

thermoscreens®

C RECESSED EE AIR CURTAINS

INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS



PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING INSTALLATION

Thermoscreens Ltd
St. Mary's Road Nuneaton
Warwickshire England
CV11 5AU

Email: sales@thermoscreens.com

Tel: +44 (0) 24 7638 4646

Fax: +44 (0) 24 7638 8578

www.thermoscreens.com



UN-PACKING YOUR C RECESSED EE AIR CURTAIN

The following items are supplied and packaged within the boxes.

■ C-Recessed Air Curtain



■ Remote Control

Electric



Ambient/LPHW



■ Recessed Grille



If anything is missing or damaged please contact your place of purchase immediately.

For your records

Date of Purchase.....
Place of Purchase.....
Serial Number.....

For warranty purposes proof of purchase is necessary so please keep a copy of your invoice.

(All documentation supplied with each unit should be stored and kept for future reference).

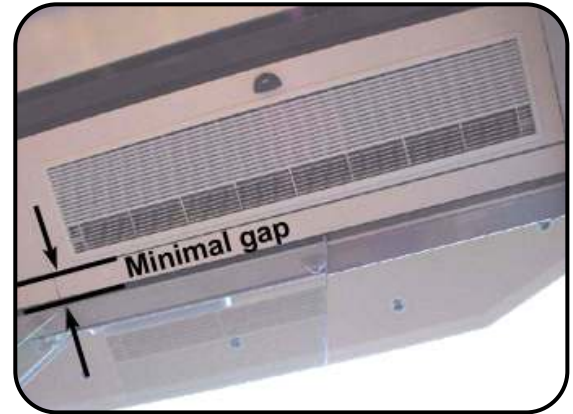
INSTALLATION OF YOUR HORIZONTAL APPLICATION C RECESSED AIR CURTAIN

The C Recessed air curtain has been designed for recessing within ceiling voids or bulkheads.

Location

Ensure that the unit is mounted within its height specification of 1.8m to 2.75m maximum (from floor level to the underside of the unit/grille) and that it is situated as close to the door as possible.

Note: The air discharge should be nearest to the door as shown in adjacent figure. Ensure the air curtain is as close to the door opening as possible for best performance, obstructions such as door opening devices, structural beams etc will reduce the performance.



Note the C Recessed air curtain has a series of punched air ventilation slots along one side panel of the unit which will be within the ceiling void once the unit is installed. There must be an air gap of 50mm minimum between these ventilation holes and any obstruction/bulkhead within the ceiling void to allow ventilation air to easily enter the air curtain via these slots. Furthermore, the ceiling void must be sufficiently large and freely ventilated so there will be an adequate supply of ventilation air (m³/hr) to the unit, see Table 1. If the ceiling void is enclosed around the air curtain it will need an air ventilation grille of effective free area (cm²) as given in Table 1 and an adequate air path within the void for air to enter the punched air ventilation slots.

Table 1

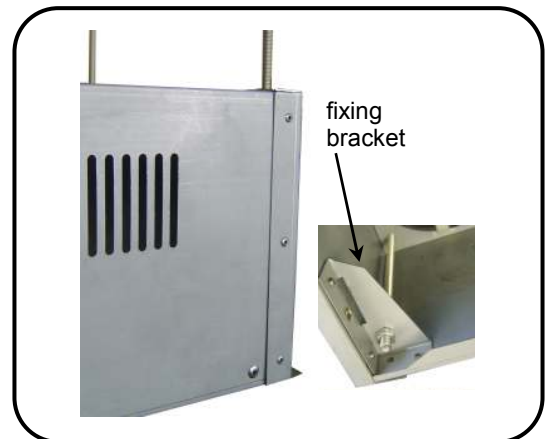
Air curtain	Required air flow within ceiling void (m ³ /hr)	Effective free area of ventilation grille for an enclosed ceiling void (cm ²)
C1000R	353	500
C1500R	421	700
C2000R	707	1200

Ceiling Suspension

Make the cut-out in the ceiling to the dimensions given in Figure 1, ensuring the length of the hole is exact. The air curtain will fit through the ceiling cut-out, ensure there is sufficient height clearance in the ceiling void to do this. Alternatively, the ceiling can be fitted after the air curtain has been installed.

