



Luxury Underfloor Heating Professional Heating Systems

www.warmfloor-solutions.com

Professional Heating Technologies **wfs**

Heating Applications for your Home

In comparison to traditional heat sources found today, underfloor heating systems are completely invisible as the heating elements are placed inside the floor construction. Underfloor heating systems nowadays are a low cost, value for money, reliable and are an energy efficient solution to keeping your family warm. Underfloor heating is fast becoming more and more popular in the modern home, eliminating the need for wall mounted heaters which restrict the true size of your room and overall design and layout.

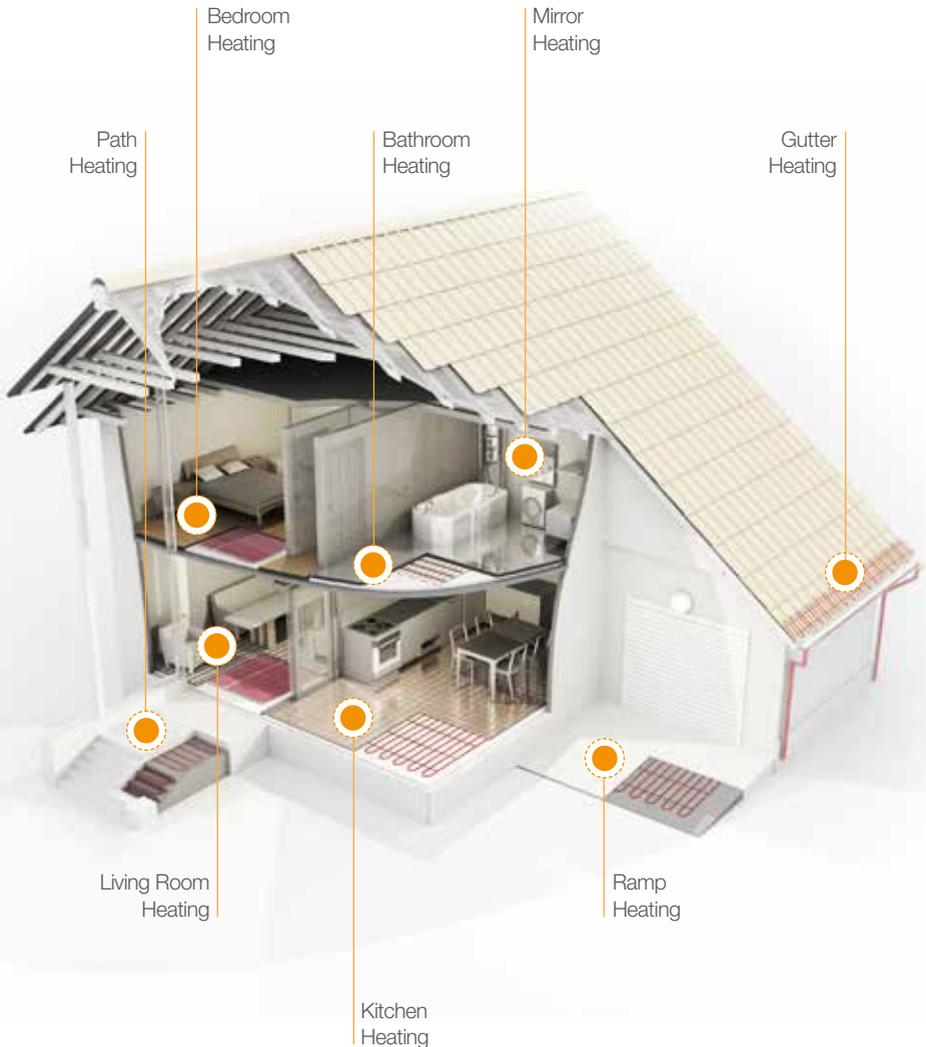


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Benefits of Underfloor Heating vs Conventional Heating

