

**Thermocell  
Solar Water Heater matrix  
CCC Processing and Spec Sheet (for B-112)**

To fill in space greyed out

Building Elements/items to check		Requirement to G12/AS2 G12/AS2	to G12/AS2 Clause	Supporting Thermocell information	(TC) Supporting Notes
General	Plumbers Name				
	License Number				
	Application form			B001	
	Verification that the property owner is aware and consents to the proposed work			Signed Quotation for work	
	Application Fee			\$350	
	Project Value				
	All Alternative solutions identified			<b>All solutions outlined below</b>	
	Site Plan:			Site photo or Map	Street View Picture, Google map or CCC Survey map supplied
	Floor Plans:			Floor plans supplied	
		All spaces identified		Floor plans supplied	
		Hot water cylinder location		Floor plans supplied	
		Smoke Detectors comply		Floor plans supplied	
	Roof Plan:				
		Show location of panels		Elevation/photo supplied	
		Dimension Panels		Elevation/photo supplied	1040mm (W)x 740mm (H)x 75mm (thick) per panel
		Dimension panels from roof edges where near gable		Elevation/photo supplied	
	Recession angle compliance			Elevation/photo supplied	
	PIM items checked			Not applicable to TC	
	<b>Solar Heater Compliance</b>	Listed on the SIANZ website		Listed on site	Listed on the SIANZ website
		Make:		Thermocell Ltd	
	Model:			Modline or Arline + configurations	

<b>B1-Structure</b>	Year first constructed					Client to supply information
	Building structure complies with Structural standards G12/AS2 1.1.1		Alternative Solution	1.1.1	Comply to 1.1.1	Thermocell panels and structure comply to all points of 1.1.1
	Weight per panel kg/sq meter (less than 22kg/sq meter)			1.1.1	21 kgs per panel	Weight of each panel is 21kg per square meter, when filled and complete
	Roof Pitch less than 45 deg			1.1.1	Elevation/photo supplied	
	Wind Zone		Alternative Solution	1.1.1	Tyndall and Hanham Report supplied	
	Solar Collector area		Alternative Solution	1.1.1	Tyndall and Hanham Report supplied	
	Snow Load		Alternative Solution	1.1.1	Tyndall and Hanham Report supplied	
	Solar Collectors parallel to roof			1.1.1	Fixing detail supplied	
	Location of collector on the roof complies			Fig 2	Elevation/photo supplied	
	Collector fixing detail included				Fixing detail supplied	
	<b>Collector fixing</b>	Collector fixing details shown are correct for roof type			Fixing detail supplied	
		At least 4 points of support per collector			Fixing detail supplied	
		Outermost support within 200mm of collector edge			Fixing detail supplied	
		Fixings do not compromise roof framing strength			Fixing detail supplied	
		Collectors fixed direct to roof have spacer blocks		Fig 11	Fixing detail supplied	
		Collectors fixed to roofing material only		6.3.3	Not applicable to TC	
		Concrete tile straps		6.3.4	Not applicable to TC	
		Elevated mounting complies		6.5	Tyndall and Hanham Report supplied	
		Collectors mounted at a different angle to roof comply		6.6	Tyndall and Hanham Report supplied	
	Storage tanks	New or Existing				
		For new tanks seismic restraints specified complies		AS1 6.11.4	As per AS/NZS 3500.4 5.5.4	Tanks will be installed according to this standard.
	Storage tanks in roof space	Specific design seismic restraint			Not applicable to TC	
		Max 200L NZS 3604			Not applicable to TC	
	Max 450L when installed to AS/NZS 3500.4			Not applicable to TC		
	Storage tank on roof has SED			Not applicable to TC		

