

# Soak in the Sunshine



Solar Hot Water

# Soak in the sunshine, and SAVE with solar hot water from Chromagen



USES UP TO  
**80%**  
LESS  
ENERGY

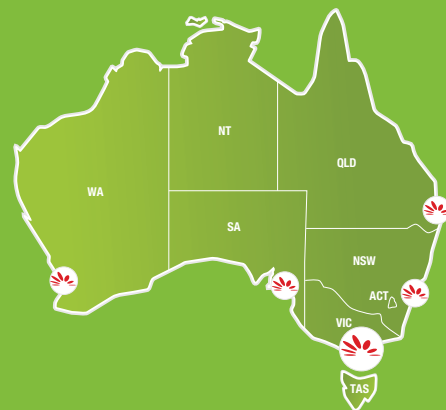
With a solar hot water system from Chromagen, you can literally soak in the warmth of the sun whilst reducing your water heating bills. These highly efficient water heaters use the sun's unlimited and free energy to pre-heat your water, using up to 80% less purchased energy than conventional hot water systems.

## Efficient living with Chromagen

Chromagen, a pioneer in the production of solar water solutions has a long history of innovation and excellence. Founded in 1962, the Chromagen brand is a major international player in thermal solar technology. Chromagen's world-class solar hot water systems are sold to over 35 countries and are recognised across the globe for their high quality, reliability and durability.

Today, Chromagen Australia distributes a wide range of residential and commercial solar and energy solutions, including the renowned solar hot water systems.

With a commitment to providing quality & sustainable environmental solutions for Australian consumers, Chromagen Australia has a nation-wide presence with a network of offices, dealers and service agents across the country, so you can count on local experience, solutions and service.

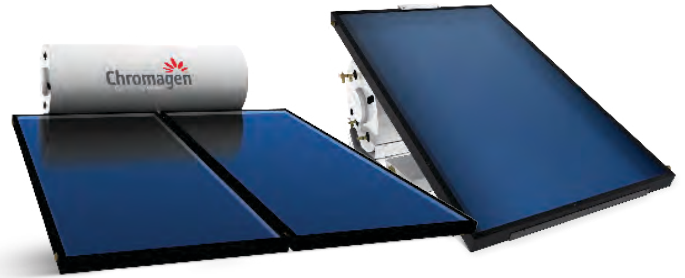


## The range



### Split Configured Systems (*SplitLine*)

- Includes a split configuration of a ground-mounted tank and roof-mounted thermal collector/s
- Provides an aesthetically pleasing rooftop appearance
- Requires a pump to circulate water through the collectors



### Roof Mounted Systems (*RoofLine & LowLine*)

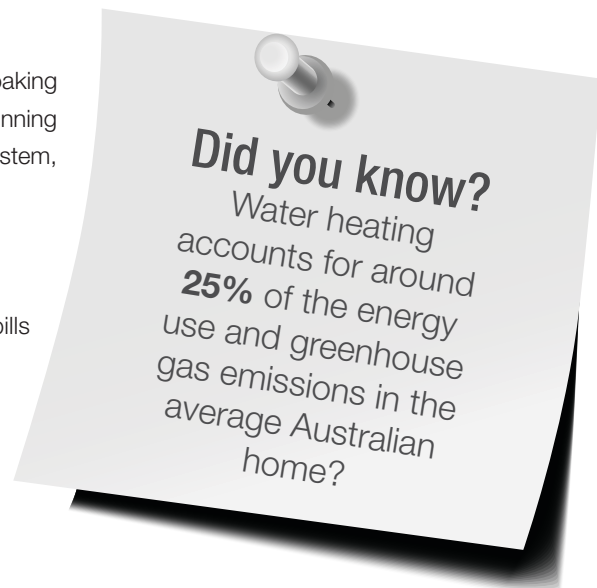
- Includes a roof-mounted tank & collector/s
- Ideal where ground space is limited
- Uses natural thermosiphon convection or a solar pump to circulate water efficiently through collectors

