Plan for a safe & maintenance-free winter with Warmup®
Snow Melting Solutions

Why get a Snow Melting System?

The obvious part is that **not having to shovel** seems like a pretty good thing. But there are other advantages beyond convenience:

(1) A snow melting system also **protects you from liability**. If you own a business and worry about slip and falls, this is a reliable solution 24/7.

(2) **Pavement damage**: if you pay someone to shovel with a truck or a 4-wheeler, blades can cause damage to your concrete and reduce its lifespan. And over expensive pavers it is even worse.

(3) **Damage to landscaping**: the salt spread on your driveway or walkway doesn't mysteriously disappear. It dissolves with the melting ice and snow and runs into the concrete and surrounding landscaping. This will damage your concrete's top coat and can easily kill plants you'll have to replace in the spring.

What would you need to Install a Snow Melting System?

Getting a snow melting system is simpler than you'd think. Most systems are **comprised of 3 elements: a set of heating mats (or cables), a controller and a sensor.**
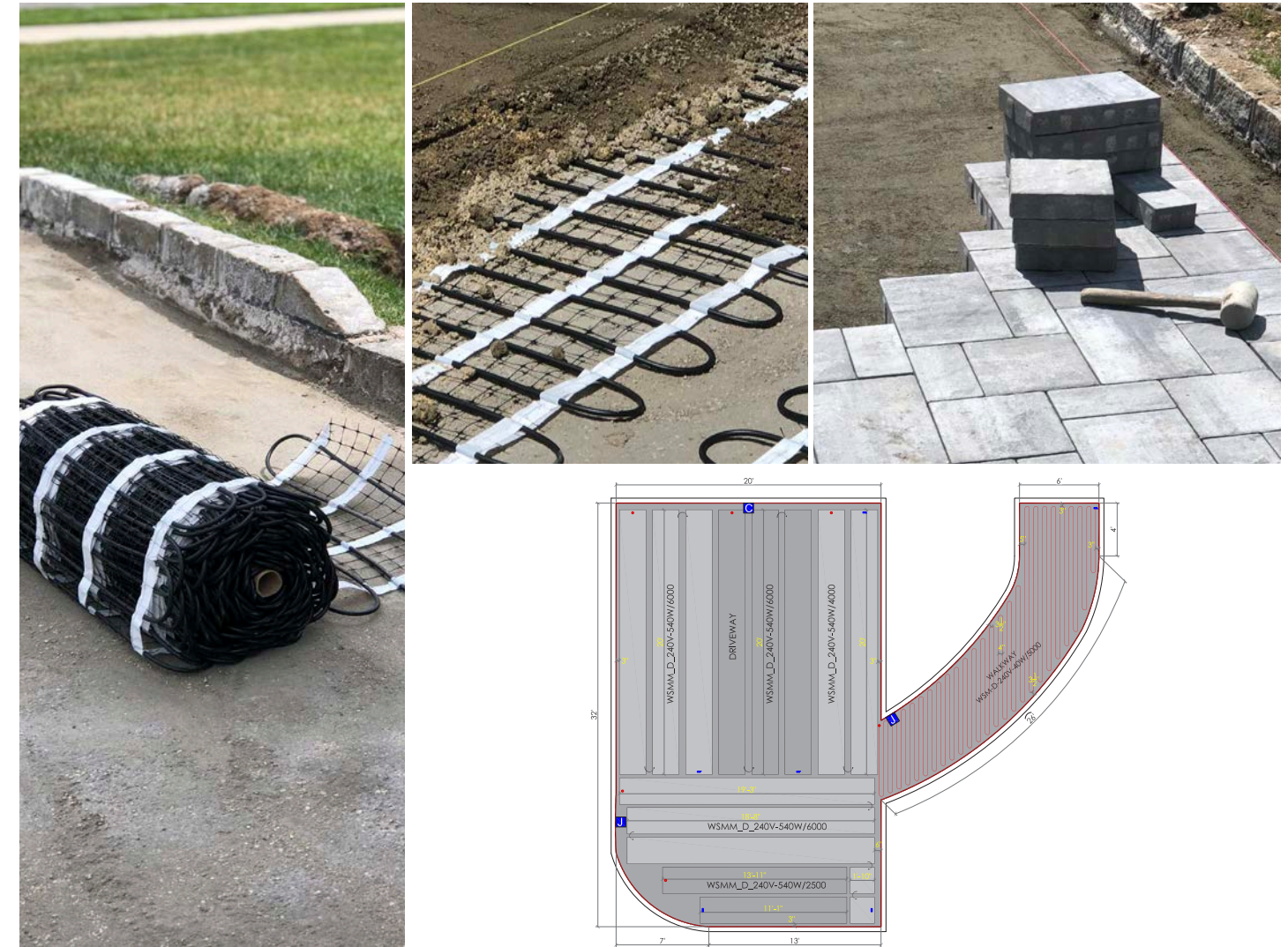
1. Heating Mats or Cables

