WATERCO
water, the liquid of life

ElectroHeat
Heat & Cool

The latest advancement in swimming pool heating, Electroheat Heat & Cool heat pumps extract latent heat from the surrounding air, intensifies it and transfers it to your swimming pool.

The ElectroHeat Heat & Cool heat pumps are designed to heat your pool in the cooler months and then cool your pool in the warm summer months when the water is too warm to swim. Using a unique reversing technology we can accomplish both tasks with a single unit.

- Energy efficient heating
- Temperature management & self-diagnosis
- Unique Reversing circuit for cooling
- Titanium heat exchanger
- Weather proof cabinet
- Efficient R410 Refrigerant

Made in USA

R410 Refrigerant

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Energy efficient heating

A swimming pool is a major financial investment. Getting the most out of your pool, 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 will economically keep your pool warm 24 hours a day.

Compared to gas and electric heaters, Electroheat Heat & Cool uses just a fraction of the energy to generate the same amount of heat and unlike solar heating; there is no reliance on the sun as the latent heat in the air is used.

How the Electroheat works

Electroheat Heat & Cool uses refrigeration technology to extract heat from the surrounding air and transfers it to the swimming pool.

Heat extraction

The fan circulates air through the evaporator air coil that acts as a heat collector. The liquid refrigerant in the evaporator air coil absorbs the available heat from the ambient air.

Heat Intensification

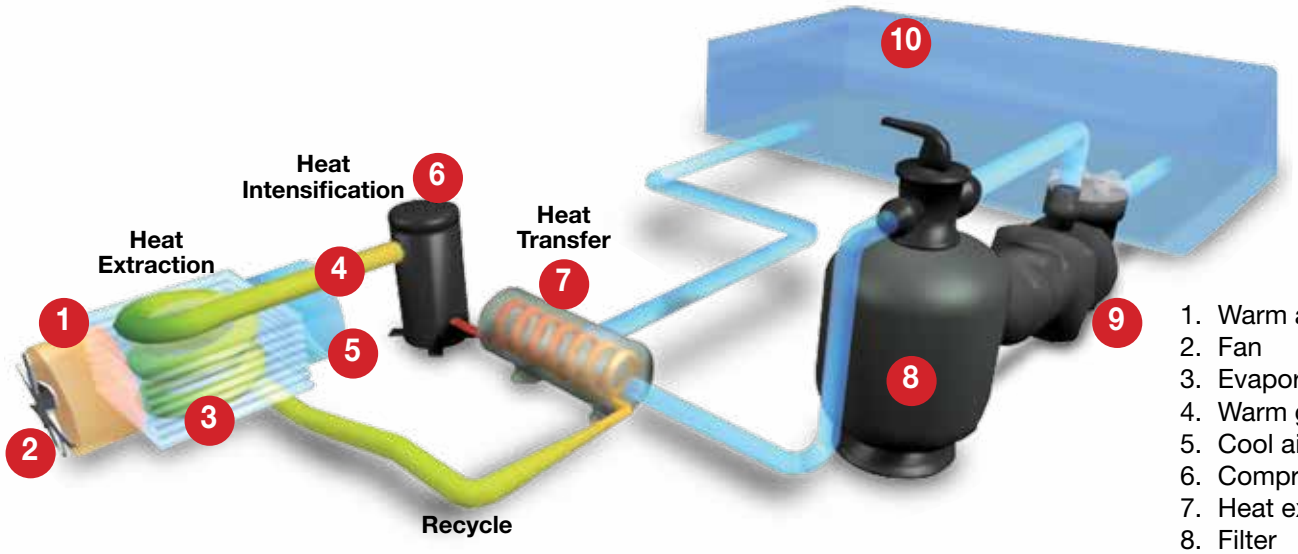
The compressor then receives the warmed refrigerant and intensifies the heat. The intensely hot refrigerant is then pumped into the heat exchanger.

Heat Transfer

The heat from the hot refrigerant flowing inside the heat exchanger is then transferred to the pool water.

Recycle

The refrigerant restarts the process and flows through the evaporator air coil to collect heat once again.