## Reliable solar-heated water, on tap

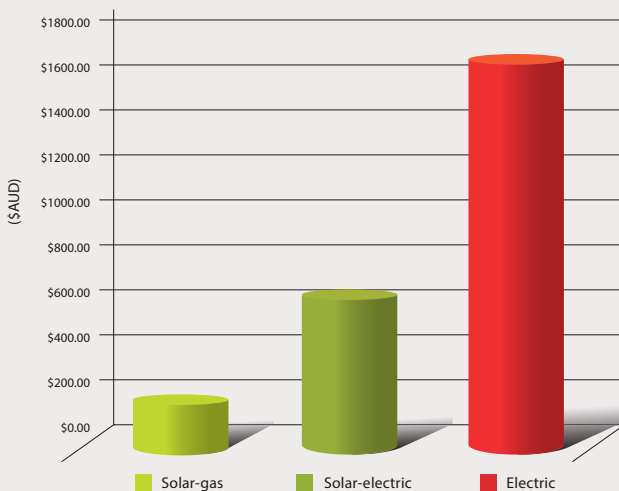
Hot water is a basic household need and there are few things more soothing than soaking in a warm shower or bath. There are, however, few things more frustrating than running out of hot water just when you want it, but with a Chromagen solar hot water system, reliable, environmentally-friendly hot water is on tap.

### The solar advantage:

- Solar pre-heated water significantly reduces power consumption & power bills
- Improves the energy efficiency of your home
- Reduces emissions of harmful greenhouse gases
- Provides a reliable supply of hot water in any weather or time of day



Annual Running Cost Comparison (SAUD)



## Energy efficiency

Old energy-hungry electric hot water heaters are very expensive to run and are a huge contributor to household energy consumption, but with solar hot water you could save over \$1000\* per year!

You save so much because most of the heating comes FREE from the abundant Australian sunshine and less electricity or gas is required. When you use the sun to heat your water, you are not only saving money today, you are also reducing your carbon footprint, for a cleaner environment tomorrow.

\*Based on a daily hot water demand of 300 litres, an electricity cost of \$0.30/kWh, gas cost of \$0.02/MJ and on installation in Zone 3. Excludes water costs.

## Split Configured Systems

Chromagen's split configured solar hot water systems consist of a ground mounted tank and roof mounted collectors, and have been designed to provide energy efficient water heating and installation flexibility, without compromising the aesthetics of the home.

Split configured systems are available with the choice of flat plate or evacuated tube collectors to best suit each individual application along with a storage tank, available in a variety of sizes to suit a variety of applications.

All split configured systems are available with the choice of either gas or electric auxiliary boosting to provide reliable hot water in any weather, and to meet the power requirements of your specific location. Gas boosted models feature a highly efficient Midea continuous flow water heater while the electric-boosted models feature an in-tank heating element to supplement the heating required on days of high consumption and/or low solar gain.

Image: Gas boosted SplitLine system with dual BlackMax collectors



## SplitLine with Flat Plate Collector



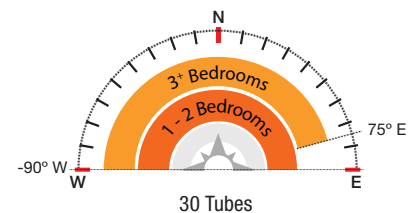
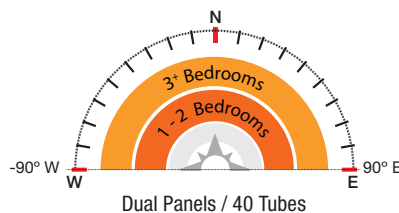
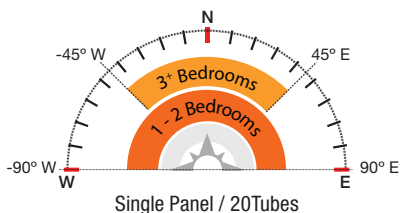
Storage Tank		Standard (150L / 200L)	Large (300L)	X-Large (400L)
Thermal Collector	Flat Plate: EcoBlue	1 Panel	2 Panels	2 Panels
	Flat Plate: BlackMax	2 Panels	2 Panels	2 Panels
Auxiliary Boost Options	Gas	✓	✓	✓
	Electric	-	✓	✓
System Configurations	Open Loop	✓	✓	✓
	Closed Loop	-	-	-
Frost Protection	Auto Temp Regulation	Standard Inclusion		
	Mechanical Frost Valve	Recommended in Frost Prone Areas		