2. Controller

3. Sensor

Residential Driveway

Size	Price	Type
750 Sqft	**$7,521.00**	**WSMM and WSM**

Total Area	750 sqft	
Heating System	3 2'x60' mats	$3,483.00
	2'x40' mat	$775.00
	2'x25' mat	$529.00
	420' of loose cable	$759.00
Controller	WSM-252W	$1,975.00
	Subtotal	$7,521.00

Specifications	
Voltage	240
Amps	122.9
Winter Cost to Run	$285
Total Wattage	29,500

Hydronic or Electric?

A snow melting system can be powered by a boiler with a glycol-mix circulating through tubes, or it can be powered by electricity running through cables. Both will deliver the same end result. Choosing one over the other can be a factor of utility costs in your area, but usually comes down to size.

Beyond 1,000 sqft it may be more cost-effective to consider a hydronic set-up. Costs will likely be higher upfront due to the mechanical set up required (boiler, pump, valves, etc) but may be more efficient over the long run. Below 1,000 sqft and most certainly for smaller applications like access ramps and residential walkways and driveways, electric systems can be compellingly effective because the low upfront cost to install the system.

But, "electricity is expensive..."

Not if your system runs efficiently. While a KiloWatt usually costs more than a Therm (gas), Electric systems only run for about 5 to 8 hours during a snow fall. Did you know that a Hydronic system runs 24/7 to prevent the liquid from freezing all winter?

When you take about 13 "snow events" in Chicago on a typical winter, that means your system will have run 13 x 8 hours. For a 12 Kw system (about 300 sqft) that means you'll have spent $149 for the whole winter running your driveway. True, electricity isn't cheap, but when used efficiently, it can be a lot less than you had imagined.

Designing your System

The main principle is that "it melts where it is installed". Because it is buried in sand (pavers, asphalt) or concrete you don't need to melt every square inch of your walkway or driveway. Typically a 2ft path on a 4ft-wide walkway suffices. Similarly, melting tire-tracks rather than the whole driveway can be very cost-effective.

While it is mostly a personal choice, tire-tracks are a great option unless you get no sun or passive melting on the driveway. You should also consider "run-off" and plan for the walkway or driveway to be heated so as to ensure melting snow and ice is routed away from the area.
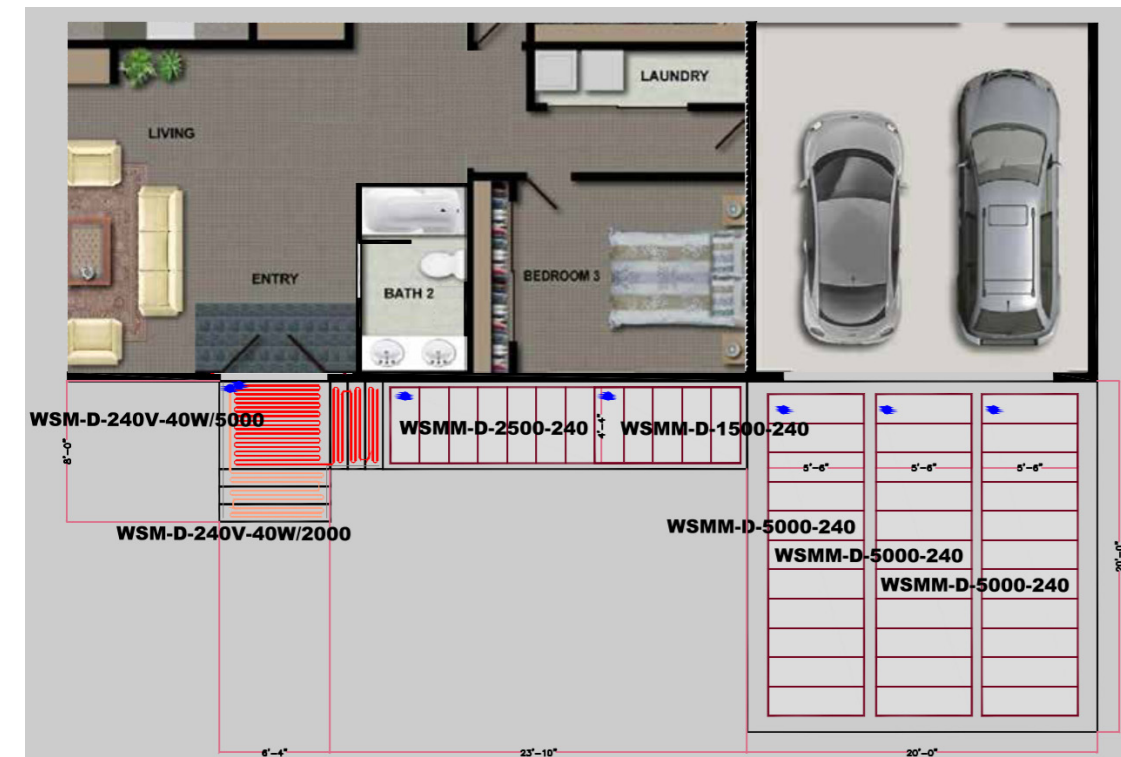
Cables or Mats?

