



# Tile Heater Kit Installation Guide

Coldbuster Helpline: 1300 653 914

**WARNING:** Failure to read this guide prior to installing the COLDBUSTER heater may result in installation problems which could void this heaters warranty.

[www.coldbuster.com.au](http://www.coldbuster.com.au)

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## Introduction

To ensure a simple and hassle free installation please read through the guide before commencing with the installation.

Coldbuster does not accept responsibility for any loss or consequential damage suffered as a result of installations that in any way contravene the instructions detailed in this guide.

If you are uncertain with any instruction detailed in this guide, please contact the Coldbuster helpline during office hours (EST).

## Contact Coldbuster

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PO Box 797, Brookvale NSW 2100 Australia

T. 1300 653 914  
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W. [www.coldbuster.com.au](http://www.coldbuster.com.au)

# Installation Do's and Do not's

## Do's

- Plan the installation, especially when more than one heater is being installed
- Ensure the floor surface is smooth, clean and dry before installing the heater
- Ensure the heater is installed as per these instructions
- Maintain a minimum 30mm spacing between elements
- Install the floor covering as soon as possible after the heater is installed
- Protect the heater with cardboard or hardboard if the floor covering installation is delayed
- Test the heater before installing the floor covering
- Ensure tile adhesives and grouts are suitable for use with floor heating
- Ensure the heater is connected to a RCD (safety switch) protected circuit
- Retain your invoice as proof of purchase for warranty purposes

## Do Not's

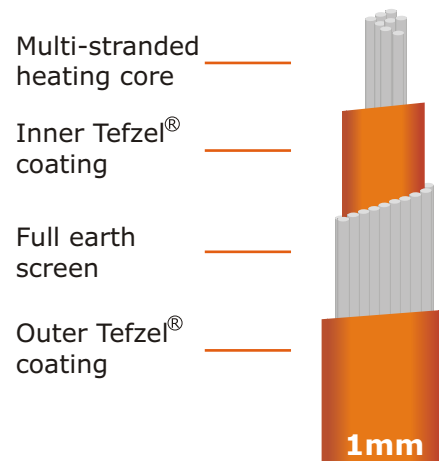
- Do not ever cut the element wire
- Do not allow heater wires to touch or cross one another
- Do not allow harmful traffic (eg. Spiked boots, ladders, wheelbarrows) over the heater before installing the final floor covering
- Do not place sharp or heavy objects on the uncovered heater
- Do not install the heater under any surface not suitable for floor heating
- Do not install heating in shower recesses to prevent damage to heater due to fixing shower screens
- Do not commence installing the final floor cover before testing the heater
- Do not run the heater until the tile adhesive and grout has fully cured

# Product Information

The Coldbuster kit contains the following items:

- heater mounted on self adhesive tape
- self adhesive fibreglass mesh
- Klimaguard installation alarm monitor
- electronic thermostat with programable timer
- installation guide

The heater wire is made up of 4 parts.



**Tefzel coated element**  
**More robust**  
**No corrosion**  
**No maintenance**

Tefzel® is a trademark of DuPONT

# Tools Required for Heater Installation

The following tools are required:

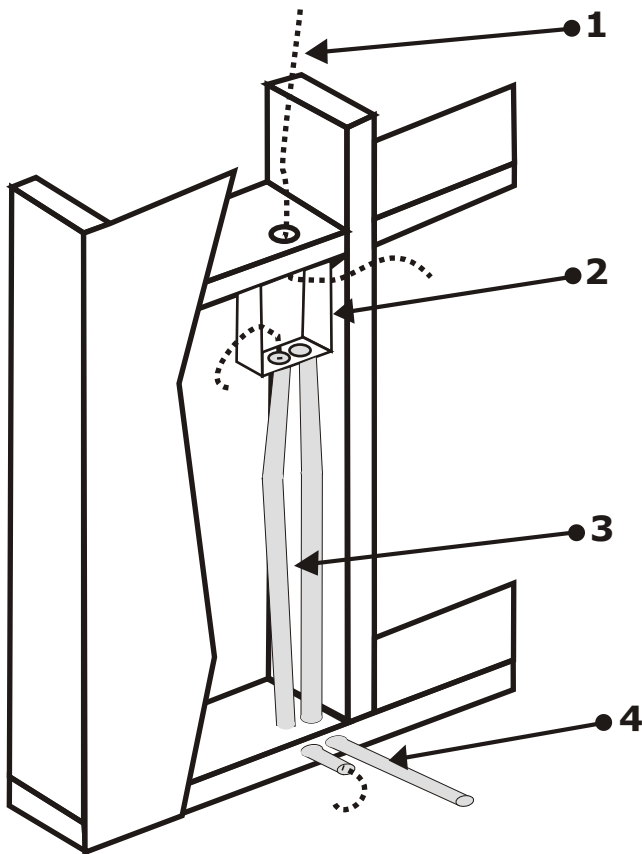
- bonding liquid mixed in 1:4 ratio and paint roller to apply
- chisel & hammer or angle grinder
- tile adhesive (20kg per 5sqm), large bucket and mixing paddle
- steel float or blunt edged trowel
- tape measure
- pencil or chalk
- cloth tape

