

**ENERGY AND
SPACE EFFICIENT
HEATING FOR
SCHOOLS**



- Simple 'above ground' Installation – new build or retrofit
- Proven Energy Efficiency – Independently tested by BSRIA
- Rapid Response Times – On or Off in minutes to cater for class size and uses
- Future Proof – works with conventional heat sources as well as renewables
- Even, comfortable heat – no cold corners or hot spots
- Health & Safety – no obtrusive edges or pipework to cause falls or injury
- Healthy Heat – No drafts to spread dust and allergens
- Easy to clean – simple wipe down when mopping
- No grilles, fins or slots – to harbour infections and communicable diseases
- Frees up wall space – Flexible room layouts to suit any furniture or uses
- Built in cable duct – AV & Data cables routed safely

A Product by

As seen on

ThermaSkirt® is a revolutionary heating system . . .

How does ThermaSkirt® directly benefit Schools?

ThermaSkirt® replaces the LST radiators and skirting board trim in one. It has proven to be at least 13% more energy efficient than radiators and deliver comfort levels indistinguishable from Under Floor heating. As ThermaSkirt® is a completely sealed radiant unit it does not have any grilles, gaps or exposed pipe work. This means that it does not collect dust and grime that harbour infectious spores and bacteria and does not present a tripping hazard or risk of impact injury in a fall – a common occurrence in a vibrant school environment.

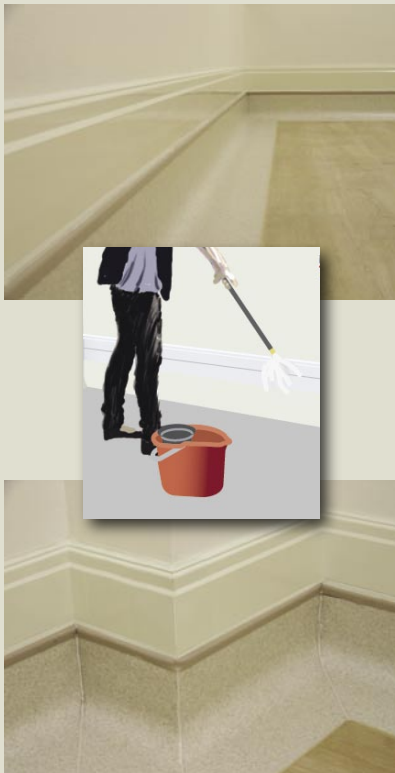
Radiant heat does not create convection currents that would otherwise circulate dust and other particles that can aggravate respiratory afflictions and spread infection in schools.

ThermaSkirt® can heat a classroom in minutes from cold and more importantly cool down quickly when required, an essential feature if a comfortable classroom is to be maintained with a fluctuating class size and uses.

ThermaSkirt® has recently been installed in several schools, both refurbishment & new-build. ThermaSkirt® can be connected onto conventional existing pipework, whether overhead or in the wall or floor. Replacing old and inefficient radiators with ThermaSkirt® reduces running costs and increases comfort levels for students.



Advantages of using ThermaSkirt®



- Rapid Response Times – No overheating or underheating, whatever the class size or use.
- Energy efficient radiant heat – indistinguishable from UFH.
- Easy to clean – simple wipe down when mopping the floors.
- No grilles, fins or slots – to harbour infections and spread communicable diseases.
- Frees up wall space – Flexible room layouts to suit any room layout.
- Built in cable duct – AV & Data cables routed safely.
- Future Proof – Classroom re-layout and room changes possible.
- Any floor construction or finish – timber structures, carpet or timber floors do not affect performance.
- Fixable and adaptable – No long term warranty issues or repair worries.
- Conventional Boilers or Renewables – Retrofitted for the future.
- Air Induction Units available – through wall inlets to maintain ideal Oxygen levels.
- SafeHeat™ Controls – Surface Temperature Controls for sensitive applications.

... energy efficient and cost effective!

ThermaSkirt® Vs. LST Radiators Vs. Under Floor Heating

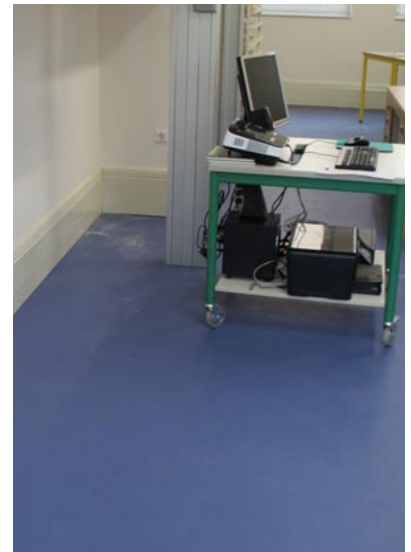
Classroom comfort, energy efficiency and Health & Safety are major concerns in the School environment; ThermaSkirt® addresses these issues far better than any other system currently available.

