



# **AIRBLOC**

AC COMMERCIAL & RETAIL  
ELECTRICALLY HEATED,  
AMBIENT & LPHW  
1000 & 1500 & 2000mm  
High & Standard Capacity

Installation and  
operating manual

## Index

- 1** Technical specification & safety details
- 2** Installation details
- 3** Servicing
- 4** Element and motor replacement
- 5** General user instructions
- 6** Fault finding
- 7** Spare parts



# 1 Technical specification & safety details

## General

All installations must be in accordance with the regulations in force in the country of use.

These instructions must be given to the user on completion of the installation.

Installers and service engineers must be able to demonstrate competence and be suitably qualified in accordance with the regulations in force in the country of use.

To ensure continued and safe operation it is recommended that the appliance is serviced annually.

The fan wheel, air inlet and outlet grilles, need to be cleaned monthly with a soft brush.

The manufacturer, offers a maintenance service. Details are available on request.

The air curtain inlet/outlet grille and case air inlet slots must not be obstructed during use.

## Electrical

The appliance must be earthed.

It is recommended that the electrical supply to the air curtain is via an appropriate switched isolator in accordance with the regulations in force in the country of use and must be via a fused double pole isolator having a contact separation of greater than 3mm in all poles.

Electrically heated supply is 415V 3 phase and neutral max cable inlet size is 6mm<sup>2</sup>.

Ambient & LPHW supply is 230V 1phase and neutral max cable inlet size is 6mm<sup>2</sup>.

Time switches and thermostats can be installed at the discretion and responsibility of the installer.

## Fixing details

Airbloc units should be installed horizontally directly over the door opening. It is recommended that the air curtain is installed on the inside of the building, within the open room space against a wall or ceiling. Care must be taken to allow complete free air movement into the inlet grilles of the unit to ensure correct working operation of the air curtain. The discharge opening should be as close to the top of the door as possible and to cover the entire door width.

## Clearance distances

It is recommended that a minimum clearance of 200mm is allowed around the top and front of the unit. The clearance allows for cable entry and prevents combustible surfaces overheating. The minimum mounting height (floor to grille outlet) is 1.8m. The recommended maximum mounting height is 3m for the standard capacity and 4m for the high capacity. These units are designed for surface mounting only. Models suitable for recessing into ceilings are available

## Health and Safety

Sole liability rests with the installer to ensure that all site safety procedures are adhered to during installation.

