

A Guide to Air Source Heat Pumps

The energy efficient heating
solution installed in your
new home

Right where you belong

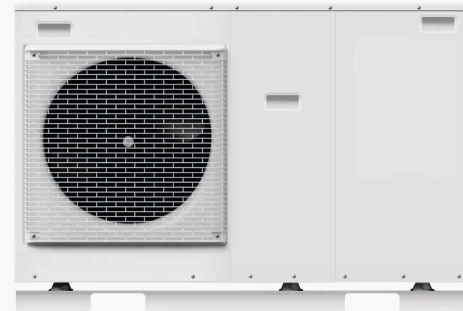
gleeson

Your new Gleeson home has an air source heat pump installed.

Why is Gleeson using air source heat pumps?

Gleeson is committed to being a sustainable business, supporting the government's goals of Net Zero Carbon by 2050. This means that we are placing sustainability at the heart of everything we do, ensuring all of our efforts have a positive impact on communities, people and the environment.

By 2025, it is widely expected that the government will ban gas boilers for new build properties. Instead of waiting for this to force a change, we are embracing new low-carbon heating systems straight away which aligns not only with our sustainability goals but with the government's too. In doing this, we are ensuring that our homeowners benefit from a super efficient home from the moment they move in!

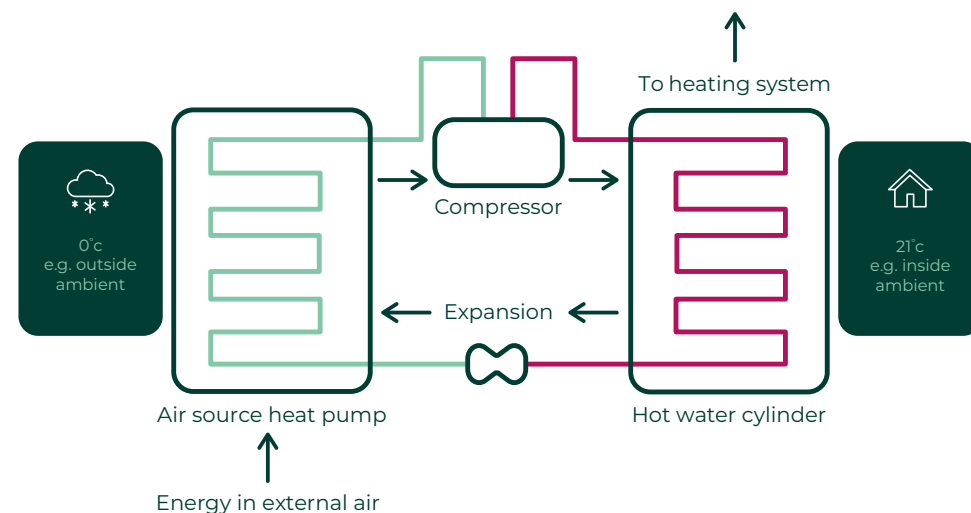


What is an air source heat pump and how does it work?

An air source heat pump works in exactly the same way as a domestic fridge, but in reverse. The external unit has a fan which pushes the outside air through a coil of fluid called 'refrigerant'. This causes the refrigerant to heat up, reaching the same temperature as the outside air. The refrigerant is then compressed, which causes it to get very hot (a bit like how a bike pump gets hot the more you use it).

This heat is transferred to water pipes in the heat pump which is then sent to the hot water cylinder and heating system inside the home. Now the heat has been released, the refrigerant cools down significantly. Having previously been compressed, it is then de-compressed which causes it to rapidly drop in temperature even further. By comparison, the outdoor ambient temperature is now far higher than the refrigerant and therefore heat naturally transfers from the air into the refrigerant. The process then repeats over and over, with electricity powering the fan and compressor.

By harnessing this process of thermal dynamics, a heat pump can take a single kW of electricity and make three times as many kW of heat energy, making it extremely energy efficient and keeping energy bills manageable.



What are the benefits of an air source heat pump?

They are highly efficient

Modern gas boilers are around 92% efficient, which means that for every 1kw of gas energy you would only get 0.92kw of heat energy. Our air source heat pumps however, are industry leading with average efficiencies that can exceed 300%. This means that for every 1kw of electrical energy you pay for, on average you will get 3kw of heating energy (the extra 2kw of energy is taken from the outside air which is completely free!)

They are sustainable

As the government invests in moving away from coal and gas power stations, the electricity coming to our homes will soon be exclusively generated by renewable energy sources like solar and wind. At this point, not only will air source heat pumps be extremely efficient, they'll also be a zero-carbon source of heat.

They are safer

Unlike boilers, there are no dangerous or explosive gases inside the air source heat pump unit, nor is there any risk of carbon monoxide build up. Air source heat pumps are just as safe as the kitchen fridge you have at home, they work in a very similar way.

They are easy to maintain

Air source heat pumps are externally located, which means less disruption for you when it comes to servicing. Your air source heat pump also comes with a minimum three year warranty which is longer than the standard gas boiler warranty period.

More kitchen space

The air source heat pump is located in the rear garden, this means more cupboard space for you in the kitchen.

They are smart control ready

With a simple plug-in, your air source heat pump can feature smart functionality; making it easily controllable from your phone, allowing you to monitor energy usage in real time, set schedules and more. We can provide this for you as an optional extra.

No gas supply

As there is no gas supply to air source heat pump homes, there is no standing charge to pay on the service.



How to maintain your air source heat pump

Your air source heat pump comes with a minimum three year warranty. Just like a boiler, you will need an annual service to maintain your warranty. Gleeson is not responsible for your yearly servicing. You will need to book an approved plumbing and heating engineer to do this for you. If you choose to install smart controls to your unit, some issues can be solved straight away, without an approved engineer even attending your home.

How to care for your air source heat pump

Make sure the outside unit of your air source heat pump is kept clear of any leaves or debris.

Do not fully enclose the outside unit as it will reduce the efficiency of the unit (and increase your bills). In the long term, it could also result in significant damage to the unit and will void your warranty.

Your air source heat pump is set to the optimum settings when you move in. Changing these settings can decrease efficiencies and significantly increase your running costs, therefore, we advise homeowners not to change any system settings (except the internal ambient temperature which you can set to your choosing - we recommend 20-22°C for optimum efficiency).

Any questions?

If you require support from Gleeson please email:
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Right where you belong

gleesonhomes.co.uk

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All information correct at time of production, March 2024