# Electrical Preparation

The Coldbuster heater element has been classified as an electrical appliance. You are therefore not required to be an electrician to install (layout) the heater.

However, all electrical connections including the connection of the thermostat must be undertaken by a licensed electrician, in accordance with current electrical codes of practice, AS/NZS3000:2000 and state codes.

## Hardwire Connection

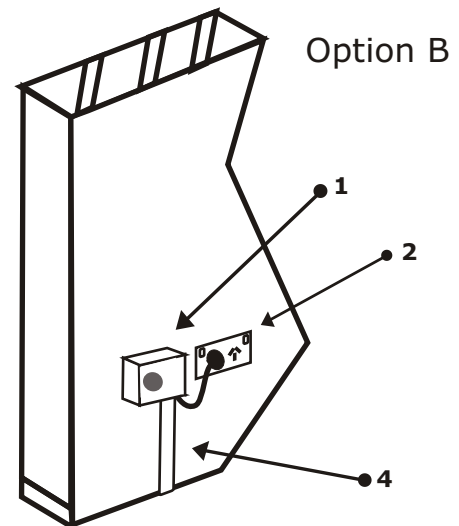
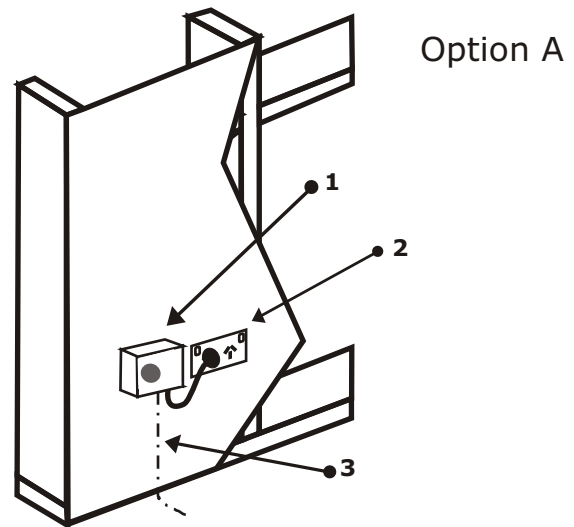


1. Power supply must be RCD protected
2. Standard flush box or plate mounted horizontally. Position between 1000mm -1500mm from the floor
3. 20mm conduit for the heater leads - 2 heaters per conduit
4. 20mm conduit for floor sensor extended into the room (optional: the thermostat also has a built-in sensor and can be programmed for air (room) sensing).

## RCD

The heater element must be connected to a circuit with RCD protection. Please consult with your electrician to ensure any existing cabling and RCD's already installed are working and capable of handling the additional load.

## Plug-In Connection



1. Powerpoint must be RCD protected
2. Thermostat mounted horizontally between 300-600mm from the floor.
3. Option A - for cavity walls fit heater lead and floor temperature sensor inside the cavity
4. Option B - for brick walls fit heater lead and floor temperature sensor inside PVC trunking and notch out the thermostat baseplate for cable access

## Floor preparation

This guide intends to serve only as an outline for the most common floor preparation required. Please contact a floor covering specialist for any additional advice.

