

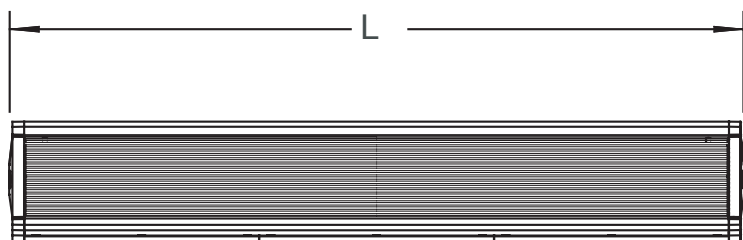
Dimplex Air Barriers

08/19023/1 Issue 1

Models : CAB10E, CAB15E, CAB10W, CAB 15W, CAB10A & CAB15A
DAB10E, DAB15E, DAB10W, DAB 15W, DAB10A & DAB15A

Dimensions

(millimetres)



Hole centres
see Fig.2

Model(s)	L	W	H	A	B
CAB 10 E\W\A	1050	320	262	920	142
DAB 10 E\W\A	1050	391	361	920	196
CAB 15 E\W\A	1550	320	262	1420	142
DAB 15 E\W\A	1550	391	361	1420	196

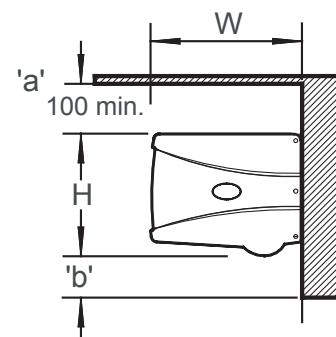


Fig. 1

THESE INSTRUCTIONS SHOULD BE READ CAREFULLY AND RETAINED FOR FUTURE REFERENCE.

IMPORTANT SAFETY ADVICE

DO NOT COVER OR OBSTRUCT the air inlet or outlet grille.

ENSURE THE APPLIANCE IS EARTHED.

Do not use this heater in areas where excessive dust exists.

This heater must not be located immediately above or below a fixed socket outlet or connection box.

Always disconnect supply before working on the product.

A suitable termination to the fixed wiring of the premises must be provided adjacent to the final position of the appliance.

This product should be mounted safely to solid wall or ceiling surfaces only.

This product must not be subjected to water spray or immersion.

Ensure the supply cables are of adequate current carrying capacity and are protected by a suitable fuse.

If the appliance is mounted in a toilet or washroom, the appliance should be mounted such that no part of it can be touched by a person using a fixed bath or shower.

If the appliance is mounted in a toilet or washroom an isolating switch must be provided outside the washroom adjacent to the entrance door.

Electrical

The installation of this appliance should be carried out by a competent electrician and be in accordance with the current IEE wiring regulations.

Fixing Positions

This appliance may be either wall-mounted or fixed to a ceiling - see Fig. 3 for various fixing positions and 'Mounting' sections for fixing details. A minimum distance of 100mm is required from top of the appliance to ceiling (see 'a' in Fig. 1) and also the distance between the bottom of the appliance and the top of the door should be kept to a minimum (see 'b' in Fig. 1).

Models

Model	Heat output kW	Electrical Supply	Electrical load A	Weight kg	Max Installed height m
AMBIENT / COLD STORE					
CAB10A	n/a	220-240V~ 1PN	0.3	15.5	2.7
CAB15A	n/a	220-240V~ 1PN	0.5	21.5	2.7
DAB10A	n/a	220-240V~ 1PN	1.5	21.5	4.0
DAB15A	n/a	220-240V~ 1PN	2.3	27.5	4.0
ELECTRICALLY HEATED					
CAB10E	4.5 / 9.0	380-415V~ 3PN	14	20.5	2.7
CAB15E	6.75 / 13.5	380-415V~ 3PN	20	29	2.7
DAB10E	6.0 / 12.0	380-415V~ 3PN	18	26.5	4.0
DAB15E	9.0 / 18.0	380-415V~ 3PN	27	35	4.0
WATER HEATED (at 82/71 °C - LPHW)**					
CAB10W	9.0	220-240V~ 1PN	0.3	17.7	2.7
CAB15W	13.5	220-240V~ 1PN	0.5	24.6	2.7
DAB10W	12.0	220-240V~ 1PN	1.5	24.7	4.0
DAB15W	18.0	220-240V~ 1PN	2.3	31.9	4.0

Wall Mounting

Using the wall mounting bracket as a guide and a spirit level to ensure the bracket is level (see Fig. 2) mark off the hole positions on the wall (a minimum height of 2.0 metres is required from the floor level to the bottom of the bracket). Position the bracket such that the air outlet of the installed Air Barrier will be as close to the top of the doorway as possible but will remain unobstructed when installation is complete.

