

Electr Heat Plus

Powerful energy efficient heat transfer



The latest advancement in swimming pool heating, Electroheat Heat Pumps are an energy efficient way to heat your swimming pool or spa. Electroheat produces up to 5 times* more heat energy than the electrical energy it consumes.

*dependant on ambient air and water temperature

- Automated controls
- Titanium heat exchanger
- Powerful heat transfer
- Scroll compressor
- Weather proof cabinet
- Environmentally friendly refrigerant



ElectrHeat Plus

A swimming pool is a major financial investment. To get the most for your money, a pool should be used as much as possible and this means keeping the pool at a swimmable temperature for the maximum number of hours in each day and the maximum number of days in each year.

A heat pump is built to heat your pool economically 24 hours a day, maintaining your desired pool water temperature.

How a Heat Pump works

Electroheat extracts heat energy from the surrounding air and transfers the heat energy to the water of the swimming pool. Electroheat works like a reversed air conditioner, using an evaporator, a compressor, and condenser to heat water instead of cooling air.

Step 1 Capture

The fan circulates air through the outer evaporator air coil that acts as a heat collector and absorbs heat from the ambient air. The liquid refrigerant in the air coil absorbs the available heat in the air transforming it to a gas.

Step 2 Transfer

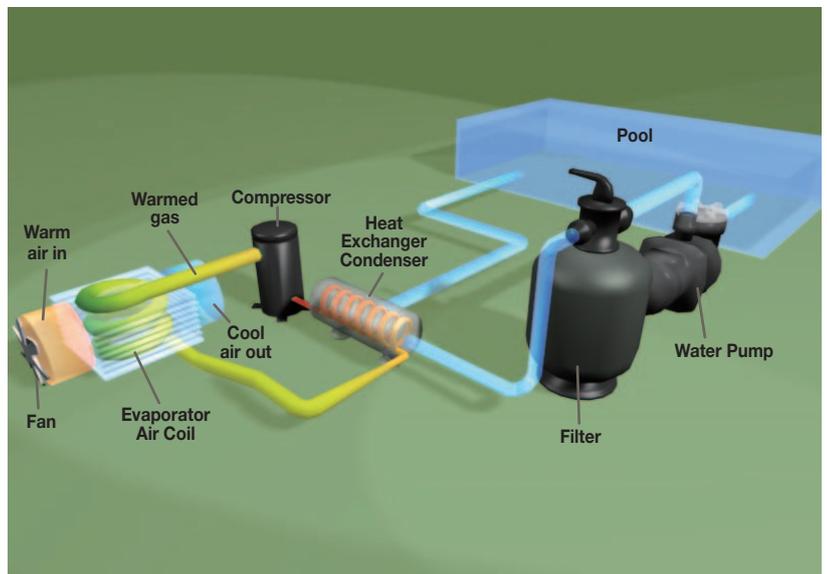
The compressor then receives the warmed refrigerant and intensifies the heat. The intensely hot refrigerant is then pumped into the heat exchanger (condenser).

Step 3 Heat Exchange

The heat from the hot refrigerant flowing inside the heat exchanger is then transferred to the pool water, via the surface of the heat exchanger's coils.

Step 4 The cycle begins again

The refrigerant is then ready to restart the process and flows into the evaporator air coil to collect heat again.



Low running costs

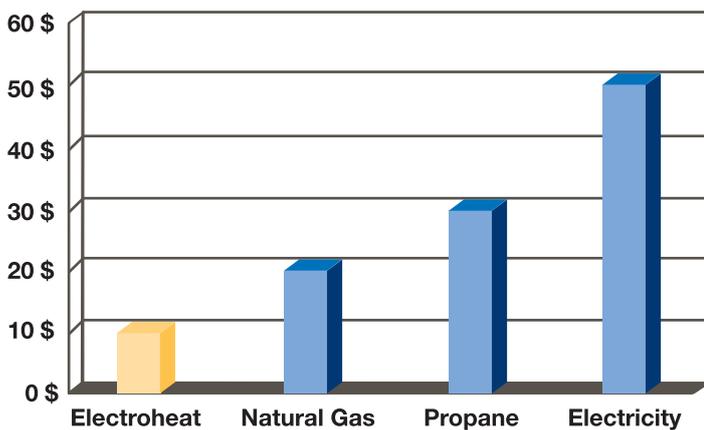
Electroheat will keep your pool water warm 24 hours a day without the need to worry about your energy bills.

Due to their high efficiency, heat pumps have low running costs. Heat pumps only require energy to operate a compressor and a fan motor, using low amperage in the process.

The ElectroHeat produces up to five times more heat energy than the electrical power it consumes.

This means that for every 1kW of electricity consumed, ElectroHeat can produce up to 5 kW of heat.

An Electroheat will offer you significant operating cost savings versus fossil fuel heaters. Save up to 80% over propane gas, 50% over natural gas and over 500% against electric heaters.



