Heating with airborne and geothermal energy: Vitocal
sustainable
environmentally
responsible
renewable
valuable
individual
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 CO₂ 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 power generated on site by a photovoltaic system is particularly environmentally responsible and cost effective.

Ideal for new build and modernisation: 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 a convenient hot water supply, for both new build and modernisation projects.
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.

66 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.

70 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.

72 THE COMPANY
The Viessmann family business is a leading international manufacturer of efficient energy systems.
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 the highest level of efficiency**

The compression process is critical to the efficiency of a heat pump. Viessmann uses the most advanced components in its heat pumps. 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.

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 COP**

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 COP (coefficient of performance).

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 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.
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. You can set the required room temperature via the touchscreen, and 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 home screen also shows numerous tips for saving energy.

**System status at a glance**
Green for go – the user can see at a glance whether their heating system is working as it should. Yellow lets you know about a pending service and red automatically offers to contact the contractor.

To enable this function, simply store the contact details of the contractor. Of course, the system user has the final decision on whether to allow the contractor to monitor their heating system using the specially developed Vitoguide 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.

Connect the module to the internet and register via plug & play. Simply scan 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.
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.

**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 Vitoguide to keep a constant eye on their customer’s system.

**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 address of the saved contractor

**ECONOMY**
Simply set your preferred temperature – save costs when you’re not at home:
+ Straightforward, convenient operation of the heating system
+ Record your daily routine and automatically save on energy costs
+ Set standard functions with one tap of a button on your smartphone

**SUPPORT**
A direct link to the contractor – just in case:
+ Simply store your contractor’s details
+ Quick and effective assistance – the contractor has all of the important information
+ All-inclusive carefree safety and maintenance package

For conditions, see www.viessmann.de/garantie
<table>
<thead>
<tr>
<th>BRINE/WATER HEAT PUMPS</th>
<th>Heat</th>
<th>Application</th>
<th>Cooling</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.7 to 42.8 kW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VITOCAL 333-G</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>1.7 to 11.4 kW</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>VITOCAL 222-G</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>5.8 to 10.4 kW</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>VITOCAL 300-G</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>5.7 to 17.2 kW</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>VITOCAL 200-G</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>5.6 to 34.4 kW</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>VITOCAL 350-G</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>20.5 to 42.3 kW</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>VITOCAL 300-G</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>21.2 to 42.8 kW</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
</tbody>
</table>

+ Accessories required
## AIR SOURCE HEAT PUMPS

**Model** | **Application** | **Cooling** | **Page**
--- | --- | --- | ---
VITOCAL 200-S | Monoblock indoor installation | | 34
| | Monoblock outdoor installation | | |
| | Split | | |
| | Detached house | | |
| | Apartment building/commercial premises | | |
| | New build | | |
| | Modernisation | | |
| | Integral DHW cylinder | | |
| | AC | | |

VITOCAL 222-S 3.2 to 14.7 kW

VITOCAL 350-A 12.7 to 20.6 kW

VITOCAL 300-A 6.8 to 13.9 kW

VITOCAL 200-A 2.6 to 12.4 kW

VITOCAL 200-A 3.2 to 14.7 kW

VITOCAL 222-A 3.2 to 14.7 kW

VITOCAL 262-A Type T2E/T2H with 300 litre cylinder capacity, type T2W for wall mounting

With types T2E/T2H
Compact, floorstanding heat pumps that take up little space and are particularly quiet in operation – making them suitable even for installation near the living space.
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 the 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.

### Take advantage of these benefits

- 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 utilisation of power generated on site by photovoltaic systems
- Web-enabled through Vitoconnect (accessory) with ViCare app

Vitocal 333-G/222-G appliances are KEYMARK certified.

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 refrigerant circuit, with output-dependent control, matches the heating output of the heat pump to the relevant 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.

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 m² and front access to all components requiring servicing ensure space saving installation. An extremely low level of operating noise of 41 dB(A) (sound power to ErP at B0/W55) means that the compact appliance can also be installed near the living space, e.g. in the utility room.

**Online control via the 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 with electrical reheating
+ Low running costs thanks to optimised SCOP (seasonal coefficient of performance) to EN 14825: up to 5.5 (cold climate/low temperature applications)
+ 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 utilisation of power generated on site by photovoltaic systems due to low output modulation of the heat pump
+ Web-enabled through Vitoconnect (accessory) with ViCare app
+ Control of a Vitovent 300-F mechanical ventilation unit

For specification, see page 54
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 outputs of between 5.8 and 10.4 kW, they are ideal for use in detached houses. Flow temperatures up to 65 °C also enable use with conventional radiators.

The heat pump is an attractively priced alternative to the compact appliance 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.
TAKE ADVANTAGE OF THESE BENEFITS

+ Compact brine/water heat pumps with heating outputs from 5.8 to 10.4 kW
+ High DHW convenience with 220 l 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 5.4 (cold climate/low temperature applications)
+ 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 utilisation of power generated on site by photovoltaic systems due to low output modulation of the heat pump
+ Web-enabled through Vitoconnect (accessory) with ViCare app
+ Control of a Vitovent 300-F mechanical ventilation unit

For specification, see page 54
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 purpose, a geothermal probe, geothermal collector or Vitofriocal ice store system 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 can also be configured for straightforward operation as a water/water heat pump. They are equally well suited to new build and modernisation, in both detached houses and apartment buildings.

**TAKE ADVANTAGE OF THESE BENEFITS**

- Year-round mono mode operation for DHW and central heating possible
- Vitocal 300-G: low running costs with maximum efficiency at every operating point due to the innovative RCD (refrigerant cycle diagnostic) system with EEV (electronic expansion valve)
- Prepared for the use of power generated on site, for example by photovoltaic systems
- Web-enabled via free ViCare app and Vitoconnect (optional)
- Control of Viessmann ventilation units possible
- Easier handling through small and light modules

Energy efficiency label
Vitocal 300-G, BW 301.B10

EHPA Quality Label as proof of the COP, for subsidy according to the German market incentive programme
Vitocal 300-G heat pump with Vitocharge power storage system and Vitocell 100-V DHW cylinder

**VITOCAL 300-G**

1. **Vitotronic 200 control unit**
2. **Condenser**
3. **Large area evaporator for efficient exchange of heat**
4. **High efficiency pump**
5. **Hermetically sealed Compliant scroll compressor**
With five output stages, the Vitocal 300-G brine/water heat pump can be used to cover the heat demand required for a number of different heating systems.

**Modular solution for higher heat demand**
Where there is a higher heat demand, the two-stage Vitocal 300-G, based on the master/slave principle, is the right choice. It can also be configured for ground or groundwater as the heat source. Two heat pumps can be linked together if a higher heating output is required.

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. The master module regulates the slave module.

**Reliable and quiet**
The powerful Compliant scroll compressor fitted in the Vitocal 300-G heat pump is outstanding on account of its high operational safety, reliability and especially quiet operation. To achieve this, the appliance is equipped with dual anti-vibration mounts to prevent structure-borne noise transmission and insulate the casing against airborne noise. At the same time, the compressor guarantees the highest coefficient of performance (COP up to 5.0 (B0/W35)) and flow temperatures up to 65 °C.

The refrigerant cycle diagnostic (RCD) system constantly monitors the refrigerant circuit in the Vitocal 300-G and, in conjunction with the electronic expansion valve, ensures the highest efficiency at every operating point, which results in high annual COPs.

**Vitotronic 200, with energy statement facility**
The Vitotronic 200 control unit is simple and intuitive to operate, thanks to the plain text user prompts and graphic display. Amongst other features, it enables a differentiated energy statement, which is accepted by subsidy bodies (in Germany).

**TAKE ADVANTAGE OF THESE BENEFITS**

- Floorstanding brine/water heat pumps:
  - Single stage heating output: 5.7 to 17.2 kW
  - Two-stage heating output: 11.4 to 34.4 kW
- Heating output in water/water configuration: 7.5 to 42.2 kW
- Flow temperature: up to 65 °C for high DHW convenience
- Low running costs thanks to high COP (coefficient of performance) to EN 14511: up to 5.0 (B0/W35)
- Low running costs with the highest level of efficiency at any operating point through the innovative RCD (refrigerant cycle diagnostic) system with EEV (electronic expansion valve)
- Easy to operate Vitotronic control unit with plain text and graphic display for weather-compensated mode and natural cooling
- Web-enabled via free ViCare app and Vitoconnect (optional)

For specification, see page 55
With its good price/performance ratio, the Vitocal 200-G compact brine/water heat pump is ideally suited to newly built detached and two-family houses. Its innovative technology, with efficient Compliant scroll compressor, enables it to achieve a maximum flow temperature of 60 °C.

**Two heating circuits for individual heating convenience**
The heat pump meets all the requirements for a newly built detached or two-family house. The Vitotronic 200 weather-compensated control unit allows two separate heating circuits to be connected.

**Prepared for subsidies**
If an optional heat meter is installed, the purchase of a Vitocal 200-G may be eligible for public subsidies [in Germany]. It would then meet the requirements of the German market incentive programme.

