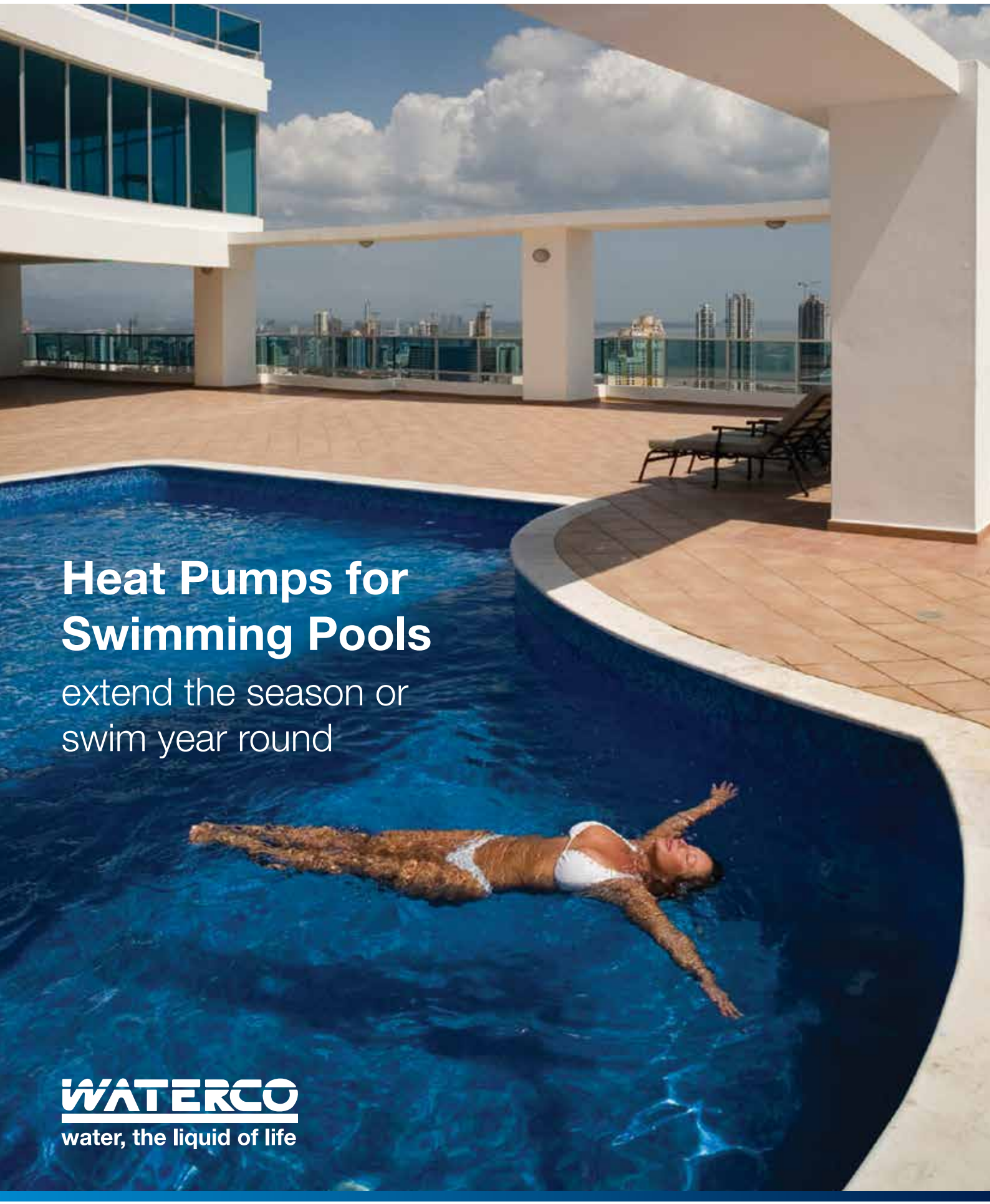


Heat Pumps for Swimming Pools

extend the season or
swim year round

WATERCO

water, the liquid of life

www.waterco.com

Extend the swimming season

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 each day and maximum number of days each year. A heat pump can economically keep your pool warm.

Compared to gas and electric heaters, Waterco Heat Pumps use 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.