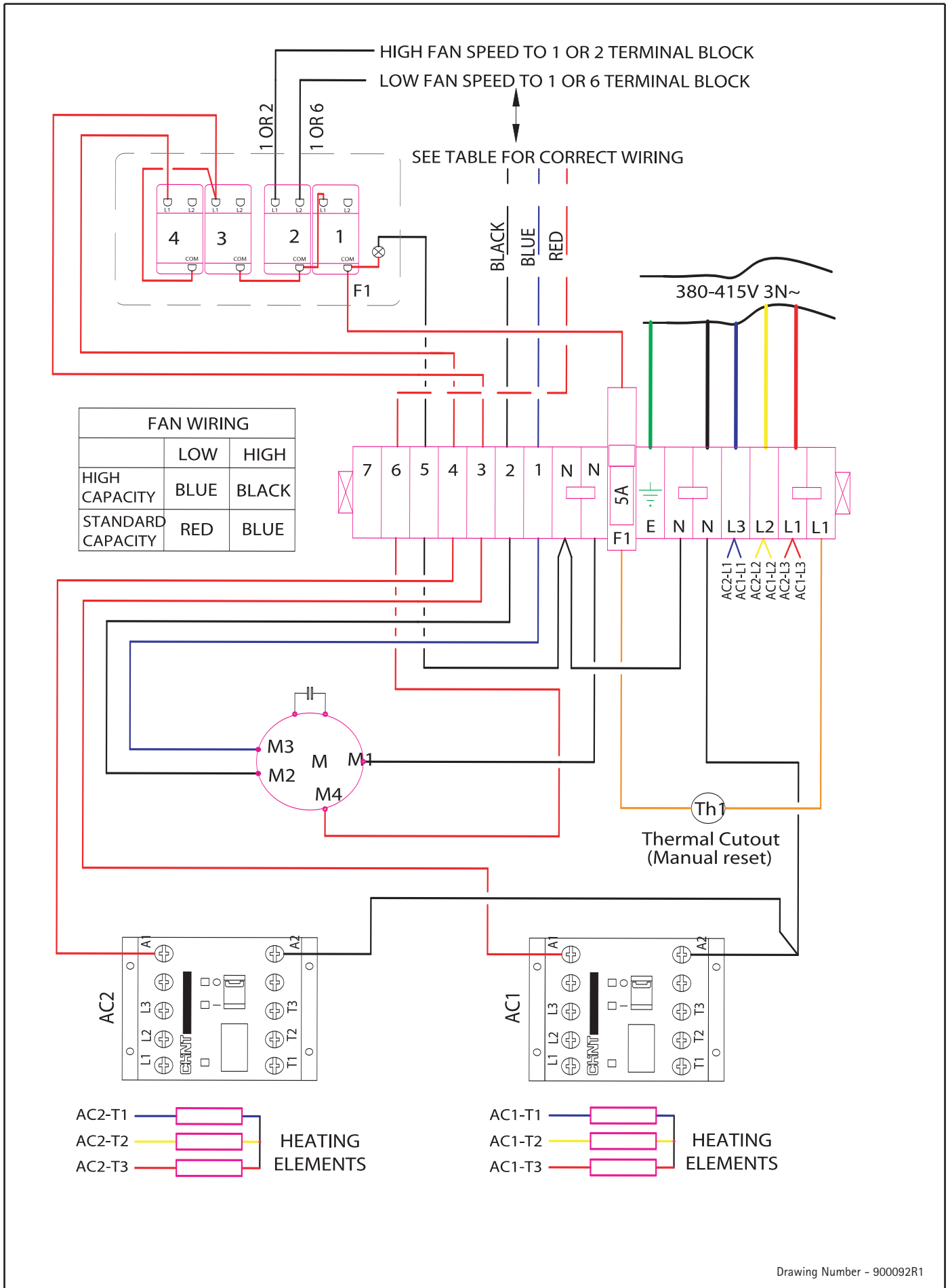
Sole liability rests with the installer to ensure that protective safety wear such as hand, eye, ear and head protection is used during installation of the product.

Do not rest anything especially ladders against the product.