**Straightforward installation**
As standard, the Vitocal 200-G is delivered complete with integral high efficiency pumps for the brine and heating circuits, a circulation pump for cylinder heating, and a safety assembly.

**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 Vitotrol app on a mobile device is also an option.

**Cooling and ventilation**
The natural cooling function is already included. To use this, the Vitocal 200-G must be equipped with an NC-Box (accessory). The Vitotronic 200 can also be used to control the Vitovent 300-F ventilation unit.

**Prepared for photovoltaic power**
The Vitocal 200-G heat pump is already prepared for the utilisation of inexpensive power generated on site by a photovoltaic system. An intelligent control unit increases on-site consumption of power generated by the photovoltaic system.

**TAKE ADVANTAGE OF THESE BENEFITS**

- Floorstanding brine/water heat pump, single stage heating output: 5.6 to 17.2 kW
- Flow temperature: up to 60 °C
- Low running costs thanks to high COP (coefficient of performance) to EN 14511: up to 4.5 (B0/W35)
- Easy to operate Vitotronic control unit with plain text and graphic display for weather-compensated mode and natural cooling
- Web-enabled via free ViCare app and Vitoconnect (optional)

For specification, see page 55
VITOCAL 200-G
5.6 to 17.2 kW

1. Vittorionic 200 heat pump control unit
2. Condenser
3. Large area evaporator for efficient exchange of heat
4. High efficiency pump
5. Hermetically sealed compliant scroll compressor
Powerful heat pumps with high flow temperatures meet the requirements for high DHW convenience in large detached houses and apartment buildings.
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 the Vitocal and, in conjunction with the electronic expansion valve, ensures the highest level of efficiency at any 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 and lag heat pumps can operate as 2-stage modules. This does not just deliver the higher heating output required, it 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.

---

**TAKE ADVANTAGE OF THESE BENEFITS**

+ Low noise and vibration emissions through sound-optimised appliance design
+ Low running costs with the highest level of efficiency at any 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 the use of power generated on site, for example by photovoltaic systems
+ Web-enabled via free ViCare app and Vitoconnect (optional)
**VITOCAL 350-C**

1. Vитотроник 200 тепловая насосная система управления
2. Конденсатор
3. Большой испаритель для эффективного обмена теплом
4. Герметичный синхронный Scroll компрессор с EVI процессом
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 for all its heat generators. Its many features 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 solar power generated on site**

The Vitocal 350-G heat pump is already prepared for the utilisation of inexpensive power generated on site by a photovoltaic system. An intelligent control unit ensures maximum consumption of self-generated power and therefore lowers energy costs.

**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 68 °C

For specification, see page 56
The Vitocal 300-G is a specially developed product 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 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 output to be raised to up to 589 kW (water/water) with multiple Vitocal 300-G units.

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 DHW and central 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.
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: ≤ 44 dB(A)
+ Integral energy statement
+ Easier handling through small and light modules

For specification, see page 56
VITOFRIOCAL ice store system

A  Energy from insolation
B  Energy from ambient air
C  Energy from the ground

1  Solar air absorber
2  Ice store
3  Heat source manager
4  Vitocal heat pump
5  NC-Box for natural cooling
This inexhaustible source of energy for brine/water heat pumps uses the energy released when water freezes to ice and ice melts to water.

The use of an ice store as an energy source is an innovative solution. The ice store consists of a tank with built-in heat exchangers which is buried in the garden and filled with ordinary tap water. Special solar air absorbers installed on the roof of the building draw heat from the ambient air, as well as from insolation, and supply it to the tank. The ice store also draws energy directly from the ground.

Using crystallisation energy for heating

The heat pump extracts the energy required for DHW and central heating from the water in the tank as required. If the temperature in the tank falls to freezing point, more energy is drawn from the freezing effect of the water – hence the term "ice store".

During the transition from water to ice, the amount of crystallisation energy released is equivalent to that required for the inverse process of thawing. With an ice store that can hold ten cubic metres – the standard size for a detached house – this corresponds to the energy content of approx. 120 litres of fuel oil.

The key difference is that the fuel oil is entirely consumed to generate heat, whilst the water content of the ice store can be used time and time again to generate heat using energy from the sun and air.

Package solutions for easy installation

Viessmann is the only heat pump manufacturer to offer the innovative Vitofriocal ice store system. For heat pumps with a rated heating output of 6.0 to 17.2 kW, various standard system packages are currently available which greatly facilitate the engineering and ordering of components. These packages comprise an ice store with built-in heat exchangers, solar air absorbers with a roof mounting system and the heat transfer medium for the primary circuit.

Larger properties with a greater heat demand require a customised ice store and solar air absorbers. Viessmann offers the relevant support for this.

No official permits required

A further benefit of the Vitofriocal ice store system: it does not require the costly drilling that is necessary for accessing geothermal energy from deep in the ground, or the extensive groundwork involved when embedding geothermal collectors over a large area. Nor does it require any official permits, as the ice store has no impact on groundwater.

TAKE ADVANTAGE OF THESE BENEFITS

- Complete ice store package with solar air absorbers for Vitocal 300-G (type 301.B06-B17) and Vitocal 222-G (type 221.B06-B10) brine/water heat pumps
- Combined utilisation of ambient air, the ground and insolation as energy sources
- No drilling – no environmental risk, no permits required
- Low running costs thanks to the high heat pump COP to EN 14511 of up to 5.0 (B0/W35)
- Particularly high efficiency (annual COP) thanks to intelligent heat source management and heat pump with RCD (refrigerant cycle diagnostic) system with EEV (electronic expansion valve)
- Easy to use Vitotronic control unit integrated in the heat pump
In addition to its primary function as a heating appliance, heat pumps can also provide cooling using two different methods:

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.

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

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

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.

Active cooling with AC-Box – efficient heating and cooling

The AC-Box combines active and natural cooling in heat pump systems, making them even more versatile and convenient. The system changes over automatically according to the required room temperature. If only a low cooling capacity is required, natural cooling is sufficient. However, when that is no longer enough, active cooling is started.

Keeping cool when it’s hot outside

The compressor circuit “kicks in” for active cooling. Using the AC-Box, the internal control unit reverses the output and input functions, and begins actively transferring heat from the building to the geothermal probe. Cold water then flows through the heating circuit itself – cooled down to 7 °C if necessary.

Utilising the energy removed

Incidentally, direct use can also be made of the heat removed from the interior in this way, for example for DHW heating or to heat a swimming pool. This means cooling and heating functions can be combined extremely effectively.
Split heat pumps are characterised by their separation into an indoor unit and an outdoor unit.
As systems for heating only, or as systems that provide heating and cooling, split heat pumps 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 450 mm 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 control unit, with user prompts, 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.

**Take advantage of these benefits**

- 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 outlets
- Prepared for the use of power generated on site, for example by 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 – Made in Germany.

**By far the quietest outdoor unit of its kind**
The result: barely audible operating noise. 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.

**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.

**Dual mounts prevent structure-borne noise**
Double, flexible anti-vibration mounts and acoustically optimised arrangement of the refrigerant circuit components effectively prevent 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 5.0 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.

**TAKE ADVANTAGE OF THESE BENEFITS**
- Low running costs thanks to high COP (coefficient of performance) to EN 14511: up to 5.0 (A7/W35) and 4.1 (A2/W35)
- Especially quiet thanks to advanced acoustic design (AAD) – ideal for use in terraced housing
- High product quality and a modern, timeless design – Made in Germany
- 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

For specification, see page 58
VITOCAL 200-S indoor unit

1. Flow switch
2. Instantaneous heating water heater (not for type AWB/AWB-M)
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.

Heat pump control unit with user prompts
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.
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 5.0 (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 l 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 utilisation of power generated on site by photovoltaic systems
- Especially quiet operation thanks to advanced acoustic design (AAD)
- Web-enabled through Vitoconnect (accessory) for operation and service via Viessmann apps

For specification, see page 59
Air source heat pumps utilise free energy from the ambient air for heating. This makes them suitable for both new build and modernisation.
The Vitocal 350-A air source heat pump is particularly suitable for modernisation; the Vitocal 300-A for modernisation and new build; and the Vitocal 200-A for new build.

Compared to a brine/water system, the investment in an air source heat pump is lower, as the costs for installing a geothermal collector or drilling holes for geothermal probes are not incurred.

**Space saving outdoor installation**
Depending on the version chosen, the heat pumps can be installed indoors or outdoors. Outdoor installation is a particularly space efficient solution. Only the control unit and hydraulic components are mounted on the wall inside the house.

**Viessmann offers everything from a single source**
When it comes to transporting heat into your home, you can rely on Viessmann’s system competence. All pipework required for connecting the heat pump, as well as the entire range of accessories, are provided from a single source, and are perfectly matched to one another.

