



**ENERGY AND  
SPACE EFFICIENT  
HEATING;  
AN M & E GUIDE  
FOR ARCHITECTS  
& CONSULTANTS**



Versatile - Suitable for residential, commercial, schools, care homes and even the NHS

Simple 'above ground' Installation - new build or retrofit with minimal disturbance

Proven Energy Efficiency - Independently tested by BSRIA

Rapid Response Times - On or Off in minutes to cater for varying occupancy or room uses

Future Proof - works with conventional heat sources as well as renewables such as Heat Pumps

Frees up wall space - Flexible room layouts to suit furniture requirements

Even, all round comfortable heat - no cold corners or hot spots

Health & Safety - no obtrusive edges or pipework to cause falls or impact injuries

Hygienic Heat - No grilles, fins or slots - to harbour infections and communicable diseases

Easy to clean - simple wipe down during regular cleaning cycles

Built in cable duct - AV & Data cables routed safely

Proven Technology - More than 9,000 systems installed worldwide

**A Product by**

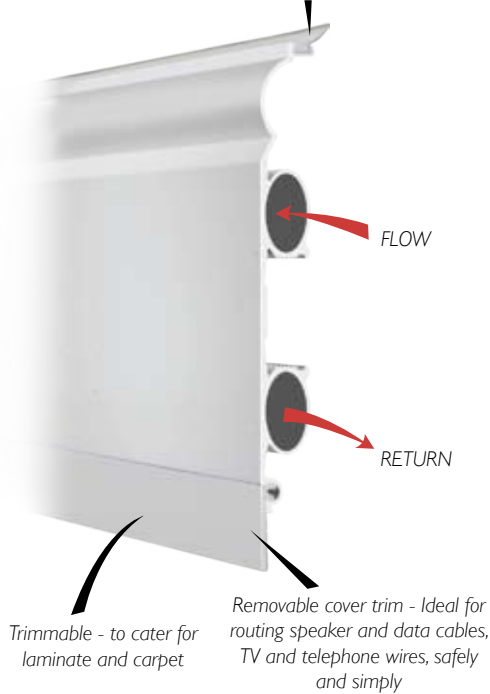
As seen on



# ThermaSkirt® is a revolutionary heating system . . .

## How ThermaSkirt® works

Removable 'caulking' strip - Simple to paint to and neat and hassle free re-decorating



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. It can save up to 25% on heating bills and significantly reduce the carbon footprint.

### Control

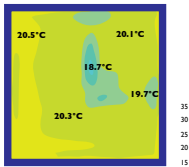
ThermaSkirt® is able to respond in minutes, whatever the floor construction or finish, and being able to control the heating so quickly enables the use of just enough energy.

### Eco Friendly

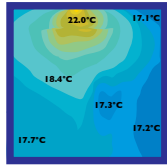
The larger surface area afforded by ThermaSkirt® enables renewables such as solar panels or heat pump system to be used. As it is fitted 'above ground' it can be installed in many more existing buildings - something that would be impossible without the upheaval required to fit underfloor heating.

### Versatile

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



ThermaSkirt® Comfort Temperature



Radiator Comfort Temperature

### Tests Prove ThermaSkirt® to be More Efficient Than a Radiator

In an independent comparative test, undertaken by BSRIA, the Computational Fluid Dynamics (CFD) of a room being heated with ThermaSkirt® and the same room being heated with radiators, ThermaSkirt® was proven to be the most efficient form of heating, giving the best uniform heat distribution, with only a  $\pm 1.3^{\circ}\text{C}$  variation, compared to a radiator with a massive  $13^{\circ}\text{C}$  variation. This equates to at least a 13% improvement in energy efficiency.

## Profiles

<p>URBAN LT</p>	<p>CLASSIC TS</p>	<p>REGENCY OG</p>	<p>DECO PR</p>
-----------------	-------------------	-------------------	----------------



Efficient . . .

quiet . . .

... energy efficient and cost effective!

## Easy to Install

ThermaSkirt® can be installed into both new build and refurbishment projects – often utilizing the existing pipework layouts. As it is 'above ground' there is minimal disturbance to the property and there is no restriction on the final choice of floor finish – ThermaSkirt® works as well with carpets and laminate as it does with tiles or marble. Simply connect onto standard radiator style plumbing with the patented connectors (radiator replacement kits available) and in a matter of hours your room or even the whole house can be radiator free, and with the added benefit of new, freshly painted skirting boards.