### Concrete floor preparation

- The concrete must be completely cured (this can take up to 8 weeks or more)
- The floor surface must be smooth, unpainted and free of dust, oil, grease, tar or glue residues
- Clean and vacuum the floor surface
- Apply bonding liquid mixed 1:4 with water and apply a thin coat with a paint roller
- Avoid ponding and allow to dry completely before installing the heater



### Timber subfloor preparation

- The floor should be rigid and free from movement. Install a fibre cement underlay over the timber structural floor before tiling
- The floor surface must be smooth, unpainted and free of dust, oil, grease, tar or glue residues.
- Clean and vacuum the floor surface
- Apply bonding liquid mixed 1:4 with water and apply a thin coat with a paint roller
- Avoid ponding and allow to dry completely before installing the heater

## Installation

### Plan the layout

#### Step 1

Plan the position and shape of the heater in the area to be heated. It is important to choose the correct heater for the size of room. Installing a heater too small for the room will not produce enough heat to warm the room sufficiently. If the heater is too big for the room it simply won't fit and cannot be cut. If you are unsure about the heater size, please refer to the kit's packaging or our website, choosing your Coldbuster heater.

The heater is manufactured in a strip form, 300mm or 600mm wide. The strips may also be taken apart by cutting the tape and sticking the element down in any position. Ensure an element distance of 30 mm is maintained. Also ensure a distance no less than 100mm from any wall or permanent fixture is



maintained.

#### Step 2

Typically, the heater start and end point will be on the floor below the thermostat position or power supply point. Chip away some of the sub floor with a chisel to form a cavity of about 10 mm deep to allow the connector blocks to be recessed into the floor. The size of the cavity will be dependant on the number of heaters to be connected to the thermostat.



Mark the position of the heaters on the floor.

## Monitor & heater installation

### Step 1

Connect the Klimaguard monitor to the heater by disconnecting the black and orange leads from each other. Wait a few seconds without touching the bare conductors. The KlimaGuard will start to tick. If it takes too long, touch both the orange and black leads with the green lead to prompt the ticking.



### Step 2

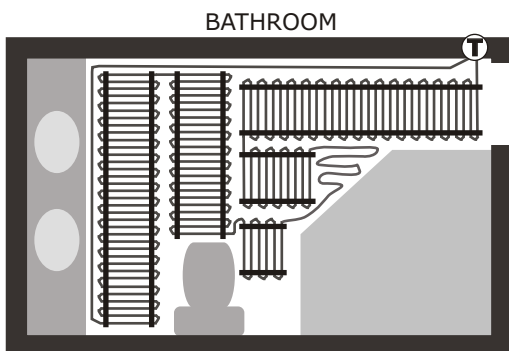
Connect the corresponding colours of the monitor to those on the heater cold leads. After about 3 seconds the ticking will stop, a beep will be heard and the LED will flash green.

### Step 4

The starting resistance values are now measured by the KlimaGuard and stored in memory. The KlimaGuard is now programmed to this specific heating element and cannot be used on any other heater. In the unlikely event the Klimaguard sounds an alarm and the LED flashes red when first connecting it to the heater, do not proceed with the installation without first calling the Coldbuster helpline.

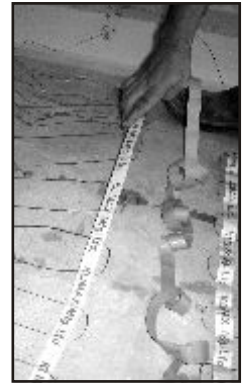
### Step 5

If the KlimaGuard sounds an alarm and the LED flashes red, check if all monitor connections are still ok. If this is so, the element may be damaged. Do not commence with the installation. Call the Coldbuster helpline.



### Step 6

Spread the heater out on the floor. Cut the tapes where necessary to allow the element to be located in the best position. Take care not to cut the element.



### Step 7

Pull the backing tape from the double-sided tape a little at a time as you proceed sticking down the heater. Do the same with the tape on the other side of the heater ensuring that the element is straight and under slight tension. Element wires should never cross one another.

