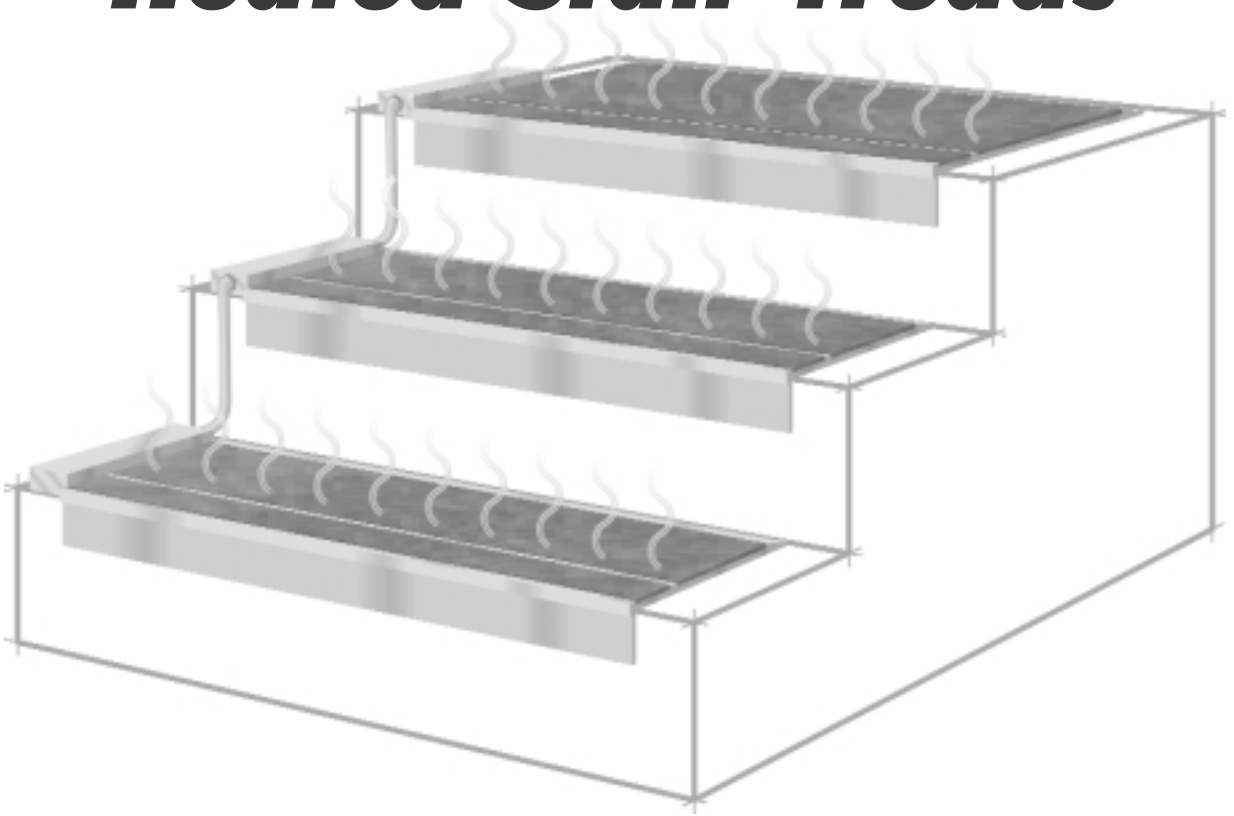
CALORIQUE

Retrofit Snow & Ice Melting Heated Stair Treads

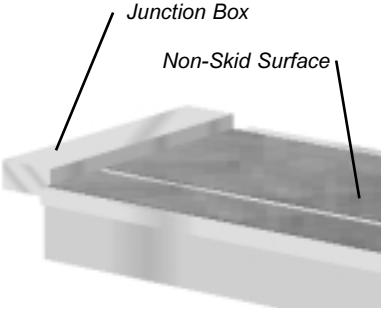


Installation Manual

CM1013 - 2007-08-21

Before Installing

- Failure to follow installation instructions, or misapplication, may result in electrical shock, fire and/or personal injury hazard. Installations not done in accordance with these installation instructions will void the warranty.
- Installation must conform to all requirements of the National Electrical Code (NEC) 426.23(B) (Fixed Outdoor Electric Deicing and Snow-Melting Equipment) and any local codes or ordinances. In countries other than the USA, follow the dictates of the local electrical and building code.
- The electrical source must conform to the heating units' requirements (voltage and circuit amperage capacity) and overcurrent protection device must incorporate a GFCI.
- Connection of heating units should be performed by a licensed electrician.
- Do not cut, bend or otherwise alter the CalorIQue Heated Stair Tread. Any alterations to the units may present a shock or fire hazard and will void the warranty.
- Suitable overcurrent protection shall be provided by means of circuit breaker or fuse. Overcurrent protection shall be of a type indicated as being acceptable for branch circuit protection.
- **WARNING:** Ensure that adequate drainage is provided for water runoff.



Tools & Materials

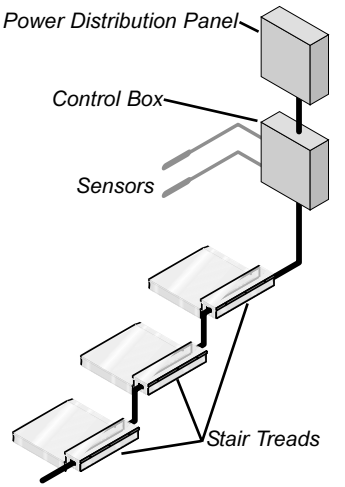
- **CalorIQue Heated Stair Treads.** See *Free Estimate Worksheet* (CM1012) for ordering details.

