

Electr  Heat
ECO-V



Inverter pool heat pumps
extend the season or swim year round



www.waterco.com

WATERCO
water, the liquid of life

Extend the swimming season

The Electroheat heat pump range are an ideal solution for heating:



Swimming pools to extend the season



Swimming pools for year round enjoyment



Plunge pools



Swim spas and spas



* Heating pools in winter months May – August should be achieved using maximum day time operation of eight hours. A pool cover is necessary to achieve desired temperature in winter.

COST EFFECTIVE 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.

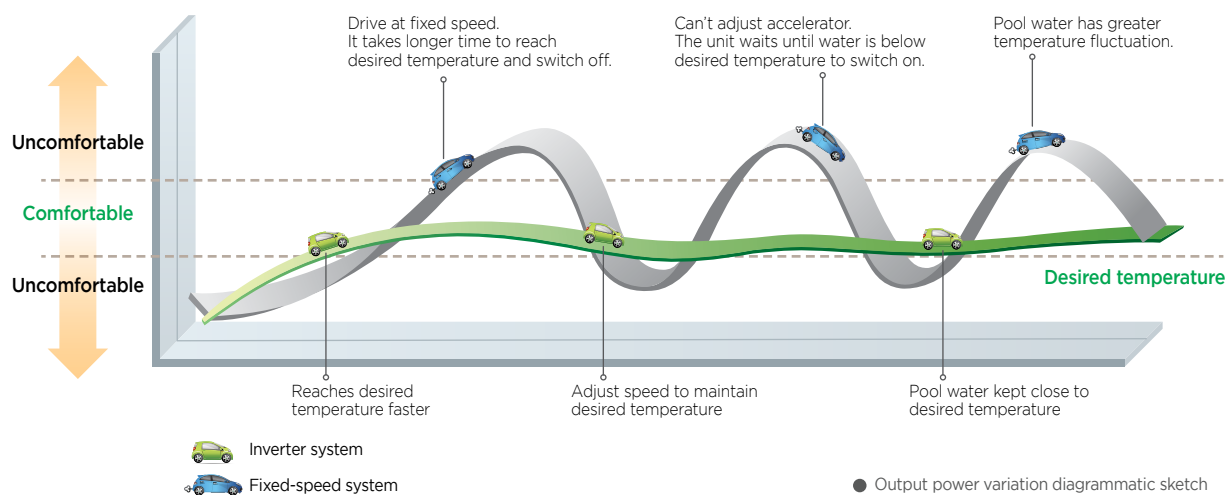
A pool heat pump will economically keep your pool warm 24 hours a day.

Compared to gas and electric heaters, the Electroheat ECO V pool heat pump range use 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.

For every 1kW of electricity consumed, Electroheat can produce up to 8kW of heat.

Electroheat ECO-V Inverter technology heat pumps can heat your pool in colder climates even when the ambient air temperature is close to 0°C.

ENERGY EFFICIENT INVERTER TECHNOLOGY



Electroheat ECO-V inverter pool heat pumps utilise a variable speed compressor to regulate the pool water temperature automatically and independently.

- inverter technology uses a variable speed compressor motor similar to a cars engine
- it slows down and speeds up as needed to hold a selected desired temperature or speed
- the desired temperature will be reached more quickly and maintained more efficiently
- inverter technology provides a more precise water temperature without the fluctuations and power wastage of fixed speed systems
- inverter technology is significantly more energy efficient with energy savings of between 15 - 30% over fixed speed systems
- the speed control of the compressor and fan motor also means quieter operation

AUTOMATIC EVAPORATOR DE-ICING

Electroheat ECO-V inverter pool heat pumps feature automatic de-icing for situations where frost or ice may develop on the evaporator as part of normal operation. Common in cooler climates or winter months, when a build-up of ice is detected the heat pump shifts temporarily into cooling mode to reverse the flow of refrigerant through the evaporator coils. Hot refrigerant moves through the outside coils, melting ice and defrosting the system. When the defrost cycle is complete, the unit shifts back to heating mode.

Electr Heat ECO-V



SMART CONTROLS for temperature management and self diagnosis



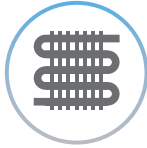
INBUILT SAFETY DEVICES for water flow, refrigerant level and compressor startup delay



POWERFUL HEAT TRANSFER through the coiled heat exchanger, maximising water contact



TITANIUM DUAL COIL heat exchanger is highly resistant to ozone, iodine, baquacil, salt and chlorinated water



LARGE BLUE FIN EVAPORATOR AREA to extract more ambient heat. Blue Fin coating provides additional protection against corrosion, especially for coastal installations.



