



# Warmup®

The world's **best-selling** floor heating brand™

## North American Projects Division 2019



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## Who is Warmup®?

More than 25 years ago, Warmup® set out to become the world's most trusted provider of innovative underfloor heating solutions.

Our strategy focuses on the creation of the best products, best service, best warranties and the harnessing of the most advanced information on product safety and capabilities through proprietary research & development.

The combination of heating wire with fluoropolymer coating and thermostats are patented, trademark protected, designed and owned by Warmup®.

We now occupy a world leading position in our field, selling more than 2.1 million systems in over 70 countries.

## About Our Systems and Services

We will assist you every step of the way. From choosing the right systems for the floor structure and finished floor surface to the design and supply of your project, Warmup is here to help.

Using our range of products, talent and research, we will design your system from start to finish.

We will quote the project and provide installation plans within 2 days.

We can provide clear calculations of running costs for the end user and comparisons between different types of systems to allow informed choices at the right decision stage.

We have a 24/7/365 customer service helpline and a national engineering team to assist in all matters. These service levels are unique to Warmup®.

**Think Warmup®.**



# Think

The **best service**  
standing behind  
the **best products** with the  
**best warranties.**

**The Project:** 685 First Avenue

**The Location:** Manhattan, New York

**About:** The 685 First Avenue site is a 32,365 sqft parcel located between East 39th and East 40th Streets on First Avenue in New York City, south of the United Nations Headquarters along the East River. It is a prominent location in Manhattan. The 2-story, 460-foot high residential tower provides 556 rental and condominium apartments and will feature panoramic views of the New York City riverfront.

**System specifications:** Custom Mats | Perimeter heat 39 Floors and Lobby | 4iE-03 Thermostats

Underfloor heating makes a space more luxurious **without** compromising the design.

It is the **most energy efficient** way to heat a space.

As our **2 million customers** tell you:

**Think Warmup®.**

## Why Underfloor Heating?

The purpose of a heating system is simply to provide thermal comfort, however it is much easier to define when we're uncomfortable. We do not really notice when we're comfortable, we do however notice when we are too hot or too cold, when the air is too dry or there is a cold draft. This is where underfloor heating comes in.

There are many different heat emitters available today. The current market leader in terms of sales value is radiators. Radiators have been the default method of installing central heating for many years, so why is underfloor heating consistently taking market share from radiators year after year to become a \$4.5 billion market growing at 9% per year?

- ✓ With very little convection generated by the underfloor heating system, less dust and other allergens are picked up and circulated within the air
- ✓ The drier floors are inhospitable to dust and carpet mites which normally thrive on the moisture deposited on cold floors by the warm air
- ✓ Walking over an unheated tile or stone finished floor bare foot is no longer something to be "feared", but something to be relished
- ✓ There is total design freedom with no radiators or other heat emitters taking up floor or wall space, giving you much more usable space to plan with
- ✓ Our advanced thermostats, incorporate decades of knowledge from our in-house research and our post occupancy monitoring scheme
- ✓ The minimal circulation of air allows our thermostats to accurately control the air temperature in each individual room, heating each room only when it is needed, rather than heating the whole house because you would like to be warm when you eat your breakfast in the kitchen each morning
- ✓ Our thermostats and their sensors are placed in the best locations available to give accurate temperature control, rather than being fixed to the side of the heat emitter in the heated air flow whilst trying to regulate the air temperature meters away
- ✓ Underfloor heating requires NO maintenance
- ✓ It has been proven that the radiant heat from underfloor heating allows comfort at a lower temperature than forced air systems

# Think

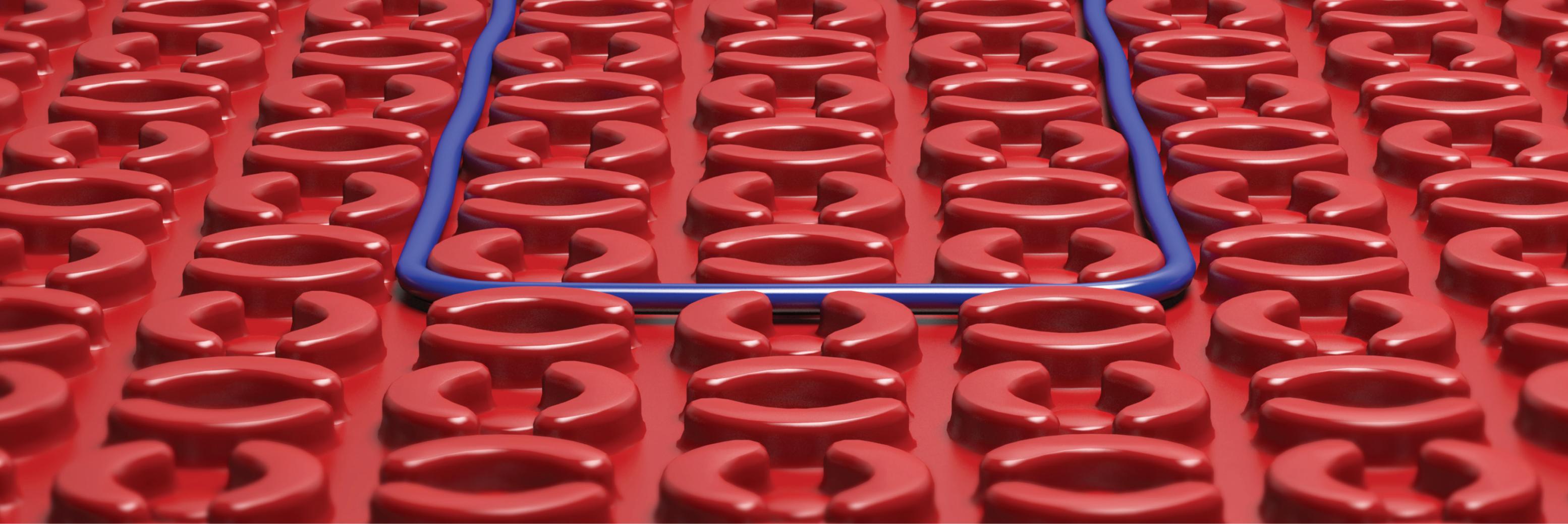
Over 20 years of  
Research-driven  
Knowledge and  
Experience - creating  
Innovative new products  
that we stand behind.



**The Project:** 15 Hudson Yards, NY

**The Challenge:** Warmup was specified to heat 70 bathrooms, 1 per apartment, at 15 Hudson Yards. The most significant challenges for this project were to seamlessly fit into a large construction plan while still taking the time to ensure that each space had a proper installation of underfloor heating.

**The Solution:** The Warmup team provided detailed plans for this installation and performed an onsite training to prepare for the challenges we anticipated ahead. With a well-equipped team on site and Warmup on call, an ideal installation took place. The Result: Electric underfloor heating mats were installed in each of the apartments bathrooms and connected to a Warmup 4iE® thermostats. After a day spent walking around New York City, these bathrooms are the perfect place to rest a pair of tired feet. A simple bathroom upgrade in these project plans will provide comfort and luxury at an incredibly affordable price for years to come.



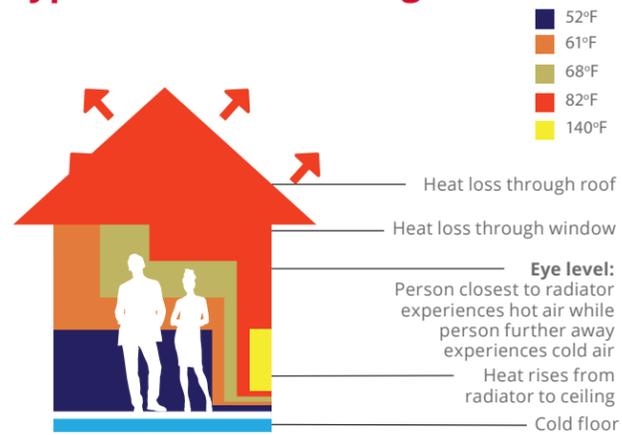
## DCM-PRO

Installation of Warmup® DCM-PRO Floor Heating System combines the DCM-PRO Heating Cable, the uncoupling system DCM-PRO anti-fracture Membrane and the 4iE® Smart WiFi Thermostat.

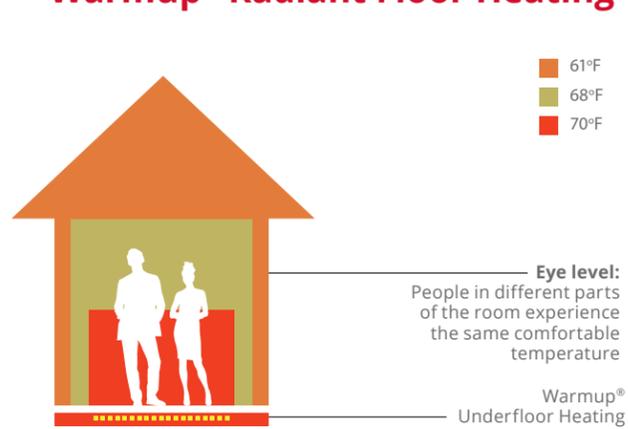
The DCM-PRO Membrane is the highest-rated anti-fracture membrane for floor heating systems with a lifetime warranty.

# Think Warmup.

## Typical Central Heating



## Warmup® Radiant Floor Heating



## Most importantly underfloor heating is more energy efficient than the alternatives.

We've explained how less heat is lost by eliminating the overheated air that passes over the windows and pools at the ceiling when using radiators or forced air. However, that same cycle of air movement means that while localized spots of the room are brought up to temperature quickly, they are up at ceiling height. Underfloor on the other hand, gently warms the entire room in unison from the ground up, getting the occupied portion of the room to a consistently comfortable temperature first.

We've also covered how our underfloor heating is easily tailored to complement your lifestyle using our controls. Whilst with a Warmup® underfloor heating system you would only be heating the rooms currently being used, with less advanced systems you will be heating the entire house, wasting energy unnecessarily.

In fact it is likely to account for 20% of the energy used to heat those rooms each year and for no benefit. For one hour's use in the morning, our research suggests that you would have to pre-heat each room with an alternative heating system for up to an hour to get the occupied space comfortable. Doubling the time the heating is on from 1 to 2 hours.

There is still a pre-heat period with our underfloor heating, but it can be as little as 30 minutes to get the room more up to target temperature. Consequently, in this scenario the total running time of our underfloor heating is only 1.5 hours, 25% less than the alternative heating systems.



# The Cost of Not Using Underfloor Heating

It is easy to dismiss underfloor heating on grounds of cost, because there is a common misconception that it is more expensive than gas central heating. In fact, underfloor heating uses a lower temperature

than standard radiators; heating costs are reduced and savings can be achieved saving at least 10% on energy bills.