1. Warm air in
2. Fan
3. Evaporator
4. Warm gas
5. Cool air out
6. Compressor
7. Heat exchanger
8. Filter
9. Water Pump
10. Pool

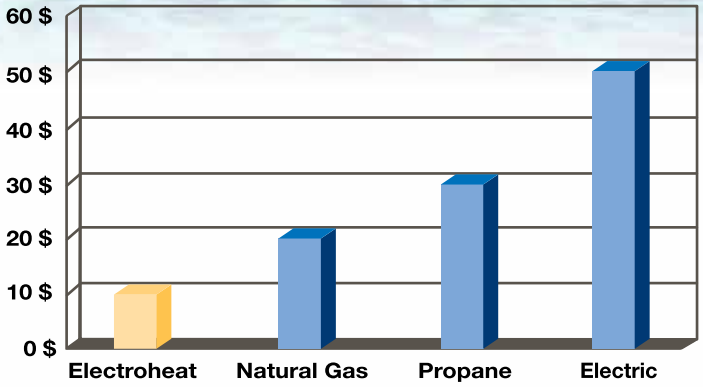
Cost effective heating

Heat pumps only require energy to operate a compressor and a fan motor, using low amperage in the process.

The Electroheat produces up to 5 times more heat energy than the electrical power it consumes.

For every 1kW of electricity consumed, Electroheat can produce over up to 5kW of heat.

Save up to 80% over propane gas, 50% over natural gas and 500% over electric heaters.



Electroheat Heat & Cool

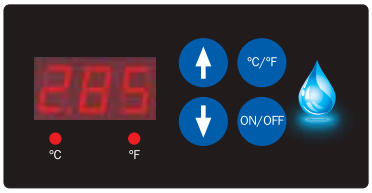
Incorporating the latest smart technology and long lasting components, Electroheat Heat & Cool is designed and built for trouble free operation.

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

Temperature management & self-diagnosis

Electroheat Heat & Cool's LED control panel provides a continuous digital pool temperature display and incorporates a self diagnosis system. In the event of a problem, the control panel will display diagnostic error codes.

The control panel also features an option to switch from POOL to SPA mode automatically via an external water pressure switch or manually via a remote control.



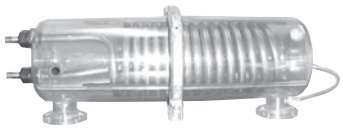
Inbuilt protection devices

The integrity and performance of your pool heater and its components are protected by built-in safety devices

- **Auto defrost control** to eliminate frost on the evaporator.
- **Auto flow switch** to shutdown the system in the event of no water flow.
- **High / Low pressure refrigerant auto reset** to shutdown the system in the event of low or high refrigerant pressure
- **Compressor protection** via a time delay to allow the refrigerant to equalise before the compressor starts/restarts.

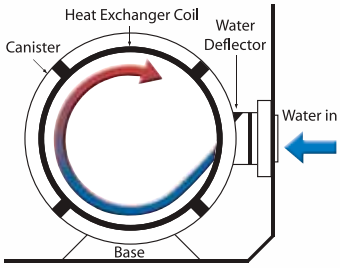
Titanium heat exchanger

Titanium heat exchangers have a longer life expectancy than standard copper heat exchangers. Titanium offers total protection against erosion and corrosion, it is resistant to: chlorinated water, ozone, iodine, Baquacil, bromine and salt water.



Powerful heat transfer

The exclusive design of the Electroheat Heat & Cool's heat exchanger creates an unmatched and powerful heat transfer source. Surface area contact with the heat exchanger is maximised by circulating water though its condenser tubes.



Efficient R410 scroll compressor

Electroheat Heat & Cool's are powered by an R410 Scroll compressor, the most powerful, energy efficient compressors on the market and most importantly they are also the quietest.

Extra large evaporator area

Electroheat Heat & Cool has an extra large evaporator allowing it to extract more heat from the outside air maximising the heat pump's performance and efficiency.

Environmentally friendly R410 refrigerant

Electroheat Heat & Cool uses ozone friendly R410 refrigerant which is not only kinder to the environment but also improves the heat pumps performance.

R410 Refrigerant

Weather proof cabinet

The Electroheat Heat & Cool's cabinet is constructed of heavy-duty UV-resistant proof ABS body panels that are impervious to rust, corrosion and deterioration.