## SplitLine with Evacuated Tube Collector



Storage Tank		Standard (150L / 200L)	Large (300L)	X-Large (400L)
Thermal Collector	Evacuated Tubes	20 Tubes	30 Tubes	40 Tubes
Auxiliary Boost Options	Gas	✓	✓	✓
	Electric	-	✓	✓
System Configurations	Open Loop	✓	✓	✓
	Closed Loop	-	-	-
Frost Protection	Auto Temp Regulation	Standard Inclusion		
	Mechanical Frost Valve	Not Required		

### Collector Orientation Allowance



## How Chromagen's SplitLine Solar Hot Water Works:

1. Roof-mounted thermal collectors harness the free abundant heat energy from the sun
2. Water from the tank is circulated via a small pump through the roof-mounted collectors and is heated
3. The heated water returns to the tank and is stored for later use
4. On days of high consumption and/or low solar gain an in tank electric element or gas continuous flow booster assists in reaching the desired water temperature





---

## Roof Mounted Systems

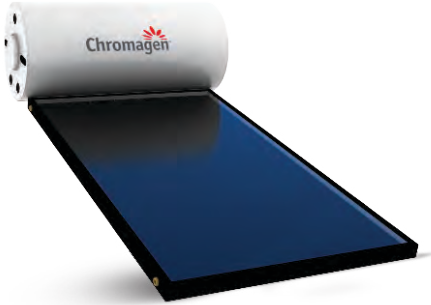
Chromagen's roof configured solar water heaters include a range of traditional close-coupled thermosiphon (RoofLine) systems and a specialised low lying (LowLine) 'tank under panel' option. All roof systems bring both the solar collector(s) and storage tank to the one roof location, which make them ideal for applications where available ground space is limited.

The RoofLine range of systems are highly efficient and use natural thermal convection to circulate hot water from the collectors to the tank without the need for electric pumps.

The LowLine system addresses applications where exposed flat roof areas require a more discreet solution to maintain the aesthetics and visual integrity of the building. This variant uses a small electric pump and controller to circulate the water between the collectors and the tank.

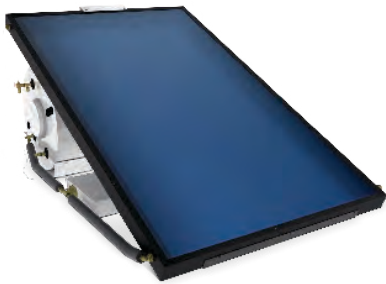
Image: RoofLine system with dual BlackMax collectors

## RoofLine with Flat Plate Collector



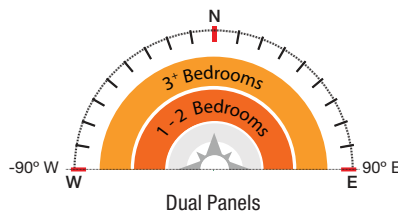
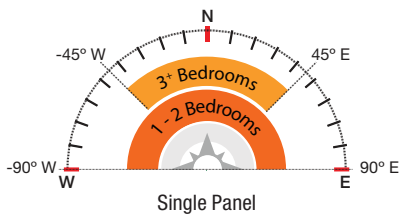
Storage Tank		Standard (200L)	Large (300L)
Thermal Collector	Flat Plate: EcoBlue	1 Panel	2 Panels
	Flat Plate: BlackMax	-	2 Panels
Auxiliary Boost Options	Gas	✓	✓
	Electric	-	✓
System Configurations	Open Loop	✓	✓
	Closed Loop	-	-
Frost Protection	Auto Temp Regulation	-	-
	Mechanical Frost Valve	Recommended in Frost Prone Areas	

