Heating a pool and spa without gas: why the rules have changed

What every homeowner should know before investing in a swimming pool and spa combination.



Traditional raised spillover spa · illustrative concept image

For many homeowners, the ultimate backyard includes a heated swimming pool and a relaxing spa. Traditionally, achieving this was relatively straightforward. As homes move towards all-electric systems, the way we design and heat pool and spa combinations is changing considerably.

Why gas heating worked so well

Gas heaters can deliver large amounts of heat in a short period. A traditional pool and spa combination can share water, filtration and heating equipment. Valves isolate the spa when needed, allowing the heater to rapidly warm the smaller body of water. After use, the system returns to normal pool operation.

This allows a pool at 26–28°C, a spa at 36–38°C when required, relatively short heating times, spontaneous use and an attractive spillover feature. Gas is not necessarily the most economical way to maintain pool temperatures, but rapid heating makes it particularly effective for spas.

Why electric heat pumps are different

Electric heat pumps extract heat from surrounding air and transfer it into the water. They are highly energy efficient, particularly when paired with rooftop solar, and are generally our preferred method for residential swimming pool heating. However, energy efficiency and heating speed are two very different things.

Heat pumps excel at gradually increasing and maintaining water temperatures. Their output depends on outside air temperature, water temperature, humidity and operating conditions. Covers and environmental heat loss also affect the time required. This matters particularly during Canberra winters, when spa use often coincides with reduced heat pump capacity.

How much difference does it make?

Consider a 2,000-litre spa connected to a pool maintained at 26°C. Raising the spa to 38°C requires approximately 28 kWh of thermal energy before heat loss.

Actual heating output	Approx. minimum heating time
10 kW	2 hours 48 minutes
15 kW	1 hour 52 minutes
20 kW	1 hour 24 minutes
30 kW	56 minutes
40 kW	42 minutes
80 kW	21 minutes

Theoretical times assume constant actual output and no heat loss. Real heating times are generally longer, especially if the pool is unheated in winter.

A real-world equipment example



EvoHeat Evo Force-Ai 32

32 kW boost output at 27°C air temperature; up to 24.36 kW at 15°C air temperature. Both ratings use 26°C inlet / 28°C outlet water. Output at spa temperatures or colder air may differ.

Source: EvoHeat Force-Ai brochure, performance data (p. 4), updated 2 June 2026. Product image: Force-Ai range, p. 2.

What are the alternatives?

Moving away from gas does not mean compromising on a beautiful pool and spa. It simply means approaching the design differently. There are three main options to consider.

01 / Install a significantly larger heat pump

Retain the traditional connected pool and spa design, but install a substantially larger heat pump, or multiple units operating together. Heating capacity must accommodate the spa's rapid heating requirements, not just the pool's volume and desired swimming season.

Advantages: Retains the integrated design and shared equipment; faster spa heating than a conventionally sized heat pump; additional pool heating capacity in cooler months.

Considerations: Higher equipment cost, potentially increased electrical supply requirements, additional space and ventilation, and heating times that still vary with weather. The system may require substantially more capacity than the pool alone.

02 / Create two independent bodies of water

Design the swimming pool and spa as separate systems. They can sit directly alongside each other and appear integrated, while each has its own filtration, sanitation and heating. The spa can be maintained at a higher temperature even when the pool is not heated.

Advantages: Greater flexibility for year-round spa use, individually sized equipment, independent water chemistry and temperature management, less reliance on rapid heating, and potentially efficient operation with insulation and a cover.

Considerations: Additional equipment and installation costs, two systems to maintain, and the need for an insulated spa cover. A traditional continuous spillover is generally not compatible with fully independent operation.

03 / Smarter plumbing and automation

Explore hydraulic designs that provide greater control over when and how water circulates between the pool and spa. Options include automated isolation valves, dedicated spa heating circuits, separate circulation pumps, multiple heat pumps, programmable preheating and on-demand spillover.

A spa could operate independently for extended periods while still allowing controlled circulation between the bodies of water. These systems require careful consideration of filtration, sanitation, water levels, flow rates and equipment compatibility. There is no universal plumbing arrangement that suits every installation.

Do not overlook the importance of covers

Retaining heat is just as important as generating it. An uncovered spa at 38°C during a Canberra winter can lose considerable heat. A quality pool blanket and properly fitted insulated spa cover can reduce heating costs, heating times, overnight temperature loss, evaporation and equipment operating hours.

Investing in a larger heating system without addressing heat loss can be an expensive and inefficient approach.

How do you intend to use your spa?

- Will you use your spa throughout winter, several times a week or only occasionally?
- Do you want spontaneous use, or are you comfortable scheduling preheating?
- Will you continue heating your swimming pool during winter?
- Is a spillover spa an important part of the design?
- Do you have rooftop solar?
- Are upfront installation costs or long-term running costs more important?

A family using the spa every evening during winter may require a completely different system to one using it occasionally during the swimming season. The equipment and plumbing should reflect your lifestyle, not simply the size or appearance of the pool.

Getting the design right from the beginning

Heating capacity, plumbing arrangements, electrical infrastructure and equipment positioning should all be considered well before construction begins. Changes after installation can be significantly more expensive and may limit available solutions.

At Pristine Pools, we believe a successful swimming pool installation is about far more than how it looks on completion. It is about how well it performs, how much it costs to operate and how easily you can enjoy it for years to come.

You can absolutely enjoy a fantastic swimming pool and spa combination without gas. The secret is designing it to operate without gas from the very beginning.

Considering a new pool and spa in Canberra, Queanbeyan or on the NSW South Coast? Our team would be happy to discuss the options and help design a system that suits your home, lifestyle and budget.

Visit pristinepools.au