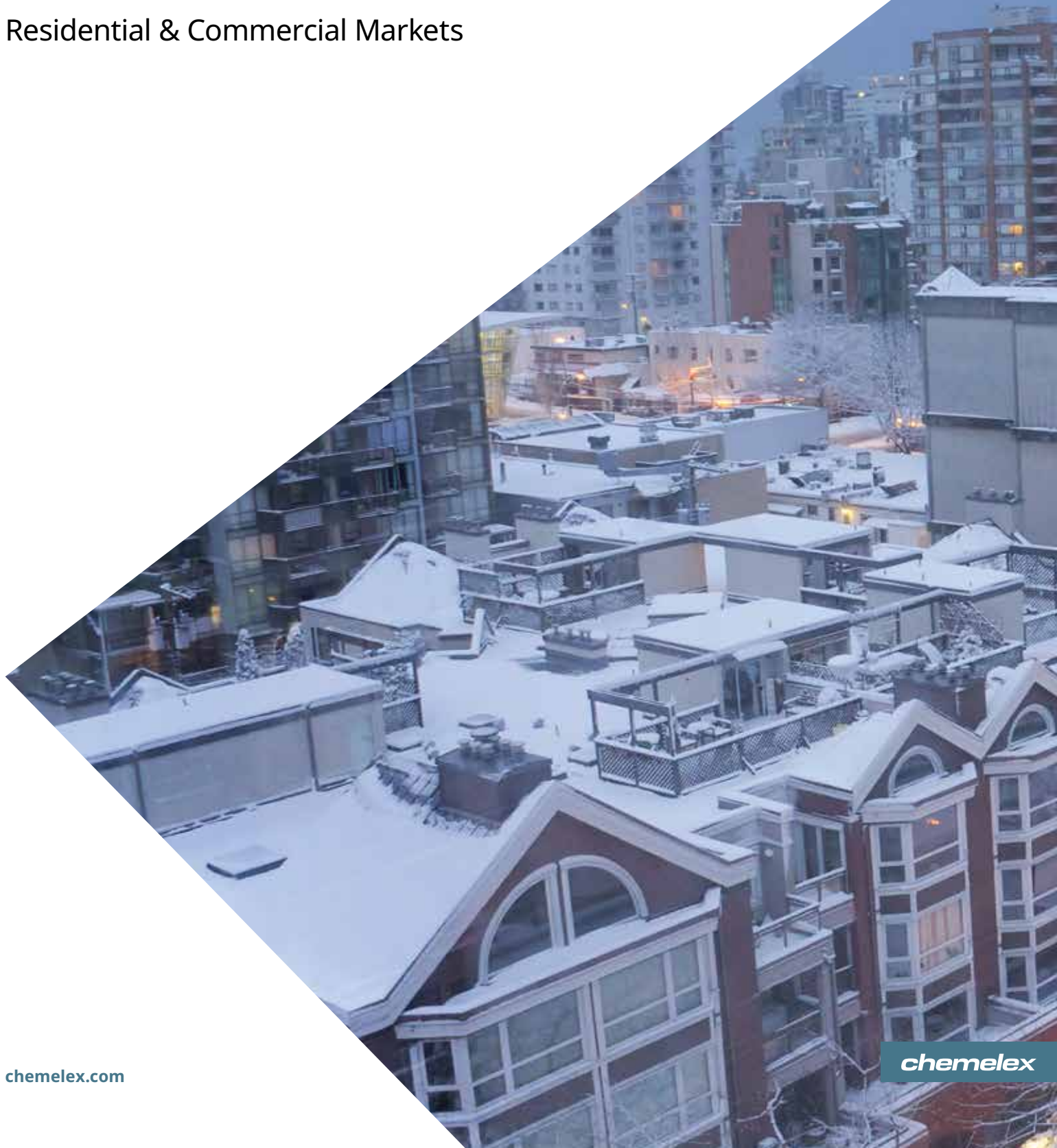


**Raychem**

*excellence is everything*

# Safety, Comfort & Performance

Residential & Commercial Markets



[chemelex.com](http://chemelex.com)

**chemelex**

## CHEMELEX

We provide quality solutions for winter safety, comfort and performance to building and infrastructure design, construction, operation and maintenance professionals. From pipe freeze protection to maintaining fluid temperatures and melting snow, detecting leaks or heating floors, you can rely on Raychem, Nuheat and Pyrotenax solutions and services for greater safety, comfort and performance.

## THE HEART OF OUR SOLUTIONS

As the inventor of self-regulating heat tracing in 1972, our Raychem brand is recognized for technical leadership in the industries we serve. Our cables deliver the right amount of heat exactly when and where it is needed. As the temperature drops, more heat is produced. Conversely, as the temperature rises, less heat is produced. But there are many more benefits:

These smart cables can be overlapped without any risk of overheating and self-regulating heating cables can be cut to length 'in the field'. Since inventing the technology more than 50 years ago, we have sold over 1.8 billion feet of Raychem self-regulating cable.

We also offer other types of heating cables, control and monitoring solutions, and a full range of heating product services. Our high power output mineral insulated heating cables and are ideal for large snow melting projects and our MI fire rated wiring provides industry leading performance for critical life safety equipment. Trust Chemelex for greater safety, performance and comfort.

***Raychem Nuheat Pyrotenax***

## BUILDING A MORE SUSTAINABLE AND ELECTRIFIED WORLD



### Energy Efficiency

Our solutions improve energy efficiency for our customers.



### Customer Productivity

Our solutions reduce labor cost in design and installation, improve utilization and reduce total cost of ownership.



### Safety

Our solutions improve end-user safety and help our customers enhance the safety of their operations.



### Resiliency and Protection

Our solutions add resiliency to critical systems by helping keep them safe from natural and manmade disruptions.



### Lifespan and Serviceability

Our solutions extend the lifespan of our customers' systems, reducing waste and lowering cost.



### Eco-Friendly

We support customers sustainability goals by developing environmentally friendly products and solutions.

