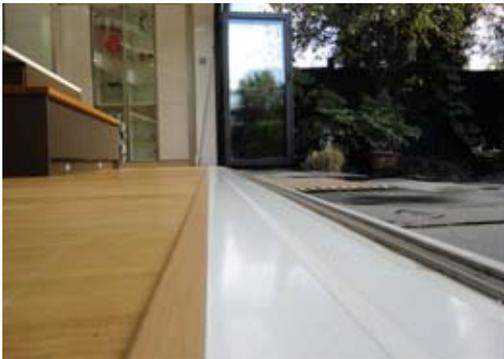




# Energy Efficient Skirting Heating



## About ThermaSkirt



Since we appeared on BBCs' Dragons Den, I am pleased to say that we have supplied over 9,000 domestic ThermaSkirt systems, and have been installed on many important and prestigious installations in the NHS, Schools, Care Homes and other public spaces around the world. Featuring more and more on DIY & TV makeover programs has also helped our profile, but our involvement in the Governments Green Deal, Retrofit for the Future and the Renewable Heat Incentive scheme is an important milestone in the companies development. The two principal forms of room space heating – conventional radiators and Under floor heating – now have an established, dynamic and innovative competitor in ThermaSkirt.

Martin Wadsworth  
Managing Director

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*ThermaSkirt is manufactured to the internationally recognised ISO9001 quality standard.*

## Why Choose ThermaSkirt?



Why?



Photo courtesy of American Micro Solar Inc

Over 9,000 Systems installed worldwide

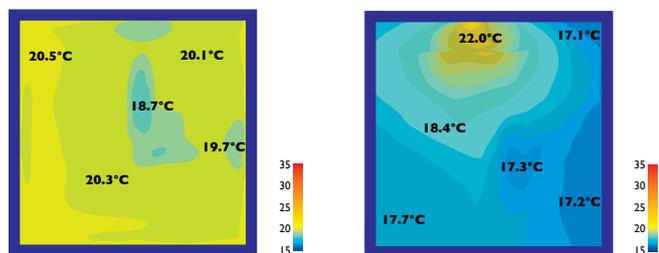
Most of us would prefer not to have radiators; ungainly lumps of metal that clutter our wall space and dictate the layout and use of our rooms. Many people appreciate the all-around even heat distribution of underfloor heating, but cannot contemplate the cost, disruption and upheaval of installing it, not to mention learning to live with its inherent slow-response times. Having your heating 'on' when it should be 'off' is no way to save valuable energy and reduce running costs.

So how can you combine the responsiveness and simple installation of a radiator, with the even heat and space saving of underfloor heating? How can you improve the energy efficiency and reduce the carbon footprint not just of the relatively few numbers of new build developments, but also the millions of existing properties already built?

Simple – ThermaSkirt; the skirting board that heats your home.

# Benefits of ThermaSkirt compared to a radiator and underfloor heating

## Vs Radiators



ThermaSkirt® Comfort Temperature

Radiator Comfort Temperature

Test results show that the unique thermal distribution pattern of ThermaSkirt® is far superior to radiators and practically identical to UFH. (BSRIA test report 51397/1)

### Comfort

As ThermaSkirt® heats the room from all directions at low level, you don't get drafts or hot spots created by the convection (movement of air) that radiators need to heat the room. Heat rises and then cools meaning that radiators heat the ceiling first before you – often requiring radiators to be up to 30% bigger than the room requires to compensate.

### Space Saving

By eliminating the radiators from the walls you save valuable living space and allow the room layout to suit your requirements. No more fixed positions for furniture. To a developer, or a conscientious home-owner, this extra useable space & versatility adds £1,000s to the value of the property

### Designed for Life

Creating a flexible and versatile environment means that rooms can be put to uses hitherto unthought of in the future. Future-proofing the room to cope with a variety of uses and a diversity of occupant as well as yet-to-be invented alternative heat sources means that ThermaSkirt really is RetroFit For the Future.

### Hygiene & Health

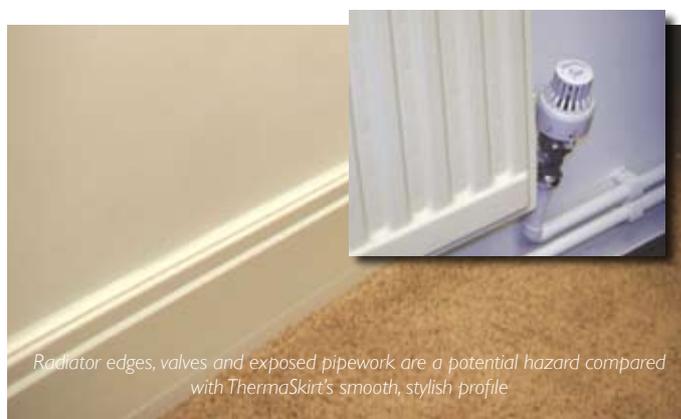
Radiators have been linked to the spread of respiratory afflictions and an aggravating factor for asthma sufferers, as the air movement they create spreads dust and particulates around the room. In addition, Microbiologists at the NHS have linked the outbreaks of C.Difficile and MRSA with the inability of radiators to be properly cleaned and the perfect dark and warm breeding grounds they provide for such virulent organisms. ThermaSkirt is simply wiped down to clean, or in NHS or hygienically sensitive areas, mopped at the same time as the floor (see page 13).

### Cost Saving

By providing a pre-painted skirting board as well as the heating ThermaSkirt often works out cheaper than installing radiators and wooden skirtings, which would still require sealing & finishing.

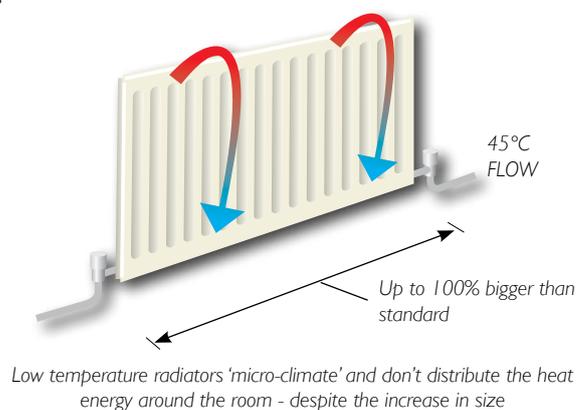
### Safety & Welfare

Over 86% of the 29,000 accidents attributed to Radiators every year (Source: RoSPA HaSS & LaSS statistics 2001/2002) are caused by impacts and falls onto them (and not scalds as is the common concern). ThermaSkirt smooth low-lines and soft edges eliminates this hazard at a stroke. In addition, Low Surface Temperature controls are available for highly sensitive areas such as NHS wards, Care Homes & Nurseries. (See page 13)

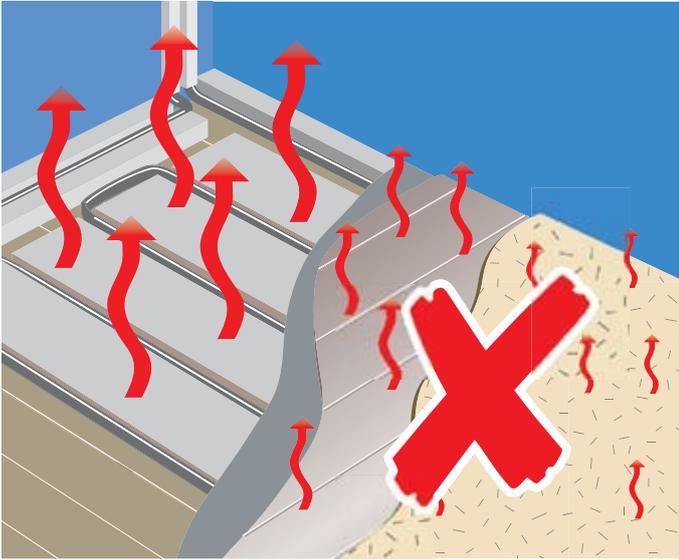


### Renewable Energy Sources and Over-sized Radiators

To compensate for the lower flow temperatures of renewable sources such as solar and heat pumps, over-sized radiators are often specified. Apart from the fact that these may be up to 100% bigger and thus even more of an eyesore, this still does not solve the problems of heat distribution. At low temperatures conventional radiators 'micro-climate'; that is the heat is confined to a small area near the radiator, as it does not have the thermal energy to circulate the air as they would do at normal boiler temperatures.



