



# Electr Heat MKV



## Heat Pumps for Swimming Pools

extend the season or swim year round

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



**WATERCO**  
water, the liquid of life

Use ambient air to heat your pool



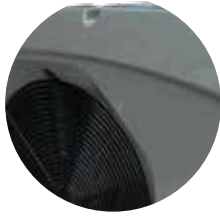
## Energy efficient heating

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

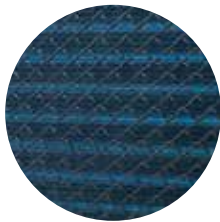
Compared to gas and electric heaters, the Electroheat MKV pool heat pump range use just a fraction of the energy to generate the same amount of heat and unlike solar heating; there is no reliance on the sun as the latent heat in the air is used.

For every 1kW of electricity consumed, Electroheat can produce up to 6kW of heat.





**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



**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



**DUAL COIL  
TITANIUM** Heat  
Exchanger is  
highly resistant  
to ozone, iodine,  
baquacil, salt and  
chlorinated water



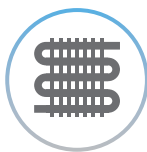
**SCROLL  
COMPRESSOR**  
for improved  
efficiency and high  
performance



**WEATHERPROOF CABINET** for outdoor installation



**R410A REFRIGERANT**, ozone friendly and maximises performance



**LARGE EVAPORATOR AREA** to extract more ambient heat



**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)

# Electr Heat MKV

**Electroheat MKV pool heat pumps feature compact design and horizontal venting and are ideal for heating:**

- ✓ Available in 9, 12, 15, 19 & 23kW heating capacities

**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

Extend the swimming season



# Energy efficient way to heat your pool





# 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 10°C, but with minimal heat output. Therefore we recommend that the minimum operating temperature should be 10°C.

## 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 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 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 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 the 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

### Electroheat MKV

Nominal Power Output (kW)*	9	12	15	19	23
Nominal Heating Capacity BTU*	30700	41000	51000	64000	78,500
Product Code	<b>278095</b>	<b>278123</b>	<b>278152</b>	<b>278192</b>	<b>278232</b>
Power Output (kW): Air 26C / Water 26C / RH63%	8.9	11.7	13.5	18.5	21.8
COP	5.9	6.1	6.1	6.3	6.2
Power Output (kW): Air 15C / Water 24C / RH 70%	6.8	9.2	9.4	17.0	20.0
COP	4.8	4.8	4.3	5.8	5.7
Supply Voltage (VAC)	240	240	240	240	240
Supply Voltage Phase	Single Phase				
Power Consumption (kW/h)	1.5	1.9	2.2	2.9	3.5
Full Load Amps	9	12	12	22	30
Minimum Breaker or Fuse (AMP)	16	20	20	30	40
Electrical Connection	10A plug	15A plug	Terminals		
Min. / Max. Ambient Air Temperature (C)	10 / 40				
Min. / Max. water inlet temp (C)	18 / 40				
Water Connections (mm)	40mm				
Bypass	External 3 x 2 way				
Min. / Max. Water Flow Rate LPM	120 - 230				
Unit Dry Weight (kg)	51	55	79		
Dimensions W x L x H (mm)	1269 x 361 x 717				
Refrigerant	R410A				
Heat Exchanger Max. pressure	3.5 bar / 350 kPa				

#### Related products:

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 - 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	15kW	9kW	9kW
3 x 7	Up to 27000	9kW	15kW	9kW	9kW
4 x 7	Up to 35000	12kW	23kW	9kW	15kW
4.5 x 8.5	Up to 50000	15kW	31kW	9kW	19kW
5 x 10	Up to 65000	19kW	23kW x 2	12kW	23kW
5.5 x 11	Up to 80000	23kW	23kW x 2	15kW	15kW x 2
6 x 12	Up to 100000	15kW x 2	23kW x 3	19kW	19kW 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 (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

## Clearance

↑  
Clearance to rear  
minimum 30cm



↓  
No obstruction to  
front 4m minimum

## Dimensions



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ZZB1971 01/20