## LowLine with Flat Plate Collector



Storage Tank		Standard (200L)
Thermal Collector	Flat Plate: EcoBlue	1 Panel
Auxiliary Boost Options	Gas	✓
	Electric	-
System Configurations	Open Loop	✓
	Closed Loop	-
Frost Protection	Auto Temp Regulation	Standard Inclusion
	Mechanical Frost Valve	Recommended in Frost Prone Areas

### Collector Orientation Allowance



## How Chromagen's RoofLine Solar Hot Water Works:

1. Roof-mounted thermal collectors harness the free abundant heat energy from the sun
2. Water from the tank is circulated through the collectors and is heated
3. The heated water returns to the tank using natural thermal convection, and is stored for later use.
4. On days of high consumption and/or low solar gain an in tank electric element or gas continuous flow booster assists in reaching the desired water temperature



# Component Specifications

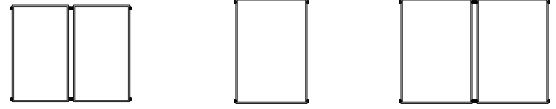
## Flat Plate Collectors

Solar hot water systems may include one of two high quality flat plate collectors, including **BlackMax** collectors or the premium **EcoBlue** collectors that consist of the latest "Blue Sputter" coating technology, providing the ultimate thermal absorption properties for ultimate efficiency. The advanced EcoBlue collectors allow Chromagen to offer single-panel system options.



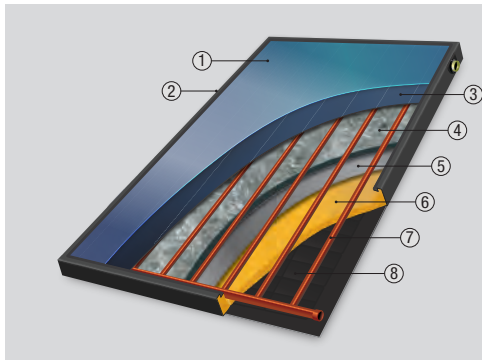
### Residential Warranty

**5 Year** Product  
**3 Year** Labour



### General Specifications

Model / Type	BlackMax		EcoBlue	
	2 Panel		1 Panels	2 Panels
Total Width x Height x Depth (mm)	2224 x 2187 x 90		1274 x 2187 x 90	2628 x 2187 x 90
Total Gross Area (m <sup>2</sup> )	4.86		2.79	5.75
Aperture Area / Absorber Area (m <sup>2</sup> )	4.28 / 4.10		2.56 / 2.54	5.12 / 5.08
Cover Thickness (mm)	3.2		3.2	3.2
Collector Weight empty / full (kg)	74 / 88		43 / 47	86 / 94
Maximum Pressure (kPa)	1000		1200	1200
Manifold / Riser Diameter (mm)	22.23 / 12		22.23 / 12	22.23 / 12
Heat Transfer medium	Water / Glycol		Water / Glycol	Water / Glycol
Fluid content (litres)	7.1		4.1	8.2



### Material Specifications

	BlackMax	EcoBlue
1 Panel Cover Material	Low iron, tempered glass	Low iron, tempered glass
2 Frame / Casing	Black Coated Galvanised Steel	Black Coated Galvanised Steel
3 Absorber Plate / Treatment	Aluminium / Selective Black Paint	Aluminium / Selective Blue Sputter
4 Upper Insulation	-	Glass wool
5 Insulation Barrier	Aluminium Foil	Aluminium Foil
6 Lower Insulation	Polyurethane	Polyurethane
7 Tube grid material	Copper	Copper
8 Backing Plate	Polypropylene	Polypropylene
Construction Type	Ultrasonically welded plate	Ultrasonically welded plate

