Your Ultimate Guide to Conservatory Heating

Ensuring you have the RIGHT heat source for the space

If you have a conservatory, you probably know the struggle to heat up a beautiful but complicated space and if you don't have a conservatory, are you as jealous as I am?

The first thing to think about when trying to heat a difficult space like this is the power output. You're going to need more heat and power output for this space to achieve the same temperature that a living room would for the same amount of time because of the whole space being a giant window!

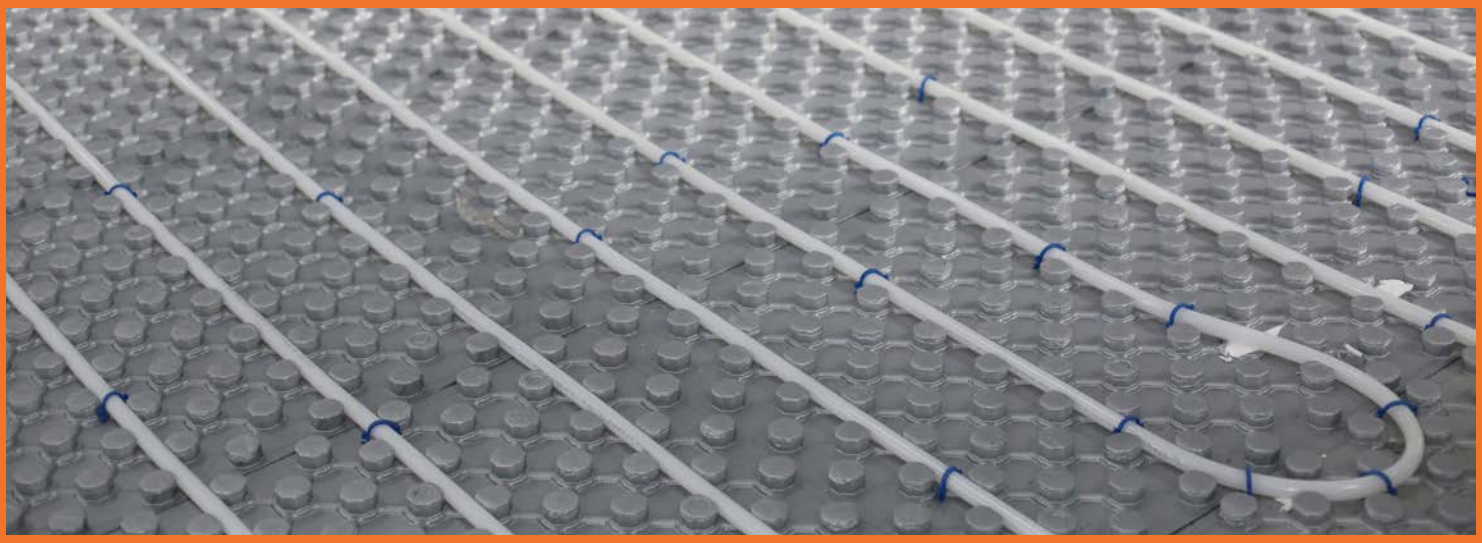
It is also dependent on your glazing, drafts, and the amount of furniture too. You don't want to be paying double the price for the same amount of heat (conservatories are harder to heat as explained above) and it might cost more. You need a more efficient heat source to heat the room to the same level and maintain that heat without costing the world, so what are the options?

Your Options...

- *Underfloor Heating*
- *Electric Radiators*
- *Panel Heaters*
- *Gas*
- *Night Storage Heaters*
- *Modern Storage Heaters*

Underfloor Heating

Let's start with underfloor heating (taking the floor is lava to the next level!)



I'll start with the positives, you have controllability of your heating, you can control what zones are on, even in the same room. So, if you have a conservatory the size of a ball room it would be pretty handy! It's great if you're renovating or having a new conservatory installed or extension because it is much easier to install. This way you can also put it under most flooring and finally the most obvious one, warm feet!

On the downside, it is expensive to install, and it can be somewhat of a hassle but at least you can throw all your socks away. Bare this in mind when getting underfloor heating that you'll need 200W per square metre of the room (if its electric). Also make sure it covers most of the room if you're using it as your only heat source, make sure to install insulation boards underneath your floor heating to improve the of your heating efficiency. You will also need to set underfloor heating to a higher temperature because there is less heat transfer which can result in running prices being higher.

Electric Radiators

The modern way to heat a home, the electric radiator like anything else has advantages and disadvantages. The floor is lava game won't be applicable here, here's what you need to know:

All electric radiators are independent; all you need is a live socket. They have low profiles and come in different styles and shapes, so they work around your conservatory and its unique look!

