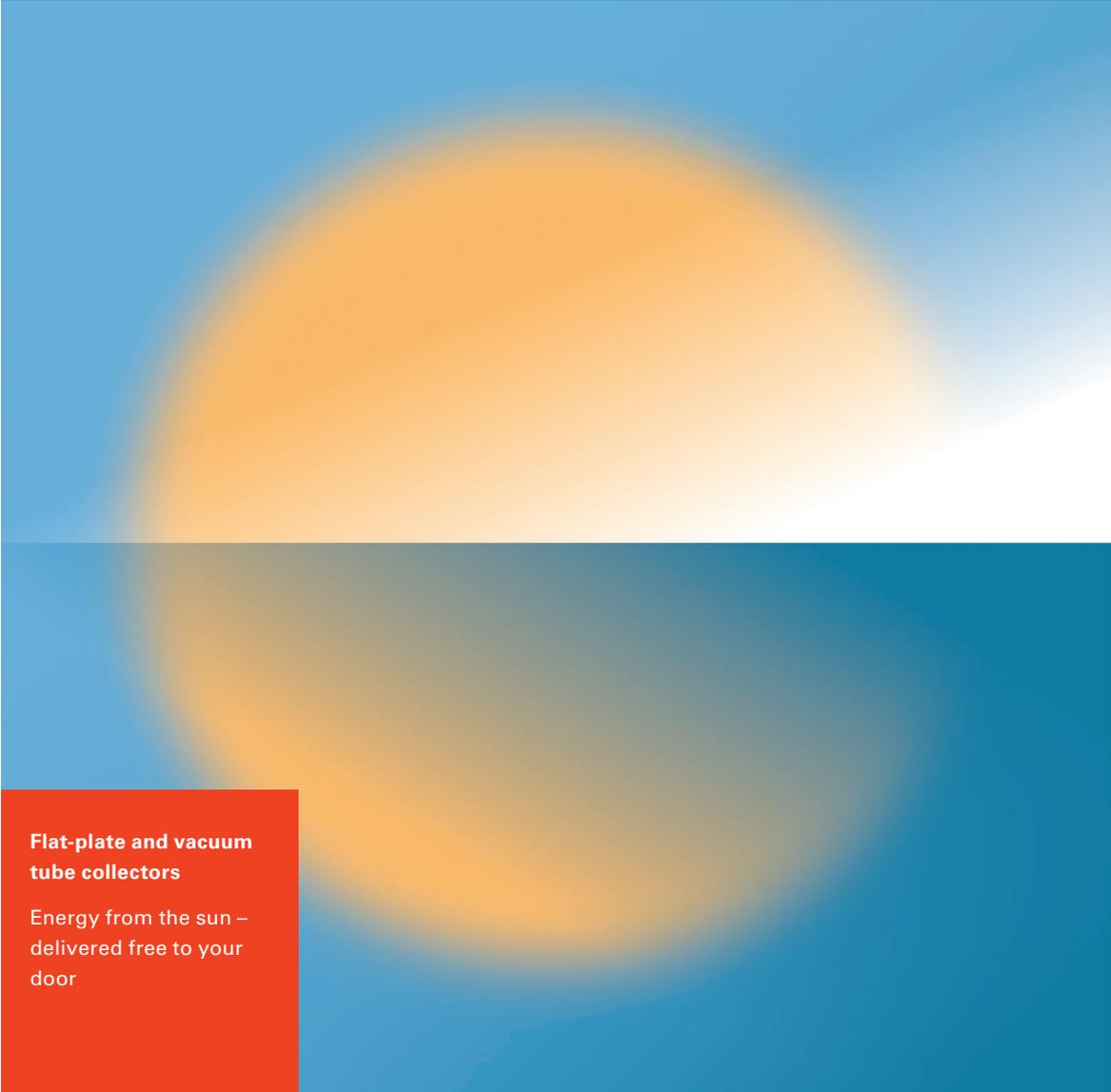




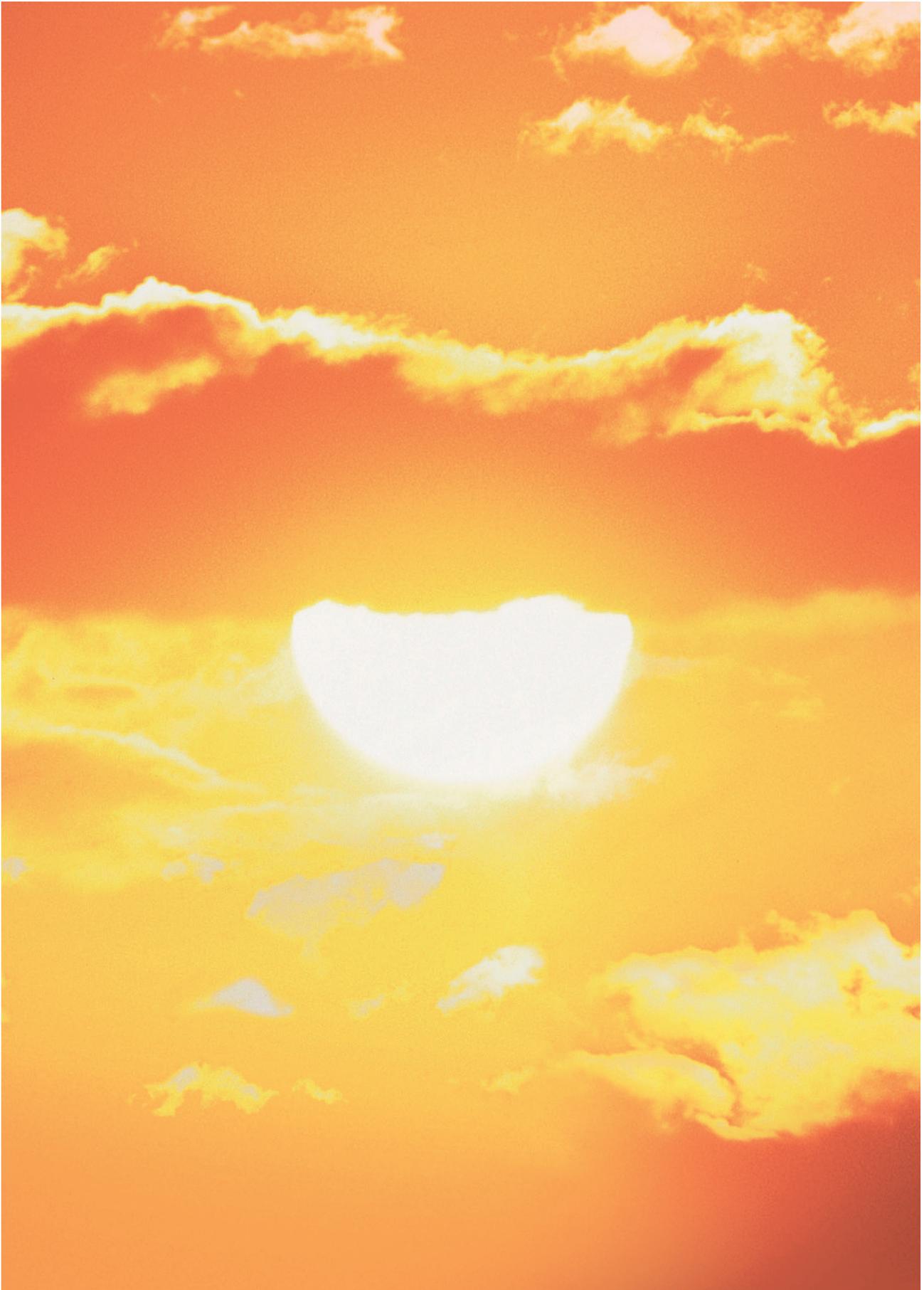
TECHNOLOGY BROCHURE

# Solar thermal systems **VITOSOL**



**Flat-plate and vacuum  
tube collectors**

Energy from the sun –  
delivered free to your  
door



## Energy from the sun – delivered free to your door

Anyone investing in a new heating system today should design it to include a solar thermal system from the outset. This will allow you to benefit from lower energy consumption and also look forward to lower monthly energy bills.

