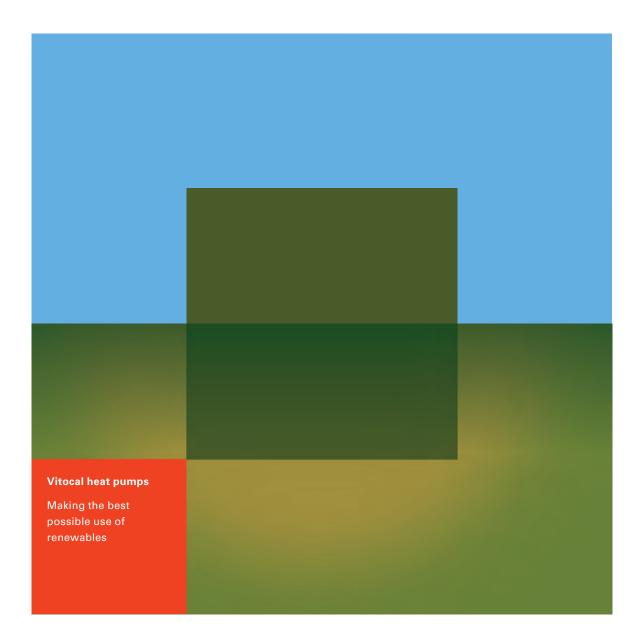
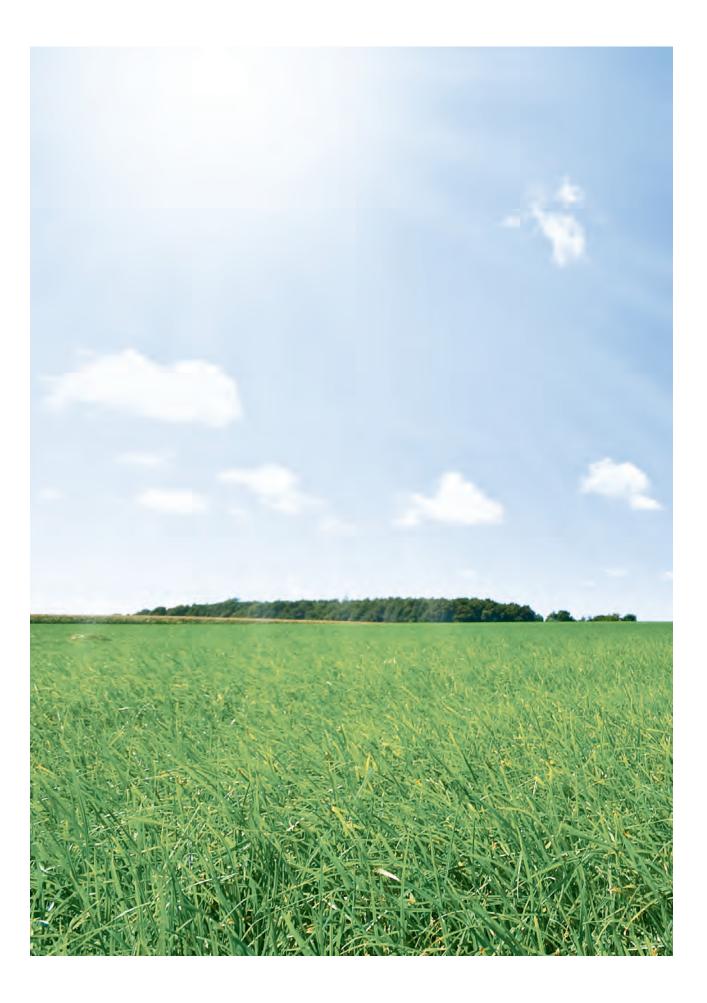




TECHNOLOGY BROCHURE

Heating with airborne and geothermal energy: **VITOCAL**





Heat pumps utilise renewable energy from the ground, sun, groundwater and air. This means they lower the consumption of fossil fuels, conserve valuable resources and reduce CO_2 emissions that damage the environment.

Another benefit is that many of the heat pumps from Viessmann feature active and natural cooling functions. Alongside their classic application as heat generators on cold days, they can also create a pleasantly cool ambience in summer.

Our extensive range offers the ideal heat pump to suit every requirement – individually matched to structural and geological conditions, as well as heat demand. Running a heat pump with self-generated power from a photovoltaic system is particularly environmentally responsible and cost effective.

Ideal for new build and modernisation projects: Viessmann heat pumps can be operated with solar thermal or photovoltaic systems, and in conjunction with an existing oil or gas heating system. This allows every building and property owner to realise their individual ideas. Heat pumps from Viessmann offer tailor-made solutions for heating and cooling, as well as convenient hot water supply, for both new build and modernisation projects.





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6 SAVE ENERGY AND PROTECT THE CLIMATE

By modernising your heating system, you are making an active contribution towards protecting the climate and saving fossil fuels.

12 BRINE/WATER HEAT PUMPS

Brine/water heat pumps use the ground as their primary energy source, either with geothermal collectors or geothermal probes.

34 AIR SOURCE HEAT PUMPS

Air source heat pumps utilise outdoor air or extract air as their primary energy source.

60 SYSTEM TECHNOLOGIES DESIGNED TO WORK TOGETHER

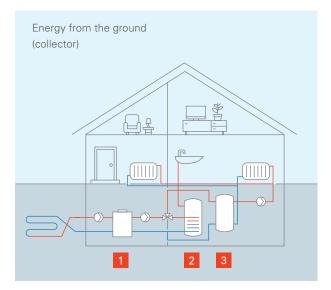
System technology from Viessmann perfects your new heating system: Vitotronic control units and Vitocell DHW cylinders, as well as high grade solar technology, for cost effective DHW heating and central heating backup.

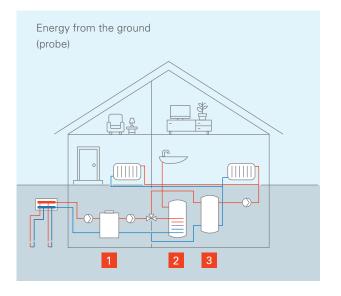
64 SERVICE THAT COVERS EVERY ASPECT OF HEATING

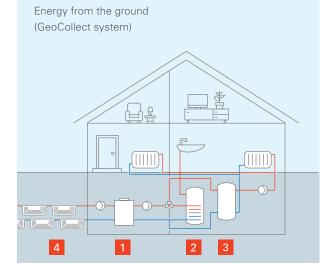
Viessmann trade partners can advise you on everything you need to know about innovative heating technology, available subsidies and finance options, without obligation and free of charge.

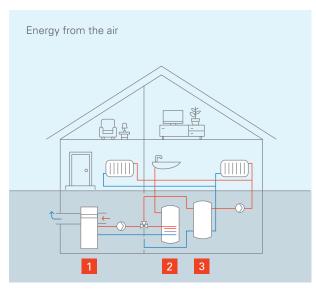
66 THE COMPANY

The Viessmann family business is a leading international manufacturer of efficient energy systems.

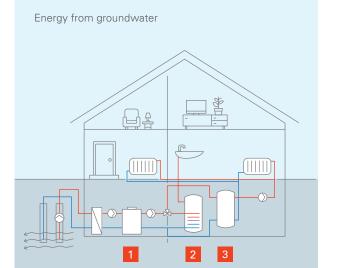


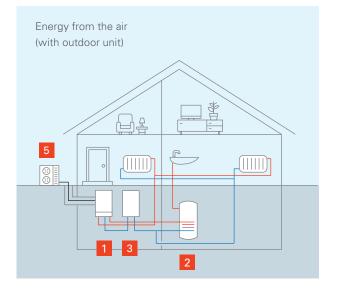






- Vitocal heat pump DHW cylinder Heating water buffer cylinder GeoCollect system Outdoor unit
- 1 2 3 4 5





The air, ground, water and waste heat are primary energy sources that are practically free and can be used to run a heat pump system efficiently.

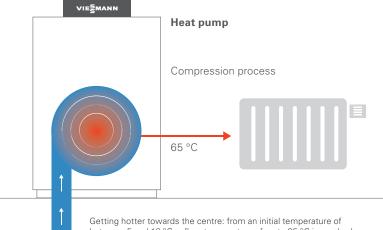
A heat pump works like a refrigerator, just in reverse. While a refrigerator directs heat to the outside, heat pumps take energy from the air or the ground and transfer it into the living space via the heating system. The transfer medium carrying the heat drawn from the environment is compressed in order to reach the flow temperatures necessary for different heating systems.

For example, a heating system with radiators requires temperatures of up to 65 °C. Underfloor heating systems, however, manage with a flow temperature of 30 °C. This makes heat pumps suitable for both modernisation and new build.

State of the art compressor technology for highest efficiency

The compression process is critical to the efficiency of a heat pump. Viessmann uses the most advanced components for this. They are characterised by quiet operation, low vibrations and an extremely long service life, without the need for maintenance.

To generate heat, thermal energy is extracted from the environment and used to evaporate a refrigerant that boils at a low temperature. The compressor compresses the gas this creates and raises it to a higher temperature level.



between 5 and 18 °C, a flow temperature of up to 65 °C is reached.

A heat exchanger transfers the energy from the heated gas to the heating circuit. The refrigerant, which is still under pressure, condenses again and is expanded in an expansion valve. The cycle then begins again.

Usage with various energy sources

The best energy source for each individual case depends on local conditions and the actual heat demand. Viessmann heat pumps can use various energy sources:

- _ Air unlimited availability; lowest investment outlay
- Ground via geothermal collector, geothermal probe or ice store; very efficient
- Water extremely efficient; observe water quality
- Waste heat subject to availability, amount and temperature level

Annual coefficient of performance

When designing a system, it is necessary to consider its likely use over an entire year. To do this, the amount of heat delivered is compared with the total electricity demand of the heat pump system. This includes the power drawn by pumps and control units, etc. The result is referred to as the annual coefficient of performance (COP).

The annual COP is the ratio of heat transfer to power consumption. The higher this coefficient, the more efficiently the heat pump is working. The quick and easy way to <u>save energy</u> and enjoy the benefits of convenience and reassurance.



The ViCare app offers new possibilities for controlling heating systems via the internet. The design of the ViCare graphic interface has been kept simple, enabling completely intuitive heating system operation.

Save energy automatically

The system is designed to control one heating circuit. The required room temperature can be set via the touchscreen and it is possible to switch between standard and party mode ("Extended heating") with a single tap.

When leaving the house ("Away"), it takes just one command to reduce the heating system temperature and save energy. Anyone wanting to program different switching times for each day will appreciate the assistant function. A separate button on the start screen also shows numerous tips for saving energy.

System status at a glance

The user can see at a glance whether their heating system is working as it should. Yellow draws attention to a pending service and red automatically offers to contact the contractor.

This function is enabled by simply storing the contact details of the contractor. Of course, it is up to the system user whether to allow the contractor to monitor their heating system using the specially developed ViGuide app. Vitoconnect is the interface between the heat generator and ViCare. It is connected directly to the Vitotronic control unit via a cable. A plug-in power supply unit is included in the standard delivery. The small adaptor, measuring only 10 x 10 cm, is designed for wall mounting.

The module is connected to the internet and registered via plug & play. It is simply a matter of scanning the supplied QR code using a smartphone.

Vitoconnect is compatible with mobile devices and operating systems iOS 8.0 and Android 4.4 or higher. Control LEDs indicate data communication between the boiler and the internet.

Explanation in brief

ViCare accesses the Vitoconnect online interface to control the heat generator. Once the system user has given their consent, the contractor can use ViGuide to keep a constant eye on their customer's system.





