

RG Cables

Roof & Gutter Self-Regulating Heating Cable Specification & Data Sheets

READ CAREFULLY



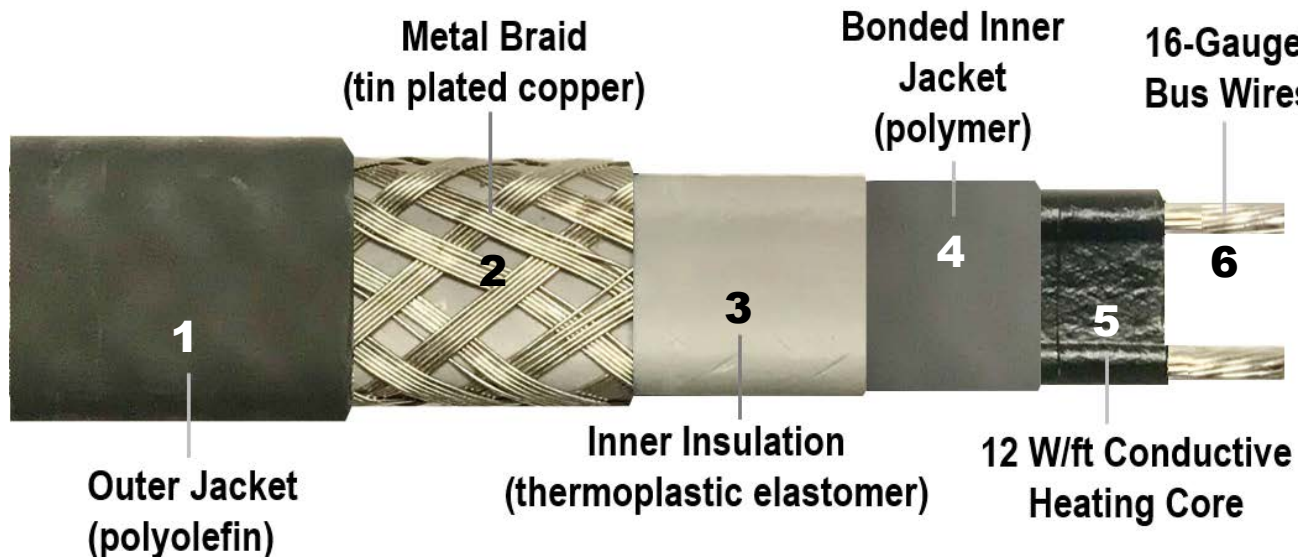
PRINCIPLE OF OPERATION

RG Cables self-regulating heating cables automatically vary their heat output with changes in surrounding temperature.

Because of the self-regulating feature of this cable, it can be safely wrapped over itself (overlapped).

The Easy Heat RG cable is available with power density of 12 watts per foot (40w/m). This wattage is specified with surrounding snow and ice. At other temperatures, of course, the cable power output will be considerably different.

CONSTRUCTION DETAILS



1. Provides abrasion protection, UV protection, flame retardant and moisture resistance
2. Provides impact resistance, EMI shielding, a continuous ground path and prevents tearing and fraying
3. Provides dielectric protection
4. Provides additional mechanical strength
5. Conductive Heating Core
6. Stranded wire for flexibility and strength, Tin-plated for corrosion/oxidation resistance and cable longevity.

PERFORMANCE INFORMATION

Performance and Rating Data

Catalog Number	RG-1	RG-2		
Voltage (Vac)	120	208	240	277
Nominal Power Output in Ice (W/ft)	12.0	10.0	12.0	15.0
Nominal Power Output @ +50°F (+10°C)	5.0	5.0		
Maximum Single Cable Length ft (m)	185	370		
Minimum Installation Temperature °F (°C)	-22 (-30)	-22 (-30)		
Current Load (Amp/ft)				
at 0°F (-20°C) start-up	0.195	0.097		
at -20°F (-30°C) start-up	0.220	0.110		

RG Cables

Roof & Gutter Self-Regulating Heating Cable Specification Guide

Principle of Operation

As snow accumulates on a roof in winter, inadequate ceiling insulation and/or roof venting can allow the roof surface above heated areas of the building to get warm enough to melt some of the snow on the roof surface, even on cold winter days.

This water will then flow down the roof and may accumulate and freeze in gutters, possibly even overflowing them and forming long icicles. (Icicles are usually a symptom of this "warm roof" problem. It can be expected that roofs with icicles will eventually form ice dams which may result in water leaking into the building.)

Left unchecked, this ice build-up (icing) can result in significant stress on the gutter, often leading to mechanical failure of the gutter.