## Vs Underfloor heating



### Versatile

There's no doubt that UFH heating works well under hard surfaces such as tiles and marble, but not every home has or would like these floor finishes. The performance of underfloor heating (UFH) is severely compromised when carpets, rugs (greater than 2.5 tog) or timber flooring are used. When a timber sub floor is the method of construction, the practicality of under floor pipe work is rarely appropriate.

ThermaSkirt can be used with any floor construction or final finish with no detriment to performance.

### Response Times

The naturally slow response times of UFH caused by its thermal mass, means that it has to be run continuously (sometimes misleadingly referred to as 'set back' mode) in order for it to have a chance of responding to a sudden drop in temperature. Even complicated control systems and weather compensation sensors cannot overcome this inherent drawback and so energy is being used when heating is not required. By contrast ThermaSkirt is fully ON (or OFF) in minutes maximising energy efficiency.

### Simple RetroFit

Digging up your floors to install heating pipes can be disruptive, dirty and expensive. Overlaid systems use small sized pipes, limiting performance and efficiency and still require modifications to existing doors and skirtings to fit. Installing UFH between joists in timber structures is complicated, costly and requires rooms to be cleared to allow installation. ThermaSkirt simply connects above ground, often to existing radiator feeds and with minimal inconvenience to the occupant.

### Reliable

Being 'above ground' in the highly unlikely event of a problem with ThermaSkirt, it is quickly spotted, easily corrected and all with minimal fuss. ThermaSkirt 'wet' parts are covered by our 10 year quibble free parts warranty, typically 5 times that of a conventional radiator. 50 year UFH warranties sound impressive but they rarely cover installation error or clogging up with debris – the cause of 95% of the 100's of under floor heating failures per year.

### Renewable Energy Sources and ThermaSkirt®

ThermaSkirt® works perfectly well at low temperatures and its heat distribution and thermal comfort levels are indistinguishable from Underfloor heating. The rapid response times and low water content (typically  $\frac{1}{2}$  to  $\frac{1}{3}$ rd of a radiator and  $\frac{1}{10}$ th of UFH) ensures the most efficient use of the heat generated by renewables such as heat pumps, solar thermal or bio-mass. As a result ThermaSkirt can help improve the annualised COP (co-efficient of performance) of these renewable heat sources.

### Combining Renewable and Conventional Heat Sources

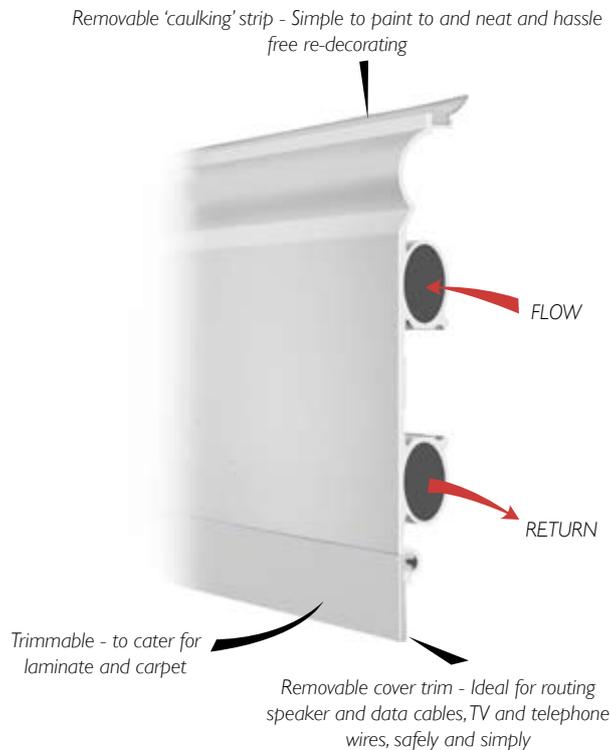
Depending on the buildings standard of insulation (listed building for example) it may not be possible to adequately heat it all year round using renewables.

By allowing the use of renewables during most of the year, and capable of working at higher flow temperatures when needed, ThermaSkirt allows many more buildings than would ordinarily be possible to take advantage of the energy savings that heat pumps and solar thermal provide.



Why?

## How ThermaSkirt Works



ThermaSkirt® is a high tech alloy polymer extrusion that replaces the skirting boards and radiators in one. Warm water flows through the patented integral oval tubes and heats the skirting front. This distributes the heat quickly and evenly all around the room, at low level – just like under floor heating. In addition, it frees up your wall space to maximise your usable living area.

### Comfort

ThermaSkirt® can make the room feel comfortable at lower operating temperatures. This can save up to 25% on your annual heating costs and significantly reduce your carbon footprint.

### Control

ThermaSkirt® is able to respond in minutes, whatever your floor construction or finish, and being able to control the heating so quickly enables you to use just enough energy, only when you need it. This can also help reduce your fuel bills. (For a choice of control systems, see page 21).

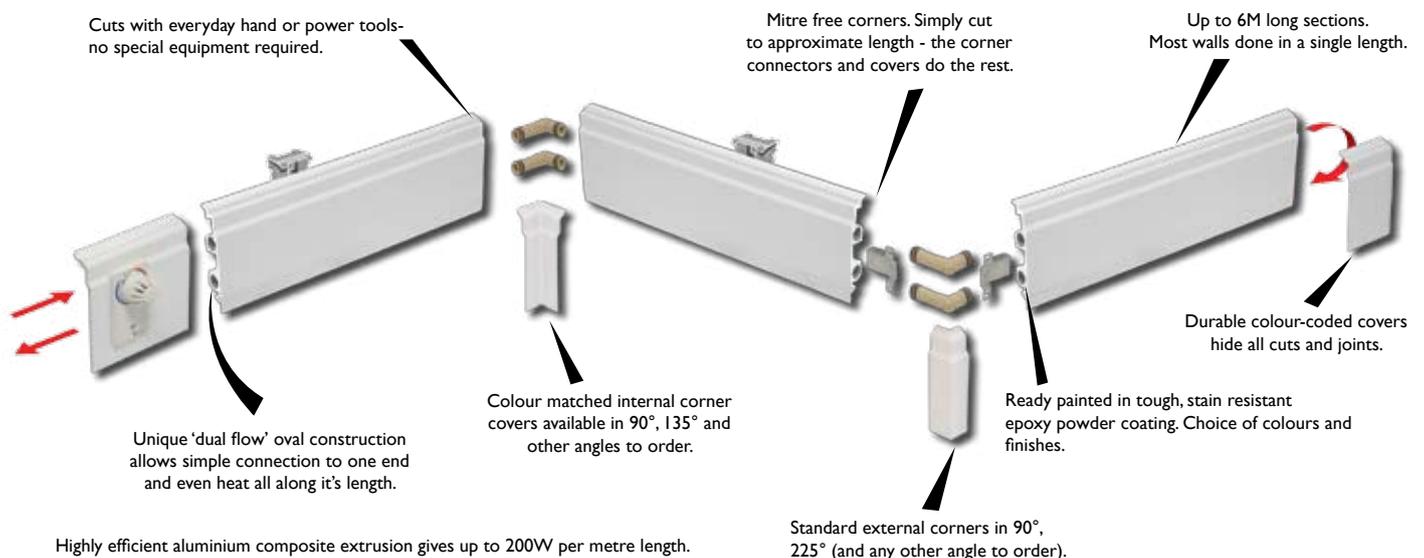
### Eco Friendly

The larger surface area afforded by ThermaSkirt® enables renewables such as solar panels or heat pump system to be used. As it is fitted 'above ground' it can be installed in many more existing buildings - something that would be impossible without the upheaval required to fit underfloor heating.

### Versatile

ThermaSkirt® can be installed directly onto the existing heating system if required, eliminating the need for sophisticated manifold, control & actuators. Alternatively, a manifold and room sensor may be employed for precise room temperature and surface temperature control. (See TherMiser system - page 21).