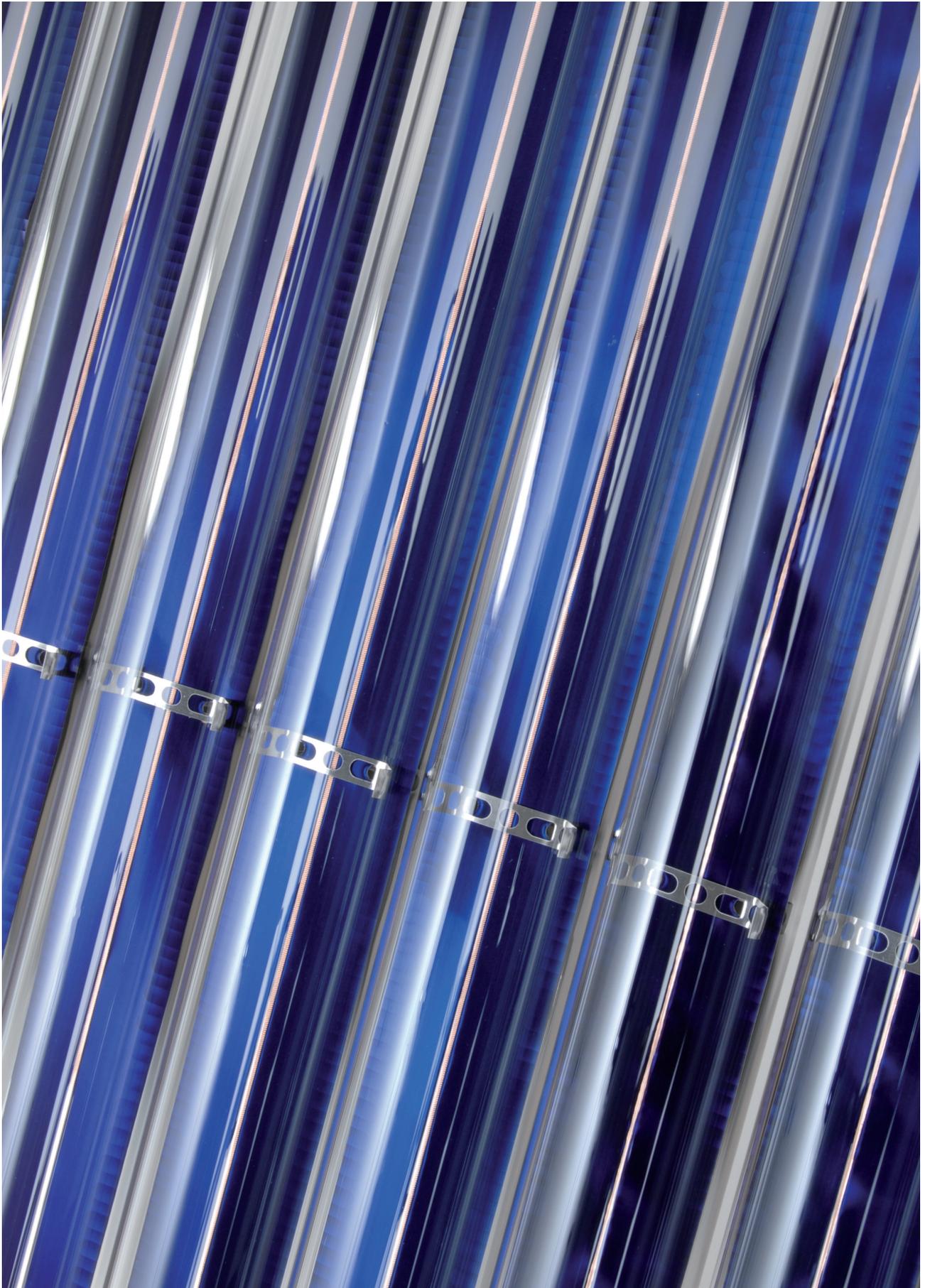
By installing solar collectors, you are demonstrating your commitment to protecting the environment by sustainably lowering CO<sub>2</sub> emissions. By choosing Viessmann technology you are opting for a futureproof system in which all components interact optimally.

Investing in solar technology also increases the value of your property.

On the following pages, you will find comprehensive information about the possibilities open to you with Viessmann solar technology for energy efficient DHW heating and central heating backup.

With more than 40 years' experience in the development and manufacture of solar thermal systems, you can count on our high quality and technical expertise.

All Viessmann systems are designed to work in combination with solar technology, so it makes no difference whether you opt for a new condensing boiler for oil or gas, a heating system for wood, or a heat pump.





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Viessmann flat-plate and vacuum tube collectors meet every requirement for efficient and cost effective DHW heating and central heating backup.

### 6 SAVE ENERGY AND PROTECT THE CLIMATE

Find out why it is worth modernising your heating system now and incorporating an efficient solar thermal system. In doing so, you will be making an active and sustainable contribution towards protecting the climate and using less fossil fuel.

### 8 THERM PROTECT: AUTOMATIC OVERHEATING PROTECTION

The globally unique Therm Protect automatic temperature-dependent shutdown in the Vitosol 200-FM and Vitosol 100-FM flat-plate collectors, as well as the Vitosol 300-TM and Vitosol 200-TM tube collectors, reliably prevents the collectors from overheating.

### 10 SOLAR TECHNOLOGY

The flat-plate and vacuum tube collectors from the Vitosol range can be optimally matched to the relevant energy demand.

### 26 CONVENIENCE AND COST EFFICIENCY BY DESIGN

Use the most advanced system technology to control your heating and solar thermal system. The intelligent Vitosolic energy management system communicates very effectively with the heating control unit, significantly lowering heating bills.

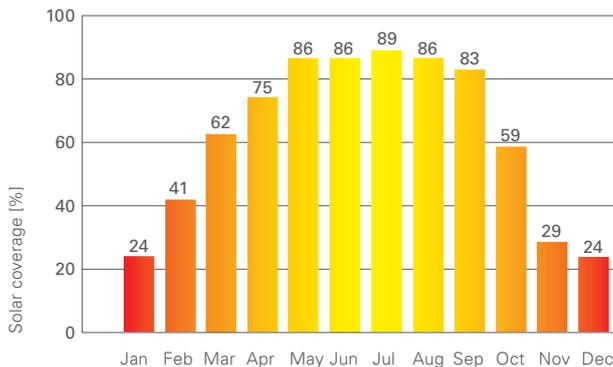
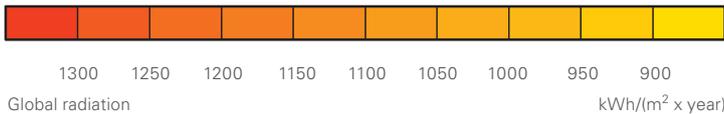
### 28 SERVICE FOR EVERY ASPECT OF SOLAR TECHNOLOGY

Make the most of our trade partners. They will tell you all you need to know about bespoke heating and solar technology, subsidy opportunities and finance options.

### 30 THE COMPANY

The power of innovation: a family business for three generations, Viessmann offers state of the art technology and takes its responsibilities seriously.

# Save energy and protect the climate



In a detached house, solar energy covers up to 60 percent of the energy required for heating DHW.

In Germany alone, there are still around two million heating systems in use today that are more than 25 years old. Their owners are often completely unaware of how much energy these systems waste, as they allow a great deal of unused heat to simply escape up the chimney. Furthermore, these old systems have an impact on our climate through unnecessary CO<sub>2</sub> emissions which contribute to global warming.