Electr Heat
Heat & Cool

Heat & Cool your water

Electroheat Heat & Cool units have a reversing valve which enables the heat pump to not only heat up the water, but also to cool down the water during the hot summer months.

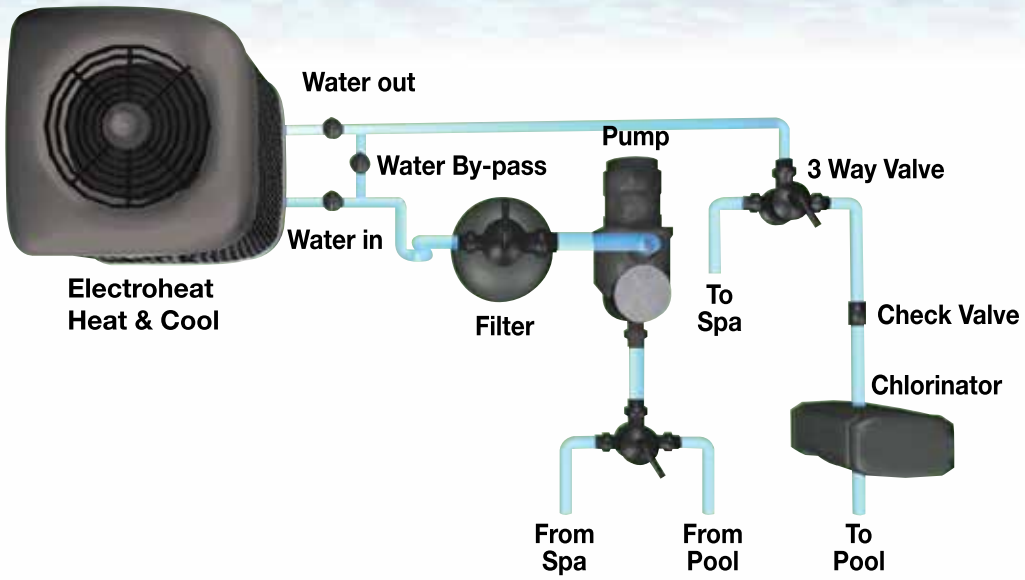
Normally, a heat pump will gather heat energy from the air with its evaporator coil. Using refrigerant and several other components, the heat is transferred over to the pool water.

By reversing this process the heat pump can actually take heat out of the water, transfer it to the refrigerant, and run it through the evaporator coil. The coil dissipates the heat into the air.

Quick and easy installation

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

Please note: Electroheat Heat & Cool is designed for outdoor installation and should not be installed in enclosed areas such as a shed or garage, unless mechanical ventilation is provided to ensure adequate air exchange for proper operation.



5 year warranty

Electroheat Heat & Cool is covered by a 5 (2+3) year warranty for residential installations and a 1 year warranty for commercial installations.

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Frequently asked questions

Should I use a pool cover?

The most effective way to prevent heat loss is to install a pool cover. An un-blanketed pool loses 2-3 times more heat than a blanketed pool. Pool covers virtually eliminate evaporation and reduce heat loss by insulating the surface of the pool, greatly reducing pool heating costs. As with all pool heaters, it would be advisable to use a pool cover at night, and when the pool is not in use.

What is the minimum ambient operating temperature?

The Ultra heat pump will actually operate down to an ambient air temperature of close to 0°C, but with minimal heat output. Therefore we recommend that the minimum operating temperature should be 5°C.

What is the best location for the Electroheat Ultra?

The location of the Electroheat Heat & Cool is very important in keeping installation costs to a minimum, while providing for maximum efficiency of operation as well as allowing adequate service and maintenance access.

The unit should be located as close as practically possible to the existing pool pump and filter to minimise water piping. The use of 90 degree bends and short radius elbows in the water piping should be kept to a minimum. The longer the distance from the pool, the higher the heat loss from the piping.

Can the Electroheat Heat & Cool be enclosed?

The Electroheat Heat & Cool is designed for outdoor installation and should not be installed in totally enclosed areas such as a shed, garage, etc., unless mechanical ventilation is provided to ensure adequate air exchange for proper operation. Re-circulation of cold discharged air back into the evaporator coil will greatly reduce unit's heating capacity and efficiency.