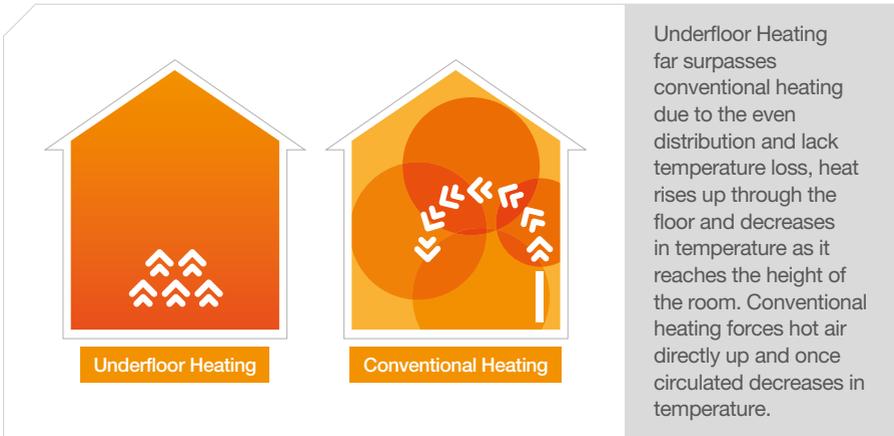
Underfloor heating systems are a perfect way to create warm comfort within living areas such as bathrooms, kitchens and conservatories.

The heating system is placed close to the floor surface and due to the even heat distribution upside you are getting the optimum heating climate in your room. Warm feet / Cool Heads

Warmfloor heating systems can be used both as a central heating unit and as a supplemental system. It is always our recommendation to partner your heating system with insulation; this lowers heat up times significantly and further increases efficiency.

Electric underfloor heating systems nowadays are low cost, value for money, reliable and are an energy efficient solution to keeping your family warm. Electric underfloor heating is fast becoming more and more popular in the modern home. Eliminating the need for wall mounted heaters which restrict the true size of your room and overall design.

The installation of these underfloor heating systems and insulation has been made to provide the user with simplicity and peace of mind, there is literally a minimal thought process to the eventual layout to the system.



What does it cost to run?

Your new luxury heating system will only cost **6p/m2** to run per 8hr day!

About Warmfloor Solutions

We are Warmfloor Solutions, a specialist in the design, supply and installation of underfloor heating, Renewable energy, flooring insulation and trace heating systems.

Since we began in 2001 WFS has grown steadily to become one of the UK's leading recognised suppliers of underfloor heating systems.

WFS are dedicated to the supply and installation of premium heating systems and controls for both electric and hydronic underfloor heating offering only the highest standards in quality and design.

Our abilities have grown over the years to include the use of low energy environmental systems and trace heating capabilities. WFS offer full design consultation and installation of Air Source Heat Pump, Solar P.V and Trace Heating Technologies.

We offer single point responsibility for the installation of all our heating systems. We understand that not each project is the same, and so we strive to understand the client's requirements in detail and tailor our systems to offer the best solution. We enjoy being specified on projects working closely with architects, consultants to deliver the perfect solution for their specific needs.

» Quality

Quality design, consultation and installations are what sets us best apart from our competitors. No corners are cut, time is used efficiently and honesty is paramount. We carefully select who our supply partners are and we have very high standards, which reflect in the products we install.

» Design & Consultation

We always provide a full design and consultation service in-house. Many of our clients and customers enjoy having us as a single point contractor involved from conception to completion with the main contractor. We use specific CAD programming to produce design drawings and other systems to provide accurate heat/loss calculations to make sure that the systems we put forward to our clients meet and exceed the requirement of the structure.

» Installation

Our installation teams are fully trained on every aspect of each and every product we install. All site operatives are CSCS accredited and usually work in three-man teams, with one member of each team always acting as the site supervisor in charge. This selected individual will have also been on a supervisors training course to aid in site liaison with client management and with their own team.

» Ethics

We are a family-based business and treat employees, clients, customers and suppliers how we like to be treated. This means treating others with respect and being professional at all times.

Introducing The Product Range



Intuitive design with unrivalled build quality.

» Thermostats

At WFS we only supply the highest quality thermostats for your new underfloor heating system to give you simple floor heating control when you want it.

Thermal controllers are designed for the automatic regulation of underfloor heating systems. They provide power to the heating sections only when it is needed to maintain the temperature stated by the user. Our thermostats automatically analyse the heat characteristics of the floor, learning more accurately when to power the heating system, reaching the desired temperature set on time, increasing efficiency further.