On the other hand, electricity can be expensive to run but it does have a larger power output which can be good for high ceilings and as I said before you will need a larger output for this type of space. Saying that, if you have a power-cut you won't have any heat, but I doubt you sleep in your conservatory.

Some electric radiators don't just use radiant heat, they convect as well, so the heat circulates around the room making you warmer quicker, but it can reduce the moisture in the air increasing the chance of breathing problems, a humidifier can solve this.

There's an upside to that though, it can help with condensation and dampness which is common in conservatories.

And finally, the most Important point is there is no storage element within the radiator which means you aren't getting that surplus heat after the radiator is turned off and these types of radiators come with low guarantee.

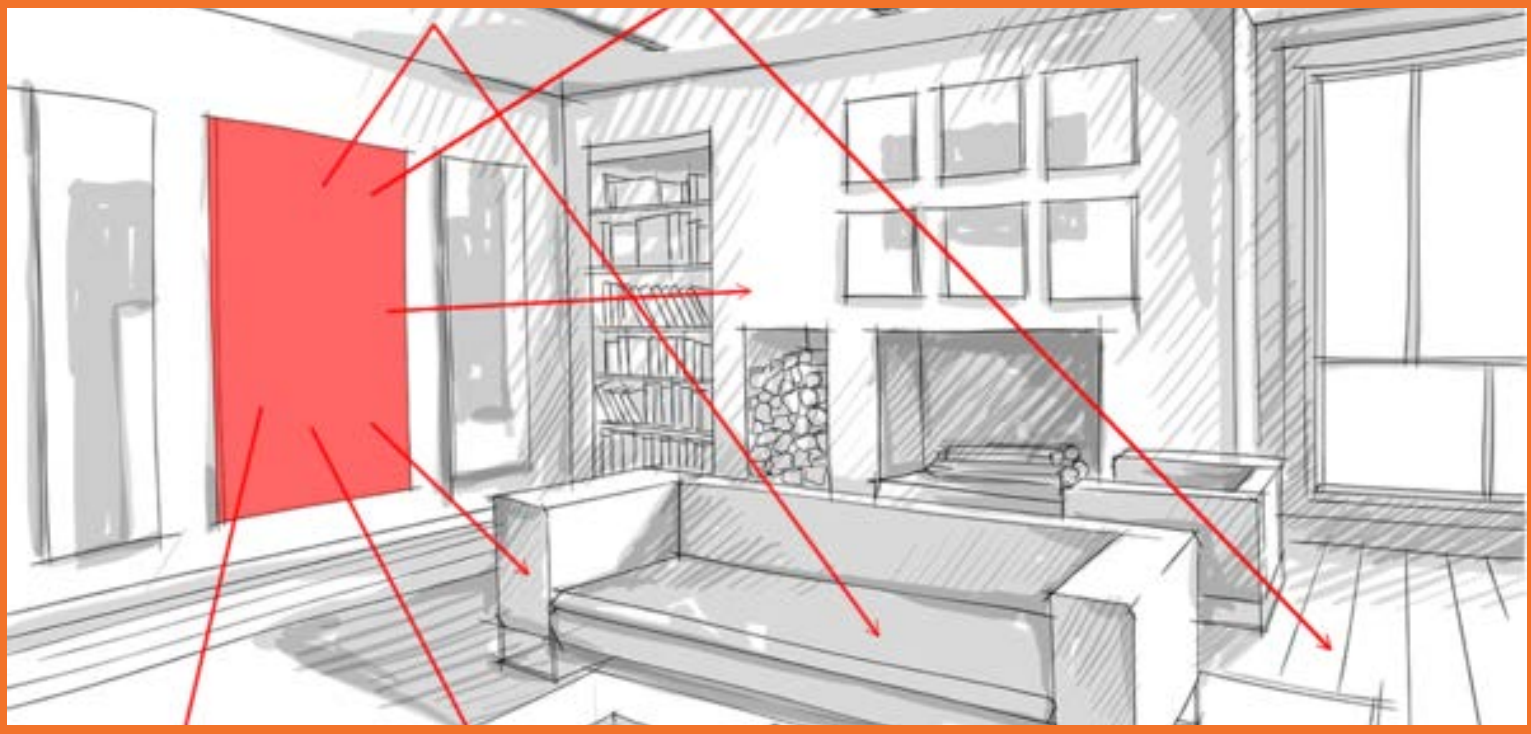
Infrared Panel Heaters

Infrared heaters work like the sun just without the lovely atmosphere or blue sky, they heat using light waves, but we cannot see them, it's exactly like the sun, the closer you get - the warmer you are.