## Standards

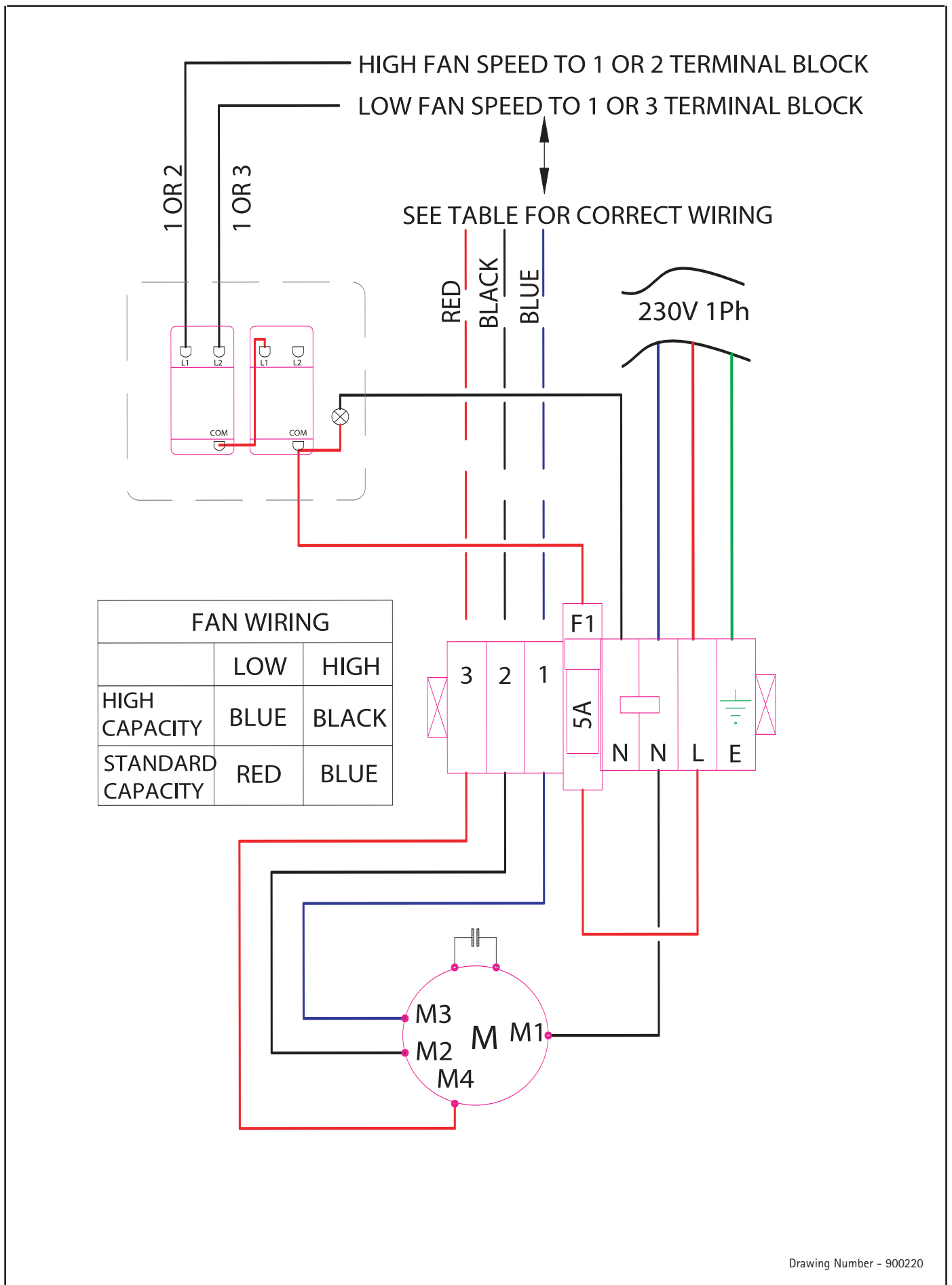
Units conform to the european electrical standard BS EN 60335-2-30:1997 and to the following european CE directives. 73/23/EEC low voltage; 89/336/EEC and 98/68/EEC electromagnetic compatibility.

