



Underfloor Heating Supply Ltd

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What is the best floor type for underfloor heating?

There are plenty of suitable floor coverings for use with underfloor heating, this means you have a wide choice of flooring to suit your tastes and needs.



Underfloor heating is most efficient when it transfers heat from the UFH pipes to the surface of the floor. Polished Concrete offers the best heat transfer as the pipes are encapsulated within the surface finish making it the best way to conduct the heat other hard surfaces like stone, tiles or engineered wood, offer great heat transfer as they are the most thermally conductive, but many other options work as well.

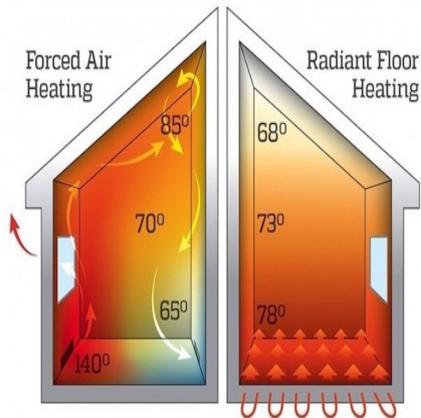
Flooring Type	AVERAGE HEAT OUTPUT (W/M²)
Polished Concrete	80-85 dependent on the depth
Stone or Tiles	71
Vinyl	68
Wood	56
2 Tog Carpet	48

When considering underfloor heating, it probably conjures up images of polished concrete or tiled rooms that are lovely and warm underfoot.

But did you know you can also use underfloor heating with carpet?

While most people probably quite fancy the idea of padding barefoot across a nice warm floor, many assume that this can only be achieved with engineered wood, stone, concrete or tiles and so on.

However, if you prefer a carpeted floor, you can still opt for underfloor heating – there are just a few points to consider. First, it helps to understand how underfloor heating works.



Underfloor heating spreads warmth evenly throughout a home, rather than suffering the hot and cold spots experienced with radiators. This is because it uses radiant heat, rather than convection heating.

With radiant heating, the floor is heated by the hot pipes looping underneath it and the floor, in turn, heats the objects in a room.

The floor covering, therefore, is a vital part of the process. It needs to not only allow this heat through but also to conduct it sufficiently.

Tile, stone and concrete are excellent at conducting heat and are the optimum choices for efficiency and performance. Other hard floors, such as laminate, also do the job well.

Although not quite as good at conducting heat as the hard floorings, carpet can be used with underfloor heating as long as it is not too thick.



Like duvets, carpet has a TOG rating. If you prefer carpeted floors, we recommend choosing carpets with a maximum TOG rating of 1.5. This will ensure it's not too thick to stop the heat penetrating through the carpet as the floor heats up and attempts to radiate that warmth through the room. Anything above 1.5 might be too thick to allow the underfloor heating work to its maximum effect

Another important point to consider when it comes to maximising the performance of your underfloor heating system is insulation.

Your home needs to be well insulated to get the most out of underfloor heating.

Sub-floor insulation - This stops heat from being lost into the ground and is installed at the same time as your underfloor heating kit.

Edge of the room – Insulating the edges of the room can also be beneficial to overall performance and is often suggested by professional installers.

Best flooring to use with underfloor heating

FLOOR COVERING	Install TYPE	FLOOR DEPTHS	HEAT TRANSFER LEVEL
Ceramic and stone tiles	New build and renovation	6mm-25mm	Very high
Polished concrete, screed and resin	New build and renovation	1mm-250mm	Very high
Vinyl and linoleum	New build and renovation	3mm-10mm	High
Solid and engineered wood	New build and renovation	6mm-25mm	High
Carpets and rugs	New build and renovation	5mm-15mm	Medium

Home insulation – Insulation throughout the home needs to be of a high standard to get the most out of your underfloor heating. This includes loft insulation, double glazing and cavity or solid wall insulation.

Our specialist advisors at Underfloor Heating Supply have more than 30 years of experience in the industry and are ready to help and assist with any enquiry you may have.