## Research & Development Leadership

The combined purchase and installation cost of an electric underfloor heating system is low, comparable to that of a conventional forced air or baseboard system, and that's excluding the cost of the furnace or boiler.

While electricity is a more expensive source of energy than natural gas, the Warmup® electric underfloor heating systems are exceptionally efficient and maintenance free.

The cost of a care plan, or the one off costs in its absence means that the running costs are also very similar.

By comparison baseboard heaters suffer wear and tear, and need to be replaced.

**As time passes, the cost of *not* using underfloor heating only increases.**

# Research and Development

At Warmup® we have invested millions of dollars into our research and development program to invent, innovate and improve upon our products and systems.

In addition we have created a unique product performance database which we use to offer energy and running cost advice for all of our systems.

**This is unique to the industry.**

## Research & Development Leadership

By continually investing in research and development, Warmup® is able to foresee and respond to upcoming industry trends and technological developments.

This guarantees you fast access to the latest innovations when it comes to underfloor heating design, energy efficiency and reducing CO<sub>2</sub> emissions.

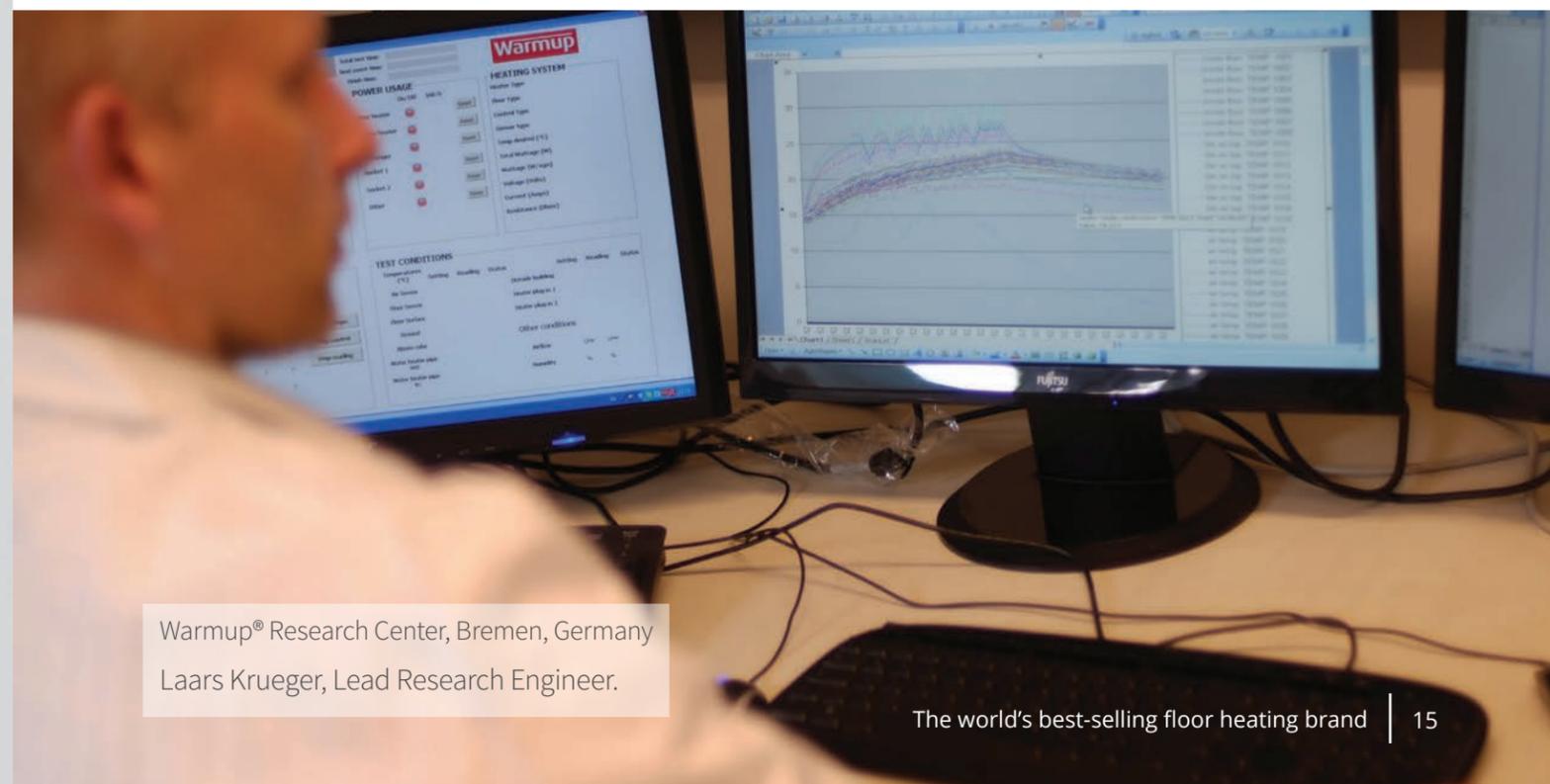


## Warmup® Research Center, Bremen, Germany

In order to establish and preserve industry thought leadership, Warmup® developed its own EN442-2 Research Center in Germany. This series of separate test environments together with the dedicated analysis centre is integral to the Warmup® business.

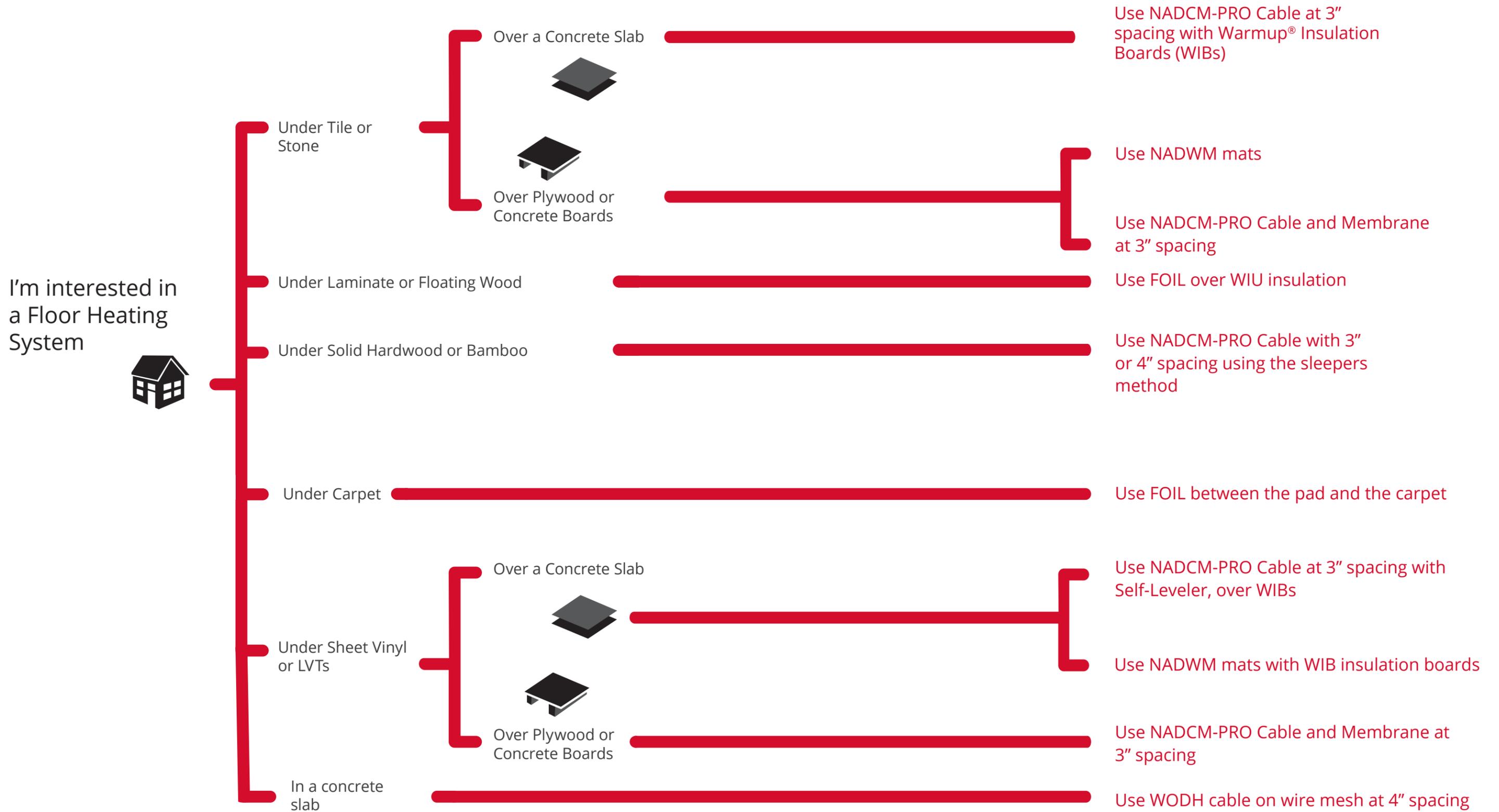
This is the main center for invention, innovation and improvement and coordinates worldwide contribution from all Warmup® offices. Results, experience and knowhow is shared with our offices and business partners around the world.

This can range from new wire and pipe types and formats, system control configurations through to materials testing for our partners products. This Research Center is run jointly with the Product Development Division.



Warmup® Research Center, Bremen, Germany  
Laars Krueger, Lead Research Engineer.

# What Floor Heating Product Should I Use?



# Warmup® Electric Systems

Warmup® provides electric underfloor heating systems for use as both primary and secondary heat sources within a zone.

The heating systems use the most technically advanced, 2mm thick fluoropolymer coated cable that will operate, maintenance free, for the lifetime of the floor.

Our low mass, responsive electric underfloor heating solutions help to achieve excellent energy efficiency, making them suitable for use in new builds, refurbishments and renovations.

They can be installed under a wide range of floor finishes, including tile, vinyl, laminate, wood and carpets.

## DCM-PRO Uncoupling Membrane

Fleece-backed or Peel-and-Stick

The TCNA-tested DCM-PRO anti-fracture Membrane can be installed on wood and cement subfloors using any tile adhesive. The patented DCM-PRO design allows for more adhesive to connect with the cable thereby distributing

the heat more evenly. There is no waiting required after installation so you can begin laying the flooring immediately.

Installers can use either modified or unmodified adhesives over the membrane to suit their installation needs. The DCM-PRO Membrane can even be covered with self-levelling mortars (SLU's) to allow installation of small format tiles and other floor types such as glue-down wood and LVT's, to be laid on top of the DCM-PRO System. The unique design of the DCM-PRO Membrane

protects the cable from installation damage leading to a reduced risk of cable failures.