Vitoconnect with sockets for the plug-in power supply unit (left) and data connection

5 year guarantee

with system web connection/connectivity

For conditions, see www.viessmann.de/ garantie



REASSURANCE

Warmth and reassurance:

- Green for go see at a glance whether everything is OK
- + Be informed about a pending service
- Direct access to the saved contact details of the contractor



ECONOMY

Simply set the preferred temperature – save costs when not at home:

- + Straightforward, convenient operation of the heating system
- Record a daily routine and automatically save on energy costs
- + Set standard functions at the tap of a button on a smartphone



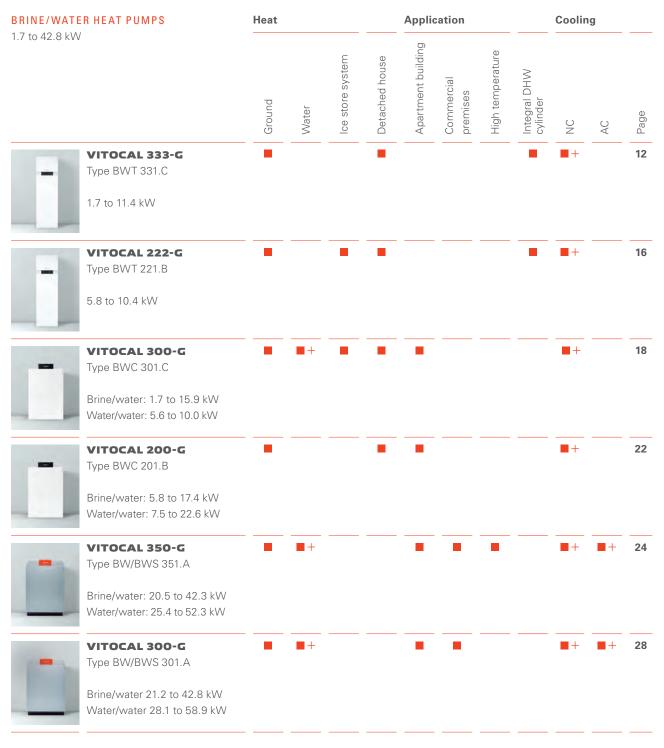
SUPPORT

A direct link to the contractor – just in case:

- + Simply enter the contact details of the contractor
- + Quick and effective assistance the contractor has all of the important information
- + All-inclusive carefree safety and maintenance package



Simply download the app and tap "Discover ViCare" on the app's start screen – and off you go, with no need for an actual heat generator or internet connection.



+ Accessories required

AIR SOURCE HEAT PUMPS		Туре			Application					Cooling	
2.4 to 20.6 kV	V	Monoblock indoor installation	Monoblock outdoor installation	Split	Detached house	Apartment building/ commercial premises	New build	Modernisation	Integral DHW cylinder	AC	Page
	VITOCAL 200-S Type AWB-E-AC 201.D Type AWB-M-E-AC 201.D 2.4 to 14.7 kW			•	•						34
-	VITOCAL 222-S Type AWBT-E-AC 221.C Type AWBT-M-E-AC 221.C 2.4 to 14.7 kW			•	•		•		•	•	38
	VITOCAL 350-A Type AWHI 351.A (indoor) Type AWHO 351.A (outdoor) 12.7 to 20.6 kW	•	•		•			•			40
	VITOCAL 200-A Type AWCI-AC 201.A 2.9 to 12.4 kW						•			•	42
	VITOCAL 200-A Type AWO-E-AC 201.A Type AWO-M-E-AC 201.A 2.4 to 14.7 kW		•		•		•				44
	VITOCAL 222-A Type AWOT-E-AC 221.A Type AWOT-M-E-AC 221.A 2.4 to 14.7 kW		•		•		•		•	•	46
jF	VITOCAL 262-A Type T2E-ze/T2H-ze with 300 litre cylinder capacity, type T2W-ze for wall mounting	•			•		•	•	With types T2E-ze/ T2H-ze		48

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The Vitocal 333-G and Vitocal 222-G compact heat pumps include a brine/ water heat pump, DHW cylinder, high efficiency circulation pump, 3-way diverter valve and instantaneous heating water heater.

Steel DHW cylinders with Ceraprotect enamel coating and a cylinder capacity of 220 litres ensure a high level of DHW convenience.

Online control via ViCare app

Using the optional Vitoconnect internet interface, the heat pump can be controlled online from anywhere via the free ViCare app on any standard mobile device. At the appliance itself, the Vitotronic 200 control unit with plain text and graphic display enables intuitive and menu-guided operation.

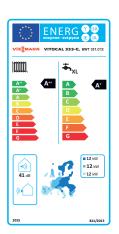
Particularly quiet operation

The sound-optimised appliance design makes these compact heat pumps particularly quiet so that they can even be installed close to the living space.

Natural heating – natural cooling

The compact heat pumps can provide a pleasant indoor climate in a low energy house, even on hot summer days.

The natural cooling function brings cool underground temperatures into the home. For this, the Viessmann NC-Box is required as an accessory.



Energy efficiency label Vitocal 333-G (BWT 331.C12)

Vitocal 333-G (BWT 331.C12) achieves energy efficiency class A⁺⁺⁺ in line with Commission Regulation (EU) No 813/2013.



Vitocal 333-G/222-G are Heat Pump KEYMARK certified.

- + Compact brine/water heat pumps with heating outputs from 1.7 to 11.4 kW (Vitocal 333-G) or 5.8 to 10.4 kW (Vitocal 222-G)
- High level of DHW convenience through integral DHW cylinder with 220 litre capacity
- Low running costs thanks to high COP (coefficient of performance) to EN 14511 (5/2018): up to 4.8 (B0/W35)
- + Flow temperature: up to 65 °C for high DHW convenience
- High operating convenience heating, cooling, DHW and ventilation via the integral Vitotronic control unit
- + Compact dimensions and small footprint to maximise available space in the building
- + Ready to connect, ex works
- + Increased photovoltaic self-consumption
- + Web-enabled through Vitoconnect (accessory) with ViCare app



Easy to operate Vitotronic control unit with straightforward navigation and clear menu structure.



The Vitocal 333-G compact appliances are the most efficient solution for new build thanks to advanced inverter technology within the brine/water heat pumps.

The refrigerant circuit, with outputdependent control, matches the heating output of the heat pump to the current heat demand of the building. This results in fewer start/stop cycles in the partial load range and higher annual efficiency. The Vitocal 333-G is available in two output sizes with a modulation range of 1.7 to 7.0 kW and 2.4 to 11.8 kW, ensuring optimum coverage in new build.

High efficiency – low energy costs

Alongside output control, the RCD (refrigerant cycle diagnostic) system enables extremely fast and accurate control of the refrigerant circuit via an electronic expansion valve. Energy saving high efficiency pumps for the brine and heating circuit reduce energy consumption and costs.

High DHW efficiency and convenience

The newly developed 220 litre DHW cylinder in the Vitocal 333-G achieves a maximum draw-off volume of over 300 litres (draw-off temperature 40 °C) with efficiency class A⁺ (XL profile) and maintains a maximum DHW temperature of 60 °C without electrical reheating. A solar heat exchanger set can be used as an option to incorporate a solar thermal system for DHW heating.

VITOCAL 333-G

- 1 Vitotronic 200 control unit (type WO1C)
- 2 Steel DHW cylinder with Ceraprotect enamel coating, 220 litre capacity
- 3 Hydraulic push-fit connectors
- 4 Condenser
- 5 Primary and secondary pumps (high efficiency circulation pumps)
- 6 Scroll compressor with output-dependent control
- 7 Instantaneous heating water heater

The combination of a heat pump and a Vitovent ventilation unit ensures exceptional living and operating convenience. The integral heat pump control unit, or an optional remote control unit, can be used for convenient operation of both appliances.

On hot summer days, the heat pump can also cool the rooms. The optional natural cooling box is required for this integral cooling function.



Straightforward installation, space saving and very low operating noise

If required, to simplify the handling and installation of the Vitocal 333-G, hydraulic and electrical plug-in connectors are available, which enable the new refrigerant circuit module to be easily removed from the heat pump and transported separately. Thanks to the flexible connection concept, the heat pump can also be quickly matched to the installation situation on site.

The small footprint of less than 0.5 square metres and front access to all components requiring servicing ensure space saving installation. With its very quiet operation of 41 dB(A) (sound power level to ErP at B0/W55), this compact appliance can also be installed near the living space, such as in a utility room.

Online control via ViCare app

Using the optional Vitoconnect internet interface, the heat pump can be controlled online from anywhere via the free ViCare app on any standard mobile device. At the appliance itself, the Vitotronic 200 control unit with plain text and graphic display enables intuitive and menu-guided operation.

TAKE ADVANTAGE OF THESE BENEFITS

- + Compact brine/water heat pumps with inverter technology
- + Heating outputs: 1.7 to 8.6 kW and 2.4 to 11.4 kW (modulating)
- + Extremely high DHW convenience thanks to DHW temperature of up to 60 °C and high draw-off rate of 300 litres through 220 litre DHW cylinder
- Very low running costs thanks to optimised DHW efficiency energy efficiency class A⁺
- + DHW temperature: up to 60 °C without electrical reheating
- + Low running costs thanks to optimised SCOP (seasonal coefficient of performance) to EN 14825: up to 5.5 (average climatic conditions/low temperature application)
- + COP (coefficient of performance) to EN 14511 (5/2018): up to 4.8 (B0/W35)
- Barely audible, even when installed near the living space, thanks to an innovative sound attenuation concept resulting in a sound power level of 33 to 46 dB(A) (B0/W55)
- + Compact dimensions and small footprint to maximise available space in the building
- + High operating convenience heating, cooling, DHW and ventilation via the integral Vitotronic control unit
- + Increased photovoltaic self-consumption due to low output modulation of the heat pump
- + Web-enabled through Vitoconnect (accessory) with ViCare app

For specification, see page 50

Thanks to advanced inverter technology in brine/water heat pumps, the new generation of Vitocal 333-G compact appliances is the most efficient solution for new build.



The Vitocal 222-G compact brine/water heat pump is fully equipped with all of the components required for DHW and central heating.

With heating output levels of between 5.8 and 10.4 kW, it is ideal for use in detached houses. Flow temperatures up to 65 °C also enable use with conventional radiators.

This heat pump is the attractively priced alternative to the compact appliances in the 300 series. With its refrigerant circuits with a fixed heating output (in three output sizes) and an electronically controlled expansion valve, it achieves a COP (coefficient of performance) of up to 4.8 to EN 14511 (5/2018) at B0/W35.

Small footprint

The small footprint of this heat pump makes it particularly suitable where space is at a premium – the brine circulation pump, heating circuit pump and 3-way diverter valve are already integrated inside the compact casing.

If required, to simplify the handling and installation of the Vitocal 222-G, hydraulic and electrical plug-in connectors are available, which enable the new refrigerant circuit module to be easily removed from the heat pump and transported separately. Thanks to the flexible connection concept, the heat pump can also be quickly matched to the installation situation on site.

Particularly quiet, therefore also suitable for installation near the living space

The casing completely protects the refrigeration module/hydraulic compartment from the outside environment and, in conjunction with the three-dimensional anti-vibration mounts, minimises operating noise. These compact heat pumps are some of the quietest in their category, as they generate a sound power level of only 46 dB(A) (B0/W55).

Vitotronic 200 control unit with optional app control

The Vitotronic 200 control unit, with plain text and graphic display, is simple and intuitive to use. Settings can quickly be changed by following the user prompts. Control via the internet through the ViCare app on a mobile device is also an option.



Vitocal 222-G Compact brine/water heat pump with integral DHW cylinder

VITOCAL 222-G 5.8 to 10.4 kW



Vitocal 222-G is Heat Pump KEYMARK certified.



Vitotronic 200 control unit display

TAKE ADVANTAGE OF THESE BENEFITS

- + Compact brine/water heat pump with heating outputs from 5.8 to 10.4 kW
- + High DHW convenience with 220 litre DHW cylinder
- Low running costs thanks to optimised DHW efficiency DHW energy efficiency class: A⁺
- + Low running costs thanks to optimised SCOP (seasonal coefficient of performance) to EN 14825: up to 5.3 (average climatic conditions/low temperature application)
- + COP (coefficient of performance) to EN 14511 (5/2018): up to 4.8 (B0/W35)
- Barely audible even when installed near the living space, thanks to an innovative sound attenuation concept resulting in a sound power level of max. 46 dB(A) (B0/W55)
- + Compact dimensions and small footprint to maximise available space in the building
- + High operating convenience heating, cooling, DHW and ventilation via the integral Vitotronic control unit
- + Increased photovoltaic self-consumption due to low output modulation of the heat pump
- + Web-enabled through Vitoconnect (accessory) with ViCare app

VITOCAL 222-G

1	Vitotronic 200 control unit (type WO1C)
2	Steel DHW cylinder with Ceraprotect
	enamel coating, 220 litre capacity
3	Hydraulic push-fit connectors
4	Evaporator
5	Primary pump
	(high efficiency circulation pump)
6	Scroll compressor with fixed heating output
7	Secondary pump
	(high efficiency circulation pump)
0	

8 Instantaneous heating water heater

Flexible configuration of Viessmann heat pumps: either brine/water heat pump, or water/water heat pump with conversion kit, depending on the primary energy source.



