



Specialists in Roofing  
and Waterproofing

*ProTherm*  
***Quantum***<sup>®</sup>

The world's thinnest flooring insulation  
for new build and refurbishment.

## What is Quantum®?



**The ProTherm Quantum® VIP system provides a state of the art insulation solution for floors. Thanks to its ultra-high thermal performance the Quantum system can dramatically reduce the thickness of a flooring system without compromising on thresholds and headroom.**

The power behind the high thermal efficiency of the ProTherm Quantum VIP is a rigid Vacuum Insulation Panel (VIP). Consisting of a silica sand micro porous core which is evacuated of air and moisture the core is encased in a special thin, gas-tight, hybrid aluminium foil envelope before having all air removed and the overlap joints sealed.

The resulting VIP panel gives an outstanding thermal conductivity, providing the thinnest possible flooring system currently available.

### The Challenge

When designing the floor in a new build or refurbishment project there are increasing regulatory requirements to improve the heat loss and overall target U-values. This can only be a good thing as we strive towards a zero carbon environment. But it also poses problems with deeper footprints and a demand for the thinnest possible solutions.

For new build domestic developments there is now a requirement for the floor to be as energy efficient as the roof. Up to 20% of a building's heat loss can be through the floor construction and it has been identified as a key element in the buildings fabric energy efficiency.





*Minitec Q is compatible with a range of screeds.*

**Quantum® and Uponor's Minitec Q Underfloor Heating System (UFH) provides a compact design that brings comfort to your home. Unlike many other renovation systems, it can be used with all types of floor covering.**

### Rapid Installation time

Once one of the approved levelling compounds has been applied, you only have to wait 3 hours before you are able to walk on the floor again. After just 3 days the floor heating can be brought up to temperature. This gives a massive advantage over other traditional screed UFH systems.

### Easy to customise for difficult rooms

As with all renovation properties, obstacles in the floor are often an issue for underfloor heating. Unlike other renovation systems, Minitec Q can easily be customised to fit around obstacles. Overall, this leads to a faster installation time.

### A true retrofit system

Minitec Q offers the lowest total build height of any wet UFH system on the market. This feature makes it perfect for renovation projects.

### Quick to react

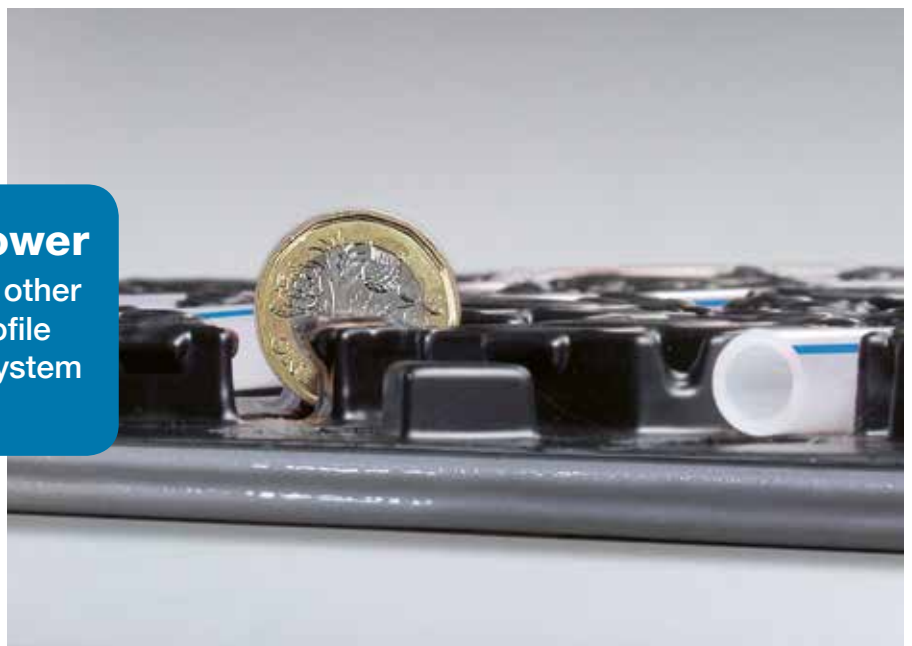
As the heat profile on the Minitec Q system is minimal, the overall reaction time is faster and in some cases the heating can even be up to 60% quicker than other UFH systems. Within minutes the floor surface will start to feel warm.

