type Door Curtain)?

The EAB range of door curtains was originally developed in conjunction with a major high street retailer and BSRIA. The brief was to design a powerful door curtain that could provide a very high air output to combat the most demanding application. Combined with high heating outputs, the EAB door curtain is particularly suited to shop fronts where an open door policy is in force.

Where can the EAB Door Curtain be used?

- At entrances, exits, or applications where a very high air output is required.
- Recessed applications.
- 'On view' applications.

The EAB range encompasses three basic unit styles which are detailed as follows:

EAB TYPE A:



A chassis unit designed to be mounted in a false ceiling and to take return air from the ceiling void.

- For use in visually sensitive areas with only the linear discharge grille visible from the shopping area.
- For industrial applications such as loading bays, where exposed fan assemblies, complete with guards, will not appear unsightly.

EAB TYPE B:



A cased unit developed for fully on view applications. Incorporating a 'non-vision' return air grille on the rear face and a linear discharge grille on the bottom, the TYPE B can be mounted directly against a wall or ceiling, as well as being supported on drop rods.

EAB TYPE C:



Another recessed unit designed to be installed into modular ceilings or bulheads with 'Uni-Strut' mounting rails to accommodate drop rods. A combined return air / supply air, hinged core egg-crate grille provides access to the internal components for routine maintenance.

Two EAB 2100W Type C Air Barriers, designed to provide a continuous air barrier 4200mm wide

Mounting Height

- All three styles of unit can be mounted up to 4.0m with fans on high speed, while they can be installed as low as 2.0m with fans on low speed.
- All three are designed to accommodate drop rods.
- Please refer to the layout drawings for fixing details.

Unit Construction

- All units are constructed using zinc-plated steel, which is powder-coated after fabrication.
- RAL or BS colours to suit individual client preference.

Case Finish

Powder-coated to any available RAL or BS specification. (White RAL9010 will be supplied as standard unless otherwise requested.)

Grille Type

- Type A: Linear discharge grille.
- Type B: Non-vision return air grille on the rear, linear discharge grille on the bottom.
- Type C: Hinged core egg-crate grille.
- All grilles can be powder coated to suit client requirements.

Filters

- Type A: is unfiltered.
- Type B: is fitted with 25mm throwaway filters.
- Type C: is also fitted with 25mm throwaway filters.

Ambient Door Curtain (suffix 'A')

- Where heating is not required, ambient units can be manufactured.

LPHW Door Curtain (suffix 'W')

- Tube Material: Copper.
- Fin Material: Aluminium.
- 1" BSP Female connections are terminated outside the unit, enabling easy connection to services.
- Pressure testing: All coils are pressure tested to 22 bar (350lbs/in²).

Steam Door Curtain (suffix 'S')

- Tube Material: Copper.
- Fin Material: Aluminium.
- 1" BSP Female or flanged connections are terminated outside the unit, enabling easy connection to services.
- Pressure testing: All coils are pressure tested to 22 bar (350lbs/in²).

Electric Door Curtain (suffix 'E')

- Multi-element finned heaters.
- Suitable for both single and three-phase supplies.
- Element construction: High quality 80/20 nickel chrome resistance wire, centred in metal tubes by compressed magnesium oxide.
- A manual reset high temperature cutout is installed as standard.
- Automatic resets can be fitted at customer's request.

Wiring and Controls Options – Water, Steam & Ambient Units

- Water, Steam and Ambient door curtains are wired to a unit mounted two-speed switch.

Wiring and Controls Options – Electric Units

- Units are wired as standard to a unit mounted terminal strip to allow for 'others' to supply all controls.
- As an alternative, a fused contactor box and switch to enable remote control of both the heater and fans can be provided. The contactor box would be supplied loose with the Type A, but fitted within the unit on Types B & C.
- A further option would exclude the remote switch, instead providing automatic two-stage control of the heater.

Electrical Supply

- Ambient, LPHW and Steam EAB units: single-phase supply (230/1/50).
- Electric units: usually a three-phase supply (415/3/50), although units can be supplied suitable for a single-phase supply if the heat output is suitably low enough.



Technical Specification

EAB TYPE A

| Unit Type | Unit Dimensions | | | | LPHW Heating | | | | | | Electric Heating | |
|-----------------|-----------------|----------|-----------|-----------|--------------------|-------------------|------------------------|-----------------------|------------------|-----------------|--------------------|-------------------|
| | Length mm | Width mm | Height mm | Weight kg | Output Fan High kW | Output Fan Low kW | Flow Rate Fan High l/s | Flow rate Fan Low l/s | WPD Fan High KPa | WPD Fan Low KPa | Output Fan High kW | Output Fan Low kW |
| EAB 1500 TYPE A | 1500 | 510 | 420 | 62 | 27.3 | 22.5 | 0.607 | 0.502 | 12.3 | 8.5 | 18# | 18# |
| EAB 1800 TYPE A | 1800 | 510 | 420 | 70 | 36.2 | 29.6 | 0.805 | 0.659 | 22.9 | 15.7 | 18# | 18# |
| EAB 2100 TYPE A | 2100 | 510 | 420 | 80 | 44.8 | 36.7 | 0.997 | 0.817 | 37.2 | 25.5 | 24* | 24* |