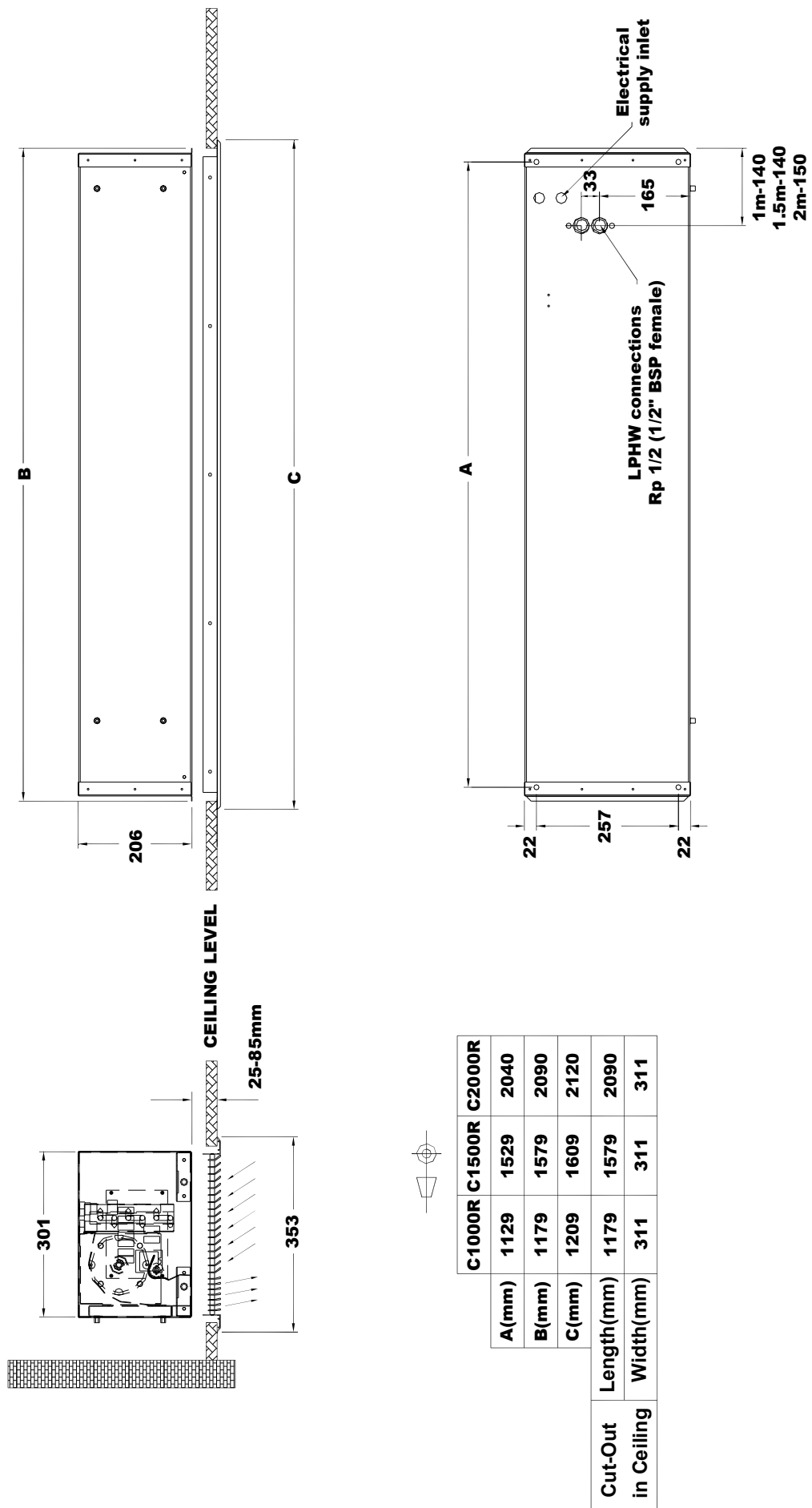
Clearance holes for M8 threaded rod to enter from above are provided on the top face of the casing (4x, for dimensions see Figure 1) allowing the unit to be suspended. Insert rod through each hole in top and attach onto each fixing bracket at lower edge of air curtain (see insert). Lock rod in place using M8 nut above and below fixing bracket (threaded rod and locking nuts are not provided). Ensure rod does not come below bottom face of unit.