Where solid final surface finishes are preferred, ThermaSkirt® can work in conjunction with UFH to provide a responsive and complimentary alternative to radiators at 1st floor; or when renewable energy sources are employed.



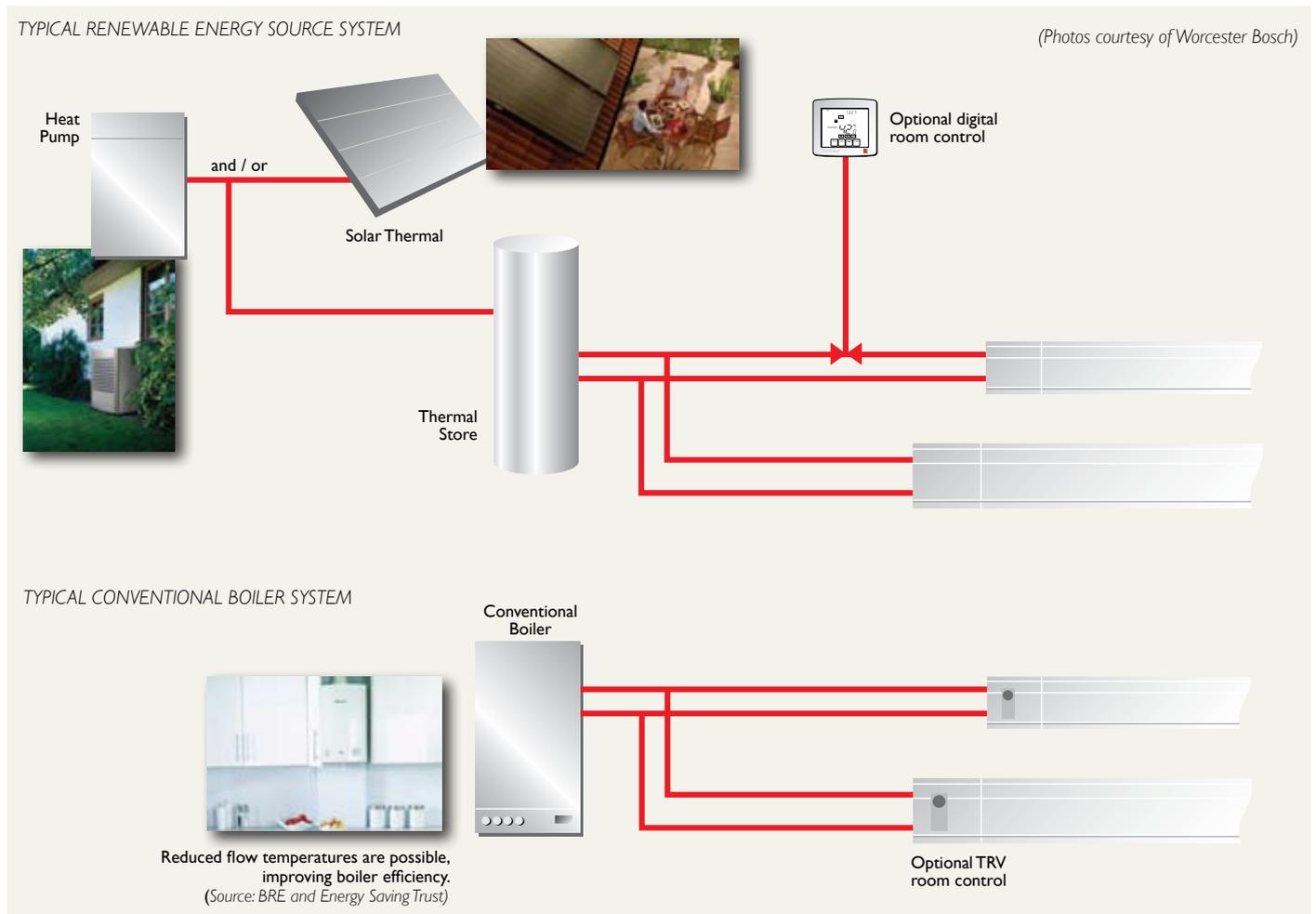
## How it Can be Installed

ThermaSkirt® has been fitted in 1,000's of properties both new build and refurbished, in conjunction with Heat Pumps and Solar Thermal Systems. By allowing the use of low temperature heat sources such as heat pumps and solar to be installed in properties that otherwise could not, ThermaSkirt® can help customers claim their RHI grants and Feed in Tariff allowances. ThermaSkirt® has been selected as one of the technologies in the Government 'Retro Fit for the Future' program, that aims to reduce the CO<sub>2</sub> footprint of the current housing stock. Being installed above ground with minimal disturbance to the floors or structure, ThermaSkirt® is facilitating the installation of renewables into older houses and buildings.



Urban LT used on wooden floor

### Typical Installation Examples



## RHI, Green Deal and Retrofit for the Future

The Renewable Heat Incentive (RHI for short) is the Government program that encourages the introduction of renewable energy technologies into the existing domestic, social and commercial sectors. The Government is seeking to achieve 15% of the UKs' heating requirements to come from renewable technologies by 2020, and has earmarked £850 million in grants and Feed In Tariffs (FITs) to achieve it.

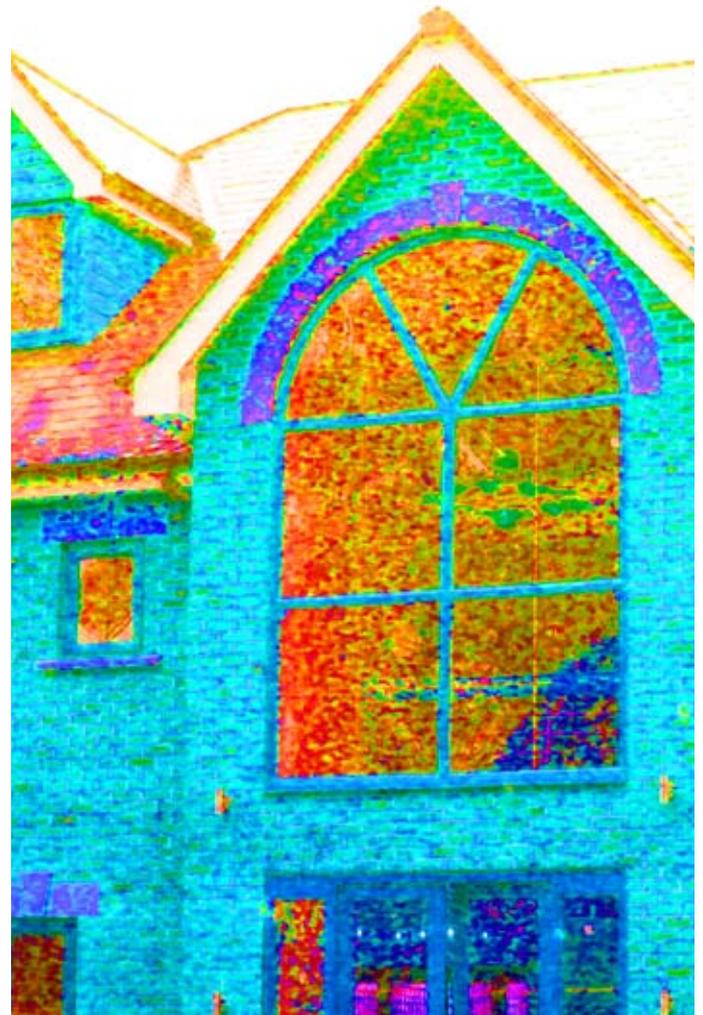


### How Can ThermaSkirt help me with my RHI project?

Installing renewables such as ground source and air source heat pumps and solar thermal systems is only half the story. Renewables work best when the properties are well insulated and the room heating system can operate at lower temperatures. Lower operating temperatures allow the heat pumps and solar thermal systems to achieve a greater Coefficient of Performance (CoP). Higher operating temperatures reduce the heat pumps and solar thermal systems CoP and thus efficiency, and may require an electric immersion heater back up – eliminating any energy or CO<sub>2</sub> savings. Lower operating temperatures require greater surface areas and better heat distribution. Underfloor heating is often promoted as the most suitable room heating system, but this would require major disruption to an existing property and is practically impossible to install efficiently under timber or carpet floor coverings. Oversized radiators are often specified, but these can be up to double the size of the high temperature radiator they are replacing, and take up more wall space. Fan assisted radiators tend to spread dust and allergens, but even these cannot evenly heat the room, and create cold & hot spots. ThermaSkirt is suitable for retro fitting or renewable heat sources such as heat pumps, as it provides the greater surface area and even heat distribution of UFH, with minimal disruption and response times.