In a new build, ThermaSkirt® can reduce and simplify pipework runs as feed and returns are to 'one end' of the room, usually near the door, and it eliminates the need for additional skirting boards, their installation and painting.

Matching MDF in all profiles is available for other non-heated areas or where conventional radiators are retained.

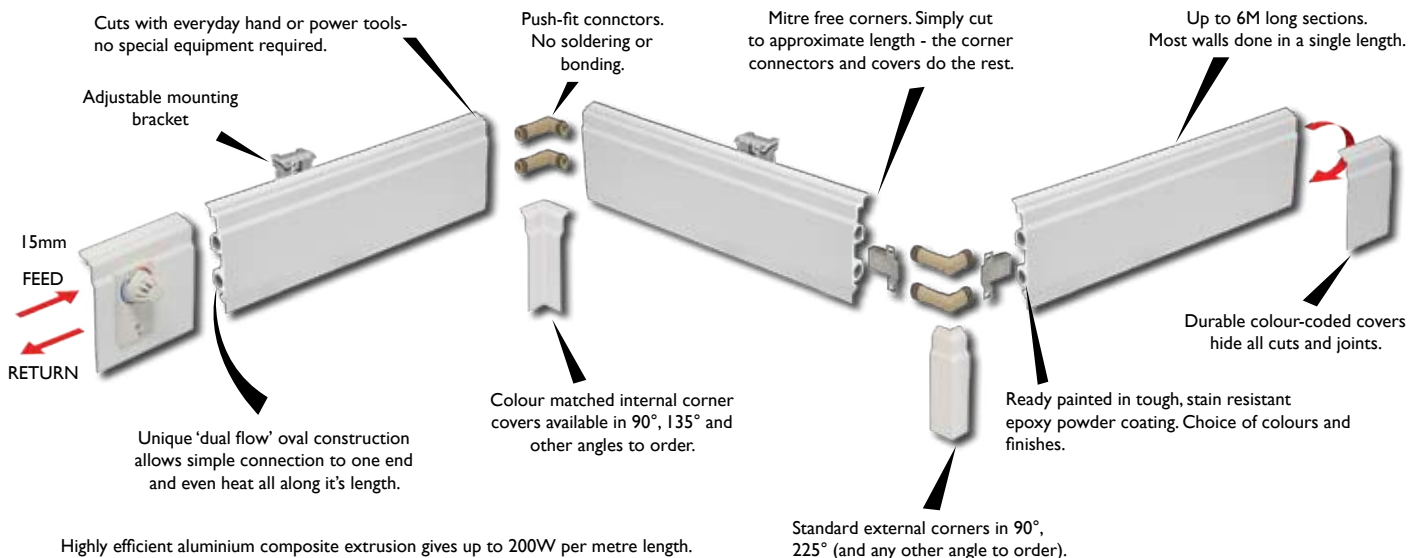
Special solutions including Curved wall sections, crossing thresholds, heating across bi-fold sun room doors and even up and over doors are all available with ThermaSkirt®.

### Control Systems

ThermaSkirt can be controlled either by a simple 'on-board' mechanical TRV or by the 'TherMiser' programmable room/zone thermostat. Programmable for both time and temperature, the system controls the room comfort level and the skirting surface temperature, via remote valve or manifold system.



## ThermaSkirt Components - simple on-site assembly



### General Data

Material (ThermaSkirt):	Alloy polymer mix
Thermal Conductivity:	236w/m2C
Capacity:	0.5l/m
Min flow rate:	10g/sec
Surface Finish:	Epoxy powder coat to BS EN 12206-1
Complies with:	BS EN 442-1

Material (connectors):	Non - hygroscopic glass reinforced elemental polypropylene
Material (Sealing rings):	Unique Viton and Silicon polymer
Typical Operating pressure:	0.5-3bar
Max Operating Pressure:	10 bar
Typical Operating Temp:	35-75degC