There are different types of infrared heating:

Near infrared is the tiny light on a tv remote used to contact the tv by radiation, we cannot feel this energy.

Far infrared (saunas) this type of heat warms up objects and people, not the air or space so it is more directly affecting you.



Infrared can help with ache, pains, and detoxifies hence the sauna element. Having said that, infrared heating can cause dehydration, blotchiness and prolonged use can cause damage to the eyes.

Infrared bounces off objects that cannot retain heat for example windows. Some objects can retain heat but, in a conservatory, you most likely do not have a carpet or curtains or walls. The waves of radiation will bounce off anything that isn't able to retain heat very well so it's not ideal for conservatories. You must be in the path of the wave, or you won't feel warm, and the rest of the room is cold. Infrared heats up very fast and saves electricity because it's only heating objects and people although your couch would be boiling! It can also reduce mould and it is very quiet.

Gas

Most of you will be familiar with gas, the old central heating system, however in a conservatory it is hard to install.

Also, it is often expensive if you wanted to get gas installed once you have built the conservatory. This is because you'd have to have pipes fitted which can be intrusive and sometimes requires planning permission.

Although gas can be cheaper to run the installation process can be messy and expensive and often not worth the cost.

Night Storage Heaters

In the early 1960s, night storage heaters hit the market and suited people's lifestyles because lots of people were home during the day, the radiators would heat up during the night using a cheaper rate than during the day and a storage element (usually clay) inside the radiator would absorb this heat and release it the next day but the heat had already been paid for during the night saving you money on the more expensive day rate however, this heat was less controllable than a regular electric radiator.

Modern Storage Heaters

Now most people are not home during the day anymore, so this night storage heaters don't work as effectively as they once did and that's why the modern storage heater was created.

The modern storage heater still has a storage element, like clay or soapstone, but it can work anytime - meaning you have the benefit of the storage element but the full controllability of your heating 24/7. Think of it like a hybrid between a night storage heater and an electric radiator!

You can put these heaters on when you want because the plugs are giving electricity to the radiators constantly instead of in economy 7 period, which would turn off the plugs during the day.

The storage element inside the radiator heats up, warming the room and then switches off, the element then continues to heat the room for up to 40 minutes without using anymore electricity = lower electricity bills + a warm conservatory!

