



***Trace Heating Systems Serving
Your Industrial and
Domestic Requirements***

Roof and Gutter De-icing System





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Gutters, roofs, and fall pipes are in danger by snowfall and long periods of cold weather. By exposure to the sun the snow melts and then the melted snow runs from the roof into cold gutters and fall pipes. The water freezes as the ambient temperature drops, forming ice layers that will build up and block the flow.

This will result that the gutters break off, or the fall pipes crack, or that unseen problems may occur. In addition to this ice-cicles may form, break off and cause damages to vehicles, plants or even injure people. Expensive structural damage may occur to outer walls, plaster and roof tiles when the water builds up on these and freezes.

UV resistant self-regulating heating tapes are use in order to prevent this from happening. Due to the characteristics of these tapes the heating output adjusts in accordance to the ambient temperature. In ice water and snow the power output of the cables is maximized. As the snow and ice melts the power output reduces somewhat until the cable has dried. As the temperature raises, the power output will sink gradually further.

Should there be colder positions, such as shaded positions that don't melt or heat up as quickly as others that may have sunlight, these positions of the heating tape will continue to provide more power output. It acts then like a heating circuit within a heating circuit.

HTS may provide the solution for your gutter or roof de-icing needs. The cut-to-length self-regulating heating cables, ThermTrace Gutter Heat Lite (TTGHL) and ThermTrace Gutter Heat (TTGH), are some of the best produced self-regulating heating tapes that are available on the Market. The UV resistance TPE over-jacket protects from the harmful sunlight, providing long years of use.

These heating tapes are safe, reliable, maintenance free and save money through reduced energy consumption. Energy is only expended when it is needed, for example when snow or ice is present. Over-heating does not occur when using self-regulating heating tapes and may even be installed in plastic gutters and fall pipes.

The design may however not be used to keep ice or snow from falling from the roof, but to prevent dams produced by frozen melt water on the roof and to keep ice in the gutters and fall pipes from blocking the flow. It is recommended that snow fences be used on the roof to prevent snow movement.



ThermTrace®GutterHeat Lite (TTGHL)

Nominal Voltage: 230V
Min.bending radius: 25mm
Dimensions: 10,5 x 6,0mm
Max.exposure temp: 85°C unpowered
65°C powered
Min.Installation temp: -30°C

Power Output	Max. Installation length (16A)
40 W/m ice water	50m
25W/m @ 0°C in air	90m
23W/m @ 5°C on pipe	110m

ThermTrace®GutterHeat (TTGH)

Nominal Voltage: 230V
Min.bending radius: 25mm
Dimensions: 11,5 x 5,5mm
Max.exposure temp: 85°C unpowered
65°C powered
Min.Installation temp: -30°C

Power Output	Max. Installation length (16A)
55 W/m ice water	35m
28W/m @ 0°C in air	77m
25W/m @10°C on pipe	88m

*** Please note that information of this publication are subject to change without notice!**



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Engineering and Design

Gutter and Fall Pipe Design:

Determine the required heating tape length:

Length of gutter (2xlength by more than 300mm width.) _____m

+ Length of fall pipe _____m

+ 1m x each fall pipe _____m

+ 1m per outlet feeding internal gutters _____m

+ 0,25m for each power connection _____m

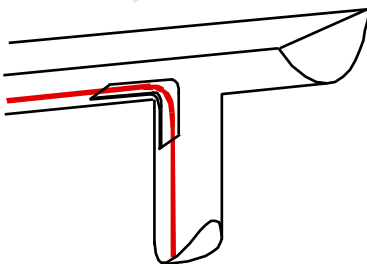
+ 1,0m per splice _____m

+ 2,5% allowance for cutting, wastage, etc. _____m

TOTAL CABLE LENGTH _____m

Installation Notes:

- The double amount of heating tape is necessary by installation above 2000m Sea Level.
- The distance between the heating tapes in shed gutters is 120mm.
- Special requirements are necessary by long fall pipes due to the weight of the heating tape.



Roof Design:

Determine the required heating tape length:

The ThermTrace GutterHeat self-regulating tapes are to be laid in a zig-zag fashion at least 300mm above the outer building wall level or 100mm above the snow fence, whichever is higher, and extended down to the gutter. This ensures a continuous run off for melted water.

General installation length requirements

Roof size in sqm. X multiplications factor = heater length in m

Height over Sea Level	Multiplications factor
700	3
1000	4
1500	5
2000	6
Over 2000	7

