



What to Expect from **New Heat Pump**!



User Guide

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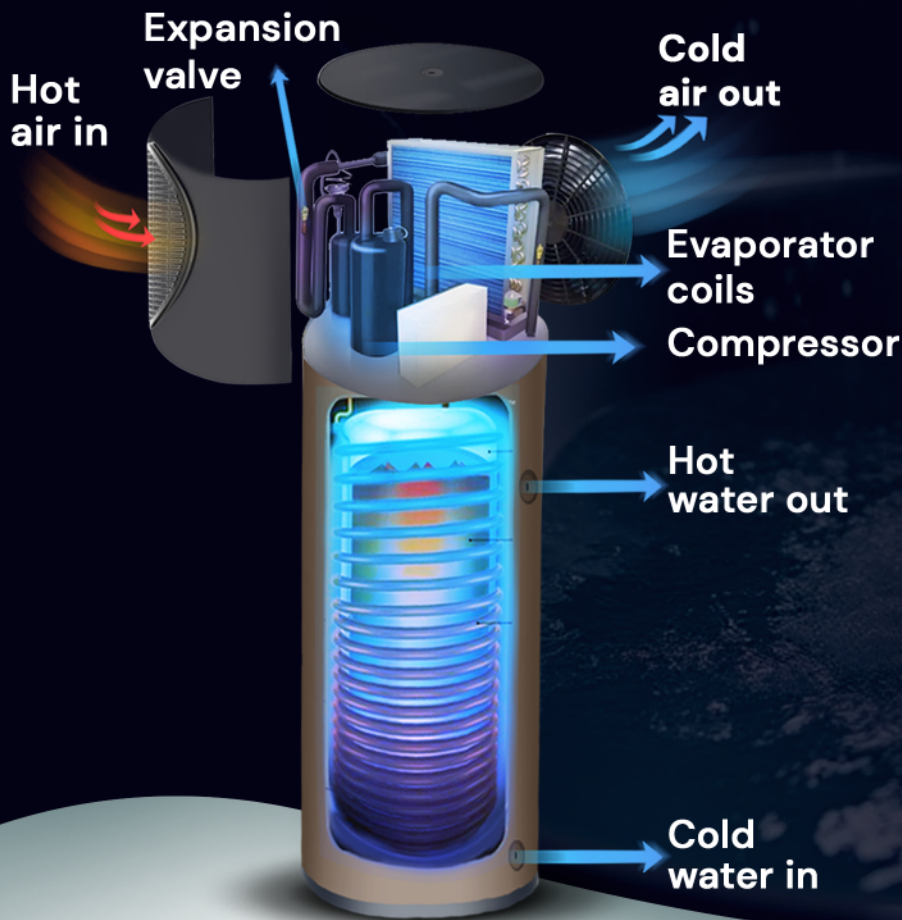
Smart Lifestyle Australia Hot Water Heat Pump

Your new heat pump water heater operates differently from a traditional electric or gas system. It uses a refrigeration cycle to extract heat from the ambient air to heat your water, a process that is highly energy efficient.

This brochure will guide you through what to expect from the Heat Pump Mode, which is the normal operating mode of your system. We'll cover typical heating behavior, recovery times, water temperature safety, how usage patterns and tank size affect hot water availability, water pressure considerations, operational sounds, and the efficiency benefits of this technology. A detailed FAQ is also included to answer common questions in an easy-to-understand way.



▶ How Heat Pump Mode Works (Everyday Operation)



In Heat Pump Mode, the system's compressor and fan work to heat the water by pulling warmth from the surrounding air. This is the default and most efficient mode of operation for your unit. Here's what to expect from normal heat pump operation.

Heating Performance: Heating water via the heat pump is a gradual process – this is normal. The unit prioritizes efficiency over speed, so water is heated steadily rather than instantaneously. Unlike an electric element that blasts heat directly, the heat pump concentrates ambient heat and transfers it to the water. This means it runs longer but uses much less energy in doing so.



Warmer outdoor air in summer helps the heat pump warm the tank faster, while colder winter air slows the process a bit. For example, if your family uses a lot of hot water in the evening, the heat pump will usually have the tank reheated by the next morning in summer, whereas it might take until later in the morning during winter. These time-frames are typical and normal for heat pump mode – they ensure efficient operation.

Tank Recovery Time

Summer:
2-3 hours



Winter:
4-5 Hours






► Safe Hot Water Temperature – Tempering Valve

For your safety, all our heat pump systems are fitted with a tempering valve. This valve blends cold water with the hot water from the tank before it reaches your taps. Its purpose is to ensure the delivered hot water is around 50 °C. Here's why this is important:

Anti-Scald Protection: Water inside the heater tank is typically heated to around 60 °C or higher to kill bacteria. However, 60 °C water can cause scalds. By law and plumbing standards, hot water supplied to bathrooms must be tempered down to ~50 °C to prevent scalding injuries. The tempering valve automatically ensures your tap water stays at a safe maximum temperature (approximately 50 °C), even though the tank itself might be hotter.