Solid brick or concrete block walls must be drilled and plugged with rawplug No. 8 size fibre inserts. The plug must be located in the solid part of the wall and not just in the plaster layer.

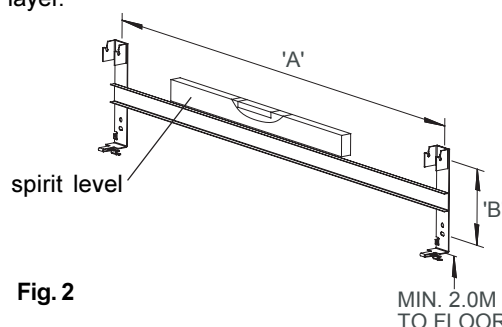


Fig. 2

When fixing to 'panel' walls, the wall bracket should be attached to the stud-work using No. 8 wood screws or by an alternative, equally secure method of fixing.

Once the wall bracket has been fitted, the Air Barrier can be clipped in place as shown in Fig. 3a.

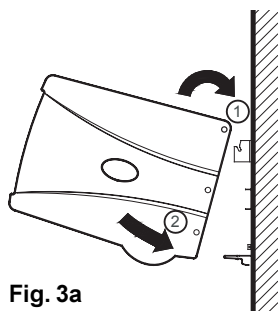


Fig. 3a

Ceiling Mounting

By using threaded inserts in the top panel of the Air Barrier, attachment to a ceiling over the product can be achieved using suitable M8 threaded steel rod or similar supports of sufficient strength - see Fig. 3b.

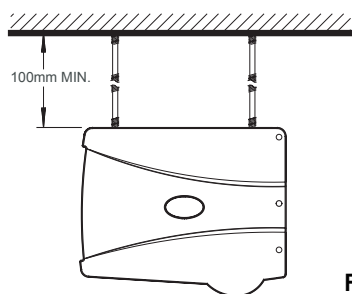


Fig. 3b

Electrical connection

All products are fitted with a microprocessor control. Electrical power and control connections are made as shown in Fig. 5. A suitable local isolating switch must be provided in the electrical supply circuit with at least 3mm clearance on each pole.

Remove the outlet grilles ('x', and 'y' in Fig. 4) by releasing the quick release 1/4 turn fasteners and hinging the mouldings as shown. Remove the bottom panel ('z' in Fig. 4).

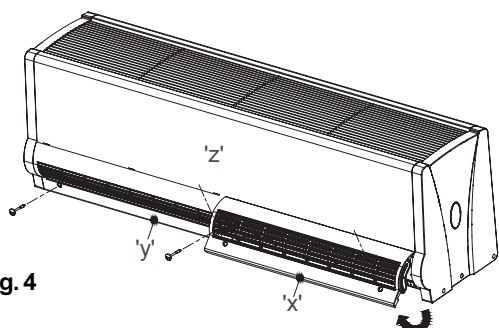


Fig. 4

CAB Models 10E & 15E (see Fig. 5a)

Having removed a 'knock out' from the centre of the top panel, feed an appropriate supply cable (see 'a' in Fig. 5a) through a suitable cable gland (not supplied) fitted in the top panel and fit to the terminal block (see 'b' in Fig. 5a).

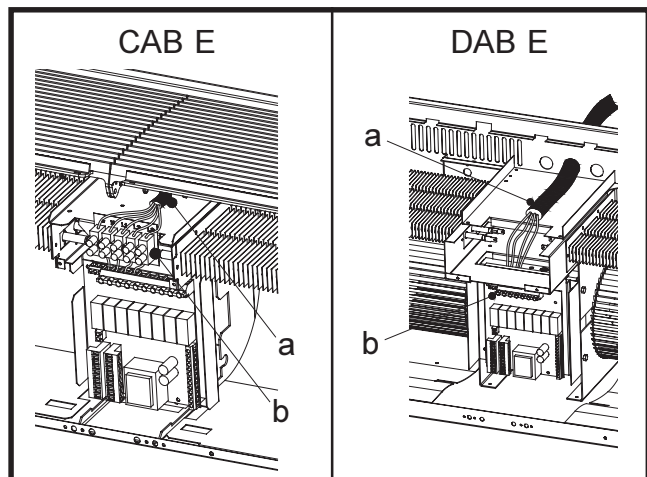


Fig. 5a

Fig. 5b

DAB Models 10E & 15E (see Fig. 5b)