What is the Electroheat Heat & Cool performance dependent on?

Electro Heat's performance will fluctuate depending on water and weather temperatures. 5 important factors determine the performance of Electroheat Ultra:

1. Size of the pool.
2. The desired temperature of the pool
3. Ambient air temperature - the warmer the air, the better the performance
4. The presence of a pool cover
5. The size of the heater

What is the Electroheat Heat & Cool's heater running time?

Most units should be sized to operate during the pool filtering cycle time of 8 - 12 hours daily, providing a steady flow of heated water. On warmer days the heater will run less because the heat loss will be less.

Electroheat Heat & Cool heat pumps have a lower heating capacity on a BTU/hr basis compared to fossil fuel based pool heaters such as gas heaters. Therefore, Electroheat Ultra heat pumps require longer operation to accomplish the desired temperature.

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.

Even though the Electroheat Heat & Cool may require longer operation, it will still heat the pool far more economically.

How does Electroheat Heat & Cool compare with solar heating and gas heating?

Solar

- 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

- 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.

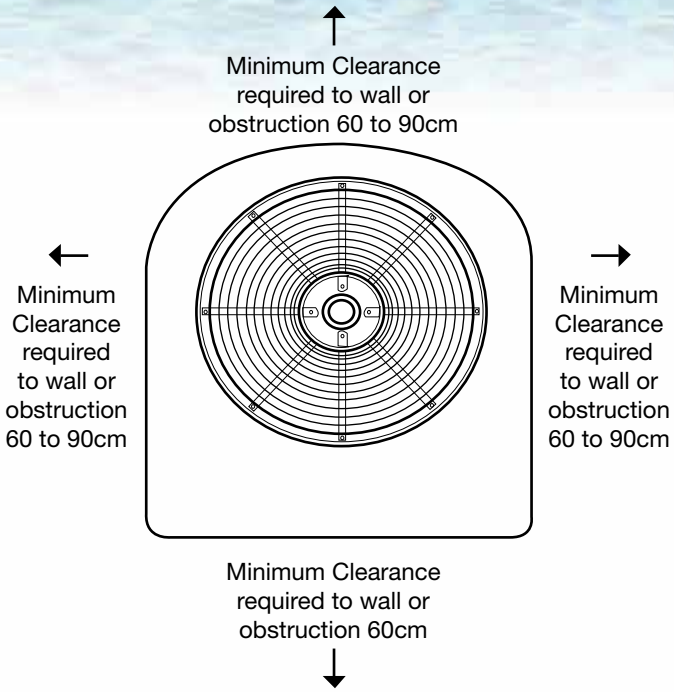
Heat pumps

- 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; its heat energy source is extracted from the ambient air.

