

Operation of your underfloor system

Principal of operation

Your heating system circulates hot water produced by the appliance around the underfloor heating loops buried in the floor slab, heating your rooms from the floor up. Your system thermostats control the heat to the given areas with the integral appliance thermostat and manifold controlling the delivery temperature.

Underfloor heating is designed to maintain a level of heat consistently. The key is in timing what we describe as comfort and setback. For periods when heat is most required the floor area should be set to a (comfort) output requirement. When least required the control should take the temperature down to a (setback) temperature, this may be during the night or periods in the day when you are not typically at home. The setback temperature should be between 3 degrees up to a maximum of 5 degrees back from the comfort setting for the zone. (If the heat source is a heat pump the maximum setback should be just 4 Degrees).

For the following you may also need to refer to your individual boiler and thermostat instructions left with you by your installer, if you don't have them you should ask them to supply them to you. or download copies from our website.

Boiler/Heat Pump Thermostat or controller

This can be either be a simple dial, or a setting which is made in a menu on the boiler or heat pump. This adjustment sets the maximum output temperature of your appliance. This setting may vary depending on whether your system is floor heating only or has other features such as radiators or Hot water production. An output temperature of 40 – 45 degrees is typically required to an underfloor only system. The floor manifold will have a blending control to allow finer control to the design parameters of a given system.

This should have been set up by your installer when the system is commissioned. typically you should not need to change any settings on the appliance or manifold, doing so may adversely affect the performance of the whole system.

Room or zone Thermostats

These are the controls you use to manage your system, there are many different control types with an array of features (you will need to refer to your individual control instructions provided).

Familiarity and interaction with Room Thermostat/Programmers will vastly improve the efficiency of your heating system.

An example of settings for a primary living area (using the controls air sensor)

6am to 10am (comfort at 20) - 10am to 3.00pm (setback at 18) - 3.00 to 10pm (comfort at 20) - 10pm to 6am (setback at 17).

An example for a bedroom

5.00am to 8.30am (comfort at 18) - 8.30am to 4pm (setback at 15) - 4pm to 10pm (comfort at 18) - 10pm to 5.00am (setback at 15).

Tip 1: If the appliance is a boiler setback can be as wide as 5 Degrees. However, If the appliance is a Heat Pump then we recommend you keep the setback to a maximum of 3 Degrees.

Tip 2: Don't set all your controllers with exactly the same times Stagger the times a little this reduces peak demand on the Heat pump making it more efficient.

The above are based on room air temperature readings at the controller. the set temperatures may need to be different to the above to best suit your specific instance.

Passive solar gain and effects explained.

In some instances, low winter sun through glazing may allow room temperatures to climb much higher than the comfort setting during the day. This is passive gain and may result in the floor loops being off for an extended period and the slab to cooling considerably, thus the floor cant re-establish enough heat output in the evening when the sun has gone.

When passive solar gain is an issue, and in bathrooms where warmth under foot is required regardless of room temperature, switching the thermostat or zone control over to use the floor sensor (where the option exists) will allow control via floor slab temperature rather than ambient air. The same principles of operation with setback will apply but the given temperatures required will be different (*Typically a setting of 26 to 29 with a 4 degree setback using floor sensing*).

You will need to experiment to achieve the set points to suit your comfort. ***It is good practice to install UFH controls with both air and floor sensing options even if the floor sensor is not used ultimately used. We Quote them in our designs without exception.***

Tip 3: Most controllers provide options to permanently lock them in comfort mode or setback mode, override them temporarily or permanently, or place them in off mode with the settings memorised. You should familiarise yourself with these features as their use will result in greater system efficiency.

- If you are away for extended periods of a week or longer, override to permanent setback.
- Leave rooms not in use or that you want to be aired at a lower setback.

Tip 4: when you shut the system down completely in the summer months turn one control on to call for heat once in a while for 5 minutes, this helps prevent pumps and motor valves seizing through lack of use.

We hope you enjoy many years of comfort from your system. Thank you for choosing our products.

Please remember to have your system serviced.