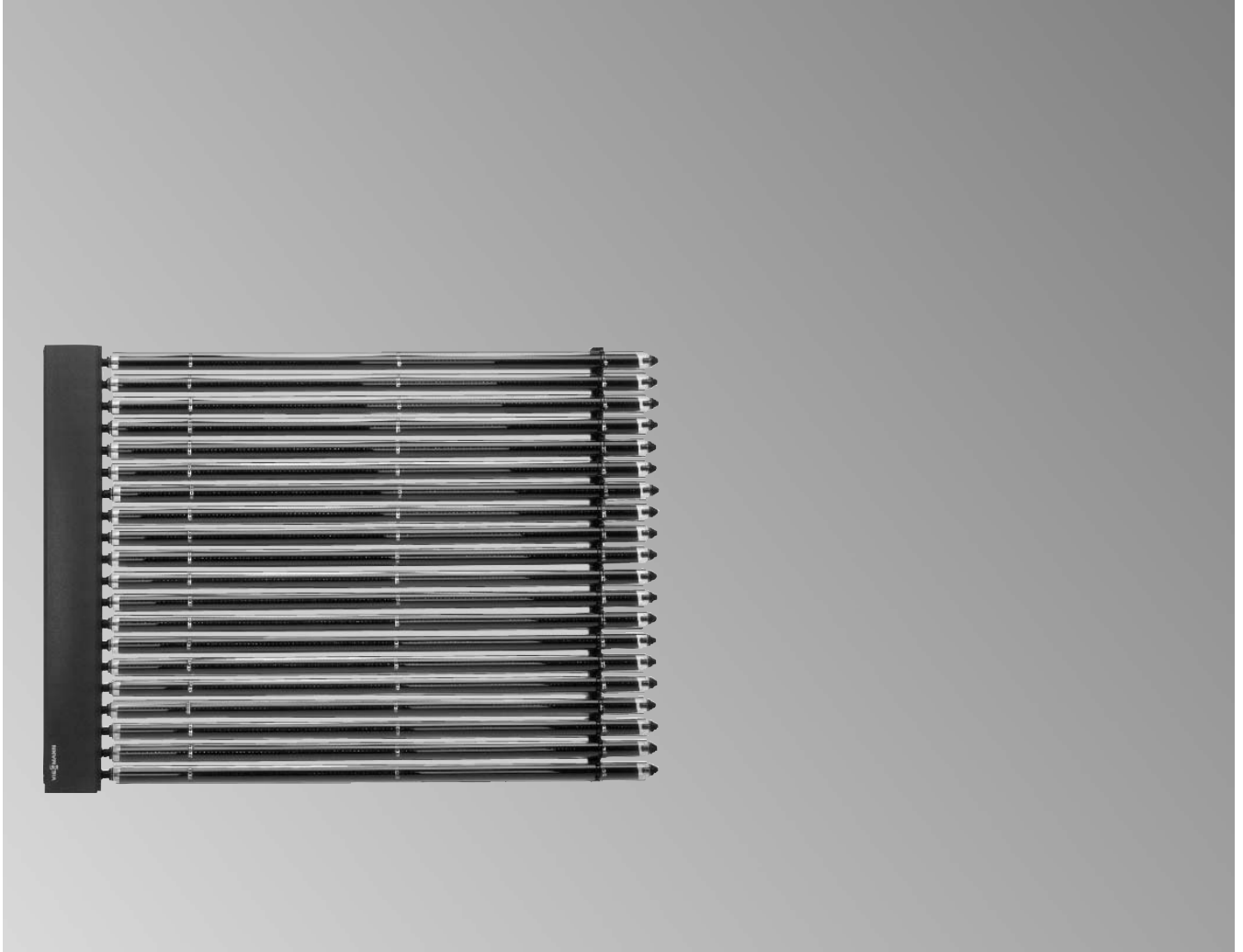


Technical Data

Part No. and prices: see Price List



File in:
Vitotec 1 Manual, Index 16

Vitosol 200

Type D10, D20 and D30

Vacuum tube collector

For installation on pitched and flat roofs, walls/fascias and balustrades.

For heating domestic hot water, low-temperature heating systems and swimming pool water via a heat exchanger

Pressure loading capacity up to 6 bar



"Blue Angel" environmental certificate awarded to the Vitosol 200 vacuum tube collector in accordance with RAL-UZ 73