Ensure each of the threaded rods are secured on to a suitable structure that can support the weight of the unit (for unit weights see Table 2)*.



* It is the sole responsibility of the installer to ensure that the building fixing points and suspension system used are suitable for the air curtain being installed

Figure 1



	C1000R	C1500R	C2000R
A(mm)	1129	1529	2040
B(mm)	1179	1579	2090
C(mm)	1209	1609	2120
Cut-Out in Ceiling	Length(mm)	1179	1579
	Width(mm)	311	311

⚠ Safety and Electrical Connections

All electrical wiring and connections MUST be carried out by a competent qualified electrician in accordance with the latest edition of the IEE wiring regulations and/or local statutory regulations.

- ⚠ A single phase or 3 phase isolator with a contact separation of at least 3mm in all poles must be fitted to the supply wiring (the isolator must be fitted in an accessible position).
- ⚠ The air curtain must be earthed.
- ⚠ The appliance must be connected using cables having an appropriate temperature rating (heat resistant).
- ⚠ Ensure that the supply cables, circuit breakers and other electrical installation equipment are correctly sized for the air curtain being installed; see Table 2.
- ⚠ On a 3 phase electrical supply the unit requires a neutral connection (3N~).
- ⚠ Cable glands used for the Electrical Input must be rated IP21 or higher.

Table 2

Air Curtain	Electrical Supply (V/ph/Hz)	Rated Power Input (kW)	Current per phase (A)	Heat Output (kW)	Weight (kg)
C1000AR	230/1/50	0.15	0.7	N/A	19
C1500AR	230/1/50	0.20	0.9	N/A	25
C2000AR	230/1/50	0.25	1.1	N/A	35
C1000WR	230/1/50	0.15	0.7	6.0	20
C1500WR	230/1/50	0.20	0.9	9.0	27
C2000WR	230/1/50	0.25	1.1	12.0	37
C1000ER	400/3/50	9.15	13.7	4.5/9.0	22
C1500ER	400/3/50	12.20	18.3	6.0/12.0	30
C2000ER	400/3/50	18.25	27.2	9.0/18.0	41

❑ Fitting of the Recessed Grille

The grille consists of a frame, grille core (fitted within the frame) and four brackets (note: the brackets are fixed to the frame).

❑ Removal of Grille Core

Prior to fitting the grille to the air curtain and the ceiling the grille core will need to be removed from its frame. Release the grille core by unfastening the two conical bolts fitted at each end of the grille core. Push against the spring loaded pins and the grille core can now be pulled clear of its frame.

Note: the grille core will still be attached to the frame via cord safety ties.

The rectangular hole in the ceiling must be sized to suit the grille frame, see Figure 1 for dimensions.

❑ Attaching the Grille to the Air Curtain

Before lifting the grille frame into position locate the four M6 bolts (two inside each end of the air curtain). Remove the M6 bolts and lift the frame into position (ensure that when fitted the air discharge vanes align with the air discharge of the air curtain, see Figure 1), screw each M6 bolt through the slot in the grille bracket until all four are located into place. Adjust the height of the grille frame (via slots in brackets) so the frame fits nicely against the under side of the ceiling. Once the desired height is achieved tighten each M6 bolt in place locking the grille frame into the correct position.

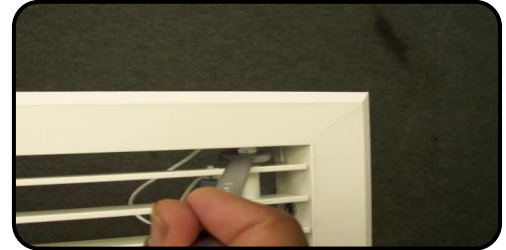
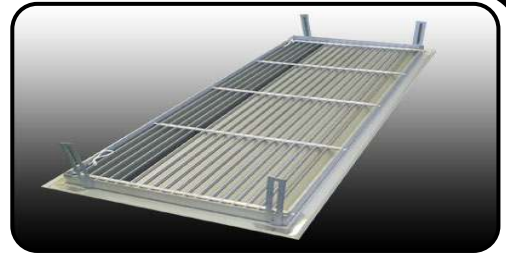
❑ Adjusting the Separator Plate