Latest in Technology and Design

Electroheat heat pumps incorporate the latest technology in design and construction. At the heart of the Electroheat are Scroll compressors and Titanium heat exchangers.



Automated Controls

Simply program your desired pool water temperature and let the Electroheat do the rest.

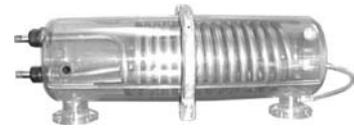


Protection devices have been built into the heater for ease of operation and to increase the durability of the product.

- **Auto defrost control** to eliminate frost on the evaporator in cold temperature conditions.
- **Auto flow switch** to shut the system when there is no water flow.
- **High /low pressure auto reset** to shut the system and compressor in the event of low or high pressure.
- **Compressor protection via time delay** – A time delay is incorporated into the system, allowing the refrigerant pressures to equalise before the compressor starts/restarts.

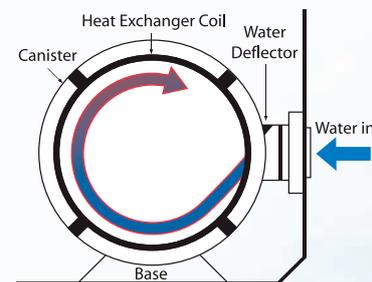
Titanium Heat Exchanger

A Titanium Heat Exchanger offers total protection against erosion and corrosion. Titanium metal's corrosion resistance is due to a stable, protective, strongly adherent oxide film. This film forms instantly when a fresh surface is exposed to air or moisture. Titanium is resistant to: chlorinated water, ozone, iodine, Baquacil, bromine and salt water.



Powerful Heat Transfer

Electroheat's innovative heat exchanger effectively circulates incoming water around its condenser tubes maximising surface area contact, generating a powerful heat transfer.



Greater Temperature Differential = Greater Heat Power = Faster Results!

Scroll compressor

Scroll compressors are the most powerful, energy efficient compressors on the market and most importantly they are also the quietest.



Below is a comparison chart of the three types of heat pump compressors.

Rotary Compressors	Piston Compressors	Scroll Compressors
<ul style="list-style-type: none"> Cheapest, noisiest, and lowest performance Largest power available is 8kW 	<ul style="list-style-type: none"> Next in line Still quite noisy Susceptible to refrigerant 'flow-back' into the compressor at start up Largest power available is 15kW 	<ul style="list-style-type: none"> Top of the line – most expensive Quietest Take most refrigerants Highest power output Minimum Energy Performance Standards (MEPS) approved Largest power available is 92kW



Extra Large Evaporator Area

Electroheat has an extra large evaporator allowing it to collect more heat from the outside air.



Weather proof ABS Cabinet

The Electroheat's cabinet is constructed from UV treated, corrosion proof ABS, enabling the Electroheat to withstand most weather conditions.

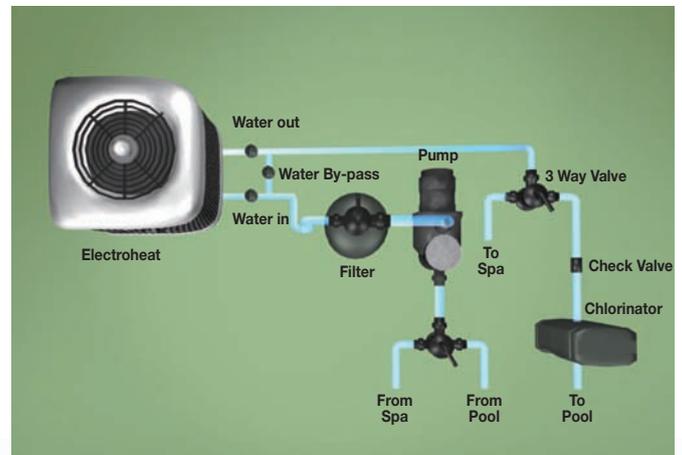


Environmentally friendly refrigerant

Electroheat uses the R407C refrigerant, a high thermodynamic performance coolant that is environmentally friendly and totally harmless to the ozone layer. This coolant is in accordance with the Montreal protocol and will not harm the ozone layer.

Quick and easy installation

Simply connect the pool return line to and from the heat pump and connect the power source.



Note: Electroheat is designed for outdoor installation and should not be installed in a totally enclosed area such as a shed or garage, unless ventilation is provided to ensure adequate air exchange for proper operation.



The plumbing connections are 1½" / 50mm UPVC half unions for easy plumbing.

General Considerations

The ElectroHeat is designed to economically heat a pool maintaining the desired water temperature at all times. The ElectroHeat will effectively heat your pool when the ambient air temperature reaches 10° C or more. ElectroHeat's performance will fluctuate depending on water and weather temperatures.