### Saving energy

Anyone investing in a new heating system today should design it to include a solar thermal system from the outset. By installing solar collectors, you are demonstrating your commitment to protecting the environment by saving energy and sustainably lowering CO<sub>2</sub> emissions.

### Protect resources

Around one third of the total energy demand in Germany is expended on heating buildings. Energy conscious construction and economical heating systems, such as those that employ condensing technology, can substantially reduce this consumption. This then contributes to the preservation of resources and to the protection of the Earth's atmosphere.

One important area of potential savings is offered by DHW heating. In our latitudes, solar collectors combined with a DHW cylinder represent the most interesting alternative to boiler operation, especially during the summer months. Even during spring and autumn, you may often be able to turn off your boiler when using solar energy to back up your central heating.

### Public subsidies

Public subsidies can be claimed for the purchase of solar thermal systems in Germany. The investment outlay is recovered in just a few years because of high energy savings. Current details can be found at [www.viessmann.de](http://www.viessmann.de).

# DHW heating and central heating backup with solar energy

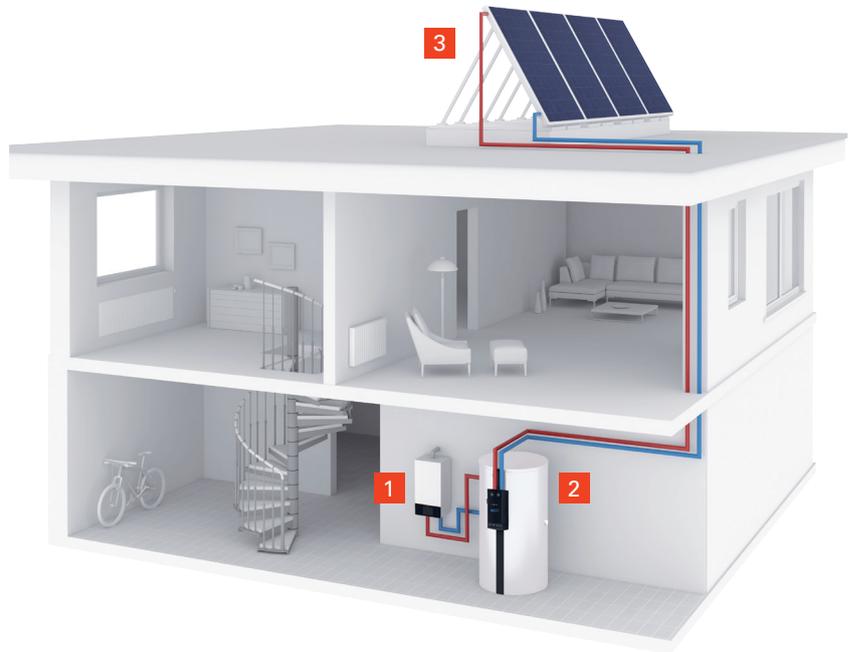
Solar thermal systems are the perfect choice for DHW heating and central heating backup. Freely available solar energy means less use of fossil fuels. What's more, investments in solar thermal energy pay for themselves in just a few years. Fundamentally, you have the option of using solar energy for DHW heating and central heating backup. Savings on oil and gas are considerable in all cases, as you will be able to reduce your annual energy consumption by around 60 percent. This is the energy that would otherwise be required for your day to day DHW heating. If you combine the heating for DHW and central heating water, you will save around 35 percent of the total energy required – every year.

## Solar thermal system with dual mode DHW cylinder

A dual mode DHW cylinder is central to this type of system. When there is sufficient solar radiation, the solar medium in the solar thermal system heats up the water in the DHW cylinder via the lower indirect coil. When the temperature drops through hot water being drawn off, such as for a bath or shower, the boiler starts if necessary to provide additional heating via the second circuit.

## Solar thermal system for DHW heating and central heating backup

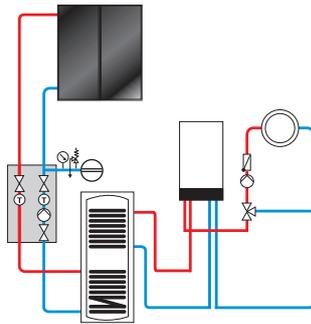
In addition to heating DHW, the solar medium heated in the solar collectors can also be used to bring heating water up to temperature. For this, the heating circuit, via a heat exchanger, uses the water in the solar cylinder that is continuously heated by the solar collectors. The control unit checks whether the required room temperature can be achieved. If the temperature is below the set value, the boiler will also start.



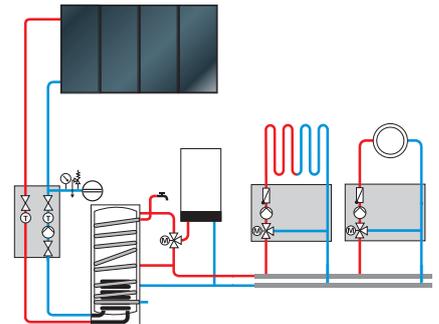
Energy efficiency class: A  
in combination with  
solar collectors **A+**

- 1 Vitodens 300-W wall mounted gas condensing boiler
- 2 Vitocell 360-M multi mode combi cylinder for DHW heating and central heating backup with attached Solar-Divicon
- 3 Vitosol 200-FM flat-plate collectors

With Viessmann, heating and solar technology come entirely from a single source. All components are perfectly matched.

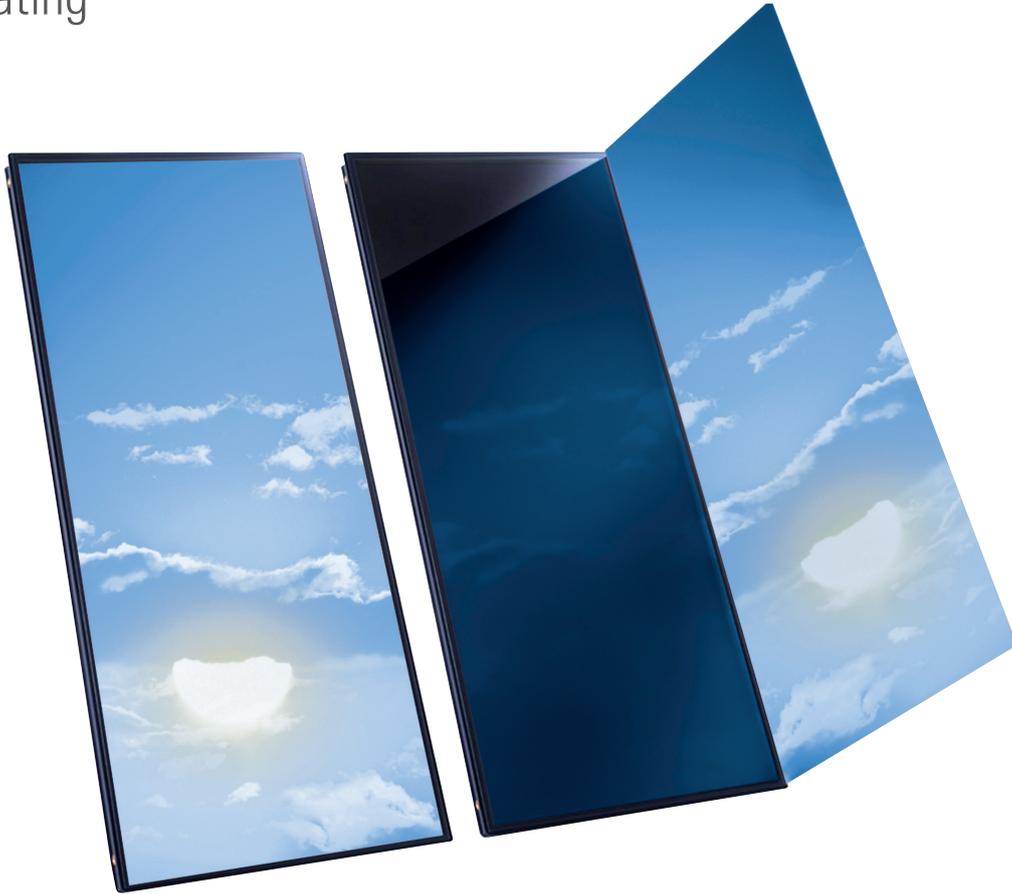


Solar DHW heating



Solar DHW heating and central heating backup

## Therm Protect, the innovative automatic shutdown facility, protects Vitosol flat-plate and vacuum tube collectors from overheating



### THERM PROTECT

With its Therm Protect automatic temperature-dependent shutdown, Viessmann has achieved an important milestone in the efficiency and operational reliability of solar thermal systems. The Vitosol 200-FM and Vitosol 100-FM flat-plate collectors, as well as the Vitosol 300-TM and Vitosol 200-TM vacuum tube collectors, all feature automatic shutdown to reliably prevent overheating of the collectors.