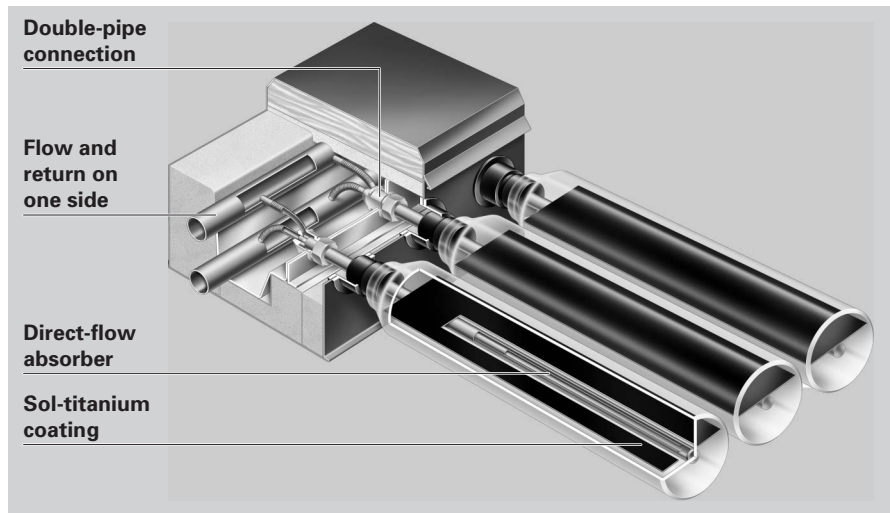


Certificated in accordance with DIN ISO 9001
Certificate Reg. No. 12 100 5581

VITOSOL 200

The benefits at a glance

- Collector surface area: 1, 2 and 3 m².
- High efficiency through vacuum collector tubes and Sol-titanium coated absorber.
- The direct-flow collector tubes permit vertical and horizontal installation without support frames.
- Wide application range for pitched and flat roofs as well as walls/fascias.
- High level of operational reliability and a long service life thanks to the use of high-grade, corrosion-resistant materials, such as borosilicate glass, copper and stainless steel.
- Awarded the "Blue Angel" environmental certificate, quality-tested by the SPF Institute Rapperswil.



Vitosol 200 – vacuum tube collector with Sol-titanium coating

Functional description

Vitosol 200 vacuum tube collectors are available in three versions: The D10 version consists of 10 ($\triangleq 1 \text{ m}^2$), the D20 version of 20 ($\triangleq 2 \text{ m}^2$), the D30 version of 30 ($\triangleq 3 \text{ m}^2$) high-vacuum glass tubes.

Vitosol 200 collectors are suitable for installation on pitched and flat roofs, walls/fascias and balustrades.

On pitched roofs, the collectors can be mounted both longitudinally (with the vacuum tubes at right angles to the roof ridge) and transversely (with the vacuum tubes parallel with the roof ridge).

The vacuum in the glass tubes ensures optimum heat insulation; convection losses between the glass tube and the absorber are almost eliminated. This enables the vacuum tube collector to make use of low radiation (diffused radiation), too.

Built into each vacuum tube is a Sol-titanium coated copper absorber. This ensures high absorption of the solar radiation and low emission of the thermal radiation.

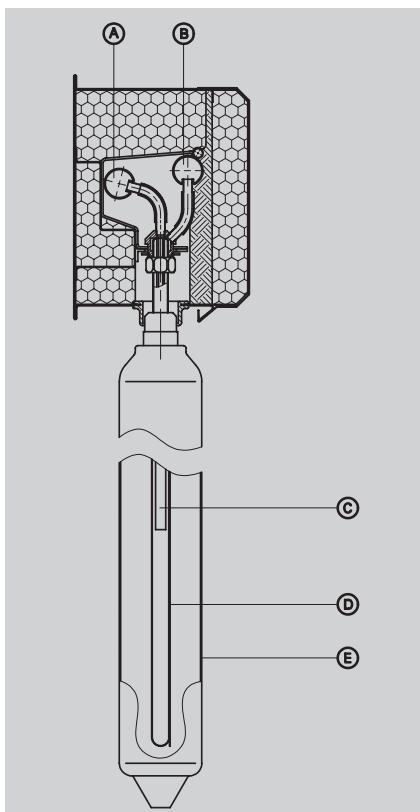
A coaxial heat exchange pipe, through which the heat transfer medium passes, is embedded in the absorber. The heat transfer medium picks up the heat from the absorber via the heat exchange pipe. The heat exchange pipe feeds into a header.

In order to be able to make optimum use of solar energy, each vacuum tube is pivot-mounted; this enables the absorber to be optimally oriented towards the sun.

Collector surface areas of up to 6 m² can be joined in parallel and a further 6 m² in series to form a collector panel with the aid of flexible and insulated connecting pipes sealed with O-rings. (Collector panels which are connected in series must be of the same dimensions).

A connection kit with clamping ring connections facilitates the connection of the collector panel to the piping of the solar circuit.

The collector temperature sensor is installed in a sensor mounting on the flow pipe in the connection housing of the collector.



