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Homeowners Guide

Emmeti CS17 Thermostat



Designed for life

WMS
UNDERFLOOR HEATING

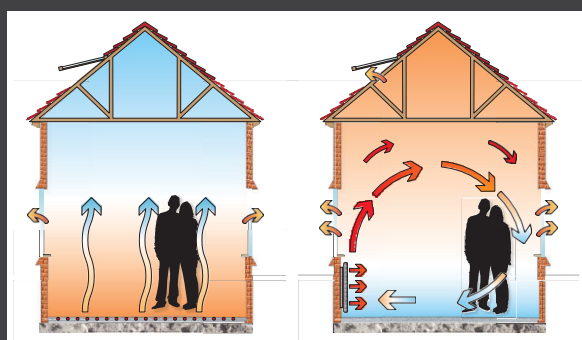
WELCOME HOME

By choosing a house with WMS Underfloor Heating installed you will be enjoying a warm and cosy home for years to come. Your underfloor heating pipe comes with a 75 year warranty, giving you full peace of mind and confidence in your system for the future.



HOW UNDERFLOOR HEATING WORKS

Underfloor heating works by circulating warm water through a series of continuous loops that are fitted underneath your floor creating a large radiant surface that heats your room from the floor upwards. This radiant form of heating is much more comfortable than the convected heat provided by radiators which draws cold air across the floor before heating it and then convects the warm air upwards towards the ceiling.



Underfloor Heating

Radiators

UNDERFLOOR HEATING 'RESPONSE TIMES'

Whatever the type of underfloor heating system that you have in your property, you will notice that the heating response time is different to a standard radiator heating system.

Particularly for screeded systems, response time is slower, so controls need to be set up to take this into account. This is normally done using a programmable or 'set-back' thermostat, which rather than turning the heating off completely, sets it back to a lower temperature on 'off' periods - this has the following advantages:

- » Improved energy efficiency - the system only has to be 'topped-up' to meet the required temperature
- » Improved response time
- » Protects system from frost
- » Keeps temperatures consistent

Using a programmable thermostat means you can set your desired temperature for any time of day or night and the heating will automatically adjust in line with your instructions to the thermostat.

For example, it will take 2 hours to heat up from a setback of 17 degrees to a room temp of 21 degrees.





UNDERFLOOR HEATING BENEFITS

UFH is more popular and more accessible than ever before. This growing market trend is a direct result of the following benefits.

Life Expectancy: UFH is expected to outlive the life of the building with a 75 year warranty on the pipework.

Running costs: UFH is proved to be between 15 - 40% cheaper to run (v.s. radiators) as it covers a greater surface area, it can therefore run at lower temperatures (50oC rather than 80oC), which makes it efficient.

Maintenance: UFH requires very little maintenance. It does not need to be checked for air in the system or bled.

Interior Design: With UFH being concealed there is freedom of design to configure furniture.

Safety: There are no hot surfaces or hard edges with UFH, providing a safe environment for young children and the vulnerable.

Health Benefits and Cleaner Homes: In the UK each day on average 1 in 8 people in the UK are currently being treated for asthma. Underfloor heating is one of the many ways helping to reduce these figures. UFH uses radiant heat, unlike radiators or AirCon (convection heat), this reduces the movement of dust (and dust mites!) making it a far more comfortable environment for asthma sufferers. Less dust movement also leads to cleaner homes!

Sale of Dwelling: UFH has become more expected in homes worth over £300k and is considered a valuable feature, thus estate agents will normally list it on the highlights of the particulars.

Floor Finishes: Tiles and stone can get very cold. Radiators only heat upwards from where they are installed so the floor is cold and uncomfortable. With underfloor heating the whole floor essentially becomes one big radiator meaning the floor finish can get warm. The Carpet Foundation carried out research with the Underfloor Heating Manufacturers Association and proved conclusively that carpet can be used over underfloor heating without impairing the performance of the system. This showed that a carpet/underlay with a combined thermal resistance of less than 2.5 togs allows underfloor systems to operate efficiently.



TOP TIPS FOR GENERAL MAINTENANCE

We recommend turning your system on once during the summer months, so it is not dormant for long periods. Just 10 minutes will be fine.