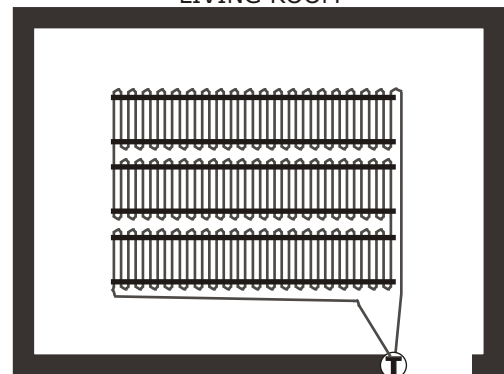


### Step 8

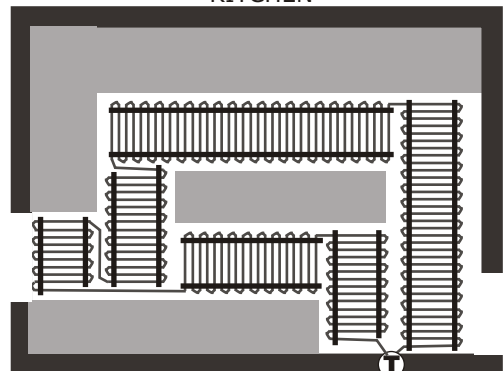
Make sure that there is enough element left over to return the connector blocks to the power source. Place the blocks in the cavity and tape them down. Ensure elements are at least 30mm apart.



LIVING ROOM



KITCHEN



# Protecting the heater

## Step 1

Stick the green mesh over the heater, centering the heater width below the mesh width. Cover all the heater element wires, including those to the connector blocks. Press the mesh down (or brush with a broom) so that it sticks to the floor and keep the element in position. Do not overlap the mesh.



## Step 2

For additional protection, we recommend applying a thin layer of flexible tile adhesive over the heater and mesh before tiling commences. This will also protect the element from accidental damage caused by removing the floor covering in the future.



## Step 3

Where a protective layer of tile adhesive has been applied, allow the adhesive to set properly (refer to the adhesive specifications).



## Step 4

Spread the tile adhesive evenly over the mesh with a steel float with rounded corners. Ensure the element stays in position and that the adhesive penetrates through the mesh with complete coverage.

## Step 5

Leave the monitor connected to the heater until the final floor covering is complete.

# Laying the floor covering

Care should be taken when moving over the heater. It is recommended a piece of cardboard or carpet is used to cover the heater to avoid accidental damage to the heater.

If the KlimaGuard monitor sounds an alarm, stop work immediately and check the monitor connections, heater resistance and insulation.

A flexible cement based tile adhesive and grout suitable for floor heating must be used. If you are not sure which type of adhesive or grout to use, please contact a floor tiling specialist.

If tiles require lifting during tiling, slide a trowel under the tile. Slide a second trowel between the tile and first trowel, and lever the tile up. This will avoid the point pressure of the lever trowel damaging the heating element.

Do not allow any heavy or sharp objects to fall, stand on, run over or be dragged across the heating elements. Do not use an angle grinder to create expansion joints.

Grout the tiles as soon as possible as per the adhesive manufacturers guidelines.

Do not switch the heaters on until the tile adhesive has cured in accordance with the adhesive and grout manufacturers guidelines (usually 7 days).