## OUR MARKETS & APPLICATIONS

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This brochure highlights our safety, comfort and performance solutions for these markets:

- **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.



### RAYCHEM PIPE FREEZE PROTECTION

- FrostGuard preassembled, plug-in self-regulating heating cable system
- WinterGard pre-packaged self-regulating heating cable system
- XL-Trace Edge self-regulating heating cable system



### RAYCHEM FIRE SPRINKLER FREEZE PROTECTION

- XL-Trace Edge self-regulating heating cable system



### RAYCHEM GREASE WASTE FLOW MAINTENANCE & FUEL OIL MAINTENANCE

- XL-Trace Edge self-regulating heating cable system



### RAYCHEM ROOF & GUTTER DE-ICING

- FrostGuard preassembled, plug-in heating cable
- WinterGard Wet pre-packaged heating cable
- IceStop self-regulating heating cable system
- Mineral Insulated (MI) heating cable system
- RIM engineered, concealed panel system



### RAYCHEM SURFACE SNOW MELTING & ANTI-ICING

- ElectroMelt self-regulating heating cable system
- Mineral Insulated (MI) heating cable system



### NUHEAT FLOOR HEATING

- Mat system
- Cable and membrane system
- Mesh system
- Basic to WiFi-enabled programmable touchscreen thermostats

### RAYCHEM HEAT LOSS REPLACEMENT & FREEZER FROST HEAVE PREVENTION

- RaySol heating cable system
- Mineral Insulated (MI) heating cable system

### RAYCHEM ADVANCED HEAT-TRACING CONTROL, MONITORING, & POWER DISTRIBUTION SYSTEMS

Our solutions include a complete range of dedicated heat-tracing control and monitoring systems, from simple thermostats to advanced networked systems, with easy-to-use interface technologies that put information and programming at your fingertips.

### PYROTENAX FIRE-RATED AND SPECIALTY WIRING SYSTEMS

- UL/ULC 2-hour, fire-rated wiring system
- Space Saving wiring system

We also offer design assistance and field service support, making your construction projects simple to design, install, and operate.

# Solutions that Make a Building Winter Safe

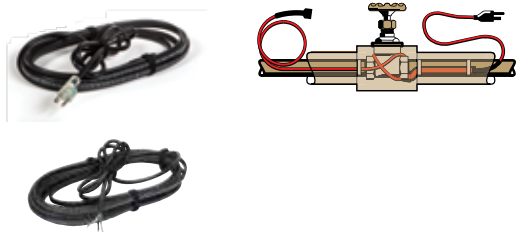
## Pipe freeze protection – Residential / Light commercial



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.

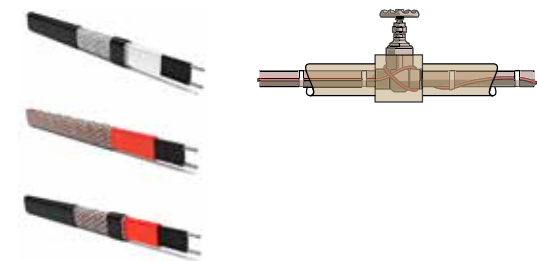
### FROSTGUARD PREASSEMBLED PLUG-IN HEATING CABLE SYSTEM



Raychem FrostGuard preassembled self-regulating heating cable with 6-ft cold lead and lighted 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, 36, 50, 75 & 100 ft; 240 V with cold lead only, in lengths of 6, 12, 18 & 24 ft
- Control options: Raychem TC-3 thermostatically controlled outlet for 120 V only
- Components: Raychem 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 Raychem WinterGard, WinterGard Plus and WinterGard Wet.

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

### PIPE FREEZE THERMOSTAT SELECTION DETAILS

GOOD	BETTER	BEST
<b>TC-3</b> <ul style="list-style-type: none"><li>• Thermostatically controlled outlet</li></ul>	<b>AMC-F5</b> <ul style="list-style-type: none"><li>• Mechanical thermostat</li><li>• Ambient or line sensing</li><li>• Fixed set point of 40°F (nonadjustable)</li><li>• 3' bulb and capillary sensor</li><li>• 22 A at 125/250/480 V</li></ul>	<b>EC-TS</b> <ul style="list-style-type: none"><li>• Electronic thermostat</li><li>• Ambient or line sensing</li><li>• Adjustable set point of 30°F to 110°F</li><li>• 25' thermistor sensor</li><li>• 30 A at 100 - 277 V</li></ul>
	<b>AMC-1A</b> <ul style="list-style-type: none"><li>• Mechanical thermostat</li><li>• Ambient sensing</li><li>• Adjustable set point of 15°F to 140°F</li><li>• 22 A at 125/250/480 V</li></ul>	



# Solutions that Make a Building Winter Safe

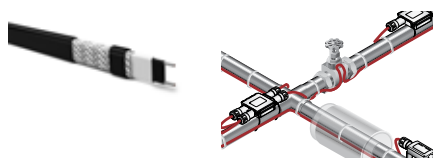
## Pipe freeze protection – Commercial / Specification



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 products work with our basic or advanced energy-saving control and sensing options.

### XL-TRACE EDGE CUT-TO-LENGTH HEATING CABLE SYSTEM



Raychem XL-Trace Edge 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: Raychem RayClic quick connect; FTC heat shrinkable fittings

## Fire sprinkler freeze protection – Commercial / Specification

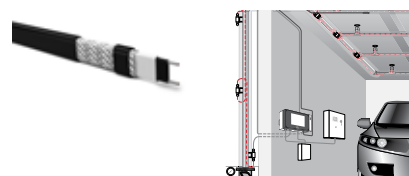


Raychem **fire sprinkler freeze protection systems** freeze protect aboveground and buried supply pipes, fire standpipes, branch lines and branch lines containing sprinklers when run in areas subject to freezing.

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 Edge complies with UL 515A, CSA C22.2 No. 130- 03 and IEEE 515.1 requirements.