Be conversant with your thermostats and how your system is controlled. Setting up your comfort settings correctly will maximise efficiencies.

Check the water in the system is clean. You will be able to observe the colour of the water in the flow meters on the top of the manifold - if this has discolored to the extent that the red meter is no longer visible, we recommend you contact your plumber to clean the water in the system.

Rugs and similar temporary floor coverings are not recommended, they will trap heat beneath them and make the system work harder to heat the room. Any temporary coverings are especially NOT recommended over sensitive floors (i.e. Timber) for risk of overheat and damage.

The system can take quite a long time to heat up from the cold. This operation should only happen once or twice a year when moving from summer to winter, however this length of time is to be expected. This will not affect on-going use unless the system is turned off to go cold before reheating.

WHICH FLOOR COVERINGS SHOULD I USE?

A commonly asked question is 'What floor covering can I put on top?'. The short answer is that most finishes can be used with UFH, but a few considerations need to be taken into account in order to ensure that your chosen floor covering does not adversely affect the output of your UFH system.

In general terms, harder surfaces such as stone and ceramic are best for use with UFH as they have the lowest thermal resistance, providing the best heat output; in contrast to coverings like deep-pile carpets and rugs which have the opposite effect. All floor coverings have a 'tog' rating, a measure of resistance - which should not ideally exceed 2.5 tog (including any underlays) when used in conjunction with UFH.

CERAMICS AND NATURAL STONE

These are the best kind of floor covering for use with UFH - due to the density of the material, the thermal resistance is low, allowing the heat from the pipework to travel quickly through and heat the space above. All stone products can be fitted above UFH including natural products such as slate and limestone.

WOOD FLOORING

Care must be taken when using wood flooring over UFH, because it is a natural product and therefore can react to changes in the environment in which it is laid. It is essential to check with the flooring manufacturer whether their products are subject to a temperature limit; if this is the case, a floor probe is supplied to limit the heating output to this level. Typically speaking engineered wood floor is the most robust and least likely to react adversely to the heat. Solid wood floors contain a higher content of natural product, and therefore will tend to be more sensitive to heat changes.

CARPETS

There is a common misconception that carpet cannot be used with UFH, which is not true, although it is one of the highest-resistance floor coverings, so this must be taken into account. We recommend not exceeding a combined

resistance of 2.5 tog for the carpet and underlay, using an underlay specifically designed for UFH is best, to keep the thermal resistance down as low as possible.

LAMINATES AND VINYL

Most laminate and vinyl flooring is fine for use with UFH as the coverings are typically thin and high-density, so have a relatively low thermal resistance. We would always recommend checking with the given flooring manufacturer first that the product is suitable for UFH.

RUGS

In general terms, rugs are not recommended for use with UFH, not only do they act as an additional resistance for the heat to get through, but heat can also gather beneath the rug, causing potential temperature build-up to a level which could damage the floor covering beneath them.

RECOMMENDED TOG VALUES

Tog value	Suitability
0 - 1.0	Excellent
1.1 - 1.6	Good
1.7 - 2.5	OK
Above 2.5	Not recommended

TOUCHSCREEN PROGRAMMABLE THERMOSTAT - EMMETI CS17

By far the most popular choice now for underfloor heating is to control with a digital programmable thermostat - not only does this allow the system to operate more efficiently, but it also offers you more flexibility and means that the heating can be programmed around your lifestyle.



What is a programmable room thermostat?

A programmer allows you to set “On” and “Off” periods to suit your own lifestyle. A room thermostat works by sensing the air temperature, switching on the heating when the air temperature falls below the thermostat setting and switching it off once this set temperature has been reached.

So, a programmable room thermostat is both in one and lets you choose what times you want the heating to be on, and what temperature it should reach while it is on. It will allow you to select different temperatures in your home at different times of the day (and days of the week) to meet your particular needs and preferences.

Setting a programmable room thermostat to a higher setting will not make the room heat up any faster; neither does the setting affect how quickly the room cools down. The way to set and use your programmable room thermostat is to find the lowest temperature settings that you are comfortable with at the different times you have chosen, and then leave it to do its job.