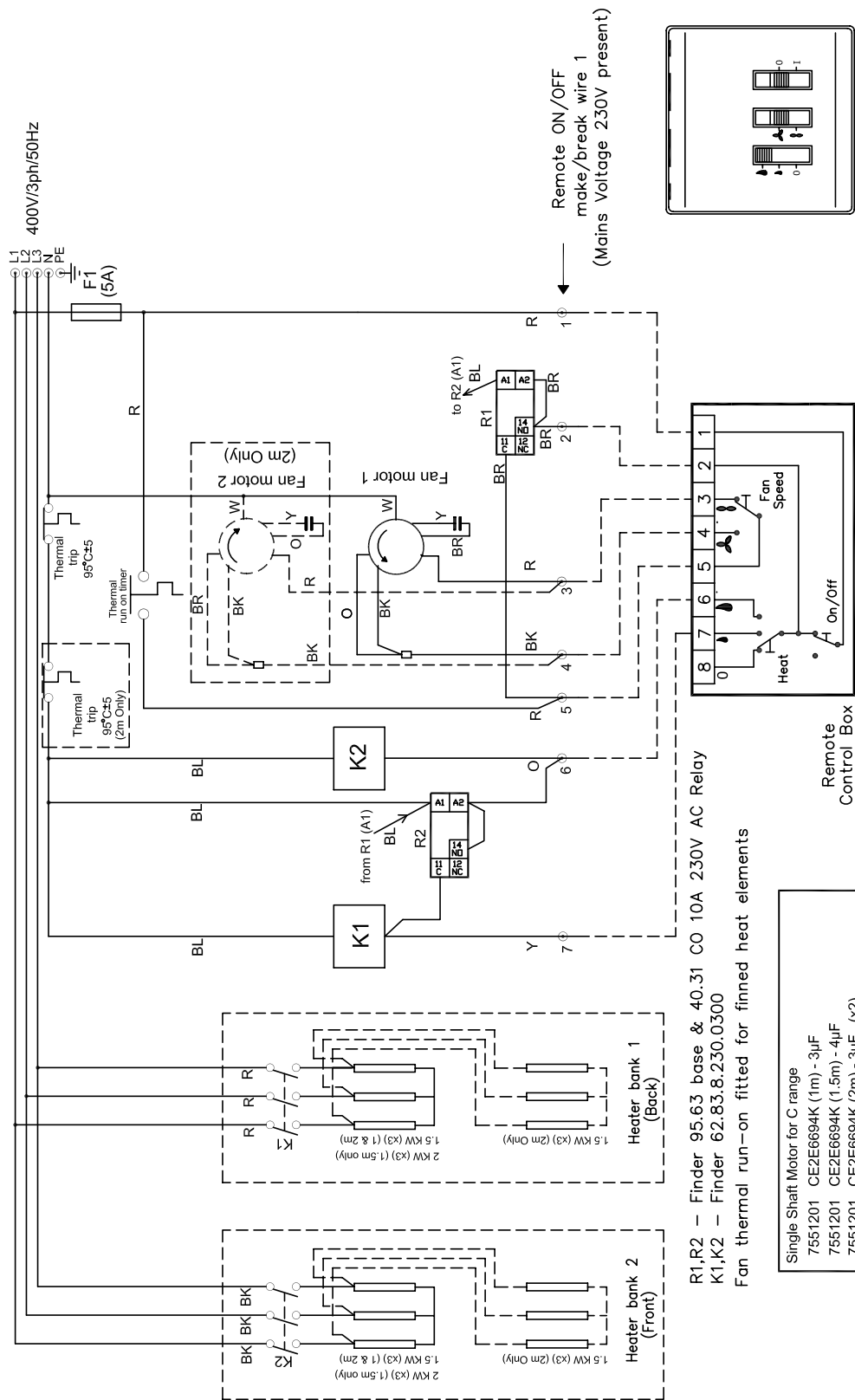
Within the air curtain there is a sliding separator plate, this needs adjusting up or down to stop the air discharge re-circulating within the air curtain. To adjust the separator plate release the M6 bolts at either end, extend the slide plate so that it will just touch the topside of the grille along its whole length and tighten the bolts. It will be necessary to fit the grille core to gauge where the separator plate should be fitted.