#### **Therm Protect: protects solar collectors from overheating**

Viessmann's patented, intelligent Therm Protect absorber layer stops the solar collectors from absorbing energy once the solar cylinder is fully heated. This protects the solar collectors from overheating and extends the system's service life. Therm Protect also allows the system to be sized more generously than with conventional solar collectors, to increase the solar yield. As a result, heating costs as well as CO<sub>2</sub> emissions will be reduced.

#### **Simpler installation**

Installation is easier, as there is no need for pre-cooling vessels or stagnation coolers. As the formation of steam from the heat transfer medium no longer has to be taken into consideration for the collectors, there are also more options when it comes to routing the hydraulic lines.

**Vitosol 200-FM and Vitosol 100-FM: crystals prevent overheating**

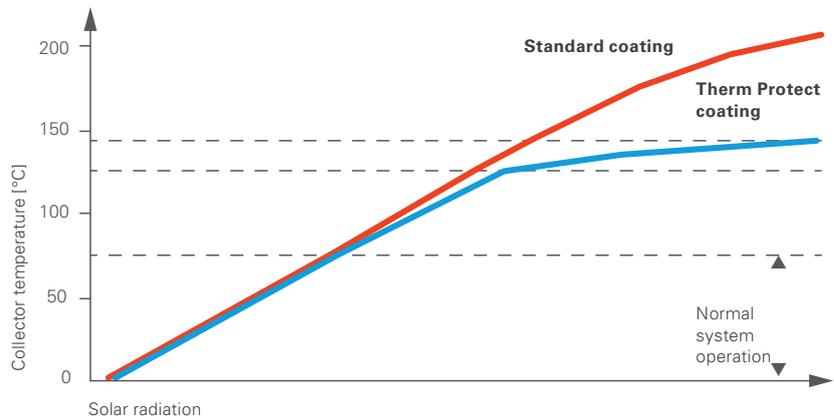
A crystalline absorber coating on the Vitosol 200-FM and Vitosol 100-FM flat-plate collectors controls energy absorption. In physical terms, the Therm Protect coating function is ensured by temperature-dependent changes in the structure of the crystals. At collector temperatures of around 75 °C and above, the reflection of incoming solar radiation is increased. Further temperature rises are limited, reliably preventing the formation of steam.

Once the temperature in the collector falls again, the crystalline structure returns to its original state. The energy absorbed by the collector is then no longer irradiated back into the environment and can be used in the solar thermal system. There is no limit to the number of times the change in crystalline structure can be activated, making this function permanently available.

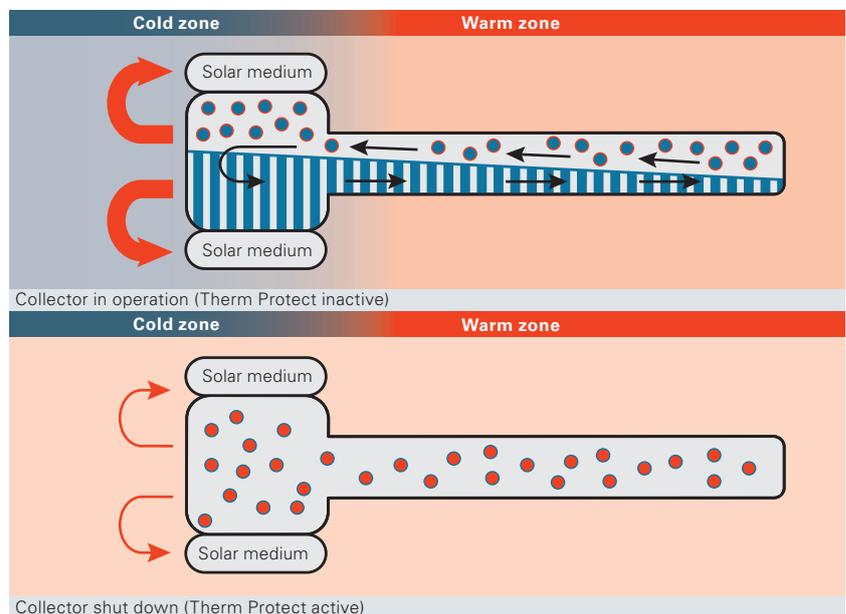
**Vitosol 300-TM and Vitosol 200-TM: heat pipe with temperature-dependent shutdown**

In the Vitosol 300-TM and Vitosol 200-TM vacuum tube collectors, a self-regulating heat pipe dry-connected inside the collector heat exchanger is responsible for the Therm Protect temperature-dependent shutdown. Solar energy causes the medium sealed inside the heat pipe to evaporate. When it reverts to its liquid state inside the condenser, the heat is transferred to the solar thermal system and the medium flows back to the sunlit area of the vacuum tube.

Once the temperature limit of approx. 120 °C is reached, the medium is no longer able to condense. Thanks to this phase-change temperature shutdown, heat transfer is interrupted and the system is thus protected against excessively high stagnation temperatures. Circulation in the heat pipe only restarts at lower collector temperatures, and solar energy can once again be transferred to the heating system.



In standard collector mode, the Therm Protect coating of the flat-plate collectors acts like any conventional absorber coating. At collector temperatures of 75 °C and above, heat transfer increases many times over, reliably preventing overheating and the formation of steam in the event of stagnation.



The self-regulating heat pipe in the Vitosol 300-TM and Vitosol 200-TM vacuum tube collectors works as follows: Once the temperature limit of approx. 120 °C is reached, the medium is no longer able to condense, so heat transfer is interrupted and the system is therefore protected against excessively high stagnation temperatures.



# VITOSOL

With a wide range of flat-plate and vacuum tube collectors, Viessmann provides flexible and individual solutions for every kind of modern heating system.

Every year, the sun radiates on average 1000 kWh onto every square metre of ground in central Europe. This corresponds to the energy content of 100 litres of fuel oil. With Viessmann solar collectors, you can utilise this energy to generate heat. A solar thermal system is the ideal extension to any heating system, and sustainably lowers energy consumption.

## The heating system that loves the environment

Even when it comes to environmental compatibility, with Viessmann solar thermal systems you'll be on the sunny side of the street: on average, annual carbon dioxide (CO<sub>2</sub>) emissions are reduced by about three quarters of a tonne for a detached house.

## Futureproof in every respect

Viessmann flat-plate and tube collectors are distinguished by their high operational reliability and long service life. The Vitosol solar collectors are made of corrosion and UV-resistant materials. This is most impressively verified by quality tests according to the EN 12975 test standard and ISO 9801, which at the same time confirm the consistently high thermal output.

Viessmann can draw on more than 30 years of experience in the development and manufacture of solar collectors.



