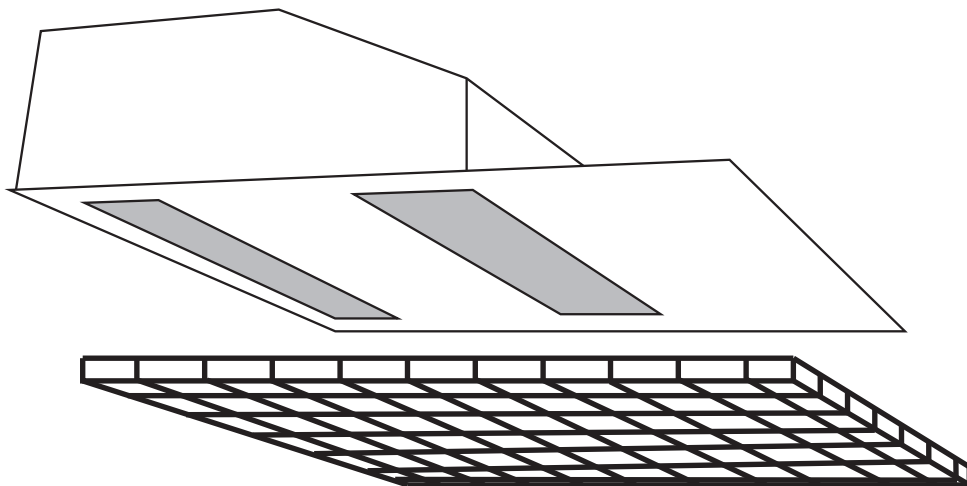


# Installation Instructions

---

The RCHS 3210 for Modular T bar Ceilings

The RCHR 3210 for Plasterboard Ceilings



Complete with **REMOTE SWITCH UNIT**  
for Fan only, 3, 2 and 1kW

Please retain for future reference



Commercial Electric Heat Limited  
Burnfoot Industrial Estate  
HAWICK  
Roxburghshire  
TD9 8SL

Tel 01450 372103 Fax 01450 377800  
Email [sales@ceh ltd.co.uk](mailto:sales@ceh ltd.co.uk) Web [www.ceh ltd.co.uk](http://www.ceh ltd.co.uk)

---

## SAFETY

The correct procedures for working at height must be adopted when installing this heater.

The heater must be installed by a suitably qualified person in accordance with current regulations.

## CONTENTS

Remove from carton and check contents ;

### RCHS-3210

- heater unit
- support clips and 4 no. machine screws
- grille
- RCH-RSW three switch control unit
- 25mm cord grip bush

### RCHR-3210

- heater unit
- support clips, 4 no. machine screws and 4 no. woodscrews
- framed grille and 6 no roundhead woodscrews
- RCH-RSW three switch control unit
- 25mm cord grip bush

## LOCATION

The heater must be installed at a minimum of 2 m and a maximum of 3m from the floor.

The heater can be positioned in the corner tile of a ceiling but for better heat distribution one tile (600mm ) from each wall is preferable.

The unit should not be positioned over desks, counters or high level display racking wherever a constant flow of heated air may be uncomfortable or cause overheating of equipment.

## CONTROL

### Remote Switch

The Remote Switching Unit allows ON/OFF, Fan only with 1,2 or 3 kW.

### Thermostat (CRST16)

A thermostat of 16A rating can be connected in the power supply to the Remote switch thus switching the unit off totally when set temperature is reached.

Alternatively it can be connected inside the switch unit between the Fan switch and heat switches by removing the internal connection. This will control the heating elements only. The fan will run continuously maintaining air circulation.

## ELECTRICAL CONNECTION

The heater should be installed in accordance with the latest edition of the IEE Requirements for Electrical Installation (BS 7671:2001)

Remove tile adjacent to connection cover plate. Remove side connection cover ( 2 set screws) Position heater in ceiling (See Fixing )

Position remote switch unit in suitable location. A means of disconnection having a contact separation of 3mm in all poles should be incorporated.

Select cabling with 4 cores and earth of appropriate size for current and volt drop.

Pass cable/s through cord grip in top of unit. Leave sufficient length for connection but ensuring cables do not foul blower unit. Make off connections to connector block and earth stud in accordance with circuit diagram RCH-W-007 (copy on back page and on top of unit )

If remote switching is not required connect power supply to L and N and link L,LI and LII with 1.5sqmm cable. Tighten up cord grip. Replace connection cover plate and ceiling tile.

**IMPORTANT : always check to ensure the heating elements cannot be energised without the fan running.**

**WARNING THIS HEATER MUST BE EARTHED**

## OVER TEMPERATURE CUT OUT

Should the heater exceed normal operating temperature the over temperature cut out on the heating elements will operate.

**To RESET** - switch off power to the unit and allow to cool before switching on again. If the problem persists consult a suitably qualified person.



---

## FIXING

### RCHS-3210

This unit is designed for installation in a standard 600mm x 600mm modular ceiling. The front cover can be reduced to a minimum 600mm x 400mm for non standard tiles.

The unit weighs 9kgs. and as such can be mounted directly in a correctly installed modular ceiling. As an added precaution additional ceiling supports can be added adjacent to the heater. If the strength of the ceiling is suspect or for a non standard ceiling system additional fixings can be made to the body of the heater by removing the front cover. Ensure fixings are clear of moving parts and cables.

The mounting clips provided allow mounting flush with the ceiling or can be rotated to allow mounting above the T bar. The latter allows the installation of the egg crate grille.