The membrane has been successfully tested to ANSI A118.12 standards and performed well on the Robinson test (ASTM C-627). It is the highest-rated membrane for floor heating systems.



### ANSI A118.12: High Performance

The Warmup® DCM-PRO showed no sign of movement at 1/8" subfloor gaps on all three tests performed by the TCNA.

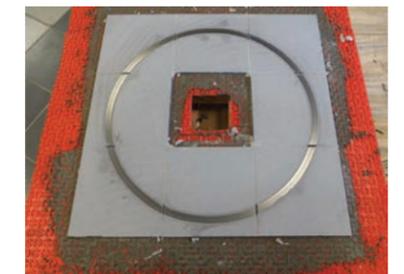
It is entirely mold proof and reached over 100 PSI bond strength at the 7-day shear strength test (high performance is >50 PSI).



### Robinson Test - ASTM C627

"EXTRA HEAVY" Commercial Rating

The Warmup® DCM-PRO Membrane completed all 14 cycles with no visible damage over a wood subfloor mounted on 19" o/c beams.



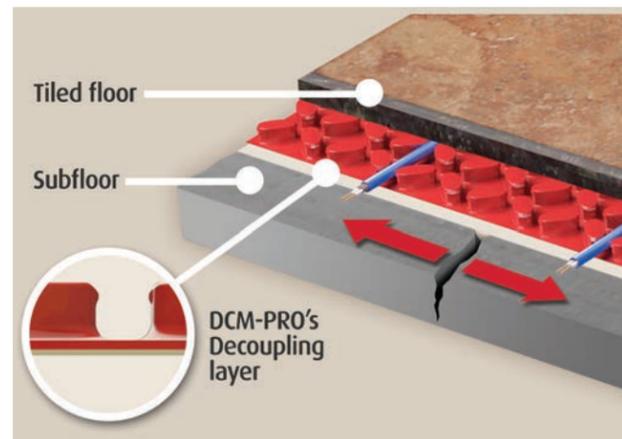
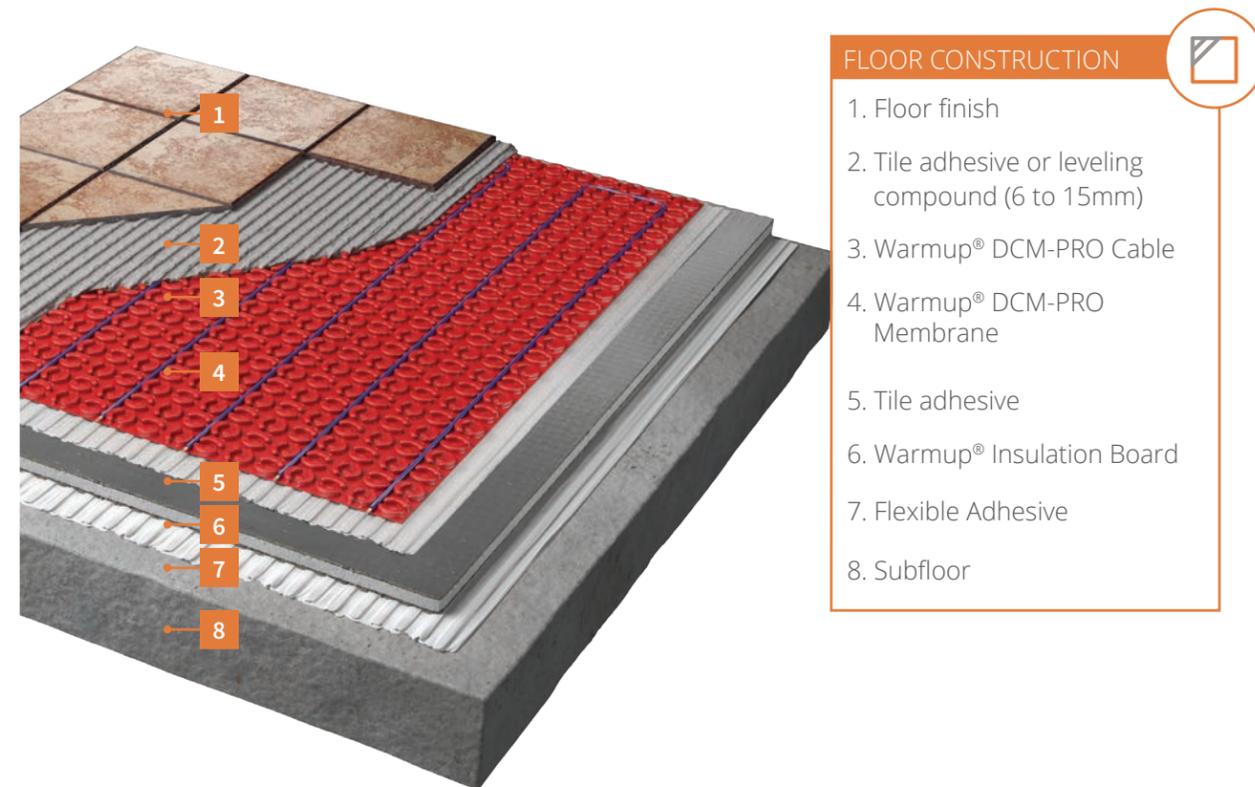
Robinson Test American Standard



## Warmup® DCM-PRO Fleece-Backed

A Membrane can replace a second layer of plywood/concrete board and reduces the risk of tile cracks caused by movement in the flooring assembly. When integrated with Cable, the Membrane system is a best-in-class integrated uncoupling, waterproofing, and floor heating solution. The unique design of the DCM-PRO Membrane protects the cable from installation damage leading to a reduced risk of cable failures.

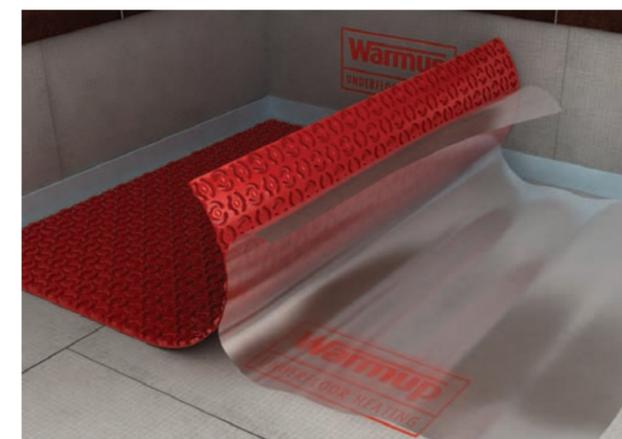
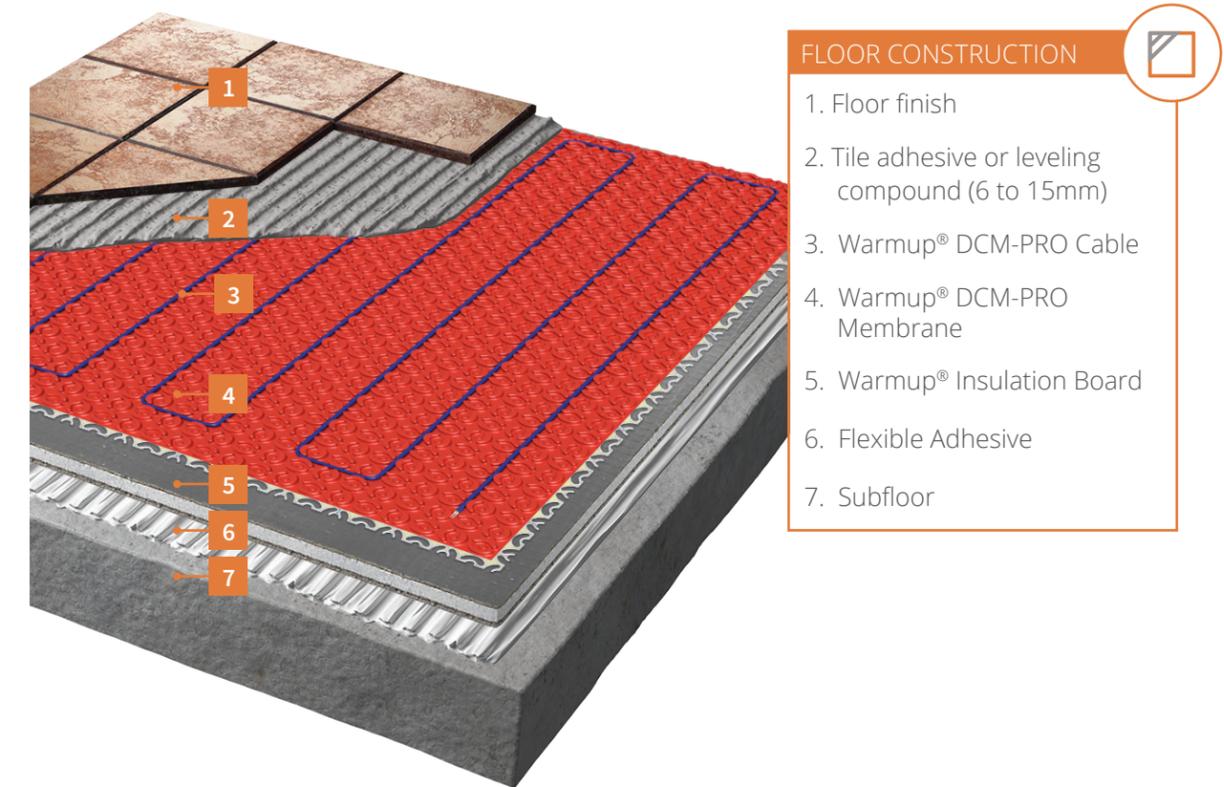
The TCNA-tested DCM-PRO anti-fracture Membrane can be installed on wood and cement subfloors using any tile adhesive. The membrane has been successfully tested to ANSI 118.12 standards and performed well on the Robinson test (ASTM C-627). It is the highest-rated membrane for floor heating systems



## Warmup® DCM-PRO Peel-and-Stick

The TCNA-tested DCM-PRO Peel-and-Stick Membrane can be installed directly onto clean plywood and concrete subfloors without thinset. The patented DCM-PRO design allows for more adhesive to cable contact ultimately distributing heat faster and more evenly. The unique design of the DCM-PRO Membrane protects the cable from installation damage, reducing the risk of

cable failure. Installers can use either modified or unmodified adhesives over the membrane to suit their installation needs. The DCM PRO Peel-and-Stick Membrane has been successfully tested to ANSI 118.12 standards and performed well on the Robinson test (ASTM C-627). It is the highest-rated membrane for floor heating systems and the first of its kind to adhere without the use of thinset.



