

## RG-SK/TK Splice Connection Kit

### Installation instructions



#### Description

The RG-SK/TK Splice/Tee Connection Kit is suitable for use with WSR and RG heating cables. Materials supplied are for one heating cable splice connection or tee connection and one end seal connection. For additional information call technical support call HTD Heat Trace, Inc. at 908-788-5210.

#### Additional Materials Required

- H07600 Fiberglass Tape
- Your application may require additional mounting accessories such as hose clamps, H01029 Aluminum heat transfer tape or a thermostat switching or sensing device. Please call HTD Heat Trace, Inc. at 908-788-5210 to order.

#### Tools Required:

utility knife, scissors, screw driver, crimp tool, diagonal cutters,  
needle nose pliers

#### Kit Components:

- A. Copper Braid Crimp (qty 1)
- B. Heat Shrink Tube for Ground (qty 1)
- C. Insulated Bus Wire Crimp (qty 2)
- D. Heat Shrink Cap (qty 2)
- E. Cable Ties (qty 3)
- F. Heat Shrink Tube (8" long) (qty 1)
- G. Cloth Tape (qty 1)
- H. Clamp Tie
- I. Mastic Strips (qty 5)
- J. Heat Shrink Tube for Individual bus wires (qty 6)
- K. Heat Shrink tube for matrix (qty 3)
- L. RG-EK End kit (includes end cap, nylon braid, heat shrink) (qty 1)





**Warning:**

These components are electrical devices and must be installed correctly to ensure proper operation and to prevent shock or fire. Carefully follow all of the installation instructions and read these important warnings.

- To minimize the danger of fire from sustained electrical arcing, ground fault protection equipment must be used on each heating cable circuit. Arcing may not be stopped by conventional circuit protection.
- Component approvals and performance are based on the use of specified parts only. Do not substitute parts or use vinyl electrical tape.
- The heating cable core is conductive and can short. It must be properly insulated and kept dry.
- The braid of this heating cable must be connected to a suitable grounding terminal.
- Keep ends of heating cable and kit components dry before installation
- Damaged bus wires can overheat or short. Do not break braid or bus wire strands when scoring the jacket or core.
- Bus wires will short if they contact each other. Keep bus wires separated.
- Heat-damaged components can short. Use a heat gun or a torch with a soft, yellow, low-heat flame, not a blue focused flame. Keep the flame moving to avoid overheating, blistering, or charring the heat-shrinkable tubes. Avoid heating other components. Replace any damaged parts.
- Use only fire-resistant insulation materials such as fiberglass
- Leave these installation instructions with end user for future reference
- De-energize all power circuits before installation or servicing

**Caution:**

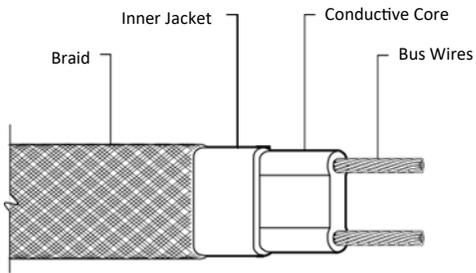
Charring or burning the heat-shrinkable tubes in this kit will produce fumes that may cause eye, skin, nose and throat irritation.

**Customer Service:**

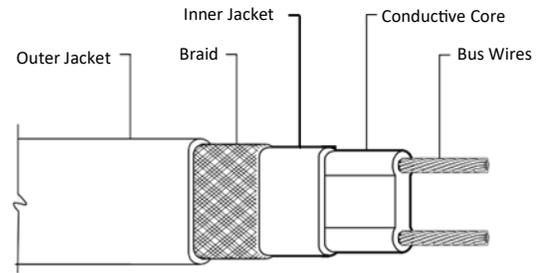
908-788-5210

support@htdheattrace.com

### Heating Cable Construction Identification



Heating Cable with Braid only (WSR-C)