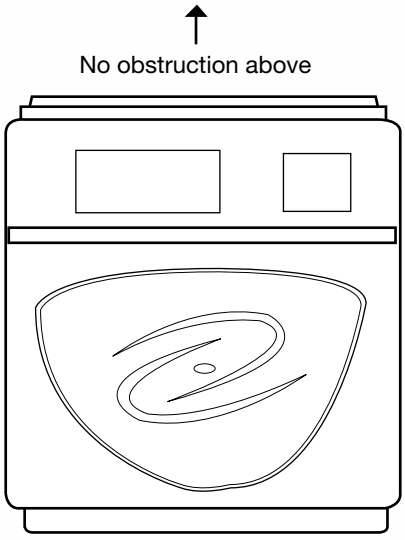
ELECTROHEAT HEAT & COOL - 6C° - R410A - 50Hz		
PRODUCT GRADE	Specialized - Heat & Cool 6 Celsius	Specialized - Heat & Cool 6 Celsius
Models Number	Electroheat Heat & Cool 31 kW	Electroheat Heat & Cool 37 kW
Code	EHC031T353-6D	EHC037T353-6D
Nominal heating capacity*	31 kW	37 kW
Heating Capacity (80/80/60)	29kW	34.7 kW
Cooling Capacity (80/80/60)	16 kW	19 kW
Compressor HP (50Hz)	6	7
Manufacturer	Sanyo	Sanyo
Electrical Characteristics		
50Hz Dual Rated Supply Voltage (VAC)	380 to 420	380 to 420
Supply Voltage Phase	3 Phases	3 Phases
Min / Max HACR Breaker or Fuse (AMP)	25	25
Unit Running Amps (amp)	12.2	12.2
Power consumption (kW/h)	6.1	7.2
Coefficient of Performance- heating (COP)	4.7	4.7
Compressor Rated Load Amps (RLA)	10.3	13.1
Compressor Locked Rotor Amps (LRA)	73	96
Evaporator Fan Motor (HP)	1/4	1/4
Fan Speed (RPM)	900	900
Fan Full Load Amp (FLA)	1.45	2.3
Fan Discharge / Fan Diameter (Inches)	Vertical / 22”	Vertical / 22”
Min./Max. Air Inlet Temperature (°C)	6° - 40°	6° - 40°
Refrigerant Characteristics		
Refrigerant Type	R-410A	R-410A
Initial Factory Refrigerant Charge (gr.)	2211	2778
Evaporator	10-1110 (double)	10-1110 (double)
Titanium coil	2x 24 feet + insert (parallels)	2x 28 feet + insert (parallels)
Expansion system	Expansion Valve	Expansion Valve
Characteristics	(2x) BBIZE-6-GA B20	(2x) BBIZE-6-GA B20
Physical Characteristics		
Cabinet Construction	ABS 752 – Luran S776	ABS 752 – Luran S776
Separate Electric Compartment	Yes	Yes

Water Flow & Plumbing Characteristics		
Water Bypass Type	Ext. Field Install	Ext. Field Install
Min./Max. Water Flow Rate (LPM)	117 - 302	117 - 302
Min./Max. Water Inlet Temperature (°C)	6	6
Water Connections (mm)	50	50

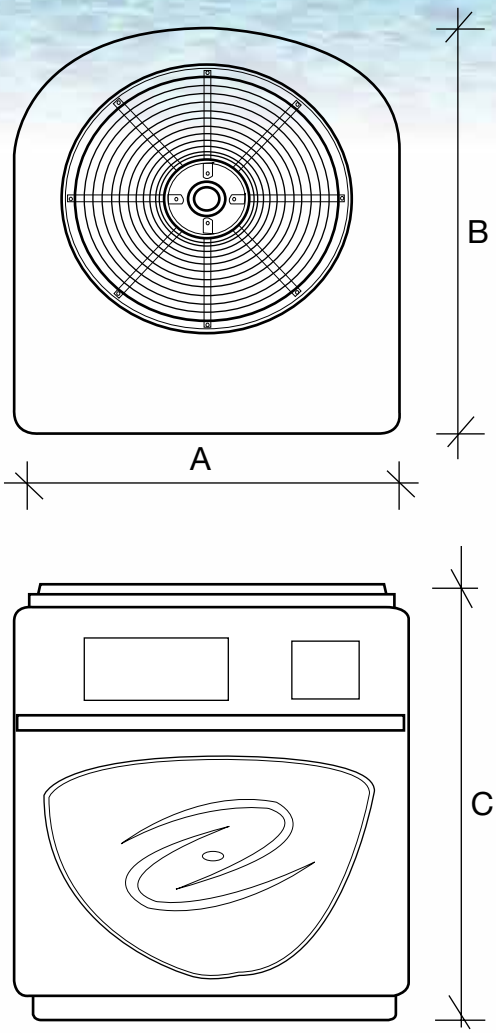
Top View



Front View



Dimensions



	31 kW	37 kW
A	863mm	863mm
B	882mm	882mm
C	990mm	990mm

Weight

31 kW	37 kW
97.5kg	99.7kg

Established since 1981, Waterco is an Australian public listed company involved in the manufacture and distribution of:

Swimming pool/spa equipment and chemicals
Domestic water filters, softeners and purifiers
Commercial and Industrial water treatment equipment.

The company's advanced fibreglass winding and pioneering plastic moulding techniques have delivered premium quality products to over 40 countries via its branches operating in Australia, New Zealand, Malaysia, Singapore, China, the United Kingdom, United States of America, Canada and Indonesia.

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