### TAKE ADVANTAGE OF THESE BENEFITS

- Low operating noise through generously dimensioned air ducts, sound-optimised appliance design and night mode with reduced fan speed
- Easy to operate Vitotronic control unit with plain text and graphic display
- Control of Viessmann ventilation units possible
- Installation indoors or outdoors with matching accessories
- Efficient defrosting through circuit reversal
- Prepared for the use of power generated on site, for example by photovoltaic systems
- Web-enabled via free ViCare app and Vitoconnect (optional)
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 minus 10 °C.

RCD system for particularly high efficiency

The electronic expansion valve and RCD (refrigerant cycle diagnostic) system also 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 high annual COPs and very low running costs.

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)
+ Matching product accessories for quick and easy hydraulic connection
+ Efficient defrosting through circuit reversal
+ With integral energy statement

For specification, see page 60
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
7. Hermetically sealed Compliant scroll compressor with enhanced vapour injection (EVI)
The Vitocal 300-A air source heat pump stands out not only on account of its contemporary design. With a maximum flow temperature of 65 °C for central heating and convenient DHW heating, this appliance is particularly suitable for modernising detached and two-family houses.

**Flexible and quiet**
The Vitocal 300-A air source heat pump is installed outside the building and uses freely available ambient air. Thanks to its variable speed DC fan, modulating compressor and sound-optimised design with sheath current air routing, the heat pump is exceptionally quiet, with a sound power level below 54 dB(A). The fan speed can be reduced further at night.
VITOCAL 300-A

6.8 to 13.9 kW

TAKE ADVANTAGE OF THESE BENEFITS

- Reversible air source heat pump for heating and cooling, for outdoor installation
- Rated heating output: 7.2 to 8.0 kW (A7/W35)
- Low running costs thanks to high COP (coefficient of performance) to EN 14511: up to 5.0 (A7/W35)
- Flow temperature: up to 65 °C at -5 °C outside temperature
- Low operating noise thanks to sound-optimised DC fan, reduced fan speed in night mode and sound-optimised appliance design
- Optional control and monitoring with wireless remote control units or ViCare app
- Prepared for Smart Grid and optimised utilisation of power generated on site

For specification, see page 61

High COP for reliable heat supply
The variable speed scroll compressor with brushless permanent magnet motor and enhanced vapour injection, as well as the electronic bi-flow expansion valve, contribute to the high COP to EN 14511 of up to 5.0 (A7/W35).

Enhanced vapour injection improves efficiency, particularly at high flow temperatures. The Vitocal 300-A provides a reliable heat supply and considerably reduces electricity costs, most notably in partial load operation.

Easy cooling in summer
The Vitocal 300-A is preset for reversible operation to provide cooling during the warmer months. When high temperatures occur in summer, convectors or area cooling systems make the interior feel comfortably cool.

Wireless or app operation
The Vitocal 300-A is equipped with the Vitotronic 200 control unit (type WO1C). It is preset for wireless remote operation and allows convenient control from the living space. In conjunction with the ViCare app and Vitoconnect, the system can also be controlled from anywhere via a smartphone or tablet.

Prepared for operation with photovoltaic power and Smart Grid
Connecting to a photovoltaic system enables further savings on running costs. The power generated on site can, for example, be used to run the Vitocal 300-A. The Vitocal 300-A is also prepared for Smart Grid applications (intelligent integration of consumers into power grids).
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 variable 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 its economical operation.

**Heating and cooling – with electricity from a photovoltaic system if installed**
This is particularly cost effective with electricity generated on site by a photovoltaic system. 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.

**Mechanical ventilation – the ideal accompaniment**
The Vitovent 300-F mechanical ventilation system is a perfect addition to the Vitocal 200-A. It achieves an air change rate of up to 280 cubic metres per hour. Virtually no valuable heat is lost this way.

The Vitovent 300-F recovers up to 98 percent of the heat from the extract air and feeds it right back into the interior. Matching in terms of design and colour, the Vitovent 300-F and the Vitocal 200-A heat pump form a single, compact unit.

**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.

**TAKE ADVANTAGE OF THESE BENEFITS**
- Reversible air source heat pump for heating and cooling, for indoor installation
- Rated heating output: 5.2 and 7.5 kW (A7/W35)
- Low running costs thanks to high COP (coefficient of performance) to EN 14511: up to 4.8 (A7/W35)
- Flow temperature: up to 60 °C at 5 °C air intake temperature
- Easy to use, integral Vitotronic 200 control unit (type WO1C); can be controlled using the Vitotrol app
- Control of a Vitovent 300-F mechanical ventilation unit
- Optimised utilisation of power generated on site by photovoltaic systems

For specification, see page 62.
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 – Made in Germany.

**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 high degree of pre-assembled components and coordinated accessories means 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.

**Take advantage of these benefits**

- Low running costs thanks to high COP (coefficient of performance) to EN 14511: up to 5.0 (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 – Made in Germany
- Maximum flow temperature up to 60 °C
- Compact monoblock indoor unit with high efficiency circulation pump, 3-way diverter valve, instantaneous heating water heater, safety assembly and control unit

For specification, see page 63
VITOCAL 200-A

**Indoor unit**
1. Instantaneous heating water heater
   (not for type AWO/AWO-M)
2. 3-way diverter valve
   for central heating/DHW heating
3. Secondary pump
   (high efficiency circulation pump)
4. Vitotronic 200 control unit
5. Flow switch

**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

**Specifications**

VITOCAL 200-A
3.2 to 14.7 kW
VITOCAL 222-A indoor unit

1. Instantaneous heating water heater
2. 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)
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.

**Particularly quiet**
With a sound pressure level of only 35 dBA 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 high degree of pre-assembled components and coordinated accessories means 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 even 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.

**TAKE ADVANTAGE OF THESE BENEFITS**

- Low running costs thanks to high COP (coefficient of performance) to EN 14511: up to 5.0 (A7/W35)
- Heating and cooling with a single appliance thanks to reversible circuit
- High DHW convenience thanks to 220 l DHW cylinder
- Especially quiet thanks to advanced acoustic design (AAD) – ideal for use in terraced housing
- High product quality and a modern, timeless design – Made in Germany
- Maximum flow temperature up to 60 °C at -10 °C outside temperature
- Compact monoblock indoor unit with 220 l DHW cylinder, high efficiency circulation pump, condenser, 3-way diverter valve, instantaneous heating water heater, safety assembly and control unit

For specification, see page 64
Independently of any other heating equipment, the Vitocal 262-A DHW heat pump heats domestic hot water, inexpensively and efficiently, by utilising outdoor, recirculation and extract air. The heat pump is equally suitable for detached houses or smaller commercial enterprises. Typical applications include, for example, bakeries or server rooms, where above average amounts of heat are produced.

The Vitocal 262-A DHW heat pump utilises heat from the indoor or outdoor air for inexpensive, energy efficient DHW heating.

Hybrid version for combination with existing boilers

The heat pump is available without an indirect coil (type T2E) for mono mode operation. Alternatively, the hybrid version with an integral indirect coil (type T2H) 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 heat pump preheats the water and, if necessary, the heat generator is used for reheating. This ensures maximum DHW convenience at all times.
Available for recirculation air or outdoor air

The recirculation air version, Vitocal 262-A, utilises air from the room where it is installed. Part of the heat from the air that is drawn in is extracted and raised to a useful temperature level (up to 65 °C for improved DHW hygiene). This removes moisture from the rooms, thus protecting the fabric of the building and improving the indoor environment. In outdoor air operation, the appliance operates in a temperature range of -8 to +40 °C and can therefore also be operated in more extreme climatic zones.

Dry immersion heater

The electric version (type T2E) is equipped at the factory with a dry immersion heater. The hybrid version with indirect coil (type T2H) can also be retrofitted with an immersion heater. This immersion heater is limescale-resistant, and it is not necessary to drain the cylinder if it has to be replaced.

Heat pump wall module

The Vitocal 262-A heat pump wall module (type T2W) is a new addition to this product range. The wall module is based on the highly efficient refrigerant circuit of the Vitocal 262-A. It is designed to heat existing DHW cylinders with a capacity of 200 to 500 litres and is ideal in utility rooms where space is limited.