Having removed a 'knock out' from the centre of the top panel, feed an appropriate supply cable (see 'a' in Fig. 5b) through a suitable cable gland (not supplied) fitted in the top panel and fit to the PCB terminal block (see 'b' in Fig. 5b)

A suitable cable for a switch panel (kit ref. - CAB C1 for electrically heated models or CAB C2 for water heated/ambient models) can be similarly introduced through the top panel and connected to the circuit board (see Fig. 9 & Fig. 10).

All Water heated and Ambient Models (see Fig. 6)

Having removed a 'knock out' from the top panel, feed an appropriate supply cable (see 'a' in Fig. 6) through a suitable cable gland (not supplied) fitted in the top panel and fit to the PCB terminal block (see 'b' in Fig. 6).

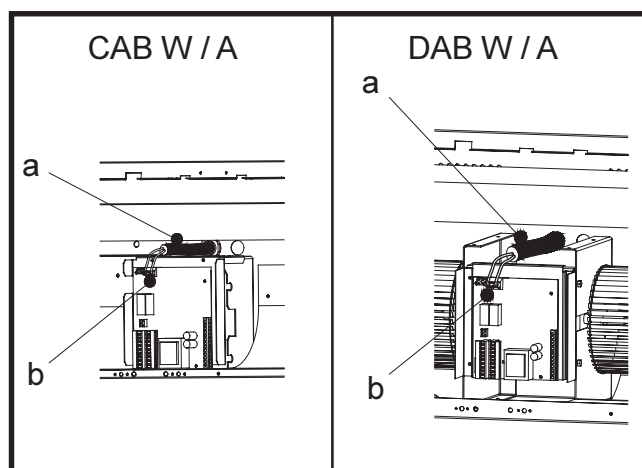


Fig. 6

If the unit is to be operated in conjunction with a door switch, a normally closed switch should be wired as per Fig. 9 & 10 as appropriate - see also 'Switch Panel Instructions'.

Ensure that the Air Barrier is securely fastened in position and that the supply cables and switches are firmly clamped before operating the appliance.

Water connection

Models designed for use in conjunction with a low pressure hot water supply should be individually connected (in a parallel circuit) to the flow and return pipe-work. Connections (see 'a' in Fig. 7) are: 1/2" BSPT (CAB series) and 3/4" BSPT (DAB series) and isolation valves (see 'b' in Fig. 7) should be fitted as close to the Air Barrier connection points as possible. For commissioning, air bleed valves (see 'c' in Fig. 7) are fitted to the coil, which can be accessed by removal of the lower panel and intake grille - see Fig. 4. The drain (see 'd' in Fig. 7) can also be accessed when the grille and lower panel are removed.

Maximum water supply conditions are 115°C and 10 bar.

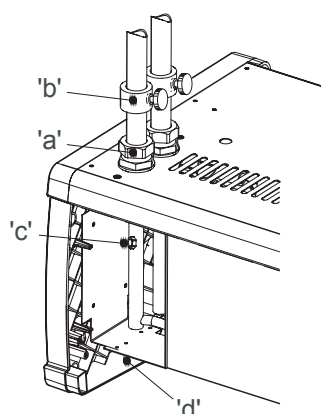


Fig. 7

To aid installation, the water coil connections may be moved to either side of the appliance. By removing the water coil and appropriate knock-outs the water coil can then be re-inserted into the required orientation. This procedure should be carried out before mounting the appliance.

Electrically heated variants

Operation using switch box (CABC1)

Switching the switch marked 'I' energises the fan.

The fan switch allows either low or high fan speeds to be selected. The heat selection switch allows the heat setting to be chosen.

- - Off
- ◐ - ½ heat
- - Full heat

The A / M (auto / manual) switch allows for manual over-ride of a door switch if fitted.

The unit should always be switched OFF using the switch box control, and not by mains power supply interruption.

When the unit is switched off (via the switch box) the fan will run on for 1 minute without heat to discharge any residual energy from the heating elements.

