



 **WINTER**

***Raychem* Nuheat**

COMMERCIAL & RESIDENTIAL MARKETS —
U.S. ELECTRICAL

THERMAL BUILDING SOLUTIONS

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Because winters can be harsh...

In winter, freezing temperatures can be a latent danger for buildings and the people who live and work in them. Think for example of the damage that can be caused by frozen pipes. Or the difficulties that can result from icicles on gutters, black ice on driveways, or snow-covered stairs and footpaths. As the responsible person, it is in your best interests to properly equip your buildings and give everyone maximum protection against frost, ice and snow.

This brochure highlights our safety and comfort solutions for residential, light commercial, commercial and specification.

Use the legend below to match the product offering with the market.

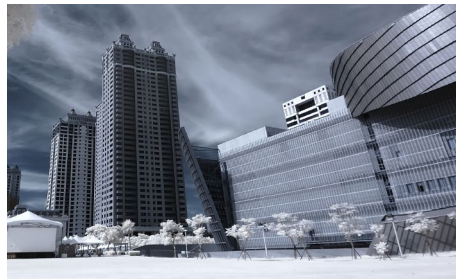
■ RESIDENTIAL / LIGHT COMMERCIAL

markets which represents basic, reliable solutions for homes and small commercial buildings, such as shops and strip malls.



■ COMMERCIAL / SPECIFICATION

markets which represents advanced, high-performing, often specified solutions for commercial buildings.





The solution: intelligent heating systems

Raychem solutions can help you avoid all risks of **material, physical and financial damage**. We have developed a series of innovative, self-regulating heating and freeze protection systems for this purpose. They are all complete, easy to install and efficient solutions to the risk of damage caused by frost, snow and the formation of ice. The low energy consumption is an added bonus. Discover here how Raychem solutions offer you the best possible protection against the lowest temperatures.

Maximum protection, optimum safety

There is an intelligent Raychem heating solution for every application. Most popular examples:

PIPE FREEZE PROTECTION



Modular and flexible cable system for keeping pipes from freezing. This heating solution prevents ice from forming and ensures that water can keep flowing. It prevents burst pipes and water damage.

ROOF & GUTTER DE-ICING



High quality and quick-to-install cable systems for keeping gutters and downspouts free from snow and ice. This heating solution prevents icicle formation and damage to gutters and ensures water can keep flowing freely.

SURFACE SNOW MELTING



Effective and reliable heating systems for keeping driveways, stairs and footpaths free from snow and ice. This heating solution prevents physical injury and vehicle accidents, and saves time clearing snow.

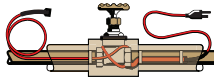
PIPE FREEZE PROTECTION – RESIDENTIAL / LIGHT COMMERCIAL



Raychem **pipe freeze protection systems** are flexible and easy to attach to the exterior of the pipe to keep pipes from freezing, bursting, and causing water damage.

Our product range allows you to choose the right solution for your application and budget—from a simple preassembled plug-in kit to one that offers energy-saving control and sensing options.

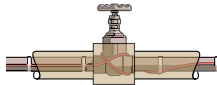
GARDIAN Preassembled Plug-In Heating Cable System



Preassembled self-regulating heating cable with 30-inch cold lead and plug for small piping up to 2-1/2 inches in diameter in dry or wet locations.

- Voltage: 120 V with plug, in lengths of 6, 12, 18, 24, 50, 75 & 100 feet; 240 V with cold lead only, in lengths of 6, 12, 18 & 24 feet
- Control options: TC-3 thermostatically controlled outlet for 120 V only
- Components: H903 application tape

WINTERGARD SERIES Pre-Packaged in Standard Roll Sizes and Cut-to-Length Heating Cable System



Self-regulating heating cable for piping up to 6 inches in diameter for dry and wet locations. The WinterGard series of products includes WinterGard, WinterGard Plus and WinterGard Wet.