Warmup offers convenient heating mats in 2ft and 3ft width. These are great for tire-tracks and straight runs. Cables are a better choice on steps and off-shaped areas with curves. Ultimately, both perform the same task at the same efficiency. Let Warmup design the best system by submitting your sketch or layout to ussales@warmup.com.

Voltage and Amperage

A typical system will be designed and operated at 240 volts. This is true for residential and commercial, but Warmup also offers commercial voltages at 208 volts, 480 volts and 600 volts (in Canada). Advanced systems can be wired on 3-phase power as well. Assume the easiest set up is a 240 volt system but let Warmup help you design the best system for you.

A key component of your project will be to determine that you have 'sufficient amperage to operate your system. It will typically take 60 to 80 amps to run a typical residential driveway, although that will vary with size. Check with your contractor or electrician what amperage may be available for your project. There are many options we can play with to design the right system for you. A quick estimate would be to account for 1 amp for every 6 sqft of heated area.

WSM-D-240V-40W/5000
WSMM-D-2500-240
WSMM-D-1500-240
WSM-D-240V-40W/2000
WSMM-D-5000-240
WSMM-D-5000-240
WSMM-D-5000-240

Snow Melting Mats

For regular layouts and spacing under concrete, pavers and asphalt pours.

Warmup systems are ideal to provide snow-free access to the house and prevent injuries on stairs and walkways.

They are commonly used in concrete pours, asphalt driveways and paved walkways.

