

InfraRedReplacingGas

In association with



Infrared heating made simple to understand – We hope!

It is very unfortunate that infrared heating is not understood by 99% of the population in the UK and elsewhere. It is a great shame that no-one, until now, in the UK has before tried to bring infrared to prominence for the benefit of everybody. I have decided to do that because I want to make the lives of people simpler when it comes to heating their homes. It need not be difficult or daunting to move from gas to infrared. Please find set out below the reasons why and all of the advantages of infrared heating over every other home heating solution.

1. Infrared is radiant heat similar to the Sun. It is not convection heat through radiators. It is therefore vastly more efficient and effective as infrared does not heat the air but instead heats people and objects.
2. There are different forms of infrared and it is important to know that proper infrared has to have a temperature exceeding 50C. Anything less is not infrared. Our panels have a temperature between 90C and 110C and that is why, apart from the quality Austrian workmanship, they provide the best quality infrared. Please try to avoid anything less otherwise you could well be disappointed and believe that infrared does not work.
3. The insulation in properties is not so important with infrared as infrared does not escape through windows, doors or walls. You can open a window and the infrared heat will not disappear outside. It will remain in the room as it has already heated the objects and walls in the room.
4. Infrared is an instant heat within four minutes of turning on. It is not like heat pumps which require sometimes hours to get to a temperature of 21C. If you require a room to warm up instantly there is nothing better than infrared.
5. Infrared panels are so easy to install. There are no radiators, piping, underfloor heating. Just the panels preferably installed on the ceiling, as near the centre as possible, so a 'cone of influence' is achieved. Every part of the room will then have heat and not as is the case with convection heat just around the radiators. It will take a qualified electrician one day or less to install a whole house with panels and thermostats. The thermostats can be programmed up to six times a day seven days week. The windows of the property can have, if required, window contacts so if the window is opened the heat will automatically shut off. I have to say from experience that sort of programming is possibly over the top. Infrared heat is so instant you only need to turn it on when you want to use a room and not otherwise. It is therefore hugely energy saving. You only heat the rooms you are going to use at the time.
6. It seems that modern life is now lived in the kitchen/diner and at night the bedroom. Those rooms are therefore the only rooms you need to heat, other than to air a room in the winter. We do have an independent Report on our website, [Infrared Replacing Gas](#), which shows cost calculations of infrared in a three-bedroom property. Again, from experience the reality is that the heat requirement with infrared is far less than with convection heat via radiators or underfloor heating. There is no warming up period other than four minutes, so no wasted energy warming up.

7. Infrared works in temperatures of +40C down to -50C unlike heat pumps which will struggle once the outside temperature drops below 5C. Heat pumps will need additional help to keep the property warm enough for residents. Infrared does not need any backup to provide the heat needed.
8. Infrared heating does not need ventilation as the heat does not dry the air. With convection heat through radiators the air is heated but the walls stay cold causing condensation. In fact, with underfloor heating the rising heat pushes up dust and children up to the height of 1.2 metres may suffer and may develop asthma. As you will know asthma is quite common in children.
9. Infrared heating is a brilliant antidote to damp and mould. No damp and mould will form, and if it exists already infrared will eradicate the problem very speedily. As has been said before infrared heats the walls and not the air.
10. Another major advantage of infrared over any other form of heating is the cost of purchase. Infrared is between one fifth and one eighth of the cost of an air source heat pump, ASHPs having to have additional insulation to work efficiently. One twentieth of the cost of a ground source heat pump. In round figures a four bedroomed house can have infrared installed for around £2000 based on volume. Further to that there is no maintenance so at least on current terms there is a saving of at least £160 per year. In addition to that infrared will last up to 40 years without the need to replace. It can be rightly said a 'no brainer'.
11. Turning to thermostats: a thermostat will only measure the temperature in the room where it is located. If you use only one thermostat for your whole property and you locate the thermostat in the living room, the thermostat will switch off all panels in your property when the set temperature of the living room is reached. So, it can happen, that you will reach in the living room the set temperature of 21C and you will have only 16C in the bath room. So normally 99% of people who build a new property or make a full renovation of their property take a room thermostat (BT710 H4A Wireless Thermostat) for each room and a BT001 (Heat4All Flush-Mounted Switch Actuator) per panel.
12. U-values influence the wattage. Our calculations are for new build houses with normal insulation. We normally we calculate slightly higher wattages, to be on the safe side. Our experiences show that the higher the wattage the lower the heating bill will be. A larger panel runs much less hours than a smaller panel and overall will be less costly. If you underestimate the wattage the room will not become warm as you would probably like. The U-values have some influence on the dimensioning of the infrared heating, but not so much as with a conventional heating system with radiators.

The best way to explain this, is with an example.

Example:

We have two properties A and B; each one has a living room of 20m² and a bath room of 6m² and both have the same good U-value.

The living room in property A has two windows with normal sizes, wooden floors or parquet floors and a lot of wooden furniture.

In this case we will need 35Watt/m², so totally 700 Watt.

The living room in property B has to complete glass walls, tiled floors, and some furniture from glass, like a glass-topped table, or cupboards with glass fronts. In this case we would need 50Watt/m², so totally 1000 Watt.

The bathroom in property A has a floor of dark virgin stone, no tiled walls, a small mirror and some wooden furniture. In this case we will need 45 watts/m², so totally 260 watts.

The bathroom in property A has a tiled floor, tiled walls, a larger mirror and a lot of ceramic furniture. In this case we will need 60 watts/m², so totally 360 watts.

So, you can see with these examples that the wattages are not only influenced by the U-value but also by the materials in the rooms, as some materials store more infrared waves and some less.

Our calculations are always based on the worst situation, so that we can be sure that each room becomes warm enough.

The advantage is that when you have a lot of materials which store a lot of infrared waves, the heaters will be working less and the heating bill will be lower.

13. Within the last two weeks we have received from www.propcert.co.uk a [SAP/EPC rating](#) for a property converted from an office block obtaining A+ on the EPC scale. This is very encouraging and we believe that the SAP/EPC rating will always be that high because of the constituents of infrared heating as described above.

We do hope that the above information has set out the facts about infrared heating in a simple way but if you have any questions please ask and we will respond.

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