- Voltage: 120 V or 240 V
- Control options: AMC-F5, AMC-1A, EC-TS, SST-2
- Components: H900 hardwire or H908 plug-in power connection kit; H903 application tape; H910 Splice/Tee kit

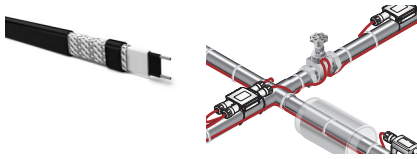
PIPE FREEZE PROTECTION – COMMERCIAL / SPECIFICATION



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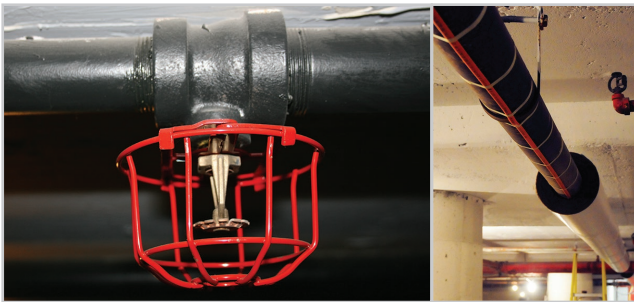
XL-TRACE Cut-to-Length Heating Cable System



Self-regulating heating cable with either fluoropolymer or polyolefin outer jacket for piping of all sizes in dry and wet locations.

- Voltage: 120 V or 208-277 V
- Control options: Single or multi-circuit, integrated power distribution, energy monitoring, BMS communications
- Components: RayClic quick connect; FTC heat shrinkable fittings

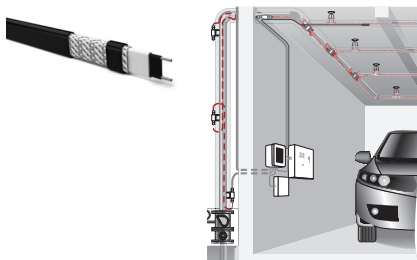
FIRE SPRINKLER FREEZE PROTECTION – COMMERCIAL / SPECIFICATION



Raychem **fire sprinkler freeze protection systems** freeze protect aboveground and buried supply pipes, fire standpipes, branch lines and branch lines containing sprinklers when run in areas subject to freezing.

The 2007 edition of NFPA 13 (Standard for the Installation of Sprinkler-Systems) allows Listed electrical heat tracing to freeze protect fire suppression systems including supply lines, standpipes and branch lines containing sprinklers. XL-Trace is c-CSA-us Certified for use on fire suppression systems under CSA C22.2 No. 130- 03 for Canada and IEEE 515.1-2005 for the US.

XL-TRACE Cut-to-Length Heating Cable System



Self-regulating heating cable with either fluoropolymer or polyolefin outer jacket for fire sprinkler freeze protection applications. This is the only heating cable on the market that is listed for freeze protection on fire sprinkler branch lines.

- Voltage: 120 V or 208-277 V
- Control options: Single or multi-circuit, integrated power distribution, energy monitoring, BMS communications. Fire panel communication listing requirements apply. See design guide.
- Components: RayClic quick connect; FTC heat shrinkable fittings

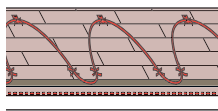
ROOF & GUTTER DE-ICING – RESIDENTIAL / LIGHT COMMERCIAL



Raychem **roof & gutter de-icing systems** protect roofs and gutters from ice dams, heavy snow build-up and icicles. The heating cable creates a continuous path for melted ice and snow to drain.

Raychem's basic, reliable roof & gutter de-icing solution ranges from a simple preassembled plug-in kit to cut-to-length heating cables. These systems are ideal for residential or small commercial buildings in light to moderate snow load areas.

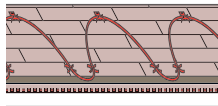
GARDIAN Preassembled Plug-In Heating Cable System



Preassembled self-regulating heating cable with 30" cold lead and plug, for small standard or standing seam roof & gutter de-icing applications on porches and overhangs.

- Voltage: 120 V in lengths of 6, 12, 18, 24, 50, 75 & 100 ft
- Components: H913/H914 roof clips; H915 downspout hanger

WINTERGARD WET Pre-Packaged in Standard Roll Sizes and Cut-to-Length Heating Cable System



Self-regulating heating cable that can be cut and spliced to fit the layout of any standard or standing seam roof line with gutters up to 6 inches wide. Choosing the H908 Plug-in cord eliminates the need to hardwire, thus reduces installation costs.