Waterco Heat Pumps are an ideal solution for heating:

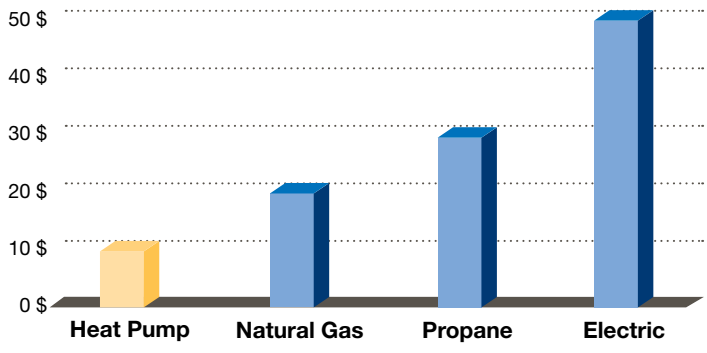
- Swimming pools to extend the season
- Swimming pools for year round enjoyment
- Plunge pools
- Swim spas and spas

COST EFFECTIVE HEATING

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

For every 1kW of electricity consumed, Waterco Heat Pumps can produce up to 5 kW of heat.

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



HOW WATERCO HEAT PUMPS WORK

Waterco Heat Pumps use 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 TRANSFER

