ProLine

RADIANT HEAT SOLUTIONS

PRODUCT

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ProLine
RADIANT HEAT SOLUTIONS

National Association of Custom Home Builders "Vendor of the Year."

About ProLine Radiant

General Information - Products and Services

ProLine Radiant is a leading international provider of interior and exterior radiant heat solutions. Our wide selection of products and unsurpassed customer services have established ProLine as the trusted radiant heat solutions provider. From large commercial applications to custom residential projects, ProLine Radiant has the top products, services and professional staff to provide the ideal radiant heat solution.

ProLine Radiant Heat Solutions Include:

- Industrial, Commercial and Residential Solutions
- Snow and Ice Melting
- Radiant Floor Heating
- Roof Deicing and Gutter Melt
- Pipe Tracing
- System Design and Engineering
- Installation Support and Training
- Electric and Hydronic Radiant Solutions

ProLine Radiant includes complete engineering and design services with each system. You'll find our professional staff to be extremely knowledgeable, friendly, and responsive. From project inception to completion, we will work with you to ensure that all your project needs are met.

The Complete Solution and Best Value

ProLine Radiant offers more than the latest industry-leading radiant heat products. We partner with you to install the best radiant heat system for your needs and budget. In addition to top quality products, ProLine includes unmatched system design/layout and engineering services, as well as expert installation support.

Our superior customer and installation services are why ProLine has gained its reputation as a trusted leader in radiant heat solutions. When it comes to the complete radiant heat solution, you won't find a wider selection of proven products or a more knowledgeable, helpful and friendly staff.

> *"The staff at ProLine was by far the most professional, responsive and knowledge-able of all those with whom I dealt."*
>
> Benson R. - TileMaster (Business Owner)

ProLine makes the process of selecting, purchasing and installing a radiant heat system as seamless as possible. Our expertise and superior service are just some of the reasons why construction professionals and homeowners alike consistently choose ProLine.

> *ProLine is with you every step of the way; from initial consultation and project analysis to system design, purchase and installation.*

Summary of Benefits

Call a radiant heat expert at ProLine for a free consultation. Or visit the ProLine Radiant website (www.prolineradiant.com) and then call us toll free at **866.676.9276** to learn more about your radiant heat options.

- Free Consultation and Analysis with an Experienced, Unbiased Radiant Heat Expert
- Wide Selection of Proven Products
- Complete System Design (AutoCAD) and Engineering Services
- Industry Leading Electric and Hydronic Radiant Heating Solutions
- Post-sales Technical Support
- Expert Installation Support
- Professional Training
- Free Quote Services

Contact your local wholesaler. If they don't carry ProLine products, be sure to ask them to!

To receive a radiant heat quote, or design, contact your local wholesaler or visit www.prolineradiant.com. Or for more information, call ProLine Radiant at **866.676.9276** today.

To submit your project for a design/quote, fax your project information to ProLine Radiant at 801.948.7599.

ProLine Radiant Product Catalog

Contents

With its focus on preeminent customer service and a wide offering of proven products, ProLine Radiant has established itself as a leading provider of complete interior and exterior radiant heat solutions throughout the United States and Canada.

ProLine Radiant Location and Contact Information

Address:
12637 South 265 West, Suite 100A
Draper, UT 84020

Phone:
Toll Free: 866.676.9276
Fax: 801.948.7599

Email and Internet:
sales@prolineradiant.com
www.prolineradiant.com

ProLine Radiant products have been featured on:

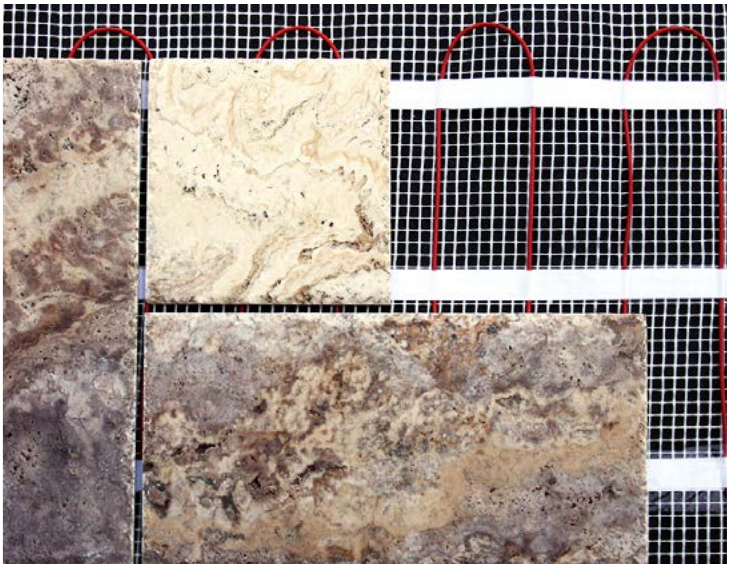
supports green power

ProLine
RADIANT HEAT SOLUTIONS

Snow Melting, Pipe Tracing,
Roof Deicing, and
Floor Heating Solutions

Project Photos

ProLine roof deicing heat cable installed in commercial gutter melt application.



ProLine radiant floor heating mats shown under ceramic tile for heated floor.

ProLine floor heating mats.

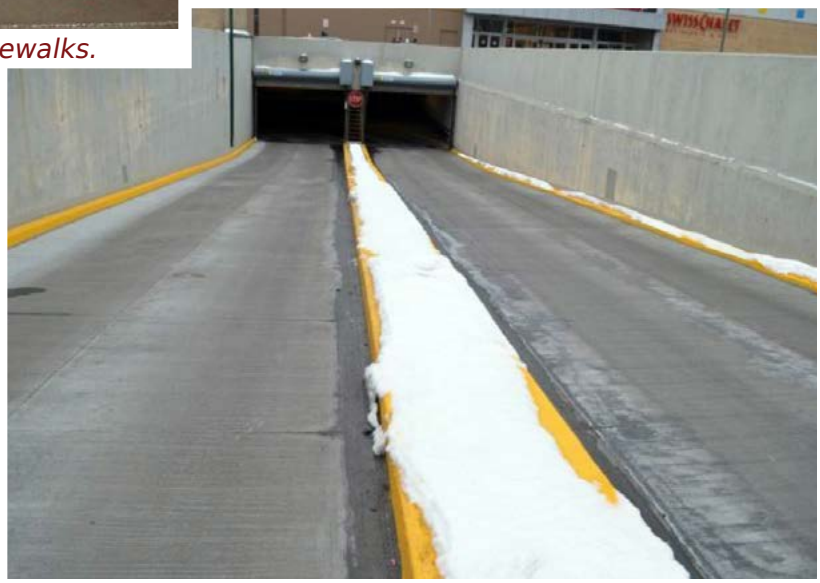
ProLine heated driveway.

ProLine low-voltage roof deicing system heating roof valley and edges.

ProLine heat cable embedded in city sidewalks.

Roof deicing system heating roof edges.

Heated tire tracks in asphalt driveway.



ProLine snowmelt system installed in parking lot ramp.

Pipe tracing system installed.

ProLine snow melting system installed in paver driveway.

Professional System Design, Installation Training, and Technical Support Services

ProLine's Unparalleled Customer Services

What truly differentiates ProLine Radiant from the competition is its customer service. In addition to its experienced design team providing detailed AutoCAD layouts, ProLine offers free installation training courses with certificates of completion. And should you need, ProLine electricians and designers are also on hand to provide technical support during the installation process. We work with you every step of the way to make the process of installing a radiant heat system as easy as possible.

Professional Design Services

ProLine custom designs each radiant heat system to ensure it meets each project's specific needs. The AutoCAD layouts contain all the specs and information necessary, so you'll know all the technical information, including load calculations, breaker sizes, number of breakers, etc., prior to any installation taking place.

ProLine Radiant Training Services

A radiant heating system is only as good as the installation - which is why ProLine provides a valuable installation training program. ProLine's professional training services include courses on radiant snowmelt, roof deicing and floor heating system installation.

Installers who successfully complete the training recieve a dated certificate from ProLine, documenting their expertise in radiant heat installation.

ProLine offers free installation training as well as professional design/layout services and installation support.

Installation Support Services

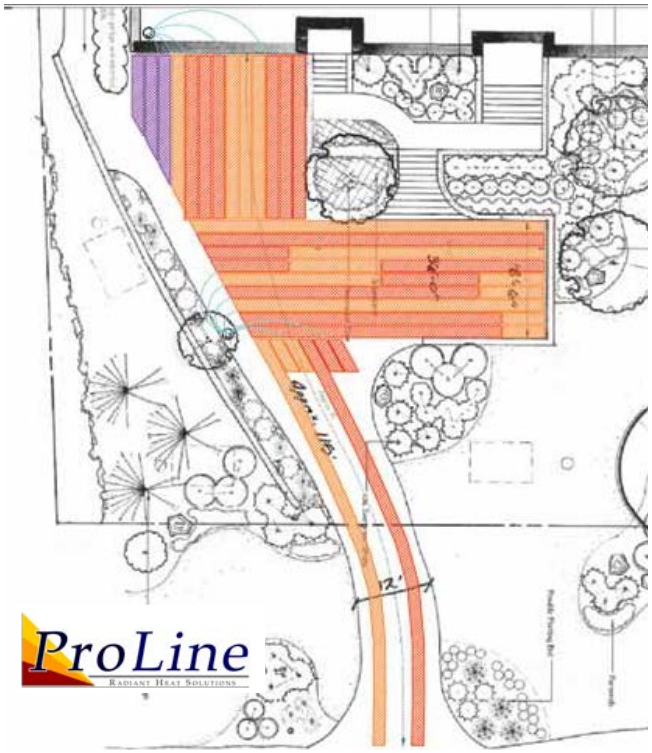
ProLine Radiant's installation support services further distinguish it from other manufacturers and wholesale distributors. ProLine Radiant provides a dedicated staff of experts to assist you throughout the installation process if you need. This valuable resource gives your business a wealth of expertise to draw from and helps to ensure timely, successful installations - and repeat business.

When you work with ProLine, you are partnering with experienced professionals who stand beside you throughout the purchase, design, and installation process. Our goal is to make the installation of radiant heat as easy as possible for you and ensure the success of your business. Enhance your bottom line with peace of mind by utilizing the trusted services and expertise of seasoned professionals whose goal is your success.

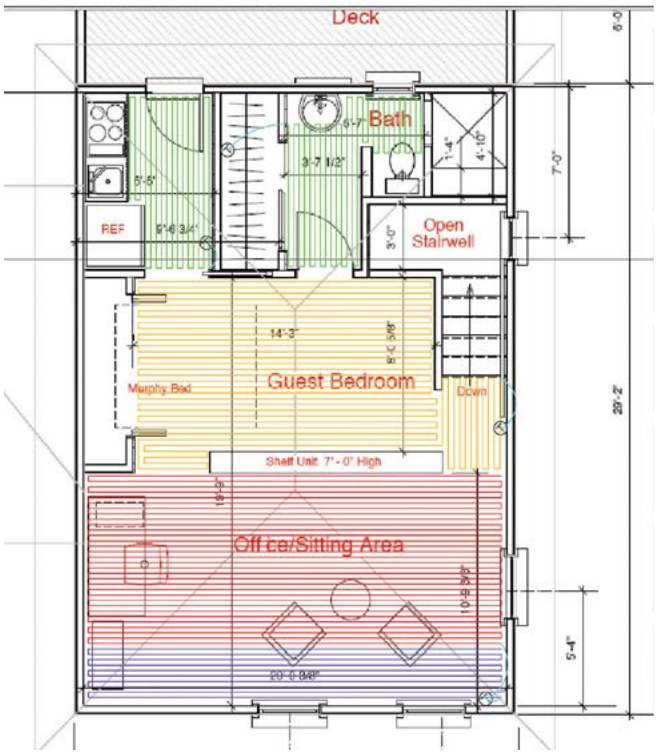
ProLine
RADIANT HEAT SOLUTIONS

ProLine Provides Engineering and Shop Drawings

Professional Design Services

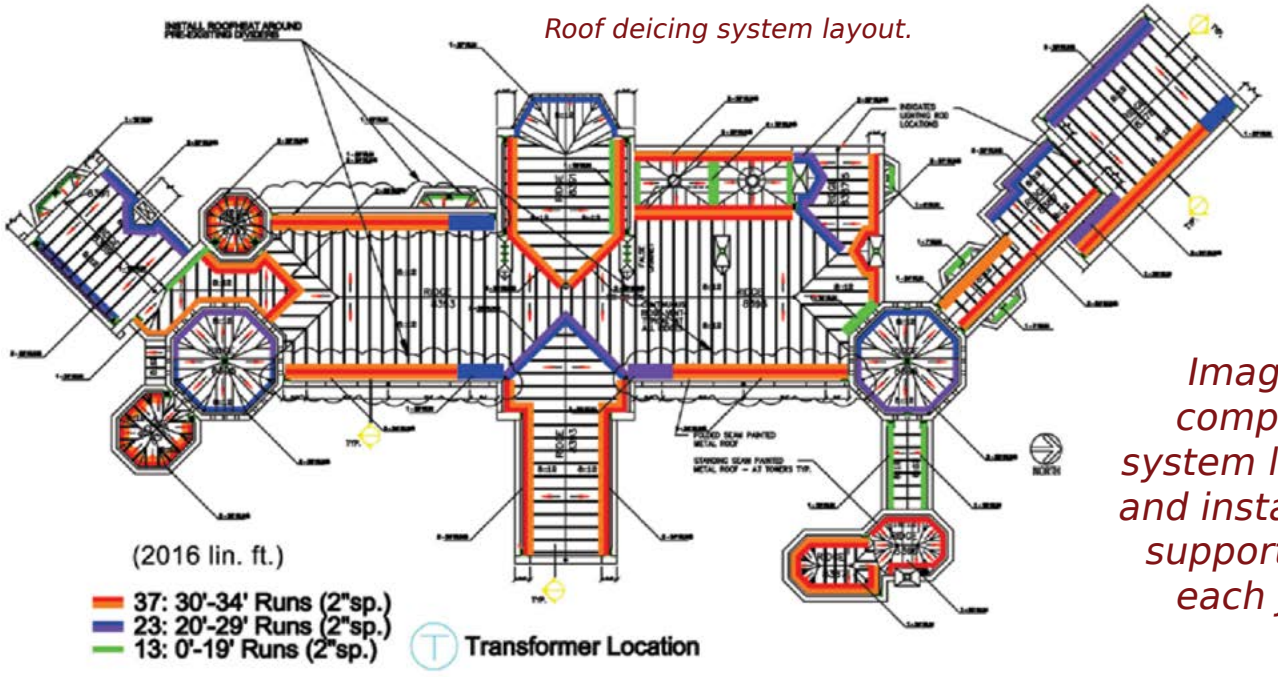


ProLine snowmelt system layout.