### SEAI (Sustainable Energy Authority Ireland)

ThermaSkirt's unique temperature controls has enabled the system to be accepted as part of the SEAI Home Energy Saving Scheme, available to Irish customers upgrading their home heating. Grants are available up to €750.



How?

### Green Deal

The Green Deal aims to incentivise the UK home owner to improve the energy efficiency of their homes. The UK's ageing housing stock are much less energy efficient than their modern European counterparts. For example, energy bills for Norwegian homes are lower than those in the UK despite their energy costs being approximately 50% higher per kw/h.

Through a scheme of low interest bearing loans, energy providers such as E.ON and British Gas, and retailers such as B&Q and Tesco will facilitate the installation of energy saving measures that will enable the UK to meet its energy & emission targets by 2050.

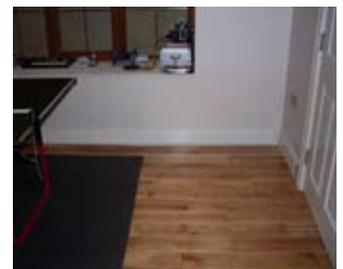
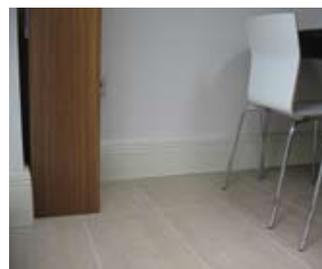
ThermaSkirt is proud to be involved in this scheme through its association with several of these providers. Please see our website for further details. [www.thermaskirt.com](http://www.thermaskirt.com)

### Retrofit for the Future

During 2009-2010, the Technology Strategy Board implemented a £multi-million programme known as Retrofit for the Future (RfF), to kick-start the retrofitting of the UK's social housing stock. ThermaSkirt has been selected as one of the most suitable new technologies for the Governments Retrofit for the Future program, and has been successfully trialed in several refurbishment projects.

## Living and Dining Spaces

By freeing up valuable wall space and improving the comfort levels of your living and dining spaces, you can increase the desirability and value of your home. ThermaSkirt® is supplied with a removable top 'caulking gasket' and bottom 'cover trim'. The colour co-ordinated caulking gasket enables you to remove it for painting and decorating, and replace for a perfect neat finish.

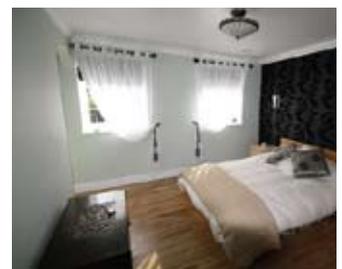
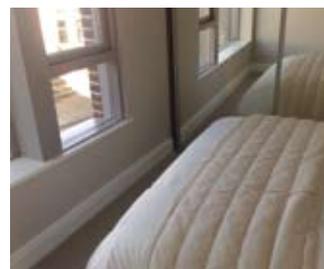
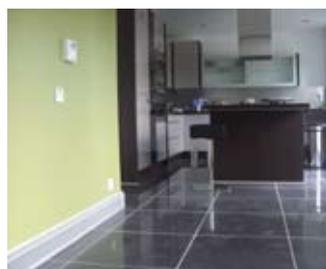
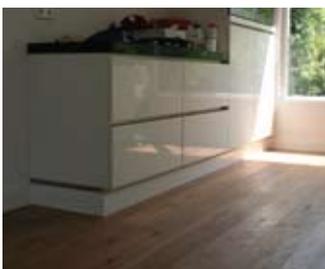
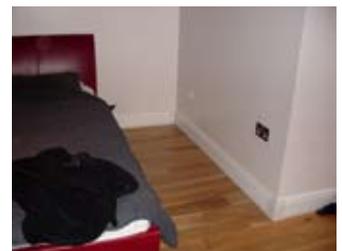


The matching bottom cover strip enables speaker and data cables etc to be hidden and can be trimmed to accommodate uneven floors - just like timber skirting.

Guests at your dining table will no longer need to move their chair away from the radiator when you fit ThermaSkirt. The whole room can be set at comfortable temperature, so everyone feels the same, even heat.

## Kitchen and Bedroom

Even rooms with fitted furniture can have ThermaSkirt. By installing along the plinths of the units you can maximise useable storage space without losing a wall to a radiator. The plinth heating panels are easily fixed into place onto the existing plinths if required. The Urban LT and Deco PR are most suitable for this application.

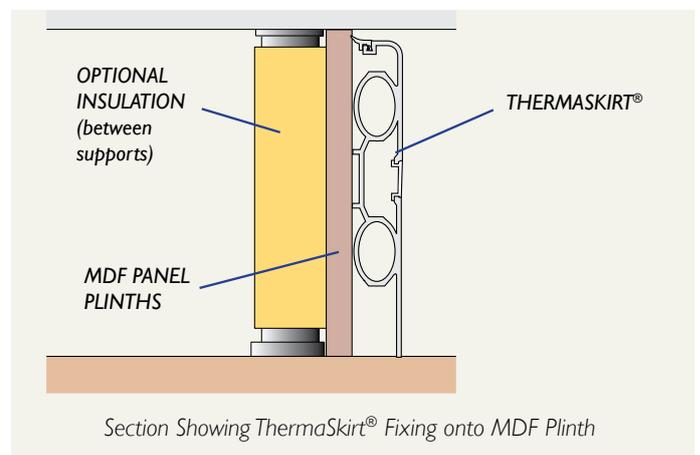


DiscreteHeat bring you the solution to heating your kitchen and bedroom without having to use unsightly radiators on the wall. Heating the kitchen with a radiator has always meant fewer kitchen units - until now!

ThermaSkirt is added to your existing plinths or can replace them.

Insulation may be fitted between brackets to maximise the heat into the kitchen or bedroom.

Even large fitted wardrobes can accommodate ThermaSkirt®, meaning you don't have to sacrifice the warmth or design of your room.



Where?

## Conservatories, bi-fold doors, basements and loft conversions

Heating a conservatory is notoriously hard to do, and with many constructed with low walls or bi-folding doors, useable wall space is at a premium. ThermaSkirt can provide a number of innovative solutions, including colour match foil to the windows, and across-the-threshold heating to ensure the conservatory is as comfortable and as cosy as is practically possible.

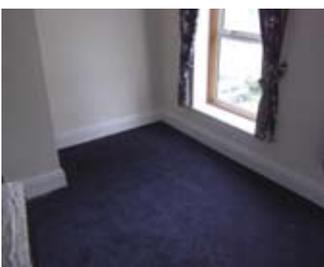
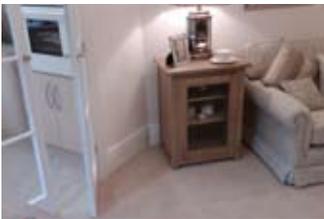


In basements or loft conversions, Thermaskirt makes the most of the available wall space, and provides a discreet and unobtrusive alternative to radiators. By providing heating around the perimeter at ground level, ThermaSkirt has also been used to combat damp and mould in areas that are prone to poor ventilation and mildew.



## Hospitals, the NHS and Care Homes

**Hospitals and Care Homes** owe a duty of care to their clients as well as a requirement to operate energy efficiently. ThermaSkirt® has been proven to reduce the risk of infection due to its wipe-clean surfaces, and the absence of slots or grilles helps prevent communicable diseases to develop and spread. As the heating is radiant it does not create convection currents that would otherwise circulate dust and other particles that can aggravate respiratory afflictions and spread hospital acquired infections (HAI).



The **NHS** has started retrofitting ThermaSkirt® into hospital areas as replacements for convector radiators in their battle to combat the spread of C.Difficile and MRSA. More than 30 hospital areas have been successfully fitted with ThermaSkirt®. "Double Decker" systems have been developed for larger wards and spaces, whilst the standard 6" profile has proven suitable for other environments around the hospital.