Figure 1 Wiring Diagram - Electric



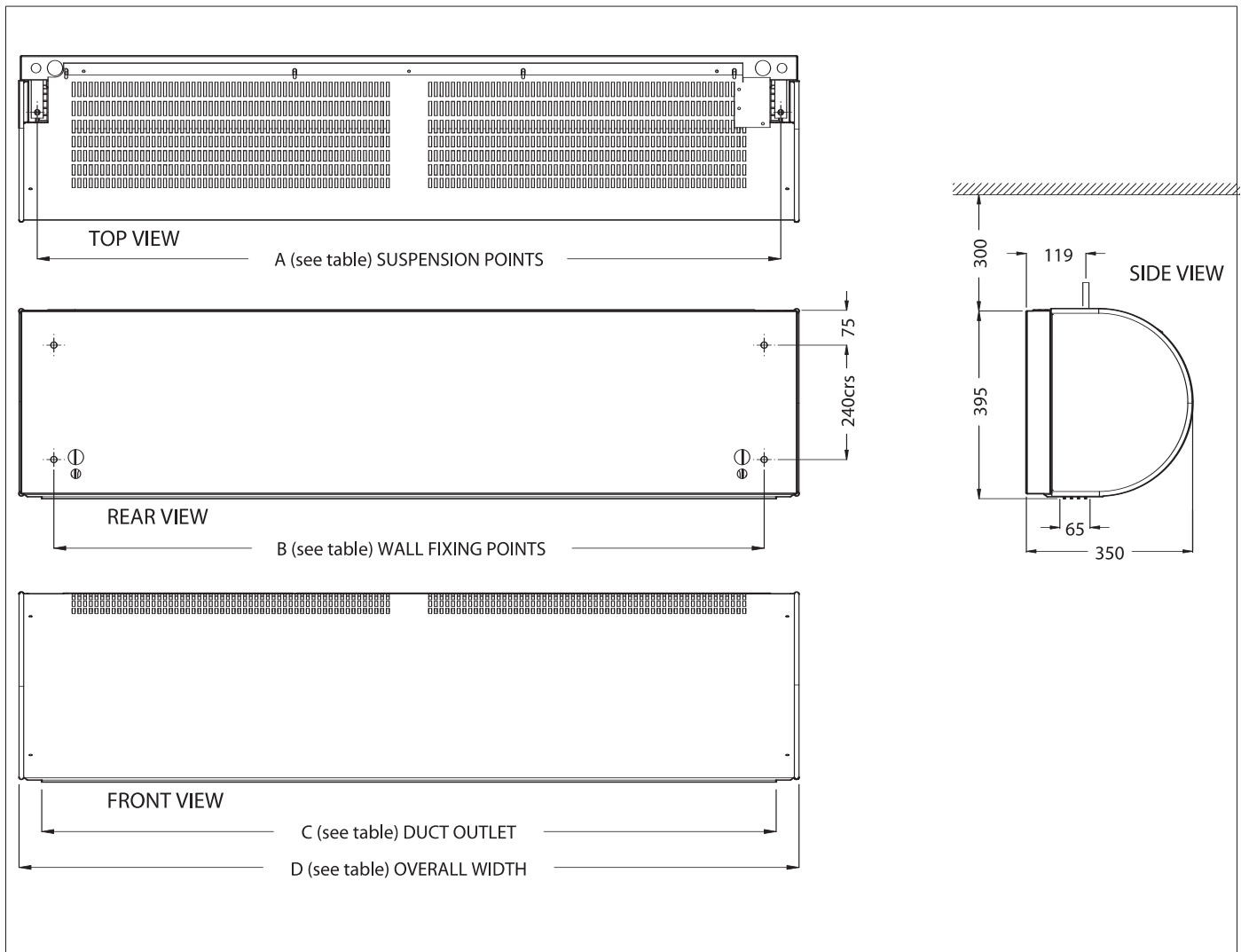
Drawing Number - 900092R1

Figure 2 Wiring Diagram - Ambient / LPHW



Drawing Number - 900220

Figure 3



**Dimensions**

	A	B	C	D
1000mm	1062	992	1095	1138
1500mm	1562	1492	1553	1638
2000mm	2062	1992	2053	2138

**Technical specification – Electric (415V 50Hz supply required)**

Model	AC1000SE09	AC1500SE12	AC2000SE18	AC1000HE12	AC1500HE18	AC2000HE24
Weight	39.5kg	49kg	60kg	39.5kg	49kg	60kg
Element rating	9kW	12kW	18kW	12kW	18kW	24kW
Motor rating	230V 50Hz 2.1 amps max					
Amps per phase	14.2	18.2	26.7	18.5	29.5	38.4

