What size heat pump do I need?

This really depends on what size pool you have, but there are other factors that need to be considered such as insulation, pool cover, geographical location, season required and desired temperature.

To find out which kW rating would be most suitable, you will need to know your pool volume. To do this, simply use the following calculation (all measurements in metres). For all roman end and shaped pools, take the measurements at the longest and widest points:

Length of pool x Width of pool x Average depth

As a general rule, we normally double the volume of above ground pools when calculating which heat pump you would require. This is to offset the additional heat loss from these pools.

Period of usage - The output of a heat pump and its ability to heat are reliant on ambient air and water temperatures, most size guides are based on a period of use from May to August (UK).

Above-ground pools

View our list of above ground pool sizes below, along with the kW size of heat pump we would suggest you need to heat the pool.

Pool Volume (Litres)	Above Ground Pool without Insulation (min. kW)*
<10,000	6kW
10,000 – 12,000	7kW
13,000 – 15,000	10kW
15,000 – 20,000	13kW
20,000 – 30,000	15kW
30,000 – 40,000	18kW
40,000 – 50,000	23kW
50,000 – 60,000	26kW

In-ground pools

View our list of below ground pool sizes below, along with the kW size of heat pump we would suggest you need to heat the pool. It is assumed that your pool is in-ground, well insulated and covered when not in use to prevent additional heat loss.

Pool Volume (Litres)	Below Ground Pool without Insulation (min. kW)*
<15,000	6kW
15,000 – 20,000	8kW
20,000 – 30,000	10kW
30,000 – 40,000	13kW
40,000 – 50,000	15kW
50,000 – 60,000	18kW
70,000 – 80,000	20kW
80,000 – 90,000	23kW
90,000 – 100,000	26kW
100,000 – 110,000	29kW
110,000 – 120,000	32kW

***Assumptions**

We have made a number of assumptions when calculating the minimum kW needed to heat the above pool volumes, these are as follows:

≈ Pool is covered with suitable cover when not in use
≈ Pool is uncovered for no more than two hours per day
≈ May to September swimming season
≈ Desired water temperature is 27-28°C
≈ Average air temperature is 15°C
≈ Above ground pool volume calculation based on filling to 80% capacity
≈ Pool pump meets the required flow rate (refer to individual heat pump specifications) ≈ Suggested kW is the minimum recommended for pool volume

Please note - To reach a higher water temperature, a larger heat pump is recommended – approximately 2KW additional heating capacity for each degree above 27-28°C

To extend the swimming season a larger heat pump is recommended – approximately 3KW additional heating capacity for each month before or after May to September