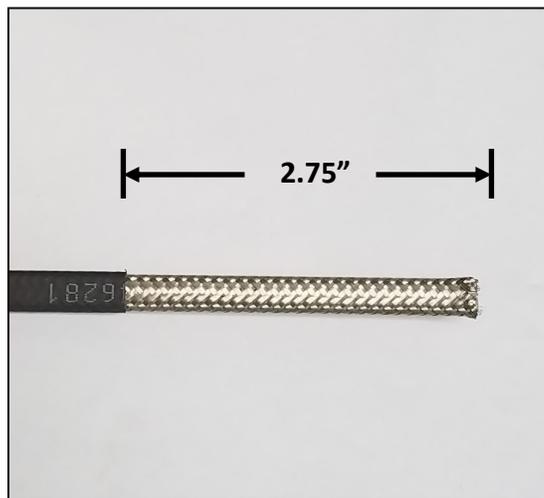


Heating Cable with Braid and Outer Jacket  
(WSR-CR, WSR-CT)

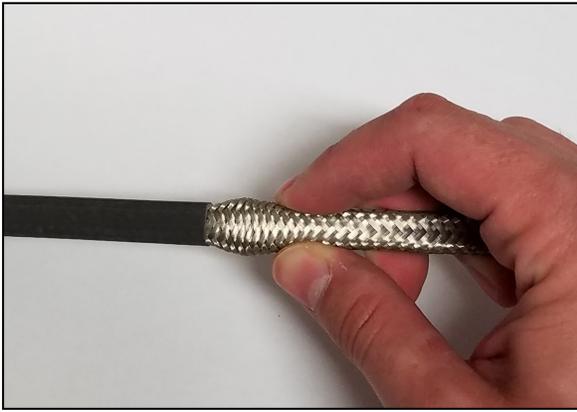
**Note:**

Instructions generally show heating cable with braid and outer jacket. Cables without outer jacket appear slightly different.

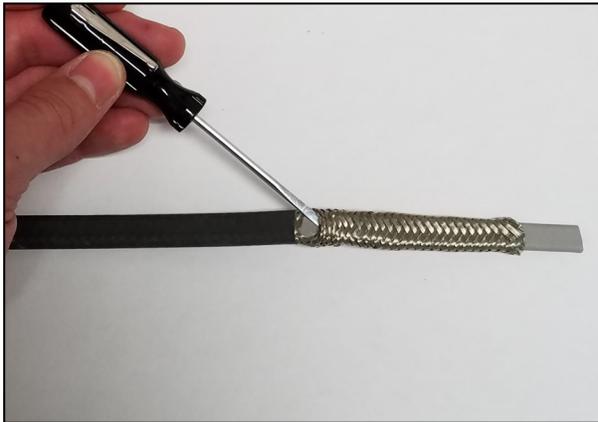
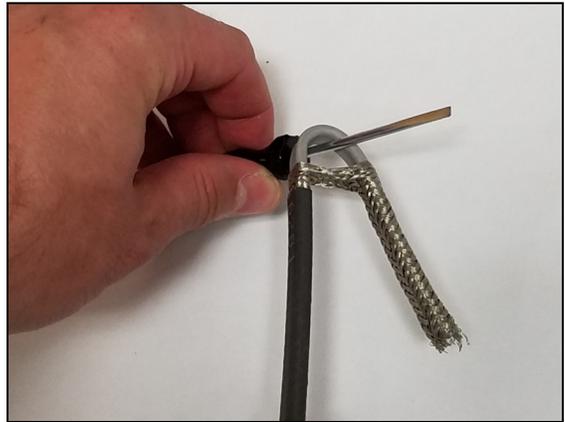
1. Remove 2.75" (70 mm) of heating cable outer jacket by carefully slicing down the middle of the jacket and then around the heating cable. DO NOT CUT BRAID.



2. Push back braid to create a bump in the braid approximately where the exposed braid meets the outer jacket. Using a small screwdriver, work an opening in the bump.