**Technical specification – LPHW & Ambient (230V 50Hz supply required)**

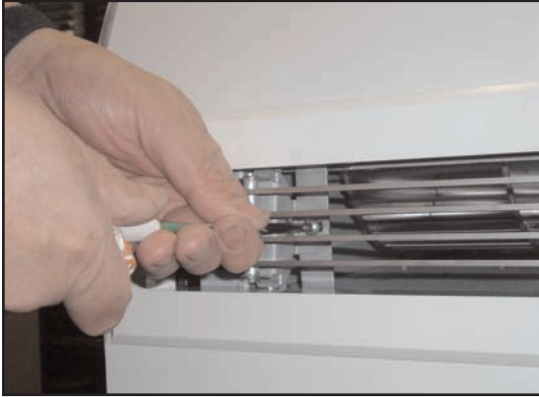
Model	AC1000SW09	AC1500SW12	AC2000SW18	AC1000HW12	AC1500HW18	AC2000HW24
	AC1000SAW	AC1500SAW	AC2000SAW	AC1000HAW	AC1500HAW	AC2000HAW
Weight	39.5kg	49kg	60kg	39.5kg	49kg	60kg
LPHW Element rating	9kW	12kW	18kW	12kW	18kW	24kW
Motor rating	230V 50Hz 2.1 amps max					

## 2 Installation details

It is the sole responsibility of the installer to ensure that the points of attachment to the building are sound. Consultation with the consultant/architect or owner of the building is recommended to ensure that a sound, mechanically stable installation is achieved.

All attachments must be capable of supporting the weight of the product detailed in Section 1.

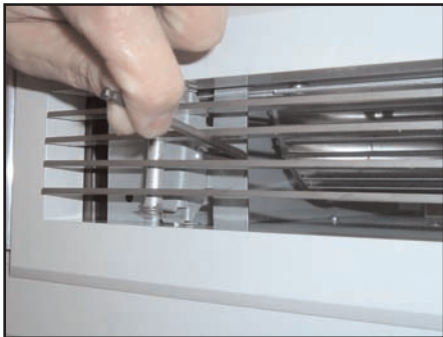
### Step 1



Remove all packaging. Remove decorative cover. Undo screws securing the outlet.

*Note All outer metal surfaces are covered by a protective plastic film, which must be removed before final fixing and operating of the unit.*

### Step 2

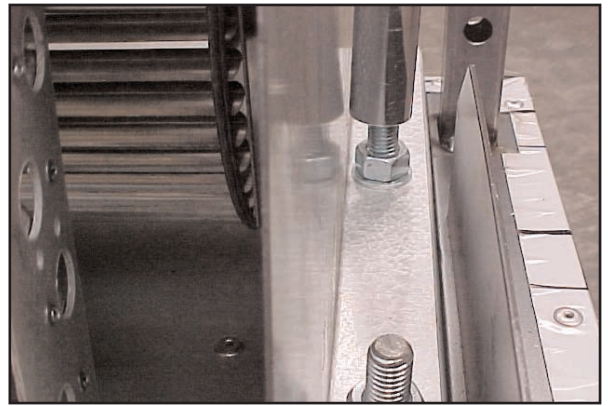


Adjust the grille by turning the screw inside with an allen key.

### Step 3



### Step 4



It is recommended that the chassis is removed from the back box to avoid having to support the weight of the product during installation. To separate the chassis from the back box undo and remove the nuts shown and lift the chassis away from the back box.

The product can be installed using either M12 drop rods or fastened direct to the wall using appropriate sized fixings suitable for the wall surface and the weight of the product.

### Step 5

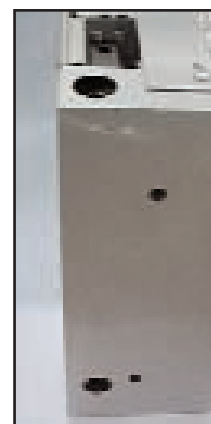


To wall mount the product, position the back box against the wall at the desired mounting height and mark through the holes in the back box brackets to enable the wall to be drilled for the appropriate fixings.

### Step 6

Drill the wall then fix the backbox in position. Lift the chassis (using lifting gear if necessary) onto the studs on the back box brackets. Refit and tighten the nuts.

### Step 7



Holes are provided in the back box for the feed cable to enter the case. Choose the appropriate hole top rear to suit the installation. Fit suitable cable gland for size of cable.

**Step 8**



To install the product using M12 drop rods follow instructions from step 4. If the decorative tube is to be used, fit this over the drop rod, then pass the drop rod through the back box brackets.