The Vitocal 300-G and Vitocal 200-G floorstanding brine/water heat pumps recover heat from high yielding heat sources. For this, a geothermal probe is inserted into a borehole or a geothermal collector is installed on the property. In all these cases, these appliances cover the entire energy demand, even on colder days.

As an alternative, depending on the location of the house, it may also be possible to utilise the thermal energy contained in groundwater. In addition, the Vitocal 300-G/200-G can also be configured for straightforward operation as a water/water heat pump. It is equally well suited to new build and modernisation projects, in both detached houses and apartment buildings.



Vitocal 300-G/200-G are Heat Pump KEYMARK certified.

- + Year-round mono mode operation for DHW and central heating possible
- Low running costs thanks to high SCOP to EN 14825: up to 5.6 for average climatic conditions and low temperature application (W35)
- Prepared for the use of self-generated power, for example from photovoltaic systems
- + Web-enabled through Vitoconnect (accessory) with ViCare app
- + Control of Viessmann ventilation units possible
- + Easier handling through small and light modules



Vitocal 300-G heat pump with Vitocell 100-W DHW cylinder



VITOCAL 300-G

- Vitotronic 200 control unit (type WO1C)
 Hydraulic push-fit connectors
 Condenser
- Primary and secondary pump(high efficiency circulation pumps)
- 5 Scroll compressor with output-dependent control
- 6 Instantaneous heating water heater

VITOCAL 300-G

Brine/water: 1.7 to 15.9 kW Water/water: 5.6 to 10.0 kW

Thanks to advanced inverter technology in brine/water heat pumps, the new Vitocal 300-G heat pump is the most efficient solution for new build and the best choice for replacing older brine/ water heat pumps. The refrigerant circuit, with output-dependent control, matches the heating output of the heat pump to the current heat demand of the building. This results in fewer start/stop cycles in the partial load range and higher annual efficiency.

The Vitocal 300-G is available in three output sizes with a modulation range of 1.7 to 8.6 kW, 2.4 to 11.4 kW or 3.8 to 15.9 kW, and therefore covers a wide range of applications for new and existing buildings.

High efficiency – low energy costs

Alongside output control, the RCD (refrigerant cycle diagnostic) system enables extremely fast and accurate control of the refrigerant circuit via an electronic expansion valve. Energy saving high efficiency pumps for the brine and heating circuit reduce energy consumption and costs.

With ventilation unit for a high level of comfort

The combination of a heat pump and a Vitovent ventilation unit ensures exceptional living and operating convenience. The integral heat pump control unit, or an optional remote control unit, can be used for convenient operation of both appliances. On hot summer days, the heat pump can also cool the rooms. The optional natural cooling box is required for this.

Straightforward installation, space saving and quiet

The small footprint of less than 0.5 square metres and front access to all components requiring servicing ensure space saving installation. With its very quiet operation of up to 41 dB(A) (sound power level to ErP at B0/W55), this heat pump can also be installed near the living space, such as in a utility room.



Vitotronic 200 control unit (type WO1C)



- + Floorstanding brine/water heat pumps, refrigerant circuit with modulating heating output: 1.7 to 15.9 kW
- + Heating output in water/water configuration: 5.6 to 10.0 kW rated heating output
- + Mono mode operation for central heating and DHW heating
- + Flow temperature: up to 65 °C for high DHW convenience
- Very low running costs due to refrigerant circuit with output-dependent control and innovative inverter technology for the highest SCOP (seasonal coefficient of performance). SCOP to EN 14825: up to 5.6 for average climatic conditions and low temperature application (W35)
- + Barely audible, even when installed near the living space, thanks to new sound insulation concept
- + Integral instantaneous heating water heater, e.g. for screed drying
- + Compact dimensions and small footprint to maximise available space in the building
- + High operating convenience heating, cooling, DHW and ventilation via integral Vitotronic control unit with plain text and graphic display
- + Easy handling as the heat pump module can be quickly removed thanks to push-fit connections
- + Increased photovoltaic self-consumption due to low output modulation of the heat pump
- + Web-enabled through Vitoconnect (accessories) for operation and service via the free ViCare app

The Vitocal 200-G heat pump is the attractively priced alternative to the 300 series. With its refrigerant circuits with fixed heating output (in five output sizes), it covers a wide range of applications with good efficiency.

Small footprint

This heat pump's small footprint makes it particularly suitable where space is at a premium – the brine circulation pump, heating circuit pump and 3-way diverter valve come ready-integrated inside the compact casing. If required, to simplify the handling and installation of the Vitocal 200-G, hydraulic and electrical plug-in connectors are available, which enable the new refrigerant circuit module to be easily removed from the heat pump and transported separately. Thanks to the flexible connection concept, the heat pump can also be quickly matched to the installation situation on site.

Quiet running for installation near the living space

The casing completely protects the refrigeration module/hydraulic compartment from the outside environment and, in conjunction with the three-dimensional anti-vibration mounts, minimises operating noise. These heat pumps are some of the quietest in their category, as they generate a sound power level of only 49 dB(A) (B0/W55).

Vitotronic 200 control unit with optional app control

The Vitotronic 200 control unit, with plain text and graphic display, is simple and intuitive to use. Settings can quickly be changed by following the user prompts. Control via the internet through the ViCare app on a mobile device is also an option.



Screen of the Vitotronic 200 control unit (type WO1C)

TAKE ADVANTAGE OF THESE BENEFITS

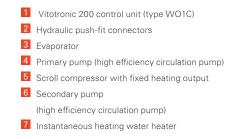
- + Floorstanding brine/water heat pumps, heating output: 5.8 to 17.4 kW
- + Heating output in water/water configuration: 7.5 to 22.6 kW
- + Mono mode operation for central heating and DHW heating
- + Flow temperature: up to 65 °C for high DHW convenience
- Low running costs thanks to high SCOP (seasonal coefficient of performance) to EN 14825: up to 5.3 for average climatic conditions and low temperature application (W35)
- + High efficiency due to RCD (refrigerant cycle diagnostic) system with electronic expansion valve (EEV)
- + Barely audible, even when installed near the living space, thanks to new sound insulation concept
- + Integral instantaneous heating water heater, e.g. for screed drying
- + Compact dimensions and small footprint to maximise available space in the building
- High operating convenience heating, cooling, DHW and ventilation via integral Vitotronic control unit with plain text and graphic display
- + Easy handling as the heat pump module can be quickly removed thanks to push-fit connections
- + Increased photovoltaic self-consumption due to low output modulation of the heat pump
- Web-enabled through Vitoconnect (accessories) for operation and service via the free ViCare app

For specification, see page 51

VITOCAL 200-G Brine/water: 5.8 to 17.4 kW Water/water: 7.5 to 22.6 kW



VITOCAL 200-G



Vitocal 200-G brine/water heat pump for installation near the living space





With its two high temperature heat pumps, the Vitocal 350-G and Vitocal 300-G, Viessmann also meets the demand for higher heating outputs. Four sizes are available up to 84.6 kW.

EVI for high flow temperatures

The Vitocal 350-G achieves high flow temperatures of up to 68 °C. This results from the use of an EVI (enhanced vapour injection) refrigerant circuit, where the injection of vapour cools the refrigerant so that it can be more densely compressed than is otherwise possible. The Vitocal 350-G also delivers sufficiently high temperatures to make it suitable for modernising apartment buildings with radiator heating systems.

RCD system for highest level of efficiency

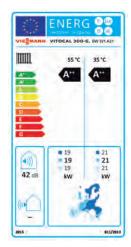
RCD stands for Refrigerant Cycle Diagnostic system. It provides constant monitoring of the refrigerant circuit within Vitocal heat pumps and, in conjunction with the electronic expansion valve, ensures the highest level of efficiency at every operating point.

Perfect for a high heating output

Vitocal 350-G/300-G is an economical solution for higher heat demands. It allows the heating flow and return lines of several heat pumps to be linked in a cascade.

A heat pump cascade consists of one lead heat pump and up to four lag heat pumps. Both the lead heat pump and the lag heat pumps can have two stages. This not only delivers the higher heating output required, but also increases the operational reliability of the entire system.

The modular design, with separate compressor circuits, also ensures particularly high levels of efficiency in partial load operation, and enables simultaneous DHW and central heating.



Energy efficiency label Vitocal 300-G, BW 301.A21



EHPA Quality Label as proof of the COP, for subsidy according to the German market incentive programme

- + Low running costs with the highest level of efficiency at every operating point through the innovative RCD (refrigerant cycle diagnostic) system with EEV (electronic expansion valve)
- + Mono mode operation for DHW and central heating possible
- Master/slave solutions for higher heat demands and DHW convenience, e.g. combination of Vitocal 300-G and Vitocal 350-G
- + Extremely quiet operation through sound-optimised appliance design
- + Vitotronic 200 control unit with plain text and graphic display for weather-compensated heating mode and natural or active cooling
- + Control of Viessmann ventilation units possible
- + Prepared for use of self-generated power,
 - e.g. from photovoltaic systems
- + Web-enabled via free ViCare app and Vitoconnect (optional)



VITOCAL 350-G

- Vitotronic 200 heat pump control unit
 Condenser
- **3** Large area evaporator for efficient exchange of heat
- 4 Hermetically sealed Compliant scroll compressor with EVI process



The powerful Vitocal 350-G brine/water heat pump is one of the quietest heat generators of its kind, thanks to its low-vibration design.

Where heat demand is even higher, the Vitocal 350-G can be operated in two-stage mode with an additional heat pump of the same type, or with a Vitocal 300-G in a master/slave system, and can then provide an output of up to 84.6 kW. At an early stage when planning the system, this configuration allows for optimum matching of the heat pumps to the building in question.

Master/slave system for DHW and central heating

In a master/slave system, the Vitocal 350-G, as the master, delivers high flow temperatures for DHW heating, while the Vitocal 300-G (slave, without its own control unit) covers the required heat load.

The EVI refrigerant circuit enables the Vitocal 350-G to achieve an extremely high COP of up to 5.0, which contributes to its low running costs.

Vitotronic 200 control unit with communication capability

Viessmann uses the convenient Vitotronic 200 control unit to ensure standardised operation of all its heat generators. Its many functions include menu-guided operation, an integral diagnostic system, control of the instantaneous heating water heater and an additional (existing) oil or gas boiler, and of course, the natural and active cooling functions. Furthermore, the Vitotronic 200 is capable of communicating, and via the Vitocom 300 module, allows the heat pump system to be set up, monitored and optimised over the internet with the Vitotrol app on a smartphone or tablet.

Operation with self-generated solar power

The Vitocal 350-G heat pump is already prepared for cost effective operation with self-generated power from a photovoltaic system. An intelligent control unit ensures maximum consumption of the self-generated power and therefore lowers energy costs.



Vitocal 350-G brine/water or water/water heat pump with a rated heating output of 20.5 to 42.3 kW

TAKE ADVANTAGE OF THESE BENEFITS

- Brine/water heat pump, heating outputs, single-stage: 20.5 to 42.3 kW
- Water/water heat pump, heating outputs, single-stage: 25.4 to 52.3 kW
- + Low running costs thanks to high COP (coefficient of performance) to EN 14511 of up to 5.0 (B0/W35)
- + Flow temperature: up to 65 °C

For specification, see page 52

The Vitocal 300-G is the specialist for large detached houses and apartment buildings. For these applications with high heating outputs, the two-stage Vitocal 300-G, based on the master/ slave principle, is the right choice.

Cascades up to 589 kW

It can deliver a heating output from 42.4 to 85.6 kW (brine/water) with the ground as the primary heat source, or 56.2 to 117.8 kW (water/water) when using groundwater. If this is not enough, the integral cascade function enables the output to be raised to up to 589 kW (water/water) with multiple Vitocal 300-G units.



heat pump with a rated heating output of 21.2 to 42.8 kW

This also assures greater operational reliability for the system as a whole. The modular design, with separate compressor circuits, also ensures particularly high levels of efficiency in partial load operation, and enables simultaneous central and DHW heating.

Powerful and reliable

At the heart of the Vitocal 300-G lies its powerful Compliant scroll compressor. This component stands out on account of its high degree of operational safety and reliability. In conjunction with the large heat exchangers and integral refrigerant manifold, the Vitocal 300-G achieves a high COP and flow temperatures up to 60 °C.