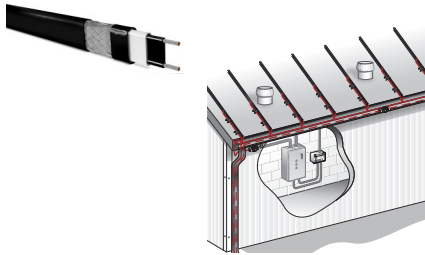
- Voltage: 120 V or 240 V
- Control and sensor options: PD-Pro and GF-Pro, LCD-8, CIT-1, GIT-1
- Components: H900 hardwire or H908 plug-in power connection kit; H913/H914 roof clips; H915 downspout hanger; H910 Splice/Tee kit

ROOF & GUTTER DE-ICING – COMMERCIAL / SPECIFICATION



Raychem's advanced, high performing **roof & gutter de-icing systems** are often specified for buildings and offer reliable state-of-the-art connection kits and control systems. These systems are ideal for commercial buildings in light to heavy snow load areas.

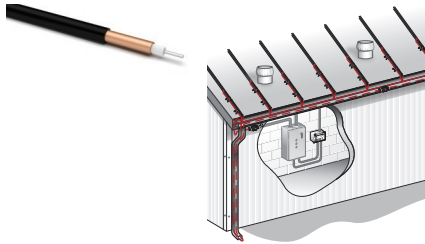
■ ICESTOP Cut-to-Length Heating Cable System



Self-regulating heating cable for standard or standing seam roof and gutter de-icing applications featuring a fluoropolymer outer jacket for superior abrasion and UV resistance, or a polyolefin jacket for less demanding applications.

- Voltage: 120 V or 208-277 V; Single-phase
- Control options: Single or multi-circuit, integrated power distribution, energy monitoring, BMS communications
- Components: RayClic quick connect; FTC heat shrinkable fittings

■ MI Pre-terminated Heating Cable System



Copper sheathed or HDPE jacketed, mineral insulated heating cable for standing seam metal roof and gutter de-icing applications.

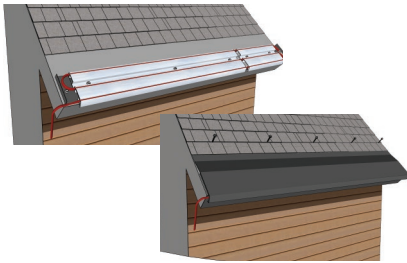
- Voltage: 120 V to 600 V; Single or 3-Phase design;
- Control options: Single or multi-circuit, integrated power distribution, energy monitoring, BMS communications
- Components: Pre-terminated

ROOF & GUTTER DE-ICING – RESIDENTIAL / LIGHT COMMERCIAL & COMMERCIAL / SPECIFICATION



Raychem's premiere, highest performing, aesthetically elegant **roof & gutter de-icing systems** are engineered systems with no visible cables. These systems are ideal for new construction or renovation of residential or commercial buildings in light to heavy snow load areas.

RIM (ROOF ICE MELT) Premiere Custom Roof Ice Melt Panel System



The Roof Ice Melt (RIM) System is our premiere offering for roof and gutter de-icing in light to heavy snow load areas. The system consists of metallic panels that embed self-regulating heat tracing cable to provide high power output and an aesthetically pleasing roof de-icing solution. The RIM system includes panels specifically designed for eaves, valleys, channels, rakes and flat roof sections.

- For this custom solution, refer to the Roof and Gutter De-Icing Systems brochure (H81855) for details and an Estimate Form that serves as a basis for the design.

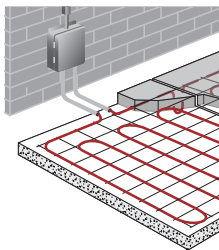
SURFACE SNOW MELTING – RESIDENTIAL & COMMERCIAL / SPECIFICATION



Raychem **surface snow melting systems** keep ramps, access ways and footpaths free of snow and ice.

Our product range allows you to choose the right solution for your application and budget — from a self-regulating system for concrete surfaces and pavers that reduces heat output automatically as the pavement warms and is ideal for smaller areas, to an MI pre-terminated system for concrete, pavers, and asphalt which provides constant power output and is ideal for larger jobs.