**VITOCAL 262-A**

1. Highly efficient compressor
2. Large area evaporator for efficient exchange of heat
3. Control unit
4. Indirect coil (hybrid version)
5. Magnesium anode
6. Dry immersion heater (accessory for the hybrid version)
7. 300 litre DHW cylinder with Ceraprotect enamel coating

**TAKE ADVANTAGE OF THESE BENEFITS**

+ DHW heat pump for outdoor, recirculation and extract air modes, type T2E and type T2H with enamelled DHW cylinder (300 l capacity)
+ High level of DHW convenience with perfectly hygienic water at temperatures of up to 70 °C – type T2E with immersion heater (1.5 kW) or type T2H with heat generator
+ Type T2H: intelligent hybrid control for economically or ecologically optimised operation
+ 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; accessory with type T2H/T2W)
+ Installation in rooms with low ceilings (up to 2 m)
+ Smart Grid ready (SG ready)
+ Prepared for optimised consumption of power generated on site by photovoltaic systems – two-stage function possible (heat pump and immersion heater)
+ Dehumidification of basement rooms in existing buildings (recirculation air mode)

For specification, see page 65
**VITOCAL 333-G**

<table>
<thead>
<tr>
<th>VITOCAL 333-G</th>
<th>Type</th>
<th>BWT 331.C06</th>
<th>BWT 331.C12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance data</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(to EN 14511, B0/W35, 5 K spread)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated heating output</td>
<td>kW</td>
<td>4.3</td>
<td>5.3</td>
</tr>
<tr>
<td>Modulation range</td>
<td>kW</td>
<td>1.7 – 8.6</td>
<td>2.4 – 11.4</td>
</tr>
<tr>
<td>COP E in heating mode</td>
<td></td>
<td>4.7</td>
<td>4.8</td>
</tr>
<tr>
<td>Maximum flow temperature</td>
<td>°C</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td><strong>Refrigerant circuit</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refrigerant</td>
<td></td>
<td>R410A</td>
<td>R410A</td>
</tr>
<tr>
<td>– Refrigerant charge</td>
<td>kg</td>
<td>2.0</td>
<td>2.3</td>
</tr>
<tr>
<td>– Global warming potential (GWP)</td>
<td></td>
<td>1924</td>
<td>1924</td>
</tr>
<tr>
<td>– CO₂ equivalent</td>
<td>t</td>
<td>3.9</td>
<td>4.4</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length (depth) x width x height</td>
<td>mm</td>
<td>680 x 600 x 2000</td>
<td></td>
</tr>
<tr>
<td>Cylinder capacity</td>
<td>litres</td>
<td>220</td>
<td>220</td>
</tr>
<tr>
<td>Maximum draw-off volume at draw-off temperature 40 °C</td>
<td>litres</td>
<td>306</td>
<td>306</td>
</tr>
<tr>
<td><strong>Coefficient of performance E (COP_\text{wh})</strong> for DHW heating</td>
<td></td>
<td>3.2</td>
<td>3.2</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>kg</td>
<td>277</td>
<td>282</td>
</tr>
<tr>
<td><strong>Energy efficiency class</strong></td>
<td></td>
<td>A+++ / A++</td>
<td>A+++ / A++</td>
</tr>
<tr>
<td>DHW heating:</td>
<td></td>
<td>XL</td>
<td>XL</td>
</tr>
<tr>
<td>Energy efficiency class</td>
<td></td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>

---

1) Based on the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)

**VITOCAL 222-G**

<table>
<thead>
<tr>
<th>VITOCAL 222-G</th>
<th>Type</th>
<th>BWT 221.B06</th>
<th>BWT 221.B08</th>
<th>BWT 221.B10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance data</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(to EN 14511, B0/W35, 5 K spread)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated heating output</td>
<td>kW</td>
<td>5.8</td>
<td>7.5</td>
<td>10.4</td>
</tr>
<tr>
<td>COP E in heating mode</td>
<td></td>
<td>4.6</td>
<td>4.6</td>
<td>4.8</td>
</tr>
<tr>
<td>Maximum flow temperature</td>
<td>°C</td>
<td>65</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td><strong>Refrigerant circuit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refrigerant</td>
<td></td>
<td>R410A</td>
<td>R410A</td>
<td>R410A</td>
</tr>
<tr>
<td>– Refrigerant charge</td>
<td>kg</td>
<td>1.4</td>
<td>1.95</td>
<td>2.4</td>
</tr>
<tr>
<td>– Global warming potential (GWP)</td>
<td></td>
<td>1924</td>
<td>1924</td>
<td>1924</td>
</tr>
<tr>
<td>– CO₂ equivalent</td>
<td>t</td>
<td>2.7</td>
<td>3.8</td>
<td>4.6</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length (depth) x width x height</td>
<td>mm</td>
<td>680 x 600 x 2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylinder capacity</td>
<td>litres</td>
<td>220</td>
<td>220</td>
<td>220</td>
</tr>
<tr>
<td>Maximum draw-off volume at draw-off temperature 40 °C</td>
<td>litres</td>
<td>293</td>
<td>293</td>
<td>293</td>
</tr>
<tr>
<td><strong>Coefficient of performance E (COP_\text{wh})</strong> for DHW heating</td>
<td></td>
<td>3.14</td>
<td>3.14</td>
<td>3.14</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>kg</td>
<td>277</td>
<td>282</td>
<td>288</td>
</tr>
<tr>
<td><strong>Energy efficiency class</strong></td>
<td></td>
<td>A** / A**</td>
<td>A** / A**</td>
<td>A** / A**</td>
</tr>
<tr>
<td>DHW heating:</td>
<td></td>
<td>XL</td>
<td>XL</td>
<td>XL</td>
</tr>
<tr>
<td>Energy efficiency class</td>
<td></td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>

---

1) 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 climate conditions for low (W35)/medium (W55) temperature applications

The new energy efficiency class A+++ comes into effect on 26 September 2019.
### VITOCAL 300-G

**Brine/water**

|-------|-------------|---------|-------------|---------|-------------|---------|-------------|---------|-------------|---------|

**Performance data**

<table>
<thead>
<tr>
<th>Rated heating output</th>
<th>kW</th>
<th>5.7</th>
<th>7.6</th>
<th>10.4</th>
<th>13.0</th>
<th>17.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>COP * in heating mode</td>
<td>4.6</td>
<td>4.7</td>
<td>5.0</td>
<td>5.0</td>
<td>4.7</td>
<td></td>
</tr>
<tr>
<td>Maximum flow temperature</td>
<td>°C</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
</tr>
</tbody>
</table>

**Refrigerant circuit**

<table>
<thead>
<tr>
<th>Refrigerant</th>
<th>R410A</th>
<th>R410A</th>
<th>R410A</th>
<th>R410A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refrigerant charge</td>
<td>kg</td>
<td>1.40</td>
<td>1.95</td>
<td>2.40</td>
</tr>
</tbody>
</table>

| Global warming potential (GWP) | 1924 | 1924 | 1924 | 1924 | 1924 |
| CO2 equivalent | 3.7 | 3.9 | 4.6 | 4.3 | 5.3 |

**Dimensions**

<table>
<thead>
<tr>
<th>Length (depth)</th>
<th>mm</th>
<th>844</th>
<th>844</th>
<th>844</th>
<th>844</th>
<th>844</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>mm</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Height (control unit open)</td>
<td>mm</td>
<td>1155</td>
<td>1155</td>
<td>1155</td>
<td>1155</td>
<td>1155</td>
</tr>
</tbody>
</table>

**Weight**

<table>
<thead>
<tr>
<th>Type BW</th>
<th>kg</th>
<th>113</th>
<th>117</th>
<th>129</th>
<th>135</th>
<th>148</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type BWC</td>
<td>kg</td>
<td>123</td>
<td>127</td>
<td>139</td>
<td>145</td>
<td>158</td>
</tr>
<tr>
<td>Type BWS</td>
<td>kg</td>
<td>109</td>
<td>113</td>
<td>125</td>
<td>131</td>
<td>144</td>
</tr>
</tbody>
</table>

**Energy efficiency class**

| III | A++ / A++ | A++ / A++ | A++ / A++ | A++ / A++ | A++ / A++ |

---

**Note:** Based on the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)

---

### VITOCAL 300-G

**WATER/WATER**

|------|-------------|---------|-------------|---------|-------------|---------|-------------|---------|-------------|---------|

**Performance data**

<table>
<thead>
<tr>
<th>Rated heating output</th>
<th>kW</th>
<th>7.5</th>
<th>10.2</th>
<th>13.5</th>
<th>16.9</th>
<th>22.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>COP * in heating mode</td>
<td>6.1</td>
<td>6.6</td>
<td>6.6</td>
<td>6.5</td>
<td>6.2</td>
<td></td>
</tr>
<tr>
<td>Maximum flow temperature</td>
<td>°C</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
</tr>
</tbody>
</table>

**Refrigerant circuit**

<table>
<thead>
<tr>
<th>Refrigerant</th>
<th>R410A</th>
<th>R410A</th>
<th>R410A</th>
<th>R410A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refrigerant charge</td>
<td>kg</td>
<td>1.20</td>
<td>1.45</td>
<td>1.70</td>
</tr>
</tbody>
</table>

| Global warming potential (GWP) | 1924 | 1924 | 1924 | 1924 | 1924 |
| CO2 equivalent | 2.3 | 2.8 | 3.3 | 4.2 | 5.6 |

**Dimensions**

<table>
<thead>
<tr>
<th>Length (depth)</th>
<th>mm</th>
<th>845</th>
<th>845</th>
<th>845</th>
<th>845</th>
<th>845</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>mm</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Height (control unit open)</td>
<td>mm</td>
<td>1049</td>
<td>1049</td>
<td>1049</td>
<td>1049</td>
<td>1049</td>
</tr>
</tbody>
</table>