Quiet operation and high output are not mutually exclusive

The hermetically sealed casing and particularly clever appliance design enable a reduction in noise emissions in the Vitocal 300-G that far exceeds expectations in this output range.



VITOCAL 300-G

- Vitotronic 200 heat pump control unit
 Condenser
- **3** Large area evaporator for efficient exchange of heat
- 4 High efficiency pump
- 5 Hermetically sealed Compliant scroll compressor

TAKE ADVANTAGE OF THESE BENEFITS

- Brine/water heat pump, heating output, single-stage: 21.2 to 42.8 kW, maximum 428 kW (as a cascade)
- + Water/water heat pump, heating output, single-stage: 28.1 to 58.9 kW
- + Flow temperature: up to 60 °C
- + Sound power level: \leq 44 dB(A)
- + Integral energy statement
- + Easier handling through small and light modules

For specification, see page 52

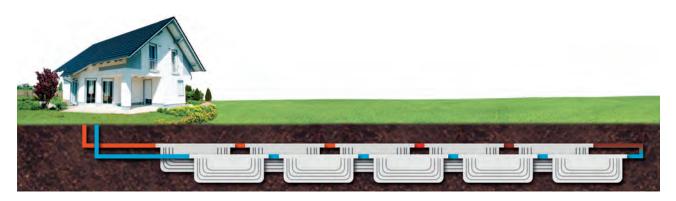


Gain energy with geothermal heat

The GeoCollect system harvests the heat that is present just a short distance below the surface. This saves costly deep drilling. We provide you with a powerful and highly efficient system. There is much less work involved than for boreholes with geothermal probes, and a permit is not normally required. Compared to typical surface absorbers, we need much less space, which makes use on smaller plots possible. The absorbers are installed about 1.5 metres below the ground and 0.7 metres apart. At this depth, adequate use can be made of the energy stored temporarily from the sun, wind and rain, for example.

BENEFIT FROM THE COMBINATION OF VIESSMANN HEAT PUMPS WITH GEOCOLLECT GEOTHERMAL COLLECTORS

- + Higher efficiency than air source heat pumps
- + Can be operated in mono mode (without electric heater rod) all year round
- + No visible components outside the building
- + No sound emissions outdoors
- + Required space only amounts to around ¹/₃ of the building's usable floor space
- + No permit generally required
- + Cooling with the natural cooling function practically free of charge
- + Reliable planning with pre-configured complete package from Viessmann
- + 10 year warranty on the system installed underground



GeoCollect is an efficient heat source for brine/water heat pumps. It harnesses the geothermal heat near the surface by means of geothermal absorber modules buried vertically in rows 1.5 m below ground.



Geothermal absorber modules made from soil-resistant plastic



Installation example in complete excavation (also possible in trench excavation)

Besides generating high levels of heating comfort and reliable DHW heating, heat pumps can also provide <u>cooling for rooms</u> in hot weather.

In addition to its primary function as a heating appliance, heat pumps can also provide cooling:

With passive cooling (natural cooling), the brine medium or the groundwater absorbs the energy from the heating circuit via a heat exchanger and transfers it outdoors. The natural ambient temperature is also used for cooling. Apart from the control unit and circulation pump, the heat pump remains switched off. This makes natural cooling a particularly energy efficient and inexpensive way to cool the interior of a building. With active cooling, the function of the heat pump is simply reversed. For this, the refrigerant cycle is reversed internally; alternatively the primary and secondary connections are changed over. As with a fridge, the heat pump then actively generates a cooling capacity.

> Natural cooling with NC-Box – energy efficient and inexpensive

All the components are prefitted in the Viessmann NC-Box. This makes the thermally insulated box not only compact, but also particularly simple and quick to install. The NC-Box is equipped with a mixer for integration in the cooling circuit. This enables continuous operation without temperatures falling below the dew point.



Natural cooling with NC-Box

For specification, see page 53







As systems for heating only, or as systems that provide heating and cooling, these units are ideal for new build and modernisation. They are characterised by separation into a quiet indoor unit and an air handling outdoor unit. This design does not require costly wall outlets or the routing of air ducts.

As with other heating systems, the actual heat generator is installed inside the building. With a maximum width of 60 centimetres (just 45 cm in the case of the Vitocal 200-S), the indoor units can be sited in a basement or even near the living space in a utility room, or wall mounted (Vitocal 200-S).

A high proportion of prefitted components makes these compact heating centres easy for contractors to install, which reduces installation costs.

Fully equipped indoor units

The indoor units incorporate hydraulic components, the heat exchanger (condenser), the DHW cylinder (Vitocal 222-S), a high efficiency pump, an instantaneous heating water heater, a 3-way diverter valve and the Vitotronic 200 control unit.

Convenient Vitotronic control unit

The Vitotronic 200 menu-guided control unit is designed logically and is easy to follow. The large backlit display offers good contrast, making it easy to read. A help function informs users of the next steps to perform. The graphic user interface also displays heating and cooling curves.

Efficient and economical Split heat pumps operate with astonishing efficiency in partial load operation. The inverter technology accurately matches the compressor output to the current heat demand through modulation, resulting in high efficiency at every operating point.



Vitocal 200-S/222-S appliances are certified in accordance with the EHPA Quality Label for Heat Pumps.



Heat Pump KEYMARK certified



- + Inverter compressor for optimum output matching to the heating and cooling demand
- + Convenient reversible design that enables heating and cooling
- + High efficiency in partial load operation through compressor with output-dependent control
- + Low sound power level of the outdoor unit in partial load operation through variable speed fan and compressor
- + No frost protection needed for the connection lines as there is no risk of the refrigerant-filled lines freezing
- + Easy to use Vitotronic 200 control unit with plain text and graphic display
- + Control of Viessmann ventilation units possible
- + Easy and inexpensive installation without costly wall openings
- + Prepared for the use of self-generated power, for example from photovoltaic systems
- + Web-enabled via free ViCare app and Vitoconnect (optional)

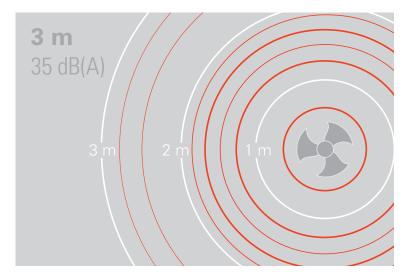
The Vitocal 200-S split air source heat pump utilises the latent heat in the outdoor air for environmentally responsible and inexpensive heating. It is available either solely for heating, or for heating and cooling.

Extremely quiet outdoor units from Viessmann

These new outdoor units in their timeless design are very easy on the eye. These appliances with one or two fans are designed and manufactured in-house. In addition to extremely quiet operation, they offer very good performance data, an excellent finish and superb product quality.

By far the quietest outdoor unit of its kind

The result is barely audible. In conjunction with intelligent speed control, the high grade, sound-optimised fans significantly contribute to reducing airborne noise in full and partial load operation. Low frequencies that are generally perceived as a nuisance in conventional heat pumps are prevented.



The Vitocal 200-S/-A is especially quiet, making it ideal for use in terraced housing – just 35 dB(A) to the nearest neighbour.

Particularly quiet at night

In night mode, the sound power levels of the fan and compressor are further reduced. This feature is important in places where statutory requirements on acoustic emissions (TA-Lärm: 35 dB(A)) must be observed. This applies particularly in areas that are densely built-up, such as terraced housing.

Double bearings prevent structure-borne noise

Double, flexible anti-vibration mounts and acoustically optimised arrangement of the refrigerant circuit components effectively prevents the emission of structure-borne sound via the casing and the refrigerant line. This means it is nearly impossible for vibrations from the outdoor unit to travel to the building structure or into the building.

Higher efficiency – COP: up to 5.2 at A7/W35

Several essential components contribute to the increase in efficiency. These include the variable speed scroll compressor, an asymmetrical plate heat exchanger and the air evaporator with corrugated fins.

- Low running costs thanks to high COP (coefficient of performance) to EN 14511: up to 5.2 (A7/W35)
- + Especially quiet thanks to advanced acoustic design (AAD) ideal for use in terraced housing
- + High product quality and a modern, timeless design
- + Maximum flow temperature up to 60 °C at -10 °C outside temperature
- + Compact indoor unit with high efficiency circulation pump, condenser, 3-way diverter valve, instantaneous heating water heater and control unit
- + Heating and cooling with a single appliance thanks to reversible circuit
- + Web-enabled via free ViCare app and Vitoconnect (optional)

VITOCAL 200-S 2.4 to 14.7 kW

VITOCAL 200-S indoor unit

- 1 Flow switch
- 2 Instantaneous heating water heater
- 3 Condenser
- 4 3-way diverter valve for central heating/DHW heating
- 5 Secondary pump (high efficiency circulation pump)
- 6 Vitotronic 200 control unit





VITOCAL 200-S outdoor unit

- 1 Coated evaporator with corrugated fins for higher efficiency
- 2 Power saving, variable speed DC fan
- 3 Variable speed scroll compressor
- 4 4-way diverter valve
- 5 Electronic expansion valve (EEV)

Hybrid solutions

The Vitocal 250-S split air source heat pump supplements existing floorstanding or wall mounted oil or gas condensing boilers up to 30 kW. Detailed information can be found in our hybrid solutions brochure.





High DHW convenience

The Vitocal 222-S compact heat pump offers a high level of DHW convenience thanks to its 220 litre enamelled DHW cylinder, which is heated via an internal indirect coil.

With their timeless design and a width of just 60 cm, these indoor units can be sited close to the living space (e.g. in the utility room). They contain hydraulic components such as a heat exchanger (condenser), DHW cylinder, high efficiency pump, instantaneous heating water heater, 3-way diverter valve and Vitotronic 200 control unit.

Menu-guided heat pump control unit

The Vitotronic 200 is structured logically and the information it displays is simple to follow. The large backlit display offers good contrast, making it easy to read. The graphic user interface also displays heating and cooling curves.

Efficient and economical

Split heat pumps operate with astonishing efficiency in partial load operation. The inverter technology accurately matches the compressor output to the current heat demand through modulation, resulting in high efficiency at every operating point.

Vitotronic 200 control unit display



TAKE ADVANTAGE OF THESE BENEFITS

- + Attractively priced split air source heat pump
- + Low running costs thanks to high COP (coefficient of performance) to EN 14511: up to 5.2 (A7/W35)
- High level of DHW convenience through integral DHW cylinder with 220 litre capacity
- + Maximum flow temperature: up to 60 °C
- + Convenient reversible design that enables heating and cooling
- + Output control and DC inverter for high efficiency in partial load operation
- + Compact indoor unit with 220 litre DHW cylinder, high efficiency circulation pump, condenser, 3-way diverter valve, instantaneous heating water heater, safety assembly and control unit
- + Easy to operate Vitotronic control unit with plain text and graphic display
- + Optimised photovoltaic self-consumption
- + Especially quiet operation thanks to advanced acoustic design (AAD)
- + Web-enabled through Vitoconnect (accessories) for operation and service via Viessmann apps

For specification, see page 55

- VITOCAL 222-S indoor unit
- 1 Instantaneous heating water heater
- 2 Condenser
- 3 3-way diverter valve for central heating/ DHW heating
- 4 Flow switch
- 5 Secondary pump (high efficiency circulation pump)
- 6 Vitotronic 200 control unit
- Enamelled DHW cylinder
 (220 litre capacity)



Vitocal 222-S indoor unit (left) with the outdoor units



Ideal for modernisation

The Vitocal 350-A air source heat pump with a rated heating output from 12.7 to 20.6 kW is particularly suitable for modernisation projects. Thanks to enhanced vapour injection in the compression process (EVI cycle), flow temperatures as high as 65 °C can be achieved – even at wintry outside temperatures. This means the Vitocal 350-A is also suitable for installation in older heating systems with radiators. To raise efficiency, we recommend replacing individual radiators with ultra-low temperature ones.

The Vitotronic 200 control unit has an integral cascade function for up to five air source heat pumps. Heating outputs of up to 92.5 kW are therefore possible to cover high heat demands.

High DHW convenience

Depending on the system configuration, a higher flow temperature enables a water temperature of up to 55 °C inside the DHW cylinder. This allows the Vitocal 350-A to deliver a particularly high level of DHW convenience. The Vitocal 350-A achieves a high flow temperature of 65 °C even at outside temperatures of -10 °C.