ProLine floor heating system layout.

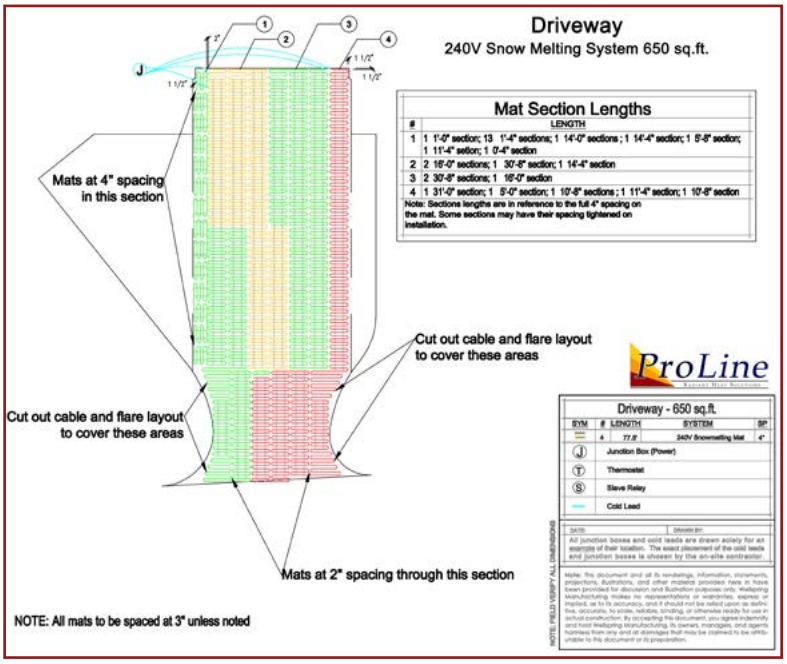
Roof deicing system layout.



Imagine complete system layouts and installation support with each job!

Heated Driveway Design and Installation

AutoCAD Design and Installation of Heated Paver Driveway



ProLine
Radiant Heat Solutions

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ProLine
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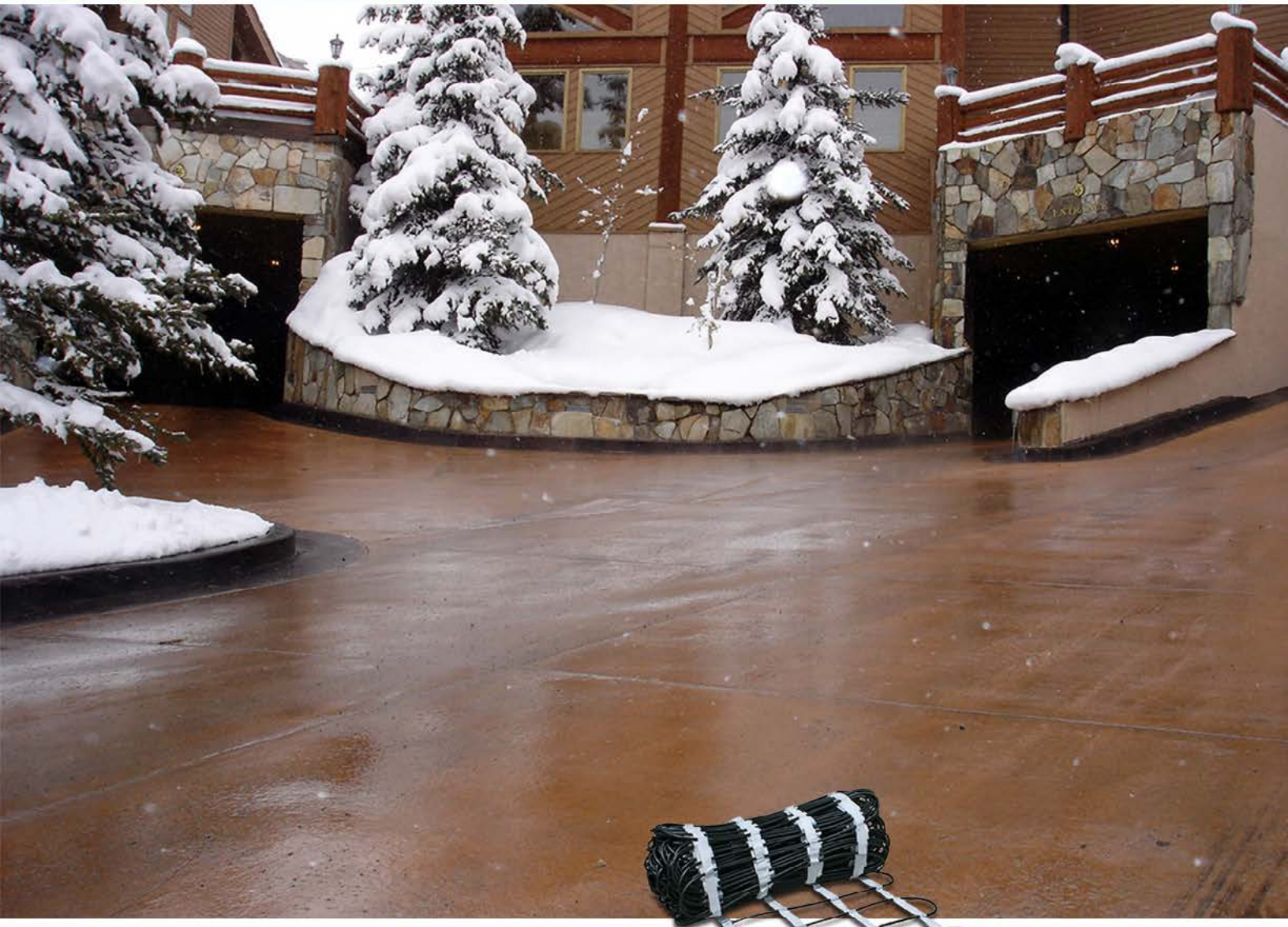
Snow Melting

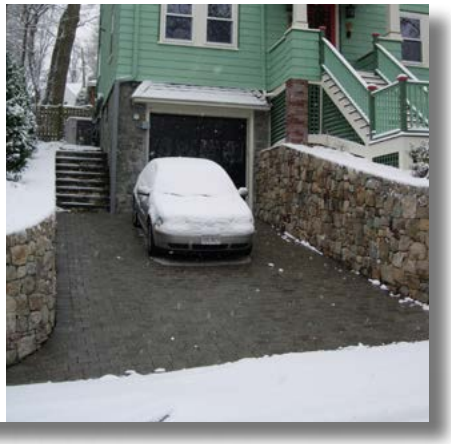
RADIANT SNOWMELT SYSTEMS



ProLine

RADIANT HEAT SOLUTIONS

Heated Driveways and Snow Melting Systems



Fully automated, maintenance-free ProLine snow melting systems have proven to be the optimum solution for heating commercial parking ramps, driveways, sidewalks, loading docks and more. Versatile and durable, ProLine heat cable is designed to withstand the stress of heavy concrete pours, brick and stone paver applications as well as the extreme temperatures of hot asphalt installations. The snow melting cable is available on the spool or pre-spaced in mats for easy “roll-out” installation. The performance and reliability of electric snowmelt systems have made ProLine Radiant a favorite among wholesalers and professional builders alike.

Features Include:

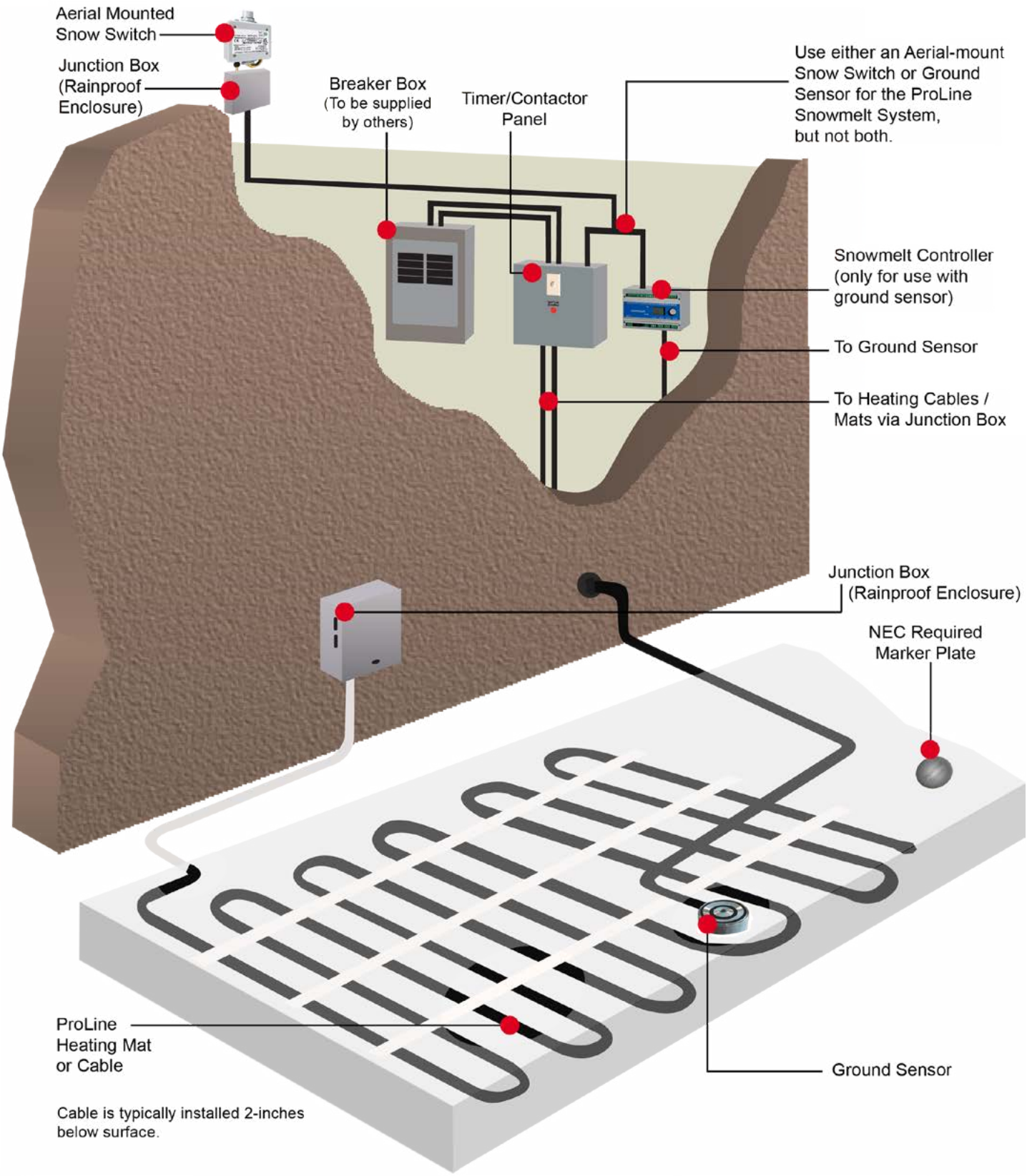
- Available on the spool or pre-spaced in mats.
- Single-point connection simplifies installation.
- Twin-conductor cable.
- Flexible installation; easy to customize.
- Durable and versatile - Designed for use in concrete, under pavers, and hot asphalt applications.
- Silent, efficient and safe.
- Maintenance free operation.
- All mats heat 2-feet wide. Power leads are 16.4 feet in length.
- 10-year limited warranty against manufacturing defects.