Setting the Clock

To set the clock, follow the steps below:

- Press MENU so the 'SET CLOCK' main menu item flashes.
- Press OK to confirm. The current hour will flash
- Press ^ V to change the hour and press OK.
- Press ^ V to change the minute and press OK.
- Press ^ V to change the day and press OK.
- Press MENU to save the change and the power button to return to the home screen.

Setting your temperature comfort levels

The LunaStat comes pre-programmed with comfort levels set. These factory default settings are:

Week Day and Weekend - 5/2 day programming

Mon-Fri

05:30 - 20oC | 08:00 - 16oC | 16:00 - 20oC | 22:00 - 16oC

Sat-Sun

06:30 - 20oC | 09:00 - 16oC | 16:00 - 20oC | 23:00 - 16oC

Monday to Sunday - 7 day programming

Mon-Sun

05:30 - 20oC | 08:00 - 16oC | 16:00 - 20oC | 22:00 - 16oC

To set/change the program comfort levels follow these steps:

- Press MENU to display the main menu items.
- Press MENU till the 'SCHEDULE' main menu item flashes.
- Press OK to confirm. 'MON ~ FRI' will flash.
- Press ^ V to select different day(s) and press OK. 'Period 1' is displayed and the corresponding hour flashes.
- Press ^ V to change the hour for 'Period 1'.
- Press OK to confirm and minute for 'Period 1' flashes.
- Press ^ V to change the minute for 'Period 1'.
- Press OK to confirm and temperature for 'Period 1' flashes.
- Press ^ V to change the temperature for 'Period 1'.
- Press OK to confirm. 'Period 2' is displayed and the corresponding hour flashes.
- Repeat steps 5 to 10 for Periods 2, 3 & 4.
- After pressing OK for 'Period 4', 'COPY TO' will flash.
- Press ^ V to cancel copy function and set other days manually.
- Press OK to apply copy function. When set to 5+2 day programming, pressing OK skips points c and d.
- Press ^ to select a day, press V to deselect a day. Note: Selected days are shown without flashing.
- Press OK to save the copy and LunaStat returns to the main menu.
- Repeat steps 2-12 to set and/or copy further days.
- Press MENU to save the change and the button to return to the home screen.

Temperature Adjustments (Manual Override)

The override facility allows you to adjust the desired temperature in your home without the need to fully re-program the thermostat. Note, this only changes the temperature until the next program time.

- Press $\wedge \vee$ once to view the current temperature setting.
- Press $\wedge \vee$ repeatedly to change the thermostat in increments of 0.5°C.
- Press OK to save the new temperature and return to the home screen. The thermostat will display 'OVERRIDE' to confirm a different temperature has been set. The heating symbol will show when the thermostat is calling for heat. If a floor sensor has been installed this temperature can be checked by pressing and holding the 'OK' button. The thermostat will return to the home screen after 10seconds.

Temperature Hold

For one-off occasions when you require to override the set temperature for a number of hours.

- Press MENU till the 'SET HOLD' main menu item flashes.
- Press OK to confirm. The 'HOLD LEFT' symbol will show and the number of hours flash.
- Press $\wedge \vee$ to change the number of hours the hold should be set for.
- Press OK to confirm and the temperature for the hold period will flash.
- Press $\wedge \vee$ to change the temperature for the hold period.
- Press MENU to save hold period and the power button to return to the home screen. After the hold period, the thermostat will revert back to the normal program setting.

Holiday Mode

The Thermostat has a holiday function. This allows you to enter a holiday period during which time the thermostat will maintain a set temperature (12°C advised) saving fuel and energy whilst protecting your house from frost and damp. At the end of your holiday, the thermostat will revert back to the programmed setting ensuring that your home is warm on your return.

- Press MENU till the 'SET HOLIDAY' main menu item flashes.
- Press OK to confirm. The 'HOLIDAY LEFT' symbol will show and the number of days will flash.
- Press $\wedge \vee$ to change the number of days the holiday should be set for.
- Press OK to confirm and the temperature for the holiday will flash.
- Press $\wedge \vee$ to change the temperature for the holiday period.
- Press MENU to save the holiday and the power button to return to the home screen.