Consistent Outlet Temperature: As a result of the tempering valve, you might notice that your hot tap water is a bit less blistering hot than with some older systems. This is normal – about 50 °C is the hottest it will get at the outlet. This temperature is still plenty hot for showers and washing, but safe enough to give you peace of mind, especially if there are children or elders in the home

No Adjustment Needed: The tempering valve is pre-set and requires no user adjustment. It is a safety feature built into the system. Just be aware that if you test the water straight from the heater's drain point (which is untempered), it will be much hotter than water from your taps. The valve only limits the tap (delivery) temperature, not the tank's internal temperature.



Hot Water Usage and Tank Size

Your usage patterns and the tank's capacity will influence how much hot water is available at any given time:

Tank Capacity:

Heat pump water heaters come in various tank sizes (e.g. 170L, 270L, 300L). Your installer likely sized your tank based on the number of people in your household and typical usage. Under normal use, a properly sized system will provide enough hot water for your daily needs, refilling and reheating mostly during off-peak times.

Back-to-Back Showers:

If several people take long, back-to-back showers or you use a lot of hot water in a short period, you could deplete the hot water in the tank. All hot water systems (even traditional ones) have limits – once the stored hot water is used up, the next person will get cooler water until the heater has time to recover. With heat pump mode's slower recovery (a few hours to fully reheat as noted), you should plan for that in heavy-use scenarios. For example, spacing out showers or running the dishwasher at a different time can help. If the tank is ever fully drawn down, remember it will take a few hours to heat back to 50 °C at the taps in heat pump mode.

Expectation Setting:

It's a good idea to get a feel for your system's daily hot water capacity. If you find you're routinely running out of hot water, it might be due to higher-than-expected usage or an undersized tank for your needs. In such cases, you can talk to your installer – but generally, some simple scheduling adjustments (like avoiding all family members showering one after the other) will ensure everyone gets a hot shower. Overtime, you'll become familiar with how much hot water your tank provides and how quickly it recovers in different seasons.

Electric back up / Boost mode (Optional Use):

While continuous heat pump mode is the recommended and default operation, if you ever urgently need to reheat the tank faster (for instance, extra guests staying over and high hot water demand), most systems have a boost function to activate the electric element. Using this will heat the water quicker, but remember it uses more electricity. It's there for convenience, but not needed in regular use. Rely on it only when necessary – the heat pump will handle everyday needs efficiently.

▶ Water Pressure and the Pressure-Limiting Valve

Your heat pump hot water system is part of your home's plumbing network. Water pressure is an important aspect of that network:

Pressure-Limiting Valve:

If your mains water pressure is above 500 kPa, the installer will have fitted a pressure-limiting valve on the inlet. This valve protects both your water heater and your home's plumbing by reducing excessive pressure. High pressure can damage plumbing fixtures and the water heater tank over time, so the valve ensures the pressure entering the system stays at a safe level.

Pressure Changes at Taps:

If you notice a slight decrease in water pressure at your hot taps (or even all taps) after the installation, it's likely because of this valve doing its job. In high-pressure areas, many homes have over 600 kPa or more coming from the mains. Reducing it to 500 kPa may make the flow seem a bit gentler. This is normal and intentional – it prevents problems down the line. The difference is often minor (you might only notice if you were used to very high pressure before), but it's good to be aware of why it occurs.

No Impact on Heater Performance:

The pressure-limiting valve won't negatively affect the performance of your hot water system; it only ensures the pressure is at a safe level. All modern hot water units (not just heat pumps) have a recommended maximum inlet pressure (commonly 500 kPa in Australia), so this isn't unique to your system. Think of it as a protective measure that prolongs the life of your plumbing.



▶ Operational Sound – Noise Levels of the Heat Pump

One of the noticeable differences with a heat pump water heater is that it makes a gentle operational sound when running. Since there's a compressor and a fan (much like an air conditioner unit), you will hear it humming during operation. Here's what to expect:

Typical Sound Level:

The unit emits around 48–58 dB of sound during normal running. To put that in perspective, this is about the same noise level as a quiet conversation at home, or a dishwasher running in the next room. In other words, you will hear a soft humming or whirring when standing near the unit, but it shouldn't be disruptive.

