

Solar technology
Flat-plate collectors

Vitosol 200-FM
Vitosol 100-FM



VITOSOL 200-FM

VITOSOL 100-FM

Viessmann's patented switching absorber layer protects high performance flat-plate collectors from overheating and stagnation.

The Vitosol 200-FM and Vitosol 100-FM high performance flat-plate collectors are the perfect addition to any heating system. With an individual absorber area of 2.3 m², solar collectors can be effectively matched to any energy demand. On average, they can replace up to 60 percent of the energy that would otherwise be required each year for DHW heating, as well as contributing to central heating backup. When used in conjunction with a condensing boiler, free solar energy can help you reduce your annual energy consumption for heating and DHW by over one third.

ThermProtect prevents overheating

An intelligent absorber layer protects the collectors from overheating. Viessmann's patented ThermProtect technology prevents further energy absorption once a certain temperature has been reached, when the solar cylinder is fully heated. If the switching temperature is exceeded, the crystalline structure of the absorber layer changes, increasing the rate of heat radiation many times over and reducing collector output. The stagnation temperature thus drops significantly, preventing the formation of steam.

By lowering the collector temperature, the crystalline structure returns to its original state. More than 95 percent of the incoming solar energy can now be absorbed and converted into heat. Only the remaining five percent is reflected. There is no limit to the number of times the change in crystalline structure can be activated, making this function permanently available.

ThermProtect also leads to higher yields with the Vitosol 200-FM and Vitosol 100-FM compared to conventional flat-plate collectors, as more generous sizing is possible.



Vitosol 200-FM
Two-family home, Geisenfeld



Collector frame with special roof integration profile for fitting the flashing frame

Attractive on any roof

The Vitosol 200-FM is the right choice if the collector is required with a frame in an individual RAL colour. It is finished in dark blue as standard and blends in with any roof. The Vitosol 100-FM is only available with an aluminium coloured frame.

The Vitosol 200-FM, type SV2G (vertical) or type SH2G (horizontal) can be selected for seamless roof integration, lying almost flush with the roof cladding when installed.

The Vitosol 200-F (type 5DIA) large area collector, with an absorber area of 4.87 m², is an alternative to individual collectors.

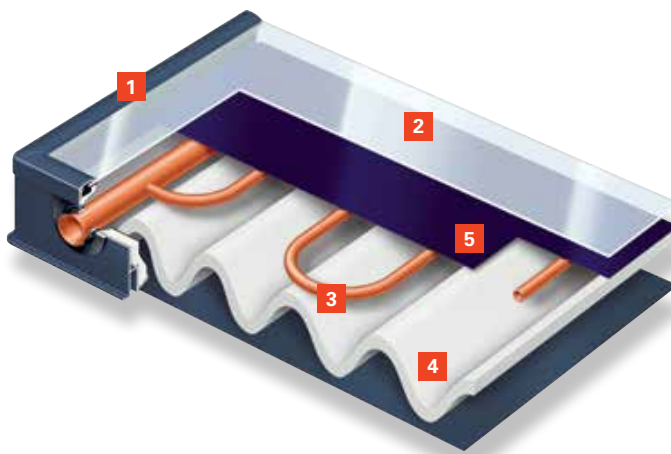
Permanently sealed and well insulated

The all-round folded aluminium frame and seamless pane mounting ensure permanent tightness and a highly stable collector. The back panel is puncture-proof and corrosion-resistant. Highly effective thermal insulation reduces heat losses, particularly in spring, autumn and winter.

Straightforward installation

Both collectors are particularly easy to install. The integral flow and return pipes enable safe installation, even for larger collector arrays, using flexible corrugated stainless steel pipe push-fit connectors. Up to twelve solar collectors can be easily linked together.

The flat-plate collectors can be used universally for above roof installation, roof integration and installation on collector supports, for example on flat roofs. The easy-to-assemble Viessmann fixing system consists of load-tested and corrosion-resistant components made from stainless steel and aluminium.

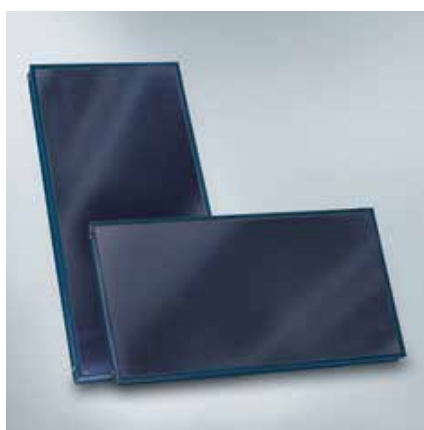


Vitosol 200-FM

- 1 All-round folded aluminium frame with glazing bead
- 2 Stable, highly transparent cover made from special glass with ThermProtect
- 3 Meander shaped absorber
- 4 Highly effective thermal insulation
- 5 Absorber panel with ThermProtect coating with automatic temperature-dependent shutdown



With optional edge trim in all RAL colours, the Vitosol solar collectors blend harmoniously into most roofs.