ProLine Mats and Cables Specifications

Cable construction	Twin conductor
Rated voltage	120-600 V (For 120, 208, 277, 600 V, please call.)
Output (mats)	37W/ft.^{2} and 50W/ft.^{2}
Output (cables)	12W/ft. (40W/m) with cable, 24-70W/ft.^{2}
Cold lead	16.4 feet (5.0m) Longer cold leads available on request.
Bending radius	Minimum 2 inches, (51mm)
Cable diameter	¼ inches (7mm)
Conductor insulation	Fluoropolymer
Metal sheath	Copper
Outer sheath	Polyolefin
Max. external jacket asphalt temperature *	220°F (105°C) *[460°F (240°C) for up to 10 minutes]
Max. External jacket temp.	158°F (70°C)
Max. conductor insulation temperature	302°F (150°C) Concrete and pavers
Min. installation temp.	5°F (-15°C)

ProLine Snow Melting System Overview

ProLine
Radiant Heat Solutions
Heated Driveways and Snow Melting Systems



ProLine Snow Melting Mats AND CABLE Ordering Information *

The ProLine snow melting system includes heating cable or a mat that is pre-spaced and taped into a 3- or 4-inch on-center-mat that allows for simple roll-out installation. All mats heat 2-feet wide. Power leads are 16.4 feet in length.

Snow Melting Mats

240 Volt Mat (50 W per square foot)

Item Number	Heated Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SM25052500	10	5	500	2.1	115.2
SM2501121000	20	11	1,000	4.2	57.6
SM2502722500	50	27	2,500	10.4	23.1
SM2504424000	80	44	4,000	16.7	14.4
SM2506025500	110	60	5,500	22.9	10.5

240 Volt Mat (37 W per square foot)

Item Number	Heated Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SM237112750	20	11	750	3.1	76.8
SM2373022000	55	30	2,000	8.3	28.8
SM2375123500	95	51	3,500	14.6	16.5
SM2376524500	120	65	4,500	18.8	12.8
SM2378025500	150	80	5,500	22.9	10.5

480 Volt Mat (50 W per square foot)

Item Number	Heated Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SM45052500	10	5	500	1.0	460.8
SM4501121000	20	11	1,000	2.1	230.4
SM4502722500	50	27	2,500	5.2	92.2
SM4504424000	80	44	4,000	8.3	57.6
SM4506025500	110	60	5,500	11.5	41.9

480 Volt Mat (37 W per square foot)

Item Number	Heated Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SM437112750	10	11	750	3.1	307.2
SM4373022000	55	30	2,000	8.3	115.2
SM4375123500	95	51	3,500	14.6	65.8
SM4376524500	120	65	4,000	18.8	51.2
SM4378025500	150	80	5,500	22.9	41.9

Snow Melting Cable

240 Volt Cable (37 and 50 W per square foot)

Item Number	Cable Length (Feet)	Approximate Heat Coverage (Square feet)		Watts	Amps	Ohms
		3-inch spacing (50 Watts Sq. ft.)	4-inch spacing (37 Watts Sq. ft.)			
SC2841000	84	20	27	1,000	4.2	57.6
SC21682000	168	40	56	2,000	8.3	28.8
SC22092500	209	50	67	2,500	10.4	23.1
SC23754500	375	90	120	4,500	18.8	12.8
SC24585500	458	110	150	5,500	22.9	10.5

Snow Melting Mats for Asphalt

240 Volt (37 W per square foot)

Item Number	Heated Area (Sq. ft.)	Mat Length (Feet)	Watts	Amps	Ohms
SMA237112750	20	11	750	3.1	76.8
SMA2373022000	55	30	2,000	8.3	28.8
SMA2375123500	95	51	3,500	14.6	16.5
SMA2376524500	120	65	4,500	18.8	12.8
SMA2378025500	150	80	5,500	22.9	10.5

** For 120, 208, 277, 600 V, please call ProLine (866.676.9276).*

ProLine
Radiant Heat Solutions

Exterior Radiant Heat Controls

Contactor Panels (with GFEP)

In keeping with its commitment to provide professional builders with the best products, service and convenience, ProLine Radiant snowmelt systems include GFEP (ground fault equipment protection) breakers with its panels, saving installers time and money.

Designed for radiant snow and ice melting applications, the ProLine Radiant contactor panel with GFEP simplifies your installation and minimizes costs. The UL listed panels feature a NEMA 4 enclosure, terminal connection block, two or four 3-pole contactors, and wiring diagram.

The panel should be used in conjunction with the in-ground snow sensor/controller or the aerial-mount snow switch (see pages 14-15).

NEMA 4X contactor panel available upon request.

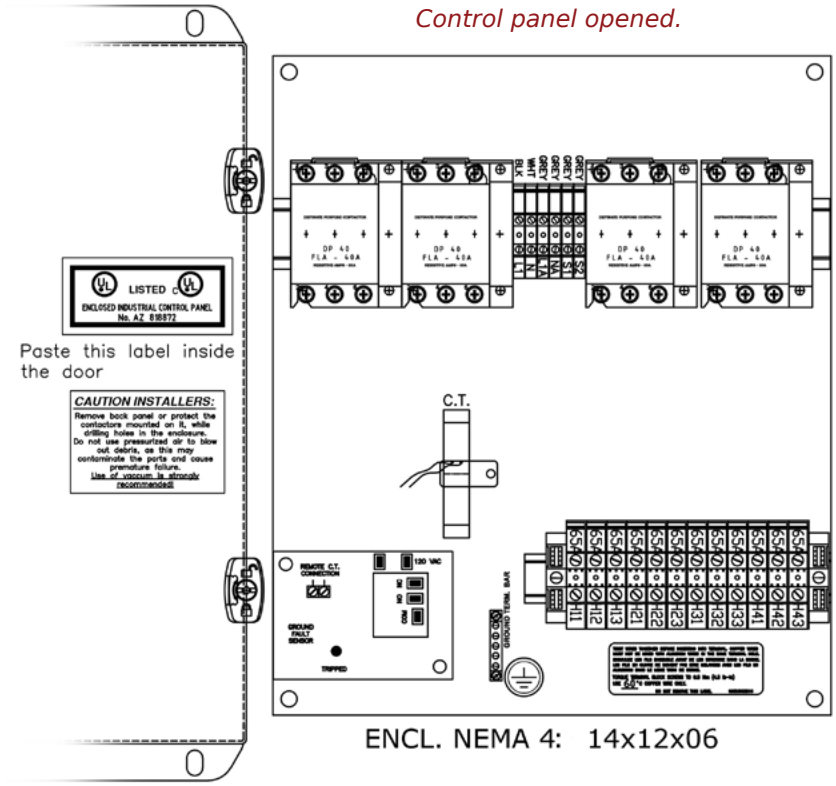
Control panel opened.

Control Panel with GFEP

Features and Benefits

NEMA 4, UL listed panel box
Low cost
Easy to install
Integrated 30mA GFEP (optional)
LED trip indicator (internal)
LED “heat on” indicator light
Pre-wired terminal connections
120 V on/off remote heat indicator
2-year warranty

Control panel front.



ProLine
Radiant Heat Solutions

Exterior Radiant Heat Controls

Snowmelt System Controller

The ProLine snowmelt control units are NEMA 1, wall-mounted control panels. The approximate size of the control unit is only 6x3½ inches. It is even possible to control the unit from an external signal (day/week timer, GSM-module or other signal source). The controller also features manual override capability, allowing you to activate the system to melt snow drifts or ice that has formed due to wind or shade.

ProLine Control Unit

The ProLine Radiant controller is designed for ice and snow melting in gutters and ground areas. Using readings from temperature and moisture sensors, the controller ensures economical control of power consumptions when keeping outdoor areas and roofs free of ice and snow.

Despite the control unit's advanced technology, compact size and ease of use, it also represents a breakthrough in that it is significantly cheaper than most other industry controllers. The unit provides maintenance-free, energy-efficient, UL listed snow melting for all types of residential and commercial applications.

ProLine Snowmelt Controller Technical Data

Supply voltage	120/230 V ±10%, 50-60 Hz
Temperature range	32°F to 122°F (0 to 5°C)
Working range	-4°F to 41°F (-20 to 5°C)
Built-in timer for manual snow melting / after run	1-6 hours
Output relay	3 x 16A potential free relay
Two zone application	Output is 2 x 16A potential free relay
Water-based system	Controlling a 3 or 4 way valve, primary pump, secondary pump.
Display	Graphic and with backlight
Ambient temperature	32°F to 122°F (0°-50°C)
Housing (including cover)	IP20
Weight	1.09 lbs. (495 g)
Dimensions (excluding cover)	H: 3.5" W: 6.1" D: 1.7" (90mm x 156mm x 45mm)
Dimensions (including cover)	H: 6.7" W: 6.4" D: 1.7" (170mm x 162mm 45mm)
LEDs indicate the functions: ON/green; ERROR/red	Supply voltage to the thermostat; fault indication

Technical Data for ProLine In-Ground Sensors	
Detecting	Moisture and temperature
Mounting	Any outdoor area
Housing	IP68
Ambient temperature	-4°F to 158°F (-20 to 70°C)
Cable length	33 feet (10 meters)
Dimensions	H: 1¼-2.4 inches (32mm-60.9mm)

Ground Sensor for Temperature and Moisture

Designed for embedding into the surface of concrete, asphalt, pavers or other outdoor surface, ProLine Radiant's in-ground snow sensor detects ground temperature and moisture for automated snow melting systems. The activation device only signals the controller to activate the system when the outdoor temperature is below the selected setting and snow or ice occurs on the sensor head.

The snow sensor is usable for all applications within hydronic as well as electrical heating. Optimal operation is ensured because of the output control, which makes the system both effective and economical.

In-ground snow sensor (and sensor cup) for automated snow melting system.

ProLine System Activation Devices (Snow Sensors)

ProLine Radiant snowmelt systems come standard with an aerial or ground-mounted snow sensor switch. This sophisticated device automatically activates the ProLine snow melting system when it detects precipitation and temperatures are below a set point. The temperature is typically set at 39°F, but is adjustable from 34°F (1.1°C) to 44°F (6.6°C). Smart system compatible, the aerial sensors have several other notable features, including adjustable delay off cycle and upgradeable remote activation.

The WS-2C Aerial Snow Sensor - Designed for snow and freezing rain detection, the WS-2C aerial snow sensor sets the standard for automated radiant snowmelt systems. The snow sensor activates the snow melting system when moisture is present and the temperature reaches the set point (usually 39°F), providing fully automated, efficient snow and ice melting.

The unit is easy to install and all the electronics can be accessed by simply removing the four front cover screws.

- Reliable Rain and Snow Detection
- Adjustable Delay Off Cycle
- Easy Installation & Full Access to Electronics
- Adjustable Temp. Trigger Point (34°-44°F)
- Smart “Manual On” Operates for one Delay
- Full 30A @ 240 VAC Control
- Field Strap for 100-120 / 200-240 VAC Operation
- Selectable Low-Temperature Cutoff
- Replaceable Remote Precipitation Sensor
- Housed in a two-gang PVC enclosure

The WS-5 Aerial Snow Sensor - The WS-5 is essentially a WS-2C fitted with a dual 30A @ 240 VAC load control contact set. It is primarily designed for larger satellite antenna/ broadcast tower deicing and pavement snow melting applications. Specifically, any job that a WS-2C can perform, a WS-5 can perform with double the load handling capability. The unit is housed in a two-gang PVC enclosure. The overall dimensions of the WS-5 are 4¾” x 7” x 2¾” (120mm x 178mm x 70mm). The unit weighs 2 pounds. The user may access all electronics by removing the four front cover screws.

- Reliable Rain and Snow Detection
- Adjustable Delay Off Cycle
- Easy Installation & Full Access to Electronics
- Adjustable Temperature Trigger Point
- Smart “Manual On” Operates for one Delay
- Dual 30A @ 240 VAC Control
- Field Strap for 100-120 / 200-240 VAC Operation
- Selectable Low-Temperature Cutoff
- Replaceable Remote Precipitation Sensor
- Housed in a two-gang PVC enclosure

The WS-8 Aerial Snow Sensor - The WS-8 is primarily designed for gutter, downspout, and roof ice melting and small satellite antenna deicing. The totally sealed, low voltage, remote mount precipitation sensor allows the user to install the small sensor head in a downspout, the bottom of a gutter, or at the end of an antenna boom, up to 10 feet away, while keeping the main controller in a more convenient or protected location.

- Reliable Rain and Snow Detection
- Adjustable Delay Off Cycle
- Easy Installation & Full Access to Electronics
- Adjustable Temperature Trigger Point
- Bright Off/On/Triggered LED Status Indicator
- Full 30A @ 240 VAC Control
- Field Strap for 100-120 / 200-240 VAC Operation
- Safe Low-Voltage Sensor Head
- Replaceable Remote Precipitation Sensor
- Smart “Manual On” Operates for one Delay Cycle

The WS-AUX Control Panel - The WS-AUX Control Display Panel is used in conjunction with a WS Snow Sensor Controller. The sensor is typically mounted on a roof, near a gutter, or in a similarly difficult location to reach. The WS-AUX provides a method of remotely monitoring and controlling the attached sensor. The user may monitor both the operating mode and the activation state of the sensor. The user may also set the sensor to prohibit automatic operation, to automatically operate, or to manually operate one snow melting cycle, then return to automatic operation. The WS-AUX derives its power from the snow sensor and requires no batteries or AC power. With an operating temperature range of -40°F to 185°F (-40°C to +85°C) the WS-AUX is designed for use either indoors or outdoors with proper protection from the elements.

