

# VHL20

## On-roof Solar Heating Panels

# Highline



- Clean, frameless aesthetic
- Ceramic edge pattern on coverglass, black frame and black mounting rail combine to give smart appearance
- Easy-align hydraulic connections
- Rapid roof fixing
- Robust build quality



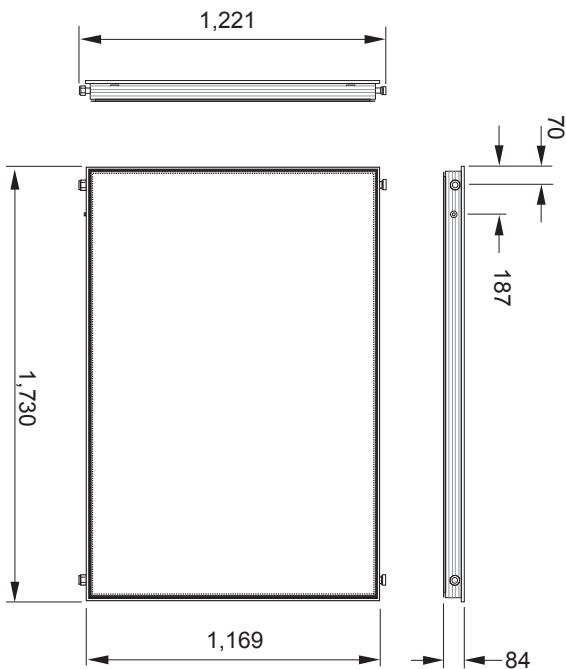
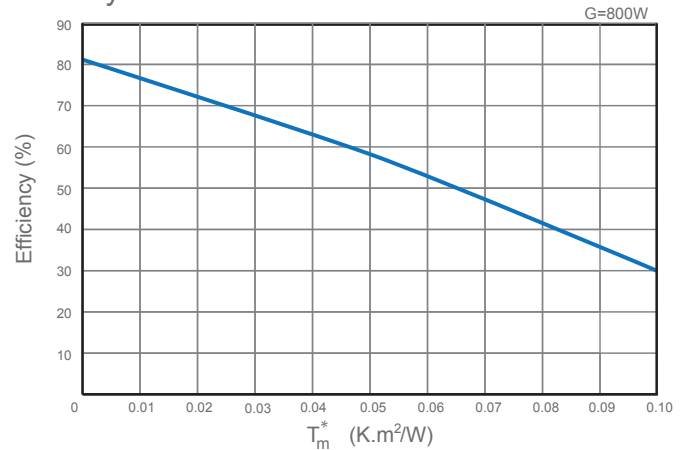
### Mechanical Specification

Model		VHL20
Width	mm	1,169
Height	mm	1,730
Thickness	mm	83.9
Weight (empty)	kg	31.9
Weight (full)	kg	33.5
Rated Flow	litres/hour	60
Pressure Drop at Rated Flow	kPa	0.2
Fluid Volume	litres	1.56
Max. Hydraulic Pressure	bar	10.0
Characteristic Wind Resistance	kPa	1.1
Warranty	years	10
Standards		EN 12975, solar keymark

### Performance Specification

Model		VHL20
Aperture Area	m <sup>2</sup>	1.84
Zero Loss Efficiency	$h_0$	0.814
Heat Loss Coefficient	$a_1$	W/m <sup>2</sup> K
Second Order	$a_2$	W/m <sup>2</sup> K <sup>2</sup>
I.A.M. (50°)	$k_{\theta}$	0.98
Effective Heat Capacity	$C_{eff}$	kJ/m <sup>2</sup> K
		5.94

### Efficiency Curve



### Also available



Clearline  
In-roof solar panels



Solar Pump Stations  
Drainback and pressurised



Symphony Cylinder  
Optimised for solar energy

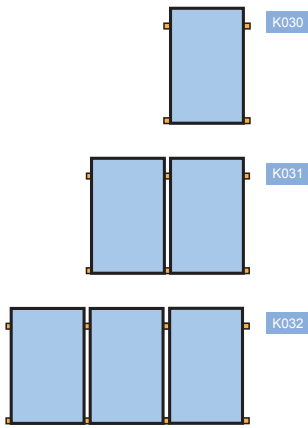


Clearline Aura  
Wireless solar energy display



# VHL20 On-roof Solar Heating Panels

## Kits



Kit Code	K030	K031	K032
Aperture Area (m <sup>2</sup> )	1.91	3.82	5.73
Min roof anchors	4	8	10
Contents:			
VHL20	1	2	3
10110	-	1	1
10111	1	-	1
10112	-	-	1
10115	1	1	1
10117	-	1	2
10118	1	2	3
20100	1	1	1