Typical heated stair tread. Your model may vary.

- **Standard Electrical Hand Tools.**
- **Overcurrent Protection.** User / installer supplied. The circuit breaker used with this sistem must have an overcurrent rating of 30 amps and an integral GFCI rated for 30mA equipment protection.
- **Electrical Conduit.** Rigid or flexible conduit meeting the requirements of N.E.C. 426.23(B) of local code (e.g. carflex).
- **Electrical Wire.** Suitable wire for use within exterior conduit. Three conductors must be available. Conductors may range from #12-14 AWG, size based upon total ampacity connected.
- **Drill with Bits.** Bit must be rated for drilling into the material onto which the stair treads are being installed.

NOTE: If using an anchoring method other than the supplied expansion shields and stainless steel screws, follow the manufacturer's instructions for best results. In all preparation and installation steps indicating use of the expansion shields and supplied 1/4" stainless steel screws, replace with the anchor manufacturer's instructions.

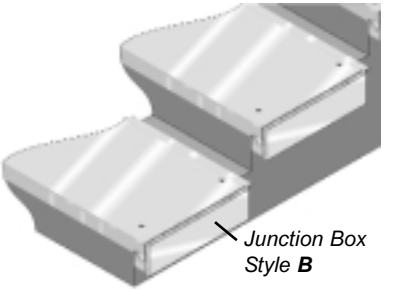
- **Construction Adhesive.** This adhesive must be water and heat resistant.
- **Silicone Sealant.** Exterior grade silicone used to waterproof the junction box cover plate.
- **Control System**. Supplied by CalorIQue, automatically turns the system on and off based on the temperature and presence of precipitation. UL Listed and CSA Certified.
- **Specification Sheet**. Provides specifications for all stair treads included with the system.
- **Product Labels**. Provide information about the system that may be required during future remodeling or repairs.
- **Warranty Card.** This card must be filled out and returned to CalorIQue to ensure proper registration of the warrantee.



Typical system wiring layout. ➲

Preparation

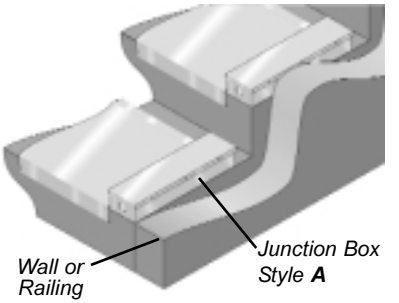
- If necessary, level worn or damaged steps with quick setting leveling compound.
- Install and supply power to a junction box located conveniently for connection to the CalorIQue Heated Stair Treads. Make sure that power is turned off at the distribution panel before installing this system.
- Install control system according to the separate instructions.
- Using an accurate ohm meter, test each stair tread to ensure that it is within the limits shown on the inside cover of the tread's junction box cover.



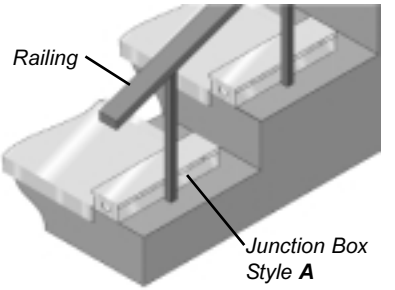
Installation

- Drill Holes to Accept Expansion Shields
  Using the stair treads as a template, mark and drill holes for the expansion shields. Holes must be

TIP: Since the exact hole locations may differ from stair tread to stair tread, label each stair and tread and use the appropriate tread to mark the hole locations.



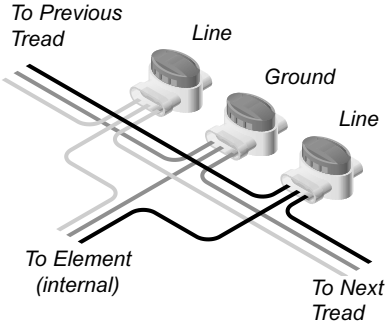
Place stair treads based on their junction box type, and the type of railing or edge work. ➲



- Insert the Expansion Shields into the Holes.
- Mount the Stair Treads. Repeat the following for each stair tread:
  - Apply construction adhesive to the underside of the stair tread.

- Replace the stair tread and secure in place using the supplied stainless steel screws.

- **Wire Stair Treads Together.**
  Using the supplied tap connectors, wire the stair treads together. Using the following figure as a guide, route conduit into the junction box on each tread and splice the three legs of electrical power together using the supplied waterproof connectors.



Tap wires between each tread using the connectors within the attached junction box.

- **Secure Conduit in Place.**
  Use a recognized method for securing the conduit.
- **Attach Cover Plate.**
  Apply a continous bead of exterior grade silicone sealant along the inside edge of the cover plate, then screw the plate to the junction box using the included screws.
- **Check Resistance.** Using an accurate ohm meter, test each stair tread to ensure that it is within the limits shown on the specification sheet. This test confirms that the treads were not damaged during installation.
- **Complete Electrical Connections.**
  - Connect Stair Treads to the Control System.
    Following the manufacturer's instructions for the control, connect the stair treads to the control.
  - Supply Power to the Control.
  - Test the System Operation.
    Turn on the system and ensure that it is drawing the correct amount of current. The current draw for your system is listed on the order sheet that comes with the system.

Operation

NOTE: Do not operate the system when the air temperature is above 50°F (10°C). Operation above this temperature may overheat the elements and present a shock hazard.

- When using the CalorIQue snow sensor, the stair treads will heat up automatically when needed. No user intervention should be required. See the control's operations manual for additional information.
- When using an on/off switch as the sole control, turn on the system when snow or icy conditions are expected.

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