

**Skyline Energy – Ecological Solutions**  
**Solar Electricity, Solar Hot Water, Heat-Pumps, and Hydronic Heating**

## Model SX-24/SX-24ZA – Hydrocarbon Hydronic Heat Pump

### Specifications: Model SX-24/SX-24ZA

Voltage / Phase	240v 50Hz/ 1 or 2 Phase
Average heating power input range	4.5kW to 5.8kW
C.O.P. range @10C ambient	3 to 4.5
Power output range @10C ambient	16kW to 19kW
C.O.P. range @4C ambient	2.9 to 4.2
Power output range @4C ambient	15kW to 17kW
Suitable floor area for slab heating	Up to 240sqm approx. <sup>1</sup>
Suitable floor area for panel heating	Up to 200sqm approx. <sup>1</sup>
Working air temp range	-19°C - +45°C
Compressor Type (Copeland Scroll)	2x ZR34K3E-PFJ-522
Refrigerant	Hydrocarbons
inlet/outlet connections diameter	32mm
Recommended Primary Circ Pump	GPD32-9/12
Maximum Outlet Water Temp	55°C
Noise Level (dBA) @ 3 metres	<60 (<55 for ZA model)
Defrost	reverse cycle
Dimensions (mm)	1450L x 800W x 1060H
Weight – empty	200Kg
Warranty (from 2017 onward)	3yrs <sup>2</sup>

SX-24ZA model uses Ziehl-Abegg “OWL” fans for improved airflow, higher efficiency and quieter operation



- Operates in cold climates
- Quiet yet powerful (ZA fans)
- Economical to operate
- Can be offset with Solar Electricity

Our staggered-start dual-compressor 220V single-phase SX-24/SX-24ZA models can also be spanned across 2ph supply or across 2ph of a 3ph supply. Ideal for heating homes in winter, even where overnight temperatures fall below freezing. Heating water for panel radiators panels or water-filled pipes embedded in concrete slab or screed.

Unit specifications subject to change without notice

1. SIZING IS FOR NEW 5-STAR THERMAL EFFICIENCY BELOW 500m ALTITUDE - CALL FOR FURTHER SIZING INFORMATION
2. Subject to suppliers sizing and installation guidelines being followed (there may be a travel charge for on-site service if there is a significant distance)

## HEATING THE NATURAL WAY

***An Air Sourced Hydronic Heat Pump uniquely extracts solar heat energy found abundant in the in air and transfers it to water.***

Our Air Sourced Hydronic Heat Pump technology has a vast potential for harnessing renewable energy, reducing energy consumption and emissions. The SX-24 is able to extract heat from the air and concentrate it to provide hot water for heating homes and commercial buildings. The only energy required is that which is used to concentrate the thermal energy – so the system can provide a heat output up to four times larger than the energy input. Running costs are similar to Natural GAS Boilers, however in non-GAS areas it can potentially reduce heating costs by more than 75% compared to other fuels like LPG and straight electricity.

Because they don't rely on direct sunlight radiation, they can operate in all seasons of the year, under all conditions; shade, overcast, sun, rain, frost, even at night.

Our optional “ZA” models are fitted with state-of-the-art “OWLET” fans from Ziehl Abegg significantly reducing noise levels and providing greater overall efficiency.

Unlike much of Europe where hydronic heating has been used for decades, in most areas of Australia a Skyline Energy Air-Sourced Hydrocarbon-Charged Hydronic heat pump, used in conjunction with Solar Electricity will outperform a ground-sourced heat pump, and generally at a much lower overall installation cost, and there is no need bury hundreds of metres of pipes in the paddock.

With zoning control and even remote activation by telephone if required, used in conjunction with good building practices such as good insulation, passive solar design, hydronic heating with our state of the art, correctly sized heat pumps can be an economical and ecological, wise investment for your home heating requirements.

