

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

Model SX-21ZA – Hydrocarbon Hydronic Heat Pump

Specifications: Model SX-21ZA

Voltage / Phase	230v 50Hz/ 1 or 2 Phase
Average heating power input range	3.5kW to 5.3kW
C.O.P. range @10C ambient	2.6 to 4.2
Power output range @10C ambient	13kW to 15kW
Max current draw 1ph	25AMP
Recommended circuit 1ph	32AMP
Suitable floor area for slab heating	Up to 210sqm approx. ¹
Suitable floor area for panel heating	Up to 180sqm approx. ¹
Working air temp range	-19°C - +45°C
Compressor Type (Copeland Scroll)	2x ZR28K3E-PFJ-522
Refrigerant	Hydrocarbons
Zeihl Abegg "OWLET" Fans	FN050-6EK.4F.V7P1, 500mm, 300W, 6000m3/hr (each)
inlet/outlet connections diameter	32mm
Recommended Primary Flow Rate	60 – 65 Lt/min
Primary Circulation Pump options	GPD32-12/25-16 (inbuilt)
Maximum Outlet Water Temp	55°C
Noise Level (dBA) @ 3 metres	<55
Defrost	reverse cycle
Dimensions (mm)	1700L x 700W x 1400H
Weight – empty	200Kg
Warranty (from 2017 onward)	3yrs ²

We use Ziehl-Abegg "OWL" fans for improved airflow, higher efficiency and quieter operation. Acoustiblok™, plus in-house noise-reduction technology, and installation techniques ensure lowest possible sound level.



- **Australian made and supported**
- **Operates in cold climates**
- **Quiet yet powerful**
- **Economical to operate**
- **Can be offset with Solar Electricity**

Our staggered-start dual-compressor 220V single-phase SX-21ZA hydrocarbon models can also be spanned across 2ph supply or across 2ph of a 3ph supply.

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

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

Our air-sourced hydrocarbon hydronic heat pump technology has a vast potential for harnessing renewable energy, extracting heat from the air and concentrating 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 many times larger than the energy input. 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.

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.

Every heatpump is a custom build - We recognise that "one size does not fit all", so we build YOUR heatpump specifically for maximum efficiency, and to make installation, operation, and control as simple possible for YOUR hydronics investment. Your supplier/installer will also select from a list of additional factory options to best suit your project, such as 1ph, 2ph or 3ph wiring, multiple heating zone relays, low-voltage transformer for 24V zone actuators, pool heating (zone) pump relay, and/or advanced anti-corrosion treatment for harsh locations.

... "let us exceed your expectations"