RCD system for particularly high efficiency

The electronic expansion valve and RCD (refrigerant cycle diagnostic) system ensure an extremely high level of efficiency for the Vitocal 350-A all year round. It delivers a high COP of up to 4.0 (to EN 14511 at A7/W35). This results in a high annual coefficient of performance and very low running costs.



Vitocal 350-A (type AWHI 351.A) for indoor installation

TAKE ADVANTAGE OF THESE BENEFITS

- + Air source heat pump, mono mode with heating output from 12.7 to 20.6 kW for DHW and central heating
- + Flow temperature: up to 65 °C
- + Low running costs thanks to high COP
 - (coefficient of performance) to EN 14511 of up to 4.0 (A7/W35)
- + Matched product accessories for quick and easy hydraulic connection
- + Efficient defrosting through circuit reversal
- + With integral energy statement
- + Web-enabled via free ViCare app and Vitoconnect (optional)

Space saving installation

The Vitocal 350-A can be installed either indoors or outdoors. The three-stage radial fan in the heat pump, as well as the flow-optimised air ducts and the sound insulated casing together make the Vitocal 350-A extremely quiet. During night operation the multi stage fan control unit reduces the fan speed, and thus noise emissions, even further.

VITOCAL 350-A

1 Intake side

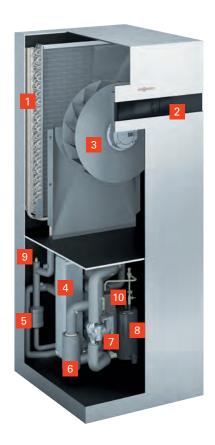
- 2 Discharge side
- 3 Evaporator
- 4 Radial fan
- 5 Electronic expansion valve
- 6 Heat exchanger for enhanced vapour injection
- Hermetically sealed Compliant scroll compressor with enhanced vapour injection (EVI)



Vitocal 350-A (type AWHO 351.A) for outdoor installation







VITOCAL 200-A

1	Evaporator
2	Vitotronic 200 control unit (type WO1C)
3	Variable speed radial DC fan
4	Condenser
5	Filter dryer
6	Instantaneous heating water heater
7	High efficiency pump
8	Compressor with output-dependent control
9	Electronic expansion valve
10	3-way diverter valve

The Vitocal 200-A air source heat pump was designed with newly built, energy efficient detached houses in mind. It achieves flow temperatures of up to 60 °C. On hot summer days it can also be run in reverse for cooling the interior.

Controlling the heat pump using the ViCare app and Vitoconnect online from anywhere is especially convenient.

Economical thanks to inverter technology

The heat pump operates particularly economically in partial load operation. To this end, the appliance makes full use of the benefits offered by its inverter-controlled compressor. With speed control, it matches the heat pump output to the actual heat demand of the building, whilst simultaneously saving on power. The variable speed high efficiency pump and DC fan further contribute to economical operation.

Heating and cooling – with electricity from a photovoltaic system if installed

This is particularly cost effective with photovoltaic self-generated power. On summer days, the solar modules generate large amounts of electricity, which frequently cannot be used in the house and have to be exported to the grid at a low feed-in tariff. With the Vitocal 200-A, this surplus solar power can be used on site to run the circulation pumps to cool the building.

Installation and operation

The monoblock design of the Vitocal 200-A makes for quick and easy installation. It can be installed and operated near the living space, as it runs very quietly.



The Vitocal 200-A meets the requirements of the EHPA Quality Label.



TAKE ADVANTAGE OF THESE BENEFITS

- + Reversible air source heat pump for heating and cooling, for indoor installation
- + Low running costs thanks to high COP (coefficient of performance) to EN 14511: up to 4.7 (A7/W35)
- + Flow temperature: up to 60 °C at 5 °C air intake temperature
- + Output control via DC inverter for high efficiency in the partial load range and accurate output adjustment to match the heat demand
- Low running costs with the highest level of efficiency at every operating point through the innovative RCD (refrigerant cycle diagnostic) system with EEV (electronic expansion valve)
- + Low operating noise through radial fan, sound-optimised appliance design and night mode with reduced fan speed
- Easy to use, integral Vitotronic 200 control unit (type WO1C) with plain text and graphic display – with telecontrol and remote monitoring for connection to the Vitocom 100 and 300
- + Optimised photovoltaic self-consumption
- + Integral energy statement
- + Web-enabled through Vitoconnect (accessories) for operation and service via Viessmann apps

For specification, see page 56

Monoblock air source heat pumps utilise the latent heat in the outdoor air for environmentally responsible and inexpensive heating.

The Vitocal 200-A monoblock heat pump utilises the latent heat in the outdoor air for environmentally responsible and inexpensive heating. It is available either solely for heating, or for heating and cooling.

Compact monoblock outdoor units

These new outdoor units in their timeless design are very easy on the eye. These appliances, with one or two fans, are designed and manufactured in-house. Consequently, they offer very good performance data, an excellent finish and superb product quality.

By far the quietest outdoor unit of its kind

The acoustic properties of the outdoor units for the Vitocal monoblock heat pumps comply with advanced acoustic design (AAD) specifications. This involves optimising the frequency spectrum so that low sounds are shifted into a higher frequency range. There, they are perceived as less of a nuisance and can be better absorbed by the building substance.

The Vitocal 200-A is, therefore, particularly well suited to densely built-up areas, such as terraced housing.

Quick installation; certificate of competence not required

The compact, wall mounted indoor unit, complete with hydraulics and control unit, is quiet and can be installed near the living space. The lines running to the outdoor unit are filled with water, so the installer does not require a special certificate of competence (refrigerant certificate). The numerous pre-assembled components and coordinated accessories mean the Vitocal 200-A can be installed very quickly.

Dual mode operation with an existing system

When it comes to modernisation, the heat pump is well suited to dual mode operation. In this case the existing system remains operational to cover peak loads when temperatures are particularly low. This significantly improves system efficiency.

Vitotronic 200 with WiFi option

The heat pumps can even be controlled from anywhere with the Vitotronic 200 control unit via the Vitoconnect internet interface (accessory) and the free ViCare app. In addition, they can be combined with Vitovent central mechanical ventilation units.



The Vitocal 200-A meets the requirements of the EHPA Quality Label.



Heat Pump KEYMARK certified

TAKE ADVANTAGE OF THESE BENEFITS

- + Low running costs thanks to high COP (coefficient of performance) to EN 14511: up to 5.1 (A7/W35)
- + Heating and cooling with a single appliance thanks to reversible circuit
- Especially quiet thanks to advanced acoustic design (AAD) ideal for use in terraced housing
- + High product quality and a modern, timeless design
- + Maximum flow temperature up to 60 °C at an outside temperature of –10 °C
- + Compact monoblock indoor unit with high efficiency circulation pump, 3-way diverter valve, instantaneous heating water heater, safety assembly and control unit
- Web-enabled through Vitoconnect (accessories) for operation and service via Viessmann apps









VITOCAL 200-A indoor unit

 Instantaneous heating water heater
 3-way diverter valve for central heating/DHW heating
 Secondary pump (high efficiency circulation pump)
 Vitotronic 200 control unit

5 Flow switch

VITOCAL 200-A outdoor unit

- 1 Coated evaporator with corrugated fins for higher efficiency
- 2 Power saving, variable speed DC fan
- 3 Electronic expansion valve (EEV)
- 4 Variable speed scroll compressor
- 5 4-way diverter valve
- 6 Condenser





The Vitocal 222-A monoblock heat pump utilises the latent heat in the outdoor air for environmentally responsible and inexpensive heating. It can provide heating and cooling. This compact appliance includes an integral 220 litre DHW cylinder.

Innovative advanced acoustic design

The acoustic properties of the outdoor units for the Vitocal 222-A comply with advanced acoustic design (AAD) specifications. The result is barely audible. In conjunction with intelligent speed control, the high grade, sound-optimised fan significantly contributes to reducing airborne noise in full and partial load operation. Low frequencies that are generally perceived as a nuisance in conventional heat pumps are largely prevented.

VITOCAL 222-A indoor unit

- Instantaneous heating water heater
 3-way diverter valve
- for central heating/DHW heating
- 3 Flow switch
- 4 Secondary pump
- (high efficiency circulation pump)5 Vitotronic 200 control unit
- 6 Enamelled DHW cylinder
- (220 litre capacity)

VITOCAL 222-A 2.4 to 14.7 kW

Particularly quiet

With a sound pressure level of only 35 dB(A) at a distance of three metres (night mode), the outdoor unit (with a fan) of the new Vitocal 222-A compact air source heat pump is one of the quietest units of its kind. Installation close to a neighbouring property or in densely built-up areas, such as terraced housing, is therefore no problem.

Quick installation; certificate of competence not required

The compact, wall mounted indoor unit, complete with hydraulics and control unit, is quiet and can be installed near the living space. The lines running to the outdoor unit are filled with water, so the installer does not require a special certificate of competence (refrigerant certificate). The numerous pre-assembled components and coordinated accessories mean the Vitocal 222-A can be installed very quickly.

High DHW convenience

The Vitocal 222-A includes a large integral 220 litre DHW cylinder. The newly developed inlet system ensures very good stratification, which allows a high draw-off volume of up to 290 litres (at 40 °C).

Vitotronic 200 with WiFi option

The heat pump can be controlled remotely with the Vitotronic 200 control unit via the Vitoconnect internet interface (accessory) and the free ViCare app. In addition, it can be combined with Vitovent central mechanical ventilation units.



Vitocell 100-E heating water buffer cylinder fitted at the back with 42 litre capacity for systems with very low heat transfer in spring, summer and autumn

TAKE ADVANTAGE OF THESE BENEFITS

- + Low running costs thanks to high COP (coefficient of performance) to EN 14511: up to 5.1 (A7/W35)
- + Heating and cooling with a single appliance thanks to reversible circuit
- + High DHW convenience thanks to 220 litre DHW cylinder
- + Especially quiet thanks to advanced acoustic design (AAD) ideal for use in terraced housing
- + High product quality and a modern, timeless design
- + Maximum flow temperature up to 60 °C at -10 °C outside temperature
- + Compact monoblock indoor unit with 220 litre DHW cylinder, high efficiency circulation pump, 3-way diverter valve, instantaneous heating water heater, safety assembly and control unit
- + Web-enabled through Vitoconnect (accessories) for operation and service via Viessmann apps

For specification, see page 58

Vitocal 222-A air source heat pump with Vitovent 300-W mechanical ventilation unit





The Vitocal 262-A uses heat from air in the room, from the outside, or extract air to provide low cost and energy saving DHW heating.



Vitocal 262-A DHW heat pump with DHW cylinder (300 litre capacity) and wall module (right)

The Vitocal 262-A DHW heat pump is an ideal addition to the existing heating system. In the new Vitopearlwhite design, the appliance is also suitable for installation near the living space. The wall mounted version is particularly compact. The Vitocal 262-A provides low cost and energy saving DHW heating. To do so, the universal unit extracts heat from the outdoor air, as well as from the ambient air and extract air indoors. Typical applications include laundry rooms, bakeries or server rooms, where a large amount of heat is regularly produced.

Environmentally responsible refrigerant

The new refrigerant circuit sets standards in terms of efficiency and climate protection. It is operated with the HFO refrigerant (hydrofluoroolefin) R1234ze, which has a GWP (global warming potential) of 7, i.e. approximately comparable to that of a natural refrigerant. In contrast, conventional refrigerants such as R134a have a much higher GWP value of over 1400. With the new generation of refrigerants, the Vitocal 262-A DHW heat pumps already meet the requirements of the European F-gas Regulation, which will continue to apply beyond 2030. This makes them particularly futureproof to operate.

Three versions to cater for every need

For mono mode operation, the heat pump is available without an internal indirect coil (type T2E-ze). A DHW cylinder with 300 litre capacity is integrated.

Alternatively, the hybrid version with an integral indirect coil (type T2H-ze) can be selected. This is recommended for retrofitting and upgrading existing systems. The intelligent control unit then always selects the optimum operating mode – heat pump or heat generator – taking into account energy prices and primary energy factors. The Vitocal 262-A preheats the water in the integral 300 litre cylinder. The existing heat generator is only used for reheating if required. This ensures maximum DHW convenience at all times.

In the space saving wall mounted version (type T2W-ze), DHW heating is provided by an adjacent DHW cylinder (160 to 500 litre capacity).

