

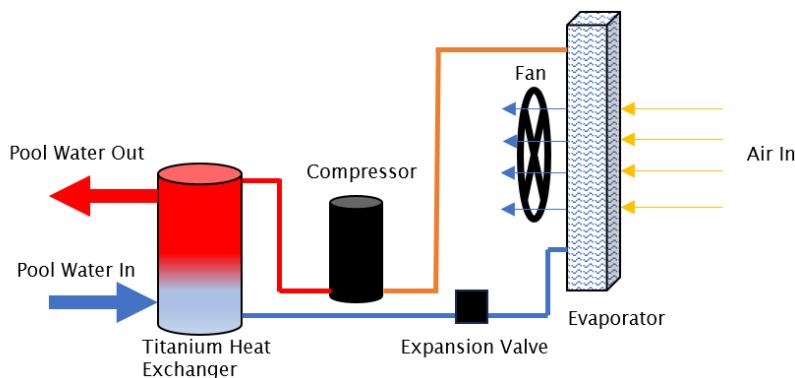
INSNRG LC INVERTER HEAT PUMP

LOWEST HEATING COST, HIGHEST EFFICIENCY

Insnrng LC Inverter heat pumps use advanced technology to regulate the heating process, adjusting their output based on the pool's temperature needs. This results in significant energy savings compared to traditional pool heaters, as they don't need to constantly cycle on and off. Additionally, they harness the ambient air temperature, making them an eco-friendly choice by reducing reliance on fossil fuels. When correctly sized, Insnrg LC heat pumps provide consistent and precise temperature control, ensuring your pool remains at the desired warmth year-round. Their quiet operation also enhances the overall poolside experience, allowing you to enjoy a serene and tranquil environment while still enjoying comfortable water temperatures. All these benefits combined make the Insnrg LC Inverter Heat Pump a smart and sustainable choice for heating your pool or spa.



HOW DOES THE LC HEAT PUMP WORK?



The process begins with the DC centrifugal fan drawing air across the evaporator coil containing refrigerant. The heat energy in the air (even when cold) causes low pressure refrigerant gas to absorb heat from the air. The low pressure refrigerant gas then passes through a compressor which raises its temperature significantly. This hot pressurised gas is now in a high energy state and able to transfer this energy through the titanium heat exchanger into the pool water.

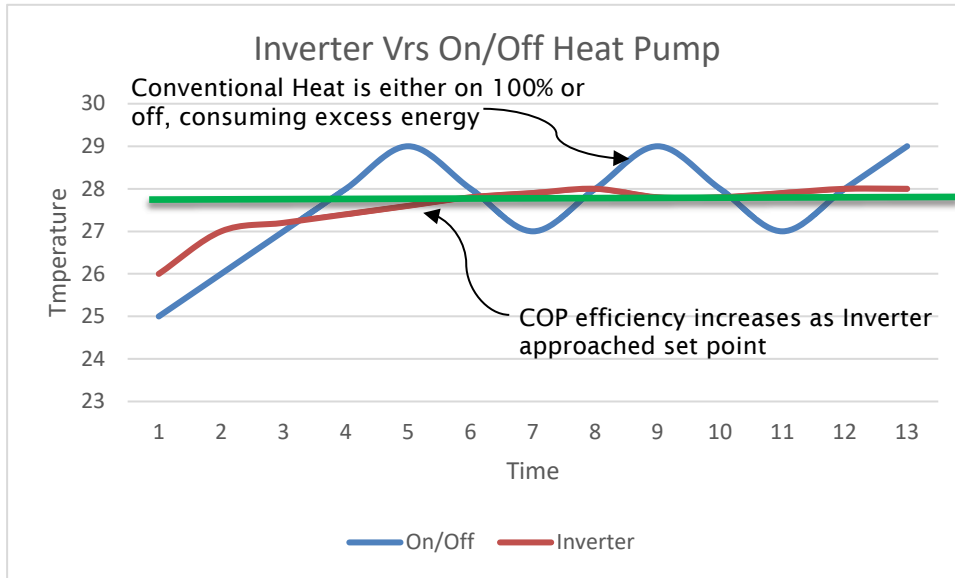
After passing through the titanium heat exchanger the high pressure gas has released its energy and is ready to start all over again.