### XL-TRACE EDGE CUT-TO-LENGTH HEATING CABLE SYSTEM



Self-regulating heating cable with either fluoropolymer or polyolefin outer jacket for fire sprinkler freeze protection applications. The XL-Trace Edge system provides safe, reliable freeze protection of fire suppression systems.

- Same as above, except that fire panel communication listing requirements apply. All system must be “supervised” with controllers having alarm contacts connected to the fire control panel (Raychem 465 per UL 515A). See design guide.

## PIPE FREEZE CONTROLLER SELECTION DETAILS

GOOD	BETTER	BEST
<b>EC-TS</b> <ul style="list-style-type: none"><li>• Electronic thermostat</li><li>• Ambient or line sensing</li><li>• Adjustable set point of 30°F to 110°F</li><li>• 25' thermistor sensor</li><li>• 30 A at 100 - 277 V</li></ul>	<b>465 (Fire Sprinkler) / 460 (Pipe Freeze)</b> <ul style="list-style-type: none"><li>• 5" color touch screen</li><li>• Intuitive Programming</li><li>• Auto-cycle</li><li>• Built-in GFPD per UL 1053</li><li>• High limit temperature cut-out</li></ul>	<b>ACS-30</b> <ul style="list-style-type: none"><li>• Multi-point electronic controller</li><li>• 30-mA GFPD</li><li>• Distributed power architecture</li><li>• Multi-application control</li><li>• Smart building control platform</li><li>• Communication to BMS</li></ul>
<b>ECW-GF</b> <ul style="list-style-type: none"><li>• Electronic thermostat</li><li>• 30-mA GFPD</li><li>• Ambient or line sensing</li><li>• Adjustable set point of 32°F to 200°F</li><li>• 25' thermistor sensor</li><li>• 30 A at 100 - 277 V</li></ul>	<b>C910</b> <ul style="list-style-type: none"><li>• NEMA 4X outdoor rated</li><li>• 30-mA GFPD</li><li>• Auto-cycle</li><li>• Communication to BMS</li></ul>	
	<b>HTPG</b> <ul style="list-style-type: none"><li>• Heat-tracing power distribution panel</li><li>• Dedicated power distribution, control, monitoring and alarm panel</li><li>• 30-mA GFPD per NEC</li></ul>	

For complete specifications and other design assistance, refer to the appropriate data sheets and application design guides available on our website at [chemelex.com](http://chemelex.com)

# Solutions that Make a Building Winter Safe

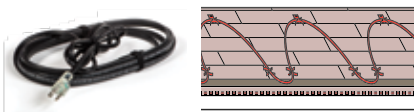
## Roof & Gutter De-icing – Residential / Light commercial



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.

Our 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.

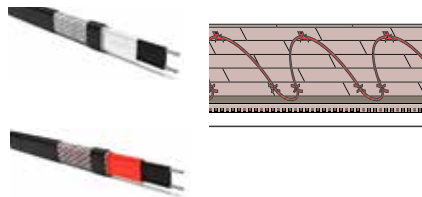
### FROSTGUARD PREASSEMBLED PLUG-IN HEATING CABLE SYSTEM



Preassembled self-regulating heating cable with 6-ft cold lead and lighted plug for short standard or standing seam roof & gutter de-icing applications on porches and overhangs.

- Voltage: 120 V in lengths of 6, 12, 18, 24, 36, 50, 75 & 100 feet
- Components: Raychem 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: Raychem PD-Pro and GF-Pro, LCD-8, Snow Owl, 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 CONTROLLER SELECTION DETAILS

GOOD	BETTER	BEST
<b>EC-TS</b> <ul style="list-style-type: none"><li>• Electronic thermostat</li><li>• Ambient or line sensing</li><li>• Adjustable set point of 30°F to 110°F</li><li>• 25' thermistor sensor</li><li>• 30 A at 100 - 277 V</li></ul>	<b>LCD-8</b> <ul style="list-style-type: none"><li>• Moisture/temperature sensing controller</li><li>• Aerial mounted sensor</li><li>• Up to 5-hour hold time (adjustable)</li><li>• Compatible with external contactors</li><li>• 16 A at 120 V</li></ul>	<b>PD-PRO &amp; Snow Owl / GIT-1</b> <ul style="list-style-type: none"><li>• Temperature and moisture sensing controller</li><li>• Works w/ Snow Owl aerial and/or GIT-1 gutter snow sensors</li><li>• Up to 8-hour hold time (adjustable)</li><li>• LED lights to indicate power and heat cycle</li><li>• Compatible with external contactors</li><li>• 30 A at 100 - 277 V</li></ul>
		<b>GF-PRO &amp; Snow Owl / GIT-1</b> <ul style="list-style-type: none"><li>• Temperature and moisture sensing controller</li><li>• Built-in GFEP protection</li><li>• Works w/ Snow Owl aerial and/or GIT-1 gutter snow sensors</li><li>• Up to 8-hour hold time (adjustable)</li><li>• LED lights to indicate power and heat cycle</li><li>• 30 A at 100 - 277 V</li></ul>

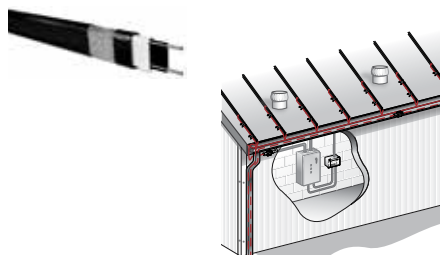
# Solutions that Make a Building Winter Safe

## Roof & Gutter De-icing – Commercial / Specification



Raychem **roof & gutter de-icing systems** are advanced, high performing and 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.