It is also probable that the roof area above the overhang will be cold, since it is not above a heated area of the building. This can result in the re-freezing of the melt-water as it approaches the roof edge, forming a layer of ice.

Continued freezing of this water causes the layer of ice to build up in thickness and eventually can become several inches thick. This results in water "ponding" at the warm/cold transition point of the roof, and migrating under the shingles.

Once water gets under the shingles, it can leak through the roof sheathing, at nail holes or other roof penetrations, and down inside the building walls, ceiling, etc. It is also possible for such water to track along ceiling beams and eventually leak into the building interior at light fixtures or through the ceiling finish at a point some distance away from the location of the ice dam.

By applying heating cable from the roof edge to a level just above the overhang, and in the gutter and downspouts, melt-water on the roof will have a clear drainage path.

Cable Installation Procedures

1. Before installing heater cable in cold weather, allow cable to warm up to room temperature. Grommets and shrink tube included in connection kits should be warm until used (keep inside jacket pocket).
 2. Clear all gutters and downspouts of debris (protect hands with gloves).
 3. Remove any sharp edges that could damage the heater cable.
 4. Mount weatherproof outlet box (not including the kit) in an unobstructed location permitting the heater cable direct access to the roof with minimal unsupported length.
 5. Secure heater cable in outlet box, leaving 12" in junction box for connection to power cables. Form a drip loop where the cable exits the junction box; this will prevent water from tracking along the cable and into the junction box.
 6. Secure cable to roofing using ZH-C or equivalent clips in appropriate pattern (shingle or metal; see diagrams page 4) with loop height associated with overhang in TABLE 2. Ensure that waterproof integrity of roofing system is maintained. If in doubt, consult with a professional roofer for appropriate advice.
 7. Position heater cable tail end at the top of cable pattern to minimize possibility of long-term submersion of tail seal.
 8. Terminate heater cable in outlet box per connection kit procedures. Connect bus wires to power supply using standard wiring connection methods according to cable control method selected above. Connect ground braid to equipment grounding conductor.
 9. Apply end seal to heater cable tail per end seal procedure below.
- ⚠ DO NOT CONNECT TAIL BUS WIRES TOGETHER; THIS WILL CAUSE DIRECT SHORT CIRCUIT OF CABLE.**
10. It is recommended that the heater cable be megger tested between bus wires and ground braid after installation to verify cable is not damaged. Heater cable should have a minimum insulation resistance of 20 megohms when tested with at least a 500VDC megger; a 2500VDC megger is preferred.
 11. Post Warning Label at the branch circuit panel. An additional Warning Label must be affixed to either the weatherproof outlet box or next to the on/off device controlling the heater cable (if used).
- ⚠ ALL WARNING LABELS MUST BE CLEARLY VISIBLE.**

RG Cables

Roof & Gutter Self-Regulating Heating Cable Specification Guide

Product Selection

Catalog Number	Description	Carton Weight lb (kg)	UPC
RG-1	EasyHeat RG Self-Regulating, 12 W Roof & Gutter Deicing Cable, 120 V	0.1 lbs per foot (0.17 kg per meter)	0-13627-00509
RG-2	EasyHeat RG Self-Regulating, 12 W Roof & Gutter Deicing Cable, 240 V	0.1 lbs per foot (0.17 kg per meter)	0-13627-00513

ACCESSORIES



- **SRPC Heat Shrink Power/End-Seal Connection Kit.***
- **SRP Heat Shrink Power-Termination Connector Kit.**
- **SRES Heat Shrink End-Seal Connector Kit.**
- **SRPCRG Power Connection Kit** connects power to heater cable in a junction box (not included).
- **SRSRG Splice Kit** splices two pieces of cable together, if a longer length cable is needed.
- **ZH-C Roof Clips*** secure the cable from moving.
- **DSH Downspout Hangers*** support the heating cable descending a downspout drain. One kit is required for each downspout. Cable must be looped to the bottom of downspout and back up, utilizing a downspout hanger to prevent cable from being pulled tight against the drain/gutter edge.
- **ALT1 Aluminum Transfer Tape** 180' length by 2" width

**Recommended for most installations*

EasyHeat Controls

Automatic Temperature Sensing Controls

- SMC51 Temperature Controller w/ 8 ft sensor**
- SMC52 Temperature Controller w/ 20 ft sensor**

Automatic Snow & Ice Sensing Controls

- GC1 Single Zone Controller**
- MSC1 Multi-Zone Controller**

1-YEAR LIMITED WARRANTY AND LIABILITY

Easy Heat warrants that if there are any defects in material or workmanship in any heating cable or accessory during the first year after the date of purchase. We will provide new products to replace any defective items, or we will refund the purchase price paid for the accessory or cable, not including any labor or other installation costs. As an alternate, we may elect to repair the cable or accessory at our factory with all shipping and other removal costs borne by the purchaser.

