



ROOF-MOUNTED DIRECT SYSTEMS

LCSD SERIES - OPEN CIRCUIT THERMOSIPHON

Solahart LCSD Series is a solar water heater designed to provide higher efficiency in low to medium solar gain areas. The LCS collector has an aluminium absorber plate with all copper header and risers. The absorber is coated with Mirotherm[®], a sputtered selective surface widely used in Europe. The Mirotherm absorptive and anti-reflection layers provide high solar absorption, and an infrared reflection layer ensures low thermal emission, making the most of the available solar radiation.

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 models also feature a larger anode for enhanced tank protection.

LCSD systems are installed with a Thermosiphon Restrictor Valve (TRV), an over-temperature protection system, to assist in restricting over performance during periods of high solar radiation and low hot water draw off.

These direct systems do not have 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



HIGH PERFORMANCE

Designed to provide higher efficiency for use in **low to medium** 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 **70%** and could save up to 1.8 to 2.8 tonnes of CO₂ emissions per annum, when replacing an electric water heater.⁽²⁾



SOLAHART WARRANTY

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

Technical Data

MODELS LCSD / LCSD FREE HEAT - OPEN CIRCUIT SYSTEMS

Systems		302LCSD
Tank model	Standard	300L
	Free Heat	300LF
Collector	Model	LCS
	Number	2
TRV over-temperature protection		✓*
Storage capacity	litres / US gal	300 / 80
Boost capacity	litres / US gal	150 / 40
Tank Only: Weight empty	kg / lbs	91 / 201
Tank Only: Weight full	kg / lbs	391 / 862
Tank Only: A - Width ^(#)	m / in	2.43 / 95.7
Tank Only: B - Length ^(#)	m / in	0.51 / 20.1
System: Weight empty	kg / lbs	160 / 353
System: Weight full	kg / lbs	464 / 1023
System: A - Width ^(#)	m / in	2.48 / 97.6
System: B - Length ^(#)	m / in	2.46 / 96.9

Collectors		LCS Collectors
Aperture (heating) area	m ² / ft ²	1.87 / 20
Dimensions	length - mm / in	1943 / 76.5
	width - mm / in	1027 / 40.5
	height - mm / in	83 / 3.3
Working pressure	kPa / psi	1000 / 145
Capacity	litres / US gal	1.9 / 0.5
Weight empty	kg / lbs	31 / 69
Weight full incl. fittings	kg / lbs	38 / 84
Absorber surface		Mirotherm sputtered selective surface
Absorber material		Aluminium
Riser material		Copper
Number of risers		6
Tray material		0.7 mm aluminium
Insulation material	Base	38 mm glass wool blanket
	Sides	Polyester blanket
Glass		3.2 mm tempered low iron

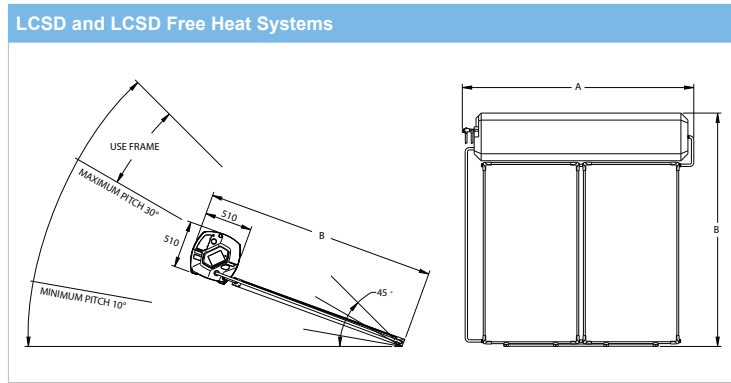
(*) TRV OTP is mandatory on these models in Australia and New Zealand.
 (#) For servicing and safe access, a space equal to the tank length should be left on the water connection end of the system and 1m (40in) should be left on the three other sides of the installation.

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	DN15 compression fitting
	hot	R 1/2

Electric Boost Specifications				
Heating unit type		Copper sheath immersion element		
Supply voltage		220 V - 240 V (50 Hz)		
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

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.

The LCSD and LCSD Free Heat systems, combined with the TRV OTP system, can be installed as a solar preheater with an inline Solahart gas booster water heater. Refer to the Solahart gas booster specification sheet for further details on the gas booster.



(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 70% shown is based on Australian Government approved TRNSYS simulation modelling of a Solahart 302LCSD 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, 5 year labour; 5/5/5 warranty, 5 year cylinder and collector supply, 5 year parts, 5 year labour; applies only when installed as a complete new system.