When first turned on the control will run through a system check. The selected settings will be reached and maintained after a 3 minute period.

Thermostatic control (optional)

By including a single pole bi-metallic or electronic thermostat to the connections as per 'C' in Fig. 9 the following functionality is introduced dependant on heat switch setting - see also 'Switch Panel Instructions'.

- - Fan only
- ◐ - ½ heat (base heating load)
- - ½ heat (base heating load) + thermostatically controlled ½ heat

Thermal Safety cut outs

The power supply to the heating elements will be interrupted if one or a combination of the following abnormal events occur:

1. Air inlet or outlet grilles are obstructed.
2. Internal ventilation is impaired due to build up of dust and fluff.
3. Blower unit stalls.

To reset the thermal safety cut-outs, access reset buttons as shown in Fig. 8. Before re-setting the reason for activation must be determined and corrective action taken.

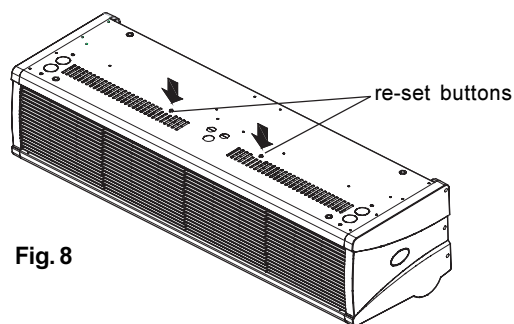


Fig. 8

Door switch control (Electric models)

By including a door switch in the circuit (shown 'D' in Fig. 9) as appropriate, the Air Barrier will respond to door openings as follows:

- (1) Door opening will energise the Air Barrier at the set conditions (switch box settings).
- (2) On door closure operation will continue at the set conditions for a further 1 minute.
- (3) Between 1 minute and 2 minutes from door closure ½ fan set back operation will activate.
- (4) After 2 minutes, the Air Barrier will return to a dormant state until the door is re-opened.

If the door re-opens during this 2 minute run on cycle, the process will re start at (1).

Low pressure hot water heated / Ambient (fan only) variants

Operation using switch box (CABC2)

Switching the switch marked 'I' energises the fan.

The fan switch allows either low or high fan speeds to be selected.

The A / M (auto / manual) switch allows for manual over-ride of a door switch if fitted.

The unit should always be switched OFF using the switch box control, and not by mains power supply interruption.

When first turned on the control will run through a system check. The selected settings will be reached and maintained after a 3 minute period.

Thermostatic control (Water versions only)

A thermostatic regulation valve with a remote sensing bulb (not supplied) can be positioned in the supply water pipe-work to regulate the heat output.

Door switch control (Water /Ambient models)

By including a door switch in the circuit (shown 'D' in Fig. 10) as appropriate, the Air Barrier will respond to door openings as follows:

- (1) Door opening will energise the Air Barrier at the set conditions (switch box settings).
- (2) On door closure operation will continue at the set conditions for a further 1 minute.
- (3) Between 1 minute and 2 minutes from door closure ½ fan set back operation will activate.
- (4) After 2 minutes, the Air Barrier will return to a dormant state until the door is re-opened.

If the door re-opens during this 2 minute run on cycle, the process will re start at (1).

Wiring Diagrams

CAB & DAB 'E' - Electric models - see Fig. 9

CAB & DAB 'W' & 'A' - Water & Ambient models - see Fig. 10

For operation via switch box, all BMS switches as shown in Fig. 9 & 10 need to be OPEN CIRCUIT if used

- A - Master Module Link
- B - 12VDC Feedback Signal to BMS (Unit Fault Check)
- C - Thermostat (Optional)
- D - Door Switch (Optional)
- E - Thermal Safety Cut-out Circuit
- F - Elements

For operation via BMS, switch box to be set as follows:

I/O in 0 (off) position

Heat selection switch to be in 0 (off position)

Fan selection switch in either high or low speed position

	bms M1	bms M2	bms H1	bms H2
⊕	1	0		
⊕⊖	X	1		
⏏			1	0
○			X	1

0 - Circuit Open

1 - Circuit Closed

X - Either Open or Closed

Wiring Diagram

Electric Models

CAB 'E' & DAB 'E'