ThermaSkirt can be cleaned as part of the floor cleaning process - any time of day or night, whether the heating is on or off. There is no dismantling covers, no specialist tools or equipment required. It can simply be mopped down with a 1% bleach solution.

Replacing old and inefficient radiators with ThermaSkirt reduces running costs and increases comfort levels for patients.

**Care homes** need to maximise usable space, as well as provide a safe environment. ThermaSkirt® takes up no wall space and can be installed with surface temperature limiting controls to meet the requirements of LST radiators. Their wipe clean surfaces, and safe edges also help to maximise the client's well being, as well as being practical and energy efficient to maintain and operate.

The risk of bacteria cross-contamination and contracting an infection is particularly high in the health sector. ThermaSkirt addresses these concerns far better than the current norm of LST radiators.

Falls, Trips, Impacts	25,936	86.66%
Grab injury burns to hands & arms	1,847	6.10%
Burns to other part of body	583	1.90%
Other Causes	1,543	5.16%
<b>Total Radiator Accidents</b>	<b>29,909</b>	<b>99.82%</b>

Source: RoSPA HaSS & LaSS statistics 2000-2002



"The DiscreteHeat system keeps the whole children's unit at a comfortable temperature and it is easy to keep it clean because, unlike a radiator, there are no nooks and crannies where airborne particles can hide."

**Dr Barzo Faris**

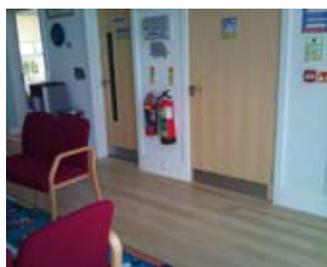
Infection Prevention & Control lead at Trafford Healthcare NHS Trust



Ask for brochure NHS12 for further information

## Schools, colleges and other public spaces

**Classroom comfort**, energy efficiency and Health & Safety are major concerns in the School environment; ThermaSkirt® addresses these issues far better than any other system currently available. Low water content and direct-to-room heating mean a super rapid response to changing class sizes and different uses – something UFH cannot deliver or match.



**Schools and colleges** also need to reduce the risk of accidents and the clean lines and absence of sharp edges, exposed pipework and bulky valves creates a safer working environment for active students to study.

The rapid response times of ThermaSkirt® ensure that comfortable, concentration-friendly temperatures can be closely controlled, despite the obvious huge potential variances in class occupancy, and the changing climate outside. Underfloor simply cannot react fast enough to compensate for our fickle weather and class sizes that could vary between 5 and 35 students in a single morning. More than 30 schools and college areas have been retrofitted with ThermaSkirt®.

The risk of bacteria cross-contamination and contracting an infection is particularly high in classrooms, where there are a large number of people in close proximity and an abundance of 'hiding places' for bacteria. ThermaSkirt® is simply cleaned when the floor is mopped and the problem is eliminated altogether.



Ask for brochure SCH12 for further information

## Special solutions and overcoming obstacles

Being a versatile and well engineered product, ThermaSkirt has been installed in some very challenging applications and overcome many hurdles that would defeat conventional heating systems. Here are a few examples of the ways in which ThermaSkirt can heat even the most awkward spaces; why not see if we can help you heat yours?

**Bypassing doorways & apertures** is an every day occurrence with ThermaSkirt. Here are some of the ways:

**Threshold in screed** – a channel is formed in new floors, or cut into existing floors (typically 50mm x 50mm) to allow the flow & return pipes to continue onto the next section.

**Bi-Directional & Corner feed points** – existing feed & return pipes may not always be in a convenient position or simple to move. A variety of pipework interconnections are available to enable spaces to be fed on all sides with the minimum number of feed points, simplifying installation and reducing cost.

**Hard to heat environments** – being a radiant heat, ThermaSkirt can be used to heat people directly. Shown above, even a 150 year old listed Church building has replaced ineffective radiators (which only heated the ceiling) with pew heaters, that benefited the congregation with no loss of useable space to worship.

**Narrow and awkward spaces** – Even unique installations such as narrowboats can benefit from ThermaSkirt!

**Special Profiles and Colours** – If you have a project of more than 500m of heated skirting why not contact us to discuss your specific requirements?



**Curved walls** in windmills, water towers and oast houses as well as bay windows present a common headache to heating engineers & home owners alike. ThermaSkirt can be formed to shape to suit a template provided by the installer or client.



Bi-directional pipework



Skirting to threshold pipework



Narrowboat & pleasure craft



Using threshold kit on solid floor



Using threshold kit on timber floor



Using architrave kit

**Threshold Kit in timber floor** – simply route the feed and return pipes in or through the joists to continue the system past the doorway.

**Threshold heater** – mostly suitable for external patio or bi-fold sun doors, this not only neatly overcomes the opening, it also provides heating exactly where the rooms greatest heat loss occurs, making a real difference.

**Architrave kit** – cleverly designed to suit the ThermaSkirt profile, the aluminium architrave profile hides the feed & return pipes as they pass up & over the doorway. Available up to 5m openings, the kit includes a patented bleed point to release any air that may be trapped during commissioning.

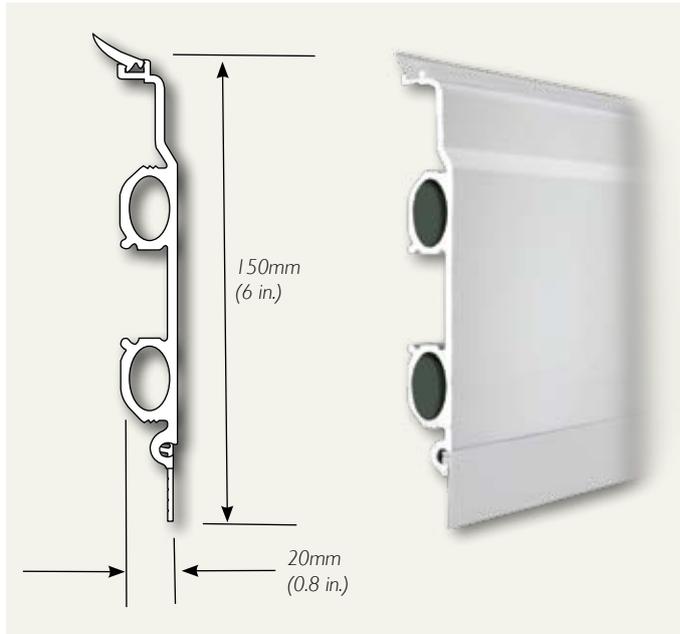
**Matching MDF** – ThermaSkirt profiles are available in a matching MDF, to complete the look of the room in unheated areas, for minimal cost.

Where?

## Which Profile?

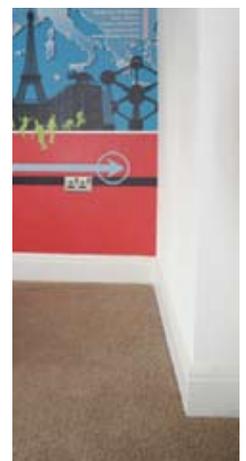
### URBAN LT

Urban LT (Lambs Tongue) is the most versatile profile, finding applications in both new build and refurbishment applications. It has been used in Art Deco & Arts & Craft type houses as well as more contemporary apartments and loft conversions.



Urban LT's clean lines make it also suitable for offices, restaurants, school and public buildings, and profiles are available to combat infection spread in hospitals and clinics.

Urban LT has been used successfully with Ground and Air source heat pumps and solar thermal heating systems. Its smaller profile make it a perfect for use upstairs in bedrooms when using the larger OG profile downstairs. It may also be successfully used with renewable energy in main downstairs rooms, depending on the construction or final insulation values of the property.

