



**Central Heating  
&  
Energy Efficiency Advice**

**Reducing Running Costs**

**Maximising Efficiency**

**Heating Controls**



**INTEGRAL**

**Maintaining your Building**

**How can I make my central heating system more efficient without spending lots of money?**



**Your first step should be to make sure you are using your heating controls correctly.**

**Review your boiler thermostat, cylinder thermostat, time programmer and thermostatic radiator valve settings and re-set them to match your needs more closely in terms of timing and comfort.**



**Control individual room temperatures with thermostatic radiator valves**

**If you have radiators, make sure that they are not blocked by furniture or curtains. Any obstructions will stop air flowing freely around the radiators - and so reduce their overall efficiency.**

**Getting your boiler serviced once a year will make sure it continues to work as efficiently as possible.**

**I don't get a consistent heat throughout my radiators. What can I do to fix this?**

**Air can stop water from reaching all parts of the radiator and decrease its effectiveness. A radiator that needs bleeding will not be as warm as other radiators, and its heat will be concentrated at the bottom. The heating system should be switched off when you bleed radiators to stop more air from entering the system. Hold a tea towel underneath the radiator key and open the valve very slowly as dirty water can spray out.**

## How boiler controls could help with fuel bills

### Use boiler controls to maximise energy efficiency

Even though condensing boilers are already over 90% efficient, the performance of your heating system can be further improved using boiler controls.

### How can heating controls help with fuel bills?

Using the right boiler controls with a condensing boiler offers annual savings of up to £235 (source: EST) and can help to ease your home's impact on the environment.

Heating controls give you the freedom to decide how your home is heated, making it warm when you need to, but switching off when you don't.

Making small adjustments to your boiler controls can help to save money. By turning your room thermostat down by just 1 degree, you could save £55 annually.

## Which heating controls do I need?

All new or replacement boilers require a minimum level of controls installed alongside them, either:

- ◆ A timer or programmer with a room thermostat and thermostatic radiator valves (TRVs)

OR

- ◆ A programmable room thermostat and thermostatic radiator valves

If your heating system includes a hot water cylinder, that will require a thermostat too.



### **What is a programmer?**

**A boiler programmer allows you to set different times for heating and/or hot water.**

### **What is the difference between timers and programmers?**

**A timer operates your heating system at the same times every day whereas a programmer allows different heating times for different days of the week to suit your lifestyle.**

### **What is a room thermostat?**

**A room thermostat enables you to set the target temperature for a room. Room thermostats are usually best positioned in the hall or landing. They should be sited away from direct sunlight and clear of curtains and furniture.**

### **What is a programmable room thermostat?**

**A programmable room thermostat enables you to set different room temperatures for different times of the day and night.**

**When set up correctly, a programmable room thermostat prevents the system from having to heat the house from a 'cold start'.**

**The control always maintains a temperature within the property and this ensures that the boiler is only ever 'topping up' the temperature in the home.**

**As a guideline, target temperatures should be set at 21 C for comfort temperature and 15 C for economy temperature.**

## **What is a thermostatic radiator valve (TRV)?**

**TRVs allow you to control the temperature of each room individually, thus helping to improve comfort in your home as well as saving money and energy. Most radiators will be fitted with these. Ideally, TRVs should be well exposed and not obstructed by curtains or blocked by furniture**

## **Is it cheaper to run my central heating all day or use the timer?**

**Generally only use heating when you need it, systems that are run all day raise the average internal temperature of the dwelling, which costs.**

**The more control you have over the time your central heating and hot water are on or off, the more you save on fuel costs.**

**Note the system would have to be designed for this type of 'on off' operation.**

**As a rough guide, you can work it out for yourself if you have a gas fired system.**

**First read your gas meter and then run the system for a week using the timer, then read the meter again at the end of the week.**

**Then leave the heating on all day (regulated by the thermostats) for the following week and take another meter reading.**

**The difference between the readings will tell you which was the most economical, given that the weather was similar for both weeks.**

**This is a useful test for assessing the most effective way for you to heat water, using gas or electric.**



## How can I set the controls to reduce my running costs?

### Reduce the temperature settings:

We find that the temperatures customers choose to set their controls at, vary according to their particular needs, but would recommend you set your hot water cylinder thermostat at 60 C (140 F)



Set room thermostat at 18 C - 21 C (65 - 70 F) With young children or elderly in bed, the temperature should not be allowed to fall below 12 C (55 F). For severely disabled people or babies a room temperature of 23 C (73 F) may be more appropriate. Setting your room thermostat down 1 0C can save up to 10% on your fuel bill.



If you have thermostatic radiator valves these will allow you to set individual radiators to lower settings such as in bedrooms where you may prefer a lower temperature (try setting TRVs on middle numbers and if too hot turn down one notch - if too cool, turn up one notch.) You could even turn them off completely when a room is not in use. If you do, remember to close the door, otherwise warm air will escape into there from the adjoining hallway or landing and reduce any savings. Watch out for condensation/dampness occurring in these rooms though.

### Reduce the time the heating is on:

You will probably find that you can save energy without loss of comfort by setting the system to "come on" about half to three quarters of an hour before you get up, and to "go off" half an hour before everyone goes out.

Set it to "come on" again half and hour before you get home and to "go off" again half an hour before going to bed.

## Is it economical to shut off my radiators?



Yes, you can make savings by turning off radiators during periods when some rooms are not in use but remember to close the doors otherwise warm air will escape into these rooms from the adjoining hallway or landing and reduce any savings. Also you must keep an eye on unheated rooms to guard against dampness or condensation. It is probably wiser just to turn them down.

## What settings should my boiler thermostat be at?

If your system has a room thermostat and a thermostat on the hot water cylinder, set the boiler thermostat on maximum and use these other thermostats to set comfortable room and hot water temperatures.

If there are no temperature controls the following are the suggested boiler thermostat settings: NB: If your boiler is behind the gas fire the boiler thermostat can be found behind the flap at the bottom of the fire.

Control Marking	Winter Setting	Summer Setting
OC (OF)	82 C (180 F)	70 C (160 F)
1-4 (or 1-8)	Close to 4 (8)	Around 2 (or 4)
Min - Max	Max	Between Min & Max
High-Low	High	Low

## I have a boiler back unit. Is it cheaper to run the boiler or the fire?



It is only worthwhile using the fire on its own for heating when you don't want to heat the whole house, perhaps between seasons such as early spring when outside temperatures start to rise and are less predictable. The boiler produces more heat and so uses more gas but of course, heats the whole house including the hot water.

Integral UK Ltd is committed to the prevention of pollution and in particular we aim to reduce and make better use of all natural resources, minimising waste and emissions in all processes, looking for energy savings and opportunities for the use of recyclable materials. We also take account of environmental factors and opportunities during the design and delivery of products and services.



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