ProLine Snowmelt System Activation Devices

Technical Data and Specifications

WS-2C Specifications	
Dimensions	4¾"x7"x2¾" (120mm x 178mm x 70mm)
Weight	2 lbs. (0.9 Kg)
Operating temperature	-40° to 185°F (-40° to 85°C)
Enclosure rating	NEMA 3R
Supply power	100-120 VAC / 200-240 VAC Field selectable 15 W maximum
Trigger temperature	34° to 44°F (1.1° to 6.6°C) Field selectable
Delay off (sensor)	2 Minutes
Delay off (controller)	30-90 Minutes field selectable
Load contact capacity	30A @ 240 VAC / 100,000 Operations at full load
Monitor contact capacity	24 VDC/VAC 400mA 10 W Total

WS-5 Specifications	
Dimensions	4¾”x7”x2¾” (120mm x 178mm x 70mm)
Weight	2 lbs. (0.9 Kg)
Operating temperature	-40° to 185°F (-40° to 85°C)
Enclosure rating	NEMA 3R
Supply power	100-120 VAC / 200-240 VAC Field selectable 15 W maximum
Trigger temperature	34° to 44°F (1.1° to 6.6°C) Field selectable
Delay off (sensor)	2 Minutes
Delay off (controller)	30-90 Minutes field selectable
Load contact capacity	2x30A @ 240 VAC / 100,000 Operations minimum at full load
Monitor contact capacity	24 VDC/VAC 400mA 10 W Total

WS-8 Specifications	
Dimensions	4¾”x7”x2¾” (120mm x 178mm x 70mm)
Weight	2 lbs. (0.9 Kg)
Operating temperature	-40° to 185°F (-40° to 85°C)
Enclosure rating	NEMA 3R
Supply power	100-120 VAC / 200-240 VAC Field selectable 15 W maximum
Trigger temperature	34° to 44°F (1.1° to 6.6°C) Field selectable
Delay off	30-90 Minutes field selectable
Load contact capacity	30A @ 240 VAC / 100,000 Operations minimum at full load

ProLine WS-AUX Snow Sensor Control/Display Panel

The WS-AUX control display panel brings control and monitoring of your snowmelt system indoors. No need to hope that the system has successfully triggered. One glance at the WS-AUX confirms it.

The WS-AUX is compatible with the WS-2C, WS-5, and WS-8 rain/snow sensor controllers. The unit consists of an electronic printed circuit board mounted securely to a steel mounting plate. The overall dimensions of the WS-AUX are 4.1”x 1.8” x 0.9” (104mm x 45mm x 23mm). The unit weighs 2.5 ounces. The WS-AUX fits into a standard single-gang or multi-gang electrical enclosure. Compatible self-threading mounting screws that fit both metal and plastic enclosures are included. The plate also has mounting holes for a rectangular “modular” cover plate. This allows the user to select a cover plate color and material that blends with the decor of the room.

ProLine radiant snow melting system with aerial-mount snow sensor installed at roof’s edge.

ProLine
Radiant Heat Solutions

Pipe Tracing

PIPE FREEZE PREVENTION

ProLine
RADIANT HEAT SOLUTIONS
Self-Regulating Cable for Pipe Trace Systems

Pipe Trace Solutions

Pre-terminated Heat Trace Cable

ProLine's self-regulating pipe tracing cable is an ideal solution for industrial, commercial and residential pipe freeze protection as well as process temperature maintenance. The durable heat cable can be installed in industrial, commercial and residential pipe trace applications.

ProLine Radiant's easy-to-use pipe tracing systems feature pre-terminated heat cable that is available with or without a ground fault circuit interupter. In addition to pipe freeze protection, ProLine pipe trace systems can also be used for process temperature maintenance applications where viscosity control at higher temperatures is required.

ProLine offers a range of pipe trace cable that can be used in a variety of industrial hazardous, non-hazardous and commercial applications. Heat tracing can be used in commercial, residential, and industrial applications with both metal and plastic piping.

ProLine Radiant's self-regulating heat cable on spools.

Industrial pipe tracing application.

The self-regulating cable adjusts heat output in response to ambient temperatures, so when the temperature rises, the electrical resistance increases and the consumption of electricity decreases, ensuring safe, energy-efficient operation. The cable will not overheat or burnout - even when touching or overlapping.

Also, because of the self-regulating properties, a thermostat may not be necessary in some applications. ProLine Radiant heat cable is resistant to watery and inorganic chemicals and protected against abrasion and impact damage.

The termination, power connection, splice, tee, and end seal kit reduces installation time and requires no special skills or tools.

Pipe Trace Solutions (PLSR Heat Cable)

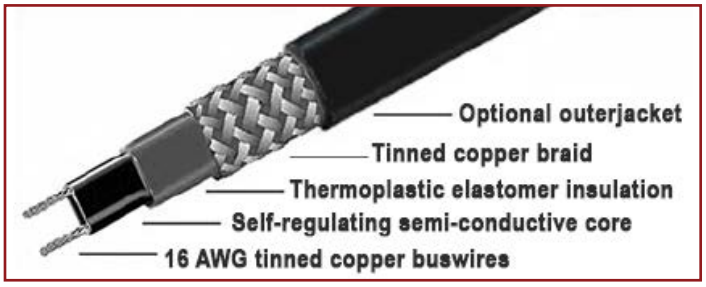
ProLine's self-regulating (PLSR), parallel heating pipe trace cable is designed for a variety of industrial applications and environments, including explosion-hazardous and nonhazardous areas up to a maximally admissible work-place temperature of +149°F (65°C). The UL listed cable can be used for plastic or metal pipe freeze protection and flow maintenance of pipes, tanks, and valves. The cables are available on spools in lengths of 250' / 500' / 1000' in 120, 208, 240, and 277 volts, and in pre-assembled lengths in 120 volts.

Features and Benefits

- Energy Efficient - Automatically varies its power output in response to pipe temperature changes.
- Easy to Install - Can be cut to any length required on site (up to max circuit length) so there's no wasted cable.
- Low Cost – Less installation cost than steam tracing; less maintenance expense and less downtime.
- Safe / Durable – Does not overheat or burn out, even when touching or overlapping.
- Versatile – Suitable for plastic or metal pipes, gutters and downspouts, and for use in non-hazardous, hazardous and corrosive environments.
- Easy Install – The power connection, splice, tee and end seal kit will reduce installation time.
- Optional Outer Jacket - Makes the heating cable resistant to watery and inorganic chemicals and protects against abrasion and impact damage.
- 10-year warranty - NOT PRORATED
- Pre-assembled cable includes a 3-foot power cord and plug.

PLSR Technical Data

Service voltage	110-120, 208-277 V
Maximum maintain or continuous exposure temperature (power on)	149°F (65°C)
Maximum intermittent exposure temperature 1,000 hours (power on or off)	-40° to 185°F (-40° to 85°C)
Minimum installation temperature	-40°F (-40°C)
Protective braid resistance	< 18.2Ω/km
Bus wire gauge	16 AWG
Approvals	UL Listed; hazardous
Certifications	Class I, Div.2 Groups A,B,C,D Class II, Div.2 Groups F,G Class III



Maximum Circuit Length at Circuit Breaker Size

Cable	Startup Temp.	120 V				240 V			
Breaker Size		15 A	20 A	30 A	40 A	15 A	20 A	30 A	40 A
PLSR-120-5 and PLSR-240-5	50°F (+10°C)	200	200	200	200	498	530	530	530
	32°F (0°C)	190	200	200	200	429	505	505	505
	-4°F (-20°C)	165	200	200	200	337	433	480	480
	-40°F (-40°C)	140	190	200	200	255	328	400	400
PLSR-120-8 and PLSR-240-8	50°F (+10°C)	145	150	150	150	354	406	420	420
	32°F (0°C)	125	150	150	150	291	360	360	360
	-4°F (-20°C)	110	145	150	150	183	229	350	350
	-40°F (-40°C)	95	130	150	150	164	206	275	320
PLSR-120-10 and PLSR-240-10	50°F (+10°C)	100	130	130	130	242	295	315	360
	32°F (0°C)	90	120	130	130	177	216	246	315
	-4°F (-20°C)	80	110	130	130	131	164	215	215
	-40°F (-40°C)	75	100	130	130	114	141	170	215
PLSR-120-12 and PLSR-240-12	50°F (+10°C)	100	130	130	130	183	229	229	240
	32°F (0°C)	90	120	130	130	124	160	180	210
	-4°F (-20°C)	80	110	130	130	91	124	158	158
	-40°F (-40°C)	75	100	130	130	85	98	120	158

** Lengths may vary. Please contact a ProLine representative for more information.*

Self-Regulating Heat Cable Comparison

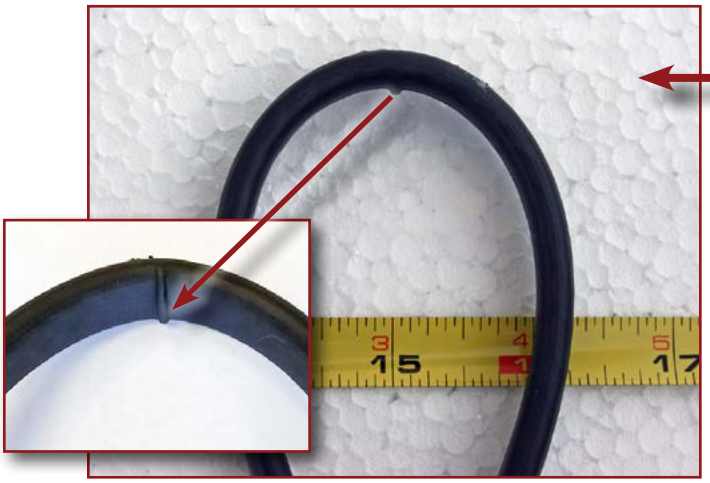
ProLine self-regulating heat cable features a more flexible outer jacket and more durable carbon core than other leading brands of self-reg cable. These features provide more consistent performance, longer lifespan, and easier installation in cold temperatures.

Key Features of ProLine Self-regulating Heat Cable vs. Other Cable Brands

Outer Jacket Quality

Typical self-regulating heat cable

The outer jacket of typical self-reg cable tends to “bubble” or separate from the cable core when the cable is manipulated for turns. These irregularities create stress points on the cable that can result in water reaching the core, leading to erratic heating and eventual cable failure.



Other Leading Brands of Self-regulating Cable

The outer jacket of most self-regulating heat cable separates from the core at a typical bend radius of 2 inches.

ProLine Radiant Self-regulating Heat Cable

ProLine self-regulating heat cable does not “bubble” at an even tighter bend radius of 1½ inches.

ProLine Self-regulating Heat Cable

ProLine self-regulating heat cable features a higher quality outer jacket that does not “bubble”. This reduces the chances of water seepage and cable failure.

Installation at Low Temperatures

Typical self-regulating heat cable

Typical self-regulating cable has a minimum installation temperature of 32-40°F. This is because the carbon in the cable becomes brittle and can easily break when bent or manipulated at low temperatures.

The outer jacket also becomes stiff, making the securing of cable to the pipes difficult during cold weather installations. The outer jacket tends to “pucker” and pull away from the core when making bends, compromising the cable’s integrity and leading to cable failure. Therefore installing most self-regulating heat cable at temperatures below 40°F is not recommended.

ProLine self-regulating heat cable and plug with GFCI.

ProLine self-regulating heat cable

ProLine self-regulating cable features a higher quality carbon center that is more resilient in low temperatures, thereby allowing the cable to be safely installed at temperatures as low as 0°F.

The higher quality outer jacket also remains flexible at low temperatures, resulting in more reliable performance and easier installation when securing to various pipe trace applications.

“In all the years I’ve been installing radiant heating systems, I’ve noticed that “bubbles” in the outer jacket of the cable almost always result in a point of failure. The superior outer jacket of ProLine’s self-reg cable helps to eliminate this problem.”