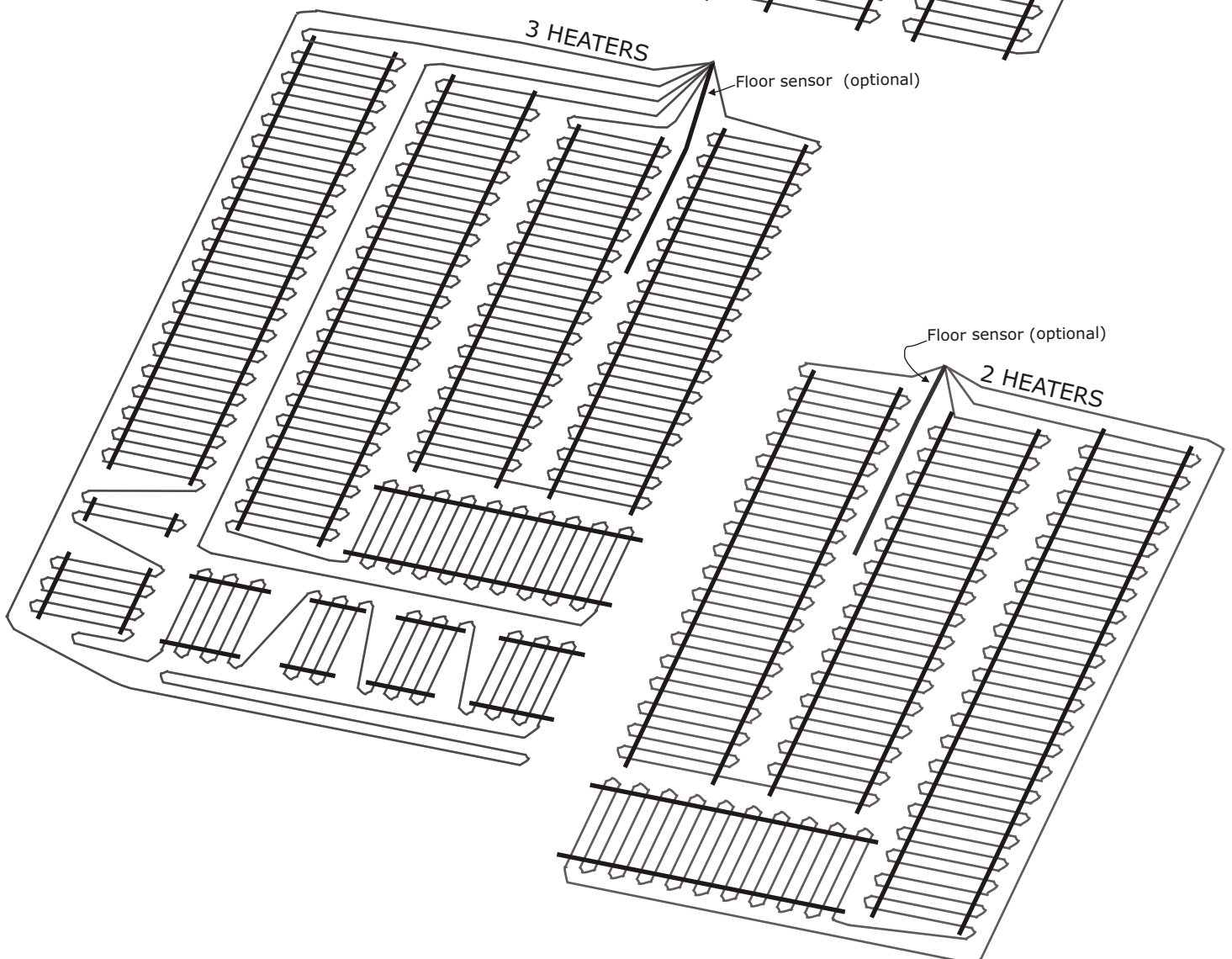
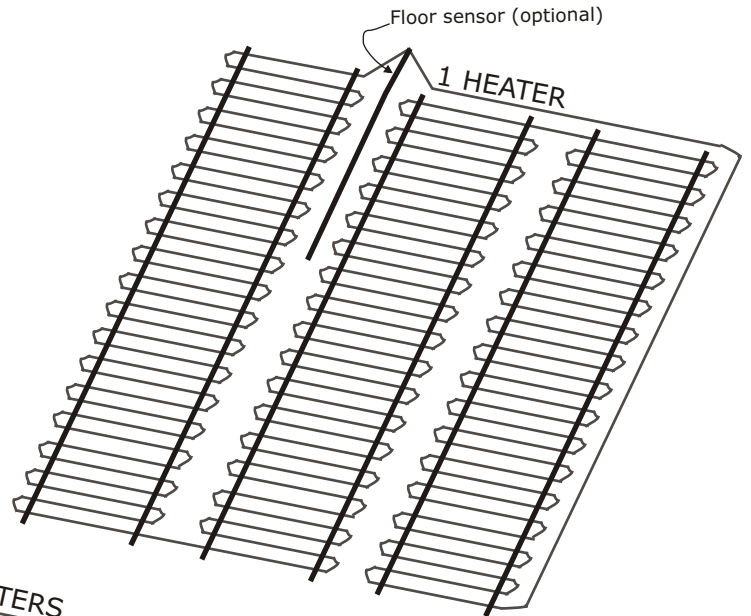
## Multiple heater installations

If you are installing multiple heaters into one room and using one thermostat, all heater wires will need to start and finish at the same point.

Remember to maintain spacing of no less than 30mm between heater wires. Do not allow heater wires to cross. Do not allow the blocks to touch in the cavity.

Each heater must be tested and fitted with it's own KlimaGuard monitor. The KlimaGuard monitors cannot be interchanged between heaters.

Follow the standard heater installation guidelines.



