ELECTRIC UFH PERFORMANCE TROUBLESHOOTING



My floor is getting too hot

- **1.** The floor temperature settings on the thermostat may be incorrect. Check the thermostat settings ensuring that it is controlling the floor surface temperature and that the set target and limiting temperatures are correct.
- 2. The floor sensor may be poorly positioned, if so the thermostat will be displaying a floor temperature that is not indicative of the floor surface temperature.

Recalibrate the floor sensor in the thermostat settings.

3. The thermostat may be set in regulator mode with the duty cycle set too high. If the thermostat cannot be set to reference a floor sensor, reduce the regulation value to its minimum selectable value. With the heating active, incrementally increase the setting at an hourly interval until the required floor surface temperature is achieved.

My floor does not get up to temperature

- 1. Underfloor Heating is normally designed to heat floors to up to 9°C above the design room air temperature, which is typically 29°C. Delicate floor finishes, such as vinyl and some timbers, may be limited to 27°C. Our hand and foot temperature is normally similar to this, at around 29 32°C, so the heated floor will feel slightly cooler than touching your own hands together.

 If you wish to raise the floor temperature, such that it feels warm, it is permissible to set it up to 15°C higher than the design room air temperature. The higher heat output of the floor may overheat the room, making it uncomfortable. The manufacturer of the floor finish should be consulted to ensure compatibility with the chosen temperature before making any changes to the thermostat settings.
- 2. Refer to points 1, 2 & 3 in the "My floor is getting too hot" above, as each issue can also be the cause of under heating a floor.
- 3. If the thermostat is controlling the heating using the air temperature, with a floor temperature limit then the floor may be turned off before it reaches its limit.

This is normal as the thermostat is preventing the room air temperature from becoming overheated.

I am getting patchy heat across my floor

- 1. If the subfloor varies across the floor, the amount of heat absorbed by it and lost through it will affect the floor surface temperatures differently above each case.
- 2. If the floor covering over the underfloor heating changes, each floor finishes characteristics will affect the warm up period and the achievable surface temperature.
- 3. Hot water pipes under the floor could cause parts of the floor to seem warmer than others.
- 4. Irregularly spaced cables will cause the floor to be warmer above the closer cables and cooler where the cables are spaced further apart.



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My floor does not get up to temperature

4. The heating system may be uninsulated. If the heater has not been installed over a layer of Warmup Insulation Boards, it will be actively heating the subfloor as well as the floor finish. The warm up period of the floor will therefore be slower as the system is heating a much greater mass. It could take several hours if it is installed directly on a thick layer of uninsulated concrete.

If your thermostat has an optimised start feature, ensure it is enabled so that the thermostat can compensate for the mass of the floor. If your thermostat does not have an optimised start feature, measure the time taken for the floor to warm up and adjust the heating start time to compensate.

5. The heat output of the installed system may not be sufficient. The system will require a power output of approximately 10W/m² for every degree warmer you require the floor to be than the air. This is in addition to any heat loss downwards through the subfloor.

If the room air temperature is also lower than desired, supplementary heating may be required to overcome the room heat losses.

If access is available to the underside of the subfloor, installing insulation within the floor will reduce the amount of heat lost through the floor.

6. Floor coverings such as carpets, underlays and timber are thermally resistive and will reduce the achievable floor surface temperature. They may also require the floor sensor to be recalibrated.

Floor finish combinations with a thermal resistance of more than 0.15m²K/W or 1.5 tog are not recommended and we recommend that you look to fit a less resistive floor finish. Floor finish combinations with a thermal resistance of more than 0.25m²K/W or 2.5 tog are not permitted.