– Eric W., Licensed Contractor

ProLine
RADIANT HEAT SOLUTIONS
Self-Regulating Cable for Pipe Trace Systems

ProLine Pipe Trace Cable Ordering Information

Pre-Terminated Self-Regulating Cable (Pipe, Roof and Gutter

Item Code	Description	Length	Output @ 50°F	Voltage
PLSR-120-50	Pre-terminated Self-Regulating Heat Cable	50	6W/ft.	120
PLSRT-120-75	Pre-terminated Self-Regulating Heat Cable	75	6W/ft.	120
PLSRT-120-100	Pre-terminated Self-Regulating Heat Cable	100	6W/ft.	120
PLSRT-120-50 GF	Pre-terminated Self-Regulating Heat Cable	50	6W/ft.	120
PLSRT-120-75 GF	Pre-terminated Self-Regulating Heat Cable	75	6W/ft.	120
PLSRT-120-100 GF	Pre-terminated Self-Regulating Heat Cable	100	6W/ft.	120
Self-Regulating Cable (Pipe, Roof and Gutter)				
PLSR-120-5	Self-Regulating Heat Cable	250’/500’/1000’	5W/ft.	120
PLSR-120-8	Self-Regulating Heat Cable	250’/500’/1000’	8W/ft.	120
PLSR-120-10	Self-Regulating Heat Cable	250’/500’/1000’	10W/ft.	120
PLSR-120-12	Self-Regulating Heat Cable	250’/500’/1000’	12W/ft.	120
PLSR-240-5	Self-Regulating Heat Cable	250’/500’/1000’	5W/ft.	208-277
PLSR-240-8	Self-Regulating Heat Cable	250’/500’/1000’	8W/ft.	208-277
PLSR-240-10	Self-Regulating Heat Cable	250’/500’/1000’	10W/ft.	208-277
PLSR-240-12	Self-Regulating Heat Cable	250’/500’/1000’	12W/ft.	208-277
*Cut fee	*Cut fee for non 250’/500’/1000’ rolls	250’/500’/1000’		

PLSR Cable Accessories and Controls

Item Code	Description
PLSR00-Pipe	Power connection kit, includes end seal kit (PLSR12)
PLSR03-Aluminum	Aluminum application tape
PLSR03-Fiberglass	Fiberglass application tape
PLSR08	Plug-in cord set, 120 V GFCI, 125’ maximum run length
PLSR10	Splice / tee kit
PLSR12	End seal kit
WS-115	Air sensing NEMA 4 outdoor thermostat 120/240 V
WS-115R	Surface sensing NEMA 4 outdoor thermostat
Class I Div 2	
PLSR-PTBO	Multiple entry octagon power connection kit with J-Box; hazardous locations, NEMA 4X
PLSR-PTBS	Power connection kit with J-Box; hazardous locations, NEMA 4X
PLSR-JHE	End seal kit; hazardous locations
PLSR-JHS	Inline splice tee kit; hazardous locations
PLSR-JHT	Tee splice; hazardous locations
PLSR12L	End seal kit with light (can be used at beginning or end)
PLSR-PP	Pipe trace power panel with GFEP (includes sensors)

Pipe Trace Cable Accessories and Controls

PLSR Cable Accessories and Controls

PLSR-PTBS - Power connection kit with J-Box; hazardous locations, NEMA 4X

PLSR-PTBO - Multiple entry octagon power connection kit with J-Box; hazardous locations, NEMA 4X

PLSR-JHE - End seal kit; hazardous locations

- **A** Seal plate for main box
- **B** Main end seal box
- **C** Grommets
- **D** Label

PLSR-JHS - Inline splice tee kit; hazardous locations

- **A** Main box
- **B** Pressure seal end
- **C** Grommets
- **D** Gaskets for main box
- **E** Cover for main box
- **F** Label

PLSR-JHT - Tee splice; hazardous locations

- **A** Main box
- **B** Pressure seal end
- **C** Grommets
- **D** Gaskets for main box
- **E** Cover for main box
- **F** Label

PLSR10 - Splice / tee kit

- **A** Clamp tie
- **B** Mastic strips (1½" long x 1" wide)
- **C** Heat-shrinkable tube (8" long x 1" diameter)
- **D** Heat-shrinkable tube (1" long x ⅛" diameter)
- **E** Heat-shrinkable tube (1" long x ½" diameter)
- **F** Uninsulated braid crimp
- **G** Cable ties
- **H** Insulated bus wire crimps
- **I** Black cloth tape (6" long)
- **J** Heat-shrinkable cap
- **K** Heat-shrinkable tube for ground

JSR00 - Power connection kit - with end seal kit (PLSR12)

- **A** Black-shrinkable tube (5½" long x ⅛" diameter)
- **B** Green-shrinkable tube (6" long x ¼" diameter)
- **C** Seal fitting and white grommet
- **D** Black-shrinkable tube (1" long x ½" diameter)
- **E** Mounting bracket for piping
- **F** Gasket
- **G** Lock nut
- **H** Blue grommet
- **I** Wire nuts
- **J** Labels

ProLine
Radiant Heat Solutions

Roof Deicing

SELF-REGULATING HEAT CABLE

ProLine

RADIANT HEAT SOLUTIONS

Roof Deicing and Gutter Melt Systems

Self-regulating Roof Heating Cable

Most roof deicing applications are best served by using ProLine's self-regulating heat cable. The heat cable can be installed in gutters and downspouts to keep structures safe from ice damage and frost erosion.

Features and Benefits

The irradiated conductive core of the heat cable increases its heat output as the ambient temperature falls, and decreases its output when the temperature rises.

- Will not overheat or burnout when overlapped
- Superior quality outer jacket and carbon core
- Features advanced technology that results in highly effective, energy efficient operation
- Can be cut to length in the field
- Fully automated
- Maintenance free
- Protects roofs by preventing ice dams and ice buildup

ProLine roof and gutter deicing systems are compatible with the following standard materials:

Roof Materials:

- Shake / Shingle
- Rubber / Tar
- Wood / Metal

Gutter/Downspout:

- Metal
- Plastic
- Wood

Eliminate ice dams by heating roof edges.

Maximum Cable Length in feet at Cable Breaker Size

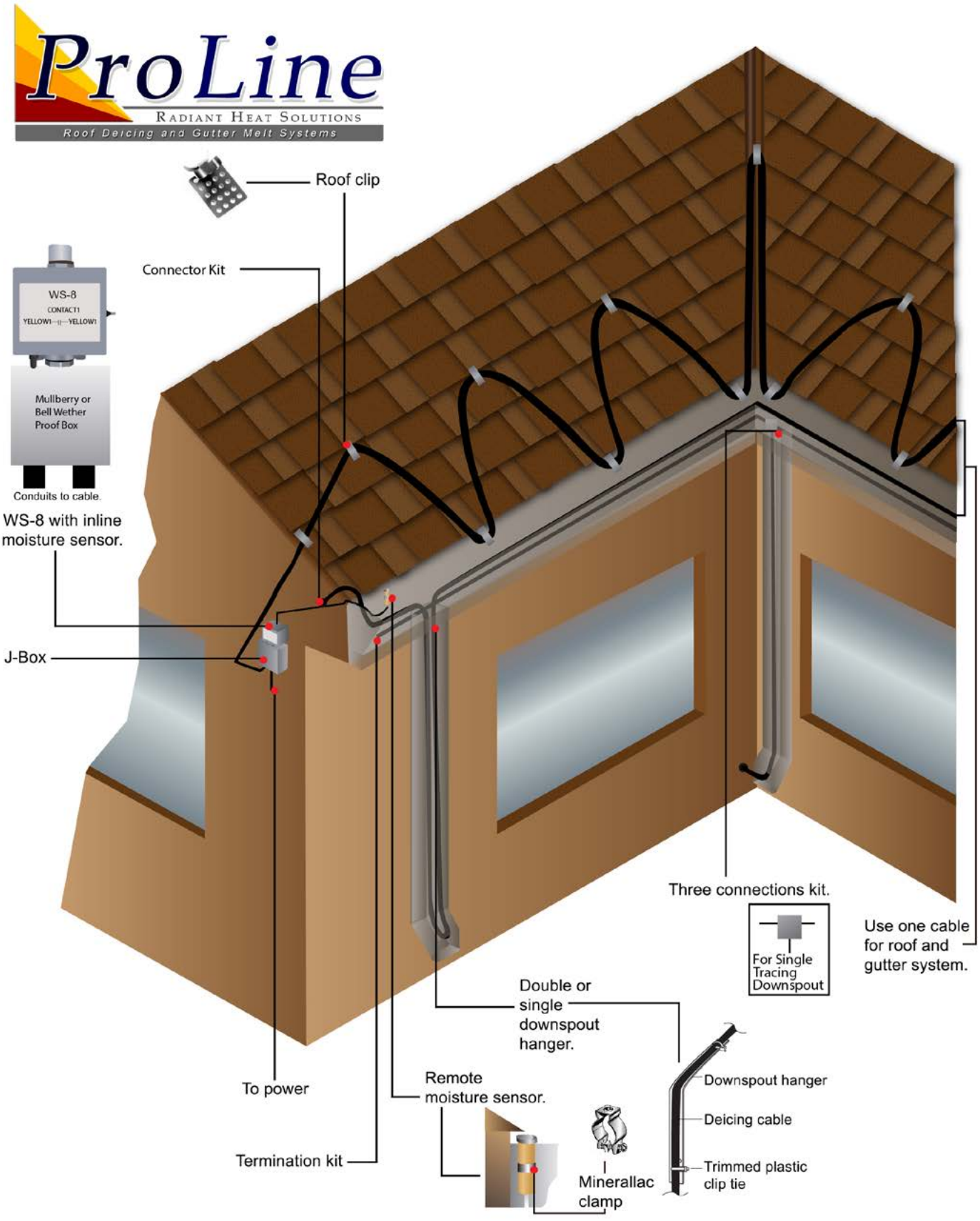
Cable	Startup Temp.	120 V				240 V			
Breaker Size		15A	20A	30A	40A	15A	20A	30A	40A
PLSR-5	50°F (+10°C)	200	200	200	200	498	530	530	530
	32°F (0°C)	190	200	200	200	429	505	505	505
	-4°F (-20°C)	165	200	200	200	337	433	480	480
	-40°F (-40°C)	140	190	200	200	255	328	400	400
PLSR-8	50°F (+10°C)	145	150	150	150	354	406	420	420
	32°F (0°C)	125	150	150	150	291	360	360	360
	-4°F (-20°C)	110	145	150	150	183	229	350	350
	-40°F (-40°C)	95	130	150	150	164	206	275	320
PLSR-10	50°F (+10°C)	100	130	130	130	242	295	315	360
	32°F (0°C)	90	120	130	130	177	216	246	315
	-4°F (-20°C)	80	110	130	130	131	164	215	215
	-40°F (-40°C)	75	100	130	130	114	141	170	215
PLSR-12	50°F (+10°C)	100	130	130	130	183	229	229	240
	32°F (0°C)	90	120	130	130	124	160	180	210
	-4°F (-20°C)	80	110	130	130	91	124	158	158
	-40°F (-40°C)	75	100	130	130	85	98	120	158

** Lengths may vary. Please contact a ProLine representative for more information.*

Several roof heating options are available from ProLine Radiant. From heating gutters and downspouts, roof valleys, roof edges and trouble spots, and even heating entire roofs, ProLine roof deicing experts can recommend and design the ideal system for your specific needs.

ProLine pre-terminated self-regulating heat cable with and without a ground fault circuit interupter (GFCI).

Self-Regulating Heat Cable System Overview



Self-Regulating Heat Cable Comparison

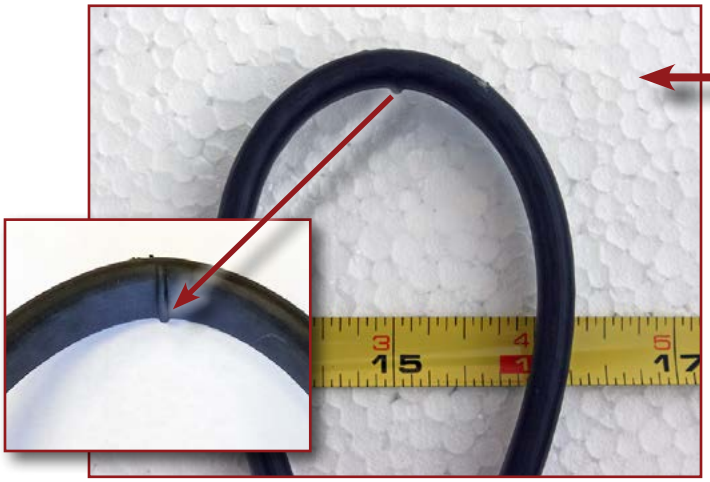
ProLine self-regulating heat cable features a more flexible outer jacket and more durable carbon core than other leading brands of self-reg cable. These features provide more consistent performance, longer lifespan, and easier installation in cold temperatures.

Key Features of ProLine Self-regulating Heat Cable vs. Other Cable Brands

Outer Jacket Quality

Typical self-regulating heat cable

The outer jacket of typical self-reg cable tends to "bubble" or separate from the cable core when the cable is manipulated for turns. These irregularities create stress points on the cable that can result in water reaching the core, leading to erratic heating and eventual cable failure.



Other Leading Brands of Self-regulating Cable

The outer jacket of most self-regulating heat cable separates from the core at a typical bend radius of 2 inches.

ProLine Self-regulating Heat Cable

ProLine self-regulating heat cable features a higher quality outer jacket that does not "bubble". This reduces the chances of water seepage and cable failure.

ProLine Radiant Self-regulating Heat Cable

ProLine self-regulating heat cable does not "bubble" at an even tighter bend radius of 1½ inches.

Installation at Low Temperatures

Typical self-regulating heat cable

Typical self-regulating cable has a minimum installation temperature of 32-40°F. This is because the carbon in the cable becomes brittle and can easily break when bent or manipulated at low temperatures.

The outer jacket also becomes stiff, making the securing of cable to the roof, gutter, or pipes difficult during cold weather installations. The outer jacket tends to "pucker" and pull away from the core when making bends, compromising the cable's integrity and leading to cable failure. Therefore installing most self-regulating heat cable at temperatures below 40°F is not recommended.

ProLine self-regulating heat cable and plug with GFCI.

ProLine self-regulating heat cable

ProLine self-regulating cable features a higher quality carbon center that is more resilient in low temperatures, thereby allowing the cable to be safely installed at temperatures as low as 0°F.

The higher quality outer jacket also remains flexible at low temperatures, resulting in more reliable performance and easier installation when securing to roofs, gutters, and pipes.

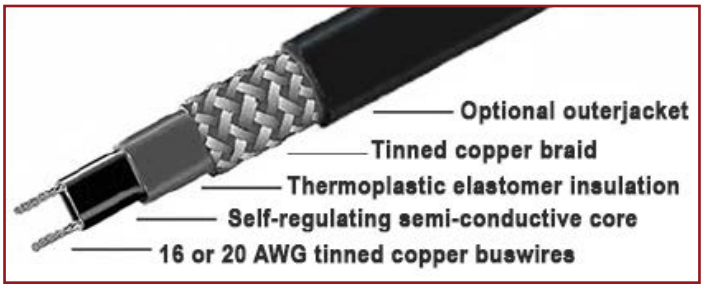
"In all the years I've been installing roof heating systems, I've noticed that "bubbles" in the outer jacket of the cable almost always result in a point of failure. The superior outer jacket of ProLine's self-reg cable helps to eliminate this problem."

