Ridgewater Energy

Heating Advice - Controls

Room Thermostats

Temperature control is essential for energy efficient heating and is one of the simplest and most effective ways of reducing carbon emissions, lowering fuel bills and improving comfort levels.

Room thermostats can reduce energy usage by simply switching the heating system on and off to limit fuel consumption, reduce comfort temperatures and prevent rooms from overheating.

Part L of the Building Regulations (2006) states that households must have separate temperature control in each heating zone (i.e. living or sleeping area). This is achieved using room or programmable room thermostats in all zones; a room or programmable room thermostat in the main zone and TRVs on individual radiators; or a mixture.

Understanding Room Thermostats

A room thermostat can have the biggest impact on a boiler's efficiency and every domestic central heating system should have one. Installers should always check that one is fitted when servicing or replacing a boiler.

A room thermostat will sense the air temperature in a room and once it falls below the thermostat setting, it will call for heat. Once this set temperature has been reached, the thermostat will stop calling for heat and the heating system is then turned off.

The room thermostat works in conjunction with the boiler's timer, so it will maintain the air temperature to a set level, but only when the heating circuit is already timed to be on. The latest thermostat models have digital temperature displays, setback features and user-adjustable minimum/maximum temperature settings, all designed to make it as easy as possible for householders to control their room temperatures, according to their lifestyle.

For even greater control and higher energy savings, it's worth recommending a programmable room thermostat, either as an upgrade or if a property has no room thermostat and the boiler doesn't have a timer. A programmer and room thermostat combined, provides both time and temperature control in one unit.

A programmable room thermostat will allow householders to set what time their heating system comes on and what temperature it should reach to suit their living patterns. It can automatically provide different temperatures at different times of the day and week. This flexibility in temperature and time settings means the desired comfort levels are achieved throughout the day but with minimum fuel consumption, providing greater energy savings than a standard room thermostat.

Ease of retrofit

An increasing range of wireless retrofit room and programmable room thermostats are now available, offering big advantages for users. Positioning is more

flexible, as it's not restricted to areas accessible by cable runs and wireless models are also much quicker and easier to fit, as there is no need to lift carpets and floorboards, and no brick or plasterwork to chase out. For householders, there is no unsightly surface wiring and no damage caused to wallcoverings, fabrics and furnishings during the installation process.

When fitting wireless programmable room thermostats, there is also the added advantage for installers of only having to fit and commission one unit, rather than two. All this should reflect in the price to the householder.

Room Thermostat Location

Usually, only one room or programmable room thermostat is used to control the main heating zone, but if householders would like to have different temperatures in different rooms, installers can also recommend TRVs for individual radiators. However, it's important that TRVs are set to prevent local overheating and that they're not installed in the same room as the thermostat, in a kitchen or in rooms with supplementary heating, such as gas fires. The best location for a room thermostat is in a regularly heated room with a free flow of air around the unit. This could be the hall, lounge or main bedroom.

Thermostatic Radiator Valves (TRVs)

Thermostatic Radiator Valves (TRVs) are used in place of standard on/off valves. Their purpose is to enable any central heating system to be used in the most effective and economic way.

They can, in fact, save you money. Instead of one central control thermostat switching all the radiators in the home on or off at the same time, depending solely on the temperature near the thermostat, every radiator is independently controlled by its own thermostat.

As soon as any individual room temperature reaches a pre-set level, the radiator in that room automatically reduces its output, yet others in the house continue to operate until they too reach the required temperature. They work best in rooms that overheat, like kitchens or conservatories, or in rooms which are rarely used, such as spare bedrooms.

There are now wireless enabled TRV's, that can operate automatically and be set to maintain various settings on a room by room, or zone by zone basis. By fitting TRVs you can save at least £25-£50 annually.

TRV Operation

Leave TRVs on their highest setting when the heating system is not in use for a long period (e.g. over the summer), to prevent them seizing in a closed or off position. Always leave one or two radiators without a TRV if you have a fully pumped central heating and hot water system.

The radiators, (ideally the bathroom should be one), should have a permanently open lock-shield valve at both ends, so that pressure is not put on the pump, when the TRVs elsewhere have closed down all the other radiators.

Don't fit a TRV in the same room as a room thermostat. It will stop the room thermostat from turning off the heating when it should.

To find out if you qualify for a grant contact Ridgewater Energy on:

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