



SpeedTrace Roof and Gutter De-Icing Kit Pre-Assembled Self Regulating Heating Cable

For Snow and Ice Melting
on Roofs, Gutters, and Downspouts

Instruction Manual

	<p>Read and understand this entire manual before installing, operating or servicing this SpeedTrace Roof and Gutter Kit. Failure to understand these instructions could result in an accident causing serious injury or death. Only qualified personnel should install, operate or service this kit.</p>
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TABLE OF CONTENTS

Introduction	2
Safety Alert Symbol	2
Important Safety Instructions	3
Product Description.....	4
Kit Contents.....	4
General Requirements For Roof & Gutter De-Icing... 5	5
Electrical Codes	5
Heating Cable Selection Guide	6
Installation Planning.....	7
When to Install	7
Roof & Gutter Requirements.....	7
Electrical Requirements.....	7
Before Installation.....	7
Cable Pattern Arrangement & Roof Clip Placement . 8	8
Standard Pitched Roof With Gutters.....	9
Standard Pitched Roof Without Gutters.....	9
Valleys.....	10
Standing Seam Metal & Plastic Roofs	11
Installation Instructions.....	12
Installation of Cable & Roof Clips on Standard Pitched Roofs (With or Without Gutters).....	12
Installation of Cable & Roof Clips on Standing Seam Metal or Plastic Roofs.....	15
Installation in Gutters & Downspouts.....	16
Electrical Heat Trace System Identification.....	17
Check the Installation	17
Starting the System	17
Off-Season/Year-Round Installation and Removal....	17
General Heating Cable Specifications.....	18
Detailed Heating Cable Specifications	18
Troubleshooting Guide.....	19
Warranty Information.....	19

INTRODUCTION

Thank you for purchasing a BriskHeat[®] SpeedTrace Roof & Gutter De-Icing Kit. Your SpeedTrace Roof & Gutter Kit is designed to provide a long and efficient service life with function, reliability, and safety in mind. For additional information or other BriskHeat[®] products, please contact BriskHeat[®] at 1-800-848-7673 (toll free, U.S. / Canada) or 614-294-3376.



SAFETY ALERT SYMBOL

The symbol above is used to call your attention to instructions concerning your personal safety. It points out important safety precautions. It means "**ATTENTION! Become Alert! Your Personal Safety is involved!**" Read the message that follows and be alert to the possibility of personal injury or death.



Immediate hazards which **WILL** result in severe personal injury or death.



Hazards or unsafe practices that **COULD** result in severe personal injury or death.



Hazards or unsafe practices that **COULD** result in minor personal injury or property damage.

SAVE THESE INSTRUCTIONS!

Additional copies of this manual are available upon request.

IMPORTANT SAFETY INSTRUCTIONS



⚠ DANGER

A person who has not read and understands all operating Instructions is not qualified to operate this product.

⚠ DANGER

- Keep volatile or combustible material away from heating cable when in use.
- Use the heating cable only in approved locations.
- Keep sharp metal objects away from the heating cable.

Failure to observe these warnings may result in electric shock, risk of fire, and personal injury.

⚠ WARNING

End-User Must Comply to the Following:

- Only qualified personnel are allowed to connect electrical wiring.
- Disconnect all supply power at the source before making any power connections.
- All electrical wiring must follow local electrical codes and highly recommend following NEC Article 427.
- The person who performs the final installation / wiring must be qualified for this work.
- The end-user is responsible for providing a suitable disconnecting device.
- The end-user is responsible for providing a suitable electrical protection device. It is highly recommended that a ground fault circuit breaker is used.

Failure to observe these warnings may result in personal injury or damage to the heating cable.

⚠ CAUTION

- Never handle the heating cable while it is in operation; always disconnect the heating cable from the power source and allow to cool prior to handling.
- Inspect heating cable before use.
- If spillage of foreign matter onto heater occurs, disconnect from power source and clean after heating cable has been allowed to cool.
- Fasten heating cable using approved methods only.
- Do not repair damaged or faulty heating cable.
- Do not crush or apply severe physical stress on heating cable or cord assembly.
- Unplug heating cable when not in use.
- Do not use for other applications.

Failure to observe these warnings may result in personal injury or damage to the heater.

⚠ WARNING

Read and understand this entire manual before installing, operating or servicing this SpeedTrace Roof and Gutter Kit. Failure to understand these instructions could result in an accident causing serious injury or death. Only qualified personnel should install, operate or service this kit.

PRODUCT DESCRIPTION

- SpeedTrace Roof & Gutter Kits are designed to melt snow and ice on roofs, gutters, and downspouts.
- Kits available in 50, 75, 100, 125, and 150 foot lengths, pre-assembled with a 30-inch power with 120VAC 3 prong plug (230V, with bare wire).
- Kits include SpeedTrace heating cable, roof clips, downspout hanger brackets, cable ties, and caution labels for installation.
- Self-Regulating heating cable automatically adjusts heat output based on surface and ambient temperature.
- No temperature controller is required.