Asphalt
Asphalt
Crushed Aggregate
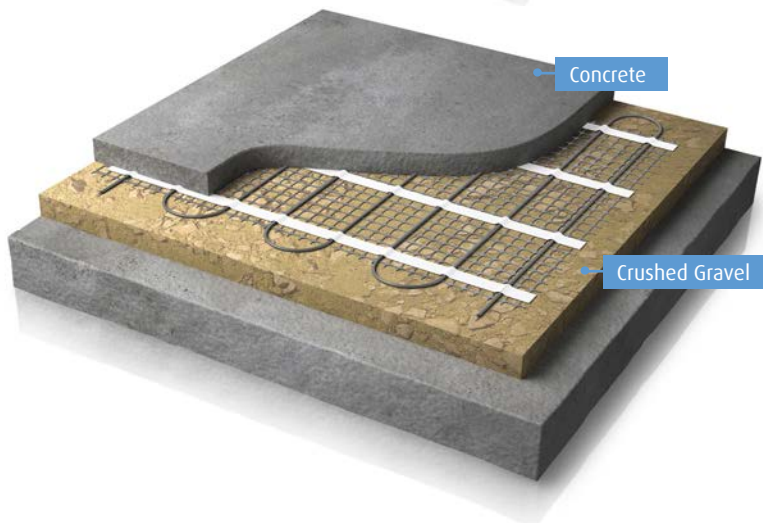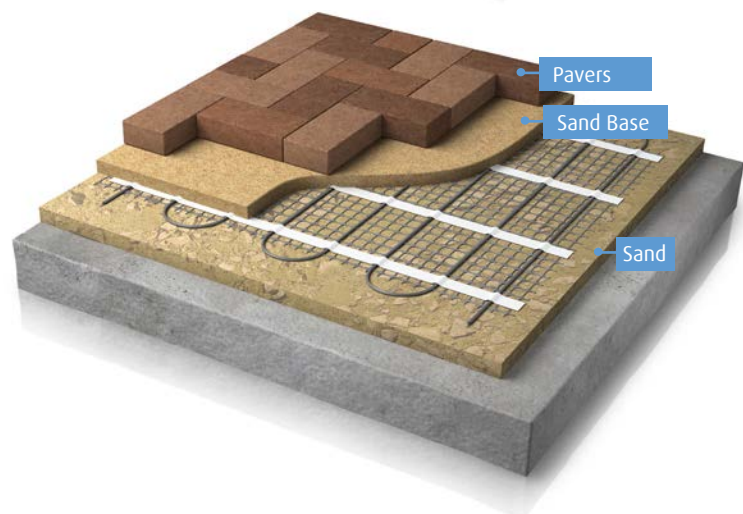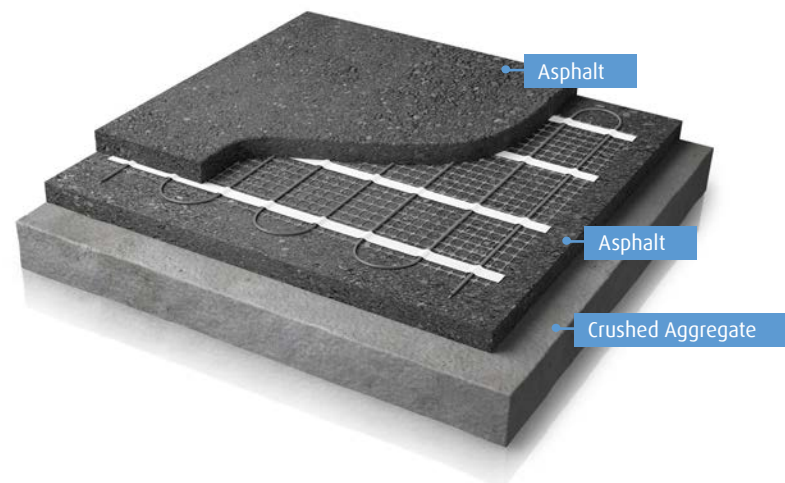
Mats are 2ft or 3ft wide and with a 3" cable spacing providing 50w/sqft for optimum results under even the harshest conditions.

FEATURES & BENEFITS

· Versatile installation in asphalt, concrete or under pavers

· Dual conductor cable, one-point connection

· Available in a wide range of lengths to suit your requirements

· Available in 2 ft and 3 ft wide rolls

Pavers
Sand Base
Sand

TECHNICAL DATA

· Operating voltage: 208, 240, 277, 480 and 600V

· Output rating: 50W/sqft at 240V

· Rated to a maximum temperature of 464°F (240°C) under asphalt pours

· Cold tail length: 16'4"

· 10-Year Warranty

Concrete
Crushed Gravel

Voltage	Area (sqft)		Mat Length (ft)	Wattage	Amps	Resistance (Ω)	Canada	USA
240V*	10	WSMM-240/500	5	500	2.1	115.20	$272.00	$217.50
	20	WSMM-240/1000	10	1000	4.2	57.60	$374.00	$298.50
	30	WSMM-240/1500	15	1500	6.3	38.40	$502.00	$401.00
	40	WSMM-240/2000	20	2000	8.33	28.80	$574.00	$459.00
	50	WSMM-240/2500	25	2500	10.43	23.00	$662.00	$529.00
	60	WSMM-240/3000	30	3000	12.5	19.20	$748.00	$598.50
	70	WSMM-240/3500	35	3500	14.6	16.46	$858.00	$686.50
	80	WSMM-240/4000	40	4000	16.7	14.40	$969.00	$775.00
	90	WSMM-240/4500	45	4500	18.8	12.80	$1,052.00	$841.50
	100	WSMM-240/5000	50	5000	20.86	11.50	$1,195.00	$956.00
	120	WSMM-240/6000	60	6000	25.0	9.60	$1,452.00	$1,161.00