EAB TYPE B

| Unit Type | Unit Dimensions | | | | LPHW Heating | | | | | | Electric Heating | |
|-----------------|-----------------|----------|-----------|-----------|--------------------|-------------------|------------------------|-----------------------|------------------|-----------------|--------------------|-------------------|
| | Length mm | Width mm | Height mm | Weight kg | Output Fan High kW | Output Fan Low kW | Flow Rate Fan High l/s | Flow rate Fan Low l/s | WPD Fan High KPa | WPD Fan Low KPa | Output Fan High kW | Output Fan Low kW |
| EAB 1500 TYPE B | 1500 | 630 | 480 | 87 | 27.3 | 22.5 | 0.607 | 0.502 | 12.3 | 8.5 | 18# | 18# |
| EAB 1800 TYPE B | 1800 | 630 | 480 | 99 | 36.2 | 29.6 | 0.805 | 0.659 | 22.9 | 15.7 | 18# | 18# |
| EAB 2100 TYPE B | 2100 | 630 | 480 | 112 | 44.8 | 36.7 | 0.997 | 0.817 | 37.2 | 25.5 | 24* | 24* |

EAB TYPE C

| Unit Type | Unit Dimensions | | | | LPHW Heating | | | | | | Electric Heating | |
|-----------------|-----------------|----------|-----------|-----------|--------------------|-------------------|------------------------|-----------------------|------------------|-----------------|--------------------|-------------------|
| | Length mm | Width mm | Height mm | Weight kg | Output Fan High kW | Output Fan Low kW | Flow Rate Fan High l/s | Flow rate Fan Low l/s | WPD Fan High KPa | WPD Fan Low KPa | Output Fan High kW | Output Fan Low kW |
| EAB 1500 TYPE C | 1498 | 598 | 460 | 78 | 27.3 | 22.5 | 0.607 | 0.502 | 12.3 | 8.5 | 18# | 18# |
| EAB 1800 TYPE C | 1798 | 598 | 460 | 92 | 36.2 | 29.6 | 0.805 | 0.659 | 22.9 | 15.7 | 18# | 18# |
| EAB 2100 TYPE C | 2098 | 598 | 460 | 108 | 44.8 | 36.7 | 0.997 | 0.817 | 37.2 | 25.5 | 24* | 24* |

Electric Heater Options

18kW heater is standard on the EAB1800E. 9, 12 & 15kW heaters also available

* 24kW heater is standard on the EAB2100E. 12, 15, 18 & 30kW also available

EAB DOOR CURTAIN MOTOR RATINGS

| | MOTOR SUPPLY | TOTAL MOTOR POWER kW | TOTAL F.L.C. Amps | TOTAL START CURRENT Amps |
|------------------------|--------------|----------------------|-------------------|--------------------------|
| 1500 EAB DOOR CURTAINS | 230/1/50 | 0.6 | 4.8 | 15 |
| 1800 EAB DOOR CURTAINS | 230/1/50 | 0.8 | 6.4 | 20 |
| 2100 EAB DOOR CURTAINS | 230/1/50 | 1.0 | 8.0 | 25 |

Note: Units with electric heaters fitted would usually require a three-phase supply



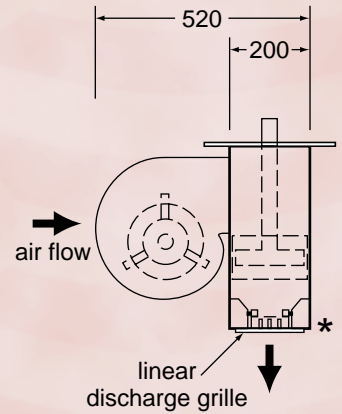
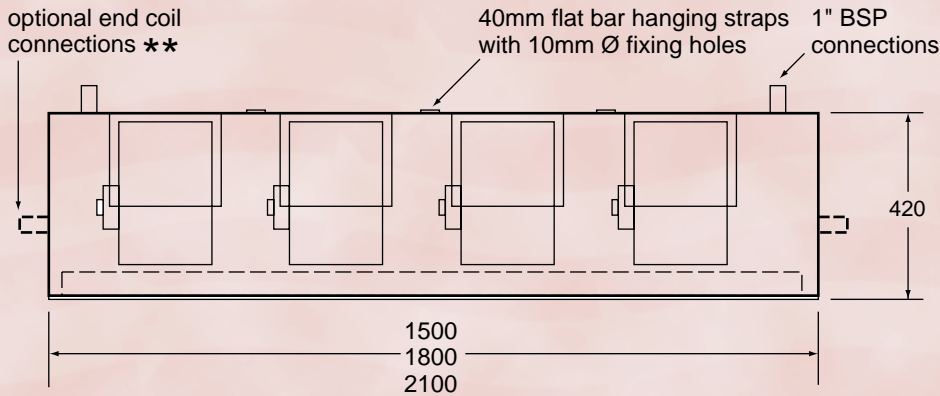
'Special' CDC circular air curtain with 'EAB' performance available on request