Frost Protect Mode

- Press MENU till the 'SET SETUP' main menu item flashes.
- Press OK to confirm. The small digits display the feature number, the large digits display the setting value for the feature.
- Press OK to cycle through the feature numbers, Frost Protection is 04.
- Press $\wedge \vee$ to change setting number for each feature.
- Press MENU to save the setting and the power button to return to the home screen.

Locking the thermostat (Tamper-proof)

The LunaStat keypad can be locked to prevent any accidental adjustment or tampering of the thermostat. Press and hold both $\wedge \vee$ until the LOCK symbol shows. Keypad is now locked. Repeat to unlock.



NIGHT SETBACK EXPLAINED

What is night setback?

A thermostat with the night setback function will follow the temperature set by the dial during the period that it is programmed to be on, and then automatically reduce the temperature by 4°C when the thermostat is set to be off.

How is this different from standard thermostats?

Standard thermostats without night setback are either on or off according to the time clock controlling the system.



How does this affect my room temperatures?

Night setback should be thought of as an up/down control as opposed to on/off.

The thermostat program heats up to a set temperature and then allows the room to cool off to a lower temperature or heats up to a warmer temperature as programmed.

When setting the program to a lower temperature a maximum of 3 or 4 degrees of set back is recommended. Longer than this the system takes disproportionately longer and energy saving is not increased.

Why is the night setback needed?

Night setback protects underfloor heating systems from frost and helps to keep temperatures consistent, although these are not its principal duties.

The main advantages are that it helps to improve the energy efficiency of the heating system and improves the response time, which is the time taken to heat the area.

The response time of underfloor heating systems is dependent on the amount of heat energy stored in the floor. For that reason, if the room is kept at 3-4°C below the normal set temperature, the time taken to heat up to the set temperature is reduced substantially.

FAQs

How do I increase / decrease the floor sensor?

Floor sensors are used for two reasons: a) to protect sensitive floor finishes from overheat, and b) to control the floor temperature in wet rooms where the thermostat is installed outside of the room. Where used to protect sensitive floor finishes, we strongly recommend you do not adjust this yourself - please contact the supplier to ensure this is carried out correctly. When used in wet rooms, the thermostat will need to be configured to read the floor sensor as the primary form of temperature control, then simply increase / decrease the temperature set point to achieve your comfort settings.

How do I ensure the flow temperature is correct, that enough heat is being provided by the boiler?

Before checking this, ensure a thermostat has been calling for heat for at least 30mins. If the boiler is functioning correctly, hot water will be supplied to the manifold and the manifold bar will be warm (possibly hot) to touch. If there is no heat at the manifold, the boiler is not providing hot water. Please consult your plumbing engineer.

My UFH isn't working?

There is a misconception that the floor finish should be very warm to touch when the UFH is operating - please be aware that this is not the case. Due to the size of the surface area of the floor, the floor temperature will only be slightly warmer than the air temperature to be able to achieve your comfort settings.

If in doubt, please check your thermostat settings are correctly set up. As a physical test, turn up a thermostat so that it is calling for heat, within

30mins you will be able observe water flowing through the manifold flow meters (on the top of the manifold) and feel warmth coming through from the boiler. If neither of these happen within 1hr, please call us on the number below to carry out some simple checks over the phone.

Pumpset codes, what different codes and lights mean?

When the pump is running, LED 1 is green. The four yellow LEDs indicate the current power consumption (1 = low, 2 = medium low, 3 = medium high, 4 = high). When LED 1 is flashing green the pump is on standby. If LED 1 is red, the pump has detected an alarm. Please contact us on the below number to identify the issue.

Do you offer a maintenance agreement?

Due to the nature of underfloor heating being a concealed product, not prone to corrosion and with minimal moving parts, maintenance contracts are not normally necessary. In the first instance we suggest you call us if you have a question and we will be glad to help. Most issues can be simply resolved over the phone.

What are your warranty / defect periods?

Warranty Periods	
Pipe	75 years
Manifold (flow/return bars)	50 years
Pumpset blending valve	2 years
Controls	2 years

WMS Underfloor Heating Ltd
Heritage House
Woodside Lane
Brookmans Park
Hertfordshire
AL9 6DE

01707 64 99 22

sales@wms-uk.com

wms-uk.com

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UNDERFLOOR HEATING