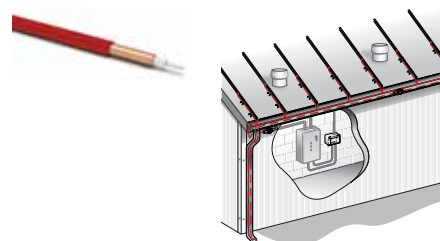
### ■ ICESTOP CUT-TO-LENGTH HEATING CABLE SYSTEM



Raychem IceStop self-regulating heating cable for standard or standing seam roof & 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



Raychem Mineral Insulated (MI) copper sheathed or low smoke zero halogen (LSZH) jacketed, mineral insulated heating cable for standing seam metal roof & 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 CONTROLLER SELECTION DETAILS

GOOD	BETTER	BEST
<b>EC-TS</b> <ul style="list-style-type: none"><li>• Electronic thermostat</li><li>• Ambient or line sensing</li><li>• Adjustable set point of 30°F to 110°F</li><li>• 25' thermistor sensor</li><li>• 30 A at 100 - 277 V</li></ul>	<b>PD-PRO &amp; GF PRO w/ Snow Owl / GIT-1</b> <ul style="list-style-type: none"><li>• Temperature and moisture sensing controller</li><li>• Works w/ Snow Owl aerial and/or GIT-1 gutter snow sensors</li><li>• Up to 8-hour hold time (adjustable)</li><li>• LED lights to indicate power and heat cycle</li><li>• Compatible with external contactors</li><li>• 30 A at 100 - 277 V</li><li>• GF-PRO has built-in GFEP protection</li></ul>	<b>ACS-30</b> <ul style="list-style-type: none"><li>• Multi-point electronic controller</li><li>• 30-mA GFPD</li><li>• Distributed power architecture</li><li>• Multi-application control</li><li>• Smart building control platform</li><li>• Communication to BMS</li></ul>
<b>ECW-GF</b> <ul style="list-style-type: none"><li>• Electronic thermostat</li><li>• 30-mA GFPD</li><li>• Ambient or line sensing</li><li>• Adjustable set point of 32°F to 200°F</li><li>• 25' thermistor sensor</li><li>• 30 A at 100 - 277 V</li></ul>	<b>APS &amp; SC-40</b> <ul style="list-style-type: none"><li>• Temperature and moisture sensing controller</li><li>• Multiple sensor types</li><li>• BMS interface</li><li>• Master/slave function</li><li>• APS-4C has built-in GFEP protection; and works with SC-40 contactor</li></ul>	<b>SMPG</b> <ul style="list-style-type: none"><li>• Heat-tracing power distribution panel</li><li>• Dedicated power distribution, control, monitoring and alarm panel</li><li>• 30-mA GFPD per NEC</li></ul>

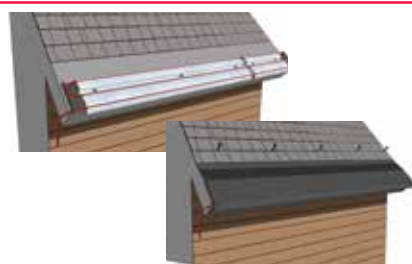
# Solutions that Make a Building Winter Safe

## Roof & Gutter De-icing – Residential / Light commercial & commercial / Specification



Raychem **roof & gutter de-icing systems** are the premiere, highest performing, aesthetically elegant 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.

### **ROOF ICE MELT (RIM) PREMIERE CUSTOM ROOF ICE MELT PANEL SYSTEM**



Raychem Roof Ice Melt (RIM) System is our premiere offering for roof & 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 & Gutter De-Icing Systems brochure (H81855) for details and an Estimate Form that serves as a basis for the design.

### **RIM CONTROLLER SELECTION DETAILS**

<b>GOOD</b>	<b>BETTER</b>	<b>BEST</b>
<b>ASD</b> <ul style="list-style-type: none"><li>• Electronic controller</li><li>• Ambient sensing</li><li>• Adjustable set point</li><li>• 30 A at 100-277 V</li></ul>	<b>HECS</b> <ul style="list-style-type: none"><li>• Electronic controller with power distribution</li><li>• 30-mA GFPD</li><li>• High efficiency design with ambient and RIM sensing</li></ul>	<b>ACS-30</b> <ul style="list-style-type: none"><li>• Multi-point electronic controller</li><li>• 30-mA GFPD</li><li>• Distributed power architecture</li><li>• Multi-application control</li><li>• Smart building control platform</li><li>• Communication to BMS</li></ul>



# Solutions that Make a Building Winter Safe

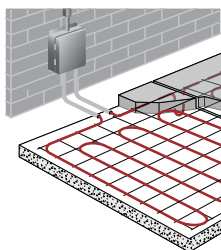
## Surface snow melting – Residential & commercial / Specification



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.

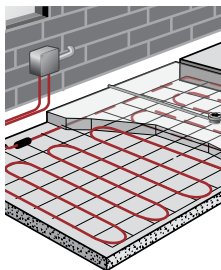
### **ELECTROMELT CUT-TO-LENGTH HEATING CABLE SYSTEM**



Raychem ElectroMelt self-regulating heating cable for surface snow melting and anti-icing in concrete pavement.

- Voltage: 208 V; 240 V; 277 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**



LSZH 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

### **SURFACE SNOW MELTING CONTROLLER SELECTION DETAILS**

GOOD	BETTER	BEST
<b>EC-TS</b> <ul style="list-style-type: none"><li>• Mechanical thermostat</li><li>• Ambient or line sensing</li><li>• Adjustable set point of 30°F to 110°F</li><li>• 25' thermistor sensor</li><li>• 30 A at 100 - 277 V</li></ul>	<b>PD-PRO &amp; GF PRO w/ Snow Owl / GIT-1</b> <ul style="list-style-type: none"><li>• Temperature and moisture sensing controller</li><li>• Works w/ Snow Owl aerial and/or GIT-1 gutter snow sensors</li><li>• Up to 8-hour hold time (adjustable)</li><li>• LED lights to indicate power and heat cycle</li><li>• Compatible with external contactors</li><li>• 30 A at 100 - 277 V</li><li>• GF-PRO has built-in GFEP protection</li></ul>	<b>ACS-30</b> <ul style="list-style-type: none"><li>• Multi-point electronic controller</li><li>• 30-mA GFPD</li><li>• Distributed power architecture</li><li>• Multi-application control</li><li>• Smart building control platform</li><li>• Communication to BMS</li></ul>
<b>ECW-GF</b> <ul style="list-style-type: none"><li>• Electronic thermostat</li><li>• 30-mA GFPD</li><li>• Ambient or line sensing</li><li>• Adjustable set point of 32°F to 200°F</li><li>• 25' thermistor sensor</li><li>• 30 A at 100 - 277 V</li></ul>	<b>APS &amp; SC-40</b> <ul style="list-style-type: none"><li>• Temperature and moisture sensing controller</li><li>• Multiple sensor types</li><li>• BMS interface</li><li>• Master/slave function</li><li>• APS-4C has built-in GFEP protection; and works with SC-40 contactor</li></ul>	<b>SMPG</b> <ul style="list-style-type: none"><li>• Heat-tracing power distribution panel</li><li>• Dedicated power distribution, control, monitoring and alarm panel</li><li>• 30-mA GFPD per NEC</li></ul>

