

# Electr Heat ECO-V



## Inverter pool heat pumps

extend the season or swim year round

[www.waterco.com](http://www.waterco.com)

**WATERCO**  
water, the liquid of life

# Extend the swimming season



## COST EFFECTIVE HEATING

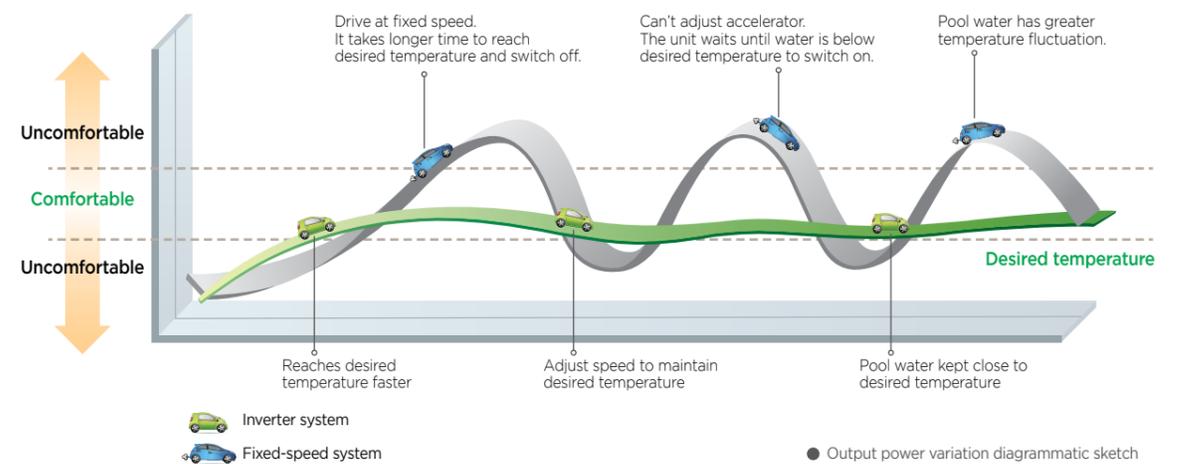
A swimming pool is a major financial investment. Getting the most out of your pool, means keeping the pool at a swimmable temperature for the maximum number of hours in each day and the maximum number of days in each year.

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.

## 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.

# Use ambient air to heat your pool



**SMART CONTROLS** for temperature management and self diagnosis



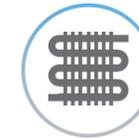
**INBUILT SAFETY DEVICES** for water flow, refrigerant level and compressor startup delay



**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  
10 years - titanium heat exchanger  
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](http://www.waterco.com)



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

Available in: 5, 9, 12 & 17kW heat and cool models.  
Heating capacity measured at 15C air.

The Electroheat ECO - V side vent heat pump range are an ideal solution for heating:



Swimming pools to extend the season



Swimming pools for year round enjoyment



Plunge pools



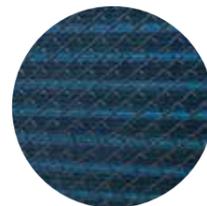
Swim spas and spas



5, 9, 12 & 17kW models



**Unique modern robust design** – noise & vibration reduction



**Hydrophilic Blue fin evaporator technology** – improved corrosion resistance



**Improved condensate collection** – two fitted spigots to allow drainage hose connection



**Refrigerant pressure gauge** – confirmation of refrigerant gas charge

# Energy efficient pool heating



## 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 warmer months 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 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.

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 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						
Model			Electroheat ECO-V Inverter 5kW	Electroheat ECO-V Inverter 9kW	Electroheat ECO-V Inverter 12kW	Electroheat ECO-V Inverter 17kW
Air 27C / Water 26C	Heating Capacity	KW	6.8 - 1.9	11.9 - 3.8	14.5 - 4.2	20.2 - 5.3
	Electrical Input	KW	1.19 - 0.21	1.4 - 0.25	2.4 - 0.48	3.0 - 0.5
	Normal Current	Amps	5.1 - 0.9	6.1 - 1.1	10.4 - 2.1	13 - 2.2
	COP		5.69 - 9.04	8.48 - 15.2	5.99 - 8.75	6.64 - 10.6
Air 15C / Water 26C	Heating Capacity	KW	5.1 - 1.4	9.2 - 2.5	12.2 - 3.5	17.0 - 4.5
	Electrical Input	KW	1.00 - 0.18	1.86 - 0.32	2.36 - 0.46	3.62 - 0.61
	Normal Current	Amps	4.38 - 0.8	8.08 - 1.4	9.85 - 2.0	15.7 - 2.65
	COP		5.05 - 8.0	4.95 - 7.8	4.85 - 7.6	4.70 - 7.4
Power Supply	V / PH / Hz	230VAC / 1Ph / 50Hz				
Electrical Connection		10A plug	10A plug	15A plug	terminals	
Set Temperature range	°C	15°C - 40°C				
Operating Temp range	°C	-10°C - 43°C				
Water Heat Exchanger		Titanium Coil / PVC Tank				
Heat Exchanger Max. Pressure		3.5 bar / 350kPa				
Compressor		Inverter				
Compressor Quantity		1				
Fan Quantity		1				
Exhaust Direction		Horizontal				
Water Inlet / Outlet Dimension		1.5"				
Hydraulic Connection	mm	PVC 40 SLIP				
Nominal Water flow	LPM	70 - 80	84 - 94	100 - 110	110 - 120	
Sound Pressure at 1M	dB(A)	50 - 59				
Sound Pressure at 10M	dB(A)	32 - 42				
Unit Dimensions (L*W*H)	mm	1269 * 370 * 714				
Net Weight	kg	50	53	59	67	
Refrigerant		R32				
Display		LED				
Modes		Heating / Cooling				

Related products:  
 Electroheat MKV range - Pool heat pumps  
 Electroheat Ultra range - Pool heat pumps with hot gas de-icing for cold climates.  
 Electroheat Pro range - Pool heat pumps for commercial applications.  
 Electroheat ECO-V range - Top venting pool heat pumps with inverter technology

### Sizing Chart to Heat Your Pool to 28°C

Pool Size (m)	Litres	Temperate Location *		Warm Location **	
		Up to 10 hrs / Day Run time		Up to 10 hrs / Day Run time	
		with Pool Cover	No Pool Cover	with Pool Cover	No Pool Cover
3 x 6	Up to 23000	9kW	17kW	5kW	9kW
3 x 7	Up to 27000	12kW	17kW	5kW	12kW
4 x 7	Up to 35000	17kW	25kW	9kW	17kW
4.5 x 8.5	Up to 50000	21kW	17kW x 2	12kW	17kW
5 x 10	Up to 65000	25kW	21kW x 2	12kW	12kW x 2
5.5 x 11	Up to 80000	17kW x 2	17kW x 3	17kW	12kW x 2

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 :- Where minimum average daytime temperatures between September to April are not less than 18°C.  
 \*\* Warm Location :- Where minimum average daytime temperatures between September to April are not less than 24°C

### Clearance



### Dimensions



**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 (NZ) Limited**

Auckland, New Zealand  
Tel: +64 9 525 7570

**Waterco (C) Limited**

Guangzhou, China  
Tel: +86 20 3222 2180

**PT Waterco Indonesia**

Jakarta, Indonesia  
Tel: +62 21 4585 1481

**Waterco Singapore Intl Pte Ltd**

Nehsons Building, Singapore  
Tel: +65 6344 2378

**Waterco (Far East) Sdn Bhd**

Selangor, Malaysia  
Tel: +60 3 6145 6000

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