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.

Slim profile heaters with low level radiant heating all around the room delivers levels of comfort that ordinary radiators cannot match.

Smooth unobtrusive lines, make for a safe and hygienic heating system, that frees up walls space and corridors, eliminating completely the risk of pupil injury in a fall or collision – the biggest source of radiator related injuries (see overleaf).

With the recent rise in the awareness of so called 'Superbugs' the problem of infection in schools has never been more acute. 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.



Disadvantages of using LST Radiators and UFH



- LST radiators obstruct gangways and are often the cause of impact injuries and falls.
- Small slots and fins inside are impossible to keep clean and free from bacteria & material.
- Radiators dictate room layout and furniture positioning
- Protective covers are difficult to remove and deter thorough cleaning.
- Cold air drawn in from the floor carrying spores and microbes - Warm air carries infection around the hall or classroom.
- Slow response time of UFH means the room is often too hot or too cold – a hindrance to good performance in class.
- UFH is impossible to fit in existing buildings without major upheaval and cost
- UFH requires low flow temperatures making major changes to existing heating systems a must
- UFH is impossible to adapt or repair once fitted without major disruption
- Changes to school layout are virtually impossible as the 'heating footprint' is embedded in the concrete.



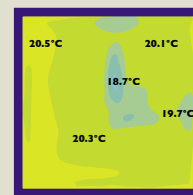
ThermaSkirt[®] Vs. Overhead Radiant Panels

The cleaning difficulties associated with LST radiators are equally applicable to overhead radiant panels. By their very nature, they are inaccessible and above reachable height, requiring ladders or platforms for access. Equally they may be placed over sensitive equipment which would suffer if got wet or disturbed whilst cleaning. The overhead positioning of the panels also means that pupils are being heated from the head down - a known cause of discomfort and behavioural related problems. ThermaSkirt[®] is placed at floor level, creating a warm comfortable environment from the ground up.

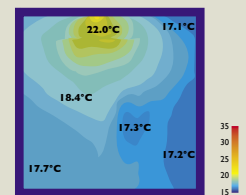


Tests Prove ThermaSkirt[®] to be More Efficient Than a Radiator

ThermaSkirt has been independently tested and proven to be both more energy efficient and provide a more comfortable environment for occupants. (Source BSRIA Test 51397/1). Test results show that the unique thermal distribution pattern of ThermaSkirt[®] is practically identical to under-floor heating.



ThermaSkirt[®] Comfort Temperature



Radiator Comfort Temperature

Radiator Related Injuries

Contrary to common concern, the majority of radiator related injuries are impact and fall related, and not scalds & burns. Whilst hot surfaces are a concern for persons with restricted movement or sensory disability, a far greater hazard is presented by the hard edge and surfaces of bulky radiators in the event of a trip or fall. ThermaSkirt's smooth lines and soft edges does not present a trip or fall hazard, and by itself would eliminate over 85% of all radiator related injuries. See the table below extracted from data provided by The Royal Society for the Prevention of Accidents (ROSPA).

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%
Total Radiator Accidents	29,909	99.82%

*The majority of burns to the hands and arms were reported in the under 5s and over 65's (73% of all scald injuries) and are listed as 'grab' injuries incurred when trying to prevent a fall. This is not a factor with the ThermaSkirt system.

Source:  ROSPA HaSS & Lass Accident Statistics 2000 ~ 2002.

What other benefits does ThermaSkirt[®] have ?



ThermaSkirt can be controlled either by the Building Management System (BMS) 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. This enables ThermaSkirt to be installed onto existing systems that may require higher flow temperatures in other areas of the building, as the controlled zones surface temperature is limited by a unique control valve. As ThermaSkirt operates successfully at lower flow temperatures, where practical, the heating system can be run cooler, saving energy and fuel costs, as well as enabling the introduction of renewable heat sources such as solar thermal or heat pumps. This is not possible with LST radiators as they rely on high temperatures to move the air & thus heat around.



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