# Solutions that Make a Building Comfortable **Nuheat**

## Floor Heating Residential & commercial / Specification



Comfort is everything, especially in your home. With Nuheat **Electric Floor Heating Systems**, you can offer the comfort of a warm floor that is maintenance-free for your customers. Nuheat Electric Floor Heating Systems are ideal for both new construction or renovation projects.

### **CUSTOM AND STANDARD MATS**



The thinnest custom-built and pre-built electric floor heating mat. Designed to precisely fit any room.

- Available in over 70 standard off-the-shelf square and rectangular sizes
- Custom Mats manufactured in only 3 days
- 12 W/ft<sup>2</sup>; 41 BTUs (15 W/ft<sup>2</sup>; 51 BTUs also available upon request)

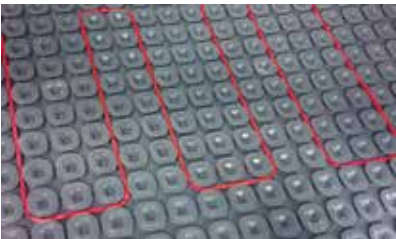
### **CABLE**



The robust floor heating cable solution. Perfect where on-site adjustments are required.

- Available in 33 sizes in both 120 and 240 V
- Flexible wire spacing and heating output
- May be installed at 12 W/ft<sup>2</sup> (41 BTUs), or 15 W/ft<sup>2</sup> (51 BTUs)

### **CABLE AND MEMBRANE**



The integrated electric floor heating and uncoupling solution. Membrane can reduce risk of tile cracks due to subfloor movement.

- Accommodates Nuheat Cable's thin cold lead splice and end seal with cutting or modification
- Can replace a layer of subfloor
- Flexible heat output (10, 12, 15 W/ft<sup>2</sup>)

## **THERMOSTATS**

GOOD	BETTER	BEST	
Element	Home	Signature	Conductor
Basic on/off, up/down non-programmable thermostat	Fully programmable thermostat with color touchscreen	Wifi-enabled, fully programmable thermostat with color touchscreen and smart home integration	Wifi-enabled, fully programmable thermostat with vanishing, touch-sensitive display and smart home integration

# Solutions that Make a Building Comfortable

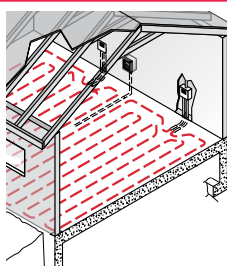
## Heat loss replacement & Freezer frost Heave prevention systems Commercial / Specification



Raychem **heat loss replacement systems** can eliminate the chill felt from the heat lost through floors over non-heated areas such as garages, or loading docks. The heating cables achieve this by replacing the heat normally lost through the floor insulation over a cold space.

Inside cold rooms and freezers, subfreezing temperatures cause heat to be lost from the soil under the floor. As the soil freezes, capillary action draws water into the frozen areas where the water forms a concentrated ice mass. As the ice mass grows, it heaves the freezer floor and columns, causing damage. Raychem **freezer frost heave prevention systems** can prevent this problem.

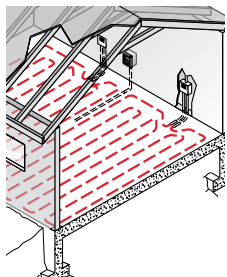
### ■ RAYSOL CUT-TO-LENGTH HEATING CABLE SYSTEM



Raychem RaySol self-regulating heating cable can heat concrete, tile, stone and marble floors in lobbies, foyers, bathrooms, kitchens, and gymnasiums, or can replace heat in concrete floors built over garages, loading docks, arcades, and other cold spaces. Self-regulating heating cable can also prevent heaving in soil under freezers, refrigerated warehouses, and cold rooms.

- 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

### ■ MI PRE-TERMINATED HEATING CABLE SYSTEM



LSZH jacketed copper sheathed heating cable can heat concrete, tile, stone and marble floors for lobbies, foyers, bathrooms, kitchens, and gymnasiums, or can replace heat in concrete floors built over garages, loading docks, arcades, and other cold spaces.

LSZH jacketed copper sheathed heating cable can also preventing heaving in soil under freezers, refrigerated warehouses, and cold rooms.