SCROLL COMPRESSOR for improved efficiency and high performance



WEATHERPROOF CABINET for outdoor installation



R32 REFRIGERANT, ozone friendly and maximises performance



AUTOMATIC HOT GAS DE-ICING
Heats your pool even when the ambient air temperature is close to 0°



Warranty - Residential
25 years - titanium heat exchanger tube against corrosion (effective 1 Aug 22)
3 years - compressor
2 years - all other components

Warranty- Commercial - 1 year

Conditions apply, see the Waterco Limited warranty set out in the Waterco Warranty Booklet or view it at www.waterco.com

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 heat pump will actually operate down to an ambient air temperature of 0° if fitted with hot gas deicing but with minimal heat output. Therefore, we recommend heat pumps be operated in the warmest part of a 24 hour period to increase operating efficiency.

WHAT IS THE BEST LOCATION FOR THE ELECTROHEAT?

The location of the Electroheat is very important in keeping installation costs to a minimum, while providing for maximum efficiency of operation 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. Longer distances from the pool increase piping heat loss.

CAN THE ELECTROHEAT BE ENCLOSED?

The Electroheat 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'S PERFORMANCE DEPENDENT ON?

Performance will fluctuate depending on water and weather temperatures. 5 important factors determine the performance of Electroheat:

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'S HEATER RUNNING TIME?

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

Electroheat 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 heat pumps require longer operation to accomplish the desired temperature.

If your heat pump is sized and installed correctly, between 10°C to 18°C, it should increase your water temperature up to 5°C a day. Over 21°C you should obtain an increase up to 0.8°C an 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 may require longer operation, it will still heat the pool far more economically.

HOW DOES ELECTROHEAT 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 pool water through the solar absorber on the roof.

Gas heaters

- Gas heaters are the 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 are more energy efficient.
- Heat pumps require a small amount of electricity; its heat energy source is extracted from the ambient air.

Performance Specifications							
Nominal Power Output (kW)*	12	21	24	27	39	38	48
Power Output: Air 27 C / Water 26 C / RH 80%	11.2 ~ 6.5	21.0 ~ 5.46	24.0 ~6.24	26.6 ~ 6.9	39.0 ~ 15.2	37.6 ~ 14.3	47.6 ~ 18.5
Electrical Input (kW)	2.4 ~ 0.84	4.05 ~ 0.62	5.0 ~ 0.69	5.95 ~ 0.85	7.5 ~ 1.8	7.2 ~ 1.75	8.7 ~ 2.2
COP	4.6 ~ 7.7	5.2 ~ 8.2	5.2 ~ 8.2	5.2 ~ 8.2	5.2 ~ 8.4	5.2 ~ 8.2	5.4 ~ 8.4
Power Output: Air 15 C / Water 26 C / RH 70%	6.0 ~ 3.0	17.2 ~ 4.6	21.0 ~ 5.1	24.1 ~ 6.1	32.1 ~ 12.0	31.5 ~ 12.0	41.5 ~ 16.1
Electrical Input (kW)	2.4 ~ 0.84	4.05 ~ 0.62	5.0 ~ 0.69	5.95 ~ 0.85	7.21 ~ 1.79	7.33 ~ 1.79	9.88 ~ 2.48
COP	2.5 ~ 3.6	4.25 ~ 7.45	4.20 ~ 7.4	4.05 ~ 7.2	4.45 ~ 6.7	4.30 ~ 6.7	4.2 ~ 6.5
Normal Current (Amp)	10.0 ~ 3.6	17.6 ~ 2.7	21.7 ~ 3.0	27.2 ~ 3.95	32.3 ~ 8.02	12.1 ~ 2.96	16.3 ~ 4.10
Supply Voltage (VAC)	230 ~ 240V/50Hz					380 ~ 415V/50Hz	
Supply Voltage Phase	Single Phase					Three Phase	
Breaker or Fuse (AMP)	16	20	25	32	40	20	20
Electrical Connection	15A plug	terminal box					
Min. / Max. Ambient Air Temperature (C)	> 0 / 40	-5 / 43			-10 / 43		
Min. / Max. water inlet temp (C)	10 / 40	1 / 40			1 / 40		
Water Connections (mm)	40 Slip				50 Slip	50 Slip	
Water Bypass Type	External Field Install 3 X 2 way						
Heat Exchanger Max. pressure	3.5 bar / 350kPa						
Min. / Max. Water Flow Rate LPM	115 - 160	110 - 160	135 - 185	145 - 195	200 - 230	200 - 230	250 - 270
Sound Pressure Level @ 1 meter	46 ~ 57	49 ~ 59			50 ~ 59	50 ~ 59	
Sound Pressure Level @ 10 meters	27 ~ 37	31 ~ 41			32 ~ 42		
Weight (kg)	43	118	120	122	180	200	236
Dimensions W x L x H (mm)	636 x 714 x 973	860 x 850 x 1106			1450 x 702 x 950		1450 x 702 x 1260
Cabinet Material	Polymer				Powder Coat Steel		
Refrigerant	R410A	R32					
Fast Evaporator De-icing	Yes						
Evaporator area m²	0.74	2.89	3.24	3.24	3.75	3.75	5.00
Mode	Heat / Cool						