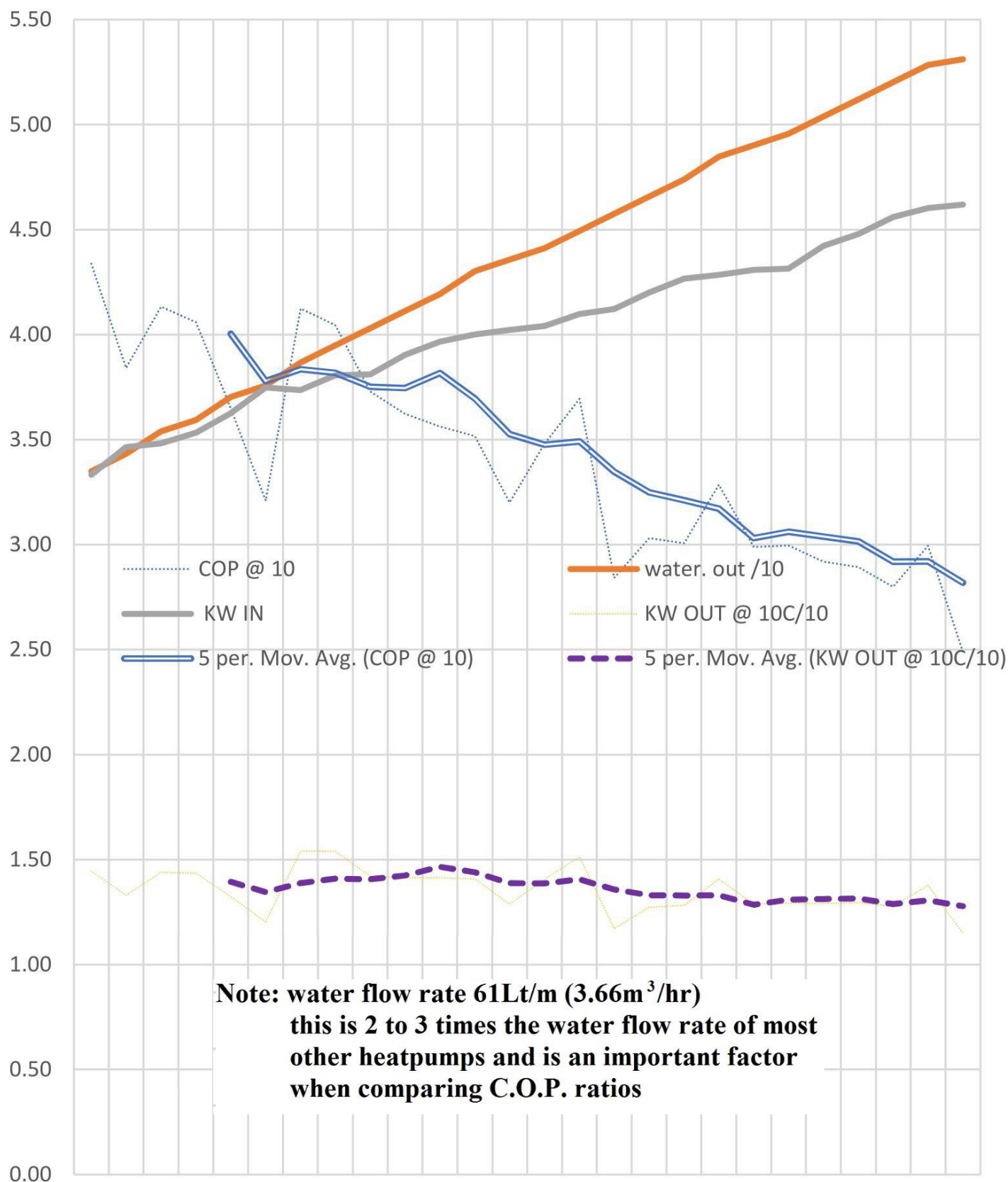
1300 552 976

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Model SX-21ZA Hydrocarbon Hydronic Heatpump
Typical Performance Chart - C.O.P. (includes 500W primary circ pump):
(Note – Primary water flow rate 60 – 65 Lt/min)



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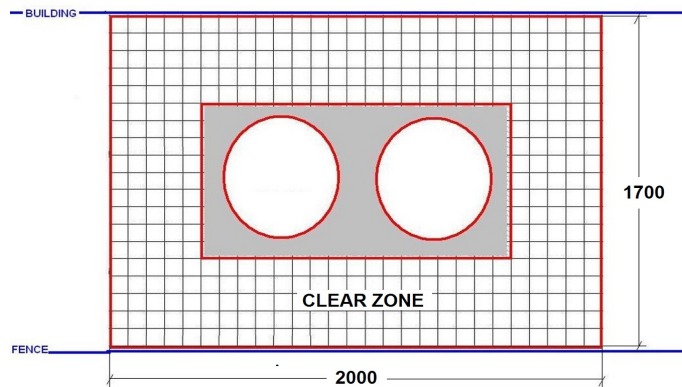
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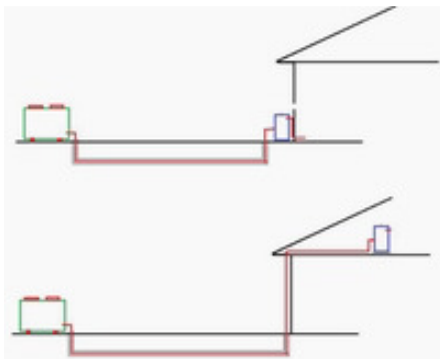
Installation Notes:

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:



A REALLY BAD EXAMPLE



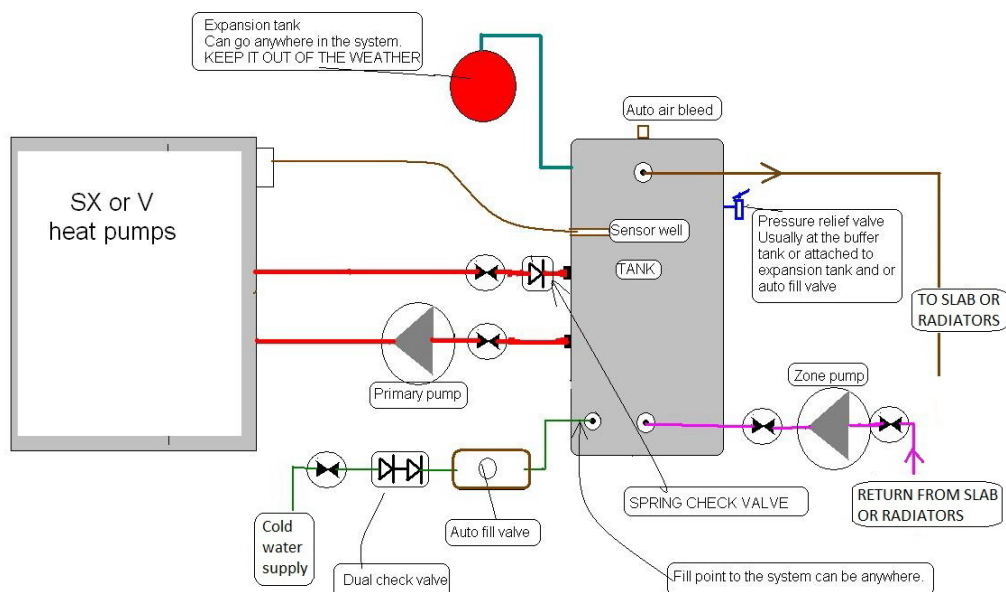
Remote heatpump location is quite acceptable if installed properly



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, and 200Lt stainless steel buffertanks.



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