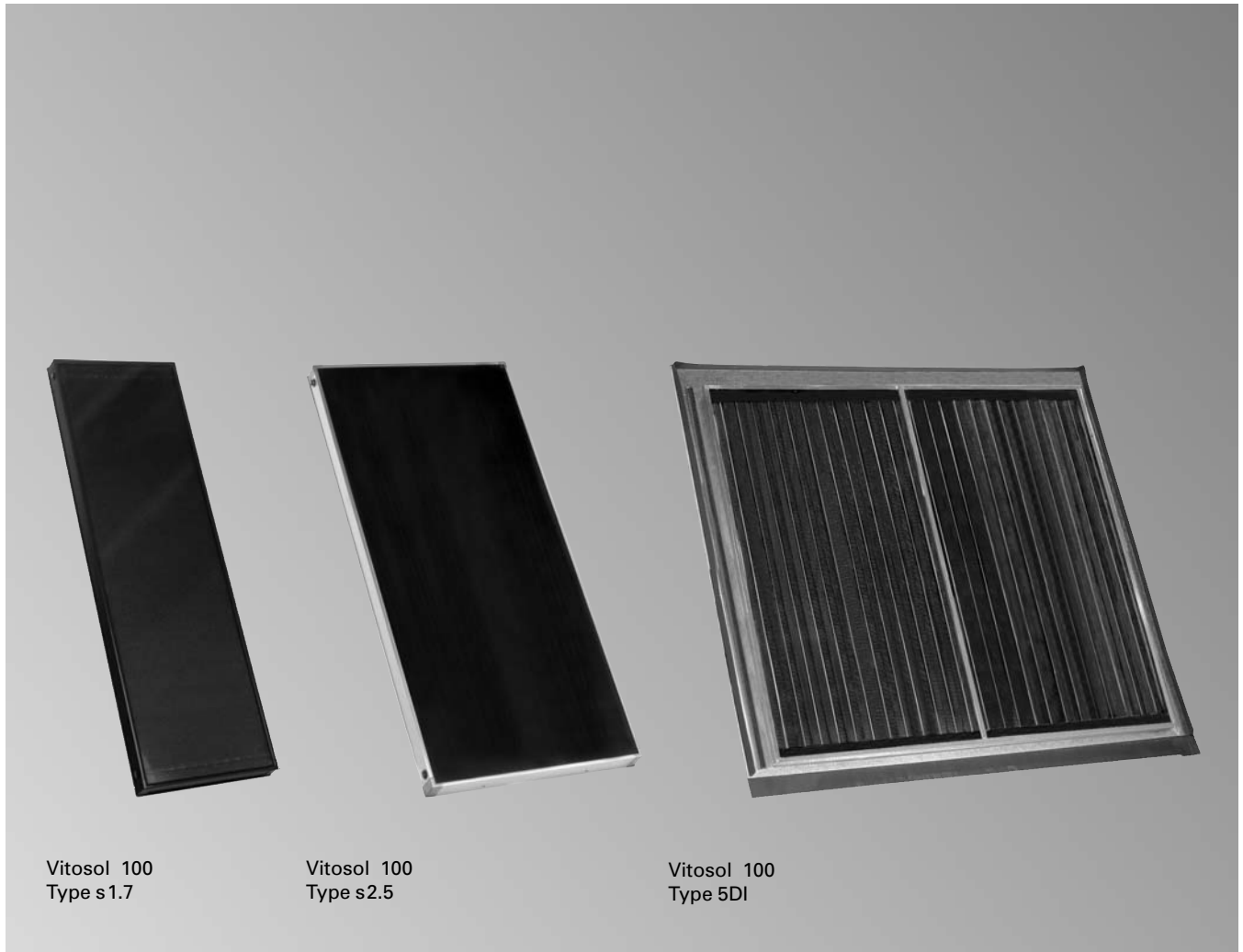


Data Sheet

Part nos. and prices: see price list



File in:
Vitotec 1 Manual, Index 16



Vitosol 100
Type s1.7

Vitosol 100
Type s2.5

Vitosol 100
Type 5DI

Vitosol 100

Flat collectors (1.7 or 2.5 m² absorber surface)
type s1.7; w1.7; s2.5 and w2.5

for installation on flat and pitched roofs and for integration into the roof and for free-standing installation

Large area flat collectors (5 m² absorber surface)
type 5DI

for roof integration on pitched roofs with roof tile cover

For heating DHW, for low-temperature heating systems and swimming pool water via a heat exchanger

Pressure rating up to 6 bar



CE symbol in accordance with current EU guidelines



"Blue Angel" certificate of environmental excellence for flat collector Vitosol 100, type s/w1.7 and s/w2.5, granted in accordance with RAL-UZ 73



Certified acc. to DIN ISO 9001
Certificate no. 12 100 5581



SPF quality seal (quality assurance test by the Solarenergie Prüf-und Forschungsstelle, Rapperswil (Switzerland)).
For type 5DI applied for.

