

HEATING AN OUTDOOR POOL

GAS BOILER

High performance gas boilers use natural gas, LPG or butane as the main fuel source.

Advantages:

- Gas boilers are compact and occupy very little space.
- Reduced emissions over oil boilers.
- The heat source is always available, irrespective of weather conditions.
- Rapidly heats pools.
- Can provide an economic investment opportunity, especially if the existing boiler located close to the pool system.
- Combines perfectly with alternative systems (i.e. renewable energy secondary systems).



Disadvantages:

- Relatively high running costs when used as the sole heating source.
- If there is no gas supply nearby, the connection costs can mount up.
- NB: Propane (LPG) and butane solution /

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OIL BOILER

In a dedicated swimming pool oil heater, domestic fuel oil is burned, heating fluid in a closed loop to a high temperature. This fluid is circulated through a series of stainless or titanium tubes which come into contact with the pool water, heating it up as a result.



Advantages:

- The same advantages as the gas boiler (above)

Disadvantages:

- Relatively high running costs when used as the sole heating source.
- Powered by fossil-fuels, so a high carbon footprint. Costs are volatile and linked to crude oil pricing. Deliveries required

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AIR SOURCE HEAT PUMP

Heat pumps are a great alternative that will help you lower your carbon footprint and boast highly efficient performance ratings. They are becoming an ever increasing popular choice to heat swimming pools with



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How they work:

- An air-to-water heat pump absorbs heat from the air and transfers it to the pool water. Natural energy from the surroundings is drawn into the heat pump by a large fan. This is initially absorbed by the heat pump's first heat exchanger, known as the 'evaporator', which contains a highly conductive cold refrigerant liquid.
- Another small pump is then used to circulate the energy around the heat pump, allowing the liquid to absorb heat energy from the air. As this happens, the liquid turns from a cold liquid into a cool vapour.
- This cool vapour then passes through a compressor which squeezes it and significantly raises the temperature of the vapour. This now hot vapour passes through a pool water heat exchanger where the heat transfers to the pool water, heating it up. As it offloads its heat, the hot vapour condenses back into a cool liquid, before passing through an expansion valve to convert back into a cold liquid, and restarting the cycle.

Why they're a great choice:

- The most noteworthy feature of a heat pump is the fact that they can actually extract more heat energy than they consume during their operation.

Advantages:

- Affordable system with a good return on investment compared with fossil fuel heating systems.
- Superb ecological credentials, and suitable for achieving an entirely energy self-sufficient pool with photovoltaic panels.
- Works using heat in ambient air, so it heats your pool even when the sun isn't shining.
- Water can be heated at night and utilise cheaper electricity night rates.

Disadvantages:

- It is usually not possible to use a heat pump to heat the water to swim in the winter, as its efficiency diminishes when the temperature drops below 10°C.
- The positioning of the unit which does emit mechanical noise can be a compromise.

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