❑ Fitting the Grille Core

Once the above is complete the grille core can be refitted, to do so locate each spring loaded pin in its locating hole, push against the spring loaded pins to allow the fixed pins to locate within their fixing holes. Tighten and secure the conical bolts fitted at each end of the grille core.

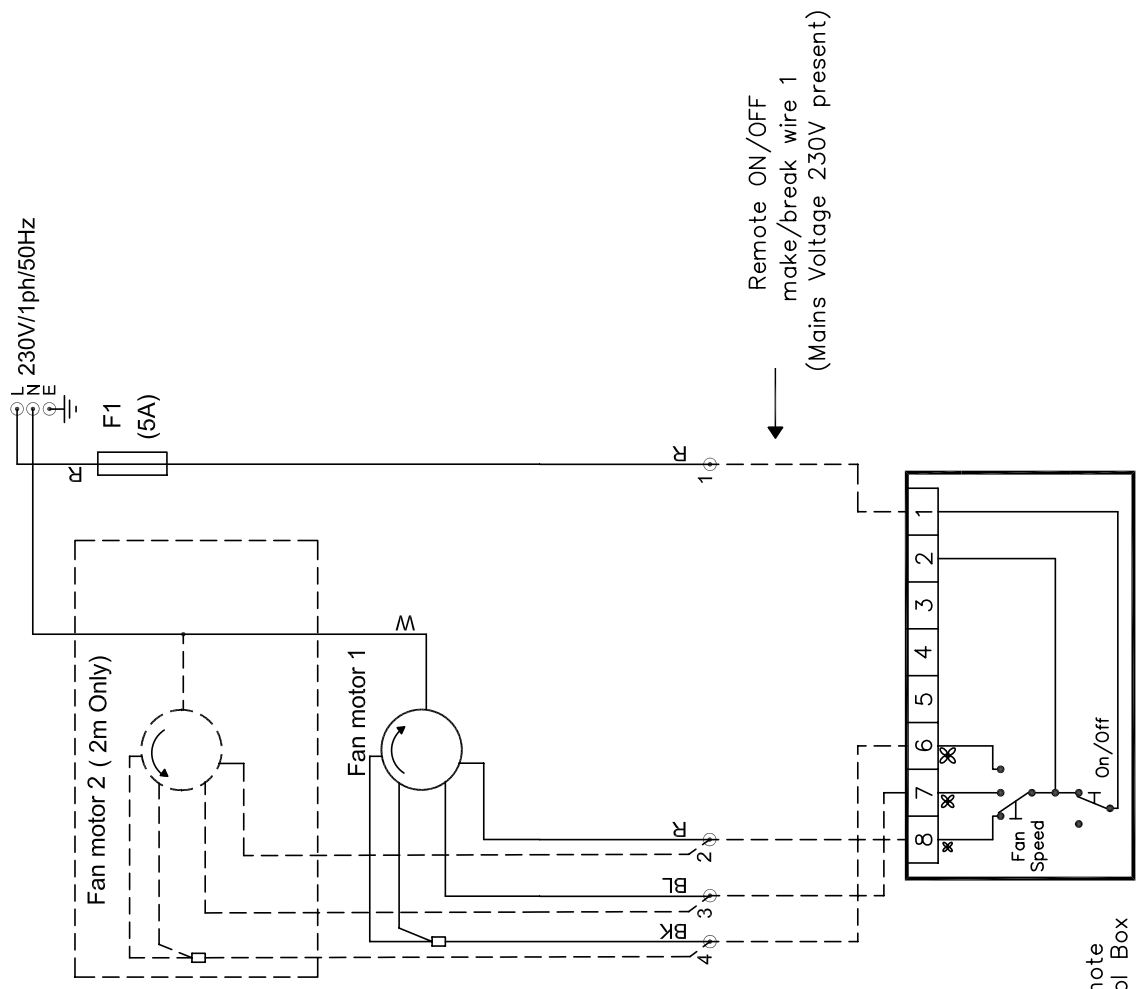
Once the ceiling is finished remove the protective plastic film from the recessed grille frame.