# Warmup® StickyMat™ System

The Warmup® StickyMat™ System is designed for use within the adhesive layer under tiles or within a levelling compound under other floor finishes.

The fixed spacing and self-adhesive mat makes installation of regularly shaped rooms quick and easy whilst ensuring precision is maintained.

The StickyMat System is ideal for installations within regularly shaped areas, where 20" or 3' wide mats can be quickly rolled out across the floor in parallel runs.

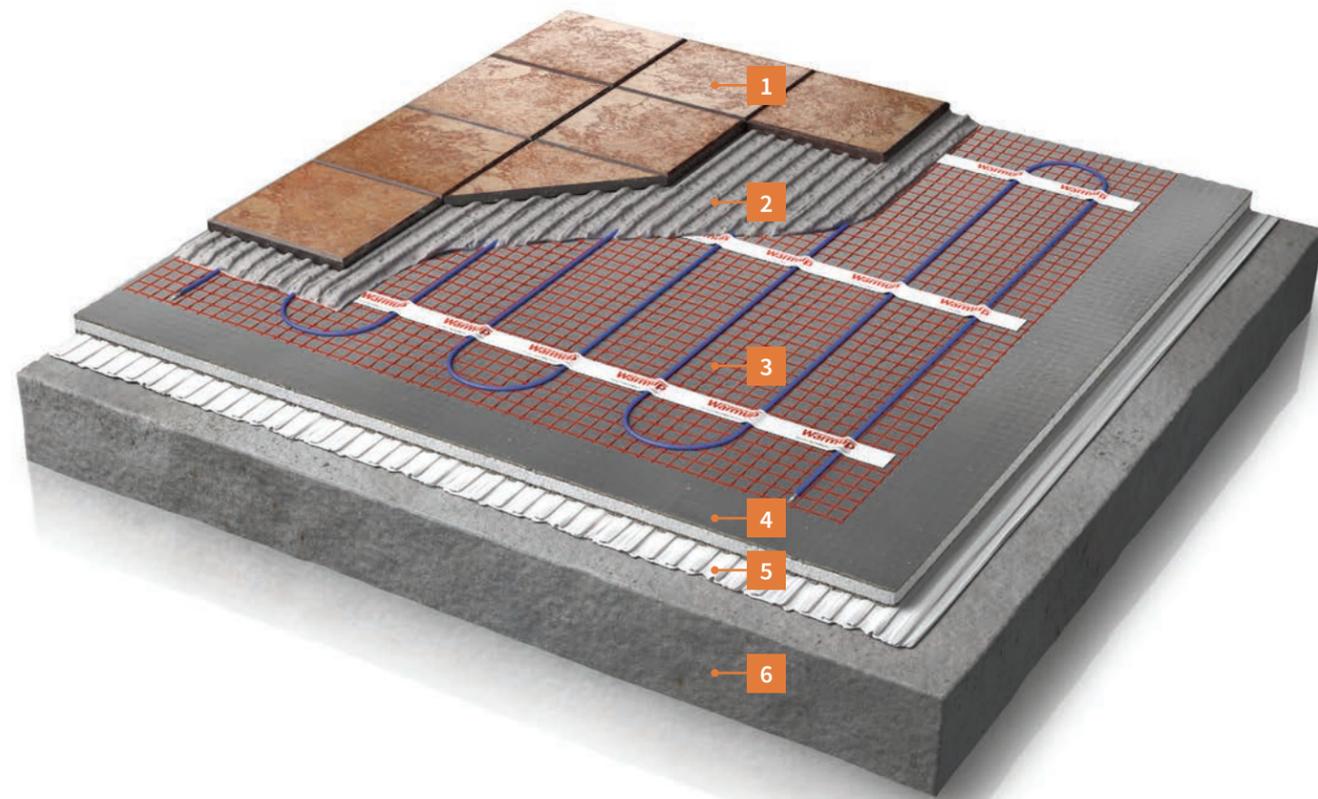
For floors using a vinyl, carpet, timber or other UFH compatible floor finishes including tiles, the system can be covered with a levelling compound to provide a flat and level floor surface.

The pressure sensitive adhesive securely binds the mats to the floor, keeping them flat and ensuring the application of tile adhesive is snag free whilst allowing the mats to be easily repositioned as needed.

Alternatively, the Foil Heater System offers a completely dry construction that does not require a levelling compound.

## FLOOR CONSTRUCTION

1. Floor covering
2. Tile adhesive or leveling compound
3. Warmup® StickyMat™
4. Warmup® Coated Insulation Board
5. Warmup® Flexible Adhesive
6. Subfloor



## System Description

Once the subfloor is prepared, Warmup® Cement Faced Insulation is bonded to it. The StickyMats™ are then rolled along the length of the area to be heated, being cut and turned at the ends until the heated area is fully covered.

The tiles are then laid as usual over the insulation and the StickyMats™ to complete the floor.

## Features

StickyMats have a heat output of 14watts per square foot making them ideal for use as the primary heat source within modern homes and most older properties. The StickyMat, like the Warmup® Loose Wire System, comes with Warmup's Lifetime Warranty to provide complete peace of mind.

## Technical Information

The ultra-thin, 1/8" multi strand, dual core heating cable, is double insulated with an advanced fluoropolymer making it exceptionally tough and easy to tile over. With UL component approval, this marked heating element meets the highest safety

standards for ultimate peace of mind.



**CASE STUDY:** 27th St & Queens Plaza S - Long Island City, NY

**Client:** Raymond Chan Architect PC.

**About the Project:** In this case study, Warmup® provided Raymond Chan Architect a solution to heat loss caused by window area and perimeter wall drafts.

[www.warmup.com/underfloor-heating-case-studies](http://www.warmup.com/underfloor-heating-case-studies)



# Warmup® Foil Heater System

The Warmup® Foil Heater System is an electric underfloor heating system for laminate, engineered wood and other floating floor finishes.

The Foil Heater is fitted between the insulating underlay and the floating floor deck, adding negligible height to the installation.

## System Description

The Foil Heater System is optimized for use under floating wood floors, especially as a direct application under both engineered wood and laminate floors. For carpet installations, the FOIL Heater System installs between the insulation pad and the floor level.

## Features

The fiber reinforced foil provides a continuous earth layer within the floor construction whilst also diffusing the heat away from the heating cable. In combination with its integral earth layer the UL rating of the foil heater offers an exceptional level of electrical safety not found in alternatives such as carbon film heaters.

## Technical Information

The fibre reinforced foil is wrapped around a thin multi strand, dual core heating cable that is insulated with an advanced fluoropolymer.

This robust combination allows us to offer a 15 year warranty with full confidence in the products performance and its ability to provide years of maintenance free heating.



### FLOOR CONSTRUCTION

1. Floor finish
2. Warmup® Foil Heater
3. Warmup® insulated Underlay
4. Floor deck
5. Insulation
6. Joists



### CASE STUDY: The Yoga Hub – Belleville, ON, CANADA.

Shelagh and Phil approached Warmup® while setting out on an exciting business venture: remodeling a space into their dream yoga studio. Warmup® was happy to be considered as a contributor to the project.

[www.warmup.ca/case-studies](http://www.warmup.ca/case-studies)



# Warmup® Inslab System

The Warmup® WODH cable is used specifically for thermal storage heating in building foundations. There are other more specific applications for this cable (see Applications) but its main purpose is to heat a thermal mass.

This can then release the heat over a long period of time. This is particularly useful for buildings operating on solar power or benefiting from dual tariffs or electric rates (low cost at night, high cost during the day).

## System Description

The In-slab cable system is designed for installation in concrete slab of 2" to 4" (50mm to 100mm). If insulation is absent or beneath more than 4" (100mm) of concrete subfloor, insulation boards must be used to ensure optimum heat-up times.

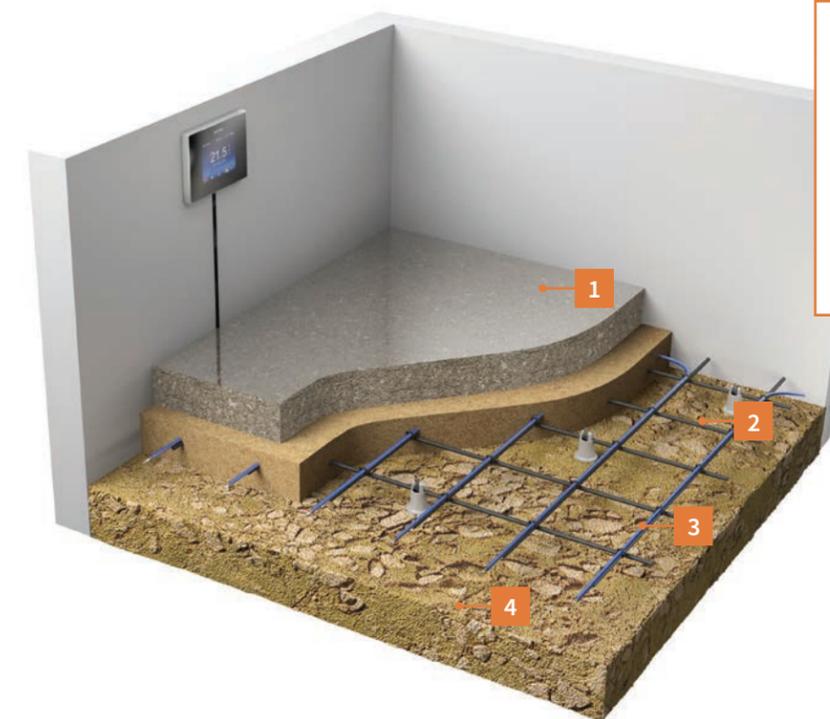
The In-slab cable system is for installation within concrete floors, and is ideal for new constructions where floor height is not an issue. This is suitable for almost any flooring finish and in particular where the flooring (wood, carpet, vinyl) may be replaced from time to time.

## Features

The WODH is a twin-conductor cable (no return) in an advanced fluoropolymer jacket with a standard output of 5.5W/linear foot. Thanks to its structure and build, it cancels out all electromagnetic field interference.

## Technical Information

The cable is installed in dirt, sand beds or tied to a lightweight mesh and embedded in a concrete foundation pour. It is suitable for residential and commercial environments, such as basements (residential) to replace a waterbased system, or cooler slabs (commercial) to prevent slab heaving due to cold temperatures.



### FLOOR CONSTRUCTION

1. Finished concrete (4-6")
2. Sand (4")
3. Cable in sand, secured with wire mesh or landscape staples
4. Drained base or "foundation"



# Warmup® Insulation Boards (WIBs)

Warmup® Insulation Boards are an important element when installing underfloor heating. They provide the foundation to lay the heating system.

