



ROOF-MOUNTED INDIRECT SYSTEMS

CS/SP SERIES - CLOSED CIRCUIT THERMOSIPHON

Solahart CS and SP Series feature Australian designed Envelope solar collectors and offer the very latest in styling and all-weather durability.

The **CS Series** provides higher collector performance in low to medium solar gain areas while the **SP Series** provides efficient performance in medium to high solar gain areas. The collectors have been designed to meet or exceed Australian and International Standards in areas of strength, performance and durability.

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.

Frost Resistant: Indirect or closed-circuit systems circulate an anti-freeze fluid to heat water 'indirectly' via a heat exchanger which makes them suitable for frost or harsh water chemistry regions.⁽¹⁾



**ELECTRIC OR GAS
BOOSTING FOR HOT
WATER REGARDLESS
OF THE WEATHER**

HOW YOU BENEFIT



HIGH PERFORMANCE

CS Series - Provides higher performance in **low to medium** solar gain areas.



HIGH EFFICIENCY

SP Series - Provides efficient performance in **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% to 75%** and could save up to 1.6 to 2.9 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⁾

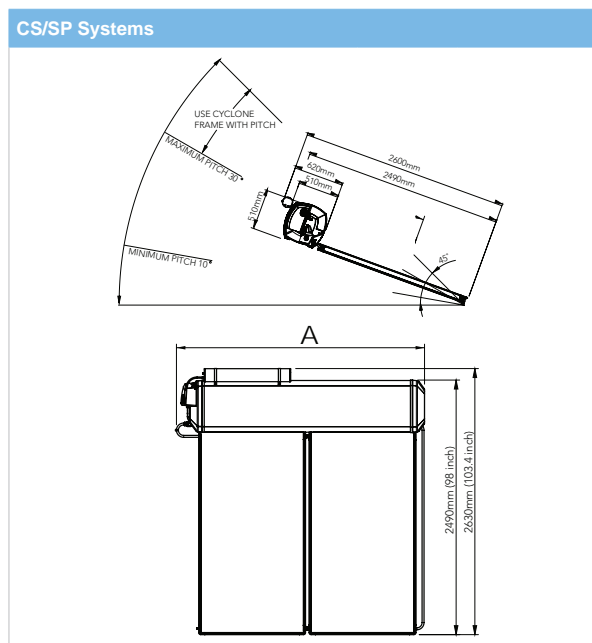
Technical Data

MODELS		CS / CS FREE HEAT - INDIRECT SYSTEMS			SP / SP FREE HEAT - INDIRECT SYSTEMS		
Systems		181CS13C	302CS13C	303CS13C	181SP	302SP	303SP
Tank model	Standard	180J	300J	300J	180J	300J	300J
	Free Heat	-	300F	300F	-	300F	300F
Collector	Model	CSA2013	CSA2013	CSA2013	SPA2000	SPA2000	SPA2000
	Number	1	2	3	1	2	3
HartStat over-temp. protection (OTP) ⁽⁴⁾		✓	✓ ⁽⁵⁾	✓ ⁽⁵⁾	✓	✓	✓
Storage capacity	litres / US gal	180 / 48	300 / 80	300 / 80	180 / 48	300 / 80	300 / 80
Boost capacity	litres / US gal	90 / 24	150 / 40	150 / 40	90 / 24	150 / 40	150 / 40
Tank Only: Weight empty	kg / lbs	69 / 153	107 / 236	107 / 236	69 / 153	107 / 236	107 / 236
Tank Only: Weight full	kg / lbs	249 / 549	407 / 898	407 / 898	249 / 549	407 / 898	407 / 898
Tank Only: A - Width ⁽⁶⁾	m / in	1.62 / 63.8	2.43 / 95.7	2.43 / 95.7	1.62 / 63.8	2.43 / 95.7	2.43 / 95.7
System: Weight empty	kg / lbs	124 / 274	210 / 463	260 / 463	124 / 274	210 / 463	260 / 574
System: Weight full	kg / lbs	317 / 699	529 / 1163	583 / 1286	317 / 699	529 / 1163	583 / 1286
System: A - Width ⁽⁶⁾	m	1.62 / 63.8	2.43 / 95.7	3.38 / 133.1	1.62 / 63.8	2.43 / 95.7	3.38 / 133.1

⁽⁴⁾ HartStat OTP is supplied as standard on CS13C and 303SP systems in Australia and is available as an option on 181 and 302SP systems. ⁽⁵⁾ HartStat OTP is mandatory on 302 and 303 CS13C models in Australia and New Zealand. ⁽⁶⁾ 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. SP & CS13C Systems 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.

Collectors		CSA2013	SPA2000
Aperture area	m ² / ft ²	1.88 / 20.2	1.88 / 20.2
Dimensions	length - mm / in	1996 / 78.6	1996 / 78.6
	width - mm / in	1043 / 41.1	1043 / 41.1
	height - mm / in	82 / 3.2	82 / 3.2
Working pressure	no OTP - kPa / psi	80 / 12	80 / 12
	with OTP - kPa / psi	170 / 24	170 / 24
Capacity	litres / US gal	1.9 / 0.5	3.8 / 1
Weight empty	kg / lbs	37 / 82	45 / 99
Weight full	kg / lbs	39 / 86	49 / 108
Absorber surface		Blue Tinox sputtered selective surface	Black polyester powder coat
Absorber / Riser material		Copper	Steel
Number of risers		13	35
Insulation blanket material (base)		38 mm glass wool	38 mm polyester
Frame material		Extruded aluminium	
Glass		3.2 mm tempered low iron	

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



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	8	51	39	31
2.4	10	68	52	41
3.6	15	103	77	62

⁽¹⁾ Harsh water regions – the Solahart warranty may not apply if the water heater is connected to a water supply which has a Total Dissolved Solids content >2500mg/L. If the water supply is scaling with a saturation index >0.8 a low watts density heating unit must be used, or is corrosive with a saturation index <-1.0 a corrosion resistant heating unit must be used, for warranty to apply to the heating unit.

⁽²⁾ Energy savings of up to 65% to 75% shown are based on Australian Government approved TRNSYS simulation modelling of a Solahart 302SP and 302CS13C 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.

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

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