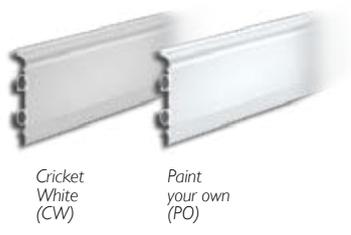
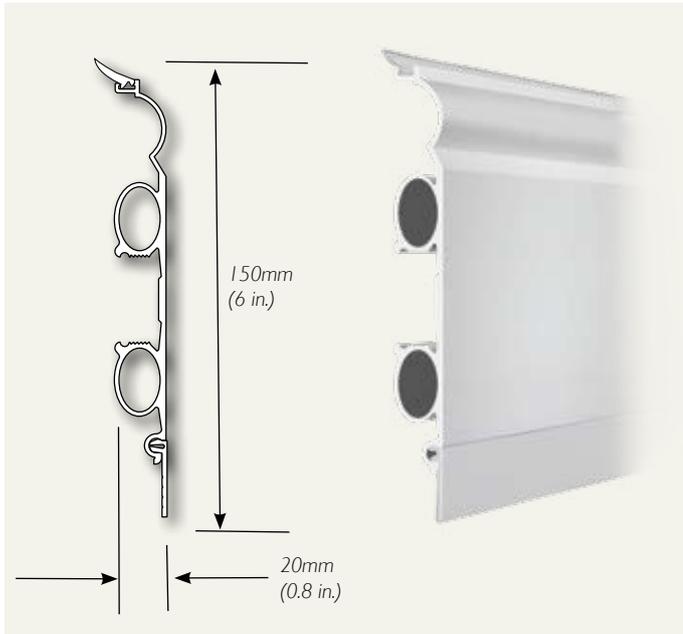


Actual size and profile

For technical information and performance, please see page 22.

**CLASSIC TS**

Classic TS (Torus) has been developed to replicate the most popular profile in both new build and refurbishment projects. Based on the evergreen Torus of the Victorian and Edwardian era, it has been given a modern twist with an easy to clean upper portion.



**To order a Sample:**  
 Email: [sample@discreteheat.co.uk](mailto:sample@discreteheat.co.uk) with your choice of colour, address and contact telephone number. You may be charged a nominal amount to cover postage.

A full 6", the Classic TS is very similar to the Urban LT in terms of performance and features.

The ThermaSkirt® alloy profile and connector covers are provided in a base finish that will accept primer and top coat from a number of reputable manufacturers paint ranges including **CROWN** (ask for details).

Like the Urban LT, the Classic TS is designed for use with renewable energy systems such as solar thermal and heat pumps, subject to insulation levels and available wall perimeter. It is particularly appropriate for bedrooms with the Regency OG in the larger main living spaces if required.

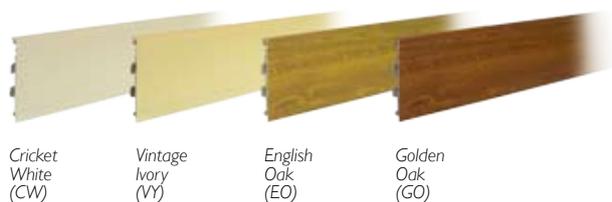
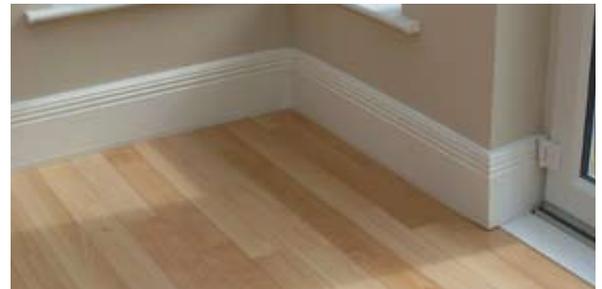
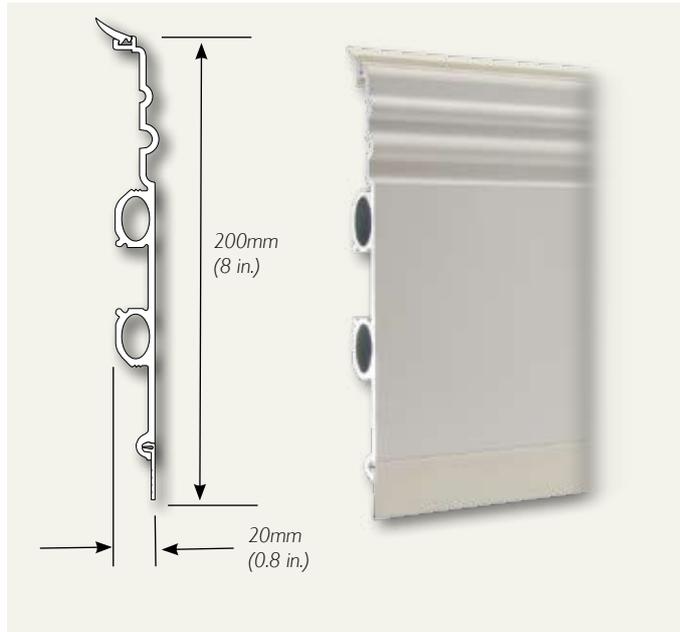
*For technical information and performance, please see page 22.*



## Profiles

### REGENCY OG

Regency OG (Ogee) profile has been specifically designed for retro fitting into larger and older properties.



Cricket White (CW)

Vintage Ivory (VY)

English Oak (EO)

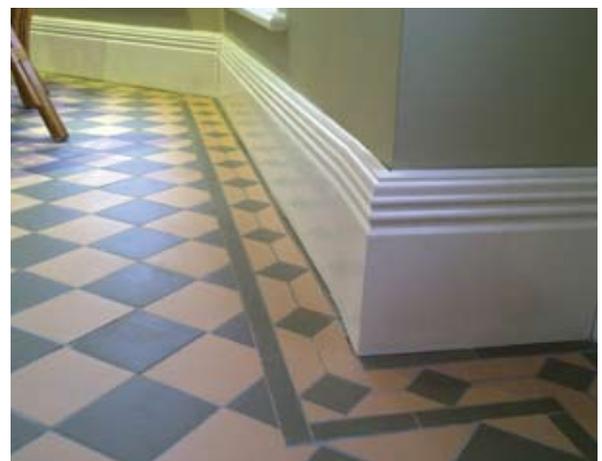
Golden Oak (GO)



Due to its greater output and grander proportions (being a full 200mm (8") deep), it has found applications in converted churches, Victorian Villas, Orangeries and conservatories and other habitable spaces that demand higher levels of heating. Its greater surface area also make it perfect for use with renewable energy sources, depending on the final insulation U values of the refurbished property.

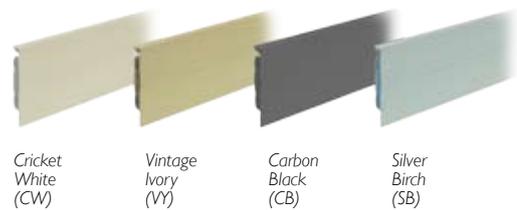
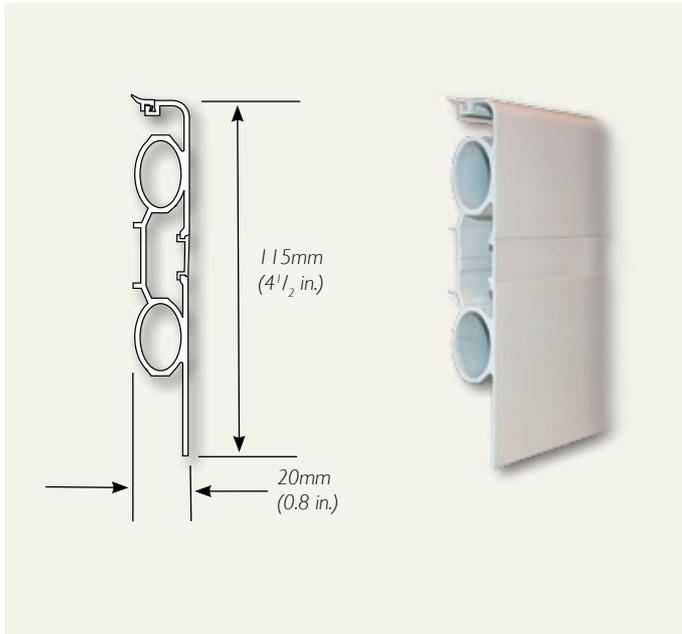
The Regency OG has been created especially to work perfectly with renewables such as ground & air source heat pumps, and solar panels. Its larger surface area means that adequate, evenly distributed heat is provided even at 40~45°C flow temperature, subject to insulation levels. As the ThermaSkirt® is fitted 'above ground', its ideal for retro fitting into existing properties, meaning that heat pumps and solar panels may be employed in buildings that otherwise would require major upheaval or structural alteration to provide under-floor heating.