The insulation improves the response time and heat retention within the room reducing energy consumption and carbon emissions.

Warmup® Insulation Boards are 1/4" thick and manufactured from water resistant extruded polystyrene, finished on both faces with a thin layer of fibreglass reinforced cement.

They are ideal for tile backing with the internal layer of insulation capable of supporting 5,735lbs per square foot and are ideal for use with underfloor heating as they push the heat into the room, by not allowing heat to penetrate down into the concrete substrate below.

The low thermal conductivity of the insulation enhances the efficiency of underfloor heating systems, even when used over pre-insulated sub floors.

This is because they reduce the thermal mass of the floor, significantly reducing the amount of heat absorbed by the sub floor. This allows the underfloor heating system to warm the floor and the room up faster and ensures the floor cools down faster after use.

By reducing the amount of time the room takes to warm up and cool down, the room can spend longer at its cooler set back temperature, reducing its heat loss.

The waterproof insulation panels are suitable for bathrooms and showers as well as dry rooms, allowing the same construction to be used throughout.

Installing WIBs drastically improves floor heating efficiency, with a quick heating time, with a 78% faster heating time than over concrete slab alone. Heat up times over a 59°F concrete slab were 78% faster than when applied directly over the subfloor. While a Warmup® mat over WIBs reaches 80 degrees in 64 minutes, a traditional system took 5 full hours to reach 77°F.

- This also means that the system ran a lot less, and proved to provide 71% savings in electrical usage.

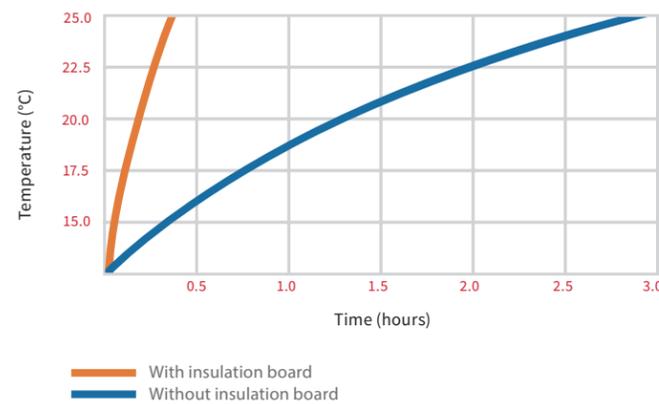
- Depending on the cost of electricity and price of the insulation boards, pay-back time was estimated between 1.7 and 2.1 years.



The Warmup® Research Centre found that response times were cut from over 2.5 hours to just 20 minutes by including Warmup® Coated Insulation within the system installation, placing it between the Warmup® Electric Underfloor Heating System and the concrete subfloor.

**Notes:**

This data applies to Warmup® heating products only. Assumes a system running twice a day for 2 hours on a concrete subfloor. Warmup® tests performed to EN442-2 standards.



# Warmup® Insulated Underlay

Warmup® Insulated Underlay is a free-floating system designed for use under the Warmup® Foil Heating system.

It provides a smooth and seamless subfloor, suitable for soft and resilient floor coverings such as carpet and vinyl.

Warmup® Insulated Underlay is a thin insulation barrier that reflects heat upwards, making the underfloor heating system more efficient and effective. It also reduces contact noise. The foil backing acts as an effective moisture barrier.

Warmup® Insulated Underlay has been specially developed for installation under Warmup® FOIL systems used to heat rooms under Laminates, floating wood floors, floating LVT floors and carpet.

Thanks to the structural integrity and design of the Warmup® Insulated Underlay, a heat

resistance of as much as 0.19 (Rm value) is achieved.

When installing under Carpet use over or instead of the carpet pad in order to improve the heat reflection upwards.

Under Laminate, use directly on slabs with Warmup® FOIL heaters over the underlayment.

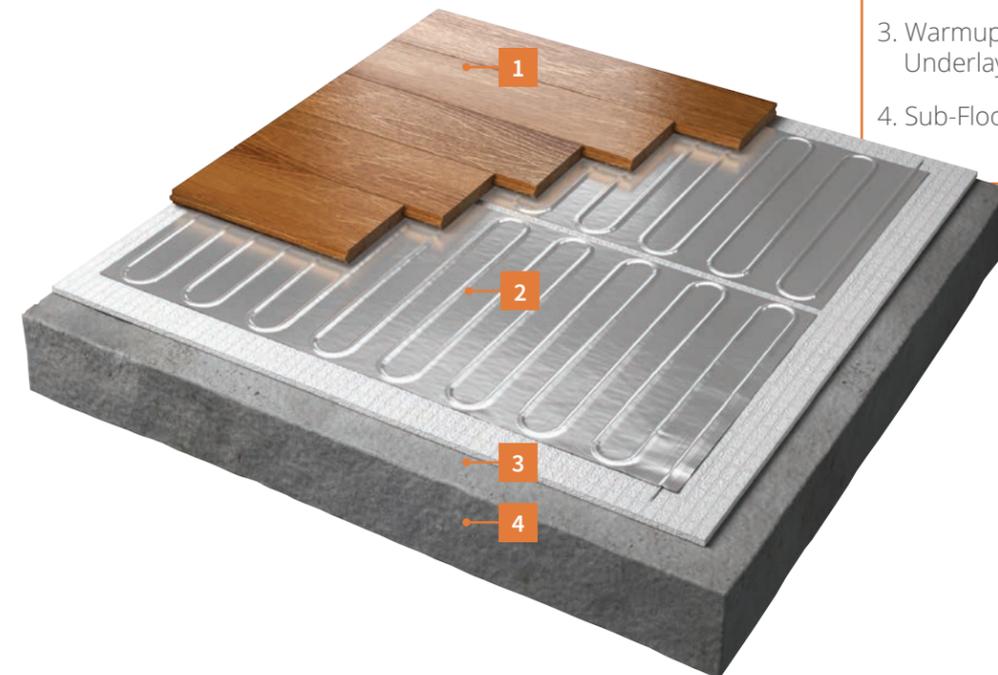
While not required, an 1/8" polystyrene foam can be applied over the FOIL heaters to improve plank leveling and noise canceling.

When installing Under LVT: contact Warmup® for options. While some LVT brands install easily over

Warmup® FOIL systems, others require the use of a more rigid base.

The WIU resists heat loss and increases the efficiency of the underfloor heating system. The WIU is very thin at only 6mm making it lightweight and easy to install.

Additionally, the FOIL backing acts as a moisture barrier and is extremely effective in reducing contact noise.



# Warmup® Bathroom Collection

Our range of bathroom upgrades are designed to increase comfort and convenience, making your bathroom a more luxurious environment.

Relax, unwind and escape in your own bathroom retreat, with a Warmup® Spa package.

## Mirror Defoggers

- Available in 6 sizes
- Adhesive backed
- Easy to install
- Fog free mirror in seconds
- Fits most mirrors
- Low running cost
- Connects to existing lighting circuit



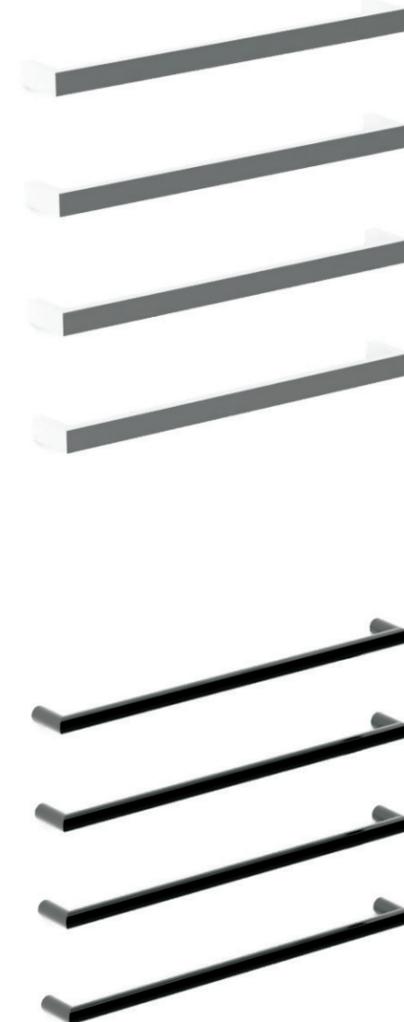
## Electric Towel Warmers

Warmup® Towel Warmers were designed and built with simplicity in mind. Constructed of high quality 304 stainless steel, expertly welded in unique designs, Warmup® towel warmers are safe and easy to use.

If your goal is to get the comfort of a nice warm towel after the bath or shower, then wire it to your light switch. By the time you're done, your towel will be wonderfully warm.

While most of our models require hard-wiring to a power source (except plug-in models), they do not require a control. Our proprietary heating technology inside the towel warmer will ensure the device reaches 145°F in 3 minutes.

If the plan is to dry the towels faster in an active household or prevent the discomfort of moldy towels in a poorly ventilated space, then wire it to a separate switch which you can leave on separately from the lights or fan.