### VITOSOL 300-TM

(Type SP3C)

Vacuum tube collectors with heat pipe technology and Therm Protect  
Absorber area: 1.26, 1.51 and 3.03 m<sup>2</sup>

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### VITOSOL 200-TM

(Type SPEA)

Vacuum tube collectors based on the heat pipe principle and Therm Protect  
Absorber area: 1.63 and 3.26 m<sup>2</sup>

Page 12



### VITOSOL 200-FM

(Type SV2F and SH2F, type SV2G and SH2G)

Flat-plate collectors with Therm Protect  
Absorber area: 2.31 m<sup>2</sup>

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### VITOSOL 100-FM

(Type SV1F and SH1F)

Flat-plate collectors with Therm Protect  
Absorber area: 2.31 m<sup>2</sup>

Page 18



### VITOSOL 141-FM

DHW solar package

Vitosol 100-FM flat-plate collectors (Type SVKF for above roof installation, type SVKG for roof integration) and Vitocell 100-B/-W (type CVBA) with 250 litre capacity

Page 22



# Highly efficient vacuum tube collectors based on the heat pipe principle and Therm Protect

The absorbers with highly selective coating collect a vast amount of solar energy and thereby ensure high efficiency. At the same time, the vacuum in the tubes provides very effective thermal insulation. This means there are almost no losses between the glass tubes and the absorber, enabling the collector to convert even low levels of sunlight into useful heat. The vacuum tube collectors use the available solar radiation extremely efficiently, particularly in the spring and autumn and in the winter when outside temperatures are low.

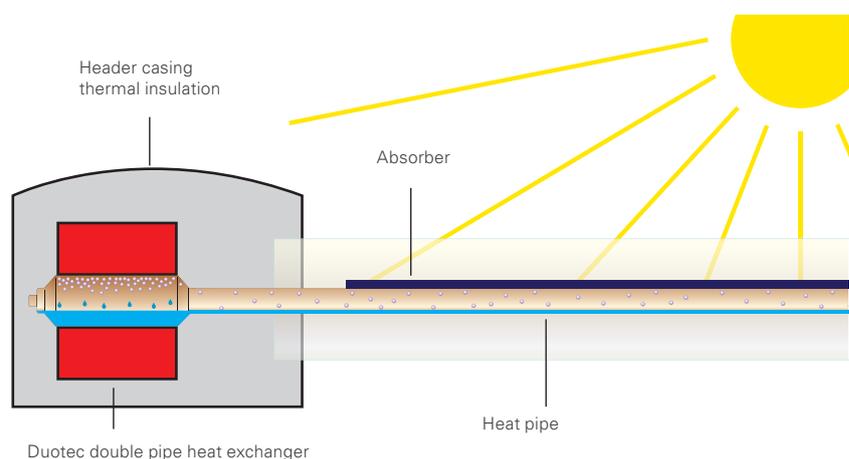
## High energy yields for years to come

Viessmann solar collectors are designed for an exceptionally long service life. This is guaranteed by the use of high grade, corrosion-resistant materials, such as glass, aluminium, copper and stainless steel. The absorber is an integral part of the vacuum tube. This protects it from weather influences and contamination, and ensures high energy yields for years to come.

## Heat pipe principle for high operational reliability

The Vitosol 300-TM and Vitosol 200-TM are highly efficient vacuum tube collectors based on the heat pipe principle.

In heat pipe systems, the solar medium does not flow directly through the tubes. Instead, a process medium evaporates in the heat pipe below the absorber and transfers the heat to the solar medium. The dry connection of the heat pipes inside the header, the low fluid content inside the collector



The medium heated by the sun evaporates and shifts to the colder part of the tube. There, the steam condenses, transferring the heat to the header, and the water is then reheated in a new cycle.

and the Therm Protect automatic temperature-dependent shutdown ensure particularly high operational reliability.

## Quick and safe installation

Vitosol tube collectors are delivered as pre-assembled modules. An innovative push-fit system enables the tubes to be quickly and easily installed. The tubes can be rotated individually for optimum alignment with the sun. The tubes are connected in a dry state, i.e. without direct contact between the process medium and the solar medium, allowing individual tubes to be replaced without draining the system. The stainless steel corrugated pipe push-fit connectors interconnect the individual collectors.



Vitosol 300-TM – Universal application through vertical or horizontal installation in any location, either on rooftops, façades or for freestanding installation.

# The Vitosol 300-TM high performance vacuum tube collector meets the highest demands for efficiency and safety

The Vitosol 300-TM high performance collector is one of the most efficient models on the market. It is particularly recommended for use in restricted spaces. The absorber angle can be adjusted by +/- 25 degrees to deliver an exceptionally high yield, even when the sun is in less favourable positions. The collector can be installed and used in any position and is designed for use on detached houses and apartment buildings. It features Therm Protect automatic temperature-dependent shutdown, which is activated if heat draw-off stagnates for a long period whilst there is a high level of solar radiation.

### Operational reliability with Therm Protect

The Vitosol 300-TM is currently the only collector on the market that can be installed horizontally (maximum tube incline of three degrees) and includes Therm Protect automatic temperature-dependent shutdown. It prevents overheating of the collectors when no heat is drawn off and there is a high level of solar radiation. The Vitosol 300-TM is therefore also suitable for buildings that are not in use all year round, such as residential buildings during holiday periods.

### Maximum heat transfer with Duotec

The collector works according to the heat pipe principle, where the solar medium does not flow directly through the tubes. Instead, a process medium evaporates inside the heat pipe and transfers the absorbed heat through condensation to the solar medium via the Duotec double pipe heat exchanger. This method guarantees optimum heat transfer.

### Exceptionally long service life

The Vitosol 300-TM is designed for an exceptionally long service life thanks to its high grade, corrosion-resistant materials, including glass, aluminium, copper and stainless steel. The absorber is an integral part of the vacuum tube. This protects it from weather influences and contamination, and ensures high energy yields for years to come.

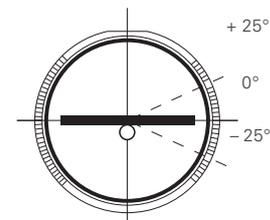
### Quick, easy and safe installation

The above roof installation system with rafter anchors simplifies the task of securing the collectors. The rafter hooks and flanges are designed to be fixed directly onto the rafters,

enabling the collectors to be perfectly integrated into any kind of roof cover. The two mounting rails also save additional time during installation.

In systems with multiple collectors, dark blue cover panels create a seamless visual transition between the collector casing and absorber surfaces. Retaining caps in the base rail in the same colour as the casing prevent tubes from slipping.

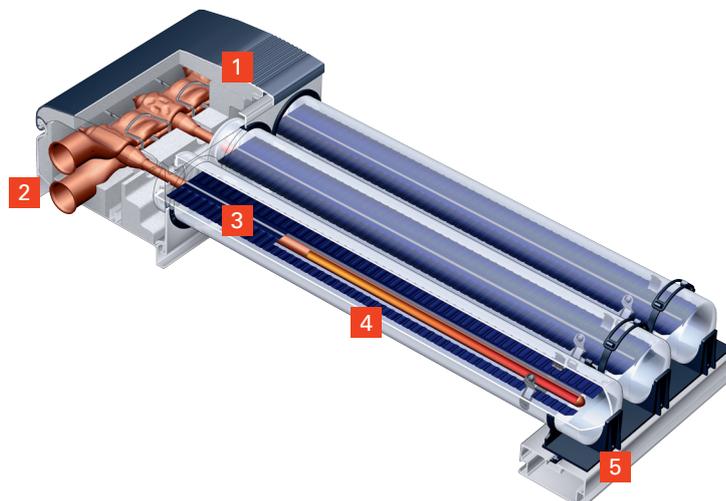
Should a service be required, heat pipe tubes can be replaced quickly and easily without having to drain the system due to their dry connection.