### No overboarding

Once the Minitec Q system has been installed, there is no need to add any form of overboarding, meaning the installer can simply lay the desired floor finish straight on top of the dry surface – easy!

**ONLY**  
**15mm**  
FLOOR HEIGHT

**50% lower**  
than any other  
low profile  
screed system







The system is up to 5 times the performance of current flooring insulants and enabling architects, specifiers, developers and self builders to dramatically improve the U-value for the same build-up or help meet the overall building envelope performance target.

For retrofit projects, listed buildings, and un-insulated floors the ProTherm Quantum floor system can be the perfect solution to future proof floor areas that would have to be ignored or accepted as lowering the overall building performance along with rectifying the well-being aspect associated to cold bridging at ground level.

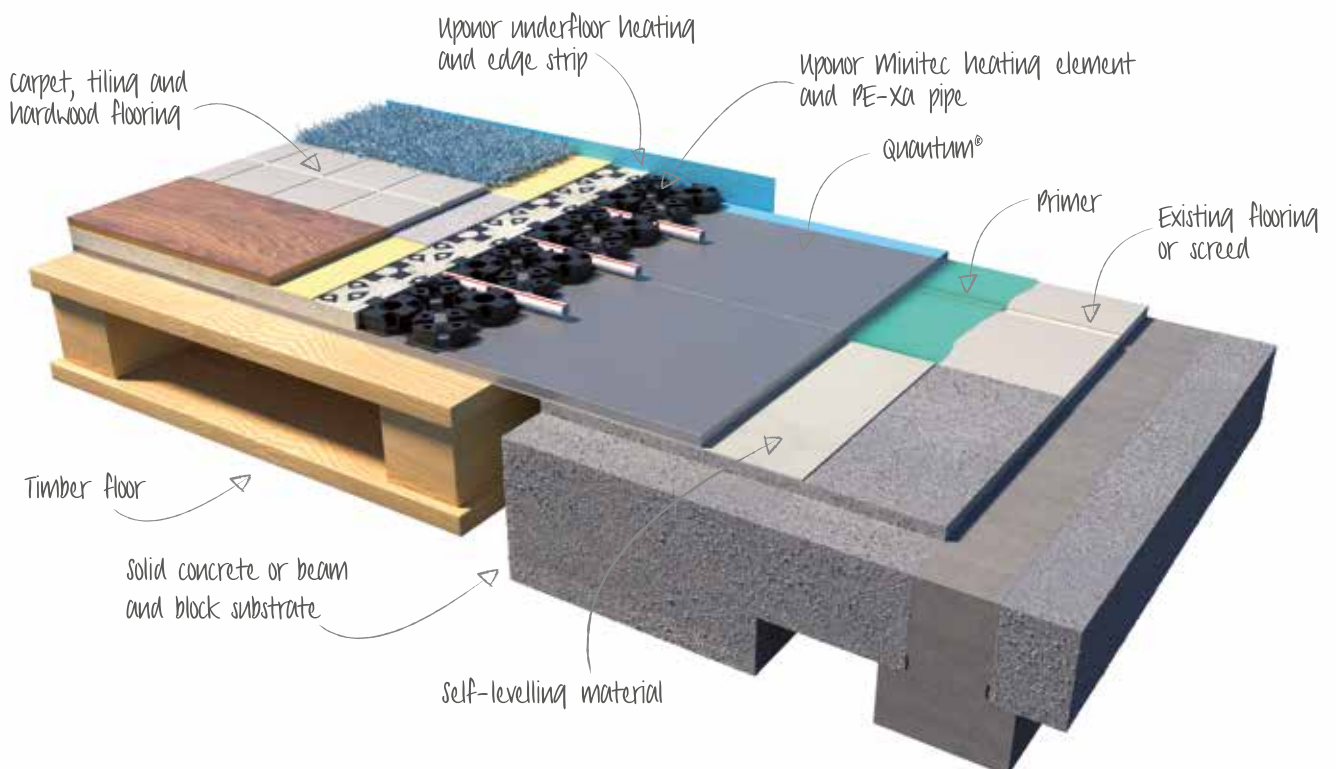
## Design & Support Services

Here at **Quantum® Floors** we have a team of experts providing ProTherm Quantum thermal calculations and design schemes. This ensures maximum ratio of ProTherm Quantum VIPs are utilised delivering the highest possible performance to the desired floor level.

**For new build**, once the board layouts have been produced we can offer any necessary site checks as the build progresses, ensuring any discrepancies are amended before delivery and installation.

**For refurbishment projects** we offer a site survey to ensure we provide the most efficient system equal to the space available.

*A typical design layout, showing the Quantum boards fitting in to the floor shape.*