*For technical information and performance, please see page 22.*



DECO PR

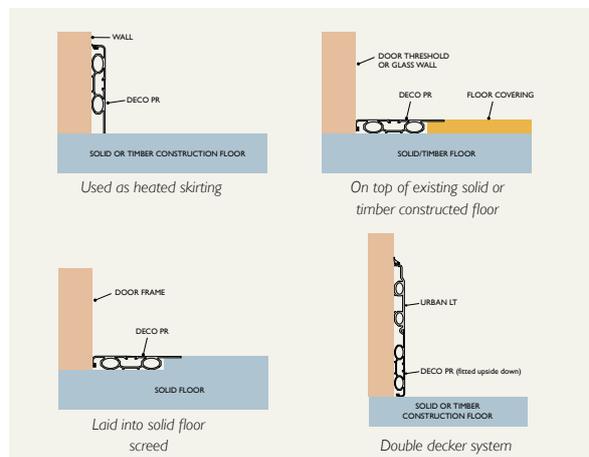
The Deco PR (pencil round) profile is the simplest profile with a unique and highly efficient fixing method.



It has been specifically designed where cost and simplicity are paramount, and is mainly suited to new build applications. It is ideal for starter homes and apartments, as well as timber or SIPP constructed habitable spaces such as student accommodation, holiday lodges and mobile homes. It also is ideal for mounting flat on its back as a threshold or glazed wall perimeter heater, and may be let into the floor or tiled or carpeted flush, where limited wall space is available. Its clean lines make it also suitable for offices, and versions are available to combat infection spread in hospitals and clinics.

Due to its diminutive size and reduced surface Deco PR may not always be suitable for use in low temperature heating systems. It may be combined with the LT, OG & TS profiles to form a 'double decker' system. Please check with DiscreteHeat and/or your heating engineer before specifying.

For technical information and performance, please see page 22.



Actual size and profile

Which?

## Profiles

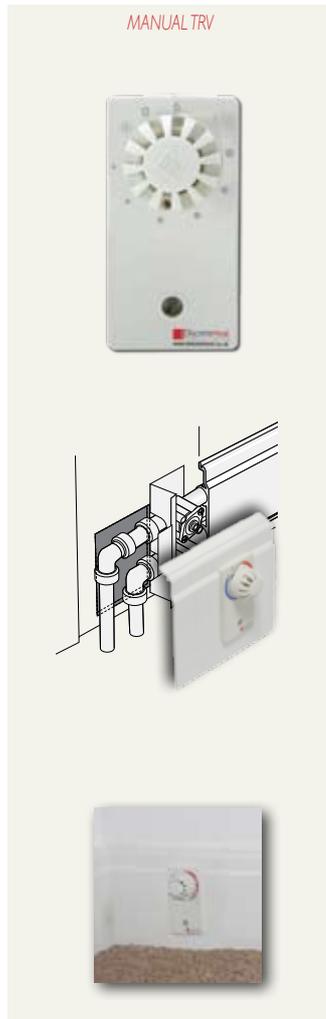
TRIDENT TP

AIRO-THERM

DETAILS COMING  
SHORTLY

# Control Systems

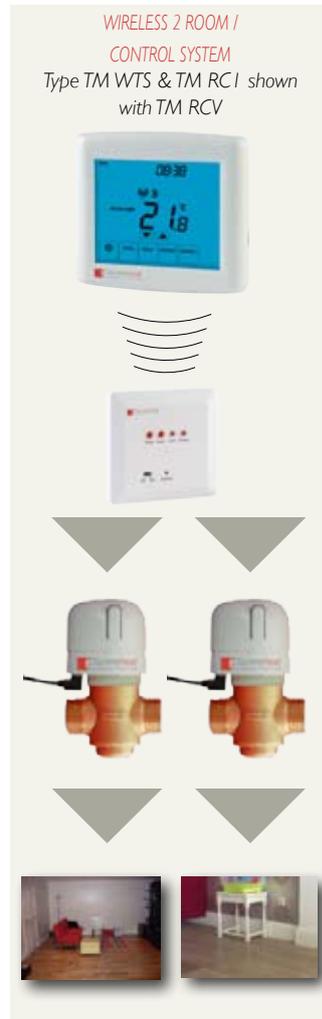
TherMiser control systems are designed to provide precise remote control of ThermaSkirt heating system, to closely maintain the desired room temperature and timings, providing a completely discreet heating system. Low surface temperature control for additional safety, or wireless multi-room zone control for ease of installation are also available.



- Simple comfort control TRV
- 'On-board' design for instant operation
- Colour coordinated knob & fascia plate
- Integrated lock shield valve for local isolation
- Direct connection to standard 15mm pipes
- Variety of covers to suit all installations



- Electronic Touch Screen with 7 day/ 4 period programming
- Room & ThermaSkirt surface temperature control for LST applications such as hospitals, care homes and schools.
- Standard 35mm Switch back box mounting
- 230v AC control
- Eliminates manual TRV control knob on skirting



- Wireless Touch Screen with 7 day/4period programming.
- 2 Zone wireless receiver can control 2 separate zones/room
- Eliminates manual TRV control knob on skirting
- Control valve secreted in cupboard or floor/wall/ceiling void
- Rechargeable battery (Touch Screen)
- 230v Hard wire supply to TM RCI and onto TM RCV control valve



- Wireless room control for up to 8 Zones/areas
- Direct connection from Control unit to Manifold actuators – no intermediate control unit required.
- Rechargeable, portable touch screen thermostats
- Programmable for time & temperature.
- Complete range of manifolds from 2 – 8 ways

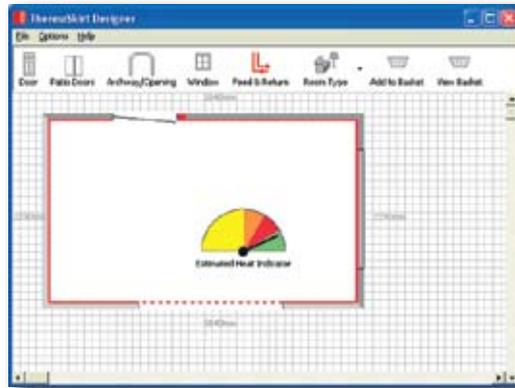
What?

# Technical Information

## Design on-line

Log on to our website - [www.discreteheat.co.uk](http://www.discreteheat.co.uk) and go to the software page.

There you'll see a screen like the one opposite. Just follow the simple steps and you can create your own ThermaSkirt® heating system - in minutes! It will even work out your heat loss estimate!

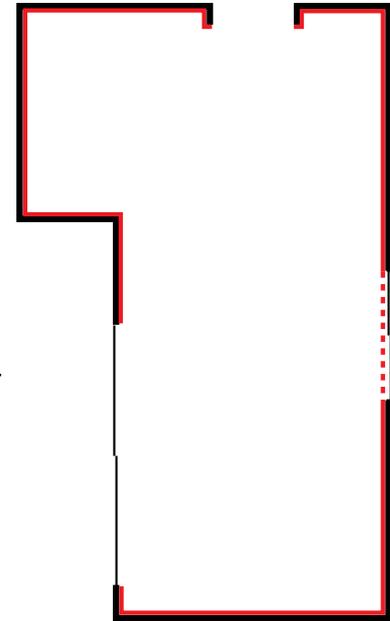


ThermaSkirt designer produces a numbered room plan.

You can even order and pay for it on-line. Alternatively, go straight to [www.thermaskirt.com](http://www.thermaskirt.com) and download the free software.

ThermaSkirt can be supplied in pre-cut ready-to-install room kits, complete with your numbered room plan. You or your installer can follow the step-by-step instructions supplied.