Dry immersion heater

The electric version (type T2E-ze) is factory-fitted with a dry immersion heater.

The hybrid version with indirect coil (type T2H-ze) can be retrofitted with an immersion heater if required.

TAKE ADVANTAGE OF THESE BENEFITS

- + DHW heat pump for outdoor, recirculation and extract air modes, type T2E-ze and type T2H-ze with enamelled DHW cylinder (300 litre capacity)
- High level of DHW convenience with perfectly hygienic water at temperatures of up to 70 °C – type T2E-ze with immersion heater (1.5 kW) or type T2H-ze with heat generator
- + Type T2H-ze: intelligent hybrid control for economically or ecologically optimised operation
- + HFO refrigerant: R1234ze
- + Low running costs thanks to highly efficient refrigerant circuit
- + Low noise emissions thanks to special silent mode
- + DHW heated to a maximum temperature of 70 °C (up to 65 °C via heat pump module and up to 70 °C with immersion heater or heat generator)
- + Quick heat-up function with immersion heater (standard delivery with type T2E-ze; accessory with type T2H-ze/T2W-ze)
- + Installation in rooms with low ceilings (up to 2 metres)
- + Smart Grid ready (SG Ready)
- + Prepared for optimised consumption of photovoltaic self-generated power two-stage function possible (heat pump and immersion heater)
- + Dehumidification of basement rooms in existing buildings (recirculation air mode)

For specification, see page 59





Vitocal 262-A Type T2H-ze



Vitocal 262-A Type T2W-ze



VITOCAL 262-A

- Highly efficient compressor
- 2 Large area evaporator for efficient exchange of heat
- 3 Control unit
- Internal indirect coil (type T2H-ze, hybrid version)
- 5 Magnesium anode
- 6 Dry immersion heater (accessory for the hybrid version)
- **7** 300 litre DHW cylinder with Ceraprotect enamel coating



VITOCAL 333-G

Vitocal 333-G	Туре	BWT 331.C06	BWT 331.C12
Performance data			
(to EN 14511, B0/W35, 5 K spread)			
Rated heating output	kW	4.3	5.3
Min./max. output range	kW	1.7 - 8.6	2.4 - 11.4
COP E in heating mode		4.7	4.8
Maximum flow temperature	°C	65	65
SCOP 1)		5.3	5.3
Refrigerant circuit			
Refrigerant		R410A	R410A
 Refrigerant charge 	kg	2.0	2.3
 Global warming potential (GWP)²⁾ 		1924	1924
- CO ₂ equivalent	t	3.9	4.4
Dimensions			
Length (depth) x width x height	mm	680 x 600 x 2000	
Cylinder capacity	litres	220	220
Maximum draw-off volume at draw-off temperature 40 °C	litres	306	306
COP ε (COP_{wh}) for DHW heating		3.2	3.2
Weight	kg	277	282
Energy efficiency class 3)		A+++ / A++	A+++ / A+++
DHW heating:			
Draw-off profile		XL	XL
Energy efficiency class	i i i i i i i i i i i i i i i i i i i	A+	A+



VITOCAL 222-G

Vitocal 222-G	Туре	BWT 221.B06	BWT 221.B08	BWT 221.B10
Performance data				
(to EN 14511, B0/W35, 5 K spread)				
Rated heating output	kW	5.8	7.5	10.4
COP E in heating mode		4.6	4.6	4.8
Maximum flow temperature	°C	65	65	65
SCOP 1)		4.8	5.2	5.3
Refrigerant circuit				
Refrigerant		R410A	R410A	R410A
 Refrigerant charge 	kg	1.4	1.95	2.4
 Global warming potential (GWP)²⁾ 		1924	1924	1924
- CO ₂ equivalent	t	2.7	3.8	4.6
Dimensions				
Length (depth) x width x height	mm		680 x 600 x 2000	
Cylinder capacity	litres	220	220	220
Maximum draw-off volume at draw-off temperature 40 °C	litres	293	293	293
Coefficient of performance ε (COP _{wh}) for DHW heating		3.14	3.14	3.14
Weight	kg	277	282	288
Energy efficiency class ³⁾ DHW heating:	III.	A++ / A++	A++ / A++	A++ / A++
Draw-off profile		XL	XL	XL
Energy efficiency class	- 6	A+	Δ+	A+

Seasonal coefficient of performance (SCOP) under average climatic conditions, low temperature application (W35) to EN 14825
 Based on the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)
 Energy efficiency class in line with Commission Regulation (EU) No 813/2013 regarding heating under average climatic conditions – low (W35)/medium (W55) temperature applications



VITOCAL 300-G BRINE/WATER

Vitocal 300-G brine/water	Туре	BWC 301.C06	BWC 301.C12	BWC 301.C16
Performance data (to EN 14511, B0/W35, spread 5 K)				
Rated heating output	kW	4.3	5.3	7.5
Min./max. output range	kW	1.7 – 8.6	2.4 - 11.4	3.8 – 15.9
COP E in heating mode		4.7	4.8	5.0
Maximum flow temperature	°C	65	65	65
SCOP 1)		5.3	5.3	5.6
Refrigerant circuit Refrigerant		R410A	R410A	R410A
 Refrigerant charge 	kg	2.0	2.3	3.3
 Global warming potential (GWP) ²⁾ 		1924	1924	1924
– CO ₂ equivalent	t	3.9	4.6	6.3
Dimensions Length (depth) x width x height	mm	680 x 600 x 975	680 x 600 x 975	680 x 600 x 975
Length (depth) x width x height		000 × 000 × 373	000 × 000 × 373	000 × 000 × 373
Weight	kg	149	154	163
Sound power level to ErP (B0/W55)	dB(A)	min./max. 30 – 47	min./max. 33 – 46	min./max. 39 – 47
Energy efficiency class 3)		A+++ / A++	A+++ / A+++	A+++ / A+++

VITOCAL 300-G WATER/WATER

Vitocal 300-G water/water With water/water conversion kit	Туре	BWC 301.C06	BWC 301.C12	BWC 301.C16
Performance data (to EN 14511, B10/W35) Rated heating output	kW	5.6	7.0	10.0
COP ϵ in heating mode Maximum flow temperature	°C	6.4 65	6.4 65	6.6 65

VITOCAL 200-G BRINE/WATER

Vitocal 200-G brine/water	Type	BWC	BWC	BWC	BWC	BWC
		201.B06	201.B08	201.B10	201.B13	201.B17
Performance data						
(to EN 14511, B0/W35, spread 5 K)						
Rated heating output	kW	5.8	7.5	10.4	13.2	17.4
COP E in heating mode		4.6	4.6	4.8	4.6	4.5
Maximum flow temperature	°C	65	65	65	65	65
SCOP 1)		4.8	5.2	5.3	5.0	4.8
Refrigerant circuit						
Refrigerant		R410A	R410A	R410A	R410A	R410A
 Refrigerant charge 	kg	1.40	1.95	2.40	2.15	2.60
 Global warming potential (GWP) ²⁾ 		1924	1924	1924	1924	1924
 CO₂ equivalent 	t	2.7	3.8	4.6	4.1	5.0
Dimensions						
Length (depth) x width x height	mm		68	80 x 600 x 975		
Weight	kg	145	148	152	158	165
Sound power level to ErP (B0/W55)	dB(A)	40	44	46	49	48
Energy efficiency class ³⁾		A+++ / A++	A+++ / A++	A+++ / A++	A+++ / A++	A+++ / A++

VITOCAL 200-G WATER/WATER

Vitocal 200-G water/water	Туре	BWC	BWC	BWC	BWC	BWC
With water/water conversion kit		201.B06	201.B08	201.B10	201.B13	201.B17
Performance data (to EN 14511, B10/W35) Rated heating output COP ε in heating mode Maximum flow temperature	kW °C	7.5 6.1 65	9.8 6.2 65	13.4 6.4 65	16.9 6.5 65	22.6 6.2 65

¹⁾ Seasonal coefficient of performance (SCOP) under average climatic conditions, low temperature application (W35) to EN 14825

low temperature application (W35) to EN 14825
 2) Based on the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)
 3) Energy efficiency class in line with Commission Regulation (EU) No 813/2013 regarding heating under average climatic conditions – low (W35)/medium (W55) temperature applications





VITOCAL 350-G

Vitocal 350-G (single-stage, master) Vitocal 350-G (2-stage, slave without its own control unit)	Type Type	BW 351.B20 BWS 351.B20	BW 351.B27 BWS 351.B27	BW 351.B33 BWS 351.B33	BW 351.B42 BWS 351.B42
Performance data					
(to EN 14511, B0/W35, 5 K spread)	kW	20.5	28.7	32.7	42.3
Rated heating output COP ε in heating mode	KVV	4.8	4.9	5.0	42.3
Maximum flow temperature	°C	4.8	4.5	68	4.8
Refrigerant circuit					
Refrigerant		R410A	R410A	R410A	R410A
 Refrigerant charge 	kg	5.5	7.3	9.0	9.25
 Global warming potential (GWP) ¹⁾ 		1924	1924	1924	1924
- CO ₂ equivalent	t	10.6	14.0	17.3	17.8
Dimensions					
Length (depth)	mm	1085	1085	1085	1085
Width	mm	780	780	780	780
Height (control unit open)	mm	1267	1267	1267	1267
Weight					
Type BW	kg	270	285	310	315
Type BWS	kg	265	280	305	310
Energy efficiency class ²⁾		A+++ / A++	A+++ / A++	A+++ / A++	A+++ / A++

VITOCAL 350-G

WATER/WATER

Vitocal 350-G (single-stage, master)	Туре	BW 351.B20	BW 351.B27	BW 351.B33	BW 351.B42
Vitocal 350-G (2-stage, slave without its own control unit)	Туре	BWS 351.B20	BWS 351.B27	BWS 351.B33	BWS 351.B42
Performance data (to EN 14511, B10/W35)					
Rated heating output	kW	25.4	34.7	42.2	52.3
COP ε in heating mode		5.7	6.1	6.2	5.8
Maximum flow temperature	°C	65	68	68	68



VITOCAL 300-G

Vitocal 300-G	Туре	BW 301.A21	BW 301.A29	BW 301.A45
Vitocal 300-G	Туре	BWS 301.A21	BWS 301.A29	BWS 301.A45
Performance data				
(to EN 14511, B0/W35, 5 K spread)				
Rated heating output	kW	21.2	28.8	42.8
COP E in heating mode		4.7	4.8	4.6
Maximum flow temperature	°C	60	60	60
Refrigerant circuit				
Refrigerant		R410A	R410A	R410A
 Refrigerant charge 	kg	4.7	6.2	7.7
 Global warming potential (GWP) ¹⁾ 		1924	1924	1924
- CO ₂ equivalent	t	9.0	11.9	14.8
Dimensions				
Length (depth)	mm	1085	1085	1085
Width	mm	780	780	780
Height	mm	1267	1267	1267
Weight				
Type BW	kg	245	272	298
Type BWS	kg	240	267	293
Energy efficiency class ²⁾		A++ / A++	A++ / A++	A++ / A++

VITOCAL 300-G

WATER/WATER

Vitocal 300-G Vitocal 300-G	Туре Туре	BW 301.A21 BWS 301.A21	BW 301.A29 BWS 301.A29	BW 301.A45 BWS 301.A45
Performance data (to EN 14511, B10/W35)				
Rated heating output	kW	28.1	37.1	58.9
COP ϵ in heating mode		5.9	6.0	5.5
Maximum flow temperature	°C	60	60	60

NATURAL COOLING WITH NC-BOX



Performance data Cooling capacity subject to the heat pump output for Vitocal 333-G/300-G/222-G/200-G	kW	approx. 1.25 – 5.0
Dimensions		
Length (depth)	mm	520
Width	mm	580
Height	mm	420
Weight incl. mixer	kg	28

Based on the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)
 Energy efficiency class in line with Commission Regulation (EU) No 811/2013 regarding heating under average climatic conditions – low (W35)/medium (W55) temperature applications



