EasyWire (TC) Installation Instructions

General

Our product, EasyWire, is intended to bring up the floor temperature to a comfortable condition (no cold feet).

Read instructions carefully

I. No modifications may be made to the product.

II. **Never cut the heating wire**.

III. **In the case of two EasyWire products operating under one controller, connection must be run in electrical parallel. Do not connect EasyWire in series.**

IV. Do not install the product if the temperature is below -41° F.

V. **EasyWire (TC) is a twin conductor heating element having 3 cold leads attached at one end of the reel. Red and Black are the load connection and the yellow/green wire is the ground connection.**

FLOOR STRUCTURES

Preparations

I. All preparations are essential to ensure a quality installation.

II. Remove all obstacles from the sub-floor and make sure that the sub-floor is free from all dirt, nails, sawdust and other construction residue.

III. Plan the heating wire layout, thermostat location, rough-in, and power supply from the main panel. The wire should be installed about half the center spacing away from any obstacles, walls, edges etc.

IV. Minimum banding radius (where needed) R = 5 cm.

V. Ensure the wire length fits the applicable area in accordance with your plan.

VI. See last page for electrical preparations.

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Installation Steps

1. Mark Thermostat and conduit location.

2. Install thermostat electrical box and conduit (should be performed by a licensed electrician)

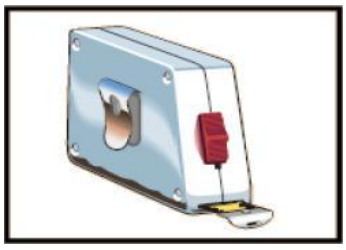
3. Clean floor surface and remove any sharp objects that may damage the heating wire.

4. **Test No. 1:**

   Test the heating wire, before rolling it out, with an ohmmeter (the results should be ± 10% of the tag value). If the resistance is above or below 10% please call us.

   The heating wire is terminated by three cold lead (two line wires and ground) wires. The wires are 14 AWG, and the length is about 12 feet long. If the **cold lead wires** are too long, they can be trimmed to the required length.

5. Mark heating wire location on the sub-floor in accordance with your plan.



6. Attach the clip strips to the subfloor according to your floor plan. Allow up to 3 feet apart between strips. Upon completion of this step you are ready to apply the heating wire on your floor.

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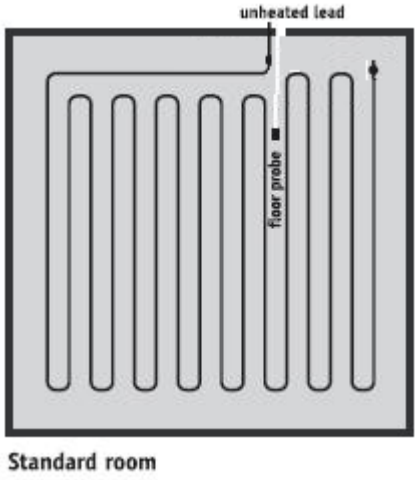
7. Place heating wires apart in accordance with your plan. Heating wires should be spaced apart according to the following calculation:

$$\frac{\textbf{HEATED AREA (SQFT) X 12}}{\textbf{LENGTH OF WIRE (Ft)}} = \text{SPACING (inches)}$$

8. Make sure the heating wires (black or blue wires) do not cross each other at any point (as shown below).



Standard room

9. **DO NOT FORGET TO INSTALL THE FLOOR SENSOR** upon completion of the heated element installation.

10. At this point you should be ready to connect the heating element to the thermostat.
Make sure you have the following standard approved electrical tools and measuring equipment such as multimeter, cutters, measuring tape, adhesive tape, wire striper, pliers etc. to complete work.

WARNING:

"RISK OF ELECTRIC SHOCK AND FIRE DAMAGE TO SUPPLY CONDUCTOR INSULATION MAY OCCUR IF CONDUCTORS ARE ROUTED LESS THAN 2 INCHES (51 MM) FROM THIS HEATING PRODUCT. REFER TO INSTALLATION INSTRUCTIONS FOR RECOMMENDED MEANS OF ROUTING SUPPLY CONDUCTORS".

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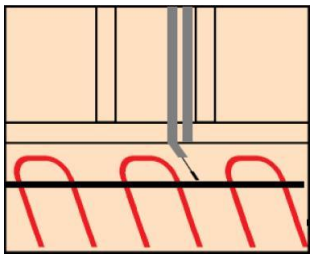
11. Pull the cold lead through the conduit to the thermostat box gently.

DO NOT EXERT ANY PULLING FORCE ON THE SPLICE CONNECTION BETWEEN THE COLD LEAD AND THE HEATING ELEMENT



Pull the sensor cable from the floor to the thermostat box through a separate tube. The sensor is low voltage and does not go in the same tube as the power leads.