**Weight**

| kg | 113 | 117 | 129 | 135 | 148 |

**Energy efficiency class**

| III | A++ / A++ | A++ / A++ | A++ / A++ | A++ / A++ | A++ / A++ |

---

**Note:** Based on the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)

---

### VITOCAL 200-G

**Type BWC**

|------------|---------|---------|---------|---------|---------|

**Performance data**

<table>
<thead>
<tr>
<th>Rated heating output</th>
<th>kW</th>
<th>5.6</th>
<th>7.6</th>
<th>9.7</th>
<th>13.0</th>
<th>17.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>COP * in heating mode</td>
<td>4.4</td>
<td>4.4</td>
<td>4.4</td>
<td>4.5</td>
<td>4.5</td>
<td></td>
</tr>
<tr>
<td>Maximum flow temperature</td>
<td>°C</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>

**Refrigerant circuit**

<table>
<thead>
<tr>
<th>Refrigerant</th>
<th>R410A</th>
<th>R410A</th>
<th>R410A</th>
<th>R410A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refrigerant charge</td>
<td>kg</td>
<td>1.20</td>
<td>1.45</td>
<td>1.70</td>
</tr>
</tbody>
</table>

| Global warming potential (GWP) | 1924 | 1924 | 1924 | 1924 | 1924 |
| CO2 equivalent | 2.3 | 2.8 | 3.3 | 4.2 | 5.6 |

**Dimensions**

<table>
<thead>
<tr>
<th>Length (depth)</th>
<th>mm</th>
<th>845</th>
<th>845</th>
<th>845</th>
<th>845</th>
<th>845</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>mm</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Height (control unit open)</td>
<td>mm</td>
<td>1049</td>
<td>1049</td>
<td>1049</td>
<td>1049</td>
<td>1049</td>
</tr>
</tbody>
</table>

**Weight**

| kg | 113 | 117 | 129 | 135 | 148 |

**Energy efficiency class**

| III | A++ / A++ | A++ / A++ | A++ / A++ | A++ / A++ | A++ / A++ |

---

**Note:** Based on the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)

---

---

**Note:** Energy efficiency class in line with Commission Regulation (EU) No 811/2013 regarding heating under average climate conditions for low (W35)/medium (W55) temperature applications
### VITOCAL 350-G

---|---|---|---
**Vitocal 300-G** (2-stage, slave without its own control unit) Type BWS 351.B20 | BWS 351.B27 | BWS 351.B33 | BWS 351.B42

#### Performance data (to EN 14511, B0/W35, 5 K spread)

<table>
<thead>
<tr>
<th>Rated heating output [kW]</th>
<th>COP E in heating mode</th>
<th>Maximum flow temperature [°C]</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.5</td>
<td>4.8</td>
<td>68</td>
</tr>
<tr>
<td>28.7</td>
<td>4.9</td>
<td>68</td>
</tr>
<tr>
<td>32.7</td>
<td>5.0</td>
<td>68</td>
</tr>
<tr>
<td>42.3</td>
<td>4.8</td>
<td>68</td>
</tr>
</tbody>
</table>

#### Refrigerant circuit

- **Refrigerant**
  - R410A
- **Refrigerant charge** [kg]
  - 5.5
- **Global warming potential (GWP) [1]**
  - 9.25
- **CO2 equivalent [t]**
  - 10.6

#### Dimensions

- **Length (depth) [mm]**
  - 1085
- **Width [mm]**
  - 780
- **Height (control unit open) [mm]**
  - 1267

#### Weight

- **Type BW [kg]**
  - 270
- **Type BWS [kg]**
  - 285

#### Energy efficiency class*

- **A++ / A++**

---

### VITOCAL 350-G

**WATER/WATER**

<table>
<thead>
<tr>
<th>Performance data (to EN 14511, B0/W35, 5 K spread)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated heating output [kW]</td>
</tr>
<tr>
<td>COP E in heating mode</td>
</tr>
<tr>
<td>Maximum flow temperature [°C]</td>
</tr>
</tbody>
</table>

#### Refrigerant circuit

- **Refrigerant**
  - R410A
- **Refrigerant charge** [kg]
  - 4.7
- **Global warming potential (GWP) [1]**
  - 6.2
- **CO2 equivalent [t]**
  - 9.0

#### Dimensions

- **Length (depth) [mm]**
  - 1085
- **Width [mm]**
  - 780
- **Height [mm]**
  - 1267

#### Weight

- **Type BW [kg]**
  - 240
- **Type BWS [kg]**
  - 240

#### Energy efficiency class*

- **A++ / A++**

---

### VITOCAL 300-G

**WATER/WATER**

<table>
<thead>
<tr>
<th>Performance data (to EN 14511, B0/W35, 5 K spread)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated heating output [kW]</td>
</tr>
<tr>
<td>COP E in heating mode</td>
</tr>
<tr>
<td>Maximum flow temperature [°C]</td>
</tr>
</tbody>
</table>

#### Refrigerant circuit

- **Refrigerant**
  - R410A
- **Refrigerant charge** [kg]
  - 7.7
- **Global warming potential (GWP) [1]**
  - 11.9
- **CO2 equivalent [t]**
  - 14.8

#### Dimensions

- **Length (depth) [mm]**
  - 1085
- **Width [mm]**
  - 780
- **Height [mm]**
  - 1267

#### Weight

- **Type BW [kg]**
  - 245
- **Type BWS [kg]**
  - 240
**NATURAL COOLING WITH NC-BOX**

<table>
<thead>
<tr>
<th>Performance data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling capacity subject to the heat pump output for Vitocal 333-G/300-G/222-G/200-G</td>
<td>kW</td>
</tr>
<tr>
<td></td>
<td>approx. 1.25-5.0</td>
</tr>
<tr>
<td>Dimensions</td>
<td>mm</td>
</tr>
<tr>
<td>Length (depth)</td>
<td>520</td>
</tr>
<tr>
<td>Width</td>
<td>580</td>
</tr>
<tr>
<td>Height</td>
<td>420</td>
</tr>
<tr>
<td>Weight incl. mixer</td>
<td>kg</td>
</tr>
</tbody>
</table>

* Based on the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)

**ACTIVE COOLING WITH AC-BOX**

The maximum cooling capacity is limited by the integral heat pump (for Vitocal 300-G, type BWC/BW 301.806-17).

<table>
<thead>
<tr>
<th>Dimensions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (depth)</td>
<td>mm</td>
</tr>
<tr>
<td>Width</td>
<td>mm</td>
</tr>
<tr>
<td>Height</td>
<td>mm</td>
</tr>
<tr>
<td>Weight</td>
<td>kg</td>
</tr>
</tbody>
</table>

* Energy efficiency class in line with Commission Regulation (EU) No 811/2013 regarding heating under average climate conditions for low (W35)/medium (W55) temperature applications
**VITOCAL 200-S**

<table>
<thead>
<tr>
<th>Type</th>
<th>AWB-M / AWB-M-E-AC</th>
<th>AWB / AWB-E-AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>V 230 230 230 230</td>
<td>400 400 400 400</td>
</tr>
<tr>
<td><strong>Performance data – heating</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(to EN 14511, A2/W35) kW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COP E, heating mode</td>
<td>3.6 3.7 4.0 4.0</td>
<td>4.1 4.0 3.9</td>
</tr>
<tr>
<td>Output control kW</td>
<td>2.0 – 4.1 2.4 – 5.5 2.8 – 7.0 4.4 – 9.6</td>
<td>4.4 – 10.1 4.8 – 10.6 5.2 – 11.2</td>
</tr>
<tr>
<td><strong>Performance data – heating</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(to EN 14511, A7/W35, 5 K spread) kW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COP E, heating mode</td>
<td>4.6 4.6 4.7 4.7</td>
<td>5.0 4.9 5.0</td>
</tr>
<tr>
<td>Output control kW</td>
<td>2.4 – 4.2 3.0 – 6.3 3.5 – 7.5 5.5 – 12.6</td>
<td>5.5 – 12.6 5.9 – 13.7 6.4 – 14.7</td>
</tr>
<tr>
<td><strong>Performance data – heating</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(to EN 14511, A-7/W35, 5 K spread) kW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COP E, heating mode</td>
<td>2.9 2.9 2.9 2.9</td>
<td>3.2 3.0 3.0</td>
</tr>
<tr>
<td><strong>Performance data – cooling</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(to EN 14511, A35/W18) kW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated cooling capacity kW</td>
<td>4.0 5.0 6.0 7.0</td>
<td>7.0 8.2 9.2</td>
</tr>
<tr>
<td>Energy efficiency ratio (EER) in cooling mode</td>
<td>4.2 4.2 4.1 4.2</td>
<td>4.0 3.9 3.8</td>
</tr>
<tr>
<td><strong>Refrigerant circuit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refrigerant kg</td>
<td>R410A 1.8</td>
<td>R410A 1.8</td>
</tr>
<tr>
<td>– Refrigerant charge kg</td>
<td>R410A 2.39</td>
<td>R410A 2.39</td>
</tr>
<tr>
<td>– Global warming potential (GWP)</td>
<td>R410A 3.6</td>
<td>R410A 3.6</td>
</tr>
<tr>
<td>– CO₂ equivalent kg</td>
<td>R410A 3.6</td>
<td>R410A 3.6</td>
</tr>
<tr>
<td><strong>Dimensions, indoor unit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length (depth) x width x height mm</td>
<td>370 x 450 x 880</td>
<td></td>
</tr>
<tr>
<td><strong>Dimensions, outdoor unit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length (depth) mm</td>
<td>546 546 546 546</td>
<td>546 546 546 546</td>
</tr>
<tr>
<td>Width mm</td>
<td>1109 1109 1109 1109</td>
<td>1109 1109 1109 1109</td>
</tr>
<tr>
<td>Height mm</td>
<td>753 753 753 1377</td>
<td>1377 1377 1377</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indoor unit kg</td>
<td>44 44 44 45</td>
<td>45 45 45</td>
</tr>
<tr>
<td>Outdoor unit kg</td>
<td>94 94 99 137</td>
<td>148 148 148</td>
</tr>
<tr>
<td><strong>Energy efficiency class</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A++ / A** A++ / A** A++ / A** A++ / A**</td>
<td>A++ / A** A++ / A** A++ / A**</td>
<td>A++ / A** A++ / A** A++ / A**</td>
</tr>
</tbody>
</table>