» Underfloor Heating Mats

Team up your professional thermostat controller with the WFS heating mat, the highly competitive, high quality electric underfloor heating mat. WFS advanced heating mat systems have been manufactured for professional use, yet are easy to install at any skill level. WFS Heating mat systems provide a highly economical solution for simple floor warming and primary heat source when used in conjunction with flooring insulation in all rooms. All WFS Mat systems utilise our insulated, twisted dual core heating element, protected by an armour braid and our advanced tough heat resistant outer jacket.

- Advanced Fluoropolymer
- Ultra-thin
- Ultra Sticky
- 100% Armour earth braid shield
- Lifetime Warranty



Which System & Size?

Mat or Loose cable systems

- Mat systems are used in all types of rooms which are generally a regular shape with few obstructions like a large square living room
- Loose lay Cable systems are used when the room shape and size is bit more unusual, where you find it difficult to use conventional matting systems

Which wattage & why?

WFS have a range of power outputs which are selected dependant on their application and end user requirements.

We suggest the following as a simple guide to which is best suited for their general purpose.

100W/sqm output: This range is generally used for simple floor warming within bathrooms and wet rooms. As a secondary heat source where other heating is available such as radiators and towel rails, this is the most economical floor warming system available.

160W/sqm output: This range is used for simple floor warming within living areas where primary heating is not essential and there are other sources of heating available such as radiators. This can also be used as a primary heat source in some circumstances when used in conjunction with flooring insulation.

200W/sqm output: This range is the highest wattage available for underfloor heating systems. This is used for floor warming or as primary heating source in all room types and high heat loss areas like conservatories providing a full heating solution.

Loose lay cable output: The loose lay cable system output can be varied dependant on what the specific requirements are. The output generally ranges from 100W – 160W per square meter, this is simply adjusted by the cable spacing created between the heating elements during planning and installation. A simple spacing calculation can determine the cable spacing and subsequent power output created; this can be found in the loose lay cable installation instructions in this manual.

How do I know which size to choose?

With some time and planning you can safely select which size system you require for your project. If you follow these simple measurement steps coupled with the wattage information above you can select you're the exact system for your needs.

1. Measure your room – length x width. This gives you your total floor area; please note this is not your heated floor area
2. Measure all fitted fixtures and fittings (if applicable). This will be deducted from your total floor area
3. Now deduct 5-10% from your walkable or heated area and round down to your nearest size available from the chosen wattage output table found on page 5.

Example: Typical Bathroom Measurement
We have a standard bathroom which measures total area of 9.0sqm total area, we have a bath, toilet and sink unit which total 2.1sqm.

Calculation:
 $9.0 - 2.1 = 6.9\text{sqm}$
 $6.9 - 10\% = 6.21\text{sqm}$

Mat/Cable selection:
WFS600-6.0 or
GB840-5.6-7.0

The Mat System

Underfloor Heating

Advanced Fluoropolymer, Armour Braid, Ultra-Thin, Self-Adhesive, High Quality Heating Mats



» 100W/sqm, 160W/sqm & 200W/sqm Underfloor Heating Mats

WFS advanced heating mat systems have been manufactured for professional use, yet are easy to install at any skill level. WFS heating mat systems provide supplementary heating for bathrooms, kitchens, and living areas creating a warm floor surface and in some cases can provide a full heating solution when used in conjunction with insulation.

» Underfloor Heating Mats

All WFS Mat systems utilise our insulated, twisted dual core heating element, protected by an armour braid and our advanced tough heat resistant fluoropolymer outer jacket. All WFS cables have a high IP rating of 67 which is suitable for use in wet areas and in conjunction with wet room systems. The heating element is attached to a 100% fully self-adhesive fibreglass mesh for rapid and superior installation without any need for priming on a clean dust free floor, ensuring zero lift in self-levelling compounds and peace of mind. WFS heating mats come with only one power lead wire making it easy to install without raising the floor level. All WFS cables are manufactured in Scandinavia, world leaders in underfloor heating process and quality. WFS Cable manufacture complies and surpasses all UK and European standards and requirements.