– Eric W., Roofing Contractor

Self-Regulating Heat Cable Specs

Technical Data

Service voltage	110-120, 208-277 V
Maximum maintain or continuous exposure temperature (power on)	149°F (65°C)
Maximum intermittent exposure temperature 1,000 hours (power on or off)	-40° to 185°F (-40° to 85°C)
Minimum installation temperature	-40°F (-40°C)
Protective braid resistance	< 18.2Ω/km
Bus wire gauge	16 AWG
Approvals	UL listed; hazardous
Certifications	Class I, Div.2 Groups A,B,C,D Class II, Div.2 Groups F,G Class III



PLSR Cable Accessories and Controls

Item Number	Description
PLSR00-Roof	Power connection kit
PLSR03-Aluminum	Aluminum application tape
PLSR03-Fiberglass	Fiberglass application tape
PLSR08	Plug-in cord set, 120 V GFCI, 125 ft. maximum run length
PLSR10	Splice / tee kit
PLSR12	End seal kit
PLSR12L	End seal with light (can be used at beginning or end)
PLSR14	Roof clips - 50/bag
PLSR-14IR	Insulated roof clips - 50/bag
PLSR15	Downspout hanger kit
WS-115	Air sensing NEMA 4 outdoor thermostat 120/240 V
WS-115R	Surface sensing NEMA 4 outdoor thermostat

For information about ProLine Radiant roof heating cable accessories, refer to the Information on page 28.

For additional information, please contact a ProLine representative at 866.676.9276.

ProLine Roof Heating Cable Ordering Information

Pre-Terminated Self-Regulating Cable (Pipe, Roof and Gutter

Item Code	Description	Length	Output @ 50°F	Voltage
PLSR-120-50	Pre-terminated Self-Regulating Heat Cable	50	6W/ft.	120
PLSRT-120-75	Pre-terminated Self-Regulating Heat Cable	75	6W/ft.	120
PLSRT-120-100	Pre-terminated Self-Regulating Heat Cable	100	6W/ft.	120
PLSRT-120-50 GF	Pre-terminated Self-Regulating Heat Cable	50	6W/ft.	120
PLSRT-120-75 GF	Pre-terminated Self-Regulating Heat Cable	75	6W/ft.	120
PLSRT-120-100 GF	Pre-terminated Self-Regulating Heat Cable	100	6W/ft.	120
Self-Regulating Cable (Pipe, Roof and Gutter)				
PLSR-120-5	Self-Regulating Heat Cable	250’/500’/1000’	5W/ft.	120
PLSR-120-8	Self-Regulating Heat Cable	250’/500’/1000’	8W/ft.	120
PLSR-120-10	Self-Regulating Heat Cable	250’/500’/1000’	10W/ft.	120
PLSR-120-12	Self-Regulating Heat Cable	250’/500’/1000’	12W/ft.	120
PLSR-240-5	Self-Regulating Heat Cable	250’/500’/1000’	5W/ft.	208-277
PLSR-240-8	Self-Regulating Heat Cable	250’/500’/1000’	8W/ft.	208-277
PLSR-240-10	Self-Regulating Heat Cable	250’/500’/1000’	10W/ft.	208-277
PLSR-240-12	Self-Regulating Heat Cable	250’/500’/1000’	12W/ft.	208-277
*Cut fee	*Cut fee for non 250’/500’/1000’ rolls			

Self-Regulating Roof Heating Cable

Pictured above is an example of gutter damage caused by heavy ice buildup.

ProLine roof deicing systems can save you money in the long run be eliminating costly roof repairs and water damage. ProLine's self-regulating heat cable and low-voltage systems are easy to customize and install.

PLSR RoofHeat Cable Accessories

PLSR14 - Roof clips

A Roof clips - 50 per bag

PLSR14IR - Roof clips

A Insulated roof clips -50 per bag

PLSR15 - Downspout hanger kit

A Hanger bracket
B Clamp ties

PLSR10 - Splice / tee kit

A Clamp tie
B Mastic strips (1½" long x 1" wide)
C Heat-shrinkable tube (8" long x 1" diameter)
D Heat-shrinkable tube (1" long x ⅛" diameter)
E Heat-shrinkable tube (1" long x ½" diameter)
F Uninsulated braid crimp
G Cable ties
H Insulated bus wire crimps
I Black cloth tape (6" long)
J Heat-shrinkable cap
K Heat-shrinkable tube for ground

JSR00 - Power connection kit - with end seal kit (PLSR12)

A Black cloth tapes (6" long x 1" width)
B Plug-in ground-fault equipment protection device
C Black heat-shrinkable tube (8" long x ¾" diameter)
D Black heat-shrinkable tube (5" long x ¾" diameter)
E Black heat-shrinkable tube (1" long x ⅛" diameter)
F Black heat-shrinkable tube (1½" long x ⅓" diameter)
G Black heat-shrinkable tube (1" long x ½" diameter)
H Uninsulated braid crimp
I Uninsulated bus wire crimps
J Mastic strips
K Clamp ties
L Warning labels
M Deicing/snowmelt equipment labels

ProLine
RADIANT HEAT SOLUTIONS

Low-Voltage Roof Deicing Systems

ProLine's Industry-Leading Roof Deicing System

ProLine low-voltage roof deicing systems feature a unique, self-regulating, semi-conductive polymer heating element that is very thin and can be cut on site and discreetly nailed or stapled under shingles for quick, easy installation. The heating element is fabricated with Mylar on both sides for added protection from alkaline, UV or salt damage.

The advanced roof heating system protects the roof from the harmful effects of ice dams that can lead to water seeping into roof decking, and eventually into the structure. The system is maintenance free and fully automated. The roof heating system can be installed under a variety of roofing materials, including shingles and metal.

The low-voltage roof deicing system is one of the most advanced and efficient roof deicing systems available, and is available in 3, 6, 9 and 12-inch widths. The heating elements can be cut and customized for just about any roof heating application.

Installing a ProLine Radiant roof deicing system is considerably easier than most other competitive roof heating systems. The low-voltage heating element can be nailed or attached with fasteners or screws under a variety of roofing materials, including metal.

ProLine low-voltage roof heating element being installed.

Features and Benefits

- **Extremely Thin Profile** – Allows for simple, discreet installation under roofing.
- **Can be Cut on Site** – The flexible heating element can be cut to size on site for a perfect fit.
- **Versatile** - ProLine Radiant's low-voltage system can be installed under most roofing materials, including metal.
- **Polymer Heating Element** - Unlike many other roof heating systems, the ProLine low-voltage heating element can be nailed or stapled through, simplifying the installation process.
- **Self Regulating** – When the ambient temperature rises, the electrical resistance increases and the consumption of electricity decreases, preventing the element from overheating and ensuring energy-efficient operation.
- **Protective Mylar Fabrication** – Provides durability, by protecting the heating element from alkaline, salt and UV damage.

Fully Automated Roof Deicing Solutions

How it Works

ProLine's roof deicing systems involve three main components: a heating element, transformer, and activation device (i.e., an aerial-mount snow switch and/or temperature sensor) to trigger system operation when weather conditions warrant.

The semi-conductive polymer heating element is thin, flexible, and can be cut on site.

The transformer is responsible for a specific section of the deicing system, and can step down from high voltage to low voltage (60V or less). It is the source for monitoring the power and output to the system heating element to ensure safe, accurate performance of the roof deicing system.

When conditions warrant, the activation device/snow sensor triggers the control panel. The controller then sends power to the heating element to warm roof.

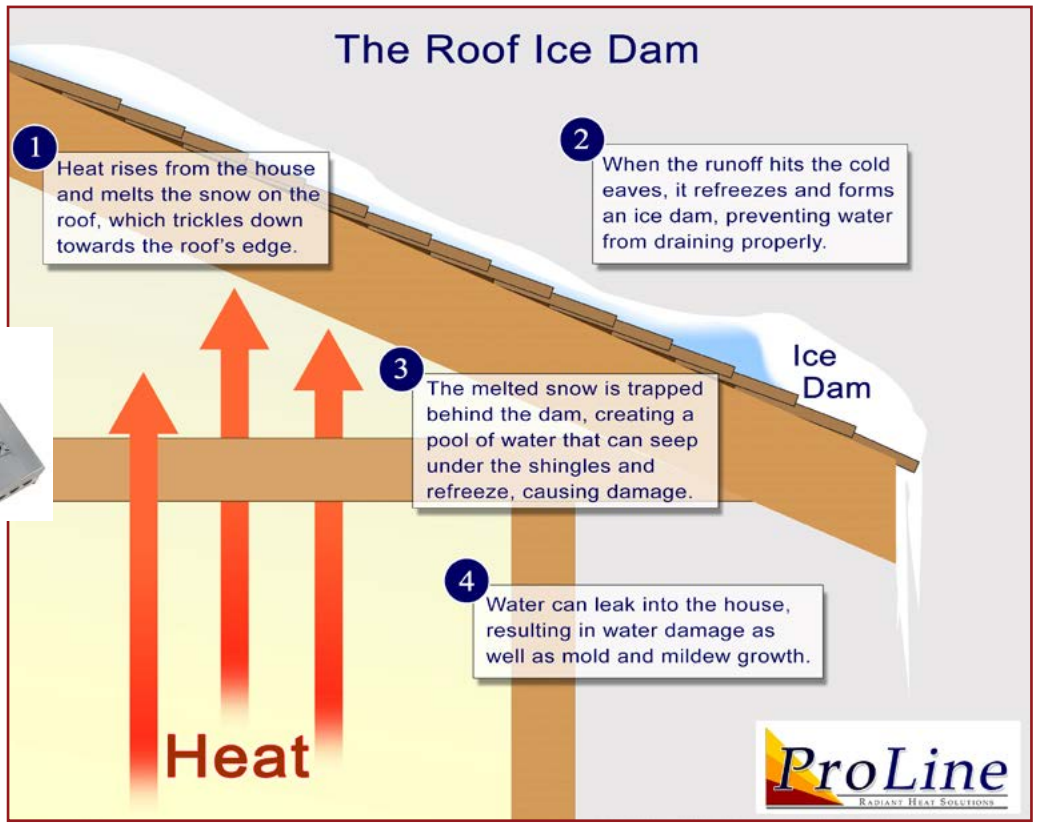


Illustration: How ice dams form on roofs.

ProLine Radiant Heat Solutions

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Draper, UT 84020 USA
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ProLine
Radiant Heat Solutions

Floor Heating

RADIANT FLOOR HEATING SYSTEMS

ProLine

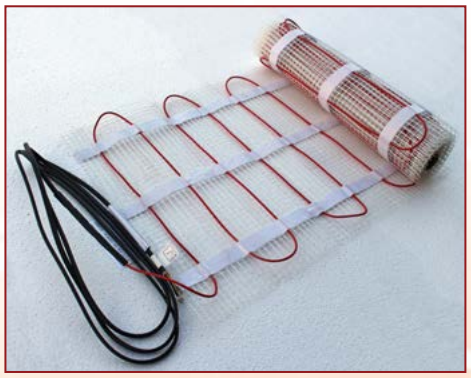
RADIANT HEAT SOLUTIONS

Radiant Floor Heating Systems

ProLine's electric radiant floor heating system is one of the most popular and durable floor heating solutions on the market. Available pre-spaced in mats with an adhesive backing or on the spool, the versatile heat cable is effective for virtually all types of floor surfaces, including tile, marble, slate, laminates, and hardwood.

Features Include:

- Single-point connection
- Twin-conductor cable
- Safety approved for wet locations
- Flexible installation
- Durable construction
- 25-year warranty



ProLine - Radiant Floor Heating Mat

The ProLine floor warming system includes a heating cable that is pre-spaced on an adhesive backed fiberglass mesh that allows for quick, simple rollout installation.

ProLine - Radiant Floor Heating Cable

Available off the spool, the ProLine floor warming cable includes heating cable with a 10-foot cold lead.

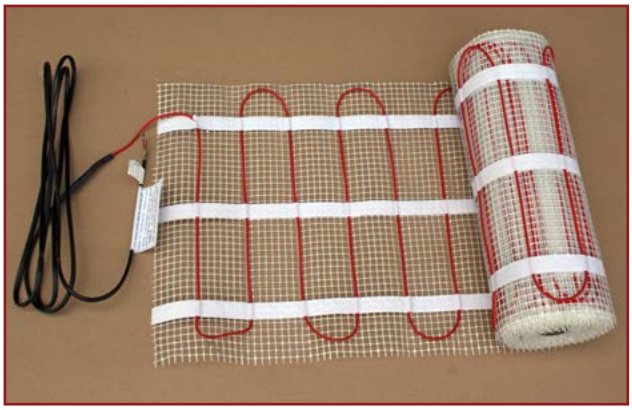
Floor Heating Cable Specifications

Cable construction	Twin conductor
Rated voltage	120 V, 240 V
Output (cables)	12W/ft.^{2} (130W/m^2)±10% (at recommended spacing)
Output (mats)	12W/ft.^{2} (130W/m^2)±10%
Recommended spacing	3-inches (76.2mm)
Bending radius	1-inch (25.4mm)
Cable diameter	1/8 to 1/6-inch (3.2mm-4.2mm)
Conductor insulation	Fluoropolymer
Outer insulation	High temperature PVC
Max. ambient temperature	104°F (40°C)
Min. installation temperature	40°F (5°C)
Cold lead	2-wire 16 AWG plus ground braid; 10 feet (3m) length

All of the ProLine floor heating systems offer you a choice of technologically advanced thermostats.