## Lose height, gain value

To solve regularly occurring challenges created by the drive for more thermally efficient buildings, safer access and more external space, the **ProTherm Quantum® VIP** system enables the homeowner to dramatically reduce the depth of a finished flooring system.

### Where is it best used?

Floors where there is a requirement for thermal performance and any insulated area where depth is critical to the overall construction.

### What does it save?

ProTherm Quantum delivers an exceptional reduction in overall depth compared to a traditional flooring system.



0.13 W/m<sup>2</sup>K U-value for solid ground floors with a 0.2 P/A ratio.

*“For retrofit projects, listed buildings, and uninsulated floors ProTherm Quantum can be manufactured to a thickness of just 12mm. This can be the perfect solution to future proof floor areas that would have to be ignored or accepted as lowering the overall building performance along with rectifying the well-being aspect associated to cold bridging at ground level.”*

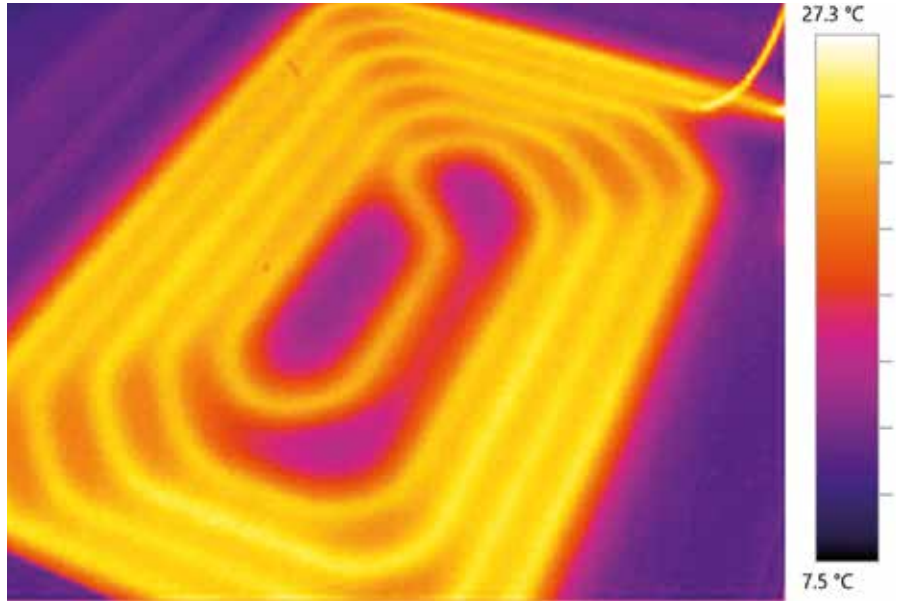
Scan the code or visit the Quantum® website at:

**prothermquantum.com**



*Minitec Q takes a matter of minutes to reach its optimum internal water temperature with maximum floor level temperatures achieved within 20 mins. (Recommended 26°C). This results in a 60% quicker response time compared to other more traditional UFH systems.*

*Minitec Q Underfloor Heating System (UFH) can be used with all types of floor covering, enabling the homeowner to choose their designs without compromise.*



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