Pros & Cons

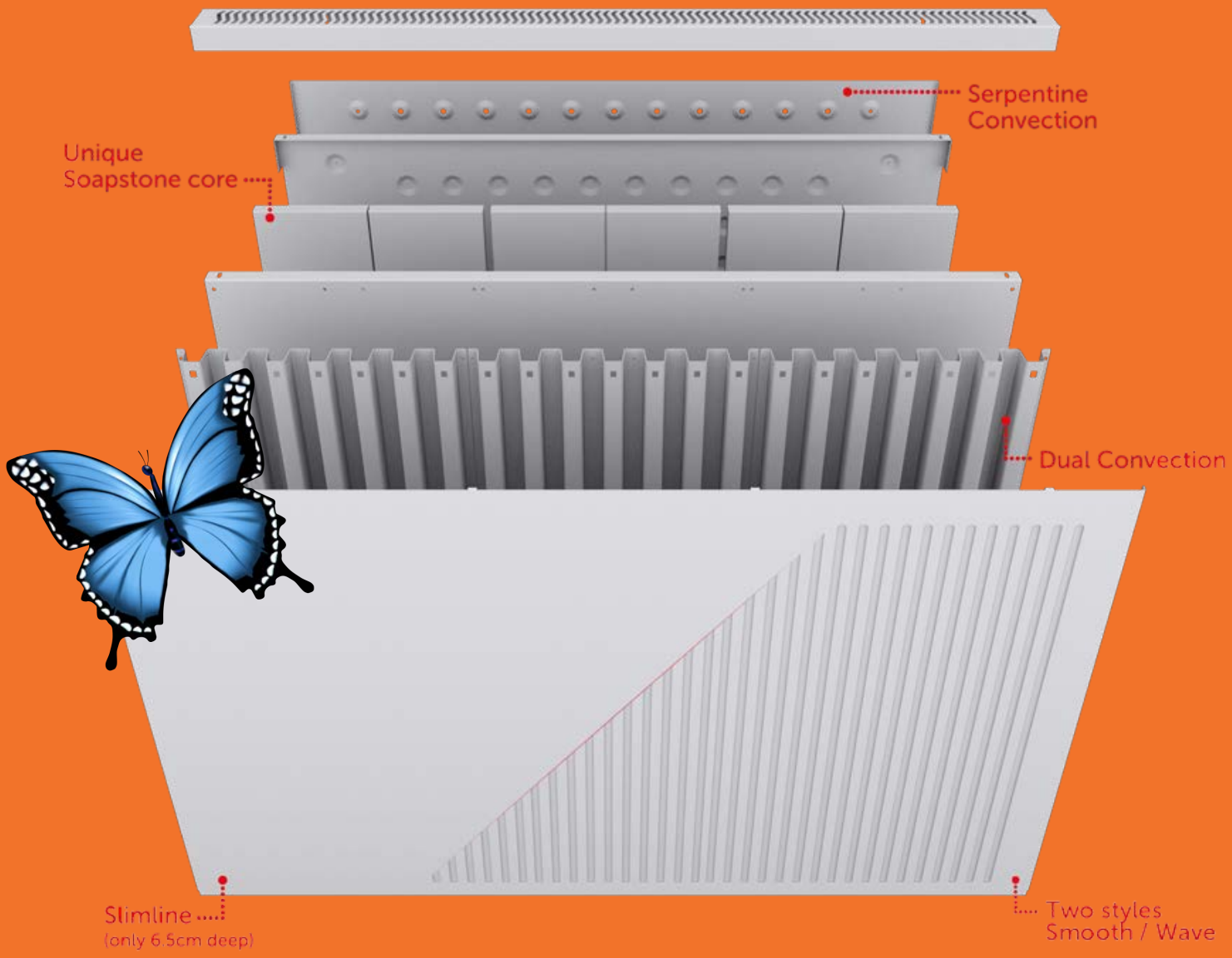
Water

Pros	Cons
• Lower running cost • Works well with sustainable energy sources, such as heat pumps • Holds heat longer	• It needs more space to be installed because of the pipes, especially in conservatories. • For underfloor heating, the floor levels might need to be raised which means your door height might change, not great if you're tall! • You might need to take a half step from one room to the next. • Costs more to install

Electricity

Pros	Cons
• Cheaper to install. • Easier to install. • Quicker to warm up.	• More costly to run. • Cools down quickly depending on the style of radiator.

How the Butterfly Range works...



So, the type of heat we use is something called resistant heat ,which is caused by the electricity travelling through the metal inside the storage element.

The electricity cannot travel as fast as it would like to (the speed of light) so let's put this into a real-life example. Imagine pouring a little bit of water into a funnel the water would travels down no problem, but if you keep pouring water into the funnel it will overflow so you would have to slow down the pour. This is like what the electricity is doing, it must slow down.

So, this causes resistance, which creates heat - a little bit like if you were to rub your hand against a carpet, you'd get a friction burn. This heat then warms up the stone and then that heat transfers to the flutes of the radiator and into your room.

Our Technology

Quadvex Technology

This is our very own Frankenstein! Quadvex stands for quadruple and convection because there are four means of convection in our radiator. So, this is how it works - convection takes place, the flutes act like vacuums sucking up cold air from the bottom and releasing it at the top, because hot air rises.

Then, we put a front panel to the front flutes, this doubles the amount of flutes that a normal German Radiator has, meaning at the front you don't have 7 flutes, you have 14 flutes = x2 convection at the FRONT of the radiator.

German

14 flutes (front & back)

Butterfly

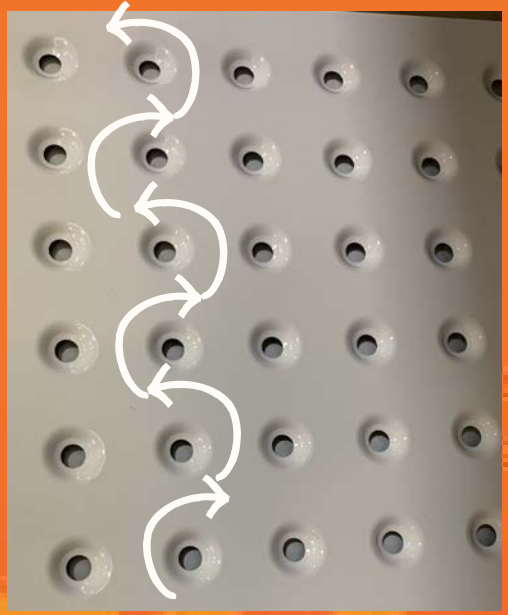
15 flutes (front) & cool-wall technology = 4 points of convection

We also have our very own patented back wall technology, as normally all the heat convected to the front would also be convected to the back (around 40%)

Our radiator is the only one on the market that has a different front and back panel - this means you lose minimal heat to the back wall, it all goes into your room!