ProLine Floor Heating Ordering Information

ProLine Mats



120 Volt Mat

Item Number	Heated Area (Sq. ft.)	Mat Dimensions (Feet)	Watts (12 W/Sq. ft.)	Amps	Ohms
TM1020	20	1.5 x 13.3	240	2.0	60.0
TM1030	30	1.5 x 20.0	360	3.0	40.0
TM1040	40	1.5 x 26.7	480	4.0	30.0

240 Volt Mat

Item Number	Heated Area (Sq. ft.)	Mat Dimensions (Feet)	Watts (12 W/Sq. ft.)	Amps	Ohms
TM2020	20	1.5 x 13.3	240	1.0	240.0
TM2040	40	1.5 x 26.7	480	2.0	120.0
TM2050	50	1.5 x 33.3	600	2.5	96.0
TM2100	100	1.5 x 66.7	1200	5.0	48.0
TM2120	120	1.5 x 80.0	1440	6.0	40.0

WARRANTY INFORMATION
ProLine Floor Heat Cable: 25-year limited warranty.

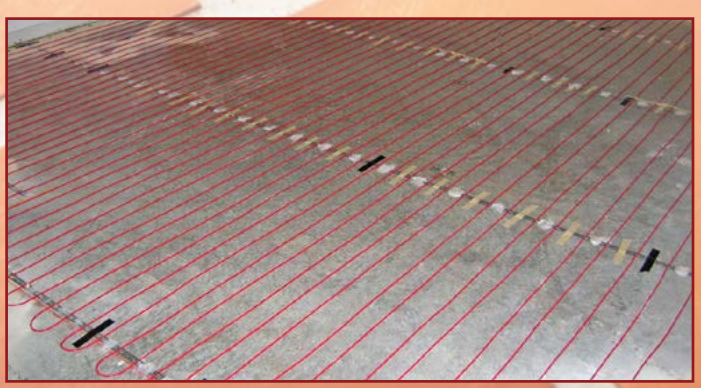
ProLine Cable

120 Volt Cable

Item Number	Length (Feet)	Approximate Heat Coverage (Square feet)			Watts	Amps	Ohms
		2-inch spacing	Standard 3-inch spacing	4-inch spacing			
TC10140	38,9	6	10	13	120	1.0	120
TC10240	77.8	13	19	26	240	2.0	60.0
TC10360	116.7	19	29	39	360	3.0	40.0
TC10480	155.6	26	40	52	480	4.0	30.0
TC10600	194.5	32	49	65	600	5.0	24.0
TC10840	272.4	45	68	91	840	7.0	17.1
TC10960	311.3	52	78	104	960	8.0	15.0
TC11210	391.7	65	98	131	1210	10.1	11.9

240 Volt Cable

Item Number	Length (Feet)	Approximate Heat Coverage (Square feet)			Watts	Amps	Ohms
		2-inch spacing	Standard 3-inch spacing	4-inch spacing			
TC20360	116.7	19	29	39	360	1.5	160
TC20600	194.5	32	49	65	600	2.5	96.0
TC20840	272.4	45	68	91	840	3.5	68.6
TC21080	350.2	58	88	117	1080	4.5	53.3
TC21440	466.9	78	117	156	1440	6.0	40.0
TC21790	580.1	97	145	193	1790	7.5	32.2
TC22090	678.4	113	170	226	2090	8.7	27.6
TC22630	851.8	142	213	284	2630	11.0	21.9
TC22840	922.2	154	231	307	2840	11.8	20.3



ProLine

SLAB/STORAGE

Floor Heating Systems

Floor Heating Cable for Concrete Slab

Slab/Storage floor heating cable is designed for installation in new concrete slab applications. The heat cable is tied directly to the re-mesh and embedded at least ½-inch below the surface. The thermal heating cable efficiently uses the concrete slab to store and distribute heat evenly throughout its intended area. The ProLine heat cable is affordable and can be installed commercially or in residences to provide radiant heating for virtually any type of flooring, including decorative concrete, hardwood, carpet, laminate and ceramic tile to provide luxurious warmth to any home or business.

Floor Heating Applications

Designed to produce 10-15 watts per square foot, ProLine Slab/Storage heating cable is the premier floor heating solution for in-slab applications and decorative concrete of both custom residential and large commercial projects. The radiant floor heating system can efficiently provide comfortable heat for virtually any type of radiant floor heating application, ranging from decorative concrete to hardwood, carpet and ceramic tile.

The Slab/Storage radiant floor heating system offers maintenance-free operation, is easy to install and features a comprehensive 10-year manufacturer warranty. Because the Slab/Storage heat cable is waterproof, it is safe for use in both wet and dry applications, including tiled shower and bathroom floors.

Decorative Concrete

Slab/Storage heat cable has proven to be perfectly suited for heating decorative concrete floors. Designed to withstand the stress of heavy concrete pours, ProLine Slab/Storage heat cable is ideal for safely heating decorative and stained concrete floors without affecting the luster of colors over time. The reliability of the slab heating system has made it a favorite among professionals specializing in concrete floor installations. Slab/Storage Heat features rapid response times and utilizes the concrete slab to store and distribute heat, maximizing the efficiency of the system.

Versatile and Easy to Install

The Slab/Storage floor heating system is easy to customize and install in any size or shape of room. While it can be installed under any type of floor, the cable is required to be embedded in at least ½-inch of concrete or mortar.

Features and Benefits

- Single-point connection simplifies installation
- Safe for use in wet and dry applications
- For commercial and residential
- Save money by heating during “off-peak” hours
- Durable construction
- Flexible and easy to install
- Can be installed in concrete slab under virtually all floor types. (Ideal for heating decorative concrete.)
- 10-year manufacturer warranty

Slab/Storage heating cable is durable, versatile, and easy to install. ProLine Slab/Storage heat’s proven track record is one reason why it’s a favorite among professional builders.

FoilHeat

ProLine Radiant FoilHeat Floor Warming System

ProLine Radiant's FoilHeat cut-and-turn floor heating mat is a unique electric radiant floor heating system that is designed for use under carpet, laminate, engineered wood and other floating floors. The FoilHeat mats can be cut and shaped on site to meet the specific requirements of the project. The efficient floor heating system is ideal for heating any size or shape room, from basements and bedrooms to commercial offices, and more.

Heated Carpet and Laminate Flooring

FoilHeat is an ultra thin electric radiant floor heating system primarily for use under carpet, laminate, engineered wood and other floating floors. The principle advantages of using FoilHeat include ease of installation, rapid response time, and uniform heating of floor surfaces. The special materials used makes it free from problems of 'hot-spots' or localized heating.

Specifcations

Power	Available in 120 V and 240 V
Output rating	12 W/ft.^{2}
Thickness	⅛ inch (3 mm)
Cable spacing	2 inches (50 mm)
Cold lead	10 feet (3.0 meters)
Connections	2 conductor with ground
Inner insulation	Advanced flouropolymers

Features and Benefits

- Simple "roll out" installation
- Installs between the insulation pad and the floor
- There is virtually no floor buildup because of the grounded, flat aluminum
- No thin-set is required
- The aluminum construction efficiently distributes heat quickly and evenly
- System is completely grounded and safe
- Watertight (Heated carpet floors can be steam cleaned.)
- UL approved
- 12 watts per square foot (41 BTUs per square foot)
- 5-year manufacturer warranty
- NOTE: Any overlay must not exceed an R-value of 1.0

ProLine's FoilHeat electric radiant floor warming system shown being installed to heat basement floor.

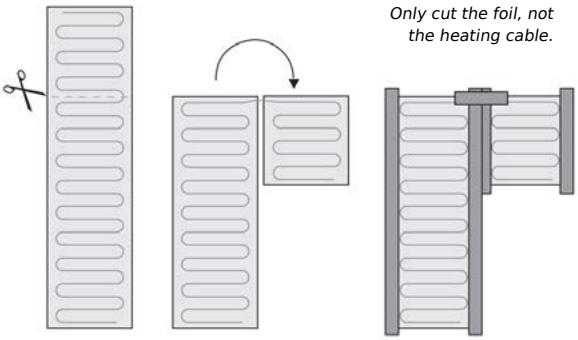
Some advantages of using FoilHeat include the ease of installation and uniform floor heating. The special materials used help to eliminate problems of 'hot-spots' or localized heating.

FoilHeat

Heating Element Construction

The heating element of the FoilHeat system is made with fluoropolymer insulated heating cables that are sandwiched between two layers of specially reinforced aluminum foil. The uniform spacing of the heating elements, further backed by the aluminum foil, ensures even heat distribution. The heating element is connected to a power-supply cable, which exits the laminate mat from one corner. The power lead is a thin flat two-core flexible cord, consisting of two insulated conductors with a metal sheath and an outer sheath. Depending on your heating requirement, FoilHeat is available in 120 and 240 volts at 12 watts per square foot. It is available in predetermined lengths with cold tail – prefabricated and tested in a carefully controlled factory environment.

NOTE: Only cut the foil. DO NOT cut the actual heating cable.



FoilHeat mats can be easily cut on site.

When cutting the mat, be sure to cut the mat only. DO NOT cut or damage the heat cable.

120 V FoilHeat Mats Sizing Guide (12 watts per square foot)

Heated Area (Sq. ft.)	Part Number	Length (Feet)	Wattage (W)	Amps (A)
10	LM1010	6	120	1.0
25	LM1025	15	300	2.5
50	LM1050	30	600	5.0
70	LM1070	42	840	7.0

240 V FoilHeat Mats Sizing Guide (12 watts per square foot)

Heated Area (Sq. ft.)	Part Number	Length (Feet)	Wattage (W)	Amps (A)
25	LM2025	15	300	1.25
50	LM2050	30	600	2.50
95	LM2095	57	1140	4.75
140	LM2140	84	1680	7.00

ProLine
Radiant Heat Solutions

Interior Radiant Heat Controls

The ProLine Radiant electronic thermostats are specifically designed to control electric radiant floor heating systems for maximum comfort and minimum power consumption. Developed for the modern home, the programmable thermostat features a large back-lit display and simple user interface. The system temperature is controlled by an external or built-in floor sensor.

Each thermostat includes an integrated Ground Fault Circuit Interrupter (GFCI, Class A). The thermostat is an electronic on/off thermostat for controlling temperature by means of a sensor placed externally. The heat output is switched on and off with a difference of only 0.7° F (0.4°C).

The thermostat can be configured for control of the floor temperature and regulator without a sensor. The advanced thermostat is compatible with existing floor sensors by means of a temperature setting, making it the best thermostat for renovation purposes.

Designed for ease of use and superior performance, the thermostat and GFCI are dual voltage models suitable for 120/240V, 50/60 Hz power supplies.

For more information about thermostats for radiant floor heating systems or ProLine heat cable and floor warming systems, contact a ProLine radiant heat expert at **866.676.9276** or email us at: **sales@prolineradiant.com**.

General Thermostat Features

Large back-lit display for easy viewing
Simple user interface and thoughtful installation design
Screw terminals for safe and easy installation
Easy to use (Can be operated without the use of the manual)
Fully Programmable
Pre-programmed for quick setup installation
Dual voltage (120 V and 240 V)
GFCI 5mA protection built in
Class A GFCI: Suitable for wet room installation
Four-event, seven-day energy savings
Monitored energy consumption
2-year manufacturer warranty

General Thermostat Specifications

Functions	On/Off control, easy-to-read digital display, 7-day programmable
Supply voltage	120/240 V ±15%, 50/60 Hz
Load	15A maximum (resistive load)
Power	1.800 W at 120 VAC / 3.600 W at 240 VAC
Temperature control range	40 to 104°F (5 to 40°C)
Ambient temperature range	32 to 104°F (0 to 40°C)
Floor temperature sensor	2-wire, 10-foot lead wire
Floor sensor type	NTC (12 KΩ) 10 ft (3 meters)
GFCI	Class A (5 mA trip level)
On/Off differential	0.7°F (0.4°C)
Regulation principle	PWM / PI
Housing	NEMA 2 (IP21)
Dimensions (H/W/D)	4.8, 3.0, 1.0 inch (123, 75, 25mm)

Adjustable Temperature Offset

The set point can be adjusted to match the actual floor temperature. This ensures a 100 percent accurate measurement and control of your underfloor heating system.

Adjustable Temperature Scale

The floor temperature scale can be adjusted within the temperature range of +41°+104°F.

Temperature Limitation

The thermostat also features a maximum temperature function to protect wood floors and minimum temperature functions for comfort.

ProLine Floor Heating Thermostats

PRO Floor Sensing Programmable Thermostat

An “all-in-one” programmable thermostat for electric underfloor heating control where optimal comfort temperature and minimum energy consumption is required. Includes floor sensor with 10-foot (3-meter) cable.

