AIR SOURCE HEAT PUMP (ASHP)

WHAT IS AN AIR SOURCE HEAT PUMP (ASHP)?

You've already been using a heat pump in your home for decades...your fridge!

The technology inside an ASHP is very similar to that of a domestic fridge - transferring heat from one place to another - the back of your fridge is warm because it is removing heat from the food inside the fridge out into the room.

An ASHP sits outside your home and extracts warmth from the outdoor air. It converts this renewable heat energy into water and transfers it inside your home to provide hot water and heating to radiators. The self-contained unit only requires electric and water connections.

HOW A TYPICAL ASHP SYSTEM WORKS

Installing an ASHP system in your home to provide low cost, low carbon heating and hot water all year round is as easy as 1, 2, 3...

1. The outdoor unit

The outdoor unit is situated outside your home or in your garden.

Freely available heat energy from the air is collected by the outdoor unit and used to provide energy to the central heating system to provide heat and hot water - like a fridge but in reverse!

Please note, from time to time the outdoor unit may have condensation on it and water will drip, this is not a leak do not worry.

2. The hot water cylinder

The cylinder is used to store your hot water as well as containing various heating parts essential to operating your heating system, such as water pumps and safety valves. Your hot water and central heating system is operated by the control panel, which will either be attached to the front of the cylinder or a wall in your home.

3. Energy efficient control

The advanced room thermostat includes intelligent temperature control to provide efficient, comfortable heating regardless of the season. Fully programmable, holiday mode and simple room control all as standard. Energy efficiency control instructions are on the following page. Your Housing Association may also circulate additional manuals and video tutorials.

4. Radiators

New radiators will be added - they will not be as hot as your existing storage heaters but instead run constantly at a lower temperature as the new system is more energy efficient and also safer for both the elderly and children.

5. New central heating system

Thanks to the air source heat pump, your new central heating system will heat your home more efficiently. Although it will be different to your existing heating system, it still does the same job. It is best to leave the system on, running low, rather than switching it on and off.

AIR SOURCE HEAT PUMP (ASHP) Cont.

FREQUENTLY ASKED QUESTIONS

Q: What happens if there's a power cut?
In the event of a power cut, your heat pump system will temporarily shut down and automatically restart once power is restored.

Q: Do I need to drain the system regularly?
No, please do not drain the system or try to release air/pressure. Doing this will cause anti-freeze to leave the system and may mean it won't work as efficiently. If you have any issues with the new system please contact Equans and we will visit to resolve any issues. Ongoing support is also available.

Q: How should I heat my home?
Time the system to keep your home at a constant temperature. If you let your home get cold the heat pump will use more energy to heat it back up. If you're too warm just reduce the temperature on your wall thermostat rather than switching the system off.

Q: Is it normal to see vapour rise from the outdoor unit in extreme cold conditions?
Yes, during these conditions, your heat pump may switch to defrost mode for a few minutes. Whilst in this mode the outdoor unit may naturally create a vapour which is perfectly normal. Heat energy can still be collected by the unit in temperatures as low as -20^{O}C!

Q: Why shouldn't I cover the outdoor unit?
The unit draws in air to convert to heat energy and therefore needs to be kept clear at all times.

Q: How do my radiators work with the new system?
Your radiators use air convection to get heat into rooms. Staying at a constant temperature, the radiators will be cooler to touch (much safer). Please do not dry clothes on the radiators.

Q: Why do my radiators feel warm and not hot?
Heat pumps heat the water in your radiators to 45-50^{O}C as opposed to the 60-70^{O}C delivered by conventional oil and gas boilers. As a result, your radiators may be cooler to the touch, but that doesn't mean they're not working. In reality, this means your new system needs to run for longer to provide the same level of heating as your previous system, but this is done using much less energy.

In addition, it means the system has fewer safety risks from overly hot radiators. It is important that you do not have any furniture in front of the radiators as this will absorb the heat instead of letting it circulate around the room.

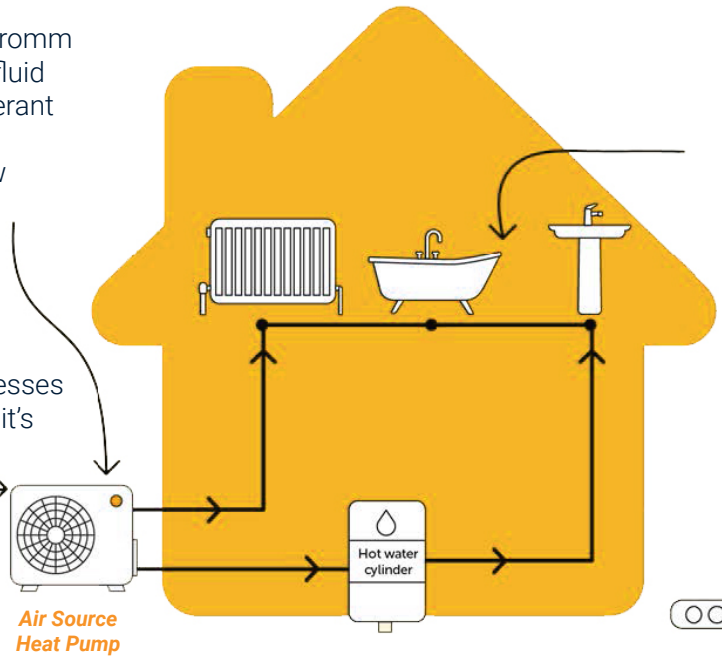
Q: Why can't I hear my heating?
ASHPs are so quiet, you won't even know it's on! With sound power as low as 54 dB for easier planning and siting, they are also suitable for use in densely built-up terraced housing estates.

AIR SOURCE HEAT PUMP (ASHP) Cont.

HOW DOES AN AIR SOURCE HEAT PUMP WORK

1.
Hot air is carried fromm outside to heat a fluid known as a refrigerant which is capable of changing at low temperatures.

2.
The pump compresses the air, increasing it's temperature, which can be used to heat the water in your home.



4.
The stored hot water is then used to supply your taps and showers.

3.
The resulting heat is used then sent to your radiators, or used to heat your hot water cylinder so it's ready to use.

Do's and Don't's

✓ Do contact your Housing Association if you believe your Air Source Heat Pump is not working or has been damaged.

✗ Don't place items on top, inside, or too close to the Air Source Heat Pump.