Features & Benefits

- Advanced Fluoropolymer insulation
- Twin conductor cable
- Armour braid
- Lifetime Guarantee Warranty
- 100% Fully self-adhesive fibre mesh for rapid installation and fixing
- Ideal for tiled floors, carpet, bonded wood and vinyl surfaces when covered with a levelling compound
- Pre-spaced heating elements for uniform heat dispersal
- A large range of standard sizes
- Made in Scandinavia

Technical Specification

- Operating voltage: 220-240V; 50Hz
- Mat width: 500mm (0.5 metre)
- Mat thickness: 3mm
- Inner insulation: Advanced
- Outer insulation: Advanced
- Earth Protection: Armour braid
- IP Rating: 67
- Output rating: 100W/sqm, 160 W/sqm and 200W/sqm
- Cold tail length: (connection lead) 3m
- Fixing Materials: Self-adhesive fibre mesh
- Compatible with: Thermostats, Insulation Boards, Flexible Levelling,
- Compounds, Wet Areas

The Mat System Specification

Size in M2	Length in M	Width in M	Wattage	Amps	Resistance Range
1.0	2.0 m	0.5 m	100 W	0.4	503-582 Ω
1.5	3.0 m	0.5 m	150 W	0.6	335-388 Ω
2.0	4.0 m	0.5 m	200 W	0.8	251-291 Ω
2.5	5.0 m	0.5 m	250 W	1.0	201-233 Ω
3.0	6.0 m	0.5 m	300 W	1.3	173-211 Ω
3.5	7.0m	0.5m	350 W	1.4	144-166 Ω
4.0	8.0 m	0.5 m	400 W	1.6	126-145 Ω
5.0	10.0 m	0.5 m	500 W	2.1	101-116 Ω
6.0	12.0 m	0.5 m	600 W	2.5	84-97 Ω
7.0	14.0 m	0.5 m	700 W	2.9	72-83 Ω
8.0	16.0 m	0.5 m	800 W	3.3	62-73 Ω
9.0	18.0 m	0.5 m	900 W	3.7	55-65 Ω
10.0	20.0 m	0.5 m	1000 W	4.2	50-58 Ω
12.0	24.0 m	0.5 m	1200 W	5.0	41-48 Ω

100W/sqm Mat Specification

Size in M2	Length in M	Width in M	Wattage	Amps	Resistance Range
1.0	2.0 m	0.5 m	160 W	0.7	314-364 Ω
1.5	3.0 m	0.5 m	240 W	1	209-242 Ω
2.0	4.0 m	0.5 m	340 W	1.4	148-171 Ω
2.5	5.0 m	0.5 m	400 W	1.7	126-145 Ω
3.0	6.0 m	0.5 m	480 W	2	105-121 Ω
4.0	8.0 m	0.5 m	640 W	2.7	79-91 Ω
5.0	10.0 m	0.5 m	800 W	3.3	63-73 Ω
6.0	12.0 m	0.5 m	960 W	4	52-61 Ω
7.0	14.0 m	0.5 m	1120 W	4.6	46-51 Ω
8.0	16.0 m	0.5 m	1280 W	5.3	39-45 Ω
9.0	18.0 m	0.5 m	1440 W	6	35-40 Ω
10.0	20.0 m	0.5 m	1600 W	6.6	31-36 Ω
12.0	24.0 m	0.5 m	1920 W	8	26-30 Ω
15.0	30.0 m	0.5 m	2400 W	10	20-24 Ω
20.0	40.0 m	0.5 m	3200 W	13.3	15-18 Ω

160W/sqm Mat Specification

Size in M2	Length in M	Width in M	Wattage	Amps	Resistance Range
1.0	2.0 m	0.5 m	200 W	0.8	259-317 Ω
1.5	3.0 m	0.5 m	300 W	1.2	173-211 Ω
2.0	4.0 m	0.5 m	400 W	1.7	130-158 Ω
2.5	5.0 m	0.5 m	500 W	2.1	103- 126 Ω
3.0	6.0 m	0.5 m	600 W	2.5	86-106 Ω
4.0	8.0 m	0.5 m	800 W	3.3	65-79 Ω
5.0	10.0 m	0.5 m	1000 W	4.2	52-63 Ω
6.0	12.0 m	0.5 m	1200 W	5	43-53 Ω
7.0	14.0 m	0.5 m	1400 W	5.8	37-45 Ω
8.0	16.0 m	0.5 m	1600 W	6.7	32-40 Ω
9.0	18.0 m	0.5 m	1800 W	7.5	29-35 Ω
10.0	20.0 m	0.5 m	2000 W	8.3	26-32 Ω
12.0	24.0 m	0.5 m	2400 W	10.0	22-26 Ω
15.0	30.0 m	0.5 m	3000 W	12.5	17-21 Ω

