

# SYNERGY



## Description

The Solahart Synergy is a smart, energy efficient alternative to traditional solar water heaters. Rather than using solar collectors, it uses highly efficient heat pump technology to extract heat from the surrounding air.

The Synergy operates in much the same way as a refrigerator but in reverse. Ambient air is used to warm and convert the refrigerant into a gas. This gas is compressed in the integrated compressor unit on top of the tank, which generates further heat, which is transferred to the water.

The Solahart Synergy also uses an advanced design to provide single pass true top down heating. The flow of the water through the heat exchanger is controlled to ensure the water is heated to 60°C in a single pass and deposited at the top of the storage cylinder for immediate use. This ensures the supply of useable hot water without waiting for the entire tank to heat.

The Synergy's larger compressor gives quicker recovery providing hot water faster. Synergy has the storage capacity and recovery similar to an electric water heater, but with the energy savings of a solar water heater.

The ceramic lined tank with its protective anode has been developed for longer life and provides peace of mind. It is also equipped with an electric booster to ensure a continuous supply of hot water in cold weather conditions.

## Key Features

- Uses heat pump technology to extract heat from the air
- Ideal for installations not suitable for traditional solar water heaters
- Integrated electric booster heats in cold weather conditions
- True top down heating for quick recovery
- Uses  $\frac{1}{3}$  the energy of a conventional electric water heater\*
- Sleek, modern design
- Fast hot water recovery

## Key Benefits

- Save up to  $\frac{2}{3}$  of your water heating energy consumption\*
- Reliable, low maintenance operation
- Hot water regardless of the weather
- Can qualify for valuable government environmental incentives\*
- Reduced energy use saves up to 3.6 tonnes of CO<sub>2</sub> emissions every year\*
- Peace of mind with 5/3/2/1+ year warranty

\* Savings of  $\frac{2}{3}$  shown are based on Australian Government approved TRNSYS simulation modelling. Savings and incentives will vary depending upon your location, type of Solahart system installed, type of water heater being replaced, hot water consumption and fuel tariff. Maximum financial savings off your hot water bill are achievable when replacing an electric water heater on continuous tariff.

+ Warranty Details: 5/3/2/1, 5 year cylinder, 3 year labour on cylinder, 2 year sealed system including labour, 1 year parts including labour; applies to a single family domestic dwelling only. All other applications have a 3/1/1/1, 3 year cylinder, 1 year sealed system, 1 year parts, 1 year labour warranty.

Warranty does not apply to the heat exchanger in hard water areas unless a water softening device is installed or in areas with a Chloride content >250 mg/l.

# Synergy "HAV" Air Sourced Heat Pump

This system is suitable for multiple installations and outdoor installation only.  
The HAV system is suitable for frost regions but is not suitable for hard water areas

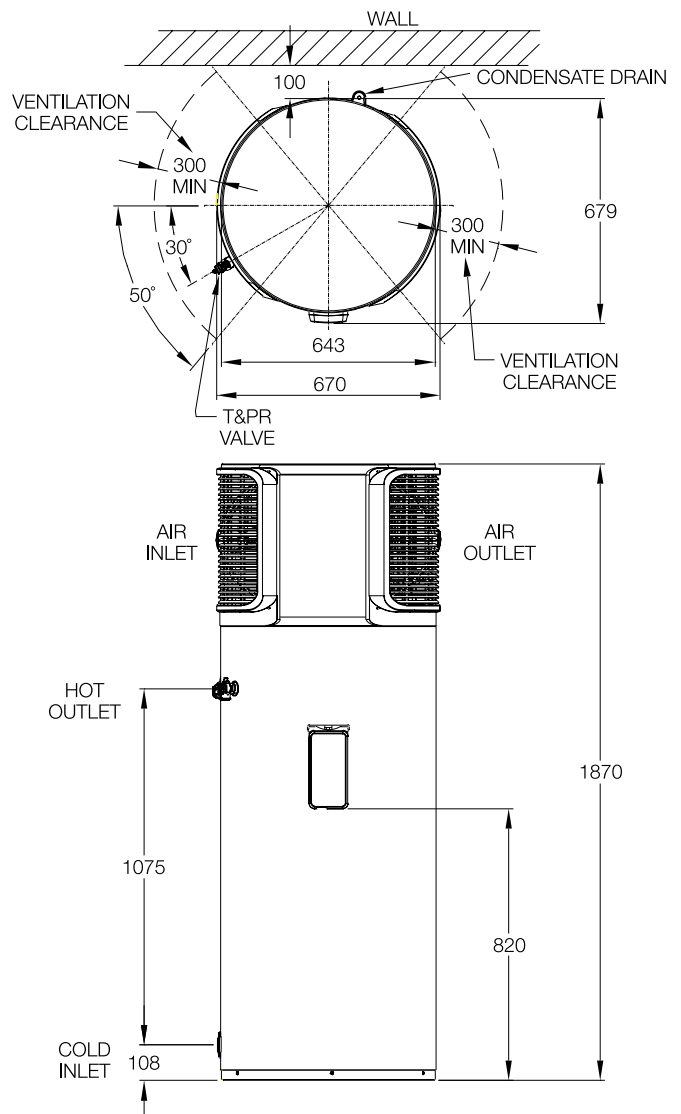
HAV System		
Model		310HAV
Installation location		outdoor
Storage capacity	litres	310
	US gal	82
Electric boost capacity	litres	220
	US gal	58
Weight empty	kg	135
	lbs	298
Weight full	kg	445
	lbs	981
Temperature setting	°C	60
	°F	140
Sound rating @ 1.5m	dB(A)	51
Rated power input	watts	1300
Refrigerant type		R134a
Height	m	1.870
	in	73.6
Width	m	0.670
	in	26.4
Depth	m	0.680
	in	26.8

## Heat Pump Performance Specifications

Ambient air temperature	Relative humidity	Recovery rate litres	Coefficient of performance COP
20°C	60%	71	3.1
30°C	60%	88	3.8

Hourly recovery rate is at 45°C temperature rise.

## Dimensions



Water Supply				
TPR valve setting	kPa	1000	psi	145
ECV* setting	kPa	850	psi	125
Max. supply pressure				
with ECV	kPa	680	psi	100
without ECV	kPa	800	psi	115
Min. supply pressure	kPa	200	psi	29
Water connections (left hand)	cold	RP 3/4 / 20		
	hot	RP 3/4 / 20		
TPR valve connection		RP 1/2 / 15		

\* Expansion Control Valve (ECV) is not supplied.

Electric Boost Specifications				
Heating unit type*	Copper sheath immersion element			
Supply voltage	220V - 250V			
Hourly recovery rate @ temperature rise of:				
Rating kW	Current Amps	30°C litres/hour	40°C litres/hour	50°C litres/hour
2.4	10	68	52	41
3.6	15	103	77	62

\* Incoloy elements are available for corrosive water areas.

Materials and specifications are subject to change without notice.