# Warranty

## Tile heater

Coldbuster Australia guarantees the Coldbuster Tile Heater subject to the conditions stated below:

1. The Coldbuster Tile Heater is free of defects at the time it was supplied. The product will be deemed to be defect free if no defect has been detected and reported to Coldbuster within 60 (sixty) months from date of purchase. Damage during installation is not covered by the warranty - see page 10.

2. The following are the conditions of this guarantee: That the heater supplied was installed by a competent person; that the installation has been carried out according to the directions as supplied by Coldbuster; that the installation has been carried out in accordance with State and Federal electrical regulations; that the heater has been connected to a RCD protected supply circuit, and that the purchaser retains the invoice as proof of purchase.

3. In settlement of its obligations under the guarantee set out above, Coldbuster shall at its option either:

- a. Repair or replace without charge the defective part, or
- b. Pay the purchaser a sum equal to the price of the defective part, paid at the time of purchase.

4. Claims under this guarantee must be lodged with Coldbuster, in writing, within the period prescribed. Full particulars must be given and a copy of the invoice must be enclosed.

5. Coldbuster's liability to the purchaser is limited to what is proved in this guarantee. The purchaser agrees that Coldbuster shall not be liable for any other or additional damages suffered by the purchaser caused by any defects in the heaters, the installation itself or any constituent part of it. Coldbuster shall not be liable to compensate the purchaser for, or to repair or to replace any floor coverings or any other item damaged or destroyed as a result of any such defects.

6. Please note that damage or repair to a heater by another party voids this guarantee. Repairs done by Coldbuster to rectify such damage cannot be guaranteed and will be charged for the client's account.

7. The guarantee is subject to the purchaser adhering to the safety & operating instructions. Pass this information and operating instructions on to new owners and tenants of the dwelling.

## Thermostat

Coldbuster Australia guarantees the Coldbuster Thermostat subject to the conditions stated below:

1. The Coldbuster Thermostat is free of defects at the time it was supplied. The product will be deemed to be defect free if no defect has been detected and reported to Coldbuster within 12 (twelve) months of date of purchase.

2. This warranty is non-transferable.

3. In settlement of its obligations under the guarantee set out above, Coldbuster shall at its option either:

- a. Repair or replace without charge the defective part or
- b. Pay the purchaser a sum equal to the price of the defective part, paid at the time of purchase.

4. Claims under this guarantee must be lodged with Coldbuster, in writing, within the period prescribed. Full particulars must be given and a copy of the invoice must be enclosed.

5. Coldbuster's liability to the purchaser is limited to what is proved in this guarantee. The purchaser agrees that Coldbuster shall not be liable for any other or additional damages suffered by the purchaser caused by any defects in the heater. Coldbuster shall not be liable to compensate the purchaser for any item damaged or destroyed as a result of any such defects.

6. The guarantee is subject to the purchaser adhering to the safety & operating instructions.

# Safety & Operating Instructions

## Safety Guidelines

Every heater is thoroughly tested before shipping and is guaranteed to be in good working order. This is an electrical heating system and must be used strictly in accordance with the manufacturer's instructions.

- DO NOT drill holes or drive sharp objects into your floor i.e. nails or screws.
- Replacing damaged tiles will, if not done properly, cause damage to the heating element. Please contact the Coldbuster helpline before undertaking such work.
- The heating must be connected through a RCD (safety switch) circuit breaker. Please test the operation of your RCD (safety switch) regularly.

## Economy Tips

Most people find 20°C a comfortable room temperature. The lower the temperature you set on the thermostat, the less electricity the heating uses. We advise you to experiment in order to find the most comfortable setting. Because floor heating is very efficient in creating comfort, 18-20°C is often found to be warm enough depending on activities in the room.

The temperature of the floor itself depends on the heat required to maintain the room temperature you select. If it is very cold outside, the floor will have to be warmer in order to maintain the same room temperature than when it is only moderately cold outside.

We recommend that when you do not occupy the room you leave the thermostat on a setting of between 12-15°C rather than switching it off, so that the floor and

the room never becomes too cold. This is cost effective as the heater does not have to stay on very long to maintain the required temperature.

When switching the system on from cold it will not heat up any faster by setting the thermostat to its maximum setting. Simply set the thermostat to the setting you find comfortable and the heater will draw maximum power until the selected temperature is reached.

Heat is lost from your room through the windows, doors, ceiling and walls. This loss can be reduced by having insulation in the ceiling and keeping doors, windows and curtains closed.