200W/sqm Mat Specification

3mm Under-Tile Loose Heating Cable

Advanced Insulation, Armour Earth Braid, Ultra-Thin, High Quality Heating Cable



» 3mm Under-Tile Loose Heating Cable

WFS advanced heating cable systems have been manufactured for professional use, yet are easy to install at any skill level. Our 3mm cable systems provide supplementary heating for bathrooms, kitchens, and living areas. The ultra-low profile of our heating cables enables them to be installed very quickly without raising floor levels. The heating elements are simply fixed to the sub floor at calculated pitch and tiled straight over for a perfect heated finish.

» Description

All 3mm cable systems utilise our insulated, twisted dual core heating element, protected by an armour braid and our advanced tough heat resistant outer insulation jacket. All WFS cables have a high IP rating of 67 which is suitable for use in wet areas and in conjunction with wet room systems. WFS heating cables come with only one power lead wire making it easy to install. All WFS cables are manufactured in Scandinavia, world leaders in underfloor heating process and quality. WFS Cable manufacture complies and surpasses all UK and European standards and requirements.

Size in M2	Length in M	Width in M	Wattage	Amps	Resistance Range
1.0-1.2	10m	150 W	0.6	346-422 Ω	259-317 Ω
1.3-1.6	17.5m	200 W	0.8	259-317 Ω	173-211 Ω
2.0-2.6	24m	310 W	1.3	166-204 Ω	130-158 Ω
2.7-3.4	30m	410 W	1.7	126-154 Ω	103-126 Ω
3.3-4.2	35m	500 W	2.1	104-127 Ω	86-106 Ω
4.6-5.8	51m	690 W	2.9	75-91 Ω	65-79 Ω
5.6-7.0	64m	840 W	3.5	61-75 Ω	52-63 Ω
6.5-8.2	73m	980 W	4.1	52-64 Ω	43-53 Ω
6.6-8.3	83m	1000 W	4.2	51-63 Ω	37-45 Ω
8.6-10.8	97m	1290 W	5.4	40-48 Ω	32-40 Ω
10.6-13.3	119m	1590 W	6.6	32-40 Ω	29-35 Ω
12.0-15.0	131m	1800 W	7.5	29-35 Ω	26-32 Ω
13.8-17.3	160m	2070 W	8.6	24-30 Ω	22-26 Ω

Features & Benefits

- Advanced insulation
- Twin conductor cable
- Armour braid
- Life Time Guarantee Warranty
- Ideal for tiled floors, carpet, bonded wood and vinyl surfaces when covered with a levelling compound
- A large range of standard sizes
- Made in Scandinavia

Technical Specification

Operating voltage: 220-240V; 50Hz

Mat thickness: 3mm

Inner insulation: Advanced

Outer insulation: Advanced

Earth Protection: Armour braid

IP Rating: 67

Output rating: 120W/sqm – 150W/sqm

Cold tail length: (connection lead)

3m

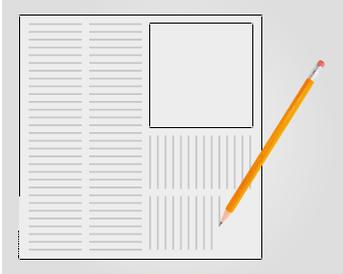
Compatible With

- Thermostats
- Insulation Boards
- Flexible Levelling Compounds
- Wet Areas



Basic Installation Steps

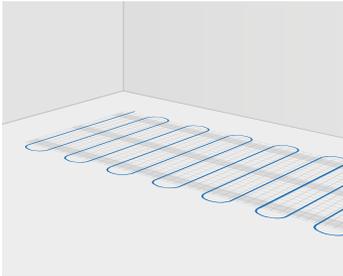
All of our kits come complete with clear and informative installation instructions, but as a quick guide to what is involved with installing your underfloor heating system we have prepared these basic steps.