Serpentine Technology

This tech is at the back of our radiator, it makes the air move in a snake like motion. We have also put dimples in the radiator that have blocks inside them so the warm air must stay in the radiator for longer because the air cannot go straight up like it would in the flutes. It must move around the dimples in a snake-like motion, making the air hotter. resulting in only 5 percent heat loss to the back wall compared to a 40%.



How Materials Effect Efficiency...

First things first, efficiency is about how effective your source of heat is at delivering heat into that space and maintaining that temperature because all electrical appliances are 100% efficient so this is where design and technology really matters.

The materials used to manufacture your modern storage radiator plays a crucial role in the efficiency of your radiators, it's about how well your radiator performs when it comes to efficiency because all electrical appliances are 100% efficient.

Metal Casing

Most German radiators are made from mild steel because of its durability and how it can retain heat, which is great if you want your heat to stay in your radiators, which means you're going to be waiting a good while for the heat to release into your space.

Whereas a metal like aluminium is not only a better conductor (2.9 times more) and 100% recyclable. It transfers heat into the room more effectively and doesn't keep that heat hostage.

Aluminium is also noncorrosive so no rusting! It is also Nontoxic and sound absorbing and recyclable and lightweight yet durable. Need I go on?! So why don't all electric radiator companies use aluminium? It's cheaper to use mild steel.

This is what stores the heat for longer, making it emit heat after the electricity has been turned off. Again, there is a very common material that most modern storage radiators use - Chamotte, which is a ceramic stone which is basically clay. It retains and gives out heat very effectively. There are just a few downsides because moisture is always in the air, clay absorbs the moisture in the air over time which breaks down over time.

Soapstone does not do this, here at the CHC our soapstone has waterproof properties, soapstone retains heat more effectively because it Is a volcanic rock it loves heat, and it lasts longer.

Other things to consider

- **Guarantee**
- **Awards**
- **Safety**
- **Made in Britain**
- **Price**

Let's break them down...

Guarantee

The next thing to consider is your guarantee, a long guarantee is obviously desirable, but you need to check what part of the radiator actually is included in the guarantee.

Some companies only cover the metal part of the radiator, make sure to check you have a guarantee for your thermostat too and the wiring!

And the most important thing is the LOCATION of your guarantee and who your guarantee is with because there can be multiple levels to a business and the original company where they bought the radiators from that's who you have your guarantee with. So, say you've got a German radiator, your guarantee would be in Germany so keep an eye out for it.

Made in Britain

Another thing to ensure your radiator is, is Made in Britain. Some companies will try to portray that they are "made" in Britain but are merely assembled in Britain!

So, make sure to do some research check the made in Britain website! This is also important because if something is genuinely made in Britain, guess where your guarantee is? Home sweet home!

Safety

Ensuring the radiator you are buying is safe for your home should be high on your agenda, you can tick this box by making sure your radiator is INDEPENDENTLY CE approved and tested.

This means it has gone through a lot of rigorous tests, a company can pay to test themselves or a third party and the testing can differ in quality. Here at the Conservatory Heating Company, we use Intertek, based in Milton Keynes and is well known for its intense testing, and this costs a lot more, but we know our product is up to standard. By going through this process, we have ensured a high standard of safety, giving you complete peace of mind.

Price

Cheap is cheerful but for how long? When it comes to heating it's not a good idea to cut costs, you've got a lovely space to heat up which I bet cost a bomb. So, why would you fall short now? I'm not saying expensive is always best, but a little convection panel heater isn't going to heat the space effectively therefore costing you another bomb!

There is a reason why things cost the cost they do. Sometimes yes, its companies putting prices up because they can, but that's not we're about. We are here to educate before anything else. In the long run you will need an energy saving solution, this is even more important in a conservatory since they're harder to heat.

When our radiator is set to an exact temperature it will get to that temperature and then turn off but as soon as it drops one degree below desired temperature it will turn back on. And because the temperature hasn't dropped massively (like it would do with a plug-in heater) it hasn't go to work hard to get back to set temperature and it will turn off again saving you electric! It continues to do this in a cycle. We did a study at Huddersfield university; the radiator was in a standard insulated room, and we had the radiator on for an 8-hour period and it only consumed 2.5 hours' worth of electricity.

"We were made to keep you warm"

the conservatory
heating company