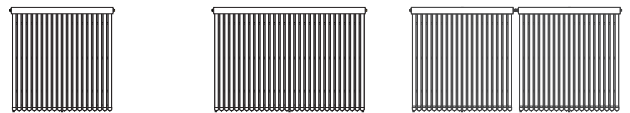
## Evacuated Tube Collectors

Evacuated tube collectors are designed to efficiently collect the thermal energy from the sun in a variety of challenging conditions. Utilising a vacuum which allows for the ultimate in heat retention, the tubes themselves contain no water; therefore are not subjected to freezing, making them ideal for cold climates. Along with a single large bore header pipe, evacuated tubes are ideal for hard water applications.



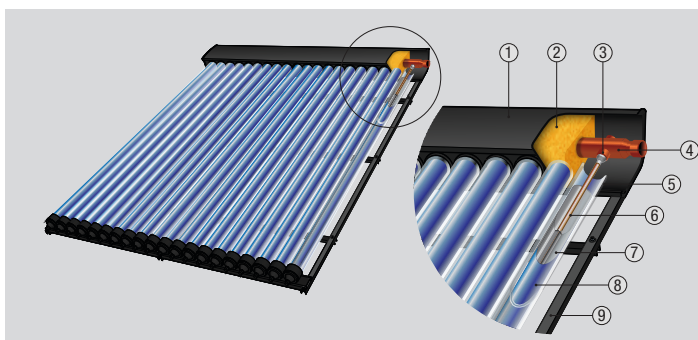
### Residential Warranty

**5 Year** Product  
**3 Year** Labour



### General Specifications

Model / Type	20 Tubes	30 Tubes	40 Tubes
Total Width x Height x Depth (mm)	1660 x 2020 x 155	2440 x 2020 x 155	3400 x 2020 x 155
Number of tubes per collector rack	20	30	40
Length of tubes (mm)	1800	1800	1800
Total Gross Area (m <sup>2</sup> )	4.1	6.2	8.3
Aperture Area / Absorber Area (m <sup>2</sup> )	1.88 / 1.6	2.82 / 2.4	3.76 / 3.2
Cover tube / Inner tube diameter (mm)	58 / 47	58 / 47	58 / 47
Cover tube glass thickness (mm)	1.6	1.6	1.6
Collector Weight Empty / Full (kg)	79 / 81	119 / 121	158 / 162
Maximum / Operating Pressure (kPa)	1000 / 600	1000 / 600	1000 / 600



### Material Specifications

1 Header block & mounting Frame	Black coated aluminium
2 Header pipe insulation	Polyurethane, mineral wool foam
3 Heat pipe absorber	Copper
4 Header pipe	Copper
5 Outer tube (Twin layer with vacuum)	Borosilicate glass 3.3
6 Heat rod	Copper with internal heat exchanger fluid
7 Inner tube	Aluminium
8 Inner tube absorber surface treatment	Ultra-selective coating



## Storage Tanks

Chromagen's thermal tanks are specifically designed for the efficient storage of solar-heated water. Our world-class thermal storage tanks are the result of decades of design evolution. This has resulted in a product with state-of-the-art engineering, rugged construction and carefully selected materials, providing the ultimate in thermal insulation and a long service life in Australia's harsh conditions.



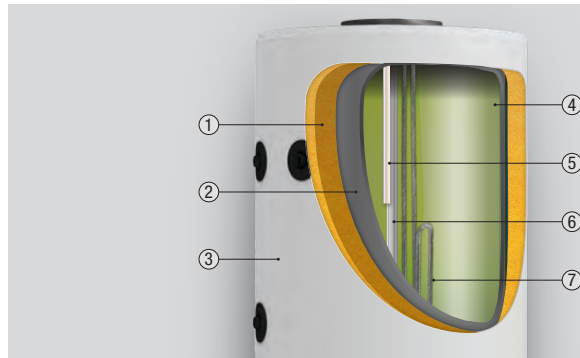
### Residential Warranty (Applicable to Tank Cylinder)