The ElectroHeat, at the start, will heat slowly but at 21°C and more, it will perform well maintaining the desired water temperature at a very low cost and could run as little as 2 hours per day in the process.

Between 10°C to 18°C, it will increase your water temperature by 3°C to 5.5°C a day. Over 21°C you should obtain an increase up to 0.8°C a hour and over 26°C up to 1.1°C an hour depending on the size of the pool, the size of the heat pump, the water temperature, and the ambient air temperature at the moment of operation.

ElectroHeat is capable of heating water up to a temperature of 35°C and more if required, depending on water and ambient air temperature at the time of operation.

Overview of benefits between Solar Heating, Gas Heaters and Heat Pumps



- Fuelled by the power of the sun, solar heating systems are a low-cost, method of heating up your pool water.
- As solar heating is reliant on the sun, they are best used to extend the swimming season.
- Virtually no operating costs, just the cost of electricity to pump the pool water through the solar absorber on the roof.



- Gas heaters are fastest method for heating your pool, providing a comfortable temperature for swimming on demand. Gas is best for heating pools or spas for short periods of time.
- Gas heaters can easily maintain any desired temperature regardless of the weather.
- Gas heaters are effective, but expensive to operate.



- Heat pumps may not heat up the swimming pool as fast as gas heaters, but they are a more energy efficient.
- Heat pumps require a small amount of electricity. The heat comes from the ambient air.
- Heat pumps can only operate efficiently in climates with ambient temperatures above 10°C

Sizing your heat pump

Heat pumps are ideally suited for heating your pool in the summer season only (May – September). However, with various climate differences that we have experienced over the last few years, we have had people reporting their heat pumps can be used from early April to late October !

Unfortunately, sizing the heater for your swimming pool is not an exact science due to so many variables such as the thermal value of the pool structure, wind speed, water velocity, water table, if a heat retention cover has been applied etc.,

Therefore, we base our calculations on the amount of heat (kW) your pool is likely to lose on a hourly basis. You will see that on some pool sizes we recommend two sizes of heater. If your budget allows, it is always desirable to buy the larger size, due to it being more cost effective and efficient thus resulting in quicker heat up time.

The sizing chart below assumes the following:-

- Minimum 15 deg C / 59F ambient air temperature (Realistic for start of season)
- Average pool depth 1.5m / 5 ft
- Minimum running time 10 hours per day
- Average wind speed 2.5 metres per second
- Desired water temperature 30 deg c / 86F
- No water table surrounding pool structure

Sizing chart

Pool Size - Imperial			Pool Size - Metric			Heater	
Length ft	Width ft	Approx Gallons	Length ft	Width ft	Approx Gallons	Minimum size heater required kW	Optimum size heater required kW
24	12	8550	7.32	3.66	38868	16	16
26	13	10034	7.92	3.96	45616	16	16
28	14	11638	8.53	4.27	52904	16	16
30	14	12469	9.14	7.27	56683	16	25
32	16	15200	9.75	4.88	69099	25	31
36	18	19238	10.97	5.49	87454	25	31
40	20	23750	12.19	6.1	107968	31	36 ^(3ph only)

Specifications	55 (16kW)	70 (21kW)	85 (25kW)	105 (31kW)	125 (36kW)	150 (44kW)
Nominal Heating Capacity (BTU/h)*	55,000	70,000	85,000	105,000	125,000	150,000
Water Flow (m ³ /hr)	Min. 6.7 - Max. 18					
Water Connections (inches / mm)	1 1/2" / 50mm					
Power Supply	220V - 240V			380V - 415V		
Power Output (kW)	16	21	25	31	36.6	44
Power Consumption (kW)	3.0	4.0	5.0	6.0	7.0	9.0
Type C Circuit Breaker (220v / 380v)	20	32	32	40	32	32
Amerage (Amp)	14	16	20	24	50--20	50--25
Weight (kg)	79	88	96	106	115	116
Noise Level @ 1m dB	62	65	65	72	72	72

Unit Dimensional Data							
Width	mm	610	750	850	920	920	920
Length	mm	690	850	770	890	890	890
Height	mm	890	950	850	950	950	950
Weight	kg	79	88	96	106	115	116

Attributes	
Digital Thermostat	Yes
Capillary Tubes	No
Thermostatic Expansion Valve	Yes
Hi / Low Pressure Protection	Auto
Hi / Low Temperature protection	Auto
Water flow protection	Auto
Compressor restart protection	Auto
Frost Protection	Auto
Cabinet UV Protection	Yes
Operation Mode	Auto

* The heating capacity depends on water and ambient temperature, as well as humidity level.

** Voltage is measured from phase to neutral.

ElectroHeat plus warranty

Components - 1 year

Heat exchanger - 10 years

Compressor - 3 years

Commercial installations are covered by a 1 year warranty on all components.

UK Distributor:



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POOL DEALER