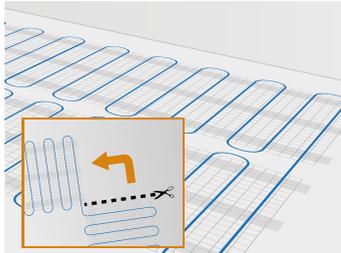
Step 1: Draw a plan of how you intend to fit your mat/s.



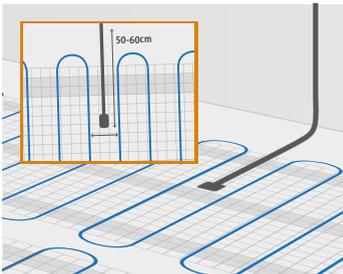
Step 2: Ensure the sub-floor is solid level, clean and dust free. Wooden floors can be reinforced with ply board or suitable tile backer board.



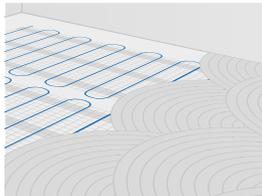
Step 3: Roll out your first mat onto your floor mesh side down. The fibre mesh will be held in place and can be repositioned several times until you are happy with placement.



Step 4: Cut across the fibre mesh when you reach an obstruction. Do not cut the cable, then flip the mat around and start laying it in the opposite direction.



Step 5: Position the floor sensor (contained inside thermostat box), halfway between the two runs of heating elements, this should be chased into the sub floor and placed inside the corrugated tube.



Step 6: Completely cover heating elements with flexible self-levelling compound or tile adhesive ensuring they are fully encapsulated leaving no air pockets.

Typical
Underfloor
Heating
Breakdown



EPS Insulation

Advanced EPS insulation, Ultra Lightweight, Ultra Strong, water and moisture proof, easy to handle and simple to fit.



» EPS Insulation Introduction

EPS insulation is the perfect way to insulate any room when laying underfloor heating. The ultra-high density board has been developed specifically for use with electrical under floor heating cable, mats and carbon film heaters EPS Thermal insulation is recommended to be used in conjunction with electric underfloor heating systems and is suitable for use with either a solid or suspended ground floor and will meet the current building regulation U value requirements. The product is CFC and HCFC free lightweight closed cell material which is easy to install. It has a high insulation value and allows for rapid dry construction methods to be used in new or renovated dwellings and is available in two depth sizes. Flooring is moisture resistant and rot proof and is unaffected by bacteria, fungi or moulds. It is non-toxic and odourless and provides no nutrients for insects or vermin.

Features & Benefits

- Ultra Lightweight and Ultra-strong
- Water and Moisture Resistant
- Easy to Handle – Simple to Fit
- Heater Laid Directly to Board
- Highly Economical
- Reduced Heating Time



The Thermostat Range



» E-Voke Touch

The Touch screen thermostats have been designed to make life a little easier. The intuitive touch screen display makes searching for the user manual a thing of the past.



» RTS Touch

Programmable Touchscreen Thermostat that is ultra-compact and provides precise control and is easily configured to control the temperature and timings for most Heating systems, including Electric or Wet Underfloor Heating Systems.



» I-STAT Thermostat

The I-STAT is the new product for 2014, offering you a smarter way to control your heating from anywhere!



» E-Voke RTS

The E-Voke RTS thermostat is a premium 24/7 digital thermostat with both floor and air temperature sensors, LCD display, built-in real time clock and calendar.



» Manual ON/OFF

The manual on/off series is as simple as they come for controlling your underfloor heating, with an on/off power switch and easy to use temperature dial it couldn't be easier.



» I-HUB

The I-Hub is the gateway to your I-System, providing remote control of all I-Stats in your home.

Model	Description	Sensor	Max Load
E-Voke Touch	Fully Programmable Thermostat	Floor & Air	16A
RTS Touch	Fully Programmable Thermostat	Floor & Air	16A
I-STAT	Fully Programmable Thermostat	Floor & Air	16A
E-Voke RTS	Fully Programmable Thermostat	Floor & Air	16A
Manual ON/OFF	Analogue On/Off Thermostat	Floor	16A

Hydronic Underfloor Heating

Advanced hydronic system, High Quality Pex-a Pipe, Uniform heat distribution, Advanced manifold and blending components, Unique pipe matrix design platform



What is Hydronic Underfloor Heating

Underfloor heating uses low temperature constant flow to evenly distribute heat through the floor area of a building. This type of heating is called radiant. Using the emitter in such a way demands less from the heat source i.e. boiler, thus reducing energy consumption by up to 30%. Not only is our underfloor heating system more efficient but radiant heating is more comfortable than convection as the heat transfers to nearby objects. Warm feet, cool heads – this has always been our motto.