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

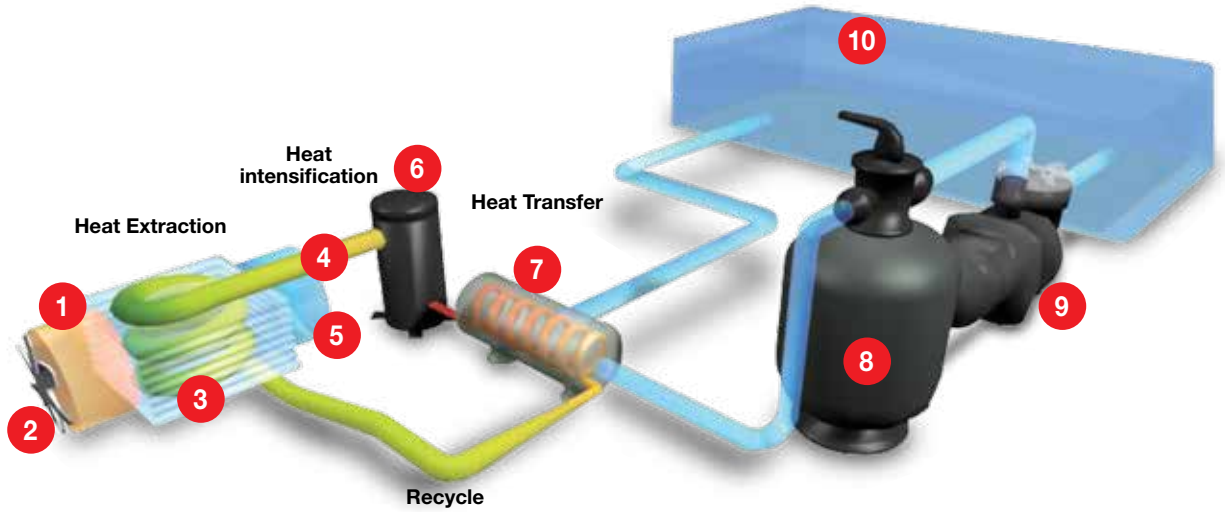
HEAT INTENSIFICATION

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

RECYCLE

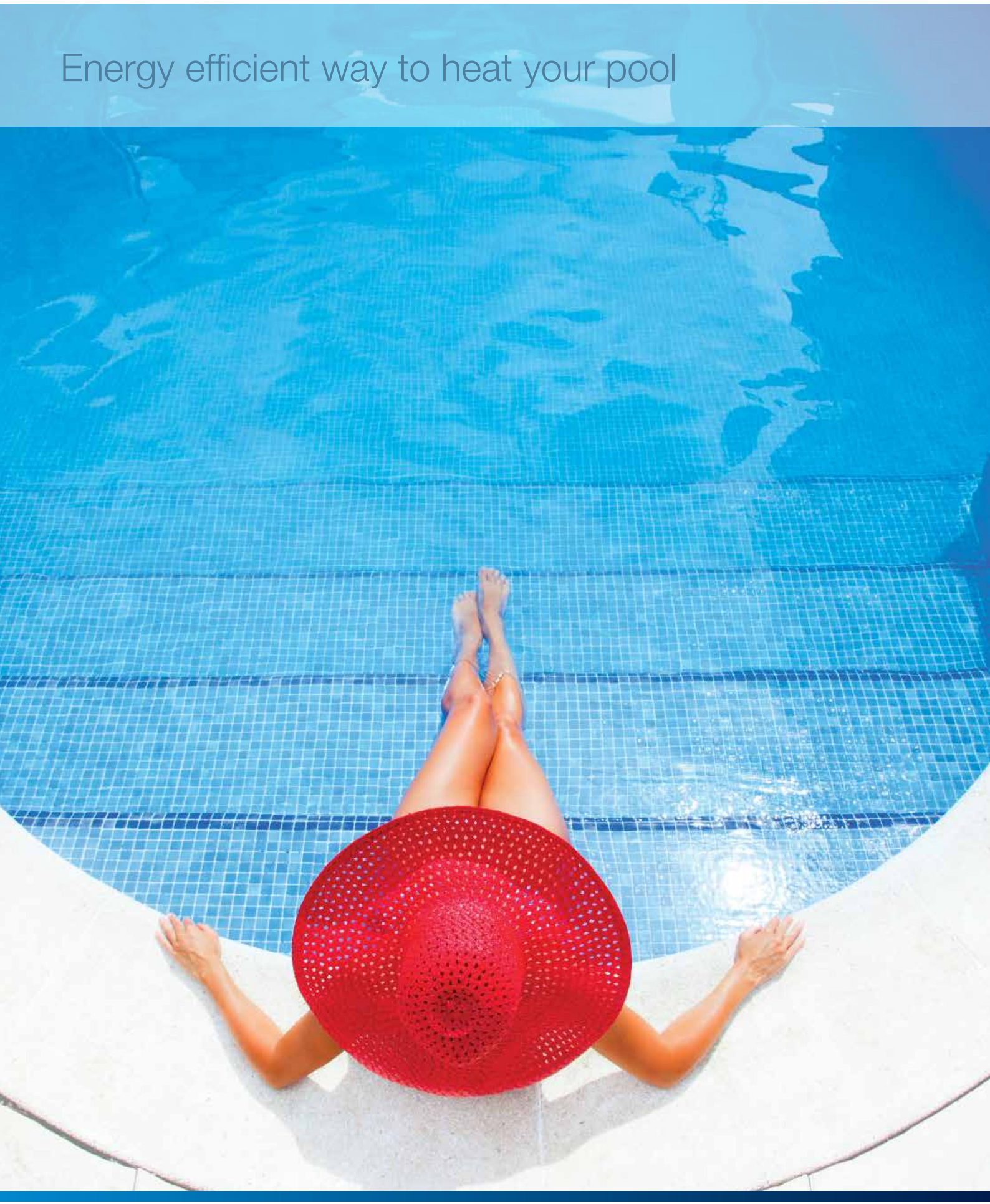
The refrigerant restarts the process and flows through the evaporator air coil to collect heat once again.

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



Use ambient air to heat your pool

Energy efficient way to heat your pool



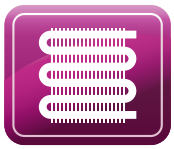
FEATURES & BENEFITS

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 dual coil heat exchanger maximising water contact

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



LARGE EVAPORATOR AREA to extract more ambient heat

SCROLL COMPRESSOR for improved efficiency and high performance

WEATHERPROOF CABINET for outdoor installation

R410A REFRIGERANT, ozone friendly and maximises performance

5 YEAR WARRANTY – Residential 2 + 3 years and Commercial 1 year

ElectroHeat

ElectroHeat is compact in size and provides the versatility of horizontal ventilation allowing greater installation options and are ideal for heating:

- Swimming pools to extend the season
- Plunge pools
- Swim spas
- Spas
- Available in standard models 12 and 15kW and defrost models 19 and 23kW heating capacities

AQUA FLOW

Aquaflow provides the versatility of horizontal ventilation allowing greater installation options and are ideal for heating:

- Swimming pools to extend the season
- Plunge pools
- Swim spas
- Spas
- Available in 19 & 23kW heating capacities

ElectroHeat Plus

The Electroheat Plus features high performance air heat extraction through the extra large evaporator utilising vertical ventilation and is ideal for heating:

- Swimming pools for year round enjoyment
- Swimming pools to extend the season
- Swimming pools where roof space for solar is limited
- Available in 25, 31, 37 & 44kW heating capacities

Electr Heat
ULTRA

Electroheat Ultra heat pumps can heat your pool in colder climates even when the ambient air temperature is close to 0C° featuring hot gas de-icing and is ideal for heating:

- Swimming pools for year round enjoyment
- Swimming pools to extend the season
- Plunge pools
- Swim spas
- Spas
- Available in 16, 22, 29 and 35kW heating capacities

Electr Heat
Heat & Cool

Electroheat Heat & Cool units are able to heat the water during cooler periods, but also cool the water during the hot summer and is ideal on:

- Swimming pools for year round enjoyment
- Swimming pools to extend the season
- Plunge pools
- Available in nominal heating capacities of 31 and 37kW

Superior performance for commercial applications

Electr Heat PRO

Electroheat PRO 96kW heat pump commercial grade pool heater features electronically controlled temperature management, fault diagnostic system and inbuilt protection devices and operates with dual high performance hermetic scroll compressors using R410A refrigerant for increased efficiency.