Product information

VITOSOL 100

type s/w1.7 and s/w2.5

Benefits at a glance

- Flat solar collector with highly efficient Sol-titanium coating.
- Collector area: 1.7 m² and 2.5 m² for horizontal and vertical installations.
- High efficiency through highly selectively coated absorber, integrated piping and highly efficient thermal insulation.
- Quick installation assured through flexible connection pipes. Up to ten collectors can easily be connected in series.
- Vitosol 100 finds universal application: on flat and pitched roofs, on top of roof coverings and integrated into the roof or free-standing.
- "Blue Angel" certificate of environmental excellence, quality test SPF Institut, Rapperswil.



Vitosol 100 – flat solar collector with Sol-titanium coating

VITOSOL 100

type 5DI

Benefits at a glance

- Large area flat collector with highly efficient Sol-titanium coating.
- High efficiency through selectively coated absorber, integrated piping and highly efficient thermal insulation.
- Quick installation assured through roofing frame for roof integration mounted on the collector, with flexible connections and lifting eyes.
- Type meets the requirements of the "Blue Angel" certificate of environmental excellence.

Function description

The main component of Vitosol 100 is the Sol-titanium coated copper absorber. It ensures high absorption of solar radiation and low emission of thermal radiation. A copper pipe through which the heat transfer medium flows is fitted to the absorber.

The heat transfer medium absorbs heat from the absorber via the copper pipe.

The absorber is encased in a highly insulated collector housing, which minimises collector heat losses.

The high quality thermal insulation provides temperature stability and is free from gas emissions.

The collector is covered by a solar glass panel. This glass has a very low iron content, thereby reducing reflection losses.

The collector housing comprises an aluminium frame (secondary aluminium), which is powder-coated for types s/w1.7, and natural for types s/w2.5 and 5DI, the solar glass panel is permanently sealed in.

Type s/w1.7 and s/w2.5

Collectors can be combined into a collector array; for type s/w1.7 comprising up to six collectors and for type s/w2.5 up to ten collectors. For this purpose, the standard delivery includes connection pipes, which are sealed with flexible O-rings.

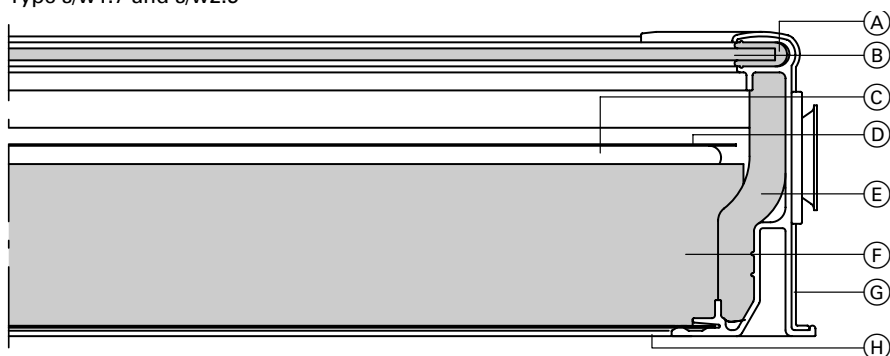
A connection set with clamping ring fittings enables a simple connection of the collector array to the pipework of the solar heating circuit.

A collector temperature sensor is installed into the solar circuit flow via a sensor well set.

Type 5DI

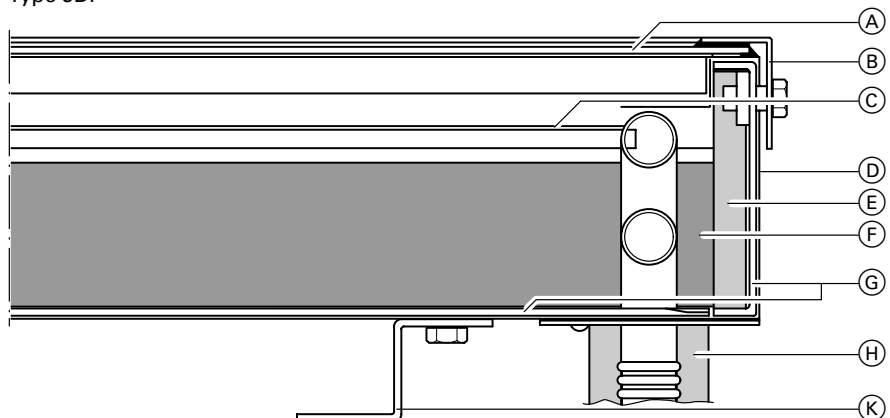
At the back of the collector are flexible, thermally insulated flow and return pipes as well as the sensor well for the collector temperature sensor.