Place the sensor in the middle of the heating wires spacing.

All connections should be performed by a licensed electrician, who is familiar with the construction and operation of the heating element.

12. Installation of this heating wire should be performed in accordance with this installation instruction manual. The installation should be in accordance with Article 424, Part IX, of the National Electrical Safety Code Book.

13. Ensure all the adhesive tapes are well glued. If any wire sticks up, a small piece of foil tape can be used to hold it down.

14. **Test No. 2:**

Test the heating wire, after it has been laid out on the floor, with an ohmmeter (the results should be ± 10% of the tag value). If the resistance is above or below 10% please call us.

15. The heating element is now ready to be covered by a cement layer with minimum ¼" thickness.

16. **A qualified electrician should carry this step**.

    a. **Test No. 3:**
    Test according to step 13.

    b. Install thermostat in accordance with the manufacture instructions and IEE regulation.

    c. Carry out the GFCI test.

    d. Ensure product load (Amp) does not exceed the thermostat switching rating.

    e. Label the panel circuit in accordance with the local code.

17. **"THIS EQUIPMENT SHALL BE INSTALLED ONLY BY QUALIFIED PERSONNEL WHO ARE FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE APPARATUS AND THE RISKS INVOLVED".**

18. **"THE INSTALLATION OF THIS HEATING PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE MOST CURRENT AND APPLICABLE NEC AND LOCAL ELECTRICAL CODES".**

19. Switch on breaker and thermostat and follow thermostat instruction for programming. Ensure mortar/screed/leveling compound is cured in accordance with the manufacturer's specification prior to energizing the heating element.

20. After the installation of the wires is completed affix labels to the service panel board and affix labels in each room with heating controls stating "RADIANT FLOOR HEATING'.

    i. **Affix label "WARNING' "RISK OF ELECTRIC SHOCK – ELECTRIC WIRING AND HEATING PANELS CONTAINED BELOW THE FLOOR. DO NOT PENETRATE FLOOR WITH NAILS, SCREWS, OR SIMILAR DEVICES".**

    ii. **Affix the following label adjacent to points of access to canceled areas in which installed heating products are accessible, "CAUTION" "RADIANT HEATING PRODUCTS INSTALLED IN THIS AREA. AVOID ACTIONS WHICH MAY RESULT IN MECHANICAL DAMAGE TO THE PRODUCT".**

Electrical preparation – to be carried out by a qualified electrician

I. Install all the necessary rough-in for the thermostat (illustration #1).

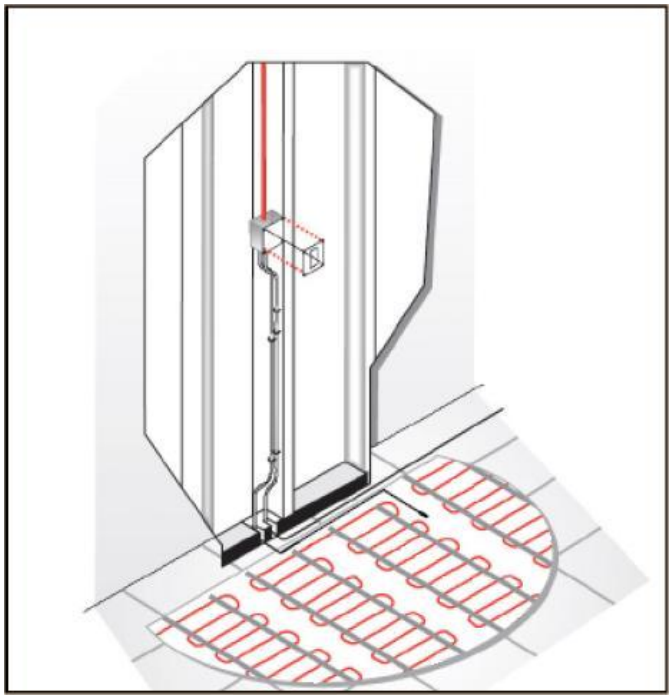
II. Power leads must be protected by local code.

III. A breaker with G.F.C.I. or thermostat that is equipped with a G.F.C.I. **must protect the circuit.**

IV. Install and programmable thermostat in accordance with the installation instructions. According to the American Society of Heating, Refrigerating and Air-Conditioning Engineers the upper lever of comfort is 85° F.

After the heating wire is installed on subfloor and tested electronically, apply finished floor or top ¼ inch of thinset as required in cases were coverings are combustible. For noncombustible floor covering materials use the necessary amount of thinset.

Illustration 1



Warning: Ensure heating wire is not connected to the power supply until all installations is completed and tested

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