## Technical Information

### Performance \*

Output/Flow Temp	Profile	Typical Radiator Temp. $\Delta T_{50}$ (72°C/160°F flow)	Typical Heat Pump/Solar-Thermal System				Typical Boiler Flow Temps.		
			40°C / 104°F	45°C / 113°F	50°C / 122°F	55°C / 131°F	60°C / 140°F	70°C / 158°F	75°C / 167°F
Watts/m (@ 56 g/sec)	URBAN LT	<b>148.5W</b>	<b>44</b>	<b>58</b>	<b>72</b>	<b>87</b>	<b>102</b>	<b>136</b>	<b>152</b>
	CLASSICTS	<b>150W</b>	<b>44.5</b>	<b>58.5</b>	<b>73</b>	<b>88</b>	<b>103</b>	<b>137.5</b>	<b>153.5</b>
	REGENCY OG	<b>163W</b>	<b>57</b>	<b>65</b>	<b>80</b>	<b>97</b>	<b>114</b>	<b>156</b>	<b>175</b>
	DECO PR	<b>130W</b>	<b>30</b>	<b>52</b>	<b>64</b>	<b>78</b>	<b>91</b>	<b>122</b>	<b>135</b>

$\Delta T_{50}$  is the EN 442-1 norm for comparing radiator outputs

Low flow temperature to maximise annualized COP

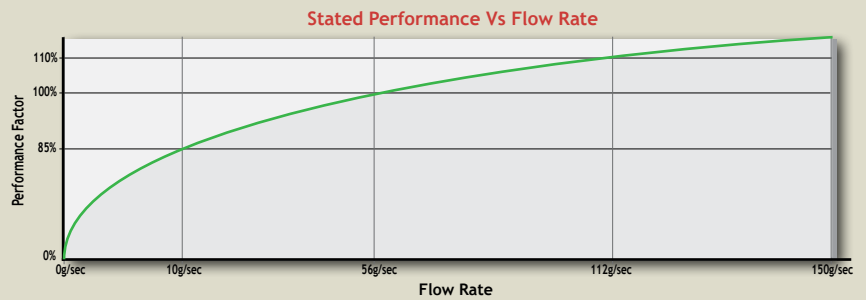
Renewables often produce flow temperatures in excess of 45° if required

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









\* DiscreteHeat recommends an allowance of up to 3% to these outputs on exterior walls to allow for back losses. Further precautions may be required depending on the age and/or nature of the construction of the building - please contact DiscreteHeat for advice.

### 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.

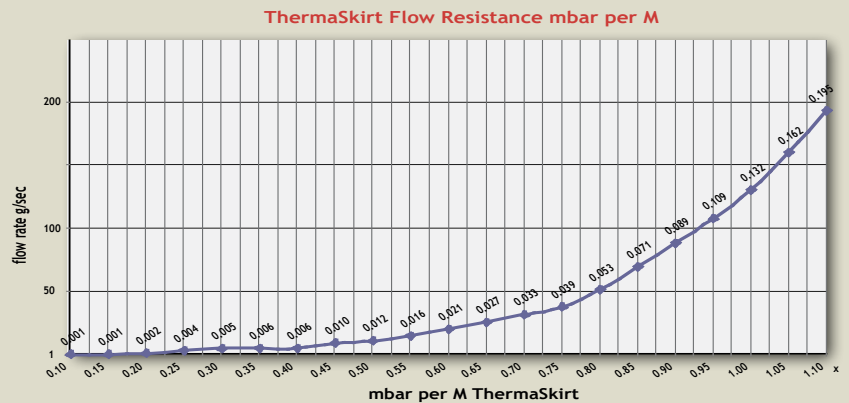


This table can help the heating engineer or M&E consultant calculate the total equivalent length in M of all the components in a system, so that pressure loss in mbar can be calculated.

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

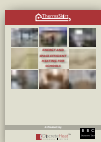
### Frictional resistance

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.

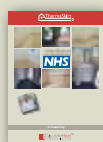


Warranty: ThermaSkirt® is protected by a 10 year parts warranty on all wet parts when installed in accordance with BS EN 5793. Further details at: [www.discreteheat.co.uk](http://www.discreteheat.co.uk)

**Tel: 01942 88 00 66 Fax: 01942 665 104 e-mail: [info@discreteheat.co.uk](mailto:info@discreteheat.co.uk) [www.discreteheat.co.uk](http://www.discreteheat.co.uk)**



SCHOOLS and COLLEGES SCH 12



HOSPITALS and CARE HOMES NHS 12



1 Victoria Works Industrial Estate, Coal Pit Lane,  
Atherton, Manchester M46 0FY



QR CODE