Reducing heat losses will make your heating system run more efficiently and economically. Some common sources of heat loss are:

- No insulation in the ceiling
- Open curtains or no curtains
- Open doors / windows
- Open chimneys of fireplaces
- Open stairwells
- Open A/C ceiling grilles

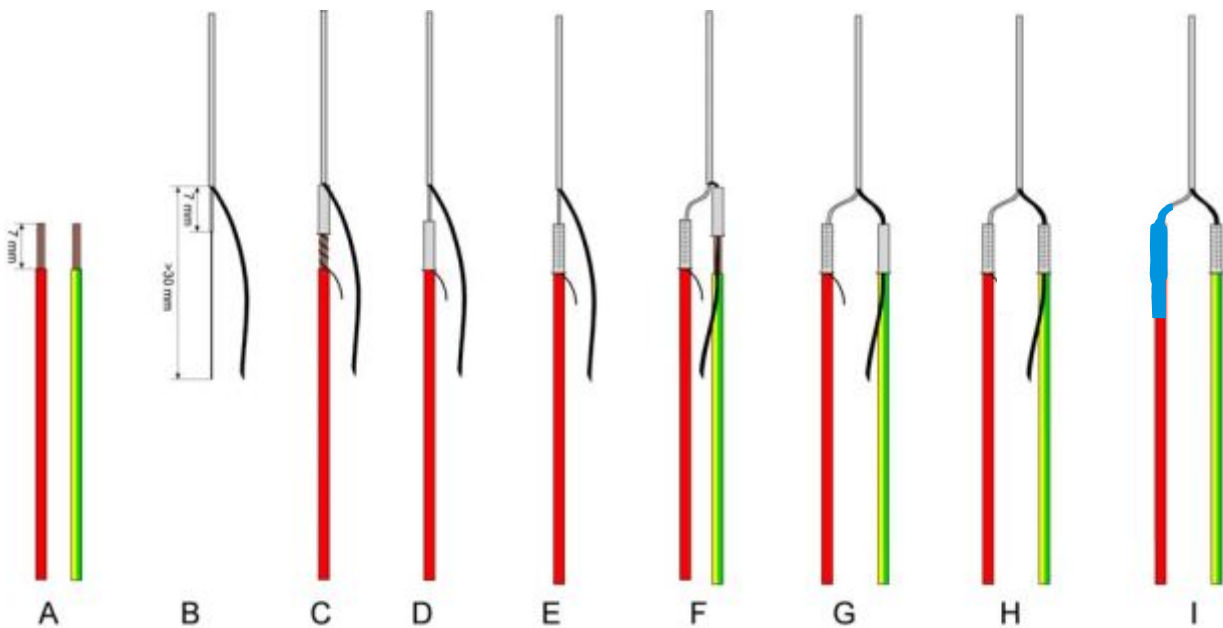
# Damage and Repair

The Coldbuster tile heater is free of defects at the time it was supplied. The risk of damage passes onto the person doing the installation and this risk is not covered by the Coldbuster warranty. Repairs to the heater voids the warranty.

If the Klimaguard sounds an alarm and the LED flashes red during the installation, stop work immediately and remove the tile and adhesive where the damage has occurred.

If the damage is not clearly visible, use an insulation tester set at 1000V connected to the element and the earth screen. This should create a spark where the damage has occurred.

The repair can be done in the following manner



1. Strip the cold leads off to expose about 7mm of copper (A)
2. Strip the outer Tefzel coating off the heating element (about 30mm)
3. Separate the screen from the insulated inner core and twist the strands of the screen together.
4. Strip the inner Tefzel coating by heating it with a flame until it melts and pull it off, so that there is about 7mm primary Tefzel insulation left (B)
5. Slip a crimp tube over the inner core element and twist the heating wire around the exposed copper of the cold lead (red/blue or black) (C+D)
6. Slide the crimp tube back over the the joint and crimp together with the correct crimping tool (E).
7. Pull the wire to ensure the crimp is sound
8. Slip a crimp tube over the screen wire of the heating element. Twist the screen wire around the exposed copper of the green/yellow lead (G+H).
9. Slip a heatshrink tube over the crimp of the heating element and melt it. (I)
10. Recess the repair joins and cover with hot melt glue or non-conductive silicone.



Electrical connections and repairs must be undertaken by a licensed electrician