



ROOF-MOUNTED DIRECT SYSTEMS

L SERIES - OPEN CIRCUIT THERMOSIPHON

Solahart L Series is a solar water heater specifically designed to provide economical service in medium to high solar gain areas. The black polyester powder coated aluminium absorber collects the sun's heat and transfers it to the water in the copper risers. The increase in temperature causes it to rise and move into the storage tank where it displaces cooler water which then travels back into the solar collectors to be heated by the sun.

The tank features **Solahart Super-Shield**[®] enamel for enhanced protection, as well as a protective sacrificial anode to improve the life of the tank. Free Heat 300 litre models also feature a larger anode for enhanced tank protection.

L systems can be installed with an optional Thermosiphon Restrictor Valve (TRV), an over-temperature protection system, to restrict over performance during periods of high solar radiation and lower hot water draw off.

These direct systems have no frost protection and are not suitable for harsh water regions.⁽¹⁾



ELECTRIC OR GAS BOOSTING FOR HOT WATER REGARDLESS OF THE WEATHER

HOW YOU BENEFIT



OPTIMAL PERFORMANCE

Our most popular system, designed for **medium to high** solar gain areas.



LOW MAINTENANCE

Elegant simplicity provides efficiency, reliability and low maintenance.



REDUCE ENERGY USE

Water heating energy use may be reduced by up to **65%** and could save up to 1.7 to 2.6 tonnes of CO₂ emissions per annum when replacing an electric water heater.⁽²⁾



SOLAHART WARRANTY

5-year and 10-year Free Heat warranty available, for peace of mind. See overleaf for details.⁽³⁾

Technical Data

MODELS		L / L FREE HEAT - DIRECT SYSTEMS (Free Heat systems are only available in 300 litres)			Collectors		L Collectors	
Systems		181L	302L	303L	Aperture (heating) area	m ² / ft ²	1.87 / 20	
Tank model	Standard	180L	300L	300L	Dimensions	length - mm / in	1943 / 76.5	
	Free Heat	-	300LF	300LF		width - mm / in	1027 / 40.5	
Collector	Model	L	L	L		height - mm / in	83 / 3.3	
	Number	1	2	3	Working pressure	kPa / psi	1000 / 145	
Storage capacity	litres	180	300	300	Capacity	litres / US gal	1.5 / 0.4	
	US gal	48	80	80	Weight empty including fittings	kg / lbs	29 / 64	
Boost capacity	litres	90	150	150	Weight full including fittings	kg / lbs	32 / 71	
	US gal	24	40	40	Absorber surface		Black polyester powder coat	
Tank Only: Weight empty	kg	62	91	91	Absorber material		Aluminium	
	lbs	137	201	201	Riser material		Copper tube	
Tank Only: Weight full	kg	242	391	391	Tray material		0.7 mm aluminium	
	lbs	553	862	862	Insulation material (base)		38 mm polyester blanket	
Tank Only: A - Width ⁽⁴⁾	m	1.62	2.43	2.43	Glass		3.2 mm tempered low iron	
	in	63.8	95.7	95.7				
Tank Only: B - Length ⁽⁴⁾	m	0.51	0.51	0.51				
	in	20.1	20.1	20.1				
System: Weight empty	kg	97	156	188				
	lbs	214	344	419				
System: Weight full	kg	279	460	493				
	lbs	615	1015	1087				
System: A - Width ⁽⁴⁾	m	1.67	2.48	3.37				
	in	66.8	97.6	132.7				
System: B - Length ⁽⁴⁾	m	2.53	2.53	2.53				
	in	99.6	99.6	99.6				

⁽⁴⁾ For servicing and safe access, a space equal to the tank length should be left on the water connection end of the system and 1m (40in) should be left on the three other sides of the installation.

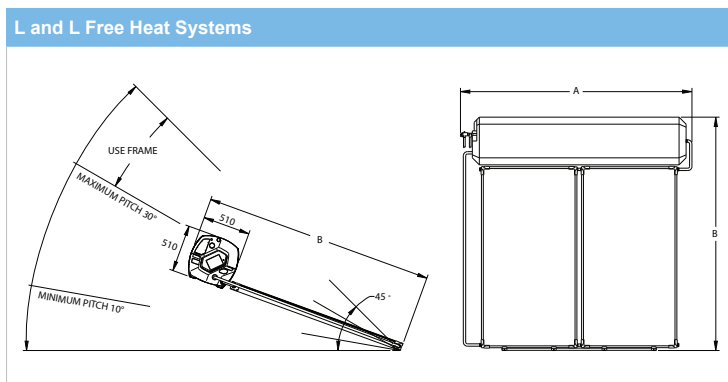
Water Supply		
TPR valve setting	kPa / psi	1000 / 145
Expansion Control Valve (ECV) setting	kPa / psi	850 / 125
Max. supply pressure with ECV	kPa / psi	680 / 100
Max. supply pressure without ECV	kPa / psi	800 / 115
Water connections	cold	Rp 3/4
	hot	R 1/2

ENERGY TIP

When installing your solar water heater, install minimum 3-star rated shower roses and flow restrictors to your taps if you don't already have them. Doing this will not only save water but make your solar savings go further.

- ⁽¹⁾ Harsh water regions – the Solahart Warranty may not apply if the water heater is connected to a water supply which: is scaling with a saturation index >+0.8, or; is corrosive with a saturation index <-1.0, or; has a Total Dissolved Solids content >2500mg/L.
- ⁽²⁾ Energy savings of up to 65% shown is based on Australian Government approved TRNSYS simulation modelling of a Solahart 302L and using a medium load in Zone 3 and apply when replacing an electric water heater. Any savings will vary depending upon your location, type of Solahart system installed, orientation and inclination of the solar collectors, 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. Refer to solahart.com.au for more information.
- ⁽³⁾ Solahart Warranty Details: Free Heat 10/5/5 warranty, 10 year cylinder and collector supply, 5 year parts supply, 5 year labour; 5/5/5 warranty, 5 year cylinder and collector supply, 5 year parts supply, 5 year labour; applies only when installed as a complete new system.

Electric Boost Specifications				
Heating unit type	Copper sheath immersion element			
Supply voltage	220 V - 250 V			
Recovery rate @ 240 V temperature rise of:				
Rating kW	Current Amps	30°C litres/hour	40°C litres/hour	50°C litres/hour
1.8	7.5	51	39	31
2.4	10	68	52	41
3.6	15	103	77	62



The L and L Free Heat systems (if installed with a TRV system) can be installed as a solar pre-heater with an in-line Solahart gas booster water heater. Refer to the Solahart gas booster specification sheet for further details on the gas booster.

Specifications and designs included in this data sheet are subject to change without notice.

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