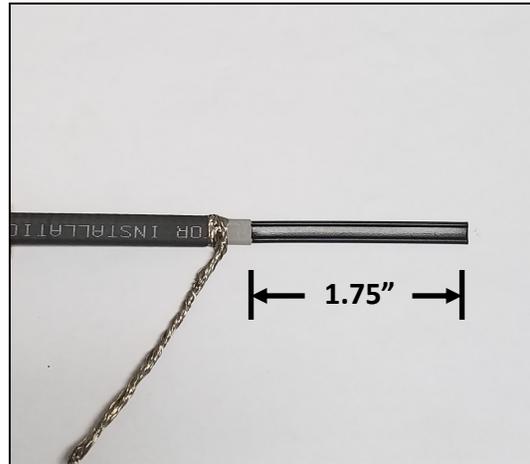
3. Using a small screwdriver, pull inner cable through the opening in the braid. Twist braid into pigtail as shown. DO NOT CUT BRAID



4. Lightly score around the inner jacket at 1.75" from the end of heating cable. DO NOT CUT BUS WIRES. If bus wire are accidentally cut, chop the cable off behind the cut bus wire and start termination process over.



5. Bend cable along score to break inner jacket. Pull inner jacket off, exposing the conductive core



6. Using diagonal cutters make a small cut between the two bus wires at the end of the cable as shown. DO NOT CUT BUS WIRES



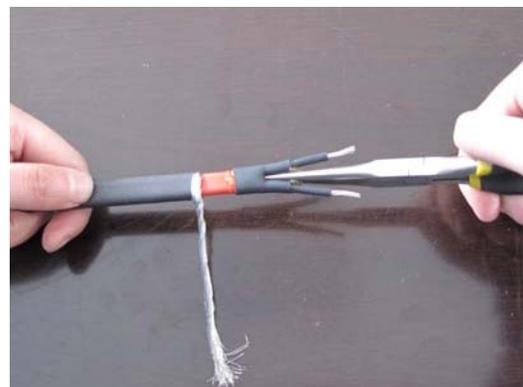
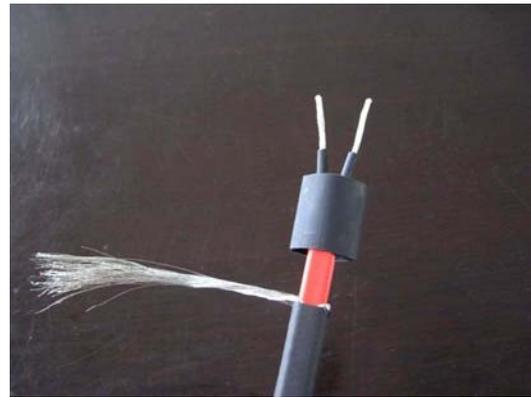
7. Using needle nose pliers, pull each bus wire away from the conductive core. Remove excess core from bus wires and the area between bus wires.



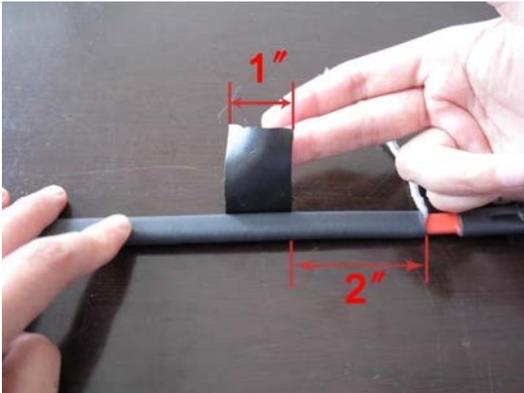
8. Slide the two 1/8" pieces of heat-shrinkable tube (Part J) over the conductors and heat shrink using continuous motion. Ensure that tubes remain up against the conductive core. It may be necessary to trim the heat-shrinkable tube to size.



9. Center the 1/2"x1" heat shrinkable tube (Part K) over the end of the heating cable as shown. Heat tube evenly until it shrinks and adhesive flows out of both ends. Immediately after shrinking, and while the heat shrinkable tubing is still hot, pinch with pliers between wires and hold for 10 seconds to ensure seal.



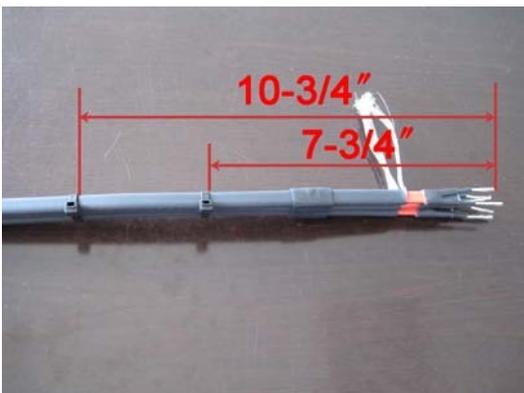
**10.** Remove one mastic strip (part I) from the release paper and wrap around the heating cable in the position shown below. Stretch the mastic strip to ensure that it has been wrapped around the entire heating cable.