**Footnotes:**
1) 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 climate conditions for low (W35)/medium (W55) temperature applications
### VITOCAL 222-S

<table>
<thead>
<tr>
<th>Type</th>
<th>AWBT-M-E / AWT-M-AC</th>
<th>AWBT-E / AWBT-E-AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>V</td>
<td>230</td>
</tr>
<tr>
<td>Performance data – heating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(to EN 14511, A2/W35)</td>
<td>kW</td>
<td>2.6</td>
</tr>
<tr>
<td>COP</td>
<td></td>
<td>3.6</td>
</tr>
<tr>
<td>Output control</td>
<td>kW</td>
<td>2.0 – 4.1</td>
</tr>
<tr>
<td>Performance data – heating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(to EN 14511, A7/W35, 5 K spread)</td>
<td>kW</td>
<td>4.0</td>
</tr>
<tr>
<td>COP</td>
<td></td>
<td>4.6</td>
</tr>
<tr>
<td>Output control</td>
<td>kW</td>
<td>2.4 – 4.2</td>
</tr>
<tr>
<td>Performance data – heating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(to EN 14511, A-7/W35, 5 K spread)</td>
<td>kW</td>
<td>3.8</td>
</tr>
<tr>
<td>COP</td>
<td></td>
<td>4.0</td>
</tr>
<tr>
<td>Performance data – cooling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(to EN 14511, A35/W18)</td>
<td>kW</td>
<td>4.2</td>
</tr>
<tr>
<td>Rated cooling capacity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy efficiency ratio (EER) in cooling mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refrigerant circuit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refrigerant</td>
<td>kg</td>
<td>R410A</td>
</tr>
<tr>
<td>Refrigerant charge</td>
<td>kg</td>
<td>1.8</td>
</tr>
<tr>
<td>Global warming potential (GWP)</td>
<td></td>
<td>1924</td>
</tr>
<tr>
<td>CO2 equivalent</td>
<td>t</td>
<td>3.5</td>
</tr>
<tr>
<td>Cylinder capacity</td>
<td>litres</td>
<td>220</td>
</tr>
<tr>
<td>Dimensions, indoor unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length (depth) x width x height</td>
<td>mm</td>
<td>681 x 600 x 1874</td>
</tr>
<tr>
<td>Dimensions, outdoor unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length (depth)</td>
<td>mm</td>
<td>546</td>
</tr>
<tr>
<td>Width</td>
<td>mm</td>
<td>1109</td>
</tr>
<tr>
<td>Height</td>
<td>mm</td>
<td>753</td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indoor unit</td>
<td>kg</td>
<td>169</td>
</tr>
<tr>
<td>Outdoor unit</td>
<td>kg</td>
<td>94</td>
</tr>
<tr>
<td>Energy efficiency class*</td>
<td></td>
<td>A++ / A+</td>
</tr>
<tr>
<td>Draw-off profile</td>
<td></td>
<td>L</td>
</tr>
<tr>
<td>Efficiency class</td>
<td></td>
<td>A</td>
</tr>
</tbody>
</table>

* 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 climate conditions for low (W35)/medium (W55) temperature applications
# VITOCAL 350-A

**Vitocal 350-A (outdoor installation)**

<table>
<thead>
<tr>
<th>Type</th>
<th>AWHO 351.A10</th>
<th>AWHO 351.A14</th>
<th>AWHO 351.A20</th>
</tr>
</thead>
</table>

**Vitocal 350-A (indoor installation)**

<table>
<thead>
<tr>
<th>Type</th>
<th>AWHI 351.A10</th>
<th>AWHI 351.A14</th>
<th>AWHI 351.A20</th>
</tr>
</thead>
</table>

## Performance data (to EN 14511, A7/W35)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>AWHO 351.A10</th>
<th>AWHO 351.A14</th>
<th>AWHO 351.A20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated heating output (kW)</td>
<td></td>
<td>12.7</td>
<td>16.7</td>
<td>20.6</td>
</tr>
<tr>
<td>Power consumption (kW)</td>
<td></td>
<td>2.9</td>
<td>4.2</td>
<td>5.8</td>
</tr>
<tr>
<td>COP in heating mode</td>
<td></td>
<td>4.0</td>
<td>3.8</td>
<td>3.4</td>
</tr>
<tr>
<td>Maximum flow temperature (°C)</td>
<td></td>
<td>65</td>
<td>65</td>
<td>65</td>
</tr>
</tbody>
</table>

### Refrigerant circuit

<table>
<thead>
<tr>
<th>Refrigerant</th>
<th>R407C kg</th>
<th>R407C t</th>
<th>R407C t</th>
</tr>
</thead>
<tbody>
<tr>
<td>R407C</td>
<td>4.0</td>
<td>1774</td>
<td>7.1</td>
</tr>
</tbody>
</table>

### Dimensions, outdoor installation

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Length (depth) (mm)</th>
<th>Width (mm)</th>
<th>Height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (depth)</td>
<td>1265</td>
<td>1380</td>
<td>1885</td>
</tr>
<tr>
<td>Width</td>
<td>1380</td>
<td>1530</td>
<td>1885</td>
</tr>
<tr>
<td>Height</td>
<td>1885</td>
<td>1885</td>
<td>1885</td>
</tr>
</tbody>
</table>

### Dimensions, indoor installation

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Length (depth) (mm)</th>
<th>Width (mm)</th>
<th>Height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (depth)</td>
<td>946</td>
<td>880</td>
<td>1870</td>
</tr>
<tr>
<td>Width</td>
<td>946</td>
<td>1030</td>
<td>1870</td>
</tr>
<tr>
<td>Height</td>
<td>1870</td>
<td>1870</td>
<td>1870</td>
</tr>
</tbody>
</table>

### Weight, outdoor installation

<table>
<thead>
<tr>
<th>Parameter</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>325</td>
</tr>
</tbody>
</table>

### Weight, indoor installation

<table>
<thead>
<tr>
<th>Parameter</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>287</td>
</tr>
</tbody>
</table>

### Energy efficiency class*

<table>
<thead>
<tr>
<th>Efficiency class</th>
<th>AWHO 351.A10</th>
<th>AWHO 351.A14</th>
<th>AWHO 351.A20</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>A++ / A+</td>
<td>A+ / A*</td>
<td>A+ / A*</td>
</tr>
</tbody>
</table>

* Energy efficiency class in line with Commission Regulation (EU) No 813/2013 regarding heating under average climate conditions for low (W35)/medium (W55) temperature applications
## VITOCAL 300-A

**Vitocal 300-A, type AWO-AC 301.B07 301.B11 301.B14**  

### Performance data – heating  
*(to EN 14511, A2/W35)*

| kW | 7.4 | 7.0 | 8.5 |
| COP | 5.8 – 9.7 | 5.8 – 12.0 | 7.2 – 13.4 |
| kW | 4.0 | 3.9 | 3.9 |

### Performance data – heating  
*(to EN 14511, A7/W35, 5 K spread)*

| kW | 7.2 | 7.2 | 8.0 |
| COP | 6.8 – 11.6 | 6.8 – 12.5 | 7.9 – 13.9 |
| kW | 5.0 | 5.0 | 5.0 |

### Performance data – heating  
*(to EN 14511, A7/W35)*

| kW | 7.0 | 10.5 | 12.0 |
| COP | 3.33 | 3.1 | 3.0 |

### Performance data – cooling  
*(to EN 14511, A7/W35)*

| kW | 8.1 | 8.1 | 19.0 |
| Energy efficiency ratio (EER) in cooling mode | 3.0 | 3.0 | 2.5 |

