

Heat Pump

CONSUMER GUIDELINES



Congratulations on choosing a Heat Pump for your home renewable energy system. This leaflet outlines some important points you should be aware of when the system is installed. For the safe and efficient operation of your appliance it should be installed to current Building Regulations. Please consult your installer concerning the points below and any other issues regarding the installation and operation of the system.

A heat pump is a system that can harness energy from free renewable sources for heating your house and producing your hot water. There are three types of heat pump available; air source, water source and horizontal and vertical ground source. Through compression, heat pumps can 'pump up' heat at a low temperature and release it at a higher temperature.

1 Ground Source Collector

The collector is used in closed loop systems to transfer the heat from the ground to the house. The design and installation of this collector is important and your installer will be able to explain all the relevant aspects of it. It is important not to landscape or plant any trees or shrubs in the vicinity of the collector area as the roots can interfere with the operation of the heat pump. It is important that you take care to note a number of things:

- Your installer will provide a plan of the site showing the collector area and depth. This could prevent damage to the collector if any future work or landscaping is carried out on the grounds. In addition photographs of the collector before it is covered up would be helpful with any future work or trouble-shooting of the heat pump system.

- Collector calculations – Your supplier/installer will carry out tests on the soil to ensure that the most suitable collector (vertical, horizontal) will be chosen. They will provide a formal set of calculations for the collector design which will aid any future trouble-shooting.

2 A Piping Schematic, Valve Chart and Wiring Diagram

Your installer will provide you with a piping schematic, valve chart and wiring diagram. This will be very useful in helping with any future work or trouble-shooting of the heat pump system.



3 Under Floor Heating System Design

You should discuss the under floor heating system and any plans for floor coverings with your installer as they affect the heat transfer from the floor and the overall operation of the system. Again, photographs of the under floor piping system during the installation would be helpful with any future trouble-shooting.

NB for the most efficient and economical operation of your system, it is important that your installer is involved (or well informed) in the above 3 points.

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4 Insulation

Pipe runs are a prime source of heat loss. All pipes and fittings should be appropriately insulated. This will ensure that minimal heat is lost through the pipe-work as it is delivered to your living space or through the taps as hot water. Special care should be taken to insulate Cold Brine circuits. Also, the pipe entry through walls should be sealed.

5 Thermostats

Thermostats are used to control the temperature of an area or space. You should consider what the optimum location for thermostats is; usually it is the living space where you will spend most of your time. In the case of Underfloor heating it is very worthwhile to have all main rooms "zoned" and fitted with their own thermostat.

6 Pressure Relief Valves

All heating systems will have pressure relief valves. In the event of high pressure build up due to a malfunction the pressure relief valve will open up to relieve excess pressure and prevent damage to the system. The vent pipe from these safety valves should be routed to the ground/drain/vessel and placed to cause minimal damage if they do vent.

Thermal Mixing Valve (Anti-Scald Valve)

Best practise calls for the fitting of a thermal mixing (anti-scald) valve on a hot water system. With the current recommendation to store hot water at 60°C to prevent the growth of legionella bacteria it is becoming more of a consideration to install thermal mixing valves. A thermal mixing valve 'mixes' cold and hot water together to ensure the water temperature is safe for people to use.

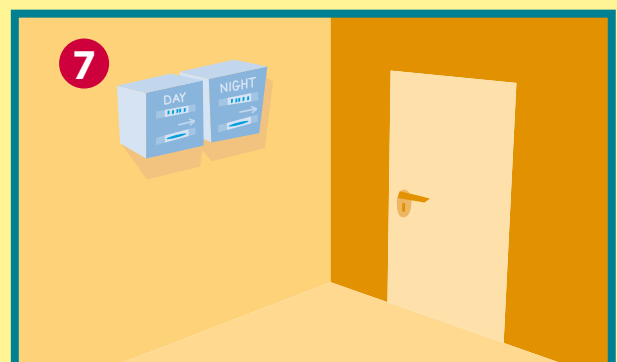
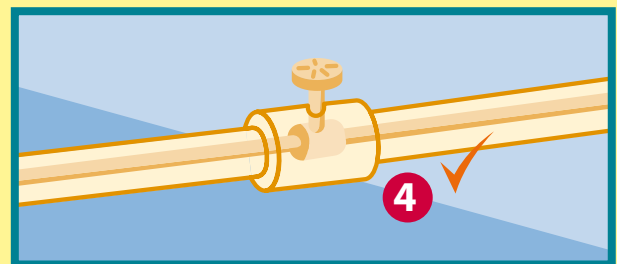
Operation & Maintenance

Your installer will supply you with an English language Operation Manual, Maintenance Schedule and provide guidance on the operation of the appliance.

It is important to follow the manufacturer's maintenance instructions to ensure the safe and efficient operation of your appliance.

7 Night Rate Meter

The operating costs of your heat pump (whether Horizontal or Vertical ground sourced, Air or Water sourced) will be substantially lower if you run on night rate electricity. You will need to install a night-rate electricity meter to avail of this cheaper rate.



Sustainable Energy Ireland is funded by the Irish Government under the National Development Plan with programmes part financed by the European Union.

Greener Homes Scheme

Sustainable Energy Ireland, Glasnevin, Dublin 9

T. 1850 734 734

greenerhomes@sei.ie

F. (01) 8082013

www.sei.ie/greenerhomes