Occasional Peaks:

At certain times (for example, on startup or during heavy heating on a very cold day), the noise might briefly increase to around 60 dB. 60 dB is roughly the volume of a normal conversation or background music. These occasional increases are usually short-lived. The system may sound a bit louder when the compressor first kicks in or if it's working hard, but it will typically settle back to its usual hum.

Placement and Perception:

The heat pump unit is usually located outdoors (or in a ventilated space like a garage). When you are indoors with the doors/windows closed, you might not hear it at all. If it's installed near a bedroom window, you'll hear a faint hum when it runs, but again it's comparable to distant background noise. Most customers get used to the sound quickly and find it far less noticeable than, say, a washing machine or vacuum cleaner. There's no need for alarm – the sound means the system is doing its job, efficiently.

Maintenance Tip:

Just ensure the area around the unit is clear and it's installed on a stable base; this keeps any operational noise and vibration to a minimum. If you ever hear unusual noises (loud rattling or knocking), that's not normal – in such a case, you'd contact us. But a steady hum and fan whoosh are exactly what you should expect to hear during heating cycles.





▶ Efficiency Benefits of Heat Pump Mode

Why accept the longer heating times and the humming noise? Because heat pump mode delivers major benefits: energy savings and environmental friendliness.

High Energy Efficiency:

Heat pump water heaters are extremely efficient. Rather than using a lot of electricity to directly heat water (as a standard electric element does), the heat pump uses a small amount of electricity to move a lot of heat from the air into the water. It's the same principle that makes your refrigerator efficient, but in reverse (moving heat into the water instead of out of a fridge)

Lower Running Costs:

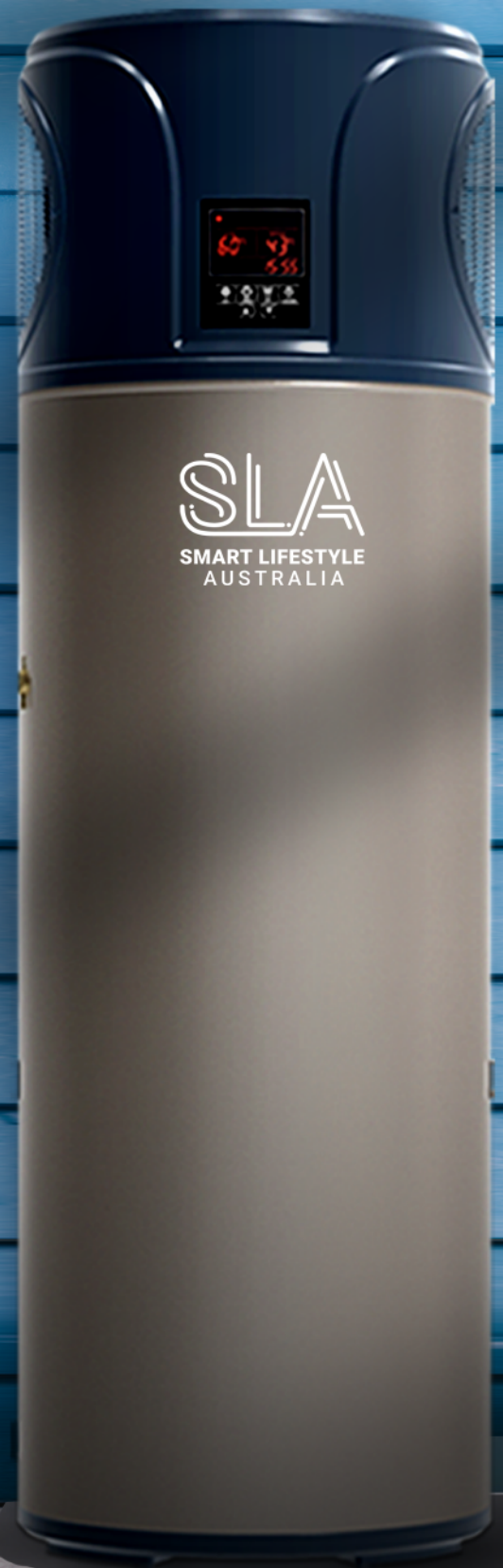
Because of that high efficiency, you'll see the difference in your electricity bills. Heating water is one of the biggest energy uses in most homes. By using heat pump mode (which primarily consumes air heat, a free renewable resource, and only a fraction of the electrical energy), you can expect substantial savings on your hot water energy costs over the life of the unit. Although the heat pump runs for longer durations, the electricity consumption is much lower during those hours, so the overall cost is less.

Environmental Impact:

Using less electricity isn't just good for your wallet – it's good for the environment. The reduction in energy use translates to a reduction in greenhouse gas emissions (especially if your electricity comes from the grid). By running in heat pump mode, your system is pulling heat from the ambient air (a form of renewable energy) and thus can significantly cut down your household's carbon footprint associated with hot water. It's a small change in how the water is heated, but multiplied over time, it makes a meaningful difference.