Voltage	Area (sqft)	Code	Mat Length (ft)	Wattage	Amps	Resistance (Ω)	Canada	USA
240V*	30	WSMM-240/3x10	10	1500	6.3	38.4	$502.00	$401.00
	60	WSMM-240/3x20	20	3000	12.5	19.2	$748.00	$598.50
	75	WSMM-240/3x25	25	3750	15.6	15.6	$886.00	$708.50
	90	WSMM-240/3x30	30	4500	18.8	12.8	$1,052.00	$841.50
	120	WSMM-240/3x40	40	6000	25.0	9.6	$1,309.00	$1,127.00

*all mats can be connected to 208V and 277V, single phase and 3 phase power. Please check our Technical Data Sheets for variations to Wattage output and Amperage Load under different Voltages.

Voltage	Area (sqft)	Code	Mat Length (ft)	Wattage	Amps	Resistance (Ω)	Canada	USA
480V	30	WSMM-480/1500	15	1500	3.12	153.84	N/A	$401.00
	40	WSMM-480/2000	20	2000	4.16	115.38	N/A	$459.00
	60	WSMM-480/3000	30	3000	6.25	76.8	N/A	$598.50
	80	WSMM-480/4000	40	4000	8.33	57.62	N/A	$775.00
	120	WSMM-480/6000	60	6000	12.50	38.40	N/A	$1,105.50

Code	Accessories	Canada	USA
WSM-NMP	Branded Name Plate for use with Warmup Snow Melt Heater installations (NEC426-13).	$49.00	$39.00
ACC-DGMTR	The Alligator Tester - Digital Multimeter.	$25.00	$20.00
ACC-MEGG	Warmup's Digital Mega-Ohmmeter is used to track Insulation Resistance for installation Accuracy and Warranty Purposes.	$223.40	$197.80
SR-ZT-100	Bag of 100 Heavy Duty Zip Ties. 7" long. For use with WSM, WODH and SR cable series. 50lbs load bearing capacity.	$24.00	$19.00
RK-EO	Repair kit for Warmup® outdoor heating cable.	$12.77	$10.00

Snow Melting Cables

For custom layouts and spacing under concrete, pavers and asphalt pours.

Snow Melting Cables are the loose equivalent of the Mats. The cables are reinforced with advanced fluoropolymer coatings to form a cable jacket that can withstand traffic and setting material. Warmup's Cables are completely grounded and safe for installation under asphalt, pavers and concrete. Choose the loose format for stairs and off-shaped areas, and combine with Mats wherever necessary.

FEATURES & BENEFITS

- Versatile installation in asphalt, concrete or under pavers
- Flexible cable: quick and easy to install in every configuration
- Dual conductor cable, one-point connection
- Available in a wide range of lengths to suit your requirements

TECHNICAL SPECIFICATIONS

- Operating voltage: 208, 240, 277 and 480V
- Output rating: 12W / linear foot at 240V
- Energy efficient twin-conductor heating cable of 1/4"
- Wire jacket rated to take maximum asphalt pour temperatures of 464°F (240°C)
- Cold tail length: 16'4"
- 10-Year Warranty

Voltage	Length (ft)	Code	3"	4"	5"	Wattage	Amps	Resistance (Ω)	Canada	USA
240V*	84	WSM-240/1000	20	27	34	1000	4.2	57.1	$279.00	$223.00
	168	WSM-240/2000	43	57	72	2000	8.3	28.9	$445.00	$356.00
	209	WSM-240/2500	51	67	84	2500	10.4	23.1	$532.00	$424.00
	251	WSM-240/3000	62	84	104	3000	12.5	19.2	$614.00	$491.00
	330	WSM-240/4000	85	110	135	4000	16.90	14.2	$782.00	$625.00
	420	WSM-240/5000	100	140	170	5000	20.86	11.5	$949.00	$759.00
	500	WSM-240/6000	122	181	200	6000	25.0	9.6	$1,144.00	$915.00