KIT CONTENTS

Kit Part Number	FFRG15-50 FFRG25-50	FFRG15-75 FFRG25-75	FFRG15-100 FFRG25-100	FFRG15-125 FFRG25-125	FFRG15-150 FFRG25-150
Heating Cable Length	50ft (15.2m)	75ft (22.9m)	100 ft(30.5m)	125ft (38.1m)	150ft (45.7m)
Roof Clips	30	50	60	80	100
Downspout Hanger Bracket	2	4	4	4	6
Cable Ties	15	20	25	30	40
Caution Labels	2	2	2	2	2

Need more downspout hanger brackets roof clips? Additional items are available. Contact BriskHeat[®] for more information at 1-800-848-7673 (U.S. / Canada) or 1-614-294-3376 (worldwide).

Additional items that may be required for installation, but not supplied:

- UV resistant RTV Adhesive for Roofs
- Caulk Gun
- Roofing Nails or Screws
- Pen & Paper
- Chalk
- Hand Tools (Hammer, screwdriver or drill, Cable Tie Cutter)

Optional Recommended Accessory

Thermo-Cube Thermostatically Controlled Outlet

Perfect for worry-free operation all year long. Thermo Cube is a device which, when plugged into a standard GFCI (15 amp minimum) electrical outlet, automatically turns power on and off to any device plugged into it based upon ambient air temperatures. Thermo Cube will automatically turn on power when air temperature falls below approximately 35°F (2°C) and will turn off the power when the temperature rises above approximately 45°F (7°C). For more information, please contact BriskHeat[®] at 1-800-848-7673 (U.S. / Canada) or 1-614-294-3376 (worldwide).

WARNING

Read and understand this entire manual before installing, operating or servicing this SpeedTrace Roof and Gutter De-Icing Kit.

GENERAL REQUIREMENTS FOR ROOF & GUTTER DE-ICING

- BriskHeat[®]'s SpeedTrace Roof & Gutter Kit is designed to melt snow and ice on roofs gutters and downspouts.
- The SpeedTrace Roof & Gutter heating cable alone may not keep snow or ice from falling off the roof. Snow fences or snow guards may be used to help prevent snow movement.
- Use the product only as described in this manual.
- SpeedTrace Roof & Gutter Kits may be used on:
 - Standard pitched roofs with or without a gutter
 - Roofs made from all types of standard roofing materials including: shake, shingle, rubber, tar, wood, plastic, and metal
 - Gutters and downspouts made from standard materials including metal and plastic
- **Not for use on:**
 - Flat roof tops
 - Slate or tile roofs as damage may occur to the roof material
- Use of an extension cord is not recommended, but if an extension cord is needed, call your local electrical inspection agency for a recommendation on the proper outdoor-safe extension cord.
- Do not install the heating cable underneath any roof covering for roof and gutter de-icing.
- Install only in accessible locations. Do not install behind walls, ceilings, floors, in insulation, or where the cable could be hidden.
- Do not alter or modify the SpeedTrace pre-assembled heating cable.
- SpeedTrace heating cable, roof clips, and downspout hanger brackets must be installed properly to ensure proper operation and to prevent the risk of electrical hazard or fire. Follow all design, installation, assembly, and test instructions carefully.
- Connect only to GFCI (15 amp minimum) outlets that have been installed in accordance with all prevailing national and local codes and standards and are protected from rain and other water.
- De-energize all power circuits before installation or servicing.
- Keep ends of heating devices and kit components dry before and during installation.
- While using pliers to close clamps on heating cable, heating cable should not be crushed or altered in any way.
- The cable should not be twisted during installation.
- Damaged heating cable can cause arcing or fire. Do not energize damaged heating cable. Replace damaged heating cable prior to applying power.
- To minimize the risk of fire from sustained electrical arcing if the heating cable is damaged or improperly installed, and to comply with the requirements of national electrical codes, ground-fault equipment protection must be used on each heating cable branch circuit. Arcing may not be stopped by conventional circuit protection.

ELETRICAL CODES

WARNING

Failure to meet national + local electrical code requirements may result in an accident from electrical shock or fire.

Articles 422 and 427 of the National Electrical Code (NEC), and Part 1, Section 62 of the Canadian Electrical Code (CEC), govern the installation of SpeedTrace Roof & Gutter Kits and must be followed.

Important: For the BriskHeat[®] SpeedTrace Roof & Gutter Kit warranty to be valid, you must comply with all the requirements outlined in these guidelines.