Features & Benefits

- More energy efficient thus reducing utility bills - Up to 30% less to operate an underfloor heating system as opposed to traditional radiators
- When used in conjunction with air source heat pumps even greater reduction in savings
- Even distribution of heating unlike radiators, which produce only convection heating
- Cleaner environment, Dust free due to lowered air movement
- Virtually maintenance free
- Very easy to control
- Suitable for all floor coverings such as tile, carpet, wood and vinyl's

Mirror Demister

Advanced mirror heating, Ultra-thin, Self-adhesive pad, Rapid heat up, simple to fit, activates with lighting



Mirror Demister

WFS mirror demisters offer the best solution for preventing condensate forming in areas of high humidity. The condensate evaporates off the mirror surface when the heater is switched on.

Ref	Dimension (mm)	Power
HFM-0.2	400x500mm	39W
HFM-0.3	550x600mm	59W

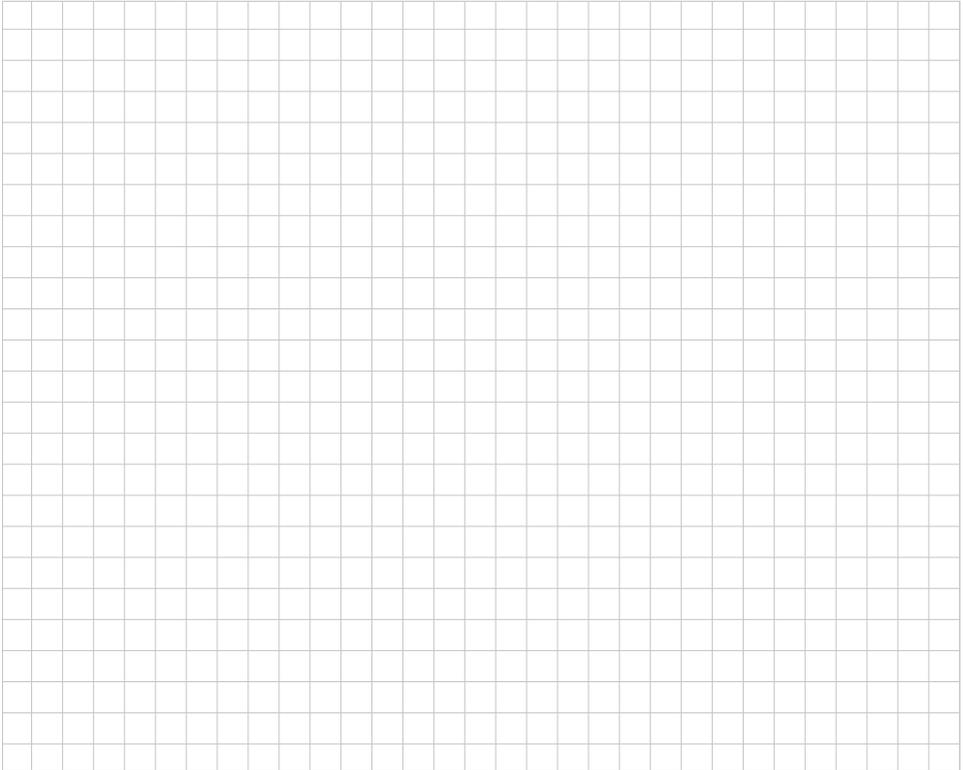
Features & Benefits

- Ultra-thin
- Rapid heat up
- Crystal clear mirror
- Self-adhesive for simple installation
- Activates with your lighting



Plan Your Project

With some time and planning you can safely select which size system you require for your project. Please see which system and size section (page 7) for further assistance.



Checklist

- Floor plan & measurements incl fixtures and fittings
- Electrical supply capacity available
- Heating mats or cables
- Thermostat
- Insulation

Need Assistance?

Contact your local dealer