INBUILT SAFETY DEVICES

- For water flow, refrigerant level and compressor startup delay
- Protecting equipment from operation when no flow is detected

WEATHERPROOF CABINET

- Made from heavy duty powder coat sheet metal

EXTRA LARGE EVAPORATORS

- Twin evaporators for enhanced heat absorption

TITANIUM HEAT EXCHANGER

- Six titanium coiled exchangers for maximum heat transfer and protection against corrosion

TWIN QUIET FANS

- Twin 660mm fans for maximum airflow
- Low noise emissions 69dBA @ 1 metre

HIGH PERFORMANCE COMPRESSORS

- Twin high performance 11HP Sanyo hermetic scroll compressors

AUTOMATIC HOT GAS DE-ICING

- Heats your pool even when the ambient air temperature is close to 0°

SMART CONTROL PANEL

- Temperature management
- Continuous temperature display and self diagnostic system

Cost effective 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 10°C, or 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 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.

Swimming Pool Heat Pump Range

	Performance Specifications							
	ElectroHeat				Aquaflow - Single Coil			
Nominal Power Output (kW)*	12	15	19	23	19		23	
Nominal Heating Capacity BTU*	41,000	51,000	64,000	78,500	64,000	64,000	78,500	78,500
Product Code	**GEY 012T251**	**GEY 015T251**	**GEY 019T251R**	**GEY 023T251R**	**AFX 019T251-G**	**AFX 019T353-G**	**AFX 023T251-G**	**AFX 080T3530**
Power Output (kW): Air 26C / Water 26C / RH63%	11.74	13.52	18.54	21.8	19.1	19.1	23.5	23.5
COP	6.1	6.4	6.2	7.2	4.6	4.6	4.5	4.5
Power Output (kW): Air 15C / Water 24C / RH70%	9.2	9.4	18	21.6	17.2*	17.2*	21.4*	21.4*
COP	5.1	4.9	6	7.2	4.1*	4.1*	4.1*	4.1*
Supply Voltage (VAC)	220 - 240	220 - 240	220 - 240	220 - 240	220 - 240	380 - 415	220 - 240	380 - 415
Supply Voltage Phase	Single					Three	Single	Three
Power Consumption (kW/h)	1.9	2.1	2.99	3.0	4.2	4.2	6.4	6.6
Unit Running Amperage (AMP)	9.1	9.3	15.28	21.2	17.8	7.6	24.8	20.0
Minimum Breaker or Fuse (AMP)	20	20	30	40	25	15	40	20
Min. / Max. Ambient Air Temperature (C)	11 / 40		0 / 40					
Min. / Max. water inlet temp (C)	14 / 40							
Water Connections (" / mm)	1 1/2" - 50mm							
Min / Max Water Flow Rate m³/h	6.7 - 18							
Noise Level @3m (dB)	57							
Weight (kg)	54		78		85	85	89	89
Dimensions W x L x H (mm)	1170 x 320 x 685				920 x 610 x 860			
Refrigerant	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Fast Defrost	No		Yes					

	Electroheat Plus				Electroheat Ultra Low				
Nominal Power Output (kW)*	31		37	44	16	22		29	35
Nominal Heating Capacity BTU*	105000	105,000	125,000	150,000	55,000	75,000	75,000	100,000	120,000
Product Code	**EPX 031T251-G**	**EPX 031T353-G**	**EPX 037T353-G**	**EPX 044T353-G**	**ESZ 016T251-G**	**ESZ 022T251-G**	**ESZ 022T353-G**	**ESZ 029T353-G**	**ESZ 035T353-G**
Power Output (kW): Air 26C / Water 26C / RH63%	30.6	30.6	36.2	43.7	16.5	25.2	25.2	28.4	34.5
COP	5.5	5.5	5.4	5.7	4.1	5.0	5.0	5.1	5.0
Power Output (kW): Air 15C / Water 24C / RH70%	28.5	28.5	35.0	42.0	15.5*	23.3*	23.3*	26.5*	33.2*
COP	5.2	5.2	5.2	5.4	3.9*	4.6*	4.6*	4.7*	4.8*
Supply Voltage (VAC)	220 - 240	380 - 415	380 - 415	380 - 415	220 - 240	220 - 240	380 - 415	380 - 415	380 - 415
Supply Voltage Phase	Single	Three			Single		Three		
Power Consumption (kW/h)	5.6	5.6	6.7	7.7	3.9	5.3	4.9	5.8	7.2
Unit Running Amperage (AMP)	24.4	9.9	11.8	13.1	18.8	25.6	8.4	9.8	12.2
Minimum Breaker or Fuse (AMP)	50	25	25	25	30 - 40	40 - 50	25	25	25
Min. / Max. Ambient Air Temperature (C)	11 / 40				0 / 40				
Min. / Max. water inlet temp (C)	14 / 40				10 / 40				
Water Connections (" / mm)	1 1/2" - 50mm				1 1/2" - 50mm	1 1/2" - 50mm	1 1/2" - 50mm	1 1/2" - 50mm	1 1/2" - 50mm
Min / Max Water Flow Rate m³/h	6.7 - 18								
Noise Level @3m (dB)	60		61		56	57		59	60
Weight (kg)	87	87	89	93	77	108	108	118	125
Dimensions W x L x H (mm)	890 x 880 x 1130				780 x 890 x 870	890 x 880 x 1120			
Refrigerant	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Fast Defrost	Yes				Yes				