- (A) Return pipe (inlet)
- (B) Flow pipe (outlet)
- (C) Coaxial heat exchange pipe
- (D) Absorber
- (E) Evacuated special glass tube

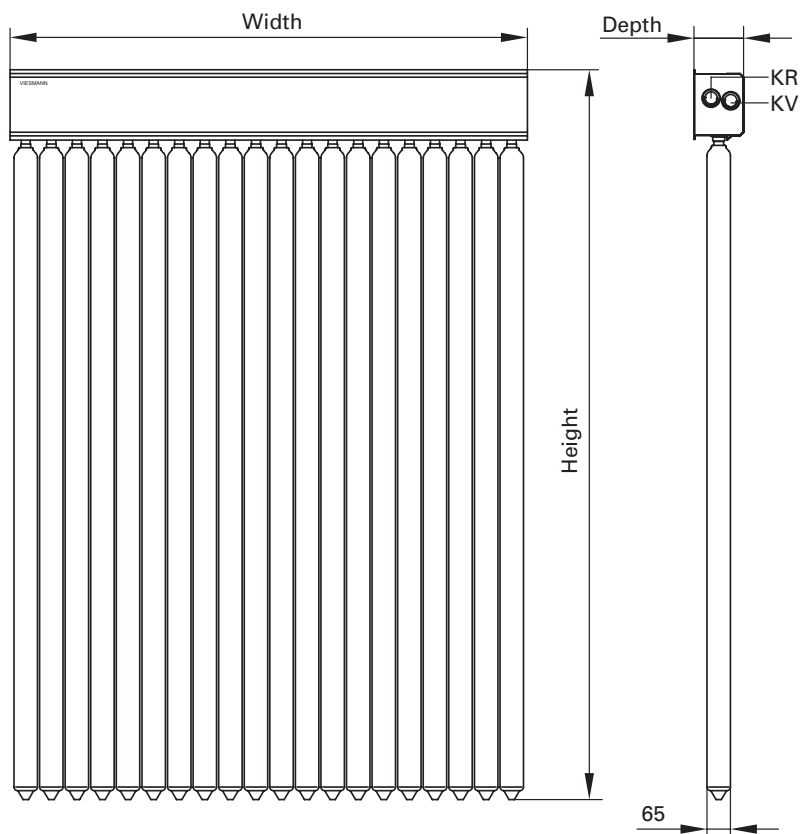
Technical data for the Vitosol 200 solar collector

Type		D10	D20	D30
Number of tubes		10	20	30
Type approval code		06-328-118		
Gross surface area	m ²	1.50	2.94	4.38
Absorber surface area	m ²	1	2	3
Aperture	m ²	1.07	2.14	3.21
Dimensions				
Width	mm	741	1450	2159
Height	mm	2028	2028	2028
Depth	mm	138	138	138
Optical efficiency* ¹	%	84	84	84
Heat loss coefficient U ₁ * ¹	W/(m ² · K)	1.75	1.75	1.75
U ₂ * ¹	W/(m ² · K ²)	0.008	0.008	0.008
Weight	kg	23	45	68
Fluid capacity (heat transfer medium)	litres	2	4	6
Max. operating pressure* ²	bar	6	6	6
Max. stagnation temperature* ³	°C	300	300	300
Connection	∅ mm	22	22	22
Installation area on flat roofs	m ²	approx. 1.5	approx. 2.94	approx. 4.38
Requirements to be satisfied by installation surface and anchorage	Roof construction with adequate load capacity for prevailing wind forces			

*¹Based on the absorber surface area.

*²With sealed systems, an overpressure of at least 1.5 bar must be present in the collectors in the cold condition.

*³The stagnation temperature is the temperature which applies at the hottest point of the collector at a global radiation intensity of 1000 W when no heat is conducted away by the heat transfer medium.



5822 127 GB

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

Technical data

Standard delivery

Technical data for the heat transfer medium

Non-toxic fluid for solar heating systems containing effective corrosion and ageing inhibitors.

Antifreeze protection:	down to -28°C to ASTM D 1177
Density at $+20^{\circ}\text{C}$:	1.032 to 1.035 g/cm^3 to ASTM D 1122
Viscosity at 20°C :	4.5 to $5.5\text{ mm}^2/\text{s}$ to DIN 51562
pH value:	9.0 to 10.5 to ASTM D 1287
Colour:	Clear, fluorescent red
Container:	20-litre drum, non-returnable

Standard delivery

The following are packed in separate cartons:

- Connection box with installation rails and product literature
- Vacuum tubes (10 per packaging unit)

Accessories, separately packed, depending on order:

Fastening accessories
Connecting pipes with insulation
Connection kit
Solar Divicon (pumping station for collector circuit)
Solar pump line (for a second pump circuit)
Air separator
Quick-acting air vent valve with tee and clamping ring connection
Connecting cables
Installation kit for connecting cable
Solar flow and return pipe
Clamping ring connection (with or without air vent)
Covering for the hydraulic connections
Filling valve
Solar manual filling pump
Solar expansion vessel with shut-off valve
Heat transfer medium
Antifreeze tester
Set of spare parts (assortment of small parts which may be mislaid during installation of the collectors)

Fastening kits

The fastening kits contain the parts required for the installation work concerned, such as:

Mounting plates, roof battens, roof hooks, nuts and bolts.

Please note:

Viessmann offers complete solar heating systems with Vitosol 200 (Type D30) for domestic hot water heating and/or as space heating backup (see Price List, Index 16).

Subject to technical modifications.

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