

# *Installation Instructions for In-screed Heating Cable*



Before you begin installing, please read through these instructions carefully.

## *Installation notes:*

- This cable is an inscreed cable, designed to be installed in a sand and cement bed of approx. 20 – 40 mm, tied to a light gauge mesh of 50 or 100 mm.
- The system requires a mains voltage of 230/240v and 30ma RCD. The final connections **MUST** be done by a licensed electrician.
- The system is designed for heating tiled areas with an optimum recommended output between 180 -200 watts per square metre, achieved by spacing the cable at approx 100 mm between loops.
- The cable is a double insulated twin core cable with an earth shield, which **MUST** be connected to the earth supply.

## *Electrical Requirements:*

- Some preparation will be needed before the walls are plastered, such as a conduit running from the thermostat position to floor level for the cable to be connected to the thermostat. (see attached wiring diagram)
- The thermostat is vertically mounted and will fit into a standard stud bracket which must also be installed before wall cladding.
- The Thermostat has a rating of 15 amps, for a larger area a contactor will be needed.

- For bathrooms and wet areas careful consideration of the position of the thermostat must be taken due to SAA Wiring Rules and Regulations. Consult a licenced electrician for advice.
- All floor heating must be connected to a 30ma RCD device.
- If 2 cables are needed, cables can be connected **in parallel** at the thermostat or junction box.

*Installation:*

Note: For bathrooms generally installation is done before the tiling screed. In some states the waterproofing is done before the screed, in some it is done after.

**STEP 1 –**

Lay out the mesh over the entire area and mark out fixed objects such as baths, showers and vanities.

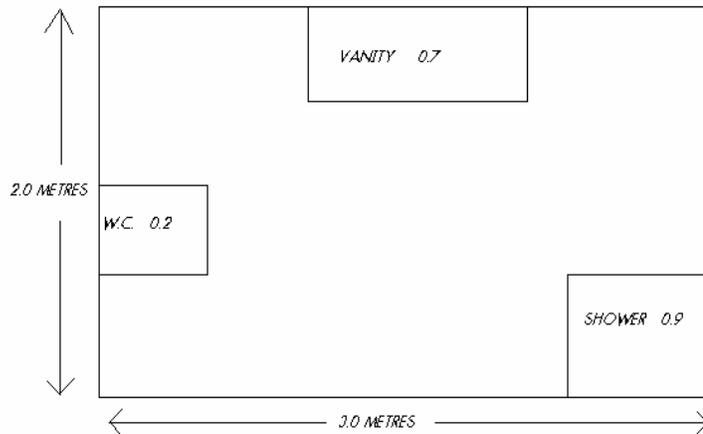


**STEP 2 –**

Calculate spacing.

This is a very important step and must be done correctly to ensure all the cable is used and to avoid extra work later. Optimum 180-200watts. (approx.100 – 120mm spacing between the loops)

Firstly measure the area to be heated in square metres (do not include the area taken up with fixed objects), then divide this area by the length of the cable shown on the cable label, see example.



e.g: total room 6 square metres, less fixed items 1.8 = 4.2 for heated area.

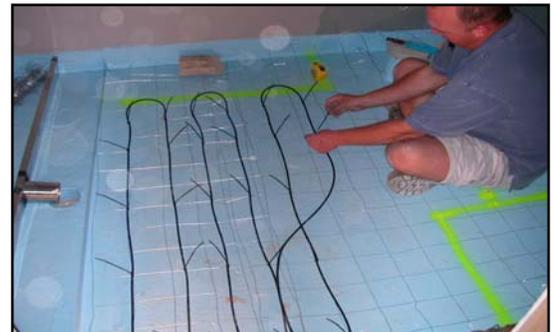
To calculate spacing divide 4.2 (heated area) by 40 metres (length shown on cable). 4.2 divided by 40 = 0.105 (use 100mm spacing) spacing. Leaving a gap of approx. 5cm from the perimeter of the room.

### **STEP 3 –**

Install the coldtail section of the cable and the thermostat probe (found in box) up the conduit or in the wall cavity (refer step 1), making sure that the connection between the heating cable and the coldtail is imbedded in the sand/cement screed.

### **STEP 4 –**

Start to tie the cable to the mesh using cable ties, simply wind the cable back and forward until the cable runs out, there is no need to return back to the thermostat as it is a twin core cable.



NB: It may be necessary after about half of the tying down of the cable to reassess the spacing to more or less, according to how much cable is left.

### **STEP 5 –**

After you have installed the heating cable it is time to install the floor sensing probe.

It is very important to position this in between 2 runs of the heating cables; if it is too close to a cable false readings will be given. Position the end of the probe approx. 30cm into the room.



### **STEP 6 –**

#### *Testing:*

After cabling is complete it is necessary to test both the cable & floor sensor with a multimeter, to ensure cables have not been damaged. The heating cable resistance can be seen on the cable. The probe resistance is written on the packaging.



A time of approx. 2 weeks should be allowed after tiling has been finished, before turning on heating, to allow cement and glues to be fully cured.

For any further advice please call your local agent or visit our website [www.radiantfloorheating.com.au](http://www.radiantfloorheating.com.au) for details.