We further warrant that any services performed for the Buyer hereunder will be performed in a good and skillful manner, based on our understanding of pertinent technical data as of the date of performance of such services. Easy Heat's sole responsibility and liability in the event of any defect, error, omission, or failure in the services rendered hereunder shall be to provide corrected services of the type provided for herein, designed to correct such defect, error, omissions, or failure, and in no event shall the Easy Heat's liability with respect to such warranty exceed the amount received by it from the Buyer on account of such services.

Our obligation to provide corrected services, new products, refund the purchase price, or perform the repair described above is conditioned upon (a) the installation of the accessory or cable conforming to the specifications set forth in our installation instructions and (b) the accessory or cable not having been damaged by mechanical or electrical activities unrelated to the operation of the accessory or cable.

A refund of your purchase price, provision of replacement products, repair of the accessory or cable or provision of corrected services as described above, shall be your sole and exclusive remedy for a breach of this warranty. THESE ARE THE SOLE AND EXCLUSIVE WARRANTIES GIVEN BY EASY HEAT WITH RESPECT TO THE GOODS AND SERVICES AND ARE IN LIEU OF AND EXCLUDE ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHETHER OR NOT THE PURPOSE OR USE HAS BEEN DISCLOSED TO EASY HEAT IN SPECIFICATIONS, DRAWINGS OR OTHERWISE, AND WHETHER OR NOT EASY HEAT'S PRODUCTS ARE SPECIFICALLY DESIGNED AND/OR MANUFACTURED BY EASY HEAT FOR YOUR USE OR PURPOSE.

This warranty does not extend to any losses or damages due to misuse, accident, abuse, neglect, normal wear and tear, negligence, unauthorized modification or alteration, use beyond rate capacity, or improper installation, maintenance or application. To the extent that you or your agents have supplied specifications, information, representation of operating conditions or other data to Easy Heat in the selection or design of the Goods and the preparation of Easy Heat's quotation, and in the event that actual operating conditions or other conditions differ from those represented by you, any warranties or other provisions contained herein which are affected by such conditions shall be null and void.

If within thirty (30) days after your discovery of any warranty defects within the warranty period, you notify Easy Heat thereof in writing, Easy Heat shall, at its option, repair, correct or replace F.O.B. point of manufacture, or refund the purchase price for, that portion of the Goods found by Easy Heat to be defective. Failure by you to give such written notice within the applicable time period shall be deemed an absolute and unconditional waiver of your claim for such defects. Goods repaired or replaced during the warranty period shall be covered by the foregoing warranty for the remainder of the original warranty period or ninety (90) days from the date of shipment of the repaired or replaced goods, whichever is longer.

This limited warranty does not cover any costs relating to the repair or replacement of any accessory or cable at the installation site. Our accessories and cables are not easily accessible. A failed accessory or cable usually cannot be easily repaired. Replacement of a failed accessory or cable will require that the materials under which it is installed be removed to permit replacement of the accessory or cable. We will not reimburse any costs relating to the repair or replacement of any accessory or cable at the installation site.

IN NO EVENT, REGARDLESS OF THE FORM OF THE CLAIM OR CAUSE OF ACTION (WHETHER BASED IN CONTRACT, INFRINGEMENT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE), SHALL EASY HEAT'S LIABILITY TO YOU AND/OR YOUR CUSTOMERS EXCEED THE PRICE PAID BY YOU FOR THE SPECIFIC GOODS PROVIDED BY EASY HEAT GIVING RISE TO THE CLAIM OR CAUSE OF ACTION. YOU AGREE THAT WE SHALL NOT BE LIABLE TO YOU OR YOUR CUSTOMERS FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL OR PUNITIVE DAMAGES. No agent, employee or representative of ours has authority to bind us to any affirmation, representation or warranty concerning the goods sold unless such affirmation, representation or warranty is specifically incorporated by written agreement.

To obtain new products, arrange repair of existing product, or a refund under this warranty, please contact Easy Heat with a description of the defect and proof of purchase at the address noted herein.

ATTN: WARRANTY DEPARTMENT:
In US - EasyHeat Inc; 2 Connecticut South Drive, East Granby, CT 06026
In CANADA - EasyHeat Ltd; 99 Union Street, Elmira, ON N3B 3L7