Straightforward installation and quick absorber alignment using the angular scale on the tube holders

## VITOSOL 300-TM

- 1 Collector casing with highly effective thermal insulation
- 2 Duotec double pipe heat exchanger
- 3 Absorber panel with selective coating inside the vacuum tubes
- 4 Heat pipe with Therm Protect temperature-dependent shutdown
- 5 Base rail with tube retainer in the same colour as the casing





Vitosol 300-TM on the roof of a detached house



Vitosol 300-TM offers universal application options

#### TAKE ADVANTAGE OF THESE BENEFITS

- + Highly efficient vacuum tube collector based on the heat pipe principle with Therm Protect temperature-dependent shutdown for high operational reliability
- + Protection against overheating during prolonged solar radiation
- + Long service life thanks to low stagnation temperatures and prevention of steam forming within the system
- + The absorber surfaces with highly selective coating, which are integrated into the vacuum tube, are not susceptible to contamination
- + Efficient heat transfer through condensers fully surrounded by the copper Duotec double pipe heat exchanger
- + Optimum orientation towards the sun thanks to straightforward absorber alignment
- + Dry connection, no direct contact between process medium and solar medium, i.e. individual tubes can be replaced whilst the system is still full
- + Dark blue collector casing and absorber surfaces form a visually seamless whole
- + Highly effective thermal insulation of the header casing for minimum thermal losses
- + Quick and straightforward installation through the Viessmann assembly and connection systems

For specification, see page 24

## The Vitosol 200-TM is a highly efficient vacuum tube collector based on the heat pipe principle

The Vitosol 200-TM vacuum tube collector has been designed specifically to be mounted horizontally in large scale systems on flat roofs, and for apartment buildings. The absorbers can be rotated through 45 degrees to best mirror the path of the sun without increased shading.

### Operational reliability with Therm Protect

The Therm Protect automatic temperature-dependent shutdown function prevents overheating when no heat is drawn off and there is a high level of sunlight. The Vitosol 200-TM is therefore also suitable for buildings that are not in use all year round, such as schools.

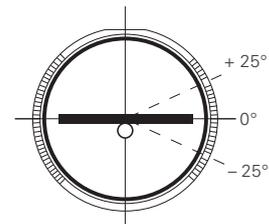
### Maximum heat transfer

The collector works according to the heat pipe principle, where the solar medium does not flow directly through the tubes. Instead, a process medium evaporates inside the heat pipe and transfers the heat through condensation to the solar medium via a copper heat exchanger. This method guarantees maximum, optimum heat transfer and good operating and service properties.

### Quickly, simply and safely installed

The header casing does not need to be opened when tubes are inserted. Retaining caps in the base rail prevent tubes from slipping.

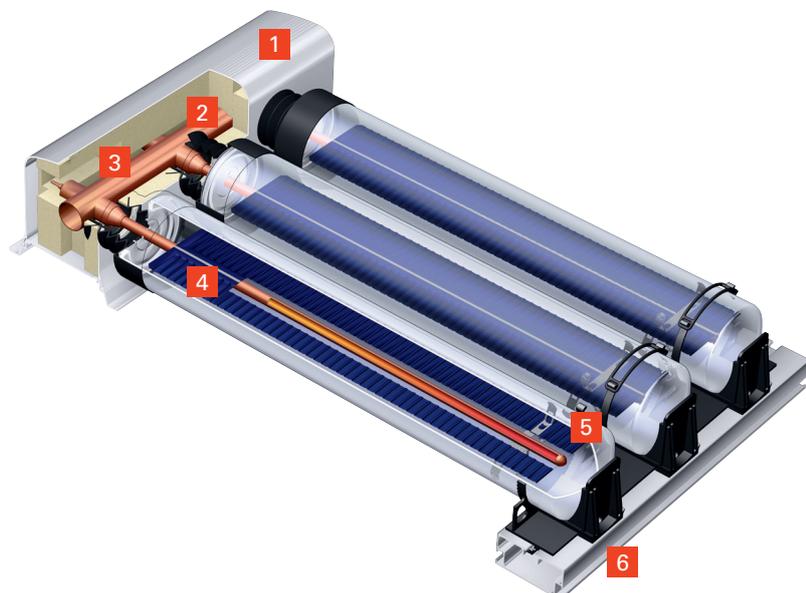
Should a service be required, the tubes can be replaced quickly, cost effectively and easily due to their dry connection, without having to drain the system.



Straightforward installation and quick absorber alignment using the angular scale on the tube holders

### VITOSOL 200-TM

- 1 Collector casing with highly effective thermal insulation
- 2 Dry connection, no direct contact between process medium and solar medium
- 3 Header for connection on alternate sides
- 4 Absorber panel with selective coating inside the vacuum tubes
- 5 Heat pipe with Therm Protect temperature-dependent shutdown
- 6 Base rail





Example of using Vitosol 200-TM tube collectors with Therm Protect



Vitosol 200-TM (type SPEA)

#### TAKE ADVANTAGE OF THESE BENEFITS

- + Vacuum tube collectors based on the heat pipe principle with Therm Protect temperature-dependent shutdown for high operational reliability
- + Overall system has a long service life thanks to the automatic temperature-dependent shutdown during periods of stagnation in the summer
- + Protection against overheating during prolonged solar radiation
- + Dry connection, no direct contact between process medium and solar medium, i.e. individual tubes can be replaced whilst the system is still full
- + Less space required than for flat-plate collectors thanks to greater efficiency
- + Constantly high output without the risk of absorber contamination
- + High levels of solar coverage, therefore suitable for central heating backup
- + Designed for horizontal installation on flat roofs and larger systems
- + Larger tube spacing, so less shading in horizontal flat roof installations
- + Absorber can be rotated by +/- 45 degrees
- + Lower service costs due to longer service life of solar components and pumps thanks to Therm Protect
- + Comparatively low static load on the building due to reduced need for ballast in horizontal installations

For specification, see page 24



# 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 2.31 square metres, 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, and contribute 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.

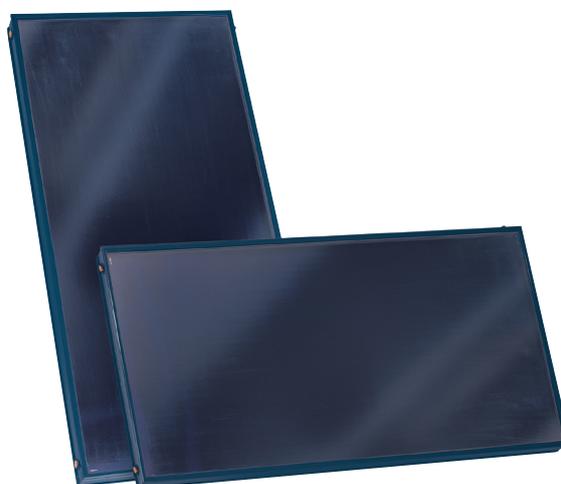
### **Therm Protect prevents overheating**

An intelligent absorber layer protects the collectors from overheating. Viessmann's patented Therm Protect technology switches off 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.

As the collector temperature falls, the crystalline structure returns to its original state. More than 95 percent of the incoming solar energy is then once again 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.

Therm Protect 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 with Therm Protect switching absorber layer



Vitosol 200-FM  
Two-family house, 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 practically 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.

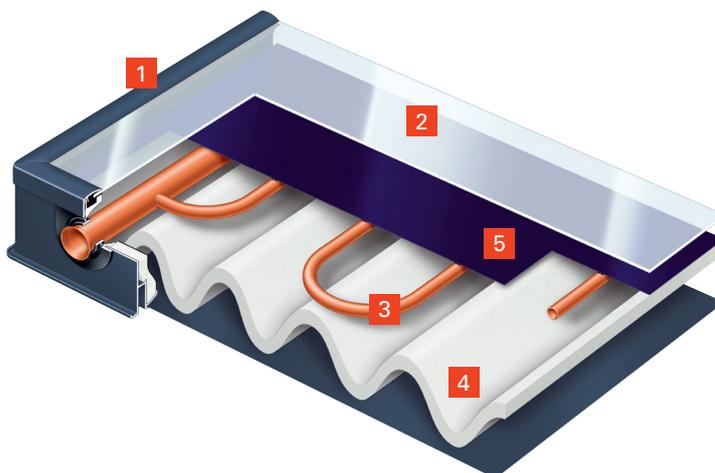
#### Permanently sealed and well insulated

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.