A pair of vertical EAB Type B Air Barriers installed either side of a loading bay in one of the country's largest airfreight and cargo villages

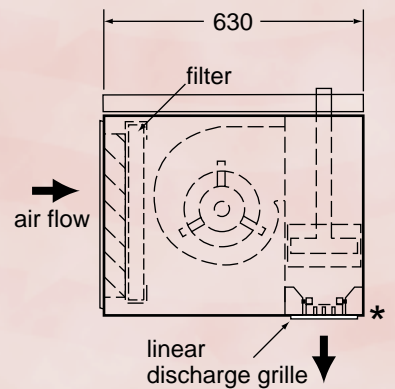
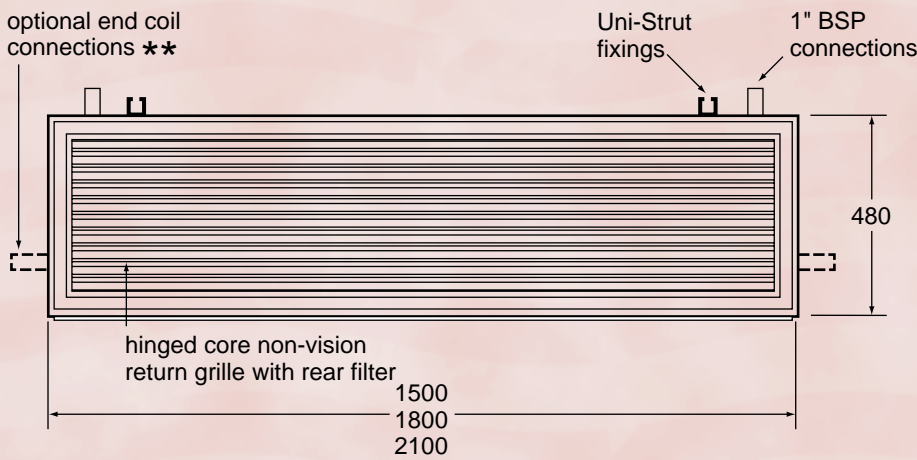


Envirotec Air Barriers – General Arrangement

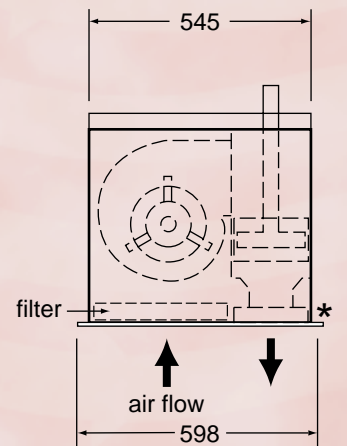
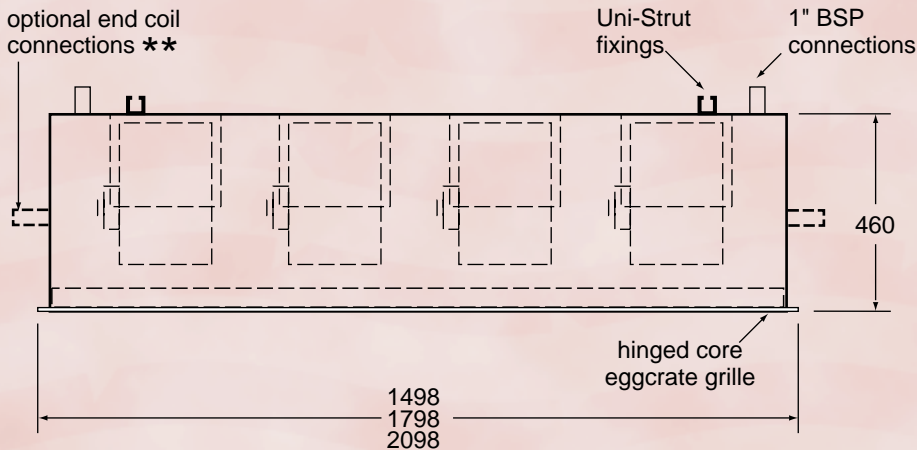
EAB Type A



EAB Type B



EAB Type C



* This side nearest door.

** Position of coil connectors to be specified at time of order.

For units with electric heaters and contactors, a control box 225 x 225 x 155 will be supplied either loose or fitted to unit. Please specify any site restrictions that will prevent mounting of control box on the outside of the unit.

All dimensions in millimetres.

Envirotec Ltd
Desborough Park Road
High Wycombe
Buckinghamshire
HP12 3BX
United Kingdom

Tel: 44 (0)1494 525342 www.envirotec.co.uk
Fax: 44 (0)1494 440889 email: sales@envirotec.co.uk

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