**5 Year** Product  
**3 Year** Labour

### General Specifications

Tank Orientation	Vertical			Horizontal	
	Standard*	Large	Extra Large	Standard	Large
Storage Size	Standard*	Large	Extra Large	Standard	Large
Storage capacity (L)	150 / 200	300	400	200	300
Diameter (mm)	470 / 510	651	650	585	585
Height / Length (mm)	1560 / 1680	1434	1765	1241	1809
Cold water inlet (mm from base)	245 / 255	261	271	162	162
Sensor point (mm from base)	245 / 255	261	450	-	-
Hot outlet (mm from base)	1315 / 1425	1051	1466	468	468
Collector cold flow (mm from base)	245 / 255	261	271	162	162
Collector return (mm from base)	545 / 555	620	630	162	162
Dry weight (kg)	44 / 52	91	126	65	97

\* Standard tank uses 150L tank for single flat plate & evacuated tube collectors / 200L tank for dual flat plate collectors



### Material Specifications

1	Insulation	Thick polyurethane layer
2	Storage tank	Mild steel
3	External coating	Baked polyester coated galvanized steel
4	Internal coating	Vitreous enamel layer
5	Built in thermostat	Pre-set temperature setting (Electric systems only)
6	Sacrificial anode	Magnesium
7	Electric element	Auxiliary boost (Electric systems only)

## Auxiliary Boosting

### Gas Boosting

When there's not enough solar to get the job done, a Midea gas boost will supplement the heating required to ensure you are never without hot water. Featuring a high 6+ Star energy rating, these units are highly efficient, heating water on demand.



### Residential Warranty

**10 Year** Heat Exchanger  
**3 Year** Parts & Labour

### General Specifications

	M20	M26
Model	M20	M26
Energy Star Rating	6.5	6.3
Thermal Efficiency (%)	84.1	84.0
Flue System	Forced Flued External	
Rating (l/min @ 25°C rise)	20	26
Nominal Gas Consumption (MJ/h)	160	200
Weight (kg)	16	21.5
Height x Width x Depth (mm)	595 x 375 x 165	645 x 413 x 195
Water connection diameter (mm)	15 BSP	
Gas connection diameter (mm)	20 BSP	
Water Pressure Min / Max (kPa)	150 / 1000	
Water Pressure Optimal (kPa)	350	
Min operating flow rate (l/min)	2.5 (min 3.0 for start up)	
Anti-frost	Standard	
Power Supply Mains Voltage (AC)	240V / 50Hz	
Power Supply Controller Voltage (DC)	12	
Ignition	Electronic	
Gas Types	Natural Gas / LPG (Propane)	

### Electric Boosting

In electric only areas, tanks are fitted with an in-tank electric heating element to increase the heat of the stored water on days of high consumption and/or low solar gain.



### Residential Warranty

**1 Year** Product  
**1 Year** Labour

### General Specifications

Model	2.3	3.6
Capacity	2.3kW	3.6kW
Length (mm)	820	820
Weight (kg)	0.5	0.5

Note: above lengths applicable to vertically fitted elements only

NOTE: An approved tempering valve must be fitted on the hot water outlet from the gas booster (for gas systems) & on the hot water outlet on the tank (for electric systems). WARNING: Do not use plastic pipe between the storage tank and solar collector panels. To do so will have catastrophic consequences. Insulation of copper flow and return lines must be in accordance with AS 3500.4 industry standard.

## Flat Roof Stand

For flat or low pitched roofs, collectors can be mounted with an optional stand to ensure they are angled for the best solar gain. Specialised stands are also available for collector and tank mounting for RoofLine systems to maintain the natural solar convection.