Type s/w1.7 and s/w2.5



- Ⓐ Continuous profiled seal (vulcanised)
- Ⓑ Glass cover of solar glass, 4 mm thick
- Ⓒ Meander-shaped copper pipe
- Ⓓ Copper absorber
- Ⓔ Melamine resin foam
- Ⓕ Mineral fibre insulating mat
- Ⓖ Aluminium frame sections
- Ⓗ Bottom plate of aluminium-zinc

Type 5DI



- Ⓐ Solar glass cover, 4 mm thick
- Ⓑ Aluminium cover frame
- Ⓒ Harp-shaped copper absorber
- Ⓓ Reinforcement frame
- Ⓔ Melamine resin foam
- Ⓕ Mineral fibre insulating mat
- Ⓖ Aluminium housing
- Ⓗ Flexible connection pipe with thermal insulation
- Ⓚ Mounting bracket

Specification

Specification – solar collector Vitosol 100

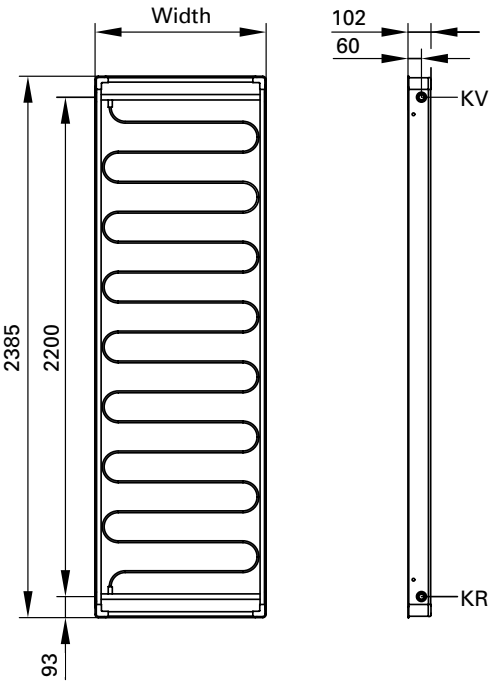
Type		s1.7	w1.7	s2.5	w2.5	5DI
Gross area	m ²	1.80	1.80	2.71	2.71	5.24
Absorber surface area	m ²	1.70	1.70	2.50	2.50	4.83
Aperture area	m ²	1.61	1.61	2.50	2.50	4.89
Dimensions						
Width	mm	753	2385	1138	2385	2570
Height	mm	2385	753	2385	1138	2040
Depth	mm	102	102	102	102	116
Optical efficiency ^{*1}	%	81	81	84	84	81
Heat loss factor k_1 ^{*1}	W/(m ² · K)	3.78	3.78	3.36	3.36	3.89
	k_2 ^{*1}	W/(m ² · K ²)	0.013	0.013	0.013	0.013
Weight	kg	44	44	60	60	105
Liquid content (heat transfer medium)	litres	1.35	2.4	2.2	3.0	4.2
Max. operating pressure ^{*2}	bar	6	6	6	6	6
Max. idle temperature ^{*3}	°C	213	213	211	211	185
Connection	∅ mm	22	22	22	22	22
Space requirement for flat roof installations	m ²	—	approx. 1.54	—	approx. 2.15	—
Requirements of base structure and fixings	a roof design with sufficient strength for the weighting to counteract attacking wind forces					

^{*1}Relative to the absorber surface area.

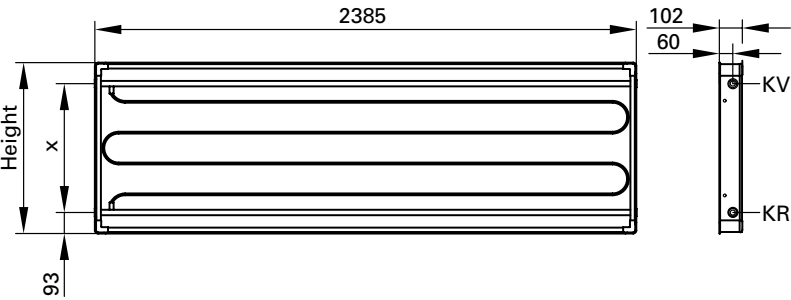
^{*2}The collectors must be pressurised, i.e. in a cold, sealed system at least 1.5 bar.