- 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

### HEAT LOSS REPLACEMENT OR FREEZER FROST HEAVE CONTROLLER SELECTION DETAILS

GOOD	BETTER	BEST
<b>ECW-GF</b> <ul style="list-style-type: none"><li>• Electronic thermostat</li><li>• 30-mA GFPD</li><li>• Ambient or line sensing</li><li>• Adjustable set point of 32°F to 200°F</li><li>• 25' thermistor sensor</li><li>• 30 A at 100 - 277 V</li></ul>	<b>460</b> <ul style="list-style-type: none"><li>• 5" color touch screen</li><li>• Intuitive Programming</li><li>• Auto-cycle</li><li>• Built-in GFPD per UL 1053</li><li>• High limit temperature cut-out</li></ul>	<b>ACS-30</b> <ul style="list-style-type: none"><li>• Multi-point electronic controller</li><li>• 30-mA GFPD</li><li>• Distributed power architecture</li><li>• Multi-application control</li><li>• Smart building control platform</li><li>• Communication to BMS</li></ul>
	<b>C910</b> <ul style="list-style-type: none"><li>• NEMA 4X outdoor rated</li><li>• 30-mA GFPD</li><li>• Auto-cycle</li><li>• Communication to BMS</li></ul>	

# Solutions that Enhance a Building's Performance

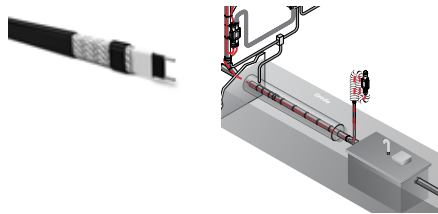
## Grease waste flow maintenance & Fuel oil maintenance – Commercial / Specification



Raychem **grease waste flow maintenance systems** can maintain cooking grease waste lines above the temperature at which the viscosity inhibits fluid flow.

Raychem **fuel oil maintenance systems** can maintain #2 fuel oil lines above the temperature at which the viscosity inhibits fluid flow.

### XL-TRACE EDGE CUT-TO-LENGTH HEATING CABLE SYSTEM



Self-regulating heating cable with fluoropolymer outer jacket is ideal for heating the piping used for grease waste created in the cooking process, or for flow maintenance applications.

- 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

### GREASE WASTE & FUEL OIL MAINTENANCE CONTROLLER SELECTION DETAILS

GOOD	BETTER	BEST
<b>EC-TS</b> <ul style="list-style-type: none"><li>• Electronic thermostat</li><li>• Ambient or line sensing</li><li>• Adjustable set point of 30°F to 110°F</li><li>• 25' thermistor sensor</li><li>• 30 A at 100 - 277 V</li></ul>	<b>460</b> <ul style="list-style-type: none"><li>• 5" color touch screen</li><li>• Intuitive Programming</li><li>• Auto-cycle</li><li>• Built-in GFPD per UL 1053</li><li>• High limit temperature cut-out</li></ul>	<b>ACS-30</b> <ul style="list-style-type: none"><li>• Multi-point electronic controller</li><li>• 30-mA GFPD</li><li>• Distributed power architecture</li><li>• Multi-application control</li><li>• Smart building control platform</li><li>• Communication to BMS</li></ul>
<b>ECW-GF</b> <ul style="list-style-type: none"><li>• Electronic thermostat</li><li>• 30-mA GFPD</li><li>• Ambient or line sensing</li><li>• Adjustable set point of 32°F to 200°F</li><li>• 25' thermistor sensor</li><li>• 30 A at 100 - 277 V</li></ul>	<b>C910</b> <ul style="list-style-type: none"><li>• NEMA 4X outdoor rated</li><li>• 30-mA GFPD</li><li>• Auto-cycle</li><li>• Communication to BMS</li></ul>	
	<b>HTPG</b> <ul style="list-style-type: none"><li>• Heat-tracing power distribution panel</li><li>• Dedicated power distribution, control, monitoring and alarm panel</li><li>• 30-mA GFPD per NEC</li></ul>	

## Solutions that Enhance a Building's Performance

### Fire-rated and specialty wiring systems – Commercial / Specification

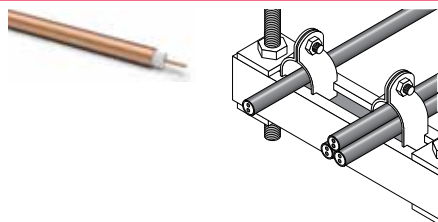


Pyrotenax **fire-rated and specialty wiring systems** protect high-rise buildings, hospitals, airports, and tunnels where fires can be costly and deadly if the emergency systems in place do not operate properly. Our fire-rated cables will operate for at least 2 hours under fire conditions to allow for the continued operation of life safety equipment and the safe evacuation of the facility.

Our product range allows you to choose the right solution for your application—whether its new construction or a retrofit project.

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#### SYSTEM 1850 UL/ULC 2-HOUR FIRE-RATED WIRING CABLE SYSTEM

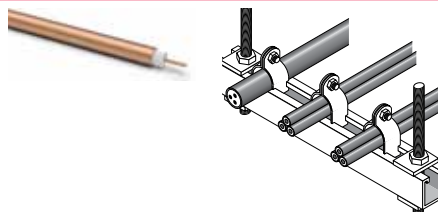


UL Classified / ULC Listed 2-hour fire-rated, mineral insulated wiring cable for the protection of critical life safety circuits fed by the emergency supply including: the fire pump, fire alarm system, smoke extraction fans, pressurization fans, and power for the firefighters' elevator in high-rise buildings, subways, tunnels, airports, and health care facilities.

- System options: Various cable conductor and jacketed options; termination kits, components and tools

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#### SYSTEM 1850 SPACE SAVING WIRING CABLE SYSTEM



Mineral insulated wiring cable is an ideal alternative for retrofitting feeders in buildings and for ease of installation in tight spaces and difficult runs in high-rise buildings, health care facilities, historic buildings, or any location where space is limited.

- System options: Various cable conductor and jacketed options; termination kits, components and tools





## CHEMELEX SOLUTIONS PROVIDE PROTECTION

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### BUILDINGS

Raychem heat trace systems offer superior reliability with the highest lifetime value at lower installed cost and lower cost of ownership. 50+ years of time-tested quality, reliability and proven performance minimizes downtime and damage while ensuring ease of use, lower installed cost, lower cost of ownership, and worry-free operation.

Burst pipes, damage to gutters and downspouts, hazardous snow-covered and slippery parking spaces, driveways and footpaths all become things of the past.

Additionally, our Pyrotenaxfire-rated cables will operate for at least 2 hours under fire conditions to allow for the continued operation of life safety equipment and the safe evacuation from a building.

