50W Outdoor Heating Cable

Heat Mat
Ice & Snow Systems

Call 01444 247020 to find out more or visit our website

www.iceandsnowsystems.co.uk

Heat Mat Outdoor Heating Cable

Cost-effective and robust outdoor heating cable

10mm Black Outdoor Heating Cable

A high-quality uniquely designed cable suitable for heating beneath virtually any exterior surface. The cable forms the major part of Heat Mat's industry leading ice and snow melting systems for ramps, driveways, car parks, pathways and steps. This cable can be used to heat the full width of ramps and drives, or just the tyre tracks.

The sacrificial outer layer of insulation enables the cable to be directly covered with hot asphalt, saving time and costs when compared to a non heat-resistant cable.

The high output cable ensures that installation time is kept to a minimum, as roughly half the cable length is required compared to standard heating cables.

The cable offers great value for money when compared to trace heating cables and also benefits from a fixed-Wattage output simplifying the electrical connections and supply. As the cable requires the same electrical feed (whatever the conditions) the required Amp rating of the supply does not vary as it would with trace heating.

All systems should be controlled by one of Heat Mat's ice and snow melting thermostats, which can use temperature and moisture sensors to ensure the system runs efficiently.

To simplify installation a professional grade metal drum can be purchased to allow easy unravelling of the heating cable on site. A full refund is provided if the drum is returned to Heat Mat following installation.

- Suitable for installation beneath virtually any exterior surface
- Hot asphalt can be laid directly onto the cable, allowing a speedy and cost-efficient installation
- Constant Wattage output simplifying the electrical supply requirements
- High output per linear metre ensures a fast installation due to the low number of cable runs
- When used with one of Heat Mat's intelligent thermostat timers, provides an exceptionally energy-efficient ice and snow melting system
- 3-Phase systems and bespoke sizes of heating cable are available for large projects where required
- A cost-effective option for Ramp Heating; outputs of up to 400W/sqm are possible if a particularly fast-reacting system is required
- Very cost effective to operate; in an average winter the system could be required to run for roughly 30 hours, meaning an electricity cost of less than £1 per metre

Product code	Length	Wattage	Resistance	200W/m² c-c 25cm	250W/m² c-c 20cm	300W/m² c-c 16.5cm
HDS-50W-021M	21m	1.05kW	55Ω	5.25m²	4.2m²	3.5m²
HDS-50W-085M	85m	4.25kW	14Ω	21.25m²	17.0m²	14.2m²
HDS-ALU-DRUM	Returnable metal drum to be used for cable dispensing					

Outdoor Cable Features

- Specifically designed for ice and snow melting of drives, walkways and ramps beneath asphalt, concrete, block paving and resin
- Ensure ramps and drives are safe for use whatever the winter weather
- Systems can be fully automated to kick in whenever they are required
- Can be used to heat the entire surface of a drive or ramp, or just the tyre tracks
- Can withstand hot asphalt being poured directly on top of the heating cable, speeding up installation
- Incredibly fast to install when fitted directly onto reinforcement fabric
- Improved safety for vehicles and pedestrians in temperatures down to -40°C
- The constant Wattage output of the cable simplifies the electrical connections and power requirements, when compared to ramp heating with trace heating cables
- Alter the distance between heating cables to create a system with your desired output
- Robust cables, designed to be 'building site' safe
- Made in our BEAB Approved factory in Denmark
- Supplied with a 10-year warranty

Compatible with

Ice & Snow Thermostats

Choice of output

For normal installations we recommend an output of between 250 and 300W/m^2 which provides a good balance between speed of operation and power requirements. Often the limiting factor to the size of area which can be heated is the available power supply on site, and with restricted power supplies it is often possible to specify a lower powered system which will still clear the ice and snow. An alternative method is to zone the system so that the restricted power supply can heat zones sequentially, lowering the overall power requirement for the system.