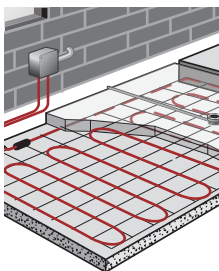
ELECTROMELT Cut-to-Length Heating Cable System



Self-regulating heating cable for surface snow melting and anti-icing in concrete pavement.

- Voltage: 208 V; 240 V; 277 V; 347 V
- Control options: Single or multi-circuit, integrated power distribution, energy monitoring, BMS communications
- Components: EMK heat shrinkable fittings

MI Pre-terminated Heating Cable System



HDPE jacketed copper sheathed heating cable for snow melting in concrete, mastic asphalt slab or road-grade asphalt slab.

- Voltage: 120 V to 600 V; Single or 3-Phase design;
- Control options: Single or multi-circuit, integrated power distribution, energy monitoring, BMS communications
- Components: n/a

COMFORT FLOOR HEATING – RESIDENTIAL & COMMERCIAL / SPECIFICATION



Nuheat **electric floor heating systems** are an ideal room-specific heat source option for both new construction or renovation projects. These easy-to-install systems may be installed under tile, stone, laminate/engineered wood floors.

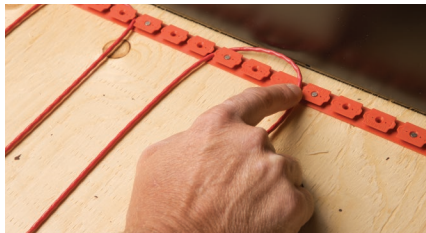
■ ■ NUHEAT Mat System



Pre-built like an electric blanket, Nuheat Mats are available in standard sizes or can be custom built to precisely fit any room with curves or angles. It is the easiest and quickest system to install.

- Voltage: 120 V or 240 V
- Available in over 70 standard off-the-shelf square and rectangular sizes
- Nuheat Custom Mats manufactured in only 3 days
- 12 watts/sq ft; 41 BTUs (15 watts/sq ft; 51 BTUs also available upon request)

■ ■ NUHEAT Cable System



Nuheat Cable is perfect where on-site adjustments are required. The system includes newly designed cable guides and a low-profile cold lead.

- Voltage: 120 V or 240 V
- Over 30 kit sizes; largest 120 V covers 120 sq ft and largest 240 V covers 240 sq ft
- Mid-point marker on heating cable for easier planning
- May be installed at 12 watts/sq ft (41 BTUs), or 15 watts/sq ft (51 BTUs)

■ ■ QUICKNET Mesh System



The QuickNet mesh system is heating cable woven into an adhesive-backed red fiberglass mesh. The simple roll-out installation is customizable on the job site to fit any room shape.

- Voltage: 120 V, 208-240 V
- Standard off-the-shelf mesh available in 14 sizes for 120 V, and 4 sizes for 240 V
- Features a low 3/16 in (3mm) profile
- 12 watts/sq ft

■ ■ Floor Heating Thermostats



The following thermostats are suitable for all floor heating systems and include built-in GFCI protection:

- Signature (WiFi-enabled programmable touchscreen)
- Home (programmable touchscreen)
- Harmony (programmable flush-mounted)
- Element (non-programmable)



The following thermostat is suitable for the QuickNet mesh system and includes built-in GFCI protection:

- QuickStat-TC (programmable)



Raychem solutions protect:

Buildings

The cable systems are made from the highest quality materials. They are UV-resistant and have a long lifespan. Burst pipes, damage to gutters and downspouts, hazardous snow-covered and slippery parking spaces, driveways and footpaths all become things of the past. Your gain? A safe living and working environment and lower maintenance costs.

People

Because Raychem systems prevent ice from forming and keep paths free from ice and snow and make them safely accessible, the risks of material damage and physical harm are kept to an absolute minimum.

Budgets

No accidents ultimately means a serious reduction in your financial risks (through claims for damages, higher insurance premiums, etc.) Thanks to the efficient operation of the cables and intelligent control, you also save a great deal of energy. Which is always very welcome during harsh winters.



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