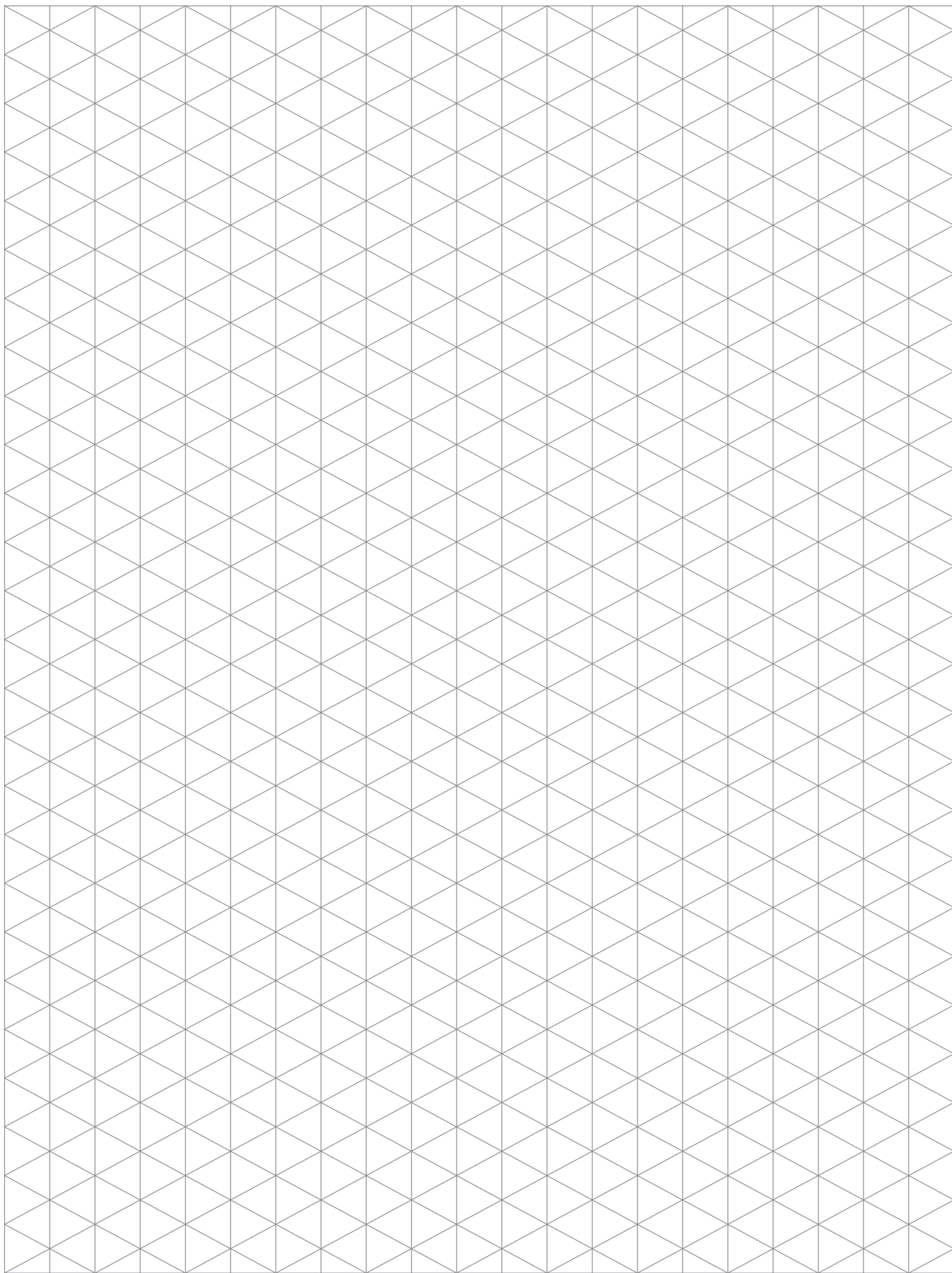
Your gain? A safe living and working environment and lower maintenance costs.