### Collector Only

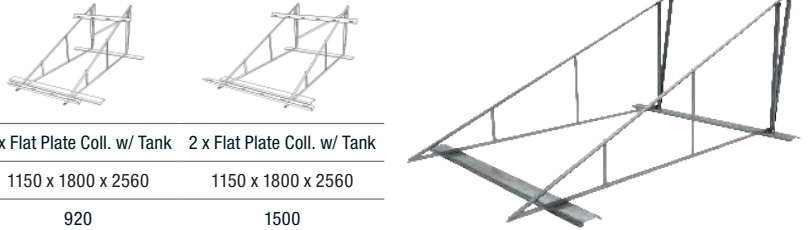
Model / Type	1 x Flat Plate Collector	2 x Flat Plate Collector	20 x Evacuated Tubes	30 x Evacuated Tubes
Dimensions (H x W x D) (mm)	1125 x 1800 x 2050	1125 x 1800 x 2050	1125 x 2440 x 2050	1125 x 2440 x 2050
Recommended Leg Spacing	920	1500	780	1170

\* Height shown as maximum. Stand is adjustable



### Collector & Tank

Model / Type	1 x Flat Plate Coll. w/ Tank	2 x Flat Plate Coll. w/ Tank
Dimensions (H x W x D) (mm)	1150 x 1800 x 2560	1150 x 1800 x 2560
Leg Spacing	920	1500

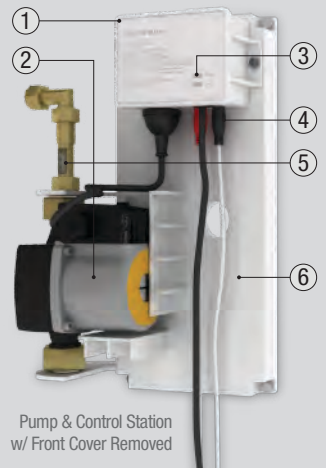


### Residential Warranty

1 Year Product ..... 1 Year Labour

## Solar Pump & Control Station

All split systems include a low energy consumption solar pump and an advanced solar controller kit. The included controller is a differential thermostat controller that continuously monitors the temperature difference between the tank sensor and the roof mounted collector sensor and in turn controls the solar circulation for the most efficient operation.



Pump & Control Station w/ Front Cover Removed

### General Specifications

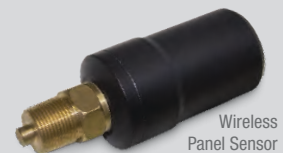
1 Solar controller	Providing reliable management of solar heating for most efficient operation
2 Circulation pump	Quality Grundfos circulation pump for efficient & dependable service
3 Warning indicators	Visual LEDs with audio alerts for error notifications
4 Sensor leads	Providing communication between the panels, tank and controller
5 Flow valve control	Controlling the solar flow for maximum heat transfer
6 Housing	Unique two piece plastic housing for greater integration with storage tank

### Residential Warranty

1 Year Product ..... 1 Year Labour

## Wireless Solar Controller & Sensor (Optional)

The latest in solar control is the optional advanced wireless solar controller kit, which includes a wireless enabled controller and a wireless collector sensor, eliminating the need for a physically hard wired connection between the tank mounted controller and the roof top collectors. This advanced controller is fully automated and does not require any adjustment or configuration.



Wireless Panel Sensor



Mech. Frost Valve

## Frost Protection

Chromagen pumped systems can employ two control methods against frost, this includes:

1. Automatic Temperature Regulation (Standard inclusion): Activated by the solar controller, the pump circulates water through the collectors to reduce the likelihood of water freezing in the panels.
2. Mechanical Frost Valve (Optional extra): Designed to open at a low temperature to allow water flow through the solar collectors to prevent the formation of ice inside the collector and pipe work.

### Residential Warranty

1 Year Product .....

1 Year Labour

Hot Water Solutions by  
**Chromagen**<sup>TM</sup>  
 Solar & Energy Solutions

chromagen.com.au | 1300 367 565

Solar Water Heaters | Continuous Flow Water Heaters | Heat Pump Water Heaters | Solar Power Systems