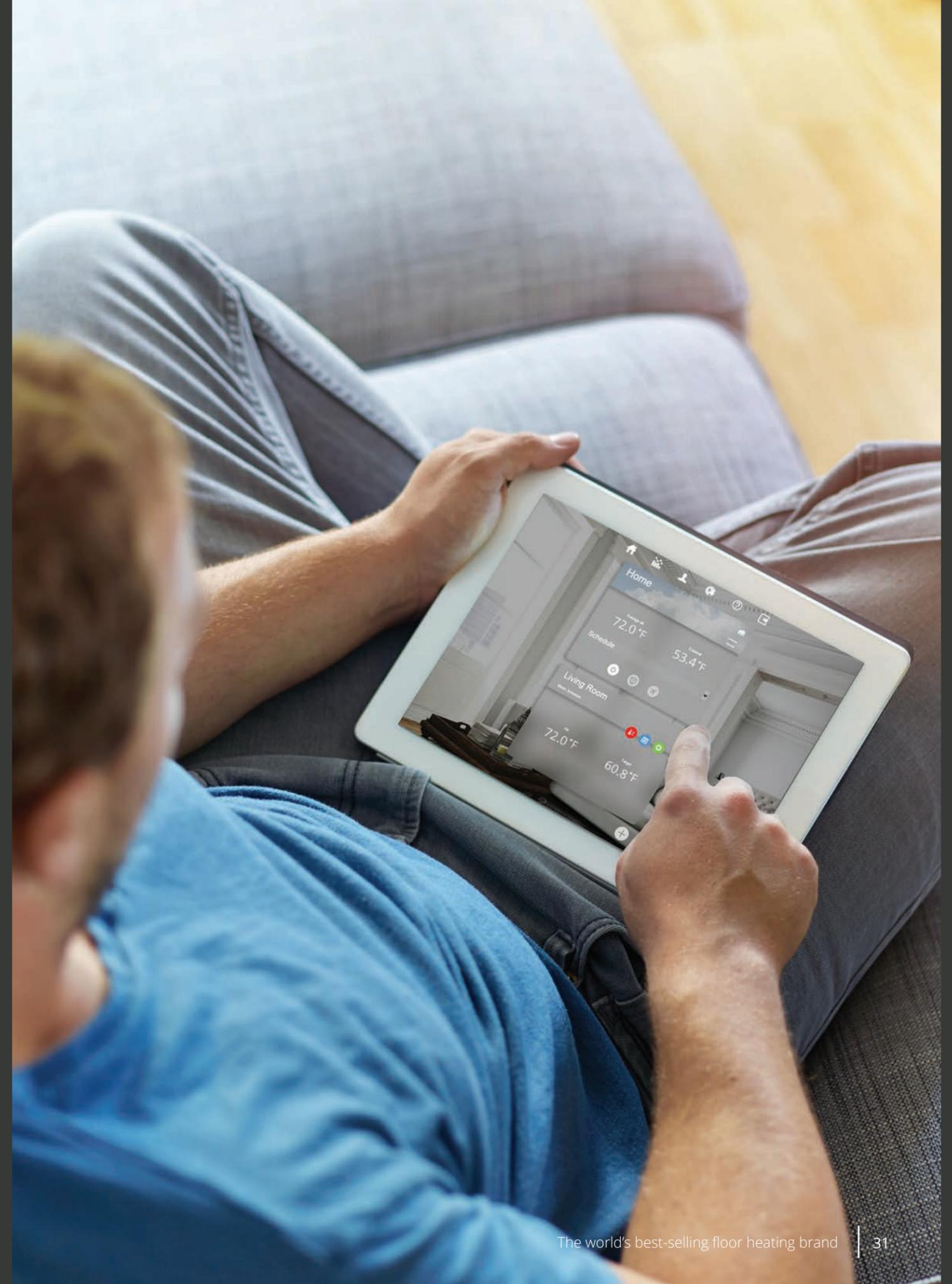


# Warmup® Controls

Warmup® Smart Devices are designed, patented and copyright-protected by Warmup®

Warmup® offers a comprehensive range of controls that we have developed in house, using our detailed knowledge of how hydronic, electric underfloor heating systems and central heating systems operate. More importantly they are designed with knowledge of how people expect them to function.

We understand that the thermostat is normally the only part of an underfloor heating system that is visible, so the modern design of our thermostats can be tailored to make them stand out, emphasising the cutting edge technology that is heating the property, or blended in with the décor.



# Warmup 4iE® Smart WiFi Thermostat

The 4iE is designed to look great in contemporary and traditionally styled homes.

Connected to the internet by WiFi, it can be controlled from a smartphone, tablet or computer as well as its own touchscreen interface.

It learns how homeowners use their heating and the unique way each zone reacts. It uses this knowledge to suggest ways to save energy, such as what

temperature should be set when the area is not in use and when the heating can be turned off earlier with no noticeable impact on comfort levels.

The 4iE offers many features and benefits that make it stand out from other smart thermostats, offering important advantages to the homeowner and trade professional.



4iE® Horizontal or Portrait | 4iE® with or without WiFi | 4iE® Black or White



### Always at the right temperature, home or away

The 4iE does not require programming, using SmartGeo™ it works with your smartphone to ensure your home is always at the temperature you want just as you arrive and using more efficient temperatures when you're away.

If you want to use a conventional program or just want to make a quick change, the MyHeating™ app is simple and easy to use.

### The most efficient settings for your home

The 4iE learns how you use your heating and the unique way your home responds to changes in temperature to calculate more efficient settings.

You will get tips with advice on comfortable temperatures that use less energy and the optimal times to turn the heating off early and still stay warm, saving up to 25% on your heating usage.

### Make it a part of your design

While the heating under the floor is not visible, we at Warmup® understand that the thermostat is usually very visible.

The 4iE can be set with a custom background picture to compliment your design and add a personal touch. Aesthetic remains modern and minimalistic with a touch screen monitor and sleek design.

## Warmup® Tempo™ Digital Thermostat

The Tempo™ thermostat enables end users to choose the time as easily as they would with a watch or clock, and quickly set their programs – heat on when you want it and off when you do not need it.



### Better

Easy-to-use interface and intuitive design. With Tempo™, end users can simply program their settings to suit individual requirements, warmer when they are at home, lower when they are away or asleep.

### Faster

Set-up takes just minutes to get right the first time. It will help avoid wasting energy and achieve savings on utility bills.

### Smarter

Its Proportional Adaptive Function ensures the room does not over-heat, reducing wasted energy whilst also protecting the components inside.

The Early Start algorithm learns how long it takes to warm the room and activates the heating so it's up to temperature at the right time.

## MyHeating™ App & Web Portal



The MyHeating™ app and web portal gives you full control of your heating systems using a smart phone, tablet or computer.

Designed for use with the 4iE® and Wholehouse systems, the app and portal deliver fully integrated tools allowing you to understand and improve your comfort while reducing energy usage.

### Connected Control, Multiplied

The MyHeating app provides connected control from any internet connected device for multiple users in multiple locations. The powerful system can control multiple heating zones across multiple heating platforms in the same house. No other app provides this level of power and flexibility.

### Intuitive

For users who prefer using a set program, MyHeating combines Natural Language Programming and self-learning functions to take the pain out of programming.

MyHeating speaks your language, not tech jargon and learns from regular overrides, adjusting your programme to keep it just right.

Programming a heating system has never been easier.

### Intelligent

With features like SmartGeo™, the MyHeating app is designed to run heating systems automatically with virtually no effort on your part.

MyHeating will also learn your heating usage patterns, how your home reacts and will propose personalised changes to settings to save energy.

### Never think about setting the heating again

MyHeating works with smartphones to keep your house at the right temperature automatically. It uses the location services already built in to smartphones to calculate how long it will take you to get home and set the temperature accordingly.

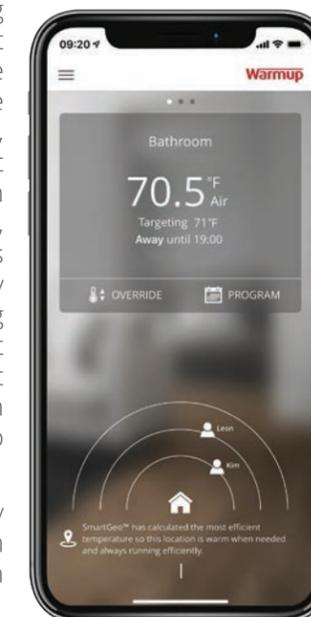
Warmup® does not know users' actual locations, only how far away from home they are, and all data is kept secure and encrypted.

### Works with all heating zones, all of the time

MyHeating is great for single heating zones such as central heating and works even better with multi-zone systems like underfloor heating.

By using the automatic settings for different room types, MyHeating can keep zones that are not likely to be used at that time at a comfortable, but more efficient temperature when users are home, ensuring bedrooms aren't unnecessarily heated during the day and just up to comfort temperature when the room is likely to be used.

In fact, it's the only geo-based system that works with zoned heating.



# Warmup® Outdoor Heating



## Maintain safe access with Snow and Ice

In the Winter, the dangers of snow and ice causes slips, trips and falls. Penetrating ice damages pavements, roofs, and gutter systems, leaving permanent hazards that need to be repaired.

Warmup® Outdoor Heating systems allow people to remove both snow and ice from key areas of risk to themselves on their property whilst significantly improving accessibility in a cost effective way.



**Project:** Sweetwater Academy of Music

**Project type:** Commercial

**Project location:** Fort Wayne, Indiana

**About the client:** One of the largest musical instrument distribution companies in the USA, Sweetwater has a sole mission to satisfy every customer that walks through the door.

**System installed:** Snow Melting system at the building entrance.

**System specifications:** Snow Melting Mat | Automated Control – CommBox | AirSense sensor

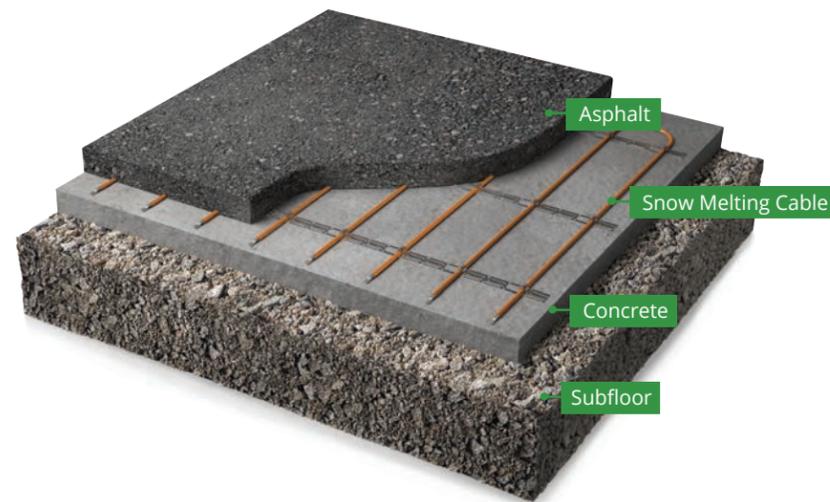
# Warmup® Snow Melting Cables

Each year thousands of people are admitted to hospital with injuries sustained following a snow or ice related fall with many more people suffering minor injuries that aren't recorded.

With a Warmup® system installed and running, safe access can be maintained during spells of snow and ice wherever it is required. The Warmup® driveway cables can be installed in sand, gravel or on wire mesh.

When the system detects snow fall or ice forming it automatically activates, to prevent their build up and deactivates again once it has been cleared to minimize energy usage.

The Warmup® snow melting cables are rated for 208-240-277V applications. Embedded up to 4" deep in concrete pours, asphalt driveways and paved walkways, the driveway heating cables can be laid out as tire-tracks or for full coverage designs. The heating cable allows for 3"-5" spacing giving flexibility and versatility to any project.



## System Description

The supporting layer should be free from sharp objects and edges before placing the cable.

The cables are fixed in to position within the sand, cement or asphalt, using either a reinforcing mesh and zip ties or the Warmup® Metal Fixing bands.

The snow sensor is fitted within the active area of the system to enable accurate control.

## Features

The Warmup® Snow Melt range includes two cable types to keep both concrete and asphalt pavements free of snow and ice.

