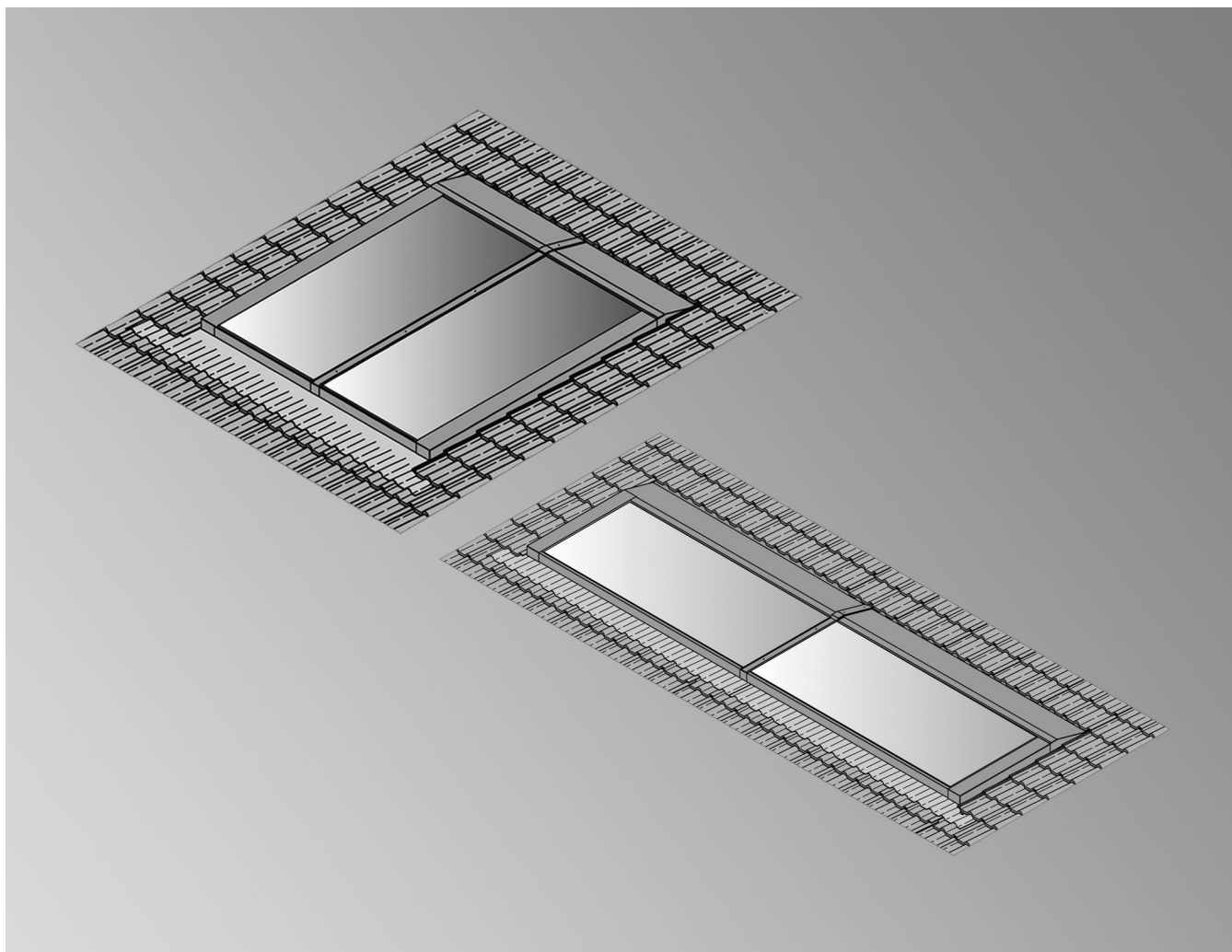


## Datasheet

Part no. and prices: See pricelist



### **VITOSOL 200-FM** Type SV2G and SH2G

**Flat-plate collector with ThermProtect automatic temperature-dependent shutdown.**

For roof integration on pitched roofs

For vertical installation in single or double rows

For horizontal installation in a single row

## Product description – Vitosol 200-FM, type SV2G and SH2G

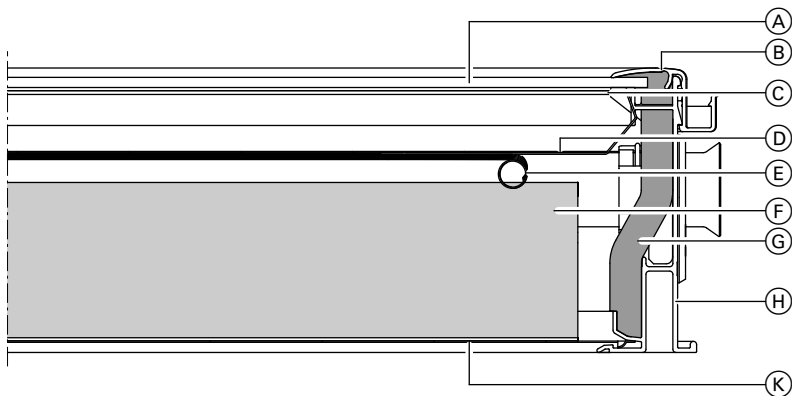
Vitosol 200-FM, type SV2G and SH2G are designed specifically for roof integration on pitched roofs.