#### Easy installation

Both collectors are very easy to install. Integral flow and return pipes enable safe installation even of larger collector arrays using flexible, corrugated, stainless steel 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 Therm Protect
- 3** Meander-shaped absorber
- 4** Highly effective thermal insulation
- 5** Absorber panel with Therm Protect coating with automatic temperature-dependent shutdown



Vitosol 200-FM on the roof of a detached house



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

#### TAKE ADVANTAGE OF THESE BENEFITS

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

For specification, see pages 24 and 25

## The Vitosol 141-FM DHW solar package makes efficient use of free solar energy for DHW heating

The Vitosol 141-FM DHW solar package is particularly suitable for modernisation projects and new build. In terms of size, performance and price, it is intended specifically for detached houses. It provides an environmentally responsible, 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.

### Therm Protect prevents overheating

An intelligent absorber layer protects the Vitosol 100-FM collector from overheating. Viessmann's patented Therm Protect technology switches off further energy absorption once a defined temperature is 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.

As the collector temperature falls, the crystalline structure returns to its original state. More than 95 percent of the incoming solar energy is then once again 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.

Therm Protect 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

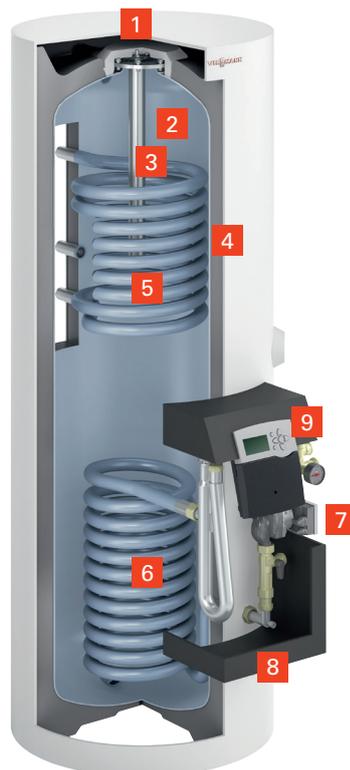
All appliances and components are a perfect match for each other, which makes the installation as easy as can be. Rafter hooks are used for above roof installation. With roof integration, the flat-plate collectors are secured directly to the roof structure. No tools are needed to link the two collectors.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

### 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 – connection for solar collectors
- 7 Solar circuit pump
- 8 Solar-Divicon
- 9 SD1 solar control module





Vitosol 141-FM – solar package for solar DHW heating with 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

- + Low energy costs through solar DHW heating
- + 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-protected steel cylinder with Ceraprotect enamel coating
- + Space optimised flat-plate collector with highly selective absorber coating
- + Therm Protect protects collector from overheating
- + Easy collector installation with rafter hooks
- + Collectors installed without tools (push-fit system)
- + Reduced power consumption due to high efficiency pump
- + Low space requirement thanks to component integration

For specification, see page 25

**VITOSOL 300-TM****VACUUM TUBE COLLECTOR**

Vitosol 300-TM	Type	Type SP3C	Type SP3C	Type SP3C
<b>Absorber area</b>	m <sup>2</sup>	1.26	1.51	3.03
<b>Gross area</b>	m <sup>2</sup>	1.98	2.36	4.62
<b>Aperture area</b>	m <sup>2</sup>	1.33	1.60	3.19
<b>Dimensions</b>				
Length (depth)	mm	150	150	150
Width	mm	885	1053	2061
Height	mm	2241	2241	2241
<b>Weight</b>	kg	33	39	79

**VITOSOL 200-TM****VACUUM TUBE COLLECTOR**

Vitosol 200-TM	Type	Type SPEA	Type SPEA
<b>Absorber area</b>	m <sup>2</sup>	1.63	3.26
<b>Gross area</b>	m <sup>2</sup>	2.67	5.30
<b>Aperture area</b>	m <sup>2</sup>	1.73	3.46
<b>Dimensions</b>			
Length (depth)	mm	160	160
Width	mm	1194	2364
Height	mm	2244	2244
<b>Weight</b>	kg	64	129

**VITOSOL 200-FM****FLAT-PLATE COLLECTOR**

Vitosol 200-FM	Type	Type SV2F	Type SH2F	Type SV2G	Type SH2G
<b>Absorber area</b>	m <sup>2</sup>	2.31	2.31	2.31	2.31
<b>Gross area</b>	m <sup>2</sup>	2.51	2.51	2.56	2.56
<b>Aperture area</b>	m <sup>2</sup>	2.33	2.33	2.33	2.33
<b>Dimensions</b>					
Length (depth)	mm	90	90	90	90
Width	mm	1056	2380	1070	2394
Height	mm	2380	1056	2394	1070
<b>Weight</b>	kg	39	40	40	39



## VITOSOL 100-FM FLAT-PLATE COLLECTOR

Vitosol 100-FM	Type	Type SV1F	Type SH1F
<b>Absorber area</b>	m <sup>2</sup>	2.31	2.31
<b>Gross area</b>	m <sup>2</sup>	2.51	2.51
<b>Aperture area</b>	m <sup>2</sup>	2.33	2.33
<b>Dimensions</b>			
Length (depth)	mm	73	73
Width	mm	1056	2380
Height	mm	2380	1056
<b>Weight</b>	kg	39	41



## VITOSOL 141-FM DHW SOLAR PACKAGE

Comprising Vitosol 100-FM and Vitocell 100-B/-W

Vitosol 100-FM	Type	Type SVKF	Type SVKG
<b>Absorber area</b>	m <sup>2</sup>	2.01	2.01
<b>Gross area</b>	m <sup>2</sup>	2.18	2.23
<b>Aperture area</b>	m <sup>2</sup>	2.02	2.02
<b>Dimensions</b>			
Length (depth)	mm	73	73
Width	mm	1056	1070
Height	mm	2066	2080
<b>Weight</b>	kg	37	38



Vitocell 100-B/-W with Solar-Divicon	Type	Type CVBA
<b>Cylinder capacity</b>	litres	250
<b>Dimensions</b>		
Length (depth)	mm	1485
Width	mm	860
Height	mm	631
<b>Weight</b>	kg	124

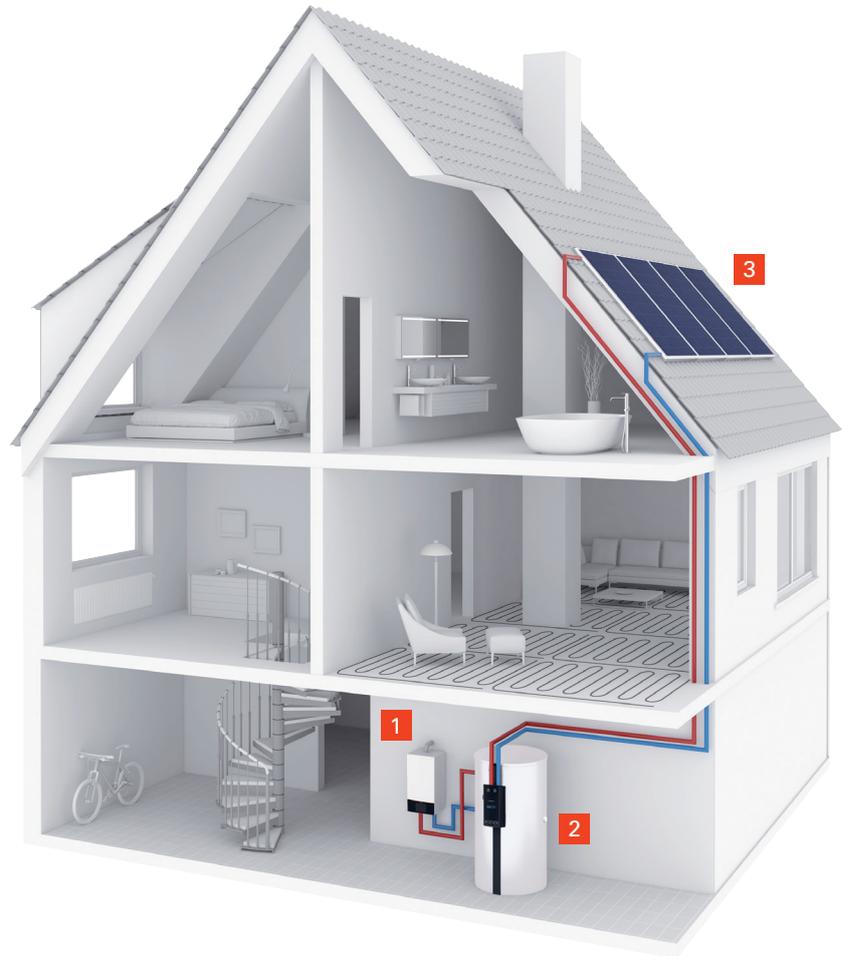
## System technology ensures reliable and safe operation