The asphalt cable can resist temperatures up to 240°C for a short time, safely above the typical 150°C temperature at which the asphalt is laid.

## Technical Information

The 240V AC cables provide a fixed heat output of 50W/ft and can be laid at spacing's as close as 3" to provide a system with a capacity of 500W/sqft that would typically provide protection down to -20°C

The cables use an advanced fluoropolymer inner insulation and a durable polyolefin outer insulation to provide both temperature and UV resistance.



**Project:** ALDI Grocery Stores

**Project type:** Commercial

**Project location:** ALDI locations in Schererville, IN; Michigan City, IN and Valparaiso, IN.

**About the client:** Based in Germany, the chain was founded by brothers Karl and Theo Albrecht in 1946. Aldi is the common brand of two discount supermarket chains with over 10,000 stores in 20 countries.

**System installed:** Snow Melting system at building entrances.

**System specifications:** Snow Melting Mat | ETO2 Controllers | ETOG Sensors

# Warmup® Snow Melting Mats

The WSMM (Warmup® Snow Melting Mat) is commonly used in concrete pours, asphalt driveways and paved walkways. All Warmup® Mats are rated for 208-240-277V applications.

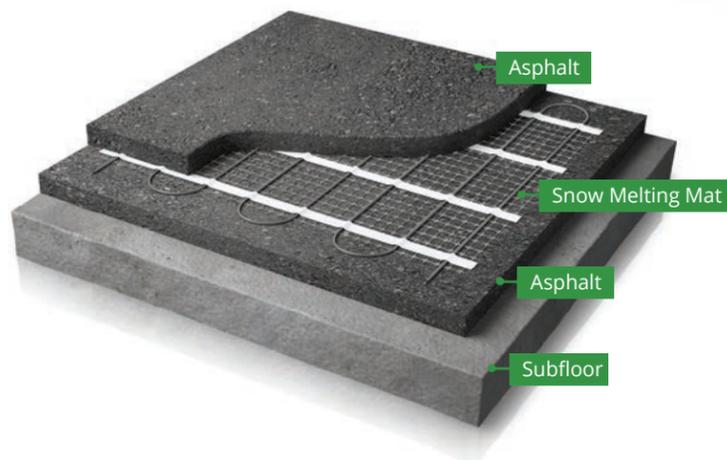
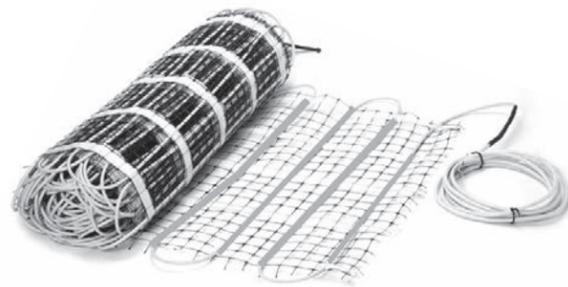
Mats are 2ft or 3ft wide and with a cable spacing providing 50w/sqft for optimum results under even the harshest conditions. Embedded up to 4" deep, they can be laid out as tire-tracks or for full coverage designs.

Warmup® driveway snow melting Mats and Cables effortlessly prevent the accumulation of snow and ice on driveways, parking garages, ramps, walkways, and stairs. The snow melting system is then connected to a moisture and temperature sensing automatic controller. Trade your shovel in for a Warmup® Heated Driveway system.

and hazard free. Snow melting mat systems are composed of heating cables taped to a sturdy mesh backing for a fast and easy installation. More precisely, the system consists of a twin conductor heating cable taped to a Polypropylene mat.

The main benefit of electric heated sidewalks and heated driveway systems over glycol-based hydronic systems is that they are much simpler to design and considerably less expensive to purchase and install. Warmup® Snow Melting Mats are uniquely designed for surface melting to keep parking lots, driveways, sidewalks, pavements, stairs, ramps safe

The heating cable is laid in a winding fashion so that they are equally spaced (3" apart) and evenly distributed on the mat, resulting in high wattage output and increased efficiency.



## Project: Walmart Distribution Centre, MI

**The Challenge:** A typical Walmart distribution center employs over 600 individuals in a 1 million square foot facility. Throughout the course of any given day, the center's employees will unload and ship over 200 trailers. Due to the size of this operation, it is crucial to Walmart that they remain prepared to handle any situation that may arise and in Coldwater, Michigan, one is inclement weather. Between arranging snow removal service at this location, getting the job done in a timely manner, and keeping the facility clear of snow and ice Walmart realized that they were spending a lot of time and resources on something that wasn't reliable or 100% effective.

**The Solution:** Snow melting mats and an automated control were the perfect solution for Walmart's situation because they eliminated the need for snow removal service and guaranteed that the facility would remain snow and ice-free at all times.

**The Result:** Coldwater averages 50 inches of snow per year but at the Walmart Distribution Center in town, you will fail to find any accumulation along the sidewalks. The best part? No maintenance or manual activation is required. With a Warmup snow melting system, Walmart daily operations are unaffected by weather and the emergency fire exit is always clear from snow and ice. Warmup is proud to be a part of the system that keeps Walmart operating safely 365 days a year.

# Warmup® Self Regulating Cable

## Roof and Gutter De-icing

The Warmup® Self Regulating Cable protects against dangerous build-up of snow and ice on roofs, within gutters and downspouts and prevents pipes from freezing.

The oval 10mm by 6mm self-regulating cable is insulated with a UV stable thermoplastic elastomer, ensuring its durable and simple to fit.

Freeze and thaw cycles create ice dams that can quickly damage or even destroy roof coverings, gutters and downspouts. Pooled water behind the dam may leak into the building, causing water damage, or climb over the ice-filled gutter, forming icicles. The resulting water damage to your home's interior can be many times more expensive to repair than the roof or gutter itself.

Self-regulating cables for the roof and gutter heating, melt snow and ice, to keep a drain path for water to flow freely away from the house.

The self-regulating heating cable is ideal for both commercial and residential use. A full range of controllers, sensors and accessories is available, guaranteeing the optimal solution for the roof and gutter heating. The cables adaptive heat output provides an energy efficient solution, increasing its heat output when needed and saving energy when it is not.

Warmup® provides self-regulating electric cables for the roof and gutter heating, that automatically adjust their power output to compensate for temperature changes.

### ROOF CONSTRUCTION

1. Warmup® Roof Fixing Clip
2. Warmup® Self Regulating Cable
3. Roof
4. Gutter
5. Downspout

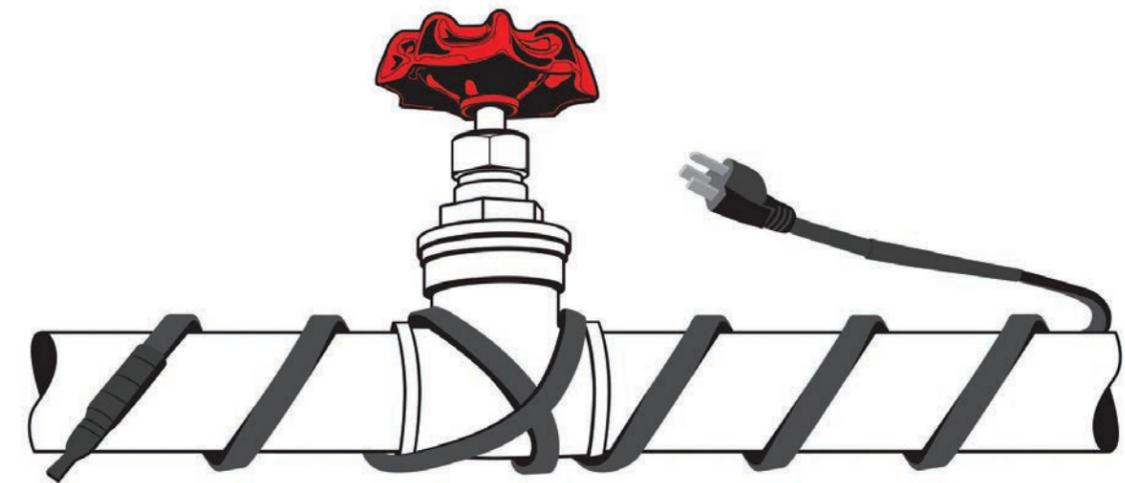


# Warmup® Self Regulating Cable

## Pipe Freeze Protection

Designed to keep pipes free of snow, our self-regulating cable gives you peace of mind knowing that your home or business is protected from the potential damage caused by frost. This product is constructed of a self-regulating polymer core that varies its output along its entire length.

The self-regulating wire is ideal for pipes freeze protection applications, as it regulates its output depending on the ambient temperature, making it more energy-efficient to run. It's well suited for both residential and industrial applications and can be installed indoor and outdoor.



### System Description

Warmup® NAMS cable is suited to prevent liquids in metal and plastic pipes and ducts to freeze and clog up. It is regularly used in large residential and commercial construction for sprinkler lines, sewer pipes and A/C drains. Warmup® cables are approved for dry and wet locations and suitable for non-hazardous locations.

### Features

The cables automatically adjust heat output according to the ambient temperature conditions. Under cooler conditions the heat output increases, and as the temperature rises the output decreases to save on energy. The cables are available in various pre-assembled lengths in kits or in spools of either 3, 5 or 8 watt.

### Technical Information

NAMS Cable is constructed of a self-regulating polymer core that varies its output along its entire length, saving energy and eliminating hot spots along the pipe. Parallel construction makes it easier to install than zone or series types of cable since it can be cut to length at any point on the pipe. It can be single overlapped without overheating the cable.

# Warmup® Snow Melting Controllers

## Roof and Gutter De-icing & Pipe Freeze Protection

Enjoy maximum control of your heated driveway, walkway or roof system with Warmup Snow Melting and De-icing controls. Warmup offers manual and automatic controls for driveway heating systems.

Automatic controllers can cut down on energy consumption by activating your system only when moisture and low temperatures are both detected.

### DS Series

Wall-mounted controllers with built-in sensor and 2x30A capacity (240V).



ASE-DS5

ASE-DS9

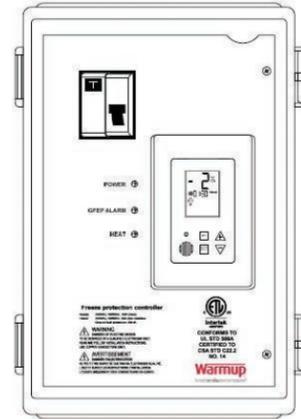
### TF115-005

Simple thermostatic controller to activate at fixed temperature. Switch 12A/120V or 22A/240V.



### WSM-63

Timer panel with 252A capacity. Operate manually as Timer, or combine with optional sensors.