**Maximum flow temperature**

| °C | 65 | 65 | 65 |

**Sound power level**

| dB(A) | 49/53/51 | 49/53/51 | 50/54/52 |

**Operating point A7/W55**

### Refrigerant circuit

- **Refrigerant**
  - R410A
  - kg 4.75
  - Global warming potential (GWP) 1) 1924
  - CO₂ equivalent 9.1

### Total dimensions

| Length (depth) x width x height mm | 1100 x 1100 x 1980 |
| Weight | 250 kg |
| Energy efficiency class* | A**/A*** |

1) 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 climate conditions for low (W35)/medium (W55) temperature applications
# VITOCAL 200-A

**Vitocal 200-A**

<table>
<thead>
<tr>
<th>Performance data</th>
<th>Type</th>
<th>AWCI-AC 201.A07</th>
<th>AWCI-AC 201.A10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated heating output</td>
<td>Operating point A7/W35 (to EN 14511)</td>
<td>kW</td>
<td>5.2</td>
</tr>
<tr>
<td>Operating point A-7/W35 (to EN 14511)</td>
<td>kW</td>
<td>7.5</td>
<td>10.1</td>
</tr>
<tr>
<td>Coefficient of performance (COP) A2/W35</td>
<td></td>
<td>3.8</td>
<td>3.6</td>
</tr>
<tr>
<td>Coefficient of performance (COP) A7/W35</td>
<td></td>
<td>4.8</td>
<td>4.7</td>
</tr>
<tr>
<td>Rated cooling capacity</td>
<td>Operating point A35/W18 (to EN 14511)</td>
<td>kW</td>
<td>5.3</td>
</tr>
<tr>
<td>Energy efficiency ratio EER</td>
<td></td>
<td>3.2</td>
<td>3.2</td>
</tr>
<tr>
<td>Maximum flow temperature</td>
<td>°C</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Refrigerant circuit</td>
<td>Refrigerant</td>
<td>R410A</td>
<td>R410A</td>
</tr>
<tr>
<td>Refrigerant charge</td>
<td>kg</td>
<td>2.2</td>
<td>3.2</td>
</tr>
<tr>
<td>Global warming potential (GWP)(^1)</td>
<td>1924</td>
<td>1924</td>
<td></td>
</tr>
<tr>
<td>CO₂ equivalent</td>
<td>t</td>
<td>4.2</td>
<td>6.2</td>
</tr>
<tr>
<td>Dimensions</td>
<td>Length (depth) x width x height</td>
<td>mm</td>
<td>880 x 700 x 1850</td>
</tr>
<tr>
<td>Total weight</td>
<td>kg</td>
<td>232</td>
<td>254</td>
</tr>
<tr>
<td>Energy efficiency class*</td>
<td></td>
<td>A++ / A++</td>
<td>A++ / A++</td>
</tr>
</tbody>
</table>

\(^1\) 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 climate conditions for low (W35)/medium (W55) temperature applications
**VITOCAL 200-A**

**MONOBLOCK VERSION**

<table>
<thead>
<tr>
<th>VITOCAL 200-A</th>
<th>Type</th>
<th>AWO-M-E / AWO-M-E-AC</th>
<th>AWO-E / AWO-E-AC</th>
</tr>
</thead>
</table>

**Voltage**  
V 230 230 230 230 400 400 400

**Performance data – heating**  
(to EN 14511, A2/W35)  
COP, heating mode  
Output control kW 2.0 – 4.1 2.4 – 5.5 2.8 – 7.0 4.4 – 9.6 4.4 – 10.1 4.8 – 10.6 5.2 – 11.2

**Heating performance data**  
to EN 14511  
A7/W35, 5 K spread kW 4.0 4.8 5.6 7.0 7.6 8.9 10.1

**Performance data – cooling**  
to EN 14511  
Rated cooling capacity kW 4.0 5.0 6.0 7.0 7.0 8.2 9.2

**Refrigerant circuit**  
- Refrigerant R410A
- Refrigerant charge kg 1.4 1.4 1.4 2.4 2.4 2.4 2.4
- Global warming potential (GWP) 1 1924 1924 1924 1924 1924 1924 1924
- CO2 equivalent t 2.7 2.7 2.7 4.6 4.6 4.6 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

**Weight**  
Indoor unit kg 41 41 41 41 41 41 41

**Energy efficiency class**  
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)

* Energy efficiency class in line with Commission Regulation (EU) No 813/2013 regarding heating under average climate conditions for low (W35)/medium (W55) temperature applications
# Vitocal 222-A

## Monoblock Version

### Voltage

<table>
<thead>
<tr>
<th>Type</th>
<th>AWOT-M-E / AWOT-M-E-AC</th>
<th>AWOT / AWOT-E-AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWOT-M-E</td>
<td>221.A04</td>
<td>221.A10</td>
</tr>
<tr>
<td>AWOT-M-E-AC</td>
<td>221.A06</td>
<td>221.A13</td>
</tr>
<tr>
<td>AWOT</td>
<td>221.A08</td>
<td>221.A16</td>
</tr>
<tr>
<td>AWOT-E-AC</td>
<td>221.A10</td>
<td></td>
</tr>
<tr>
<td>AWOT-E-AC-AC</td>
<td>221.A13</td>
<td></td>
</tr>
<tr>
<td>AWOT-E</td>
<td>221.A16</td>
<td></td>
</tr>
</tbody>
</table>

### Performance data – heating

*(to EN 14511, A2/W35)*

<table>
<thead>
<tr>
<th>COP, heating mode</th>
<th>kW</th>
<th>kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output control</td>
<td>2.0 – 4.1</td>
<td>2.4 – 5.5</td>
</tr>
<tr>
<td></td>
<td>4.4 – 9.6</td>
<td>4.4 – 10.1</td>
</tr>
<tr>
<td></td>
<td>4.8 – 10.6</td>
<td>5.2 – 11.2</td>
</tr>
</tbody>
</table>

### Heating performance data to EN 14511

*AWOT/W35, 5K spread*

<table>
<thead>
<tr>
<th>COP, heating mode</th>
<th>kW</th>
<th>kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output control</td>
<td>4.0 – 4.2</td>
<td>4.2 – 4.6</td>
</tr>
<tr>
<td></td>
<td>5.5 – 5.9</td>
<td>5.9 – 6.3</td>
</tr>
<tr>
<td></td>
<td>8.3 – 8.7</td>
<td>8.7 – 9.1</td>
</tr>
</tbody>
</table>

### Performance data – cooling

*(to EN 14511, A35/W18)*

<table>
<thead>
<tr>
<th>Rated cooling capacity</th>
<th>kW</th>
<th>kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy efficiency ratio (EER) in cooling mode</td>
<td>4.2</td>
<td>4.2</td>
</tr>
</tbody>
</table>

### Refrigerant circuit

<table>
<thead>
<tr>
<th>Refrigerant</th>
<th>kg</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>R410A</td>
<td>1.4</td>
<td>2.7</td>
</tr>
<tr>
<td>R410A</td>
<td>1.4</td>
<td>2.7</td>
</tr>
<tr>
<td>R410A</td>
<td>1.4</td>
<td>2.7</td>
</tr>
<tr>
<td>R410A</td>
<td>1.4</td>
<td>2.7</td>
</tr>
<tr>
<td>R410A</td>
<td>1.4</td>
<td>2.7</td>
</tr>
</tbody>
</table>

### Cylinder capacity

| litres | 220 | 220 | 220 | 220 | 220 | 220 | 220 |

### Dimensions, indoor unit

<table>
<thead>
<tr>
<th>Length (depth) x width x height mm</th>
<th>681 x 600 x 1874</th>
</tr>
</thead>
</table>

### Dimensions, outdoor unit

<table>
<thead>
<tr>
<th>Length (depth) mm</th>
<th>546</th>
<th>546</th>
<th>546</th>
<th>546</th>
<th>546</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width mm</td>
<td>1109</td>
<td>1109</td>
<td>1109</td>
<td>1109</td>
<td>1109</td>
</tr>
<tr>
<td>Height mm</td>
<td>763</td>
<td>763</td>
<td>763</td>
<td>1377</td>
<td>1377</td>
</tr>
</tbody>
</table>

### Weight

<table>
<thead>
<tr>
<th>Indoor unit kg</th>
<th>164</th>
<th>164</th>
<th>164</th>
<th>164</th>
<th>164</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor unit kg</td>
<td>102</td>
<td>102</td>
<td>103</td>
<td>104</td>
<td>153</td>
</tr>
</tbody>
</table>

### Energy efficiency class*

<table>
<thead>
<tr>
<th>Efficiency class</th>
<th>A** / A*</th>
<th>A** / A*</th>
<th>A** / A*</th>
<th>A** / A*</th>
<th>A** / A*</th>
<th>A** / A*</th>
<th>A** / A*</th>
<th>A** / A*</th>
</tr>
</thead>
</table>

