



HEATING CONTROLS

Homeowner Information

Typically homeowners can reduce their energy usage by up to 20% by installing easy to use heating controls in their home and using these controls in an efficient manner.

There is now grant aid available through the SEAI Better Energy Homes scheme to help you improve your home using this measure.

Adequate heating controls can help a homeowner to accurately match your space heating and hot water schedules to the working and living patterns at the house i.e. when heat and hot water are required, it is there; when it is not, it is turned off.

As a minimum, your heating systems should be split into two independently controlled "zones". They are your 'Space Heating Zone' and your 'Domestic Hot Water Zone'. This allows you to heat your domestic hot water without being forced to turn on your space heating. Additional zones can also be put in place in large homes to split upstairs and downstairs or living areas and bedrooms.

Case Study

Patrick has a four bedroom detached house with a footprint of 150m and previously had an annual heating bill of €1,700. Despite having installed a new boiler several years earlier, Patrick had very poor control of the system. He had no time or temperature control of the space and water heating and could not heat water without turning on all the radiators in the house or the electric immersion heater. This meant both were left on for long periods throughout the year, unnecessarily increasing the heating bill.

Patrick decided to get some simple control measures installed in his house which enabled him to significantly reduce his annual energy consumption and heating bill. The heating system was divided into 2 zones (1 for space heating and 1 for hot water) by getting his plumber to install a 7 day programmer with room and cylinder thermostats and a motorised control valve. Patrick can now heat his water without having to turn on radiators or the electric immersion heater and the programmable timer also allows him much greater control of when the heating should operate in each zone. Before installing these control measures, Patrick used to regularly leave the heating system running all night to make sure that house was warm in the morning and that there was enough hot water for his family to have showers.

The installation of these new control measures now mean that he has much greater control over his heating system and has reduced his annual fuel bill by 30% - an annual saving of over €500 per year. Patrick was also able to secure grant aid from the Home Energy Saving scheme to help him with the cost of this. Typical costs for this type of upgrade are approx. €800 - €1000 (excluding grant).

The Benefits of Heating Controls

- Reduction in heating bills
- Reduction in Greenhouse Gas emissions
- Increased comfort levels

Do I Need Heating Controls?

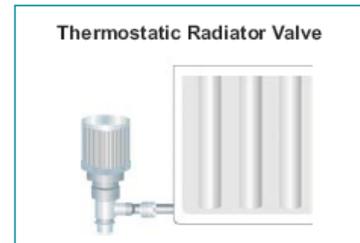
You can do a quick check on your heating control requirements by answering the simple questions below. If you answer **NO** to all or the majority of the below questions, it would be beneficial for you to install some heating controls:

- Can you heat your domestic hot water without switching on your radiators or an electric immersion heater?
- Can you turn on your heating without heating your domestic hot water?
- Can you easily adjust the heat output from radiators in the rooms you use most often?
- Have you temperature control on your boiler?
- Have you time control on your boiler that you can set for different days of the week?
- Have you a separate temperature control for your hot water cylinder?
- Have you a separate time control on your hot water cylinder?

Key Heating Controls Facts and Tips

Thermostatic Radiator Valves (TRV's)

TRV is a thermostat that regulates the amount of heat going into a radiator according to the temperature in the room. You can set a specific temperature level for a room that you are comfortable with, and then as the room heats up to that comfortable temperature, heat flow is reduced into the radiator, stopping when it reaches your comfortable set level. TRV's are particularly useful in rooms where the temperature requirement is different to that required in the main living area bedrooms, or rooms where there are other heat sources such as in kitchens

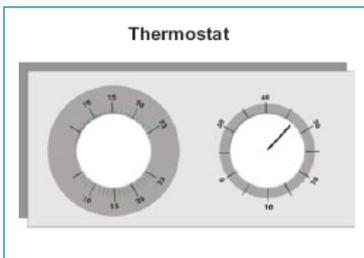
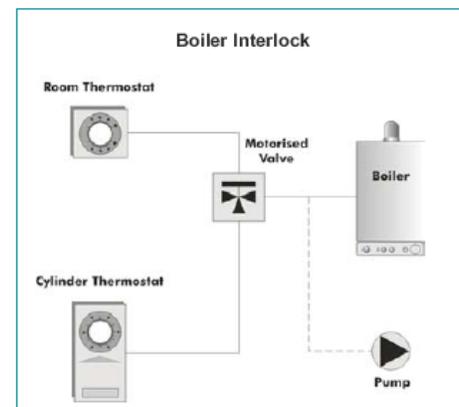


7-Day Programmable Timer

A 7-Day programmable timer will allow you to set your heating system to match your occupancy patterns on a daily and weekly basis. The separation of space heating and domestic hot water controls into zones will also allow you to set each zone to operate for required periods only. For example: you can set your boiler to switch on automatically before you wake in the morning to heat water for showers without turning on the central heating.

Boiler Interlock

Boiler interlock is a method of interconnecting your heating system controls with your boiler to ensure that the boiler only operates when required.