Viessmann supplies you with all the technology you need from a single source.

For the complete solar thermal range, Viessmann offers optimally matching system technology from a single source. All components fit perfectly together. This gives you the guarantee of outstanding efficiency and high operational reliability of your heating and solar thermal system.

The comprehensive Viessmann product range includes solar collectors, specially developed combi DHW cylinders for use with solar thermal systems, solar control units, the Solar-Divicon pump module for reliable hydraulics and thermal protection of solar thermal systems, plus oil and gas condensing boilers, wood boilers and heat pumps.

Correctly sized solar thermal systems with matching system components cover up to 60 percent of the annual energy demand for DHW heating of detached houses and two-family homes, or up to 35 percent of the total demand of low energy houses for DHW and central heating.



- 1 Vitodens 300-W wall mounted gas condensing boiler
- 2 Vitocell 360-M multi mode combi cylinder for DHW heating and central heating backup with attached Solar-Divicon
- 3 Vitosol 200-FM flat-plate collectors

Energy efficiency class: A  
in combination with  
solar collectors **A+**



### CONNECTIVITY

With Vitoconnect\* and a smartphone, the operation of Viessmann heating systems couldn't be easier. Heating systems can be controlled with the ViCare app. All apps are available for mobile devices running iOS or Android operating systems.



### SOLAR-DIVICON

The solar pump assembly is distinguished by its elegant and compact design. The thermal insulation encases all components and reduces heat losses to a minimum.



### SYSTEM ACCESSORIES

Radiators, expansion vessels, pipework systems, pumps, filters and valves – Vitoset offers the complete range of accessories for the Viessmann heating system.

\* Only required for appliances without integral WiFi.



### SOLAR CONTROL UNITS

With Vitosolic solar control units, solar energy is used particularly effectively. The intelligent energy management system covers all conventional applications and can control up to four separate electrical loads. By communicating with the Vitotronic boiler control unit, the Vitosolic ensures that optimum use is made of the heat captured by the solar collectors, and that as little additional energy as possible is used for DHW or central heating.



### DHW CYLINDERS

The Vitocell range, comprising dual mode DHW cylinders, combi cylinders and heating water buffer cylinders, offers the right cylinder for every demand, and is perfectly matched to the solar thermal system.



Discover more about the Viessmann radiator range



Find out more about Vitocell



At Viessmann, proximity to trade partners is the basis of the company's success. Everyone who chooses Viessmann heating technology benefits from our expertise.

Property developers and system users can receive advice and support regarding sales, installation and customer service exclusively via Viessmann trade partners, who complete regular training at the Viessmann Academy, and have an

in-depth knowledge of the company's products.

Every system user benefits from the comprehensive service that all installation contractors offer as standard.

# With Viessmann trade partners, you're in good hands

## EXAMPLES OF THE SERVICE WE PROVIDE

- Free, no-obligation and individual consultation, even on site
- Clear calculation of heating cost savings after modernisation of the heating system – including combinations with solar collectors, of course
- Calculation of the payback period, after which the new heating system will have paid for itself through energy savings
- Calculation of the actual heat and DHW demand for the household or property
- Information on the most viable combination of a new heating system with a solar thermal system for central heating backup and DHW heating
- Up to date information about public subsidy programmes that could help to finance a new heating system and a solar thermal system
- Support in applying for subsidies

### Technology from Viessmann – subsidies from the government

You don't just save on running costs. Energy savings and environmentally responsible heating technology is also financially supported by local, regional and national bodies through various subsidies, as well as by power supply utilities.

You can find the latest information online at [www.viessmann.de/foerderprogramme](http://www.viessmann.de/foerderprogramme)

or ask your trade partner.



Reliable and competent advice from Viessmann employees and contractors on site and at their offices

### Attractive finance – invest now and save on heating costs immediately

With the Viessmann finance model, you can start saving straight away, and turn your plans into reality. The fast and reliable process, with no red tape, makes modernisation projects easier, allowing your financial planning to remain flexible. The particular advantage is that with Viessmann's favourable terms, savings on heating costs are generally significantly higher than finance costs.

#### PLEASE NOTE:

Applications for subsidies and finance must be made before the heating and/or solar thermal system is purchased. Subsidies and finance agreements cannot be arranged retrospectively.

### Terms and conditions to shout about

If you invest now in a new heating system for your property, you may be eligible for an attractive finance package from Viessmann in conjunction with CreditPlus bank: just 3.99 percent\* effective APR.

**CreditPlus**

\* Over 24 months



Viessmann One Base networks digital services with complete energy systems, including heat pumps, ventilation systems, power storage units and photovoltaic systems.

**VISSMANN  
ONE BASE**

<b>Value added services</b>	Wärme Leads   ViShare* Service Plus   Strom Logistik Plus   FörderProfi ...
<b>Digital services</b>	ViCare   ViGuide   ...
<b>Connectivity &amp; platforms</b>	Connectivity Inside   Energy Management Inside   Vitoconnect   @wibutler   GridBox   ...
<b>Products &amp; systems</b>	...

Seamless integration of products and systems with digital services and value added services for system users and trade partners

\* The operator and contractual partner of the ViShare Energy Community is Energy Market Solutions GmbH (EMS), a subsidiary of the Viessmann Group.

We are Viessmann, a family business. Founded in 1917 as a heating technology manufacturer, today we are the world's leading provider of sustainable climate (heating, cooling and air quality) and renewable energy solutions.

Our integrated range of solutions seamlessly connects products and systems via digital platforms and services, creating an individualised feel-good climate for our users. All our activities are driven by the company mission statement "We create living spaces for generations to come." This is the responsibility that we, the 13,000 members of the Viessmann family, take on every day together with our (trade) partners.



**We create living spaces for generations to come.**



Number 1 Trade Partner – for the 16th consecutive time

**Practical partnership**

As part of its comprehensive range, Viessmann also offers a wide selection of value added services. These include an extensive training and further development programme for trade partners at the well equipped training facilities of the Viessmann Academy.

With its new digital services, Viessmann offers innovative solutions such as the operation and monitoring of heating systems by smartphone. Users benefit from greater reassurance and convenience, whilst contractors can keep a constant eye on the systems for which they are responsible.



As a family company in its fourth generation, we take a long term view: we create living spaces for generations to come. This mission statement guides the actions of all employees in the large Viessmann family.

#### VISSMANN GROUP IN FIGURES

- 1917 — Viessmann was founded
- 13 000 — employees
- 3.4 — Group turnover in billions of euros
- 54 — export share in percent
- 22 — manufacturing sites in 12 countries
- 74 — sales companies in 43 countries
- 120 — sales offices worldwide



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**Your trade partner**

12/2022 EN

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