Optimal Use:

To maximize these efficiency benefits, it's best to let the heat pump do its work on its own schedule (often systems are set to heat primarily in the late night or early morning hours when air is cooler but electricity is cheaper if you have time-of-use rates, or during the day if paired with solar PV). Avoid switching to an all-electric "boost" mode frequently, as that will negate some of the energy savings. The system is designed so that heat pump mode meets your needs most of the time. Use the booster only when necessary, and you'll enjoy continuous energy-efficient hot water.



► Frequently Asked Questions (FAQ)

Q1 The heat pump makes a humming noise when it runs– is that normal?

Yes, absolutely. The humming sound (along with a gentle fan noise) is **completely normal** for a heat pump water heater. What you're hearing is the compressor and fan working to heat your water – essentially the sound of it **doing its job**.

As mentioned, the sound level is comparable to a **quiet conversation or a dishwasher**. In technical terms, it's around 50–58 decibels most of the time. There may be a bit of a whoosh when it starts up or occasionally when it's working hard, but there's no cause for concern.

You do not need to do anything about this sound. The unit doesn't require your intervention when it's running – just let it run its cycle. Most people get used to the slight background noise quickly. If you ever hear loud or unusual noises (something banging, grinding, or alarming), that could indicate an issue and you should contact a technician. But a steady hum is **exactly what you should expect** to hear each time the heat pump is heating water.

Q2 Do I need to do anything special to operate or maintain the system?

Day to day, **the system runs automatically** – you don't need to manually switch it on or off each time you need hot water. Just leave it in heat pump mode and it will manage itself, maintaining the tank temperature and kicking in to reheat as needed. Here are a few simple pointers for operation and maintenance:

Operating Modes:



Leave the unit in its standard **Heat Pump Mode** for normal use. This ensures you get the efficiency benefits. Only use the **"Boost" or electric backup** mode if you temporarily need faster hot water recovery (for instance, lots of guests and extra hot water usage in a short time). Remember to switch back to heat pump mode afterward so you return to energy-saving operation.

Maintenance:



Heat pump water heaters are generally low-maintenance. Just like any water heater, it's good practice to have it checked every few years. The **tempering valve** may require inspection or replacement every 5 years or so per plumbing regulations (valves wear out over time).

Also, the system has a **pressure relief valve** (usually near the top of the tank) – it's wise to gently lift its lever every few months (with caution, as hot water will discharge) to ensure its functioning and not stuck. This prevents pressure build-up and prolongs tank life.

Your installer should have shown you this valve. Other than that, ensure the area around the heat pump unit is clear of debris and that air can flow freely. There are air filters on some models that might need cleaning annually – consult your manual.

Monitoring:



Keep an eye (and ear) on your system as you get used to it. You'll become familiar with its routine sounds and recovery times. If you notice anything out of the ordinary – like water leaks, an error indicator (if your unit has a display), reach out to us or a licensed technician.

But in most cases, **no special intervention is required** on your part. Just enjoy the hot water and lower energy bills!

Q3 I've noticed water dripping from a pipe near the hot water system – is this a leak?

This is most likely water being released from the Pressure and Temperature Relief (PTR) valve, and it is completely normal. The PTR valve is a critical safety feature designed to discharge small amounts of water during the heating cycle to relieve excess pressure inside the tank.

This periodic release is not a fault and indicates that the system is functioning correctly. It is important not to cap, block, or restrict the outlet pipe connected to the PTR valve, as it must remain unobstructed to operate safely. As part of routine maintenance, the PTR valve should be gently lifted every few months to ensure it is not stuck; a short burst of water is expected during this test. However, if you observe continuous or heavy dripping, the valve may be faulty and should be inspected by a licensed plumber/ contact us directly.

Conclusion:

Your heat pump water heater is a modern, efficient appliance designed to provide reliable hot water with minimal energy use. By understanding its **heat pump mode behavior** – from the longer, efficient heating cycles and seasonal variations, to the safety features like tempering valves, and the gentle hum of the compressor – you can confidently use your new system and know that it's operating as intended.

The key is to appreciate that **"different" is not bad – it's efficient.** You might make a couple of minor adjustments (such as timing of showers or getting used to the 50 °C water temperature limit), but in return you'll benefit from plenty of hot water and peace of mind that you're saving energy every day.

If you have any further questions or need assistance, please refer to the FAQ above or contact our support team. Thank you for choosing an energy-efficient heat pump water heater, and enjoy the comfort of hot water delivered in a smarter way!





Efficient Water Heaters | Air Conditioning | Refrigerator Display Cabinet | Solar Storage Battery

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