... “let us exceed your expectations”

**1300 552 976**

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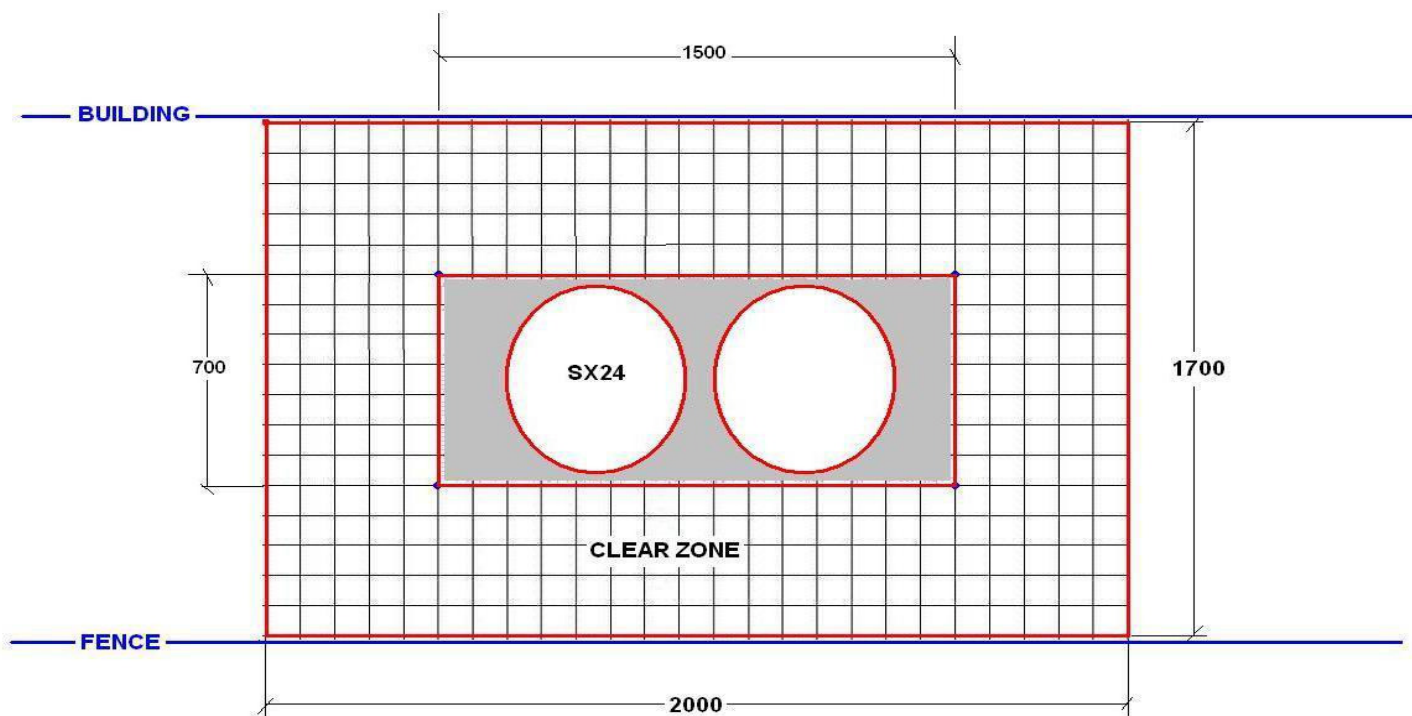
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### Installation Notes:

One of the more common installation issues is the placement of the unit in confined spaces. Air-Sourced heatpumps take heat from the air thereby discharging colder air. The colder air being discharged should not find its way back into the air inlet as this would reduce the efficiency of the heatpump, so we need to give the unit lots of breathing space. Also, even though your heatpump should provide many years of reliable service it will at some stage need maintenance so the removable side-panels should be accessible.

Other than for flow & return water pipes, circulation pumps, expansion tank and close-coupled buffertank, this footprint diagram shows the recommended MINIMUM clearances for optimum performance and accessibility:



- \* This plan is a guide only
- \* It assumes that 2 sides are closed
- \* This plan is not OK if more than 2 sides are closed
- \* Waste cold air must not be allowed to back feed to the unit.
- \* Access must be provided for service.
- \* The top of this plan must be open without overhanging structures.
- \* If there is only one side closed off then the 500mm clearance can be reduced to 300



Remote heatpump location is quite acceptable if installed properly



Installing a buffertank on a hydronic heat-pump allows for zoning without causing backpressure or flow-rate fluctuations which may trip the heat-pump. Hydronic Buffertanks may also reduce short-cycling which increases efficiency.