VITOCAL 200-S

Vitocal 200-S	Туре	AWB-M/	AWB-M-E	-AC		AWB/AWB-E-AC			
		201.D04	201.D06	201.D8	201.D010	201.D09	201.D10	201.D13	201.D16
Voltage	V	230	230	230	230	400	400	400	400
Performance data – heating									
(to EN 14511, A2/W35)	kW	2.6	3.1	4.0	5.0	7.3	5.9	6.3	7.0
COP E, heating mode		3.6	3.7	4.0	4.0	4.3	4.1	4.0	3.9
Output control	kW	2.0 - 4.1	2.4 - 5.5	2.8 – 7.0	4.4 - 9.6	4.4 - 9.5	4.4 - 10.1	4.8 - 10.6	5.2 - 11.2
Performance data – heating (to EN 14511,									
A7/W35, spread 5 K)	kW	4.0	4.8	5.6	7.0	8.1	7.6	8.6	10.1
COP E, heating mode		4.6	4.6	4.7	4.7	5.2	5.0	4.9	5.0
Output control	kW	2.4 - 4.2	3.0 - 6.3	3.5 – 7.5	5.5 – 12.6	5.0 - 11.6	5.5 – 12.6	5.9 – 13.7	6.4 - 14.7
Performance data – heating (to EN 14511,									
A–7/W35, spread 5 K)	kW	3.8	5.5	6.7	8.7	8.4	10.1	10.7	11.6
COP E, heating mode		2.9	2.8	2.9	3.1	3.2	3.2	3.0	3.0
Performance data – cooling (to EN 14511, A35/W18)									
Rated cooling capacity	kW	4.0	5.0	6.0	7.0	6.5	7.0	8.2	9.2
EER in cooling mode		4.2	4.2	4.1	4.2	4.1	4.0	3.9	3.8
Refrigerant circuit									
Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
- Refrigerant charge	kg	1.8	1.8	2.39	3.6	3.6	3.6	3.6	3.6
- Global warming potential (GWP) 1)		1924	1924	1924	1924	1924	1924	1924	1924
– CO ₂ equivalent	t	3.5	3.5	4.6	6.9	6.9	6.9	6.9	6.9
Dimensions, indoor unit Length (depth) x width x height	mm				370 x 4	150 x 880			
Dimensions, outdoor unit									
Length (depth)	mm	546	546	546	546	546	546	546	546
Width	mm	1109	1109	1109	1109	1109	1109	1109	1109
Height	mm	753	753	753	1377	1377	1377	1377	1377
Weight									
Indoor unit	kg	44	44	44	45	45	45	45	45
Outdoor unit	kg	94	94	99	137	148	148	148	148
Energy efficiency class ²⁾		A++ / A+	A++ / A++	A+++ / A++	A+++/A++	A+++/A++	A+++/A++	A+++ / A++	A+++ / A++

¹⁾ Based on the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)
 ²⁾ Energy efficiency class in line with Commission Regulation (EU) No 813/2013 regarding heating under average climatic conditions – low (W35)/medium (W55) temperature applications

VITOCAL 222-S



Voltage V 230 230 230 230 230 230 240 400	C13 22	1.C16
Voltage V 230 230 230 400 400	100	
		400
Performance data – heating		
(to EN 14511, A2/W35) kW 2.6 3.1 4.0 5.0 7.3 5.9	6.3	7.0
COP ε, heating mode 3.6 3.7 4.0 4.3 4.1 Output control kW 2.0 - 4.1 2.4 - 5.5 2.8 - 7.0 4.4 - 9.6 4.4 - 9.5 4.4 - 10.1 4.8 -	4.0 0.6 5.2 -	3.9 – 11.2
Performance data – heating (to EN 14511.		
(TO EN 1451), A7/W35, spread 5 K) kW 4.0 4.8 5.6 7.0 8.1 7.6	8.6	10.1
COP <i>ɛ</i> , heating mode 4.6 4.6 4.7 4.7 5.2 5.0	o.o 4.9	5.0
Output control kW 2.4 - 4.2 3.0 - 6.3 3.5 - 7.5 5.5 - 12.6 5.0 - 11.6 5.5 - 12.6 5.9 -		
Performance data – heating		
(to EN 14511,		
	0.7	11.6
COP E, heating mode 2.9 2.8 2.9 3.1 3.2 3.2	3.0	3.0
Performance data – cooling		
(to EN 14511, A35/W18) Rated cooling capacity kW 4.0 5.0 6.0 7.0 6.5 7.0	8.2	9.2
EER in cooling mode 4.0 5.0 6.0 7.0 6.5 7.0	3.9	3.8
Refrigerant circuit		
- J		R410A
- Refrigerant charge kg 1.8 1.8 2.39 3.6 3.6 3.6	3.6	3.6
	924	1924
- CO ₂ equivalent t 3.5 3.5 4.6 6.9 6.9 6.9	6.9	6.9
Cylinder capacity litres 220 220 220 220 220 220	220	220
Dimensions, indoor unit Length (depth) x width x height mm 681 x 600 x 1874		
Dimensions, outdoor unit		
	546	546
Width mm 1109 1109 1109 1109 1109 1	109	1109
Height mm 753 753 753 1377 1377 1	377	1377
Weight		
Indoor unit kg 169 169 169 170 170 170	170	170
Outdoor unit kg 94 99 137 148 148	148	148
Energy efficiency class ²⁾ $\blacksquare A^{++}/A^{+} \qquad A^{++}/A^{++} \qquad A^{+++}/A^{++} \qquad A^{+++}/A^{++} \qquad A^{+++}/A^{++} \qquad A^{+++}/A^{++}$	++ / /	A+++ / A++
Draw-off profile _ L L L L L	L	L
Efficiency class A A A A A A	Α	A

¹⁾ Based on the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)
 ²⁾ Energy efficiency class in line with Commission Regulation (EU) No 813/2013 regarding heating under average climatic conditions – low (W35)/medium (W55) temperature applications







VITOCAL 350-A

kg kg	325 287	335 297	400 361
mm mm	946 880 1870	946 1030 1870	946 1200 1870
mm mm	1265 1380 1885	1265 1530 1885	1265 1700 1885
kg t	R407C 4.0 1774 7.1	R407C 4.5 1774 8.0	R407C 5.2 1774 9.2
kW	8.7	12.2	15.0
kW kW °C	12.7 2.9 4.0 65	15.9 4.2 3.8 65	20.6 5.8 3.4 65
Туре Туре	AWHO 351.A10 AWHI 351.A10	AWHO 351.A14 AWHI 351.A14	AWHO 351.A20 AWHI 351.A20
	kW kW	Type AWHI 351.A10 kW 12.7 kW 2.9 4.0	Type AWHI 351.A10 AWHI 351.A14 kW 12.7 15.9 kW 2.9 4.2 4.0 3.8

VITOCAL 200-A

Vitocal 200-A	Туре	AWCI-AC 201.A10
Min./max. output range (A2/W35)	kW	2.9 – 12.4
Performance data Rated heating output Operating point A7/W35 (to EN 14511) Operating point A-7/W35 (to EN 14511) COP ε A2/W35 COP ε A7/W35 (to EN 14511 at rated heating output)	kW kW	7.5 10.1 3.6 4.7
Rated cooling capacity Operating point A35/W18 (to EN 14511) EER at A35/W18 to EN 14511	kW	8.8 3.2
Maximum flow temperature	•C	60
Refrigerant circuit Refrigerant – Refrigerant charge – Global warming potential (GWP) ¹⁾ – CO ₂ equivalent	kg t	R410A 3.2 1924 6.2
Dimensions Length (depth) x width x height		800 x 700 x 1850
Weight	kg	254
Energy efficiency class ²⁾		A++ / A++

Based on the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)
 Energy efficiency class in line with Commission Regulation (EU) No 813/2013 regarding heating under average climatic conditions – low (W35)/medium (W55) temperature applications



VITOCAL 200-A

MONOBLOCK VERSION

Vitocal 200-A	Туре	AWO-M-	E/AWO-N	I-E-AC		AWO-E/AWO-E-AC			
		201.A04	201.A06	201.A08	201.A010	201.A09	201.A10	201.A13	201.A16
Voltage	V	230	230	230	230	400	400	400	400
Performance data – heating									
(to EN 14511, A2/W35)	kW	2.6	3.1	4.0	5.0	7.3	6.1	6.7	7.0
COP E, heating mode Output control	kW	3.6 2.0 – 4.1	3.8 2.4 – 5.5	4.0 2.8 – 7.0	4.0 4.4 - 9.6	4.3 4.4 - 9.5	4.1 4.4 – 10.1	4.1 4.8 - 10.6	3.9 5.2 – 11.2
Performance data – heating									
(to EN 14511, A7/W35, spread 5 K)	kW	4.0	4.8	5.6	7.0	8.1	7.6	8.9	10.1
COP E, heating mode		4.6	4.7	4.7	4.7	5.1	5.0	5.0	5.0
Output control	kW	2.4 - 4.2	3.0-6.0	3.5 – 7.5	5.5 – 12.6	5.0 – 11.6	5.5 – 13.6	6.0 - 14.2	6.4 – 14.7
Performance data – heating									
(to EN 14511, A–7/W35, spread 5 K) COP ϵ , heating mode	kW	3.8 2.9	5.7 2.9	6.7 2.9	8.7 3.1	8.4 3.3	10.1 3.2	11.1 3.1	11.6 3.0
Performance data – cooling (to EN 14511, A35/W18)									
Rated cooling capacity EER in cooling mode	kW	4.0 4.2	5.0 4.2	6.0 4.3	7.0 4.1	6.5 4.1	7.0 4.1	8.2 4.1	9.2 4.0
Refrigerant circuit									
Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
- Refrigerant charge	kg	1.4	1.4	1.4	2.4	2.4	2.4	2.4	2.4
– Global warming potential (GWP) ¹⁾ – CO ₂ equivalent	t	1924 2.7	1924 2.7	1924 2.7	1924 4.6	1924 4.6	1924 4.6	1924 4.6	1924 4.6
Dimensions, indoor unit									
Length (depth) x width x height	mm				370 x	450 x 880			
Dimensions, outdoor unit									
Length (depth)	mm	546	546	546	546	546	546	546	546
Width	mm	1109	1109	1109	1109	1109	1109	1109	1109
Height	mm	753	753	753	1377	1377	1377	1377	1377
Weight	l	4.4						4.4	
Indoor unit Outdoor unit	kg ka	41 102	41 102	41 103	41 145	41 153	41 153	41 153	41 153
			A++ /	A+++ /	A+++/		A+++/		A+++/
Energy efficiency class ²⁾		A++ / A+	A / A++	A /	A /	A /	A / A++	A /	A /

Based on the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)
 Energy efficiency class in line with Commission Regulation (EU) No 813/2013 regarding heating under average climatic conditions – low (W35)/medium (W55) temperature applications



VITOCAL 222-A MONOBLOCK VERSION

Vitocal 222-A	Туре	AWOT-M	-E/AWOT-	M-E-AC		AWOT/A			
		221.A04	221.A06	221.A08	221.A010	221.A09	221.A10	221.A13	221.A16
Voltage	V	230	230	230	230	400	400	400	400
Performance data – heating									
(to EN 14511, A2/W35)	kW	2.6	3.1	4.0	5.0	7.3	6.1	6.7	7.0
COP E, heating mode Output control	kW	3.6 2.0 – 4.1	3.8 2.4 – 5.5	4.0 2.8 – 7.0	4.0 4.4 – 9.6	4.3 4.4-95	4.1 4.4 – 10.1	4.1 4.8 – 10.6	3.9 5.2 – 11.2
		2.0 4.1	2.4 0.0	2.0 7.0	0.0	4.4 0.0		4.0 10.0	
Performance data – heating (to EN 14511,									
A7/W35, spread 5 K)	kW	4.0	4.8	5.6	7.0	8.1	7.6	8.9	10.1
COP E, heating mode Output control	kW	4.6 2.4 – 4.2	4.7 3.0 – 6.0	4.7 3.5 – 7.5	4.7 5.5 – 12.6	5.1 5.0 – 11.6	5.0 5.5 – 13.6	5.0 6.0 – 14.2	5.0 6.4 – 14.7
Performance data – heating (to EN 14511,									
A–7/W35, spread 5 K)	kW	3.8	5.7	6.7	8.7	8.4	10.1	11.1	11.6
COP ϵ (COP), heating mode		2.9	2.9	2.9	3.1	3.3	3.2	3.1	3.0
Performance data – cooling (to EN 14511, A35/W18)									
Rated cooling capacity EER in cooling mode	kW	4.0 4.2	5.0 4.2	6.0 4.3	7.0 4.1	6.5 4.1	7.0 4.1	8.2 4.1	9.2 4.0
Refrigerant circuit									
Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
- Refrigerant charge	kg	1.4	1.4	1.4	2.4	2.4	2.4	2.4	2.4
 Global warming potential (GWP) ¹⁾ CO₂ equivalent 	t	1924 2.7	1924 2.7	1924 2.7	1924 4.6	1924 4.6	1924 4.6	1924 4.6	1924 4.6
Cylinder capacity	litres	220	220	220	220	220	220	220	220
Dimensions, indoor unit Length (depth) x width x height	mm				681 x 6	00 x 1874			
Dimensions, outdoor unit									
Length (depth)	mm	546	546	546	546	546	546	546	546
Width	mm	1109	1109	1109	1109	1109	1109	1109	1109
Height	mm	753	753	753	1377	1377	1377	1377	1377
Weight		4.6.1			4.5.1				4.6.1
Indoor unit Outdoor unit	kg kg	164 102	164 102	164 103	164 145	164 153	164 153	164 153	164 153
	ĸy								
Energy efficiency class ²⁾	•	A++ / A+	A++ / A++	A+++/ A++	A+++/ A++	A+++/ A++	A+++/ A++	A+++/ A++	A+++/ A++
				A	A	A	A	A	A