Choice of coverage

For most ramps, driveways and walkways the entire area would be heated to provide a uniform heat. In some circumstances, such as long driveways or where the power supply is restricted, it can be preferable to heat targeted areas. The most common example of this is to heat two tyre tracks on a ramp or driveway, or to heat a specific proportion of a pedestrian walkway.

Installation Methods

There are a variety of installation methods for the heating cables which vary according to the finished surface. An overview of the three most popular installation methods is detailed below; please contact Heat Mat technical support for more details or to discuss your individual requirements.

Hot Asphalt and Resin

Hot asphalt can be poured directly on top of these cables which offers a huge advantage over conventional systems. The base layer that the cables are going to be placed onto should be firm, level and should not contain any sharp elements which could damage the cable.

A flexible wire mesh should be placed in 1.2m strips across the area to be heated, with 2m between each strip. The cables can then be cable-tied onto the mesh at the appropriate spacing. The coldtail connection and coldtail lead are not designed to come into direct contact with hot asphalt so these should be covered with tile adhesive, cement or cold asphalt ahead of covering the main area. A minimum depth of 50mm of hot asphalt should be poured on top of the system and this can be compacted with a light roller if required. If a resin finish is desired this can be laid once the asphalt has cooled.

Concrete

Heating cables are often installed into concrete bases as concrete is particularly prone to damage from rock salt and freeze/thaw activity. The standard installation method would be to level the existing base and place a reinforcement fabric or rebar grid onto this layer. The grid should be raised at least 10mm above the base layer to allow total encapsulation of the cable by the concrete. The cables should be cable-tied in place on the grid at the appropriate spacing. There is no need to provide any additional protection to the coldtail connection or coldtail itself. The concrete can now be poured and it should form a layer with a minimum depth of 50mm; the concrete mix must not include sharp aggregate as this could damage the cables.

Block Paving

Care must be taken not to drop any paving slabs onto the cable during installation as these could damage the heating system. The normal method of installation would be to level the current surface and lay a 60mm layer of sand/grit then compact this as required. A flexible 1.2m wide wire mesh is then laid on top, with 2m between each run, and the heating cables are cable-tied in place. A further 40-50mm layer of sand/grit is then laid on top of the cables and this layer is compacted by hand to ensure no damage. Block paving can then be laid; to achieve the greatest benefit from the heating system, blocks should be no more than 80mm thick.

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TECHNICAL SPECIFICATION

Supply Voltage	230V+/-10%
Output range	1.05kW - 4.25kW
Maximum load	55W per metre
Standard range	21m - 85m
Coverage at 250W/m^2	4.2m^2 and 17.0m^2
Coverage at 300W/m^2	3.5m^2 and 14.2m^2
Coldtail lead	5m double insulated cable
Wire thickness	10mm
Cable flexibility	Minimum radius 100mm
IP rating	IPX7
Inner insulation	0.8mm silicon rubber (2G)
Second layer insulation	PVC (105) 90°C
Sacrifical insulation	PVC 1.2mm
Earth protection	100% aluminium earth shield
Cable reinforcement	Fibreglass strands
UV stability	UV stable Not suitable for open air use
Fixing materials	Choice of methods available
Compliant with	17th Edition IEE Wiring Regulations, 2006/95/EC

Wiring

Heating cables must always be controlled by a suitable ice and snow melting thermostat with temperature and moisture sensors as appropriate.

The circuit must be protected by a 30mA RCD and appropriate rated fuse, or circuit breaker.

Made in Denmark

About Heat Mat

With more than 1,400,000m^2 of underfloor heating installed, 22 years' experience of the UK underfloor heating market and a wealth of knowledge on Scandinavian ice and snow melting systems, you can rely on Heat Mat to understand your needs and supply the products to satisfy your requirements.

This is why we are the Professionals' Choice, the number one supplier of electric underfloor heating and ice and snow melting systems to the UK's professional installation market.

Contact us

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Version 2

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