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

* Information for reference only, results may vary depending on the region, temperature and the use of a solar blanket.

* Waterco Heat Pump performance metrics were obtained during laboratory testing conducted in Canada to the requirements of ASHRAE Standard 146-2011, and ANSI/AHRI Standard 1160: (I-P)-2009 in conditions of 26° Air/63% RH/ 26° Water and 15° Air/70% RH/26° Water.

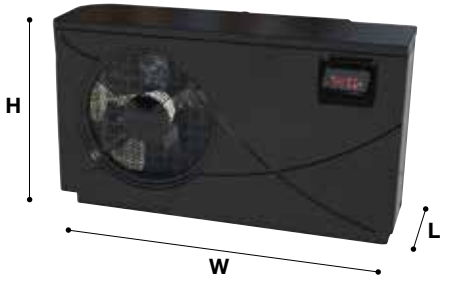
* Denotes estimates where test results are not available.

Electroheat Plus					
16 -Single Coil		21		25	
55,000	55,000	70,000	70,000	85,000	
EPX 016T251-G	**EPX 016T353-G**	**EPX 021T251-G**	**EPX 021T353-G Single coil**	**EPX 025T251-G**	**EPX 025T353-G**
16.5	16.5	21.9	18.3	24.5	24.5
4.1	4.1	5.3	4.1	4.9	4.9
15.5*	15.5*	20.7	20.7	22.5	22.5
3.9*	3.9*	5.0	5.0	4.7	4.7
220 - 240	380 - 415	220 - 240	380 - 415	220 - 240	380 - 415
Single	Three	Single	Three	Single	Three
4.3	4.2	4.1	4.5	5.0	5.0
19.2	7.9	23.6	7.9	25	9.3
30 - 40	15	40 - 50	15	40 - 50	25
11 / 40					
58				59	
77	77	82	82	84	
780 x 890 x 870					
R410A	R410A	R410A	R410A	R410A	R410A
No					

Electroheat Pro		Electroheat Heat & Cool	
96	Nominal Power Output (kW)*	31	37
330,000	Nominal Heating Capacity BTU*	105,000	125,000
WSC 330T353N	**Product Code**	**EHC 031T353-6D**	**EHC 037T353-6D**
92.6	Power Output Heat (kW): Air 26C / Water 26C / RH63%	28	34
5.7	COP	4.9	4.7
88.5*	Power Output Cool (kW): Air 26C / Water 26C / RH63%	14	19
5.5*	COP	2.4	2.6
380 - 415	Supply Voltage (VAC)	380 - 415	
Three	Supply Voltage Phase	Three	
16.12	Power Consumption (kW/h)	5.8	7.2
30	Unit Running Amperage (AMP)	9.8	12.2
50 - 60	Minimum Breaker or Fuse (AMP)	25	25
6 / 40	Min. / Max. Ambient Air Temperature (C)	11 / 40	
14 / 40	Min. / Max. water inlet temp (C)	14 / 40	
3" 80mm	Water Connections (" / mm)	1 1/2" - 50mm	
	Min / Max Water Flow Rate m³/h	6.7 - 18	
59	Noise Level @3m (dB)	60	61
453	Weight (kg)	125	130
1730 x 1090 x 1120	Dimensions W x L x H (mm)	890 x 876 x 1130	
R410A	Refrigerant	R410A	
Yes	Fast Defrost	No	

Clearance

Dimensions



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