Based on the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)
 Energy efficiency class in line with Commission Regulation (EU) No 813/2013 regarding heating under average climatic conditions – low (W35)/medium (W55) temperature applications



Vitocal 262-A Types T2E-ze/T2H-ze



Vitocal 262-A wall module Type T2W-ze

VITOCAL 262-A

DHW HEAT PUMP

Vitocal 262-A	Туре	T2E-ze	T2H-ze**	T2W-ze***
Performance data for recirculation air mode to EN 16147:2017 at A20/W10-53 (air intake temperature 20 °C/room temperature 20 °C) Coefficient of performance \mathcal{E} (COP) Maximum available amount of water (40 °C) DHW heating energy efficiency η_{wh} Annual electricity consumption (AEC)	litres % kWh	4.02 414 165 1014	4.02 414 165 1014	3.2 451 137 1225
Performance data for outdoor air mode to EN 16147:2017, medium temperature A7/W10-53 (air intake temperature 7 °C/room temperature 20 °C) Coefficient of performance ε (COP) Maximum available amount of water (40 °C) DHW heating energy efficiency η _{wh} Annual electricity consumption (AEC)	litres % kWh	3.43 440 141 1184	3.43 440 141 1184	2.92 449 124 1346
Refrigerant circuit Refrigerant – Refrigerant charge – Global warming potential (GWP) – CO ₂ equivalent	kg t	R1234ze 1.35 7 9	R1234ze 1.35 7 9	R1234ze 0.35 7 2
Maximum power consumption of immersion heater (accessory for type T2H-ze/T2W-ze)	kW	1.5	1.5	1.5
Cylinder capacity	litres	298	291	160 to 500 ¹⁾
Weight	kg	145	160	44
Dimensions Length (Ø) Width Height	mm mm mm	765 667 1848	765 667 1848	738 668 464
Energy efficiency class DHW heating* Draw-off profile Energy efficiency class	5	XL A++	XL A**	XL A+
1) Cylinder yelume een yery				

¹⁾ Cylinder volume can vary

* Energy efficiency class to Commission Regulation (EU) No 813/2013 for water heaters
 ** Details for operation with heat pump only
 *** Tested with the Vitocell 100-V (type CVAA), 300 litre capacity



System technology ensures reliable and economical operation. The convenient controls and <u>perfectly</u> <u>matching Viessmann system components</u> offer maximum reliability, flexibility and efficiency.

"The whole is greater than the sum of its parts." In accordance with this philosophy, Viessmann does not simply supply individual heating equipment components that meet the high Viessmann standards for quality, reliability and effectiveness. In addition, all products are part of a matching overall concept, where all components complement one another. After all, only perfect interaction between all system parts can draw out the maximum potential of our innovative leading technology.

Viessmann system technology incorporates everything you need for a reliable and economical heating system: the Vitotronic control unit with wireless remote control and online management using the ViCare app, powerful Vitocell DHW cylinders for the highest DHW convenience, and high grade photovoltaic systems.



CONNECTIVITY

With Vitoconnect and a smartphone, the operation of your Viessmann heating system couldn't be easier. Heating systems can be controlled with the ViCare app (page 8/9). All apps are available for mobile devices running iOS or Android operating systems.



MECHANICAL VENTILATION SYSTEMS

Controlled mechanical ventilation systems with heat recovery continuously replenish the air in the living space for a healthy, comfortable environment and remove odours and noxious substances. They do so in an extremely energy efficient way.



SYSTEM ACCESSORIES

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



Discover more about the Viessmann radiator range



Find out more about Vitocell



OPERATING CONVENIENCE

Clear, convenient, intelligent: the Vitotronic offers perfect functionality for fast and precise control of any heating system.



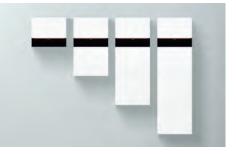
PHOTOVOLTAIC SYSTEM

The sun supplies energy that can be turned into electricity. This is economical – generating solar power is already significantly cheaper than drawing domestic power from the grid.



DHW CYLINDER

Vitocell DHW cylinders are convenient solutions for supplying a household with hot water – the perfect complement to any new heat pump.



PHOTOVOLTAIC POWER STORAGE SYSTEM Vitocharge VX3 power storage systems optimise power consumption and make users almost completely independent of the public grid. Vitocharge VX3 modular photovoltaic power storage system makes users almost completely independent of the public grid.



Thanks to their quiet operation, the Vitocal 200-G brine/water heat pump and the Vitocharge VX3 power storage system are also suitable for installation close to the living space.

There are currently two ways in which the solar power generated by a rooftop photovoltaic system can be used: it can either all be exported to the grid, or can be partially or fully consumed on site. A heat pump, for example, enables heat to be generated efficiently using self-generated power. With a heat pump, one kilowatt-hour of electricity can provide up to four kilowatt-hours of heat by using free natural energy from the environment.

As a result, if the energy demand for DHW and central heating is met with the help of a heat pump, not only can the level of photovoltaic self-consumption be significantly increased, but the more cost effective solar power also enables a low cost heat supply.

If you intend to combine a photovoltaic system with a heat pump, select an appliance that optimises self-consumption and can be adapted to match the power-generating characteristics of the photovoltaic system. For this purpose Viessmann has developed a suitably matching system comprising photovoltaic modules and a heat pump.

Optimised system concept with Viessmann heat pumps

Via an energy meter, the heat pump control unit detects whether the PV system is supplying sufficient amounts of power – which is then used by the heat pump to heat DHW and heating water. The heat gained during the day via photovoltaic technology is stored in a well-insulated cylinder and can be used for domestic hot water and heating as and when required.

With the Vitotronic 200 control unit, self-consumption of solar power is automatically increased. Combining the Viessmann heat pump with a photovoltaic system also offers the option of integrating additional components that increase self-consumption of the solar power generated (such as ventilation equipment, for example). Before the heat pump is activated, priority is given to meeting the power demand for electrical household appliances using self-generated solar power. After the demand from household appliances has been satisfied, an energy meter records the amount of solar power remaining and communicates this to the heat pump. Using the heat pump, the solar surplus can then be stored in the form of thermal energy and made available when it is required. This raises the level of self-consumption and makes use of the solar energy while it is available.

The economic viability of the photovoltaic system is substantially increased thanks to the deliberate increase in the level of selfconsumption. Using low cost solar power also makes the heat pump more economically attractive.

VITOCHARGE VX3

Vitocharge VX3 for almost complete independence of the public grid

The Vitocharge VX3 modular power storage system rounds off the energy system. It enables power to be supplied exactly when it is needed. This makes efficient, decentralised power supply with high levels of self-consumption and self-sufficiency a reality. Viessmann is the only manufacturer to supply all products from a single source, so that users can make effective and economical use of self-generated power. This offers users almost complete independence from the public electricity grid.

The Vitocharge VX3 is charged when there is surplus power. As soon as more power is needed again, this additional energy is delivered from the battery. When combined with a photovoltaic system, the energy generated during the day can be stored. At night, an electric vehicle can be charged, for example, so that it is ready to be driven in the morning.

Self-generated power for the heat pump

Another particularly effective way to save energy is by enabling interaction between a heat pump, photovoltaic system and power storage unit. This involves the electrical components in the heat pump being operated with self-generated power.

The Vitocharge VX3 compact photovoltaic power storage system with hybrid inverter was designed for connecting photovoltaic modules and/or batteries. An inverter can accommodate up to three 4 kWh battery units, thereby providing a maximum usable storage capacity of 12 kWh. Thanks to the modular design, installation is particularly straightforward and can be carried out by one person.

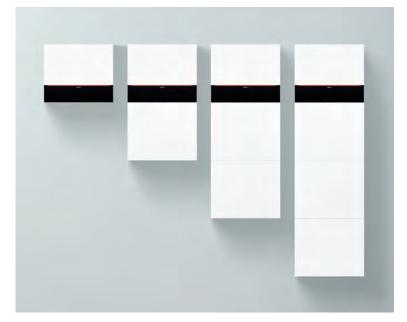
Uncomplicated and fully integrated into Viessmann's range of solutions

Due to its flexible storage capacity, the system is easy to configure. Installation is also particularly straightforward thanks to the modular design, and can be carried out by one person. As a result of full integration into Viessmann's digital services and platforms, ViStart enables fast and trouble-free commissioning, whilst ViGuide allows the trade partner to keep a constant eye on the system and whether it is functioning properly, and to react quickly to an irregularity if necessary.

> DESIGN PLUS powered by: light+building 2020

TAKE ADVANTAGE OF THESE BENEFITS

- + Straightforward installation thanks to manageable weight
- + Quick and simple commissioning
- + Full integration into ViStart, ViGuide and Service Assistant digital services from Viessmann
- + One product for all applications in new build or modernisation projects in detached houses
- + High quality guarantees durability of the entire system
- Futureproof compatibility through EEBUS for variable integration into different energy systems



Vitocharge VX3 photovoltaic power storage system – the ideal solution for new build and modernisation projects: store self-generated power and use it later

At Viessmann, proximity to our trade partners is the basis for success. Everyone can benefit from their expertise by choosing a Viessmann heat pump. You're in good hands.



Property developers and system users can receive advice and support regarding sales, installation and customer service exclusively via Viessmann heating contractors, 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.

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.

Current information can be found online at www.viessmann.de/ foerderprogramme or from one of our trade partners.

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 systems combined 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 heat pump and solar thermal system
- Support in applying for subsidies



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

Credit^P**I**us

Terms and conditions to shout about

If you invest now in a solar thermal 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. * Over 24 months

Attractive finance – invest now and save on heating costs

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.

Simply rent rather than buy a heating system

Need a new heating system but don't want to pay the full price for it? Take the easy option: with the Viessmann Wärme rental service, you get a modern and efficient Viessmann heating system – without having to buy it. Simply pay a low monthly rate and we take care of the rest.

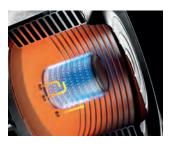
A truly all-inclusive carefree package:

- _ €0 purchasing costs
- Up to 15 years all-inclusive service and full guarantee
- Reduce heating costs by up to 30 %

WARME

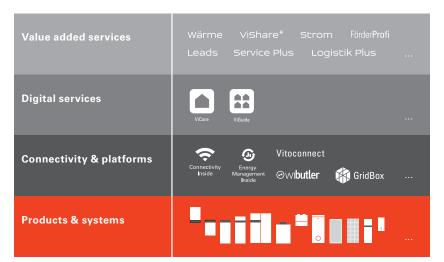
For more information, see: https://angebote.viessmann.de/ heizung-mieten-statt-kaufen?

66 / 67 THE COMPANY



Technik, die an die Zukunft denkt: Eine Schlüsselrolle für den Einsatz von Wasserstoff als Energieträger spielt der von Viessmann speziell entwickelte MatriX-Plus-Brenner

H₂ READY · 20%



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

* The operator and contractual partner in 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 12,750 members of the Viessmann Family, take on every day, together with our (trade) partners.



Wir schaffen Lebensräume für zukünftige Generationen.



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.

VIESSMANN GROUP IN FIGURES

- Viessmann was founded
- _ employees
- ___ Group turnover in billions of euros
- ____ export share in percent
- manufacturing sites in
 12 countries
- sales companies in 43 countries
- _ sales offices worldwide



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Your trade partner

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