<b>B2- Durability</b>	Roof Material:					
	Frame material:	Collector frame is constructed from Aluminium and TIG welded.			Tyndall and Hanham Report supplied	
	Fixings:	Galv coated wood fix bolts, 8mmx 200			Fixing detail supplied	
	Collector material:	Quilted Steel Evacuated panel and galvanised case			Supplied	
	Pipe Flashing Material:	Bulkhead Flashing as alternative solution	Alternative Solution		Bulkhead Flashing detail supplied	
	Contact complies with NZBC			Table 2	Butyl Rubber section	Each frame set has Butyl rubber channel fitted to bottom of frames when in contact to the roofing structure.
	Run-off complies with NZBC			Table 3	Aluminium	All frames made from Aluminium
	Use of EPDM boots with galvanized unpainted roofing complies		Alternative Solution	2.1.2	Bulkhead Flashing detail supplied	
	Stainless steel not in contact with Galvanized roofing				Not applicable to TC	
	Storage tanks in roof space have access of sufficient dimension for removal				Not applicable to TC	
	<b>Exposure Zone:</b> Zone 1 or 2					
	Fixing materials are suitable for use in the exposure zone				Fixing detail supplied	Powder coated aluminium frame
	Drain lines termination, relief valve detail described				Not applicable to TC	Thermocell panels are not subject to stagnation temperatures above 90deg C as they will stall and not over produce, therefore the HWC relief is sufficient for direct systems and glycol pack open vented for in direct systems.
	Relief valves do not discharge onto roofing/gutters				Not applicable to TC	Thermocell panels are not subject to stagnation temperatures above 90deg C as they will stall and not over produce, therefore the HWC relief is sufficient for direct systems and glycol pack open vented for in direct systems.
Frost protection/ insulation shown to all pipework outside the insulated envelope of the building				Schematic system diagram supplied	Solar controller has built in frost control at 5deg C for direct systems, and -15deg C for in direct glycol systems. All lagging is UV stable wrapped in foil tape for durability.	
Insulation to exterior is water proof and wrapped or similar to prevent premature degradation.				Schematic system diagram supplied	UV stable insulation wrapped in aluminium foil tape for weather tightness.	

<b>E2- External Moisture</b>	All pipe penetrations detailed		Alternative Solution		Bulkhead Flashing detail supplied	
	Sealing of fixing through roof		Alternative Solution		Bulkhead Flashing detail supplied	
<b>G12- Water Supplies</b>	Labeled pipe diagram appropriate to the actual installation				Schematic system diagram supplied	
	Polybutylene pipe systems used for circulating pipework between collectors and storage tanks requires verification from piping manufacturer				Not applicable to TC	Not using polybute piping system
	<b>Legionella Control:</b> Safety Devices:	Method of Legionella control is described and complies	Alternative Solution	3.5	Owner to operate in conjunction with timer control	be controlled so that the water above the element is heated to 60°C once a day, and the element is in the bottom 20% of the water tank (by volume) and no more than 150 mm from the bottom of the tank
		Anti scalding method shown and stated temp set at 50deg C or 45 deg C			Tempering valve as per AS/NZS 3500.4 1.9.2	Systems to have tempering valve fitted if new or repair of existing tanks
		Temperature control devices comply	Alternative Solution	AS1 6.5	Factory set to 60deg C	Standard electric element to be set at 60 deg C min
		Relief Valves comply		AS1 6.6	Not applicable to TC	
	Storage water heater capacity of a least 50L per m2 of collector area			Stats manufacturer	1 standard thermocell panel (1040mmx740mm) is equal to 50 litres of hot water @ 0.8msq per panel aperture area.	
<b>H1- Energy Efficiency</b>	New hot water cylinder comply			NZS4305	Stats manufacturer	Sunstore cylinders meet the A-Grade Watermark standards and NZ MEPS requirements

Documents supplied ( check off)	Schematic system diagram supplied	Copy 2	Yes <input type="checkbox"/>
	Bulkhead Flashing detail supplied	Copy 2	Yes <input type="checkbox"/>
	Fixing detail supplied	Copy 2	Yes <input type="checkbox"/>
	Tyndall and Hanham Report supplied	Copy 2	Yes <input type="checkbox"/>
	Elevation/photo supplied	Copy 3	Yes <input type="checkbox"/>
	Site photo or Map supplied	Copy 3	Yes <input type="checkbox"/>
	Floor plans supplied	Copy 3	Yes <input type="checkbox"/>
	Filled in B-112 checksheet	Copy 1	Yes <input type="checkbox"/>
	Filled in B-001 application	Copy 1	Yes <input type="checkbox"/>
	Fee paid	Cheque	Yes <input type="checkbox"/>
	Copy of quote for verification	Copy 1	Yes <input type="checkbox"/>