All thermal and design information provided here is based upon a standard installation with heating cable on roofs, gutters, and downspouts. For any other application or method of installation, please contact BriskHeat[®] at 1-800-848-7673 (U.S. / Canada), or 1-614-294-3376 (worldwide).

HEATING CABLE SELECTION GUIDE

Use the equation and table below to calculate the required heating cable length:

Cable Required for Roof = (R x M) + G + D

(R) Roof Edge Length (linear length of roof to protect)

(M) Multiplier from table below

(G) Gutter Length

(D) Downspout Length (X2 if heating cable returns back to gutter)

Heating Cable Length Required [Round Up to the closet kit size]

Example (Standard Roof):

Measurements:

Roof Edge Length: 16ft (4.9m)

Gutter Length: 16ft (4.9m)

Roof Overhang: 12" (30cm)

Downspout Length (no return): 15ft (4.6m)

Equation:

Roof Edge: 16 ft (4.9m) x 2.5 (from table) = 40ft (12.2m)

Gutter Length: + 16 ft (4.9m)

Downspout Length: + 15 ft (4.6m)

Required Cable Length = **71ft (21.6m) = 75ft (22.9m) Kit [Rounded Up]**

Roof Overhang (Eave / Soffit)	Standard Roof	Standing Seam Roof 18" (45cm) Seam	Standing Seam Roof 24" (60cm) Seam
None	2.0 ft	2.5 ft	2.0 ft
12" (30cm)	2.5 ft	2.8 ft	2.4 ft
24" (61cm)	3.0 ft	3.6 ft	2.9 ft
36" (91cm)	4.0 ft	4.3 ft	3.6 ft

Note:

- When calculating downspout length, if the downspout is at the end of a run, measure the full length of the downspout and use that value.
- When calculating downspout length, if the downspout is not at the end of a run and heating cable must return to the gutter, double the length of the downspout to determine the length of cable to install. You will need to loop the cable back up the downspout to continue along the gutter.
- For downspouts that extend below ground, heating cable should extend below the frost line if tied into a drainage system.
- If installing the cable in a gutter at the very end of a run, do not allow the end of the heating cable to stick out in the air at the end of the downspout. Instead loop the cable back up the downspout for 1ft (0.3m) and connect with a cable tie if possible.
- For roof drains leading into a heated area, a loop of heating cable is installed to a typical depth of 3.3 ft (1m).
- For valleys, run the heating cable two thirds of the way up and back down the valley. You must add this value to your total cable length calculation.

Important: All thermal and design information provided here is base upon a standard installation. For any other application or method of installation, please contact BriskHeat[®] at 1-800-848-7673 (U.S. / Canada) or 1-614-294-3376 (worldwide).

INSTALLATION PLANNING

⚠ WARNING

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WHEN TO INSTALL

Install the SpeedTrace Roof & Gutter Kit when the conditions are warm, dry, and safe. The best time to install is in advance of cold temperatures arriving. Warmer temperatures will also allow standard shingles or shakes to set or reseal after installation.

When using an RTV adhesive, follow the application directions provided by the RTV manufacturer. Be sure to allow time for the RTV to cure and set without being interrupted by inclement weather.

ROOF & GUTTER REQUIREMENTS

Suitable For:

- Standard pitched roof with or without a gutter
- Standard roofing materials including shingle, shake, rubber, tar, wood, metal and plastic roofs
- Gutters and downspouts made from standard materials including metal and plastic

Not Suitable For:

- Flat roof tops
- Slate, stone, ceramic, composite (tar and gravel) roofs

ELECTRICAL REQUIREMENTS

⚠ WARNING

Failure to meet these electrical requirements may result in an accident from electrical shock or fire.

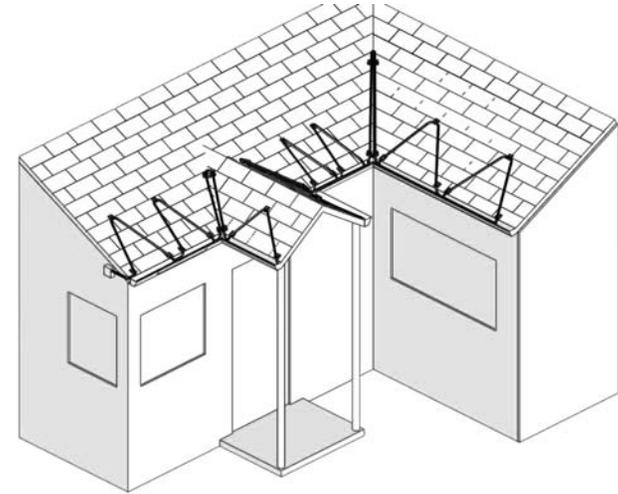
SpeedTrace Roof and Gutter Kits require a GFCI protected (15 amp minimum) outlet that is close to the cable starting point on the roof and protected from inclement weather.