This process means that for every 1 kW of power consumed, the LC is producing up to 14 kW of heat for your pool. This is referred to as the COP (Co-efficient of Performance).

The LC heat pump does not use power to heat the pool. The power used by the LC Heat Pump is simply used to compress the hermetically sealed refrigerant gas and move air through the condenser to collect the free latent heat of the air and transfer into your pool or spa water.

STABLE TEMPERATURE EQUALS ENERGY SAVINGS

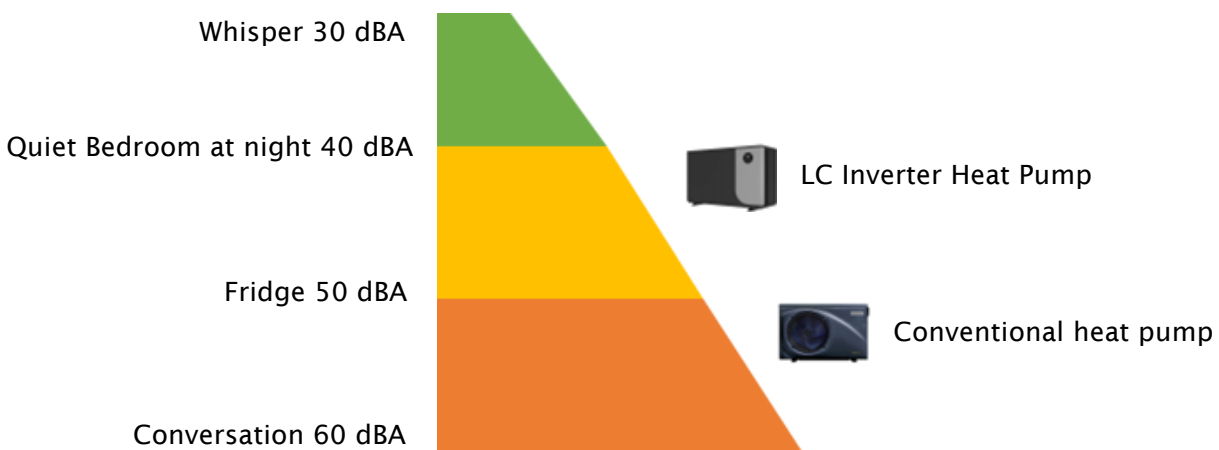
Advance electronics and DC inverter technology change the speed of the compressor and fan to match the heat losses of your pool as the set temperature is neared. As the speed of the compressor and fan are reduced the efficiency (COP) increases, reducing your energy consumption and emissions.



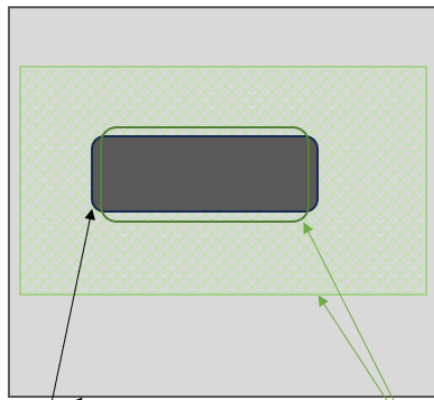
The LC Inverter heat pump matches pool heat losses by slowing the compressor and fan as the desired water temperature is reached. This has two distinct advantages:

1. By reducing the speed of the compressor and fan, the LC Inverter attempts to match the heat losses of your pool and minimising the over and undershoot of the set point pool water temperature. This results in the LC operating at a very low output once set point is reached to dramatically reduce power consumption, noise levels and increase efficiency up to a COP of 14.
2. The heat pump operating noise is even further reduced. Quiet at even full output, as the pool temperature is maintained, the slower rotation of the compressor and fan makes the heat pump barely distinguishable from ambient background noise on a quiet night.