*all mats can be connected to 208V and 240V, single phase and 3 phase power. Please check our Technical Data Sheets for variations to Wattage output and Amperage Load under different Voltages.
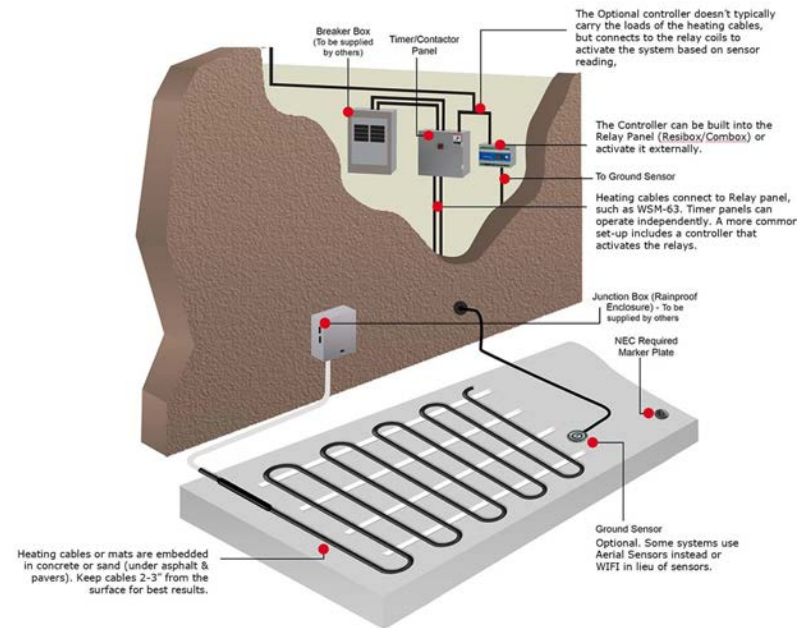
Voltage	Length (ft)	Code	Wattage	Amps	Resistance (Ω)	Canada	USA
480V	84	WSM-480/1000	1000	2.08	230.77	N/A	$236.00
	209	WSM-480/2500	2500	5.20	92.30	N/A	$449.00
	342	WSM-480/4000	4000	8.33	57.62	N/A	$662.00
	500	WSM-480/6000	6000	12.50	38.4	N/A	$941.00

Voltage	Length (ft)	Code	Wattage	Amps	Resistance (Ω)	Canada	USA
600V	84	WSM-600/1000	1000	1.7	360	$236.00	N/A
	209	WSM-600/2500	2500	4.2	144	$449.00	N/A
	342	WSM-600/4000	4000	6.7	90	$662.00	N/A
	500	WSM-600/6000	6000	10	60	$941.00	N/A

Code	Accessories	Canada	USA
WSM-NMP	Branded Name Plate for use with Warmup Snow Melt Heater installations (NEC426-13).	$49.00	$39.00
ACC-DGMTR	The Alligator Tester - Digital Multimeter.	$25.00	$20.00
ACC-MEGG	Warmup's Digital Mega-Ohmmeter is used to track Insulation Resistance for installation Accuracy and Warranty Purposes.	$223.40	$197.80
SR-ZT-100	Bag of 100 Heavy Duty Zip Ties. 7" long. For use with WSM, WODH and SR cable series. 50lbs load bearing capacity.	$24.00	$19.00
DCM-FB-82	Metal fixing strips to fix the heating cable - 83 ft long.	$131.00	$105.00
RK-OUTDOOR	Repair kit for Warmup® outdoor heating cable.	$12.77	$10.00

Sensors, Panels, and Controls

To control a system you will need two things: a relay panel and a controller. Often times, these two devices are put together in one unit. As an option, you may also need a sensor to trigger the system. Those are the 3 components needed, so let's look at your options:

Breaker Box
(To be supplied by others)

Timer/Contactor Panel

The Optional controller doesn't typically carry the loads of the heating cables, but connects to the relay coils to activate the system based on sensor reading.

The Controller can be built into the Relay Panel (Resibox/Combox) or activate it externally.

To Ground Sensor

Heating cables connect to Relay panel, such as WSM-63. Timer panels can operate independently. A more common set-up includes a controller that activates the relays.

Junction Box (Rainproof Enclosure) - To be supplied by others

NEC Required Marker Plate

Ground Sensor Optional. Some systems use Aerial Sensors instead or WIFI in lieu of sensors.