Use of an extension cord is not recommended, but if an extension cord is needed, call your local electrical inspection agency for a recommendation on the proper outdoor-safe extension cord.

BEFORE INSTALLATION

- Carefully remove any existing cables, clips, and roof clips from the roof, gutter, and downspouts.
- Clean the roof, gutter, and downspouts of leaves and other debris.
- Check the roof, gutter, and downspouts for sharp edges and file them down or repair them as necessary.
- Test the heating cable to make sure it's functioning properly. Unwind the cable and then plug it in. Wait 5 minutes then touch the cable. The cable should feel slightly warm to the touch.
- Unplug the cable before installing.

CABLE PATTERN ARRANGEMENT & ROOF CLIP PLACEMENT



Arrangement for Standard Pitched Roof with Gutter Shown

To save time and ease the installation of the SpeedTrace heating cable, plan the Cable Pattern Arrangement and Roof Clip Placement prior to installation. It is recommended to install the cable in areas that are prone to freezing, ice dams, snow build-up, and icicles.

- Premeasure the length of the roof, gutters, and downspouts.
- Using this information and the arrangements listed in the following pages, sketch the Cable Plan Arrangement and Roof Clip Placement on paper.
- After sketching it on paper, it's recommended that you chalk the roof to match the drawing for easy installation.

Plan the pattern for your roof

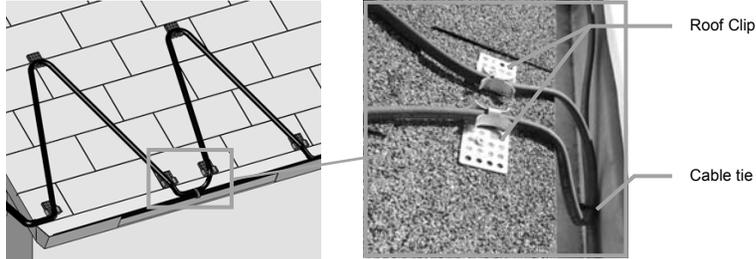
Choose a Starting Point

Select a starting point for the cable near a power outlet. The outlet should be protected from any inclement weather.

STANDARD PITCHED ROOFS WITH GUTTERS

For standard pitched metal or plastic standing seam roofs, see page 11.

Cable Placement: The cable will be installed in a triangular zig-zag pattern with the lower corner points overhanging the edge of the roof into the gutter and almost touching the bottom of the inside of the gutter.



Clip Placement: Use 1 roof clip at each top corner point of the zig-zag and 2 clips at each bottom corner point.

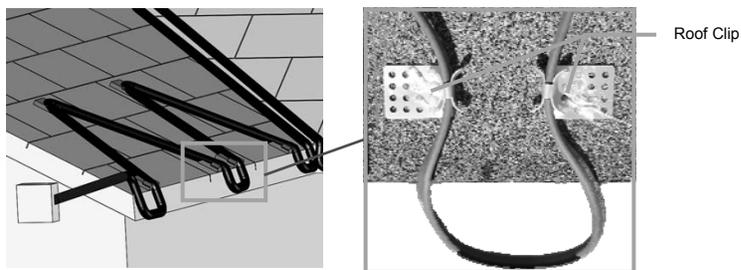
Shake and Shingle Roofs

Roof Overhang	Tracing Width	Tracing Height	Feet of Cable per Foot of Roof Edge, Not Including Gutter
None	24" (61cm)	12" (30cm)	2.0 ft (61cm)
12" (30cm)	24" (61cm)	18" (46cm)	2.5 ft (76cm)
24" (61cm)	24" (61cm)	30" (76cm)	3.0 ft (91cm)
36" (91cm)	24" (61cm)	42" (107cm)	4.0 ft (122cm)

STANDARD PITCHED ROOFS WITHOUT GUTTERS

For standard pitched metal or plastic standing seam roofs, see page 11.

Cable Placement: The cable will be installed in a triangular zig-zag pattern with the lower corner points overhanging the edge of the roof.



Clip Placement: Use 1 roof clip at each top corner point of the zig-zag and 2 clips at each bottom corner point.