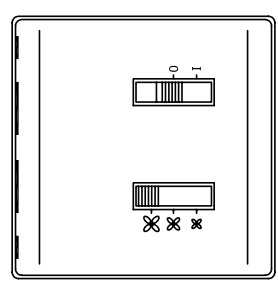


R1,R2 – Finder 95.63 base & 40.31 CO 10A 230V AC Relay
 K1,K2 – Finder 62.83.8.230.0300
 Fan thermal run-on fitted for finned heat elements

Single Shait Motor for C range
 7551201 CE2E6694K (1m) - 3µF
 7551201 CE2E6694K (1.5m) - 4µF
 7551201 CE2E6694K (2m) - 3µF (x2)



Single Shaft Motor for C range
 7551201 CE2E6694K (1m) - 3µF
 7551201 CE2E6694K (1.5m) - 4µF
 7551201 CE2E6694K (2m) - 3µF (x2)



Remote Control Box

■ Commissioning

Once the air curtain is functioning check that the fans operate, there is no excessive mechanical noise coming from the fans and that all fans are working. If the unit is electric heated or water heated check that the air stream from the discharge grille warms up across the whole length of the air curtain when heating is selected. Check that heating increases as higher heat is selected and feel to see that the warm air stream is reaching across the doorway with door open or closed.

Before leaving site it is important that the air curtain installation is “Handed-Over” to the end user or his representative and the operation of it is fully explained and that they understand how it operates. Explain also the service intervals and that the unit must be regularly cleaned.

■ Fault Conditions

In the event of a fault with electrical heated air curtains the thermal cut out(s) may operate. *Note: If the mains supply is isolated during operation then the thermal cut outs may operate..* The thermal cut out(s) are located within the unit directly above the electric element banks (one on the 1 & 1.5m and two on the 2m model).

In the case of a fault condition do not attempt to reset the thermal cut outs or replace the fuses, arrange for a Thermoscreens appointed technician or certified electrician to attend the unit to investigate the reason why the thermal cut outs/fuse(s) have operated. Once the cause has been determined and rectified, they will reset/replace the thermal cut out/fuse and function test the unit.

🔧 Service & Maintenance

Always disconnect and isolate the mains electricity supply before installing, maintaining or repairing this equipment. Note: All maintenance/repairs should only be carried out by a competent electrician or Thermoscreens appointed technician.

To ensure the air curtain operates at full efficiency the inlet/outlet grilles, fan impellers, housings and motors must be kept free of dust and debris. Build up of dust on the fan impellers can cause vibration, noise and excessive wear on the motor bearings.

Frequency of cleaning will depend on the environment, but we would recommend that the unit be cleaned a minimum of every 3 months (failure to adequately maintain the unit and provide a suitable cleaning schedule will result in performance degradation and reduce the life expectancy of the air-curtain).

Remove the grille from the air curtain. Vacuum and clean the build-up of dirt and debris within the air-curtain (*please note that the motor(s) are permanently lubricated and require no additional lubrication*).

Once the air curtain has been cleaned check all electrical connections within the unit ensuring terminals are tight and that crimped connections have not become loose. Re-install the recessed grille ensuring the straight louvers are directly under the air discharge and the 45° louvers are directly under the air intake. Reconnect the electrical supply and fully function test the air-curtain to ensure correct operation (See Commissioning).

🔧 Warranty

If any problems are encountered, please contact your installer/supplier. Failing this please contact the Thermoscreens warranty department. All units are covered by a two year warranty period.

Care has been taken in compiling these instructions to ensure they are correct, although Thermoscreens disclaims all liability for damage resulting from any inaccuracies and/or deficiencies in this documentation. Thermoscreens retain the right to change the specifications stated in these instructions.

Thermoscreens Ltd
St. Mary's Road Nuneaton
Warwickshire England
CV11 5AU

Email: sales@thermoscreens.com

Tel: + 44 (0) 24 7638 4646

Fax: + 44 (0) 24 7638 8578

www.thermoscreens.com