### Roof Anchors

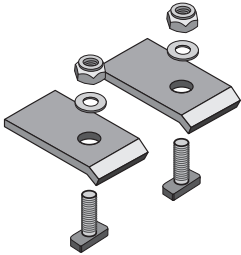
The table shows the minimum number of roof anchors required to achieve the characteristic wind uplift resistance of -1,100Pa / positive pressure resistance of 2,000Pa.

Add a 'T' to the kit code to include V4523 anchors  
Add an 'S' to the kit code for V4522 anchors

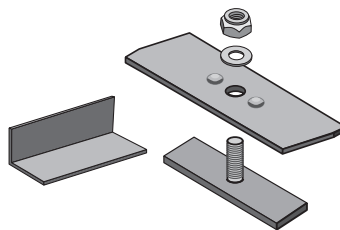
For example kit K031T will include 8 x V4523

## Components

10115  
Panel clamp set for VHL20



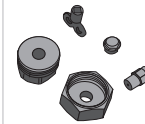
10117  
Clamp kit & jig for each additional VHL20



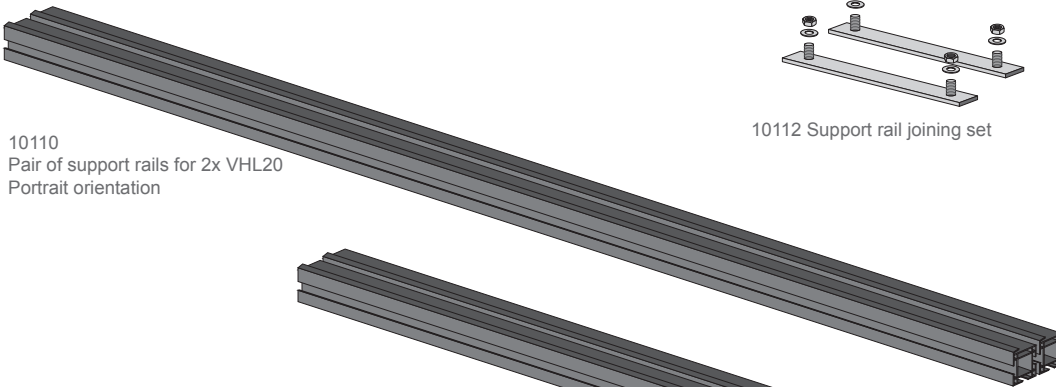
10118  
Hammer head bolt 4 pk.



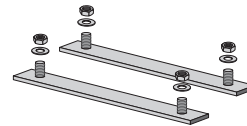
20100  
Hydraulic connecting set



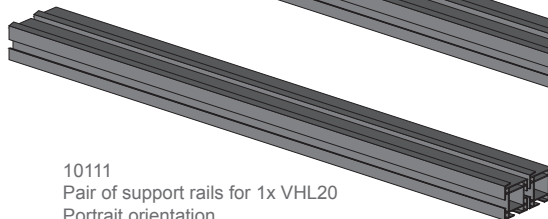
10110  
Pair of support rails for 2x VHL20  
Portrait orientation



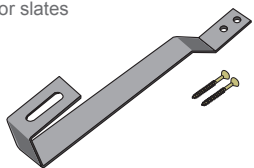
10112 Support rail joining set



10111  
Pair of support rails for 1x VHL20  
Portrait orientation

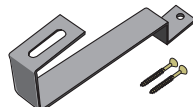


V4522 Roof Anchor  
for slates



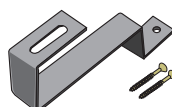
Natural and Fibre Cement Slates

V4521 Roof Anchor  
for plain tiles



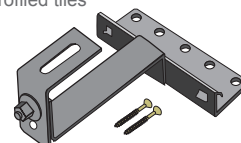
Rosemary

V4520 Roof Anchor  
for large format plain tiles



Stonewold, Mini Stonewold,  
Modern Duo, Ludlow

V4523 Roof Anchor  
for profiled tiles



Double Roman, Ashmore, Wessex, Mendip, Anglia,  
Grovebury, Regent, Renown, Norfolk Pantile,  
Landmark Pantile