**11.** Repeat Steps 1-10 for each heating cable length.



**12.** Align the heating cable sections as per the diagram below. Fasten together with two cable ties (Part E)



**13.** Twist braids from each heating cable together to make one pigtail. Slide the uninsulated copper crimp (part A) over and position 1/2" from the heating cable as per below diagram.



**14.** Using a crimping tool crimp at least twice and trim off excess braid



**15.** Position the braid crimp as per the image below. Ensure wide edge of crimp lies against the heater edges and that no sharp edge can damage the heating cable.



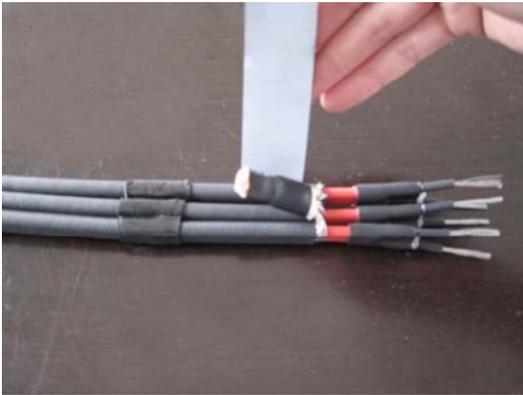
**16.** Slide the 1/2" x 1" heat shrinkable tube (part B) over the braid crimp. Apply heat evenly and completely until adhesive flows out each end.



**17.** Immediately after shrinking, and while the heat shrinkable tubing is still hot, pinch with pliers at end and hold for 10 seconds to ensure seal.



**18.** Position the crimp back against heating cables as shown below and use the black cloth tape (part G) to secure crimp .



**19.** Twist corresponding heating cable bus wires together (one from each heating cable. Ensure that bus wires from the same piece of heating cable have not been twisted together



**20.** Slide insulated crimps (Part C) over each set of buswires and crimp with crimping tool



**21.** Position end caps (part D) over each crimp ensuring that the end cap completely covers the crimp and any exposed bus wire. Apply heat evenly and completely until adhesive flows out.



**22.** The adhesive from the bus wire heat shrinkable tube may melt again during end cap heat shrinking. Squeeze area with pliers to seal so that no bus wires are visible



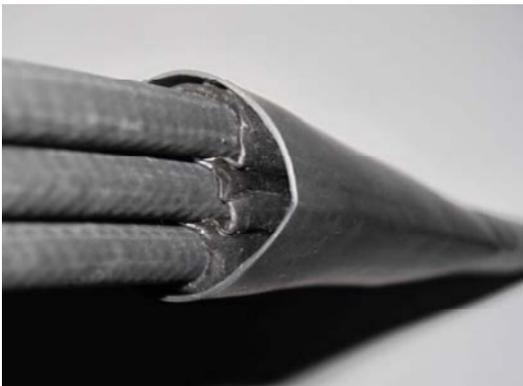
**23.** Stretch another piece of mastic strip (part I) so that it can cover the junction between the bus wires and end cap to seal the area. Repeat for the other end cap



**24.** Squeeze the two mastic pieces together



25. Position the 8" heat shrinkable tube (part F) over the splice as shown below. Ensure that the edge of the tube lines up with the edge of the mastic.



26. Apply heat starting at the point shown in the previous step and working towards the spliced end of the cables. Before working down the tube, ensure that a ring of adhesive and mastic can be seen at the end of the tube completely sealing the junction. Total heating time will be about 5 minutes.



27. Immediately after shrinking pinch the end of the heat shrinkable tube with pliers. Pinch multiple times working from the inside towards the end of the tube. Ensure that the end is pinched and sealed completely as per below images



28. Once the connection has cooled, fold the connection over and fasten using a cable tie (part E)