The main component of the Vitosol 200-FM is the absorber with highly selective coating and ThermProtect switching absorber layer. It ensures high absorption of insolation and low emission of thermal radiation. A meander-shaped copper pipe through which the heat transfer medium flows is fitted to the absorber.

The heat transfer medium absorbs the heat from the absorber through the copper pipe. The absorber is encased in a highly insulated collector housing that minimises the heat losses of the collector. The high grade thermal insulation provides temperature stability and is non-outgassing. The collector is covered with a solar glass panel. The glass has a very low iron content which reduces reflection losses.

Up to 10 collectors can be combined to create a single collector array. For this purpose, the standard delivery includes flexible connection pipes with O-rings.

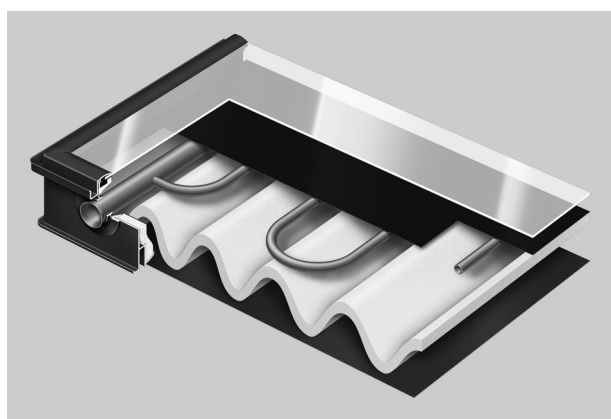
A connection set with locking ring fittings enables the collector array to be readily connected to the solar circuit pipework. The collector temperature sensor is mounted in a sensor well set, located in the solar circuit flow.



- |  |  |
|--|--|
| (A) Solar glass cover, 3.2 mm  | (E) Meander-shaped copper pipe                   |
| (B) Aluminium cover strip in dark blue, with mount for casing panels | (F) Melamine resin foam insulation               |
| (C) Pane seal  | (G) Melamine resin foam insulation               |
| (D) Absorber   | (H) Aluminium frame in dark blue                 |
|  | (K) Steel base plate with aluminium-zinc coating |

### Benefits

- Powerful flat-plate collectors for above roof and flat roof installation with ThermProtect automatic temperature-dependent shutdown for a vapour-free, fail-safe solar thermal system.
- Absorber designed with meander layout with integral headers. Up to 10 collectors can be linked in parallel.
- Attractive collector design, special in-roof frame in dark blue; for the large area flat-plate collector in RAL 7016 (anthracite). On request, the frame is also available in any other RAL colour.
- The absorber with selective coating, the stable, highly transparent cover made from special glass, and the highly effective thermal insulation ensure excellent solar yields.
- Permanently sealed and highly stable thanks to all-round folded aluminium frame.
- Puncture-proof and corrosion-resistant back panel
- Easy to install Viessmann flashing frame; installation directly on the roof structure (no pan). Optimum integration of collectors into the roof.
- Quick and reliable collector connection through flexible corrugated stainless steel pipe push-fit connectors



### Specification

For locations between 100 and 1000 m from the coast, we **recommend** the Vitosol 200-F, type SV2D (above roof installation). In close proximity to the coast (up to 100 m), **only** use the Vitosol 200-F, type SV2D (above roof installation). The Vitosol 200-F, type SV2D has a special absorber coating that allows it to be used in coastal regions.

#### Note

*Viessmann accepts no liability for type SV2G or SH2G collectors installed in coastal regions.*