Shake and Shingle Roofs

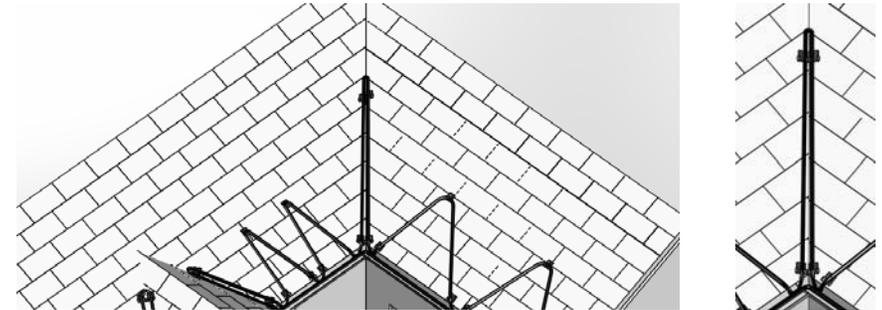
Roof Overhang	Tracing Width	Tracing Height	Feet of Cable per Foot of Roof Edge, Not Including Gutter
None	24" (61cm)	12" (30cm)	2.0 ft (61cm)
12" (30cm)	24" (61cm)	18" (46cm)	2.5 ft (76cm)
24" (61cm)	24" (61cm)	30" (76cm)	3.0 ft (91cm)
36" (91cm)	24" (61cm)	42" (107cm)	4.0 ft (122cm)

VALLEYS

(Angled areas where two sections of roof meet)

Cable Placement: Run the heating cable 2/3rds of the way up and down the valley.

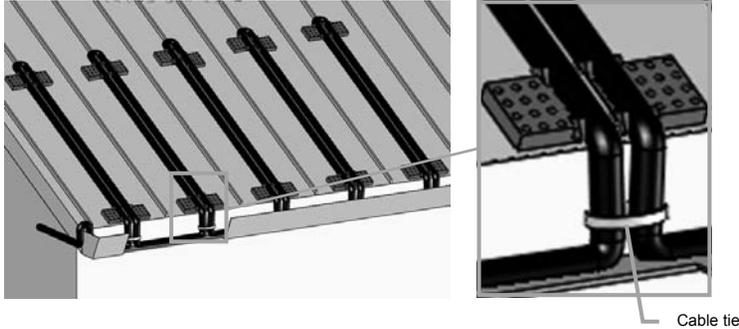
Clip Placement: Use 4 roof clips to secure the cable on the valley. Use 2 roof clips at the top corner point on each side of the run, and 2 roof clips at the bottom corner point on each side of the run.



STANDING SEAM METAL & PLASTIC ROOFS

For standard pitched roofs with or without gutters, see page 9.

Cable Placement: Run the heating cable along the standing seam to the tracing height specified in the chart below. Then run the cable to the edge of the roof. Where the two ends of the cable meet at the base of each seam, they will be connected with a cable tie as shown.



Cable tie

Clip Placement: Use 2 roof clips at the top corner points and 2 roof clips at the lower bottom corner points along the standing seam. Where the 2 ends of the cable meet at the base of each seam, they will be connected with a UV-resistant cable tie.

Standing Seam Metal or Plastic Roofs**

Roof Overhang (Eave / Soffit)	Tracing Width	Tracing Height	Feet of Cable per Root of Roof Edge, Not Including Gutter
None	18" (46cm)	18" (46cm)	2.5 ft
12" (30cm)	18" (46cm)	24" (61cm)	2.8 ft
24" (61cm)	18" (46cm)	36" (91cm)	3.6 ft
36" (91cm)	18" (46cm)	48" (122cm)	4.3 ft
None	24" (61cm)	18" (46cm)	2.0 ft
12" (30cm)	24" (61cm)	24" (61cm)	2.4 ft
24" (61cm)	24" (61cm)	36" (91cm)	2.9 ft
36" (91cm)	24" (61cm)	48" (122cm)	3.6 ft

**No additional heating cable is required for gutter when tracing standing seam metal roofs.

INSTALLATION INSTRUCTIONS

⚠ WARNING

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Choose a Starting Point

Select a starting point for the heating cable near a GFCI (15 amp minimum) power outlet. The outlet should be protected from inclement weather.

Draw Diagram of the Cable Plan Arrangement and Roof Clip Placement

Using the roof, gutter, and downspout measurements and the arrangements listed previously, sketch the cable arrangement and roof clip placement on paper.

Mark the Roof Pattern with Chalk

After sketching it on paper, it's recommended that you mark the roof with chalk to match the drawing for easy installation. The markings should indicate where the cable and roof clips will need to be installed.

INSTALLATION OF CABLE & ROOF CLIPS ON STANDARD PITCHED ROOFS (WITH OR WITHOUT GUTTERS)

For standard pitched metal or plastic standing seam roofs, see page 15.

Items Needed:

- Roof Clips
- SpeedTrace Heating Cable
- RTV Adhesive for Roofs
- Nails & Hammer OR Screws & Screwdriver or Drill
- Downspout Hanger Brackets (if Roof has a Gutter)
- Cable ties (for installation in gutters)

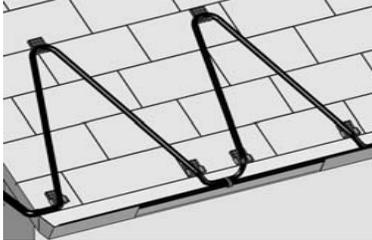
Install the roof clips according to the Cable Pattern Arrangement and Roof Clip Placement diagram and chalk markings on the roof.