^{*3}The idle temperature is that temperature, which occurs at the hottest part of the collector at 1000 W global radiation strength, if no heat is drawn off.

Type s1.7 and s2.5



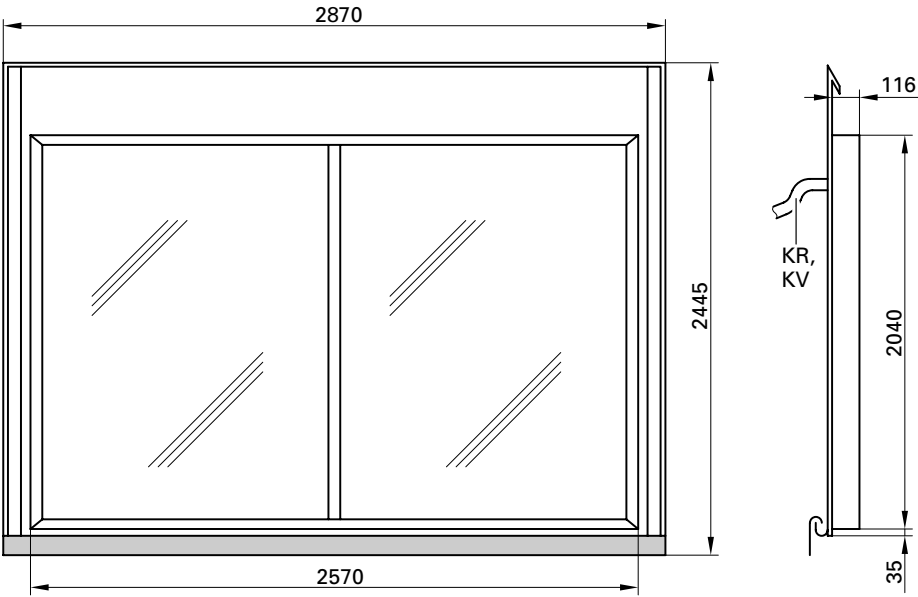
Type w1.7 and w2.5



Type	x mm
w1.7	568
w2.5	953

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

Type 5DI



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

Specification

As delivered condition

Specification – heat transfer medium

Non-toxic liquid for solar heating systems with active anti-corrosion and anti-ageing protection.

Frost protection: to $-28\text{ }^{\circ}\text{C}$

Specific gravity

at $+20\text{ }^{\circ}\text{C}$: 1.032 to 1.035 g/cm^3
acc. to ASTM D 1122

Viscosity at $20\text{ }^{\circ}\text{C}$: 4.5 to $5.5\text{ mm}^2/\text{s}$ acc.
to DIN 51562

pH: 9.0 to 10.5

acc. to ASTM D 1287

Colour: transparent, red

fluorescent

Container: 25 or 200 litres in a
disposable container

As delivered condition

Vitosol 100, type s/w1.7 and s/w2.5, is delivered ready assembled and ready to connect in shrink-wrap packaging.

Vitosol 100, type 5DI is delivered complete with roofing frame, connection pipes and lifting eyes.

Accessories, subject to order, packed separately:

for type s/w1.7 and s/w2.5

- fixing set with product documentation
- connection pipes with thermal insulation
- connection set
- sensor well set
- spare part set (assorted small parts, which may be lost during the collector installation)

for all types

- Solar-Divicon (pump station for the collector circuit)
- solar pump line (for a second pump circuit)
- air separator
- quick-acting air vent valve with tee and clamping ring fitting
- connection pipes
- installation kit for connection pipe to the DHW cylinder
- solar flow and return pipe
- clamping ring fitting (with or without air vent valve)
- casing for water connections
- filling valve
- manual solar filling pump
- solar heating expansion vessel with shut-off valve
- heat transfer medium
- frost protection tester

Fixing sets for type s/w1.7 and s/w2.5

The fixings sets comprise the components required for each individual installation, such as:

battens, roof hooks, installation plates, installation rails, nuts, connection pieces for installation rails, possibly solar panel support elements for higher snow loads or roofing frames and sealing material for roof integration, clamping bolts, screws.

Please note:

Viessmann offers complete solar heating systems with Vitosol 100 (type s2.5) for DHW heating and/or to support central heating functions (see price list register 16).

Subject to technical modifications.

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