- Simple user interface and thoughtful installation design
- Pre-programmed for quick setup
- Monitored energy consumption
- Easy to use / Simple operation
- Multi voltage: 120-240 VAC (includes 208 VAC)
- Output relay: 15A
- Large back-lit display for easy reading
- Class A GFCI for wet room installation

PRO Dual Sensing Programmable Thermostat

The programmable thermostat with dual sensors is an “all-in-one” programmable thermostat for electric underfloor heating control where optimal comfort temperature and minimum energy consumption is required.

- Simple user interface and thoughtful installation design
- Includes two sensors: a built-in air sensor (to measure room temperature) and a floor sensor with 10-foot (3-meter) cable to measure actual floor temperature.
- Pre-programmed for quick setup
- Monitored energy consumption
- Simple operation (Easy to use)
- Multi voltage: 120-240 VAC (includes 208 VAC)
- Output relay: 15A
- Large back-lit display for easy reading
- Serves as single thermostat for all applications (room, floor, room with floor limitation and as regulator)
- Class A GFCI for wet room installation

PRO Power Module Slave Relay

For large floor heating applications, the Power Module Slave Relay can be extended with additional Power Relay Modules. The PRO Slave Relay module features a built-in Class A GFCI and increases output by 15 amps per module. Output can thus be increased by 15A per module.

- Easy to use
- Screw terminals for safe and easy installation
- For use only with the CT Programmable Thermostat
- Multi voltage: 120-240 VAC (includes 208 VAC)
- Output relay: 15A
- Class A GFCI: suitable for wet room installation

PRO Digital/Non-programmable Thermostat with Floor Sensor

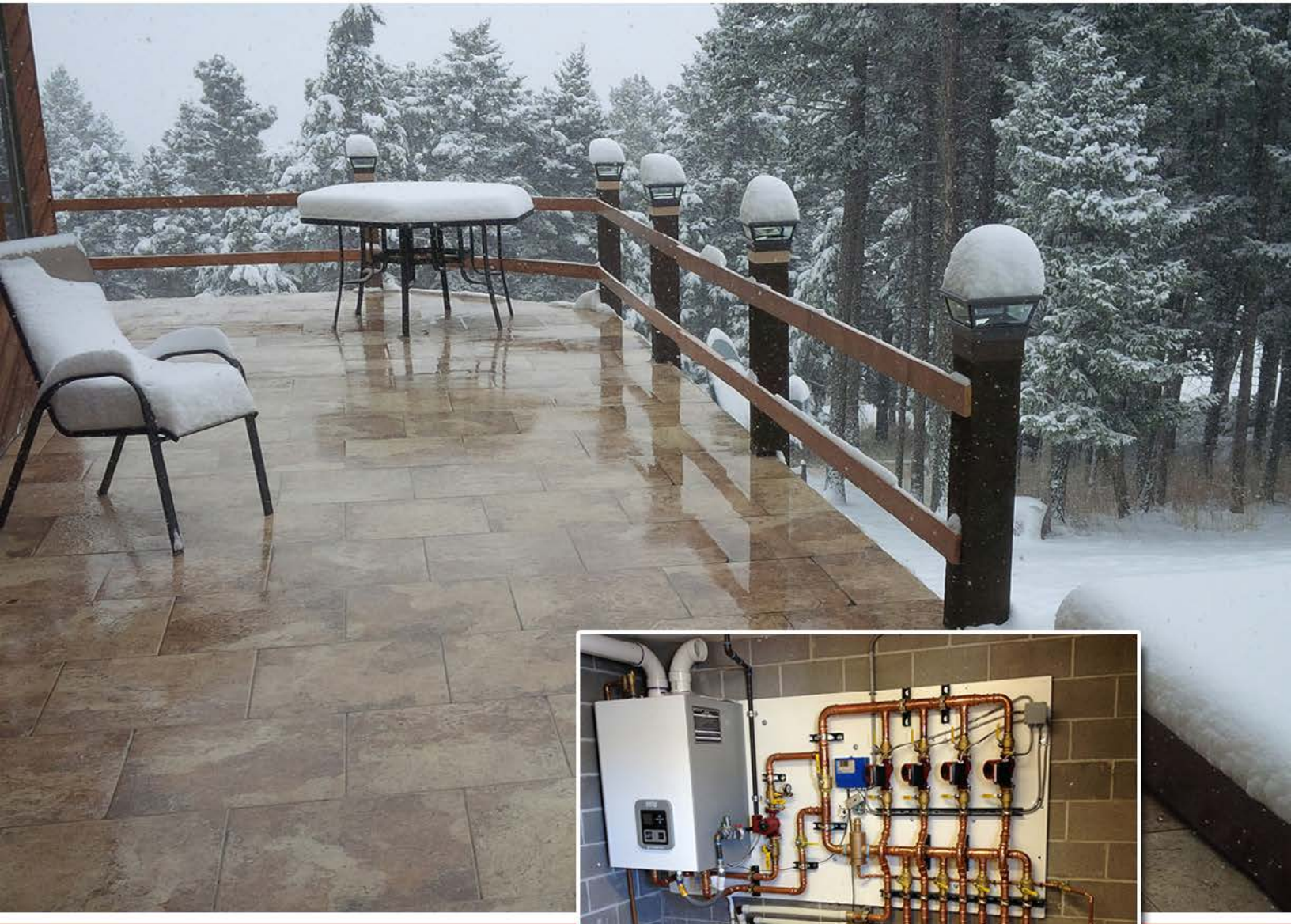
Optimal comfort in controlling electrical underfloor heating. Built on effciency, intuitive operation and with a stylish design. Includes floor sensor with 10-foot (3-meter) cable.

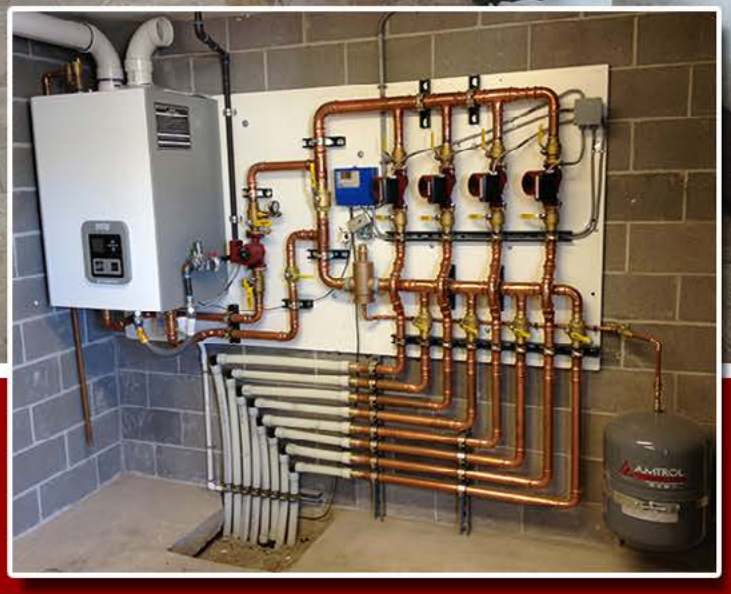
- Simple user interface and thoughtful installation design / Easy to use
- Screw terminals for safe and easy installation
- Multi voltage: 120-240 VAC (includes 208 VAC)
- Output relay: 15A
- Large back-lit display for easy reading
- Class A GFCI: suitable for wet room installation

ProLine
Radiant Heat Solutions

Hydronic Heat

SNOWMELT AND FLOOR HEATING





Hydronic Radiant Floor Heating and Snow Melting Solutions

ProLine Offers Unmatched Service, Product Selection and Support

ProLine Radiant is a nationally recognized authority in the design and installation of hydronic radiant heating and solar hot-water systems. The products and services that ProLine offers are based on extensive training and years of field experience. ProLine is customer focused, consultative and unbiased in its product offerings, mechanical engineering services and installation approach. By utilizing ProLine's dedication and expertise, you can be confident in a complete and seamless radiant heat solution.

Preeminent Consulting and Analysis

ProLine provides free, no obligation consulting services by experienced professionals to ensure that you'll receive a thorough, upfront analysis of your project. We evaluate every aspect of the system to offer the best, complete solution to meet your specific needs.

Wide Selection of Proven Products

Unlike many radiant heat manufacturers and distributors that carry only one brand or limited product lines, ProLine offers a wide selection of the industry's most reputable solutions – all at competitive pricing.

ProLine hydronic system components are at the top of their class, so you can be assured that your radiant heat system consists of the most trusted components. From boilers and manifolds to pumps and controls, your system will consist of the very best in each category.

Complete Design and Engineering Services

You will receive a comprehensive set of engineering drawings that accurately describe each component of the system and give you a visual perspective on every key process, such as:

- Tubing installation (spacing, sizing, lengths)
- Manifold Placement
- Under Slab Insulation
- Distribution Line Installation (size, lengths)

Mechanical Equipment

- Boiler Systems
- Pump Boards
- Pipe Configurations
- Controls

Unmatched Installation Support

In addition to access to mechanical engineers and electricians, you can request an experienced radiant heat installer to come to your location and supervise the installation. Or, for a complete turnkey solution, you may request for ProLine to provide an entire hydronic installation crew.

The Radiant Heat Information Authority

By complementing its wide selection of superior radiant heat products with unmatched customer service and engineering expertise, ProLine Radiant has proven itself as the unbiased radiant heat authority, and trusted leader of radiant heat solutions.

ProLine makes the process of finding, purchasing and installing radiant heat systems easy for construction professionals. ProLine works directly with installers to make these systems a reality. For more information, visit us online at www.prolineradiant.com.

ProLine Radiant hydronic snow melting system's mechanical / boiler room (left) and photo of system installed under pavers (below).

ProLine
RADIANT HEAT SOLUTIONS

ProLine Leads the Way

The professionals at ProLine Radiant are among the most knowledgeable and customer service oriented experts in the business. Our commitment to service, which includes unparalleled design, training, and installation support, is just one reason why building professionals repeatedly choose ProLine for all their radiant heat projects.

"By working with ProLine, I feel like I have the best radiant heat partner working with me, so I never feel alone during the installation process. The designer, engineer and electrician are always there for me if I have any questions or needs. Their expertise ensures that the installation goes smoothly and the customer is satisfied."

David V. - Landscape

Summary of Benefits

Industry-leading Consulting Services

Wide Selection of Proven Products

Complete System Design and Engineering

Unmatched Installation Support (Including the option of onsite assistance)

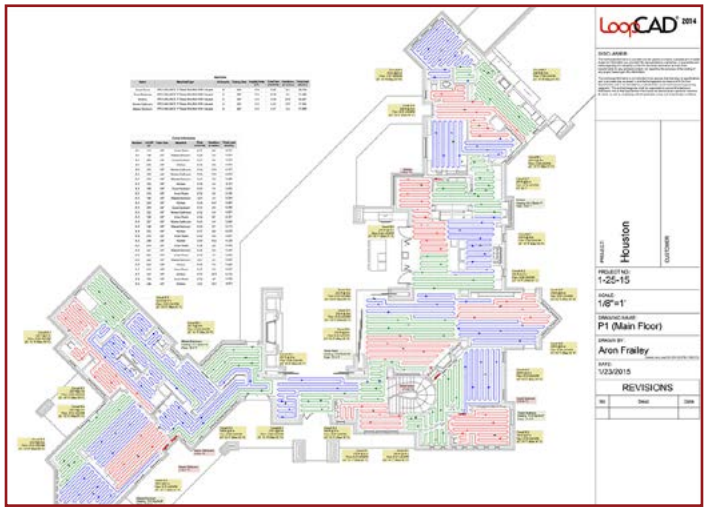
Comprehensive Information Resource

ProLine is committed to providing the best customer service in the business. You can be confident that the system design and components are among the very best in the industry. We have worked hard to earn our reputation as a trusted leader and we take pride in the national awards we have received:

First Place System Showcase (16+ zones*) – Radiant Panel Association

Second Place System Showcase (Simplicity) – Radiant Panel Association

From our wide selection of proven products to unmatched design, engineering and support services, ProLine is the premier radiant heat solutions provider. We're confident that if you compare prices, product quality and customer service, you'll choose ProLine.



Design for a hydronic floor heating system.

Your Complete Radiant Heat Solutions Provider

Residential, Commercial and Industrial Radiant Heat Applications

Residential Snow Melting

Heated Driveways
Porches and Steps
Ramps and Entry Ways
Sidewalks, Patios and Custom Walkways
Parking Areas
Portable Snowmelt Solutions
Custom Snow Melting Solutions

Radiant Heated Floors

Radiant Heat for all Types of Floor Surfaces
Retrofit Systems for Heating Existing Floors
Hydronic and Electric Floor Heating Solutions
Self-regulating Systems

Commercial Snow Melting

Critical, High-traffic Areas
Ramps and Loading Docks
Outdoor Shopping Malls
Sidewalks and Parking Areas
Federal Government Facilities
State Transit Authorities / Platforms
Helicoptor Pads
Custom Snowmelt Applications
Hydronic and Electric Snowmelt Systems

Roof Heating Solutions

Complete Roof Deicing Systems
Gutter Melt and Downspout Heating
Roof Edge (Panel) Heating
Most advanced Low-voltage Roof Heating

Included Services and Capabilities

Free Professional Consulting (**866.676.9276**)
Complete System Design and Engineering
Industry-leading Customer Service
Post-sales Technical Support
Most Advanced, Proven Products
Technical / Installation Support
Free Product and Installation Training
Free Quotes

ProLine Radiant specializes in providing custom radiant heat systems to match the specific demands of your project. If you have any type of heating need, contact ProLine today and let us help.

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