Installation Instructions for In-Slab Heating Cable

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

Installation notes:

- This cable is a **30 watt per linear meter,** in-slab heating cable, designed to be installed in a concrete slab of between 75 – 150mm, fixed to reinforcing mesh. The mesh should be placed on chairs/risers to ensure that the cable is in the middle of the slab for effective heating.
- Floor construction & insulation requirements varies between states – if you are unsure of the local requirements, please consult your supplier.
- Typical cable spacing for domestic use is 200mm centre-centre, producing 150 watts per sqm. A wider spacing can be used to achieve a lesser wattage per sqm where the system is purely being used as floor warming such as in cold stores etc – please contact your supplier for advice
- The system requires a mains voltage of 230/240v and 30ma RCD.
- The final connections **MUST** be done by a licensed electrician.
- The cable is a double insulated twin core cable with an earth shield, which **MUST** be connected to the earth supply.

Electrical Requirements:

- 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 should be connected to a 30ma RCD device.

- If 2 cables are needed, cables can be connected **in parallel** at the thermostat, or alternatively by using a junction box.

INSTALLATION

STEP 1 – Laying the cable

The heating cable is installed on top of standard steel reinforcing mesh. The cable spacing should be given by your supplier, or can be calculated by dividing the total free floor area by the length of the cable. For normal domestic installations, cables spaced at 200mm between the loops will give approx 150 watts per sqm which is usually ideal. It is therefore beneficial to use reinforcing steel with a similar gauge (e.g. SL 62/72/82/92)

Start laying the cable close to the desired thermostat position, ensuring that there is sufficient non-heated (black) cable to reach the thermostat point.

Lay out the cable in loops (spacing as described above) & fix with cable ties initially, just at the ends. This will allow you to easily adjust the cable position if required later.

When the cable has been used up & you are happy with the position, you should then fix the cable in position using cable ties at regular intervals & finally cut off the ends

Notes:

- The orange heater cable is a twin core cable with a built in return, which makes up a complete circuit. It therefore does not have to go back to the start point.

- The black cold cable should be enclosed within a 20mm conduit up to the joint with the orange cable.

STEP 2 – Floor Sensor

The floor sensor supplied with the thermostat, should be fed into a 20mm flexible conduit & secured so that it can't be pulled out.

The end of the **conduit should be sealed with tape** to prevent concrete from entering it.

The conduit (containing the sensor) should then be **placed at the mid point between two loops of the cable** & secured in position with cable ties.

STEP 3 –*Testing:*

Once the cable is in position, it is necessary to test both the cable & floor sensor with a multimetre, 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.

The final electrical connection to the thermostat should be carried out by the site electrician & the concrete should be fully cured be before turning the heating on.

For any further advice please call our technical department on **08 9301 5337** or visit our website www.radiantfloorheating.com.au for details of your local agent.