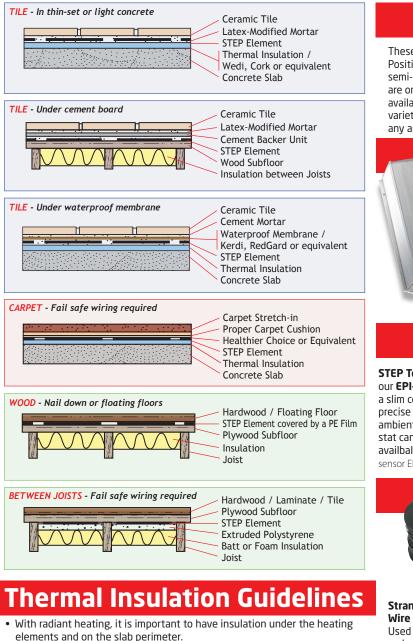
Flooring Installation Options



System Components

Heating Elements

These patented low voltage (24V, AC or DC), self-regulating, Positive Temperature Coefficient (PTC), semi-conductive polymer heating elements are only 3/64" (1.2mm) thick. They are available in 12", 9", 6" and 3" widths, and in a variety of wattages for almost any application.



Power Supply



The **EPI-LX-R** series power supplies are designed with safety and efficiency in mind. These Safety Extra Low Voltage (SELV) power supplies are virtually silent, and are composed of high quality toroidal coils, RoHS compliant interface boards with primary and secondary circuit protection, and are enclosed in an extruded aluminum profile with heat sink. The EPI-LX-R series power supplies have a built-in regulator board for use with our 24V thermostats and are available in 250W, 500W, 1000W, and 1500W power levels and 120V, 208V or 240V voltages.

Controls

Tool-Pro

STEP Touch[®] is a low-voltage (24V) thermostat for use with our **EPI-LX-R** series power supplies. This thermostat features a slim contemporary design, easy-to-read backlit display, precise temperature control, and can be set up for either ambient, or floor temperature control modes*. One thermostat can control multiple **EPI-LX-R** power supplies. Faceplate availbale in Black or White, *Which requires an external sensor EPI-LX-TS

STEP Touch[®] EPI-LX-TC

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Stranded Tinned Copper

Used to extend bus braid wires embedded in the heating elements to the power supply. Available in #10AWG, #12AWG, and #14AWG.

C&T-10 Crimp tool designed specifically for use with the STEP crimp connectors.

Manufactured in the U.S.A.



ISO-9001



Self-regulating Technology of Electro Plastics

MADE IN USA



MADE IN USA

Quick Reference & Installation Guide

Energy Efficient • AC/DC • Safe • Environmentally Friendly



warmfloor.com

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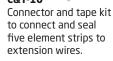
• A higher R-value is **required** under the heating elements as opposed to

• Consult insulation manufacturer for deflection/load characteristics, and

check that the product and installation procedure is approved for

over with a ratio of 4:1.

the application.



Electro Plastics, Inc.

Installation Guidelines

Plan

- Design the system and make a layout. Heating elements should be placed in open areas away from conductive materials, plumbing and fixed fittings.
- Proper thermal insulation with no voids is required in the floor and by the perimeter.
- Installation should conform to local building codes, ordinances and trade practices.

Install

- Roll the element out on the floor and cut to length according to layout. Lay the element strips side by side following the recommended spacing.
- The element can be attached to the subfloor using the following alternatives: - Staple element at least 1 inch from edge with staples no larger than 3/8". If staple hits a bus braid, cut the element, splice and seal properly.
 - Use approved double coated tape to hold elements and wires.
 - Cement mortar or latex-modified mortar can be used for leveling or when installing tile or underlayment.
- **NOTE:** Do NOT use non-approved tape or adhesive based products (premix thin-set, primer, leveler or equivalent) to adhere the element. Avoid contact between elements. Do NOT puncture the bus braids.

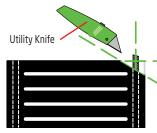
Connect

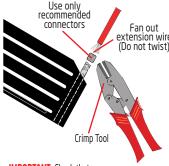
- Connect extension wires to the elements according to the drawings and electrical diagram. Determine wire gauge versus load.
- Route the wires flat on the floor, up or through the wall in conduits, under the baseboard or below the subfloor. Connect wires in parallel to the 24 volt EPI-LX-R power supply. Use only stranded tinned copper wires and do not twist ends when connecting to the interface board in power supply.
- Distribute the load evenly. The maximum load per circuit is 450 watts.
- The EPI-LX-R power supply must be installed in a well-ventilated area and wired in accordance with the National Electrical Code. Place the power supply in a way that it does not vibrate and give resonance in the building structure.
- Connect the line voltage to a two-pole on/off switch. Use stranded wires from the switch to the EPI-LX-R power supply. For control options, see the STEP Warmfloor® Installation Manual.
- The heating elements must be measured and amps noted by a certified electrician before being covered.

Cover

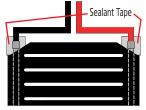
- Level the floor using proper mortar, underlayment or cement backer boards. Do NOT place a conductive material or aggressive adhesive in direct contact with the heating elements.
- Do not energize the system while installing the flooring and do not use to cure leveling compound.
- To be efficient the heating elements have to be in direct contact with the finished flooring, with no air gaps. In bathrooms, showers and wet areas, the heating elements shall be installed under a waterproof membrane.
- The heating elements provide a safe and even low temperature and can go under most floor covering.
- Follow manufacturer's instructions.

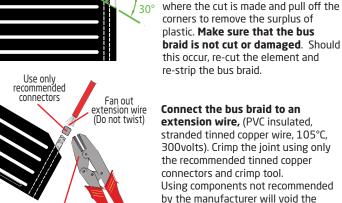
Connections and Layout





IMPORTANT: Check that connections are secure.





plastic. Make sure that the bus braid is not cut or damaged. Should this occur, re-cut the element and re-strip the bus braid. Connect the bus braid to an

Expose the two longitudinal

bus braids by cutting the plastic on

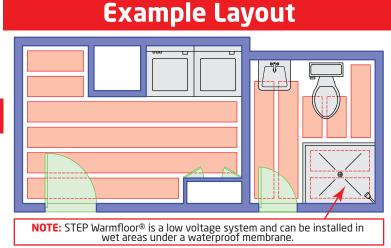
each side of the braid with scissors or

make a score in the plastic, front and

back, with a knife. Bend the element

extension wire, (PVC insulated, stranded tinned copper wire, 105°C, 300volts). Crimp the joint using only the recommended tinned copper connectors and crimp tool. Using components not recommended by the manufacturer will void the warranty.

To differentiate the polarities supplied to the element, use two different wire colors (black and red). Insulate the connections using recommended sealant tape. Fold tape and press together overlapping element, connector and wire to form a flat and smooth splice.



These installation guidelines are general in nature to the STEP Warmfloor® product. For more information refer to the STEP Warmfloor® Installation Manual on our website at www.warmfloor.com.

Wiring Diagram