Vitosol 200-FM with ThermProtect switching absorber layer

Take advantage of these benefits

- Vitosol 200-FM and Vitosol 100-FM high performance flat-plate collectors with ThermProtect switching absorber layer
- No overheating when outside temperatures are high or heat transfer is low
- Higher solar coverage for central heating backup and DHW heating
- Permanently sealed by all-round frame and seamless pane mounting
- Quick and reliable connection through flexible corrugated stainless steel pipe push-fit connectors
- Universally suitable for above roof installation, roof integration, flat roof installation, or wall mounting
- Can be installed horizontally or vertically
- Attractive design, individually finished in any RAL colour (Vitosol 200-FM)

For specifications, see pages 26 and 27

Vitosol 141-FM Vitosol 141-FM DHW solar pack comprising Vitosol 100-FM and Vitocell 100-B/-W

Viessmann's DHW solar pack makes efficient and economical use of free solar energy for DHW heating.

The Vitosol 141-FM DHW solar pack is particularly suitable for modernisation projects and new builds. In terms of size, performance and price, it is intended specifically for detached houses. It provides an environmentally friendly, efficient and economically interesting solution for DHW heating with free solar energy.

The pack comprises two Vitosol 100-FM (type SVKF/SVKG) flat-plate collectors and the dual mode Vitocell 100-B/-W DHW cylinder with 250 litre capacity. It is a perfect way to extend a system at the same time as replacing an older boiler, or is ideal for new systems where the use of solar thermal energy is now standard.

ThermProtect prevents overheating

An intelligent absorber layer protects the Vitosol 100-FM collector from overheating. Viessmann's patented ThermProtect technology prevents further energy absorption once a certain temperature has been reached. If the switching temperature is exceeded, the crystalline structure of the absorber layer changes, increasing the rate of heat radiation

many times over, and reducing collector output. The stagnation temperature thus drops significantly, preventing the formation of steam.

By lowering the collector temperature, the crystalline structure returns to its original state. More than 95 percent of the incoming solar energy can now be absorbed and converted into heat. Only the remaining five percent is reflected. There is no limit to the number of times the change in crystalline structure can be activated, making this function permanently available.

ThermProtect also leads to higher yields with the Vitosol 100-FM compared to conventional flat-plate collectors, as the collectors can be restarted again more quickly if needed.

Dual mode cylinder with Ceraprotect enamel coating

The DHW cylinder with long lasting Ceraprotect enamel coating has two indirect coils for heating by solar collectors and reheating by a boiler. For the solar circuit, the Solar-Divicon with solar control module is already installed at the factory. Highly effective and efficient all-round insulation reduces heat loss.

Straightforward installation

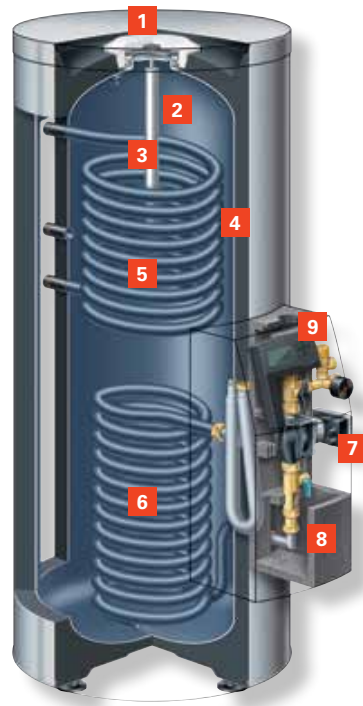
For easy installation, all appliances and components are a perfect match for each other. Rafter hooks are used for above roof insulation. With roof integration, the flat-plate collectors are secured directly to the roof structure. No tools are needed to link the two collectors. The user benefits from the low investment outlay and quick installation of the DHW solar pack.

Improved energy efficiency

By combining solar thermal with a heat generator, energy efficiency class A+ (as a system label) can generally be achieved for the overall heating system.

Vitocell 100-B

- 1 Inspection and cleaning aperture
- 2 Steel cylinder with Ceraprotect enamel coating
- 3 Magnesium or impressed current anode
- 4 Highly effective all-round thermal insulation
- 5 Upper indirect coil – for reheating by the boiler
- 6 Lower indirect coil – solar collector connection
- 7 Solar circuit pump
- 8 Solar-Divicon
- 9 SD1 solar control module





Vitosol 141-FM – solar pack for heating DHW using solar energy with a dual mode DHW cylinder, including Solar-Divicon, solar control unit, solar collectors and solar components



Vitosol 100-FM (type SVK) flat-plate collectors

Take advantage of these benefits

- Solar DHW heating for low energy bills
- Quick and easy connection of the solar thermal system to the DHW cylinder
- Solar control unit integrated in the Solar-Divicon and prefitted to the cylinder
- Corrosion-resistant steel cylinder with Ceraprotect enamel coating
- Surface-optimised flat-plate collector with absorber with highly selective coating
- ThermProtect protects collector from overheating
- Easy collector installation with rafter hooks
- No tools needed to install collectors (push-fit system)
- High efficiency pump for reduced power consumption
- Many components are already integrated, saving precious space

For specification, see page 27