

This guide takes you through a simple process to specify and order solar water heating systems for straightforward design situations such as single dwellings. Viridian Solar has a much wider range of solar products and systems available. If you need to demonstrate compliance with a specific energy target or develop a design for a more complex building, then contact us and we will be pleased to help.

1. Select Solar Roofing Kit

Average Occupancy	-	-	+
Recommended Solar Panel Area	2 - 3 m ²	3 - 4 m ²	4 - 6 m ²

Select the area of panel based on average (not maximum) occupancy of the property. For less advantageous orientation (e.g. due East or West) choose an area at the upper end of the scale.

Integrated Pitched Roof Installation

2m ²	V20 V 2 0 - 1	3m ²	V30 V 3 0 - 1
4m ²	V20 V20 V 2 0 - 2		V15 V15 V 1 5 - 2
4.5m ²	V15 V15 V15 V 1 5 - 3		
6m ²	V30 V30 V 3 0 - 2	V15 V15 V15 V15 V 1 5 - 4	V20 V20 V20 V 2 0 - 3

Flat Roof Installation

2m ²	V20E V 2 0 E - 1	3m ²	V30E V 3 0 E - 1
4m ²	V20E V20E V 2 0 E - 2		V15E V15E V 1 5 E - 2
6m ²	V30E V30E V 3 0 E - 2	V20E V20E V20E V 2 0 E - 3	

Panel Format

Installed Individually	Installed Joined Together
V - - - A	V - - - J

Roof Covering

Tiles thicker than 19mm	Slates thinner than 10mm
V - - - T	V - - - S

Tilt Angle

Optimum energy	Low profile (-10% energy)
V - E - - 3 5	V - E - - 1 0

Hold-Down

Mechanical fix to roof structure	Weigh down with 450 x 600 mm paving slabs
V - E - - F	V - E - - B

2. Signal Cable Kit

20m signal cable to connect between panel temperature sensor and controller. Order at least one kit. Additional V223 kits should be used to extend length.

V223 For roof integrated panels and cable extension

V224 For first connection to flat roof panels

3. Select Plumbing Kit

Pipes can be installed with a continuous fall and height restrictions are met. Choose simple drain-back plumbing kit.

V200

Pipes cannot be installed with a continuous fall or height restrictions are not met. Choose pressurised plumbing kit.

V260

4. Add Solar-Optimised Cylinder

Solar Panel Area (m ²)	2	3	4	6
Recommended Product Code	V518	V521	V525	V530
Total Cylinder Volume (litres)	180	210	250	300
Solar Dedicated Volume (litres)	90	105	110	125
Boiler/Immersion Volume (litres)	90	105	140	175

Check that boiler/immersion volume is sufficient for the hot water demand for days with limited solar heat (allow 30-50 litres/person).

Twin coil cylinder for use with boiler or heat pump.

V5

Single coil cylinder with electric immersion heater.

V5E

5. Clearline Aura - Solar Energy Display



V212

Colour touch-screen display communicates wirelessly with your V200 or V260 solar plumbing kit. Intuitive interface shows temperatures and energy, with historical values logged and presented in graphical format.

Also available



Clearline PV solar photovoltaic panels are available in matching sizes. They can be installed alongside Clearline heating panels and have a matched aesthetic.

If you are interested in installing PV at the same time as solar heating, contact us.

Worked Example

- Family of three with a South facing roof. Choose 3m². Dormer windows limit length of roof, choose 2 V15 panels. V15-2-R
- Preference for look of spaced-apart panels. V15-2-A-R
- Slate roof covering, completes roof kit code. V15-2-ASR
- Top of panel >4.5m higher than controller, select V260. Single signal cable has adequate length. V260 V223 x 1
- Cylinder to be used with boiler. Sized for panel area V521, but family considers itself high water use, so increase to V525 giving 47 litres per person boiler heated volume. V525
- Family interested to get the most out of their solar system. Add Clearline Aura. V212

ORDER

- Pitched Roofing Kit V - - - R
- Flat Roofing Kit V E - - -
- Signal Cable Kit V223 x V224 x
- Plumbing Kit V20
- Solar Cylinder V5
- Clearline Aura V212