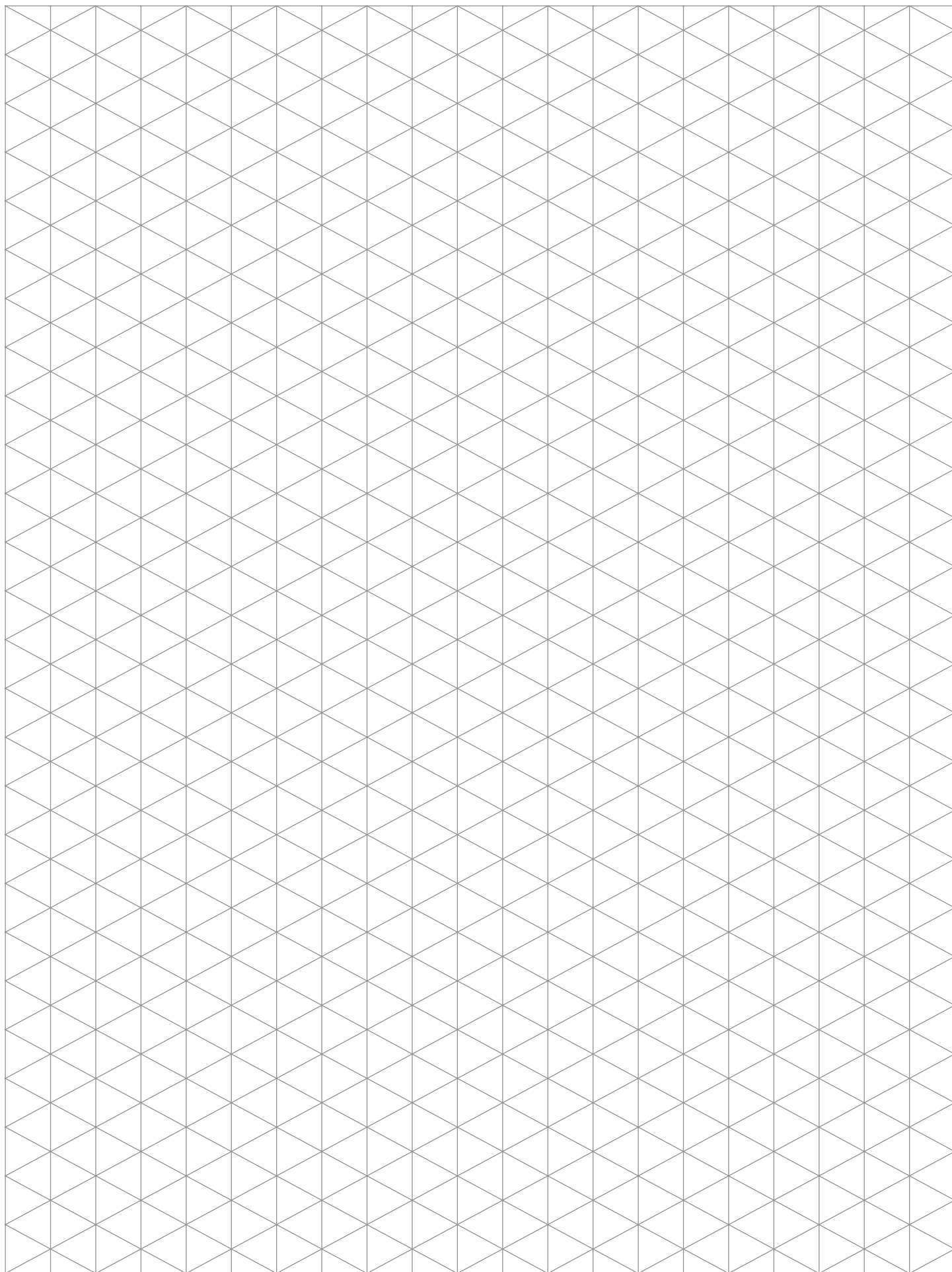
### PEOPLE

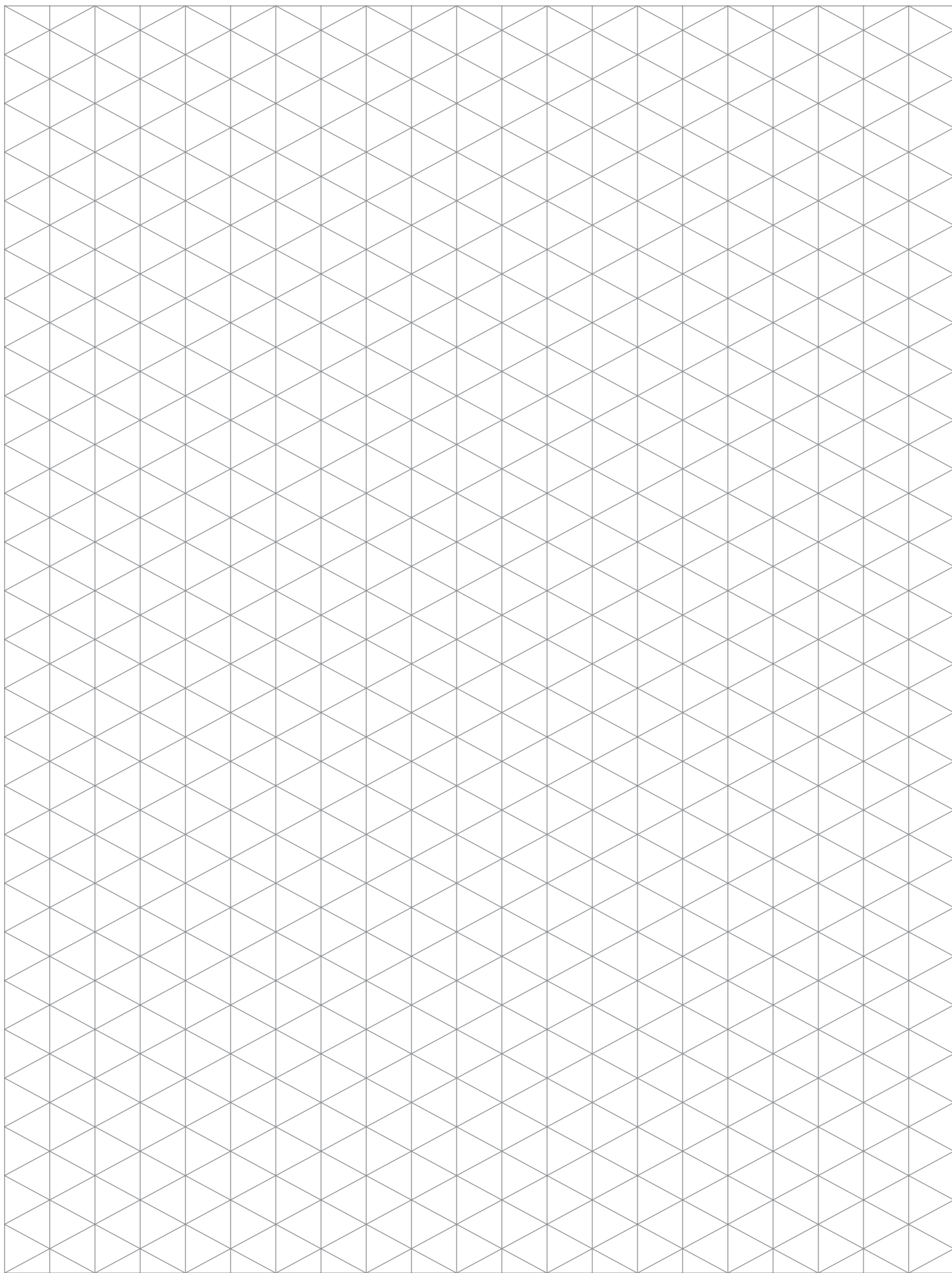
Our systems prevent ice from forming and keep paths free from ice and snow and make them safely accessible, therefore the risks of material damage and physical harm are kept to an absolute minimum.

### 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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**Raychem Tracer Pyrotenax Nuheat**