NOTE: Roof clips are NOT for use on slate, stone, ceramic, or composite (tar and gravel) roofs.

Shingle / Shake Installation

Roof clips may be attached to a shingle or shake roof using RTV adhesive and nails or screws

1. Determine the heating cable layout and clip placement according to the Cable Pattern Arrangement and Roof Clip Placement.



2. Following the RTV adhesive manufacturing instructions, apply RTV adhesive appropriate for your roof, to the back side of the roof clip where the nail or screw will be used.



3. Orient the clip as needed on the roof. Place the roof clip on the roof where the roof is marked. Press down on the clip so that the adhesive flows through the holes. The cable insertion clamp should be vertical on the roof. Attach the clip to the roof using a nail or a screw.



4. Apply sealant on top of the nail or screw heads.



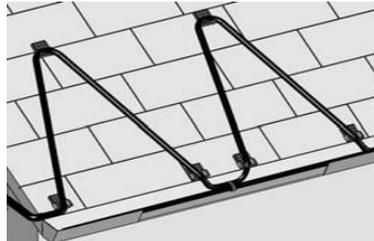
5. Allow the RTV adhesive to cure and dry before installing the cable. Refer to the RTV adhesive instructions for the cure time of the adhesive used.
6. Repeat this process. Wait for all of the adhesive on the roof clips to cure before continuing with the installation of the cable.
7. After the RTV adhesive has cured, install the heating cable between the clip clamps following the Cable Pattern Arrangement and Roof Clip Placement diagrams. Use pliers to close the clamps gently around the heating cable. Do not crush the heating cable.



8. Run the cable from the starting point and use a roof clip to connect the cable to the edge of the roof.
9. If chalk lines were made, follow the chalk lines in the standard zig-zag pattern and attach the cable to the roof with the roof clips. The lower corner points of the cable should hang over the edge of the roof.

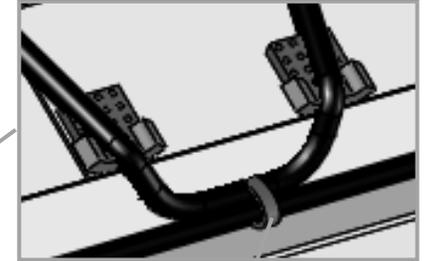
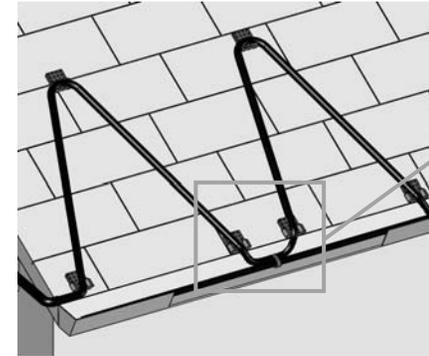
Note: If the roof has a gutter, make sure the lower corner points of the zig-zag touch the bottom of the inside of the gutter.

10. Continue installing the cable according to the specified zig-zag pattern. The cable should be installed as shown:



If the Roof Has a Gutter

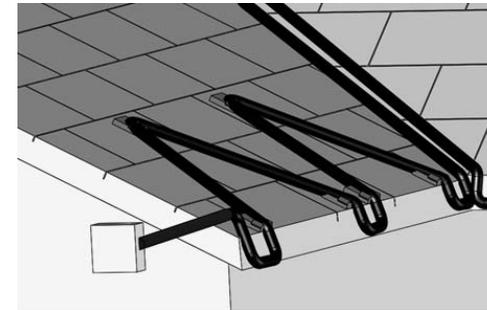
At the end of the zig-zag pattern, run the cable back through the gutter towards the direction where you started. The cable should be lying along the bottom of the gutter. When running the cable back through the gutter, use a UV-resistant cable tie to connect each bottom lower corner point to the cable running in the gutter. This will help ensure a drainage channel off of the roof and into the gutter and downspout.



Cable Tie

If the Standard Pitched Roof Does Not Have a Gutter:

The lower corner points of the cable should hang over the edge of the roof. At the end of the run, install the cable so that the end of the cable is hanging off the edge of the roof by 2-3".



INSTALLATION OF CABLE & ROOF CLIPS ON STANDING SEAM METAL OR PLASTIC ROOFS

For seamless standard pitched roofs, see page 12.

Items Needed:

- Roof Clips
- SpeedTrace Heating Cable
- RTV Adhesive for Roofs

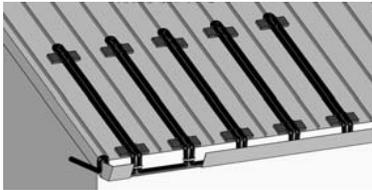
Install the roof clips according to the diagram and chalk markings on the roof.