## Product description – Vitosol 200-FM, type SV2G and SH2G (cont.)

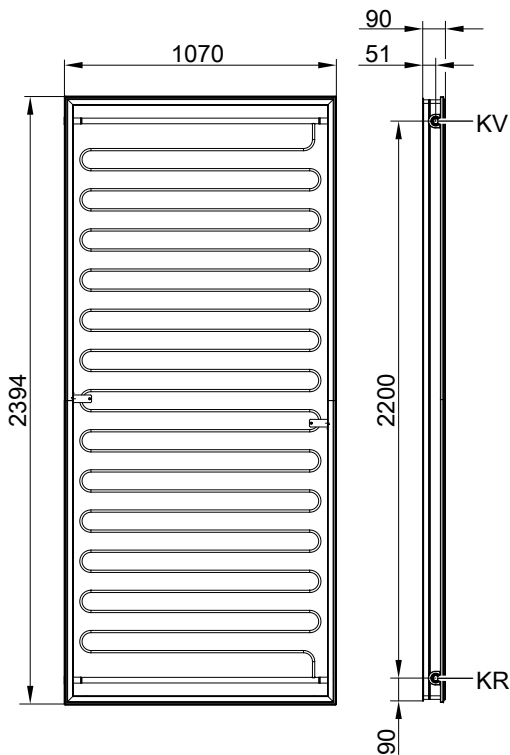
### Specification

Type		SV2G	SH2G
<b>Gross area</b> (required when applying for subsidies)	m <sup>2</sup>	2.56	2.56
<b>Absorber area</b>	m <sup>2</sup>	2.31	2.31
<b>Aperture area</b>	m <sup>2</sup>	2.33	2.33
<b>Clearance between collectors</b>	mm	21	21
<b>Dimensions</b>			
Width	mm	1070	2394
Height	mm	2394	1070
Depth	mm	90	90
Performance values, collector operating range, <b>absorber area</b> :			
– <b>Optical efficiency</b>	%	82.3	82.6
– <b>Heat loss factor k<sub>1</sub></b>	W/(m <sup>2</sup> · K)	4.421	4.380
– <b>Heat loss factor k<sub>2</sub></b>	W/(m <sup>2</sup> · K <sup>2</sup> )	0.022	0.037
Performance values, collector operating range, <b>gross area</b> :			
– <b>Optical efficiency</b>	%	75.7	76.3
– <b>Heat loss factor k<sub>1</sub></b>	W/(m <sup>2</sup> · K)	4.069	4.031
– <b>Heat loss factor k<sub>2</sub></b>	W/(m <sup>2</sup> · K <sup>2</sup> )	0.020	0.034
Theoretical performance values across the entire temperature range, <b>absorber area</b> :			
– <b>Optical efficiency</b>	%	82.7	82.9
– <b>Heat loss factor k<sub>1</sub></b>	W/(m <sup>2</sup> · K)	4.791	4.907
– <b>Heat loss factor k<sub>2</sub></b>	W/(m <sup>2</sup> · K <sup>2</sup> )	0.025	0.029
Theoretical performance values across the entire temperature range, <b>gross area</b> :			
– <b>Optical efficiency</b>	%	76.1	76.3
– <b>Heat loss factor k<sub>1</sub></b>	W/(m <sup>2</sup> · K)	4.410	4.907
– <b>Heat loss factor k<sub>2</sub></b>	W/(m <sup>2</sup> · K <sup>2</sup> )	0.023	0.026
<b>Thermal capacity</b>	kJ/(m <sup>2</sup> · K)	5.0	5.0
<b>Weight</b>	kg	40	39
<b>Liquid capacity (heat transfer medium)</b>	litres	1.83	2.4
<b>Permiss. operating pressure</b> in the collector	bar/MPa	6/0.6	6/0.6
If an 8 bar safety valve is installed in the solar thermal system (accessories)	bar/MPa	8/0.8	8/0.8
<b>Max. stagnation temperature</b>	°C	145	145
<b>Steam-producing power</b>			
– Favourable installation position	W/m <sup>2</sup>		0 <sup>*1</sup>
– Unfavourable installation position	W/m <sup>2</sup>		0 <sup>*1</sup>
<b>Connection</b>	Ø mm		22

### Specification for determining the energy efficiency class (ErP label)

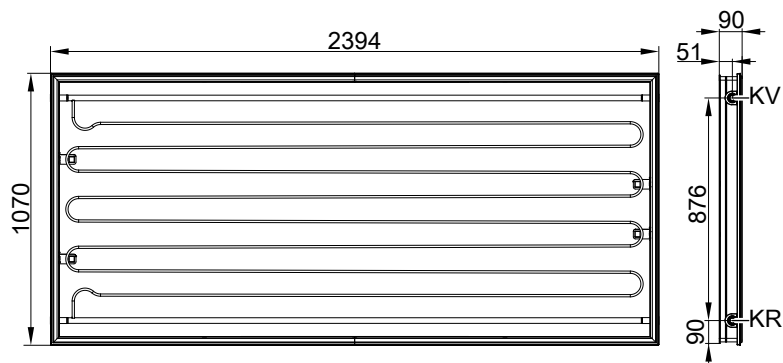
Type		SV2G	SH2G
<b>Aperture area</b>	m <sup>2</sup>	2.33	2.33
The following values apply to the aperture area:			
– <b>Collector efficiency</b> $\eta_{col}$ , at a temperature differential of 40 K	%	59	59
– <b>Optical efficiency</b>	%	82	82
– <b>Linear heat transfer coefficient</b>	W/(m <sup>2</sup> · K)	4.75	4.75
– <b>Quadratic heat transfer coefficient</b>	W/(m <sup>2</sup> · K <sup>2</sup> )	0.024	0.024
<b>Incidence angle modifier</b>	IAM	0.89	0.89

## Product description – Vitosol 200-FM, type SV2G and SH2G (cont.)



Type SV2G

KR Collector return (inlet)  
KV Collector flow (outlet)




Type SH2G

KR Collector return (inlet)  
KV Collector flow (outlet)

## Tested quality

### Tested quality

These collectors meet the requirements of the "Blue Angel" eco-label to RAL UZ 73.  
Tested in accordance with Solar KEYMARK to EN 12975 or ISO 9806.

 CE designation according to current EC Directives



Subject to technical modifications.

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