**Step 9**

Adjust the product to the required height and ensure that it is fitted level using a spirit level across the back box as required. Tighten the lock nuts and re-assemble in reverse order. Adjust outlet to required angle to give desired performance, and tighten outlet screws.

**Electrical Connections**

With case removed, connect the electrical supply and switchbox interconnecting wiring to the bottom of the terminal rail (See wiring diagrams figures 1-4)

To open terminal depress as shown



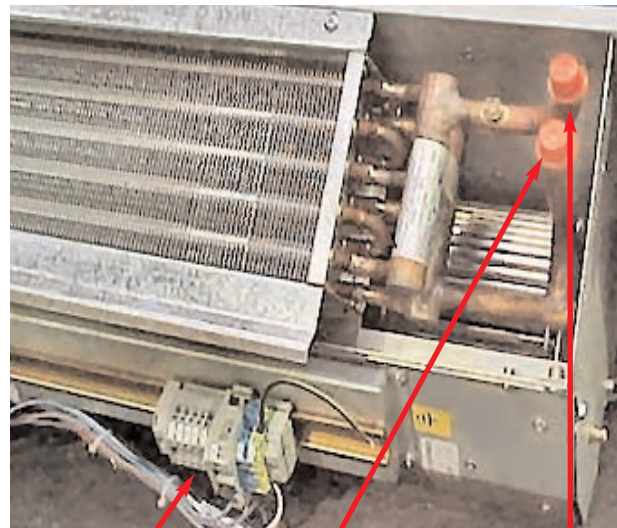
or

Insert correct size flat blade screwdriver from underneath.



**2.1 Installation details - LPHW Only**

Access to the heating coil and mains terminal block is via removal of the case as detailed below



Main Terminal Block

Flow connection with case removed. Diameter 15mm O/D copper tubing

Return connection with case removed. Diameter 15mm O/D copper tubing

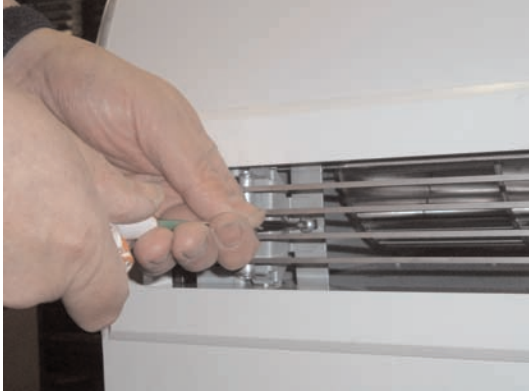
### 3 Servicing

The product should be serviced annually. Airbloc offer a service facility, call 01384 489700.

Servicing shall be undertaken by a competent person.

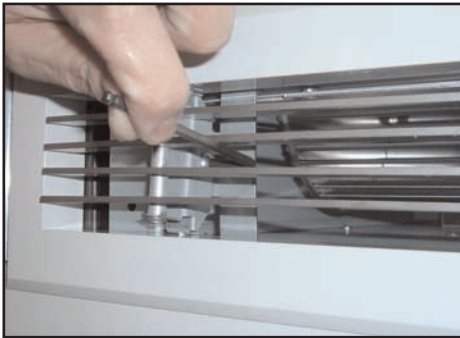
Ensure electrical power is isolated from the product.

#### Step 1



Undo screws securing the grille.

#### Step 2



Adjust the grille by turning the screw inside with an allen key.