NOTE: Roof clips are NOT for use on slate, stone, ceramic, or composite (tar and gravel) roofs.

Standing Seam Metal or Plastic Roof Installation

Roof clips may be attached to a metal or plastic roof using an RTV adhesive.

1. Determine the heating cable layout and clip placement according to the Cable Plan Arrangement and Roof Clip Placement.



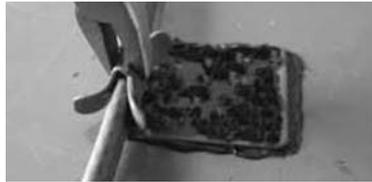
2. Select the appropriate adhesive. We recommend selecting an adhesive specifically made for outdoor use on roofs.
3. Following the RTV adhesive manufacturing instructions, apply RTV adhesive appropriate for your roof, to the back side of the roof clip.



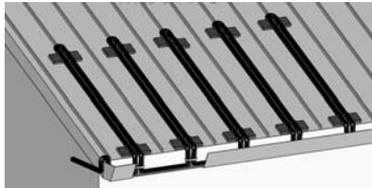
4. Orient the clip as needed on the roof. Place the roof clip on the roof where the roof is marked. Press down on the clip so that the adhesive flows through the holes. The cable insertion clamp should be vertical on the roof.



5. After the RTV adhesive has cured, install the heating cable between the clip clamps following the Cable Pattern Arrangement and Roof Clip Placement. Use pliers to close the clamps gently around the heating cable. Do not crush the heating cable.



6. Run the cable from the starting point and use a roof clip to connect the cable to the edge of the roof.
7. If chalk lines were made, follow the chalk lines in the standing seam cable pattern and attach the cable to the roof with the roof clips. Run the heating cable along the standing seam to the tracing height specified in the chart below.
8. Use 2 roof clips at the top corner points and 2 roof clips at the lower bottom corner points along the standing seam. Where the 2 ends of the cable meet at the base of each seam, they will be connected with a UV-resistant cable tie. The cable should be installed as shown:



9. Continue installing the cable according to the standing seam cable pattern.
10. If a gutter is installed on your roof, the cable should be positioned along the bottom of the gutter.

INSTALLATION IN GUTTERS & DOWNSPOUTS

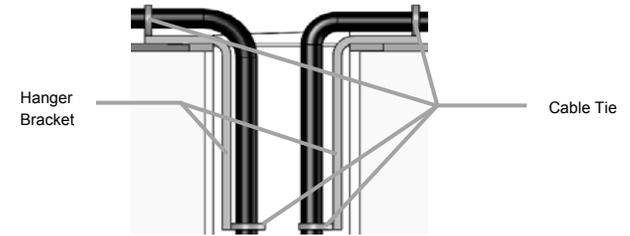
Two Hanger Brackets are used in each downspout to protect and provide stability to the heating cable. If you need more Hanger Brackets for additional downspouts, contact BriskHeat[®] for more information at 1-800-848-7673 (U.S. / Canada) or 1-614-294-3376 (worldwide).

Items Needed:

- 1 or 2 Hanger Brackets Per Downspout (determined by application)
- 2 Cable Ties Per Hanger Bracket

Downspout Hanger Bracket Installation

When running the cable down the downspouts, use hanger brackets to easily suspend the cable into the downspout.



1. Bend the hanger bracket to 90 degrees at the center of the bracket. Position the bracket next to the heating cable and insert cable ties through the bracket holes.



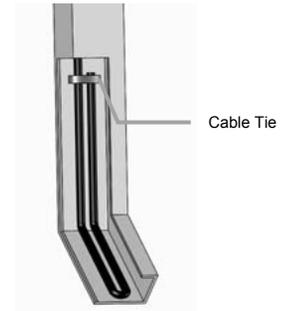
2. Tighten the cable ties to secure the cable. Trim off the excess ends of the ties. Do NOT cut the heating cable.



3. **Note:** If installing the cable in a gutter at the end of a run, do not allow the end of the heating cable to stick out in the air at the end of the downspout. Instead loop the cable back up the downspout a minimum of 1 ft(30cm) and connect with a cable tie as shown.

Insert cable into the downspout.

4. Make a "U" in the cable so the cable goes down the downspout and comes back up to complete the run along the remainder of the gutter. Insert the "U" cable into the downspout.



5. On the loose end of the cable, connect it to the second hanger bracket as shown in steps 1 and 2.
6. Position the hanger brackets in the center and on the edge of the downspout to prevent damage and to support the heating cable.
7. Continue running the cable according to the Cable Pattern Arrangement.



ELECTRICAL HEAT TRACE SYSTEM IDENTIFICATION

- Using the 2 Electrical Caution Labels provided in the kit, mark the cable with labels that indicate the presence of electric de-icing and snow-melting equipment.
- One label must be posted at the electrical outlet cover.
- The other label must be posted at the fuse or circuit breaker panel.
- The labels must be clearly visible.