Plan Reference	Code	Description	Quantity	Unit	Unit Price £	Total £
1	DH030CW	Internal 90 corner cover	1	EA	4.95	4.95
	DHICK90	Internal corner kit 90 no cover	1	EA	5.90	5.90
	DHLTMCW	Skirting made-to-measure (measured wall section 3401mm)	3271	MM	27.95	91.42
2	DHTHK2M	Threshold kit 2m no covers	1	EA	24.95	24.95
3	DHLTMCW	Skirting made-to-measure (measured wall section (2299mm)	2169	MM	27.95	60.62
4	DH030CW	Internal corner cover	1	EA	4.95	4.95



Alternatively you can buy full 2M, 3M and 6M lengths and cut on-site. Our unique algorithm program will give you a cutting schedule to minimise waste when you click 'Cut it Yourself' on the checkout page. Full instructions from: [www.discreteheat.co.uk/downloads/technical/instructions.pdf](http://www.discreteheat.co.uk/downloads/technical/instructions.pdf)

## Performance

Output Temp	Profile	Typical Radiator Temp.	Typical Heat Pump/Solar Thermal System				Typical Boiler Flow Temps.		
		ΔT50 (72°C/160°F flow)	ΔT40 (100°C/104°F)	ΔT45 (45°C/113°F)	ΔT50 (50°C/122°F)	ΔT55 (55°C/131°F)	ΔT60 (60°C/140°F)	ΔT70 (70°C/158°F)	ΔT75 (75°C/167°F)
Flow rate	URBAN LT	148.5	44	58	72	87	102	136	152
	CLASSICTS	150	44.5	58.5	73	88	103	137.5	153.5
		REGENCY OG	202	61	81	100	122	143	189
@ 56 g/sec	DECO PR	130	30	52	64	78	91	122	135
Flow rate	URBAN LT	505	149	197	245	297	350	460	517
	CLASSICTS	510	150.5	199	247.5	300	353.5	464.5	522
		REGENCY OG	690	208	275	342	416	488	643
@ 56 g/sec	DECO PR	443	133	177	218	266	310	416	460
Flow rate	URBAN LT	153	45	60	75	90	106	140	158
	CLASSICTS	154.5	45.5	60.5	75.5	91	107	141.5	159.5
		REGENCY OG	208	64	84	104	127	149	196
@ 56 g/sec	DECO PR	134	40	53	66	80	93	126	139

ΔT50 is the EN 442-1 norm for comparing radiator outputs

Low flow temperature to maximise annualized COP

Renewables often produce flow temperatures in excess of 45° if required

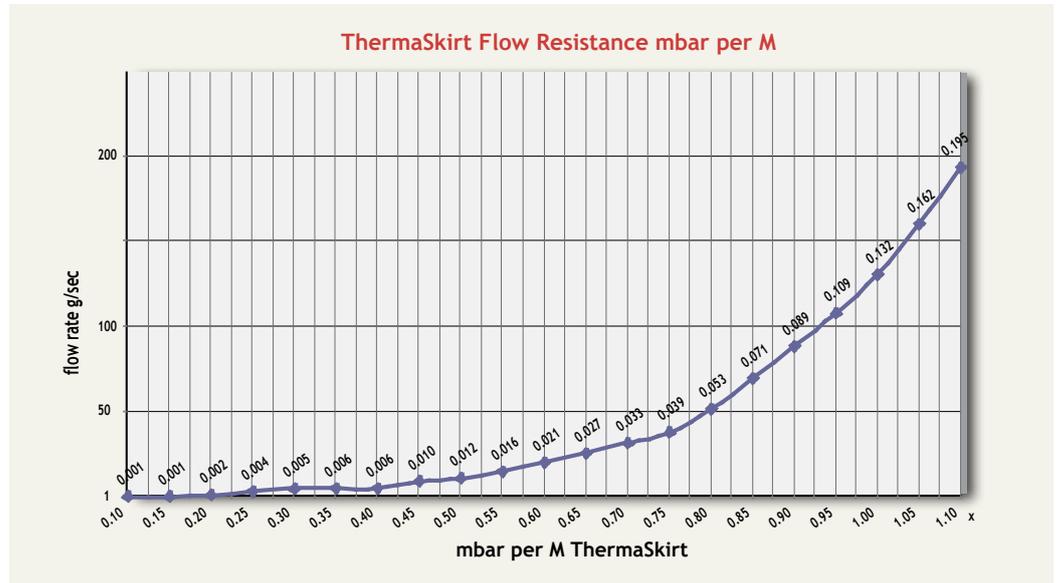
Reducing flow temperatures ensures condensing boilers operate most efficiently 100% of the time and not just on start-up. (Source: BRE & Energy Saving Trust).

**Frictional resistance**

The oval 22 x 14mm ThermaSkirt pipes has the x-sectional equivalent of an 18mm diameter pipe, and so has a very low frictional resistance compared to many other heating systems, especially UFH. Because of this, on most renovation projects the existing boiler and pump is adequate to provide sufficient flow. However on very large projects, it is advisable to consider the routing and condition of the existing pipework to avoid poor flow rates, or consequential effects such as pipe noise. An additional pump may be required to overcome the frictional resistance on large projects, and the data below can help your heating engineer or M&E consultant decide. The figures are expressed as mbar pressure lost per M of ThermaSkirt (at varying flow rates which affects the rate of pressure loss).

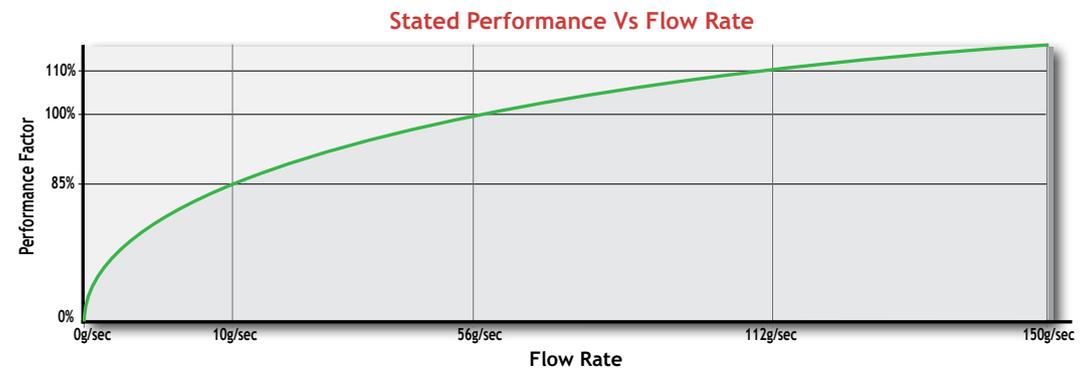
**Equivalent Length of various connection components**

The table opposite can help the heating engineer or M&E consultant calculate the total equivalent length in M of all the components in a system, so that pressure loss in mbar can be calculated. This is only relevant usually on larger commercial projects, where several hundred metres of pipework and ThermaSkirt may be installed, and the demands on the heating system need to be fully understood.



**Performance Vs Flow Rate**

Output in Watts/m (or BTU/ft) is only slightly affected over a wide range of flow rates. Our typical test data is based on 56g/sec in accordance with the BSRIA test BS EN 442-1. Output data is given here for flow rates between 10g/sec & 112g/sec which covers the lower and upper ranges of suitable performance for central heating systems.



Go to [www.thermaskirt.com/technical](http://www.thermaskirt.com/technical) for interactive data

Equivalent length of Thermaskirt for various connections							
1 metre of ThermaSkirt	90° Corner	Return Manifold	TRV Valves	Valve Push fits	Threshold	Architrave	Odd Angles
1.00 m	1.32 m	1.28 m	4.99 m	1.42 m	6.15 m	19.2 m	1.41 m

**INHIBITOR AND CORROSION PROTECTOR**

BS EN 7593:2006 requires all central heating systems to be treated with a suitable corrosion inhibitor. ThermaSkirt requires an inhibitor suitable for aluminium radiators to be used. Suitable inhibitors are available from DiscreteHeat, or from your local distributor and/or installer. If using another manufacturer's inhibitor, please check with DiscreteHeat as to its suitability.

As seen on



**GRAND  
DESIGNS**

**Property  
Ladder**



Homes Under the Hammer

**CHANNEL 5**

and



Home of the Future



11/2170

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ThermaSkirt® fully complies with BS-EN 442, 89/106 and carries the CE mark.

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