Heating cables or mats are embedded in concrete or sand (under asphalt & pavers). Keep cables 2-3" from the surface for best results.

The simplest set up is with a Timer panel like the WSM-63. This set up has all the relays built-in and has an adjustable timer that you can manually start to activate the system on snow days. There are no controls or sensors required.

An upgraded version of this is with the WSM-252, which offers the same feature as well as WIFI connectivity. This allows the device to activate based on the weather forecast once you download the Warmup WSM app .

Another great set up for smaller areas up to 300 sqft is with the DS control series. These devices are ideal for walkways, tire-tracks and residential projects. The sensor is built-into the controller and the heating mats connect directly to it. So there is nothing else to buy.

The more advanced set-ups will combine a smart panel with a sensor. A popular option for larger projects are the RESIBOX and COMBOX systems which can control large applications and have built-in GFEP protection. They are triggered by the AIRSENSE sensor mounted on the wall.

Snow Melting Controls

A control for every project and for every budget

DS Series
(ODC-ASE-DS2C/5C)

WSM-63 Timer Panel

WSM-252W WiFi Panel

Controllers

Code	Description	Canada	USA
ODC-ASE-DS2C	Wall-mounted controller with built-in sensor and 30A capacity (240V). For Snow Melting.	$844.00	$675.00
ODC-ASE-DS5C	Wall-mounted controller with built-in sensor and 2x30A capacity (240V). For Snow Melting.	$1,086.00	$868.50
ODC-CDP-2	Indoor control panel for ASE-DS controllers. Fits any single gang electrical enclosure.	$325.00	$260.00
WSM-63	Timer panel with 252A capacity. Operate manually as Timer, or combine with optional sensors.	$2,080.00	$1,663.50
ODC-RESIBOX3	GFEP protected 30A controller activates Snow Melting systems. Use with CIT, GIT and AirSense sensors.	$4,973.00	$3,978.00
ODC-COMBOX600	4x50A-3phase relays for this GFEP controller that can switch multiple zones. Plug-and-Play format.	$7,402.50	$5,922.00
WSM-252W	WiFi panel activates with the weather forecast and operates on Smartphone Application.	$2,468.00	$1,975.00
ODC-AIRSS	Outdoor moisture and temperature sensor.	$1,023.75	$819.00
ODC-AIRSS-B	Mouting bracket for AirSense sensor.	$259.00	$207.00
GF-1	In-line GFEP protection for one outdoor heating circuit up to 60A at 120/208/240V.	$811.25	$649.00
GF-2	In-line GFEP protection for two outdoor heating circuits up to 63A each at 120/208/240V.	$1,123.75	$899.00

PRO TIP: When GFEP is required by code, consider the in-line protection of the GF-1 and GF-2 instead of sourcing an expensive GFEP breaker.

GF-1

ODC-COMBOX600

WSM-252W WiFi Panel

Other available Controls and Sensors

Code	Description	Canada	USA
ODC-GIT-1	Gutter sensor. Measures moisture and temperature. Active below 38°F.	$1,369.00	$1,090.00
SM-SIT-6E	Surface-mounted snow and ice sensor. Detects moisture and temperatures. Triggers below 38°F for energy-efficient operation. Easy mounting in slabs with multiple conduit connections.	$3,163.00	$2,515.00
SIT-6E-H	Housing for SIT-6E sensor	$245.00	$196.00
ODC-ET02-4550	Programmable controller for roof and pavement applications, 115/230 VAC, 3 x 15 Amp dry contact.	$1,125.00	$899.00
ODC-ETOR-55	Roof Sensor for use with Snow/Ice Control USET02-4450 - Detects moisture, temperature and precipitation.	$624.00	$499.00
ODC-ETOG-56	Snow and Ice melting pavement sensor.	$874.00	$699.00
ODC-ETOK	Installation cup for the Snow and Ice Melting Ground Sensor USETOG-56.	$111.00	$88.69

Warmup

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Warmup Inc.
USA

T: (888) 927-6333
F: (888) 927-4721

www.warmup.com
ussales@warmup.com

Warmup Inc.
Canada

T: (888) 592-7687
F: (888) 927-4721

www.warmup.ca
ca@warmup.com

Warmup Inc.
Mexico

T: +52 (55) 8114 0145
o +52 (55) 8114 0146

www.warmup.com.mx
mexico@warmup.com

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