RELATIVE NOISE LEVELS



SMALLER INSTALLATION FOOTPRINT WITH CENTRIFUGAL FAN



Conventional front discharge heat pump
Clearance required for max efficiency

Insnrg LC Heat Pump
Reduced clearance using centrifugal fan

Heat Pumps move a lot of air. As a result, conventional heat pumps require a very significant free area at the rear of the evaporator coil and in front of the fan discharge. Insnrg's LC Inverter Heat Pumps utilize a purpose designed centrifugal fan which develops high pressure and reduces the clearances around the heat pump while maintaining maximum efficiency.

The challenge was to design the high pressure centrifugal fan while maintaining quiet operation which the Insnrg LC Heat pump has achieved.

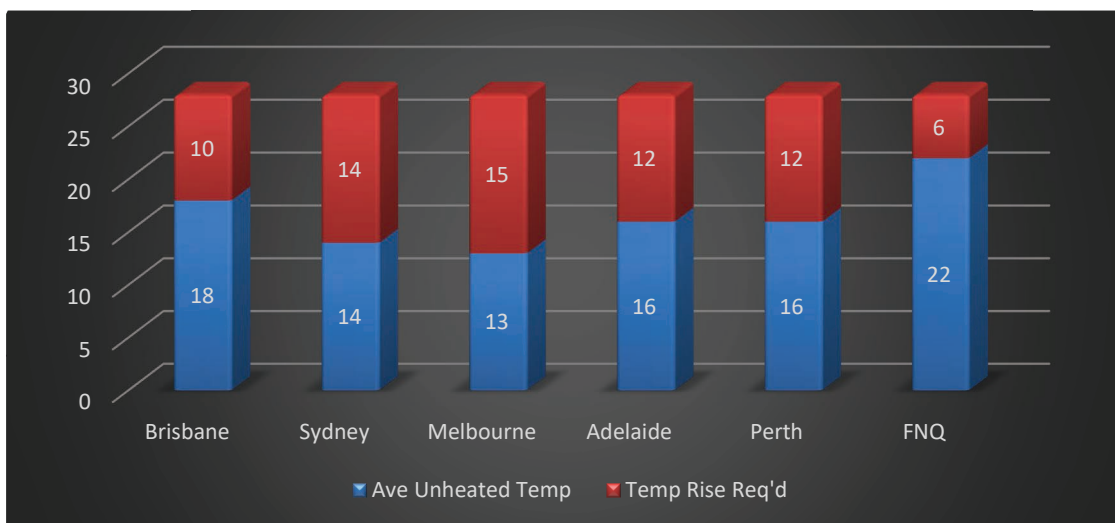
Side discharge from the centrifugal fan enables installation in narrow areas such as the blind side of your house.



Space is precious, so with only 300mm clearance at the rear and 500mm on each side, the LC Heat Pump makes installation easier with greater flexibility on how to arrange your pool equipment.