#### Step 3

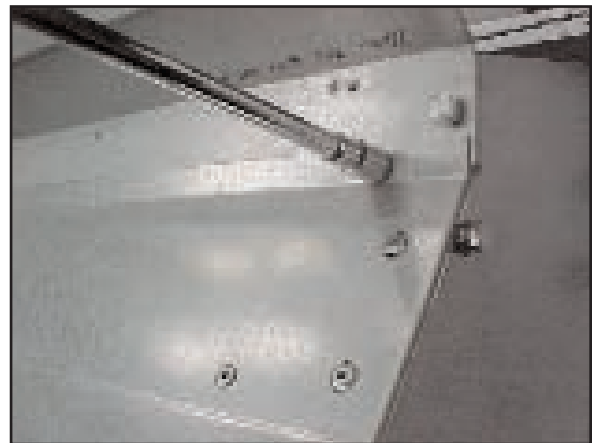


Remove 4 screws securing the top of the case and remove.

#### Step 4



Slacken two bolts on both ends.



Remove three bolts securing the access plate.

Carefully hinge down the access plate.

*Note Take the weight as access plate swings down.*

#### Step 5

With a soft brush clean away any dust from the motor and elements. Check all connections and components for soundness or signs of deterioration and replace as necessary. Re-assemble and test.

## 4 Motor Replacement

Follow steps 1 - 4 below.

### Step 1



Remove 3 screws securing fan bearing plate to access panel. Carefully remove plate with bearing housing from rotor bearing.

### Step 2



Slacken the grub screw securing rotors to the motor shaft, remove rotor.

### Step 3

Repeat steps 1 - 2 for opposite rotor.

Disconnect the wires from the motor to the mains terminal rail.



Remove the bolts securing the motor to the chassis.

Replace motor as required.

Refit in reverse of previous steps and test the performance of the product.

### Step 4

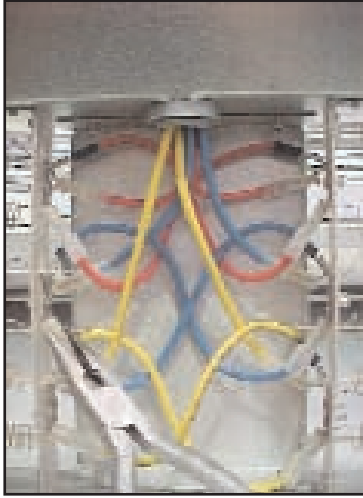
Remove the rotors and motor from the assembly and replace as required.

Refit in reverse of the previous steps and test the performance of the product.

## Element replacement

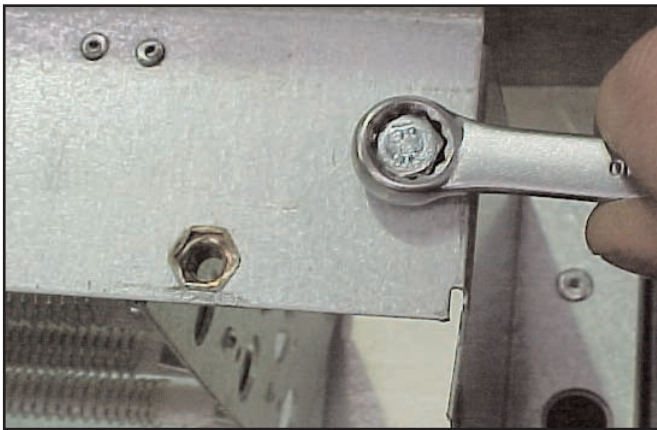
For access follow steps 1 - 4 of servicing.

### Step 1



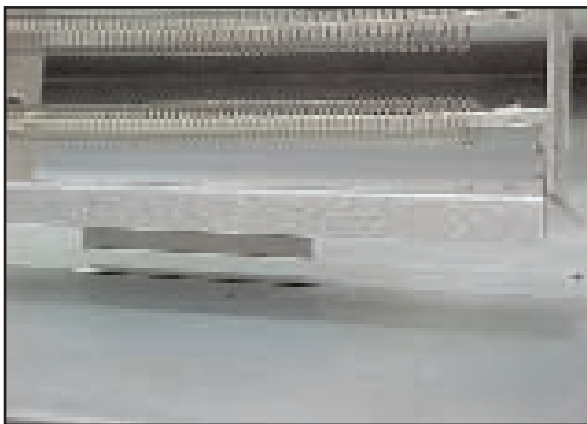
Carefully remove connections to element, noting wiring configuration.