### TRACE-2

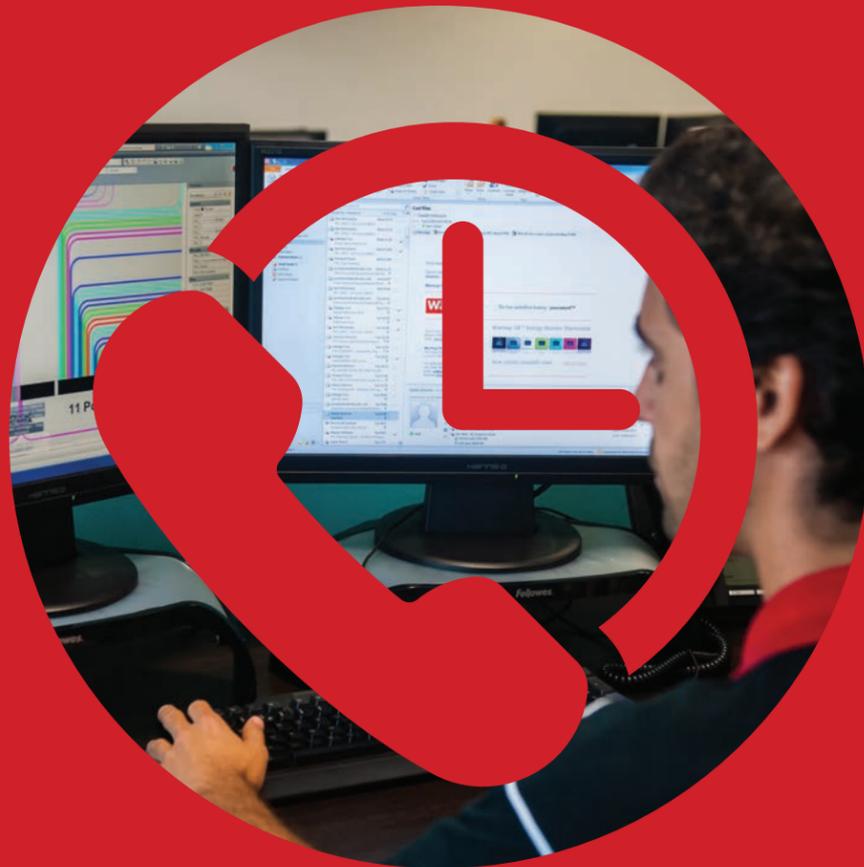
GFEP protected 30A controller activates Heat Trace systems at defined temperatures.



### Commbox-600

4x50A-3-phase relays for this GFEP controller that can switch multiple zones. Plug-and-Play format.





## “The Best Floor Heating – Guaranteed”

To the exceptional team that built Warmup®, these are not just any words that can be said by any company.

They are our promise – to you.

The warranties on our products are possible thanks to our commitment to Research and Development, on-going quality assurance from the ISO 9001 process and the testing requirements of UL and other regulatory houses.



## Projects Department: A Dedicated Service

Warmup® offers a dedicated team of Project Directors and Project Managers to help you throughout each stage of your project.

They are allocated to you and your project to support and guide you through the whole process, from specifying to commissioning.

### Design Process

Warmup® will provide you with a solution tailored to your specifications and will guide you throughout to ensure a smooth and seamless process from beginning to end of your Commercial projects. Our service includes:

#### Consultation

- R&D based knowledge
- Building regulations
- Floor build-up

#### Project Overview & Specification

- Review project specification
- Scope of Works Summary
- Product and Service Inclusions

#### Design

- 3-Part Specifications
- Technical layouts and drawings
- Detailed floor sections

#### Construction & Build

- On-site visit
- On-site installer training
- Mock installation
- 24/7 Technical Assistance
- Installer friendly SafetyNet warranty

Our floor heating systems offer complete flexibility with floor finish options including stone, ceramic, wood, carpet and vinyl to satisfy the most demanding of clients. It is the perfect choice for new/self-build, refurbishment and renovation projects, from harder to heat older homes to large apartment schemes and affordable housing. All our products are designed and manufactured in world-class facilities with an enviable reputation for innovation, quality and reliability.

A dedicated project manager will be assigned to your project to ensure you receive the right support from planning through to tendering, procuring and installation, ensuring that the required timeline is met for your large projects.

## Warranties & Guarantees

Warmup® provides a Lifetime Warranty on all its under tile floor heating products because not only do we maintain the highest standards in manufacturing, we are the only company with an

EN422-2 Testing Facility that continuously tests, Quality-Controls and improves our range of heating solutions.

### Warranty Information

NADCM Cable			
NADCM Membrane		ANSI 118.12 ASTM C627	
NADWS Cable			
NADWM StickyMat			
FOIL			
WODH In-Slab			
NAMSR Freeze Protection			
WSM & WSMM Snow Melting			
MD & TW Bathroom Collection			
Indoor Thermostats			
Outdoor Controls			

Despite the harsh environments in which they operate, Warmup® is able to provide a 10-year warranty on all its outdoor heating cable solutions. This promise is well-beyond industry standards and is paired with the most practical and effective promise: Warmup's SafetyNet™ Guarantee.

The SafetyNet™ Guarantee offers all installers the ability to receive a free and immediate replacement for product damaged onsite, for any reason. Because 99% of issues happen during installation and not thereafter, Warmup® wants to ensure that the system installed is free and clear of any defects or damage.

For detailed Warranty and SafetyNet™ terms, visit [www.warmup.com/warranty](http://www.warmup.com/warranty)

## Technical Support

All of our systems come complete with installation drawings, installation manuals and commissioning guidance.

In addition, we have a suite of online tutorial videos but we appreciate that sometimes things just don't go according to plan and we ensure we are there to help during those moments as well.

- ✓ We offer support at every stage of a project, from an initial inquiry right through to post completion occupancy and then for the lifetime of the system.
- ✓ Support is available from a member of the Warmup® team 24 hours a day 365 days a year by calling (888) 927-6333.
- ✓ Alternatively we offer Online 'live chat' via our website between 8:00am and 5:30pm Monday to Friday.
- ✓ If the heating system suffers accidental damage during installation, we will replace it free of charge under our SafetyNet™ Installation Guarantee.

If a floor is damaged post installation, we offer a dedicated team of service engineers to identify and rectify the fault



Warmup® is dedicated to helping you when you need it the most.

Did you know that we offer 24/7 Customer Support, a SafetyNet™ guarantee in case the cable(s) get(s) damaged during the installation, tool rental to find a potential break in the cable, and repair kits to fix damages?

These are instrumental to providing exceptional Customer Support, every step of the way.

Rent tools or buy them online, along with our repair kits or a Digital Multimeter (illustrated below), on [warmupedia.warmup.com](http://warmupedia.warmup.com).



Infrared thermal camera



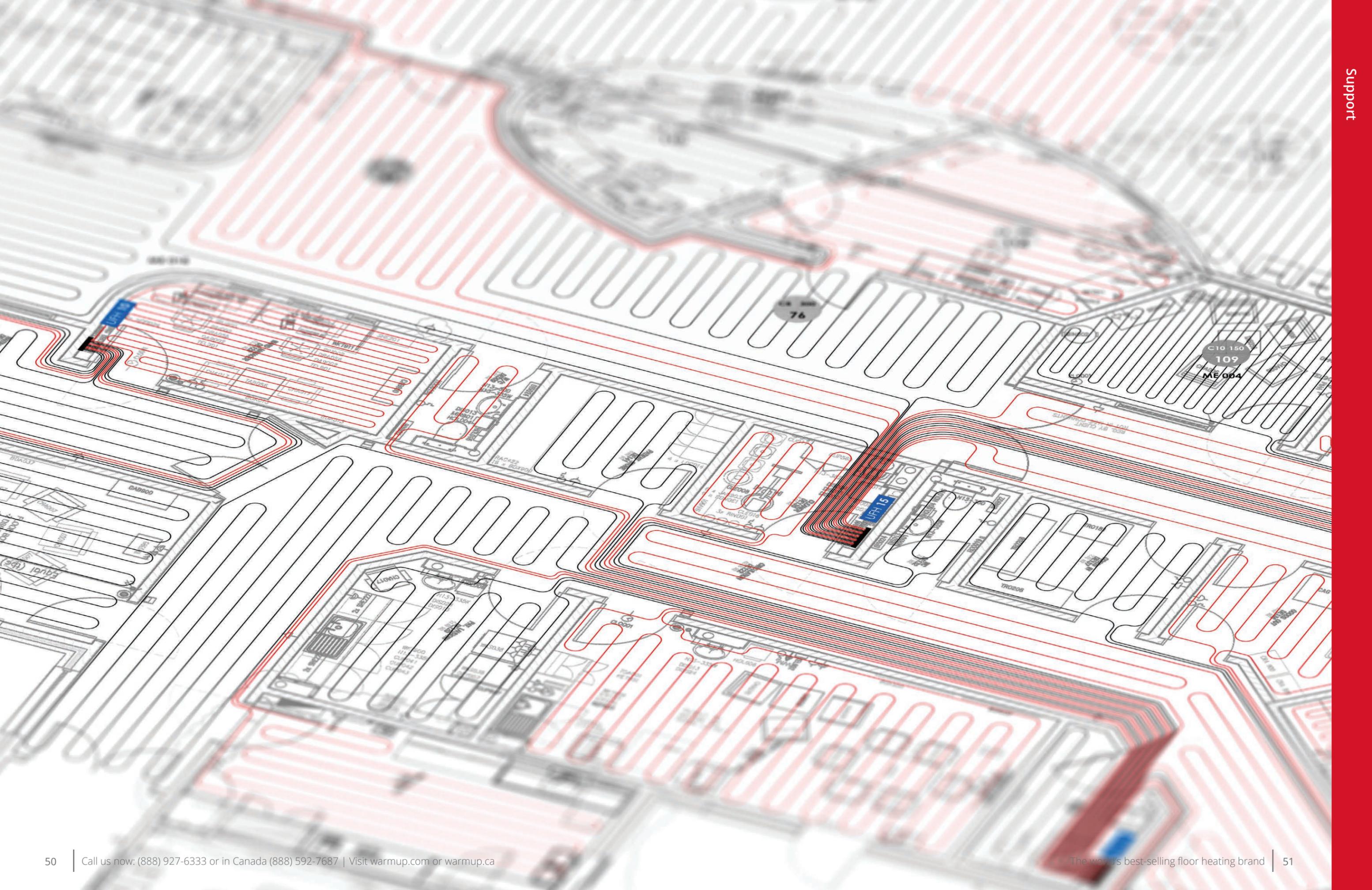
Fluke Tester



TDR Meter



Megger (mega-ohmmeter)





The world's **best-selling** floor heating brand™



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