The minimum height between structural ceiling and top of the T bar is 230mm. If there is limited clearance between the structural and suspended ceilings the unit should be inserted through the mounting hole prior to fitting the clips.

Remove 4 clips and 4 machine screws from packing. Fix clips, with machine screws provided, to screwed inserts in side of unit. Position them as required and tighten up screws. Place unit in ceiling ensuring clips engage securely with top of T bar (see dia 1) or flange (see dia 2)

If access and space is available above the suspended ceiling the grille can be put into position first and the heater positioned over it. If space is limited the heater should be positioned first and then the grille inserted by lifting the heater and sliding the grille in from the side.

### RCHR-3210

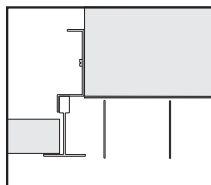
This unit is designed for installation in a plasterboard or similar ceiling where a free height above the surface of the ceiling is at least 230mm.

A 600mm x 410mm hole should be made in the ceiling and suitably framed.

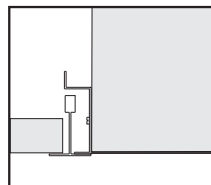
The unit can be fixed in two ways;

either 1) Remove the front cover of the unit and screw fix through the sides of the unit into the ceiling frame. Replace front cover ensuring all screws are tight and the two shakeproof washers are used.  
or 2) Fix clips, with machine screws provided, to screwed inserts in side of unit. Position them as required and tighten up screws. Place unit in ceiling and secure clips to ceiling with woodscrews provided. (see dia 3)

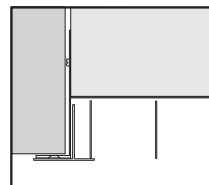
The framed grille is then positioned and fixed by the 6 round headed screws provided.



dia.1



dia.2



dia.3

## MAINTENANCE

Isolate the heater and remove any build up of dust etc. every 6 months. Check that the heater has not been covered or the airflow restricted in any way.

## WARRANTY

This product is guaranteed, in accordance with our Conditions of Sale, for a period of 12 months from date of purchase. We will repair or replace, at our discretion, any part found to be defective. We cannot accept responsibility for any consequential liability.

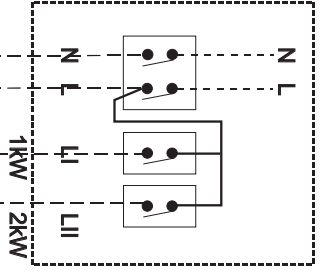
The warranty will be invalid if the heater has not been installed in accordance with these instructions. This does not affect your statutory rights.

The manufacturers reserve the right to change the specification at any time without prior notice EO&E

---

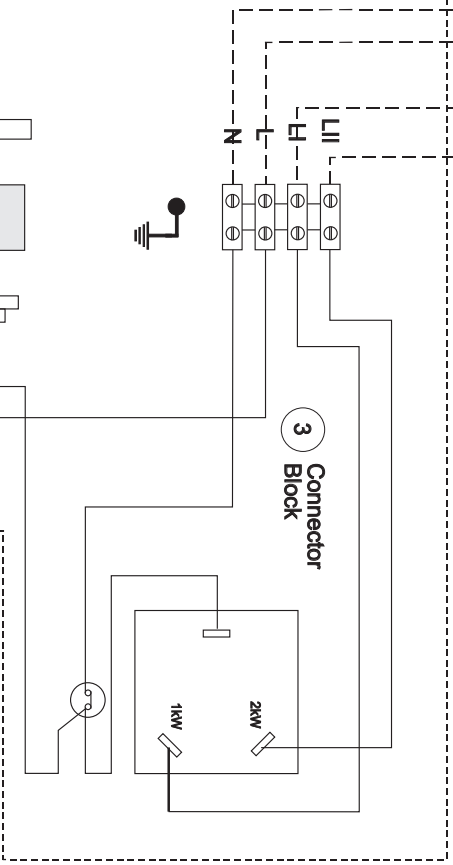


Commercial Electric Heat Limited  
HAWICK TD9 8SL



6

**Remote Switch RCH-RSW**  
**IMPORTANT:**  
Any modification to the switching in this circuit must ensure that the heating elements cannot be energised without the fan running.



3 Connector Block

1 Heating Element

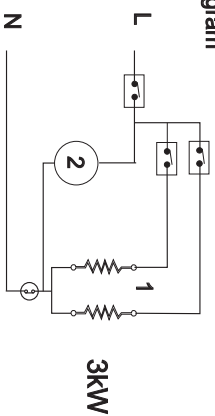
4 Blower Unit

5 Over temp cut out

Heating element incorporates over temperature cut out in common terminal.

To reset:  
Switch off and allow to cool (5 minutes) then restore supply  
Heater does not function again until power has been removed from cut out.

Schematic diagram



2 Fan Motor

3kW

No	Part No	Description
----	---------	-------------

1	B081-01	Heating element
2	D001-01	Fan motor
3	F003	Connector block
4	C001	Blower unit
5		Over temp cut out
6	RCH-RSW	Remote Sw Unit

No	Revision	Date
----	----------	------

1	add external cut out	11/04
---	----------------------	-------

Title  
**RCHS/R. 3210**  
**Recessed Ceiling Htr.**

Drawn by  
**NEB**

Date  
**10.06.98**

Scale	Drawing No.	Rev
-------	-------------	-----

nts	<b>RCH-W-007</b>	<b>1</b>
-----	------------------	----------