CHECK THE INSTALLATION

- Prior to plugging in, check to be sure the heating cable is free of mechanical damage (cuts, clamps, etc.).
- Junction boxes should be inspected for water or evidence of previous water leaks. If moisture is present, the box should be restored to dry conditions and the cause of the leak should be eliminated.
- Functionality of overcurrent protection devices should be checked.

STARTING THE SYSTEM

To turn-on the SpeedTrace heating cable, simply plug it in to a GFCI (15 amp minimum) outlet. To turn it off, unplug the cable.

Optional Recommended Accessory

Thermo-Cube Thermostatically Controlled Outlet

Perfect for worry-free operation all year long. Thermo Cube is a device which, when plugged into a standard GFCI (15 amp minimum) electrical outlet, automatically turns power on and off to any device plugged into it based upon ambient air temperatures. The Thermo Cube will automatically turn on power when air temperature falls below approximately 35°F (2°C) and will turn off the power when the temperature rises above approximately 45°F (7°C). For more information, please contact BriskHeat[®] at 1-800-848-7673 (U.S. / Canada) or 1-614-294-3376 (worldwide).

OFF-SEASON/YEAR-ROUND INSTALLATION AND REMOVAL

The SpeedTrace Roof and Gutter Kit is safe to leave installed year-round, but remember to unplug the heating cable when temperatures are warm and the cable doesn't need to be running. You may use the Thermo-Cube for worry-free on/off control so that the cable is only running when needed.

If you must remove the cable for any reason, use pliers to gently bend the clamps on each roof clip apart and remove the cable.

GENERAL HEATING CABLE SPECIFICATIONS

Kit Part Number	Length	Voltage (AC)	Max Watts*	Max Amps*
FFRG15-50	50ft (15.2m)	110-120V	500W	4.2A
FFRG15-75	75ft (22.9m)	110-120V	750W	6.2A
FFRG15-100	100ft (30.5m)	110-120V	1000W	8.3A
FFRG15-125	125ft (38.1m)	110-120V	1250W	10.4A
FFRG15-150	150ft (45.7m)	110-120V	1500W	12.5A
FFRG25-50	50ft (15.2m)	208-277V	560W	2.0A
FFRG25-75	75ft (22.9m)	208-277V	840W	3.0A
FFRG25-100	100ft (30.5m)	208-277V	1120W	4.0A
FFRG25-125	125ft (38.1m)	208-277V	1400W	5.1A
FFRG25-150	150ft (45.7m)	208-277V	1680W	6.1A

*Max Watts & Max Amps rated at Max Voltage at 32°F (0°C) in ice and snow.

DETAILED HEATING CABLE SPECIFICATIONS

Nominal cable width (in)	0.42
Nominal cable thickness (in)	0.22
Heating cable bus wire gauge (AWG)	16
Cold lead length (in)	30
Voltage rating (120 VAC)	110-120
Voltage rating (230 VAC)	208-277
Plug rating (amps)	15
Circuit breaker sizing minimum (amps)	15
Max. exposure temperature	150°F (65°C)
Electrical classification	Nonhazardous areas only
Exposure to chemicals	None
Watts/foot at 50°F (10°C)	5
Watts/foot at 32°F (0°C) in ice and snow	10
Outer Jacket Type	Moisture and flame resistant thermoplastic elastomer

TROUBLESHOOTING GUIDE

Please read this guide prior to contacting BriskHeat[®]. This guide is designed to answer the most commonly asked questions. If you are unable to identify the problem or need additional assistance, please contact your local distributor/representative or us at **1-800-848-7673**, **614-294-3376**, or **bhtsales1@briskheat.com**.

PROBLEM	SOLUTION(S)
Entire heating cable does not heat	Verify heater is connected to proper voltage. Check to see if there is a resistance reading (not an open circuit) in heater using an ohm meter.
Portion of heating cable does not heat	Examine unheated cable for damage.
Circuit breaker is tripping	Validate that the circuit breaker is capable of handling the amp requirement of heater. Examine heater and cord for any damage.

WARRANTY INFORMATION

BriskHeat warrants to the original purchaser of this product for the period of eighteen (18) months from date of shipment or twelve (12) months from date of installation, whichever comes first. BriskHeat's obligation and the exclusive remedy under this warranty shall be limited to the repair or replacement, at BriskHeat's option, of any parts of the product which may prove defective under prescribed use and service following BriskHeat's examination, is determined by BriskHeat to be defective. The complete details of the warranty can be found online at www.briskheat.com or by contacting us at 1-800-848-7673 (toll free, U.S. / Canada) or 1-614-294-3376 (Worldwide).

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