

# Comparison HEAT PUMP versus GAS for pool heating

**PREMIER HEAT PUMPS 14Kw pool heat pump water heater**  
**versus typical gas pool water heater**



**Premier  
Heat Pump  
- 14.4kw**

Purchase price \$3900+gst  
Seasonal running cost \$400-\$600  
Installation cost \$150-\$450

Service life 8-12 years  
Total life expectancy over 10 years  
Heat up time 72 hours\*  
\*(only once at start of season)

Based on 50m2 pool

**Comparable  
gas pool  
heater -  
68kw**

\$5150+gst  
\$800-\$1200  
\$800-\$1500  
(home may require gas upgrade)  
2-5 years  
Under 10 years  
12 hours

Based on 50m2 pool



**Why we need a 68kw gas heater and only a 14.4kw heat pump.**

**PREMIER HEAT PUMPS 14Kw pool heat pump.**

Pool Heat pumps use a small amount of electricity, approximately 2.4Kw of power to run a compressor motor. The compressor circulates refrigerant in a closed system to extract “free energy” from the air and use this energy to heat your pool water.

They operate much like your refrigerator does, but in reverse. However the system and compressor is much larger.

The compressor pressurizes the refrigerant gas. When this gas is allowed to expand within the system it generates heat.

This heat is transferred to the pool water by means of a titanium heat exchanger.

This process is the most efficient electrical method of heating water.

**For every 1kw of electricity the Premier Heat Pump consumes, it generates 5.3kw of heat output !**

This is called the COP (coefficient of performance).

Heat pumps are incremental heating devices. Water from the pool passes through the unit and the unit heats the water by a small amount each pass until the pool reaches the required temperature. This can take 72 hours for a large pool.

Heat pumps can operate with ambient air temperatures as low as 5 deg C.

### **Typical gas pool water heater.**

A 68kw Gas heater is an entirely different proposition.

Pool water is passed through a cast iron heat exchanger which is heated directly by the combustion of either natural gas or propane.

The generated heat then transfers to the water and the water is returned to the pool.

The effect is that the water in the heat exchanger is “instantly” heated, producing hot water in the range of 38 to 42 deg C. Heat up can take 12 hours.

Gas heaters are only really suitable when heating pools for short periods of time, and they're ideal for quickly heating pools. Therefore, gas pool heaters can be a choice for pools that aren't used on a regular basis.

## **SUMMARY**

Heat pumps are approximately half the cost of a comparable gas system to operate.

Gas heaters are often more expensive to purchase, than a comparable Premier Heat pump.

They are not as efficient with a COP that can be as low as 0.5 - 0.8 and they are considerably more costly to maintain. Most of the heat energy generated by combusting the gas escapes and is vented from the unit.

Typically most gas pool heaters need a costly heat exchanger replacement after only a few years as they burn out. The powder coated cases are also prone to failure from corrosion.

Installation costs for a gas heater can be significant, a gasfitter must make the gas connection to the unit and in older homes the gas line might have to be upgraded from older small diameters to modern 25mm pipework.

Heat Pumps are now not only cheaper to buy, BUT also much cheaper to install.

They are significantly more efficient, and in the long run cheaper to operate.

All Premier units incorporate STAINLESS steel cases so no corrosion issues.

Heat pumps have taken over as the most popular and efficient form of heating due to their use of atmospheric heat to generate energy and thus create heat for the pool.

Gas heaters are more costly to run and install.

They may however suit the buyer who only heats the pool occasionally. Wanting a faster heat up time and is not concerned with the cost of doing so.