Related products:

Electroheat MKV range - Pool heat pumps

Electroheat Pro range - Pool heat pumps for commercial applications.

Sizing Chart to Heat Your Pool to 28C SEPTEMBER to APRIL					
		Temperate Location *		Warm Location **	
		Up to 10 hrs / Day Run time		Up to 10 hrs / Day Run time	
Pool Size (m)	Litres	with Pool Cover	No Pool Cover	with Pool Cover	No Pool Cover
3 x 6	Up to 23000	12kW	21kW	12kW	12kW
3 x 7	Up to 27000	12kW	21kW	12kW	12kW
4 x 7	Up to 35000	12kW	24kW	12kW	21kW
4.5 x 8.5	Up to 50000	21kW	27kW	12kW	24kW
5 x 10	Up to 65000	24kW	48kW	12kW	27kW
5.5 x 11	Up to 80000	27kW	48kW	21kW	38kW
6 x 12	Up to 100000	38kW	38kW x 2	24kW	48kW

Note: Size and performance are influenced by ambient temperature, humidity, use of a pool cover, night time temperature, pool location, wind factor, water features and if the unit is switched off over night. The recommended sizing in the table above is based on operating the unit up to 10 daytime hours with the pool subjected to normal suburban wind. No allowance has been made for the cooling effects of water features, negative edges or high wind areas. Therefore, any under sizing of the heater for your pool heating requirements is not the responsibility of Waterco.

* Temperate Location (Sydney) :- Where minimum average daytime temperatures between September to April are not less than 18°C.

** Warm Location (Brisbane) :- Where minimum average daytime temperatures between September to April are not less than 24°C

*** Pool heating between May and August (winter) will require a larger heat pump and maximum run time of 8 daytime hours.

Consult www.watercocalculator.com or contact your local Waterco office.



12KW model
heat and cool



21, 24 & 27kW models
heat and cool



38, 39 & 48kW models
heat and cool

Clearance distances



Dimensions





Waterco pioneers reliable solutions for healthy, safe water environments, which are used in residential, commercial and industrial applications in over 40 countries.

Established in 1981, it has since become a global brand recognised for designing and manufacturing filtration and sanitisation innovations for the swimming pool, spa, aquaculture, and water purification sectors.



OFFICES - AUSTRALIA

NSW - Sydney (Head Office)

Tel: +61 2 9898 8600

QLD - Brisbane

Tel: +61 7 3299 9900

VIC/TAS - Melbourne

Tel: +61 3 9764 1211

WA - Perth

Tel: +61 8 9273 1900

SA/NT - Adelaide

Tel: +61 8 8244 6000

ACT Distribution

Tel: +61 2 6280 6476

OFFICES - OVERSEAS

Waterco (Europe) Limited

Sittingbourne, Kent, UK
Tel: +44 (0) 1795 521 733

Waterco (USA) Inc

Augusta, Georgia, USA
Tel: +1 706 793 7291

Waterco Canada

Boucherville, Quebec, Canada
Tel: +1 450 748 1421

Waterco (NZ) Limited

Auckland, New Zealand
Tel: +64 9 525 7570

Waterco (C) Limited

Guangzhou, China
Tel: +86 20 3222 2180

Waterco (Far East) Sdn Bhd

Selangor, Malaysia
Tel: +60 3 6145 6000

PT Waterco Indonesia

Jakarta, Indonesia
Tel: +62 21 4585 1481

Waterco Singapore Intl Pte Ltd

MAPEX Building, Singapore
Tel: +65 6344 2378

Waterco Vietnam Company Limited

Ho Chi Minh City, Vietnam.
Tel: +84 28 3622 7780

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