- A - Master Module Link
- B - 12VDC Feedback Signal to BMS (Unit Fault Check)
- C - Thermostat (Optional)
- D - Door Switch (Optional)
- E - Thermal Safety Cut-out Circuit
- F - Elements

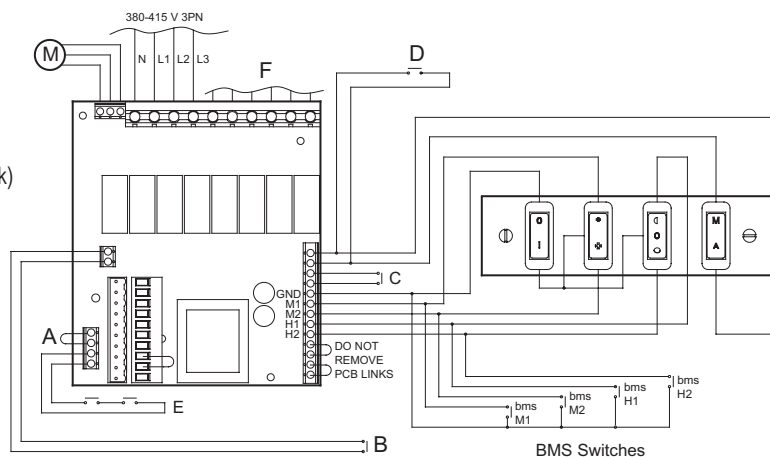


Fig. 9

Wiring Diagram

Water/Ambient Models

CAB 'A' & DAB 'A'

CAB 'W' & DAB 'W'

- A - Master Module Link
- B - 12VDC Feedback Signal to BMS (Unit Fault Check)
- D - Door Switch (Optional)

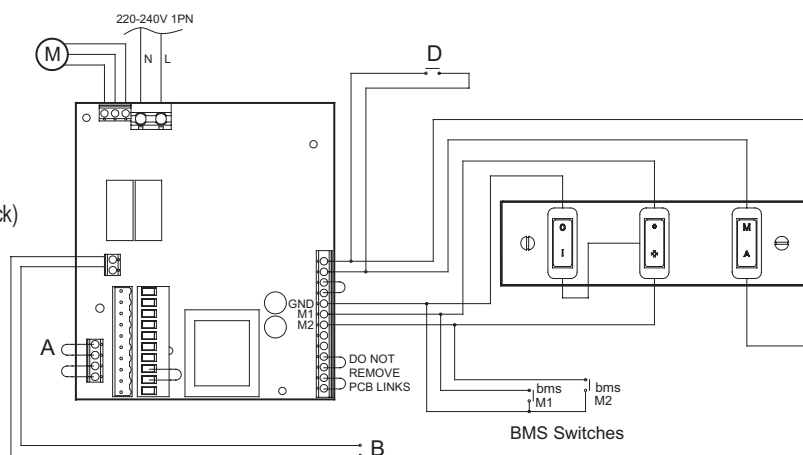


Fig. 10

Remote (BMS / BEMS) Operation

Connection to Building Energy Management Control Systems (BEMS) is possible so that remote control of the Air Barrier can be carried out in conjunction with other equipment.

Modular Connection

Refer to instructions provided with the modular linking kit.

Recessed Installation

Refer to instructions provided with the recess installation kit.

Cleaning

WARNING: DISCONNECT SUPPLY before carrying out maintenance.

External appearance can be maintained by wiping occasionally with a damp cloth ; for stain removal, a weak soap solution can be applied with a cloth and the surface wiped dry. Care must be taken to avoid any moisture ingress into the product.

After Sales Service

Your product is guaranteed for three years from the date of purchase.

Within this period, we undertake to repair or exchange this product free of charge provided it has been installed and operated in accordance with these instructions.

Your rights under this guarantee are additional to your statutory rights, which in turn are not affected by this guarantee.

Should you require after sales service you should contact our customer services help desk on 0870 727 0101. It would assist us if you can quote the model number, series, date of purchase, and nature of the fault at the time of your call. The customer services help desk will also be able to advise you should you need to purchase any spares.

Please do not return a faulty product to us in the first instance as this may result in loss or damage and delay in providing you with a satisfactory service.

Please retain your receipt as proof of purchase.



The product complies with the European Safety Standards EN60335-2-30 and the European Standard Electromagnetic Compatibility (EMC) EN55014, EN60555-2 and EN60555-3 which cover the essential requirements of EEC Directives 73/23 and 89/336

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