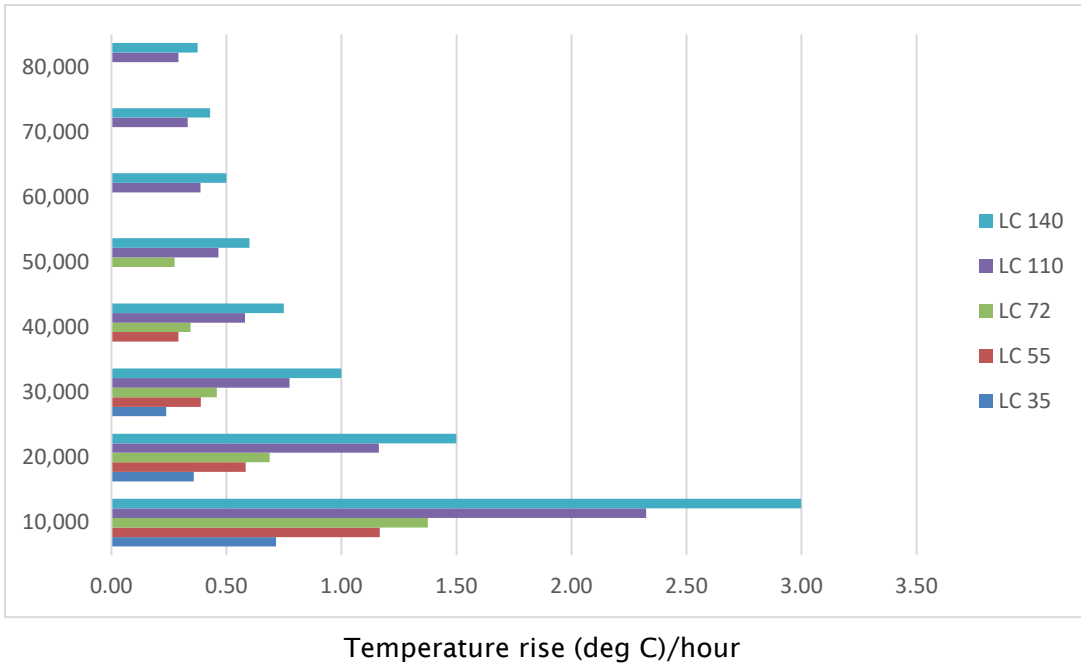
CHOOSING THE RIGHT SIZE HEAT PUMP FOR YOUR POOL

Even in the warmer climates in Australia, unheated pool water is rarely warm enough to swim in comfortably for long periods. So it's wise to understand the type of temperature rise required to make your pool an oasis and then choose the heat pump that will achieve your goals.



When choosing the right size heat pump it's important to consider your life style and how you intend to use your pool. The family may use the pool throughout the swimming season. To obtain satisfactory performance Insnrg recommend a minimum 0.25 temperature rise per hour when used to extend the swimming season, and a 0.5 degree temperature if the pool is to be used Spring or late Autumn. For year round pool heating please consult Insnrg for sizing guidance.

Pool Size (litres) Approximate Temperature rise at 27 deg Air, 26 deg Water and 80% humidity.



SPECIFICATIONS

	LC 35	LC 55	LC 72	LC 110	LC 140
Power Supply	230V 1 Phase				380 - 415V 3 Phase
Max Power Consumption	1.33kW	2.1 kW	2.48kW	4.19kW	5.69kW
Heating Capacity*	9.54kW	15.56kW	18.34kW	31.8kW	40.7kW
COP*	16.50 - 7.17	16.72 - 7.33	16.21 - 7.13	16.16 - 7.05	16.31 - 7.04
Heating Capacity **	7.46kW	11.62kW	13.42kW	22.04kW	28.80kW
COP**	8.6 - 5.33	8.42 - 5.45	8.27 - 5.41	8.05 - 5.26	8.18 - 5.06
Noise level	35 - 45 dB(A)	38 - 47 dB(A)	38.5 - 47.5dB(A)	41.5 - 51 dB(A)	42.5 - 52 dB(A)
Recommended Water Flow	68 lpm	110 lpm	130 lpm	228 lpm	296 lpm

* Air Temperature: (DB/WB) 27C/24.3C, In/out water Temp: 26C/28C, 80% RH

** Air Temperature: (DB/WB) 15C/12C, In/out water Temp: 26C, 63% RH

WARRANTY

Your LC Heat Pump is covered by a 10 year warranty on the compressor and titanium heat exchanger, 3 years on the evaporator coil, and 12 months on electronic components. (See Operating Manual for full details).

SUPPORT

Want more information on Insnrg's range of automation, energy efficient filtration and heating solutions? We're simply a phone call or email away.

Phone: 1800 467 674

Email: sales@insnrg.com

Web: www.insnrg.com

Brisbane

Melbourne

Sydney