With a heat-pump hydronic system, heat energy is always readily available so a larger buffertank is not necessary and in fact can reduce efficiency. (one reason why we don't recommend multiple potable hot-water-tank heat-pumps for hydronics)

Skyline Energy offer specially designed 100Lt, 200Lt and 400Lt stainless steel buffertanks.  
[www.skylineenergy.com.au/250SSBT.php](http://www.skylineenergy.com.au/250SSBT.php)

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website: [www.skylineenergy.com.au](http://www.skylineenergy.com.au)

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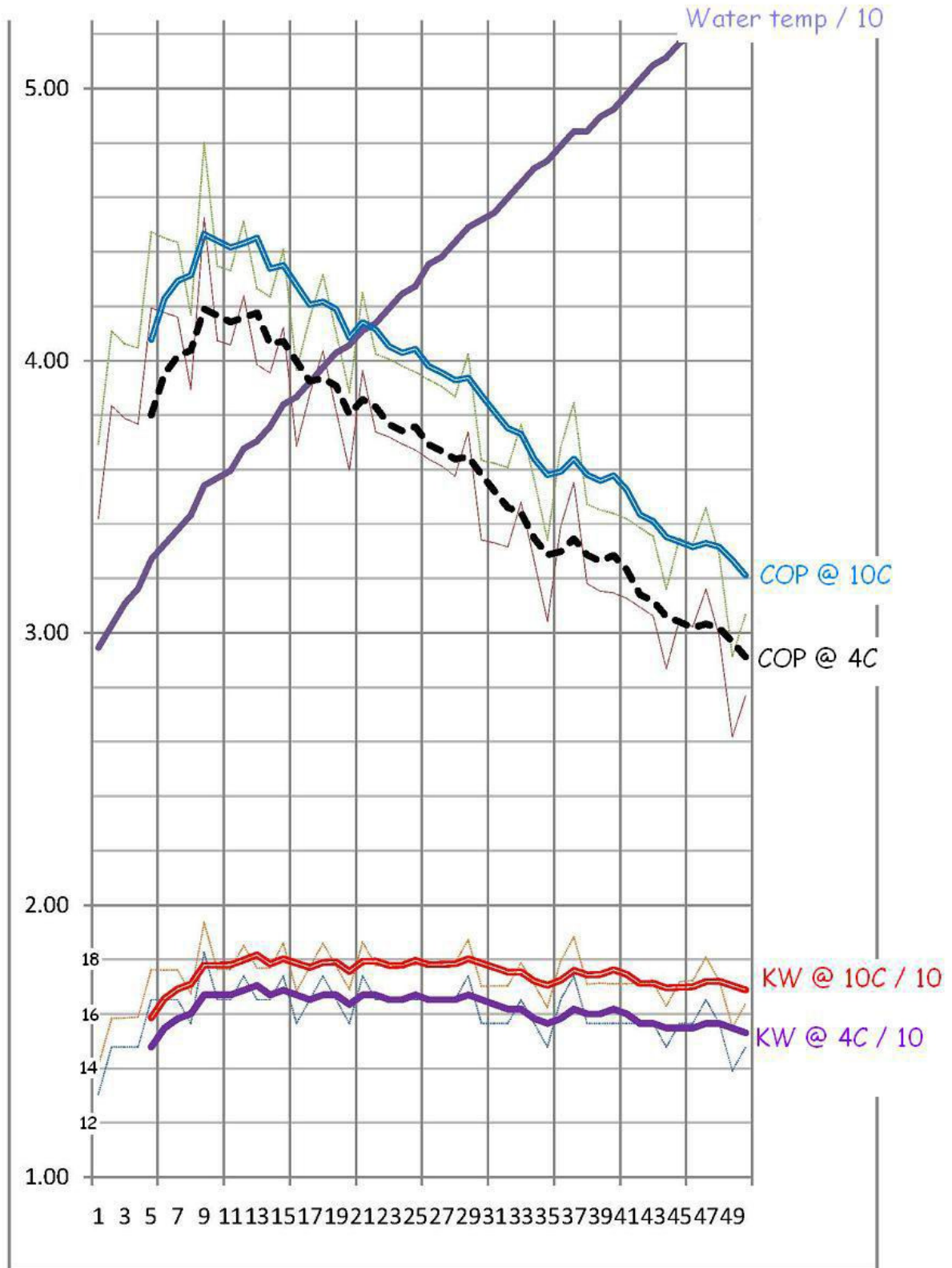
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## Solar Electricity, Solar Hot Water, Heat-Pumps, and Hydronic Heating

SX24sp owl

8-10/16E

Flow 46lt/min



super 10  
Angle 8

700g OZ50

Ambient 4C

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