### Draw-off profile

<table>
<thead>
<tr>
<th>Draw-off profile</th>
<th>L</th>
<th>L</th>
<th>L</th>
<th>L</th>
<th>L</th>
<th>L</th>
<th>L</th>
<th>L</th>
</tr>
</thead>
</table>

### Notes

1) 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 climate conditions for low (W35)/medium (W55) temperature applications
**VITOCAL 262-A**

**DHW HEAT PUMP**

<table>
<thead>
<tr>
<th>Vitocal 262-A</th>
<th>Type</th>
<th>T2E</th>
<th>T2H**</th>
<th>T2W</th>
</tr>
</thead>
</table>

### 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 $E$ (COP) | 3.8 | 3.8 | 3.2 |
| Maximum available amount of water (40 °C) | litres | 409 | 409 | 459 |
| DHW heating energy efficiency $\eta_{\text{dwh}}$ | % | 155 | 155 | 137 |
| Annual electricity consumption (AEC) | kWh | 1081 | 1081 | 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 $E$ (COP) | 3.3 | 3.3 | 2.92 |
| Maximum available amount of water (40 °C) | litres | 394 | 394 | 465 |
| DHW heating energy efficiency $\eta_{\text{dwh}}$ | % | 134 | 134 | 124 |
| Annual electricity consumption (AEC) | kWh | 1246 | 1246 | 1345 |

### Refrigerant circuit

- Refrigerant
  - Refrigerant charge | kg | R134a | 0.35 | 0.35 | 0.35 |
  - Global warming potential (GWP) | 1430 | 1430 | 1430 |
  - CO₂ equivalent | t | 0.5 | 0.5 | 0.5 |

### Maximum power consumption

- Maximum power consumption of the immersion heater (accessory for type T2H/T2W) | kW | 1.5 | 1.5 | 1.5 |

### Cylinder capacity

- litres | 298 | 291 | – |

### Weight

- kg | 145 | 160 | 44 |

### Dimensions

- Length (ø) | mm | 765 | 765 | 738 |
- Width | mm | 667 | 667 | 668 |
- Height | mm | 1848 | 1848 | 464 |

### Energy efficiency class

- DHW heating*
  - Draw-off profile | XL | XL | XL |
  - Energy efficiency class | A⁺ | A⁺ | A⁺ |

* Energy efficiency class to Commission Regulation (EU) No 813/2013 for water heaters  
** Details for operation with heat pump only
System technology ensures reliable and economical operation. The convenient controls and perfectly matching Viessmann system components 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, namely 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.
OPERATING CONVENIENCE
Clear, convenient, intelligent: the Vitotronic offers perfect functionality for fast and precise control over any heating system.

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

PHOTOVOLTAIC SYSTEM
The sun supplies more power than we need. This is economical – generating solar power is already significantly cheaper than drawing domestic power from the grid.

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 (pages 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 change the air in the living space for a healthy, comfortable environment and remove odours and noxious substances. And they do so in an extremely energy efficient way.

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

SYSTEM ACCESSORIES
Radiators, expansion vessels, pipework systems, pumps, filters and valves – Vitoset offers the complete range of accessories for your Viessmann heating system.
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. The most efficient way to generate heat from power is by using a heat pump. 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.

By meeting the energy demand for DHW and central heating with the help of a heat pump, the user can significantly increase the proportion of solar power consumed on site, whilst also enjoying reduced heating bills by making use of low cost solar power.

If you intend to combine a photovoltaic system with a heat pump, select an appliance that optimises on-site 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.

**TAKE ADVANTAGE OF THESE BENEFITS**

+ The combination of photovoltaic system and heat pump increases on-site consumption of low cost solar power and therefore reduces the cost of heating and cooling
+ The system is suitable for the integration of other renewable energy generators
+ When combined with the Vitocriocal ice store system, for example, heat source management can be further optimised.
Optimised system concept with Viessmann heat pumps

Via an energy meter, the heat pump control unit detects whether the photovoltaic system is supplying sufficient amounts of power – which is then used by the heat pump to produce 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 central heating as and when required.

With the Vitotronic 200 control unit, on-site 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 on-site consumption of generated solar power (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 the solar power generated on site. 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 on-site 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 proportion of on-site consumption. Using low cost solar power also makes the heat pump more economically attractive.

Vitocharge power storage system offers independence from the public grid

The Vitocharge 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 on-site 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 the power they generate. This offers the user independence from the public electricity grid.

The Vitocharge is charged when there is surplus power. As soon as more power is required, this additional energy is delivered by 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 Vitocharge. This involves the electrical components in the heat pump being operated with power generated on site.
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 public purse**

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 local power supply utilities (in Germany).

Up to date information is available from one of our trade partners or on the internet at: www.viessmann.de/foerderprogramme

---

**SOME SERVICE EXAMPLES**

- Free, no-obligation and individual consultation, even on site
- Clear calculation of heating cost savings after modernising your 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 your 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

---

**CreditPlus**

**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 immediately**

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

**Please note**

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

---

**Technology from Viessmann – subsidies from the public purse**

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 local power supply utilities (in Germany).

Up to date information is available from one of our trade partners or on the internet at: www.viessmann.de/foerderprogramme

---

**SOME SERVICE EXAMPLES**

- Free, no-obligation and individual consultation, even on site
- Clear calculation of heating cost savings after modernising your 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 your 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

---

**CreditPlus**

**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 immediately**

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

**Please note**

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

---

**Technology from Viessmann – subsidies from the public purse**

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 local power supply utilities (in Germany).

Up to date information is available from one of our trade partners or on the internet at: www.viessmann.de/foerderprogramme

---

**SOME SERVICE EXAMPLES**

- Free, no-obligation and individual consultation, even on site
- Clear calculation of heating cost savings after modernising your 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 your 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

---

**CreditPlus**

**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 immediately**

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

**Please note**

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

---

**Technology from Viessmann – subsidies from the public purse**

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 local power supply utilities (in Germany).

Up to date information is available from one of our trade partners or on the internet at: www.viessmann.de/foerderprogramme

---

**SOME SERVICE EXAMPLES**

- Free, no-obligation and individual consultation, even on site
- Clear calculation of heating cost savings after modernising your 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 your 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

---

**CreditPlus**

**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 immediately**

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

**Please note**

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

---

**Technology from Viessmann – subsidies from the public purse**

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 local power supply utilities (in Germany).

Up to date information is available from one of our trade partners or on the internet at: www.viessmann.de/foerderprogramme

---

**SOME SERVICE EXAMPLES**

- Free, no-obligation and individual consultation, even on site
- Clear calculation of heating cost savings after modernising your 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 your 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

---

**CreditPlus**

**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 immediately**

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

**Please note**

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

---

**Technology from Viessmann – subsidies from the public purse**

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 local power supply utilities (in Germany).

Up to date information is available from one of our trade partners or on the internet at: www.viessmann.de/foerderprogramme

---

**SOME SERVICE EXAMPLES**

- Free, no-obligation and individual consultation, even on site
- Clear calculation of heating cost savings after modernising your 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 your 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

---

**CreditPlus**

**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 immediately**

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

**Please note**

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

As a family business, Viessmann takes the long view and places great value on acting responsibly; sustainability is firmly enshrined in the company’s principles. For Viessmann, sustainability in action means striking a balance between economy, ecology and social responsibility throughout the company; meeting current needs without compromising the quality of life of future generations.

With its strategic sustainability project, Viessmann demonstrates at its own head office in Allendorf (Eder) that the energy and climate policy goals set by the German government for 2050 can in fact be achieved today with the help of commercially available technology.

Viessmann comprehensive range

- Boilers for oil or gas
- Combined heat and power generation
- Hybrid appliances
- Heat pumps
- Wood combustion technology
- Biogas production plants
- Biogas upgrading plants
- Solar thermal
- Photovoltaic
- Electric heating/DHW systems
- Refrigeration systems
- Accessories

Milestones of heating technology

As an environmental pioneer and technological trailblazer for the heating sector, Viessmann has been supplying exceptionally clean and efficient systems for heating, refrigeration and decentralised power generation for decades. Many of the company’s developments are recognised as heating equipment milestones.

Practical partnership

As part of its comprehensive range, Viessmann also offers a wide selection of complementary services. These services include a comprehensive 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.

We create living spaces for generations to come.
Viessmann is a leading international manufacturer of efficient energy systems.

### Viessmann Group in Figures

<table>
<thead>
<tr>
<th>Year</th>
<th>Figure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1917</td>
<td>12,100</td>
<td>employees</td>
</tr>
<tr>
<td>2.37</td>
<td></td>
<td>Group turnover in billions of euros</td>
</tr>
<tr>
<td>55</td>
<td></td>
<td>export share in percent</td>
</tr>
<tr>
<td>23</td>
<td></td>
<td>production companies in</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>countries</td>
</tr>
<tr>
<td>120</td>
<td></td>
<td>sales offices worldwide</td>
</tr>
<tr>
<td>74</td>
<td></td>
<td>countries with agents and sales companies</td>
</tr>
</tbody>
</table>