### Step 2



Remove two bolts securing elements.

### Step 3



Lift out element cartridge, replace as required.

Refit in reverse of the previous steps and test performance of the product.

## 5.1 General user instructions – Electrically Heated

Figure 4



### To operate the air curtain

First ensure that the electrical supply to the air curtain heater is turned on. The panel live neon on the switch box should be illuminated.

Ensure that the settings of any time-switch or thermostats incorporated in the installation are in a mode to ensure that the air curtain can operate.

By switching each rocker switch to the down position the following combinations of control can be achieved:

- ON 1 & HEAT SET 1 provides low air flow and low heat.
- ON 1 & HEAT SET 2 provides low air flow and high heat.
- ON 2 & HEAT SET 1 provides high air flow and low heat.
- ON 2 & HEAT SET 2 provides high air flow and high heat.
- ON 1 provides low ambient air flow.
- ON 2 provides high ambient air flow.

### To switch off the air curtain

For short periods ensure that all the rocker switches are in the up position.

For longer periods turn off the mains supply isolator.

## 5.2 General user instructions – Ambient & LPHW

Figure 5



### To operate the air curtain

First ensure that the electrical supply to the air curtain heater is turned on. The panel live neon on the switch box should be illuminated.

Ensure that the settings of any time-switch or thermostats incorporated in the installation are in a mode to ensure that the air curtain can operate.

By switching each rocker switch to the down position the following combinations of control can be achieved:

- ON 1 provides low air flow and high heat. - *LPHW units only*
- ON 2 provides high air flow and low heat. - *LPHW units only*
- ON 1 provides low ambient air flow with no heat from coil.
- On 2 provides high ambient air flow with no heat from coil.

### To switch off the air curtain

For short periods ensure that all the rocker switches are in the up position.

For longer periods turn off the mains supply isolator.

## 6 Fault finding

6.1 If the air curtain does not operate after running through the detail provided in Section 3, then a suitably competent service engineer should be called to identify the nature of the fault.

*Note The manufacturer operates a service function from the address provided in these instructions.*

All Air Curtains are fitted with fuse protection and motor thermal protection.

Other faults in relation to the element, motor and wiring should be identified using conventional fault finding techniques.

In the event that electrical components are replaced, please ensure that electrical safety checks in accordance with the regulations in force in the country of use are undertaken






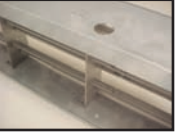



6.2 Electrical Heaters only, for the service engineer, please note that there is a thermal cut-out incorporated in the air curtain which needs to be manually reset. The cut-out is located near to the mains terminal block.

Re-setting the thermal cut-out may help to identify the nature of the fault however we do not recommend re-set without a thorough investigation into why the cut-out operated.

Figure 6



## 7 Spare parts

Photograph	Description	Part Numbers			
		AC1000SE09 & AC1000HE12	AC1500SE12 & AC1500HE18	AC2000SE18 & AC2000HE24	
	Motor	100535	100535	100535	
	Contactor	900078	900078	900078	
	Rotor LH	100539	100540	100541	
	Rotor RH	100536	100537	100538	
	Thermal cut out	900001	900001	900001	
	Element Assembly				
	Rating	9kW	12kW	18kW	24kW
	HE Part No	-	100526	100527	100528
	Length	-	1m	1.5m	2.0m
	SE Part No	100840	100841	100842	-
	Length	1m	1.5m	2m	-
	Coil LPHW Only				
	Rating	9kW	12kW	18kW	24kW
	HE Part No	-	100989	100990	100991
	Length	-	1m	1.5m	2.0m
	SE Part No	101279	101280	101281	-
	Length	1m	1.5m	2m	-
	Switchbox - Ambient & LPHW - Part No - ASCP1-2				
	Switchbox - Electrically Heated - Part No - ASCP1-4				



For commercial/retail air curtain enquires please contact

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# AIRBLOC



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