Time and Temperature Control of Electric Immersion Heater (Hot Water Cylinder Heater)

Time and temperature controls installed on immersion heaters allow householders to pre-set the time period required for water heating and the temperature to which water is heated. This means that water need not be heated for longer than required or to higher temperatures than required. Temperatures for hot water should be set to a maximum of 60°C. To heat water above this temperature only to add cold water to it afterwards is a waste of your energy. Please note that if you have a solar water heating system in place, this temperature may need to be set higher. SEAI also recommend that lagging jackets are fitted to hot water cylinders to ensure that minimum energy is lost

I Need Heating Controls....What Do I Do next?

- a) Get more information on the Better Energy Homes scheme in one of three ways:
 - Download from information from www.seai.ie/betterenergyhomes
 - Request more information by ringing 1850 927 000
 - Contact the scheme directly at info@betterenergyhomes.ie
- b) Contact a registered contractor for heating controls from the SEAI registered contractor list available on www.seai.ie/betterenergyhomes*
- c) Once you have selected a suitable contractor, complete the Better Energy Homes Scheme application form
- d) Consult the SEAI Better Energy Homes scheme Buyers Guide and the SEAI Guide "Detailed Guide to Home Heating Systems" available at www.seai.ie.

*It is recommended you contact a number of registered contractors to ensure you receive the best quality available at a competitive price.

A Buyers Guide to Heating Controls

Choosing and installing heating controls should not prove to be a difficult process. However, there are important decisions to make and a few rules to apply to ensure that your heating controls will be to your satisfaction and meet your requirements.



It is vital to look for high quality when choosing your heating controls. To achieve this, products should only be chosen that comply with the appropriate Irish, British or European standards (IS, BS or EN)

Please visit www.seai.ie/betterenergyhomes for a list of registered contractors for this scheme.

We recommend that you shop around and view other installed systems before making your final decision in order to get the best product and the best value for money. It is a good idea to discuss the Heating Controls on offer with any friends, neighbours or workmates who may already have them installed, to give you a better insight of how they are operated, how often you might need to change settings and also the advantages, improvements and any problems people have experienced when they have had them installed.

Questions to ask your supplier and installer

SEAI have compiled a list of questions you should ask your suppliers and contractors prior to making a purchase. It is in your best interest to make sure you are satisfied that all your questions are answered. If an answer seems too complicated, then ask for a simpler explanation. If someone is selling you new controls they will be happy to provide an explanation to your satisfaction.

Equipment

- Is the heating system in my dwelling currently zoned/divided according to Industry Best Practice? If not, will installation of these controls achieve this?
- How should I divide my house into zones? What is Industry Best Practice?
- Do I already have some of these products installed in my home? If so, do they need replacing?
- Are all of the proposed heating controls suitable for my particular requirements?
- What Irish Standard (IS), British Standard (BS) or European Standard (EN) do the controls comply with?
- Will the product affect the Building Energy Rating (BER) of my home?
- Will the system allow me to change time and temperature schedules from day to day and week to week?
- How often should I change settings on the controls to make my house more efficient?
- Will the products satisfy all rules and requirements for receipt of a grant under the Better Energy Homes scheme?
- Do the products have the required CE or Kitemark?

Installation and Commissioning

- Is the contractor on SEAI's list of Registered Contractors? (Remember, if the contractor is not listed you will not receive a grant under the Better Energy Homes scheme)
- What standards will the products be installed to?
- Does the contractor offer delivery, installation, commissioning and after sales service?
- What training or accreditation has the contractor received?
- Which trade associations does the contractor belong to?
- How many similar systems has the contractor installed? Are local references available?
- Will any of the installation be sub-contracted? How much?
- Who is ultimately responsible for what segments of work?
- How long will the installation take?
- What are the procedures and tests carried out when commissioning the system?
- Who is responsible for repairing any disruption to walls/ceilings etc, necessary during the installation of the system?
- What additional pieces of work need to be done to my home to prepare for the installation?
- Will the contractor provide all of these services, and at what cost?
- What work will need to be done to get my home back into its original condition following installation?

Operation and Maintenance

- Is full documentation, including any operation manuals and warranties provided in English?
- Will the supplier provide instruction and demonstration on how the installed controls work?
- Will I need to carry out any housekeeping or maintenance tasks once the controls are installed? If so, how often do I need to carry out these tasks?
- Does the supplier have spare parts available if required?
- Will I be charged for subsequent call outs if required?

Costs and Payment

- Does the quotation cover all costs associated with the works?
- What range of energy savings are these control measures likely to achieve? Approximately how much will this installation save me on my heating bill?
- What are the financing options or payment terms?
- At what stage will I get my SEAI grant payment?
- Are there any additional costs that I should be aware of?

After-Sales Service

- What after sales service does the contractor provide?
- What is the guarantee on labour and parts for each component of the system?
- Is any ongoing professional maintenance required (by the Contractor or similar)?
- For how long does the supplier provide emergency service work if required?



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