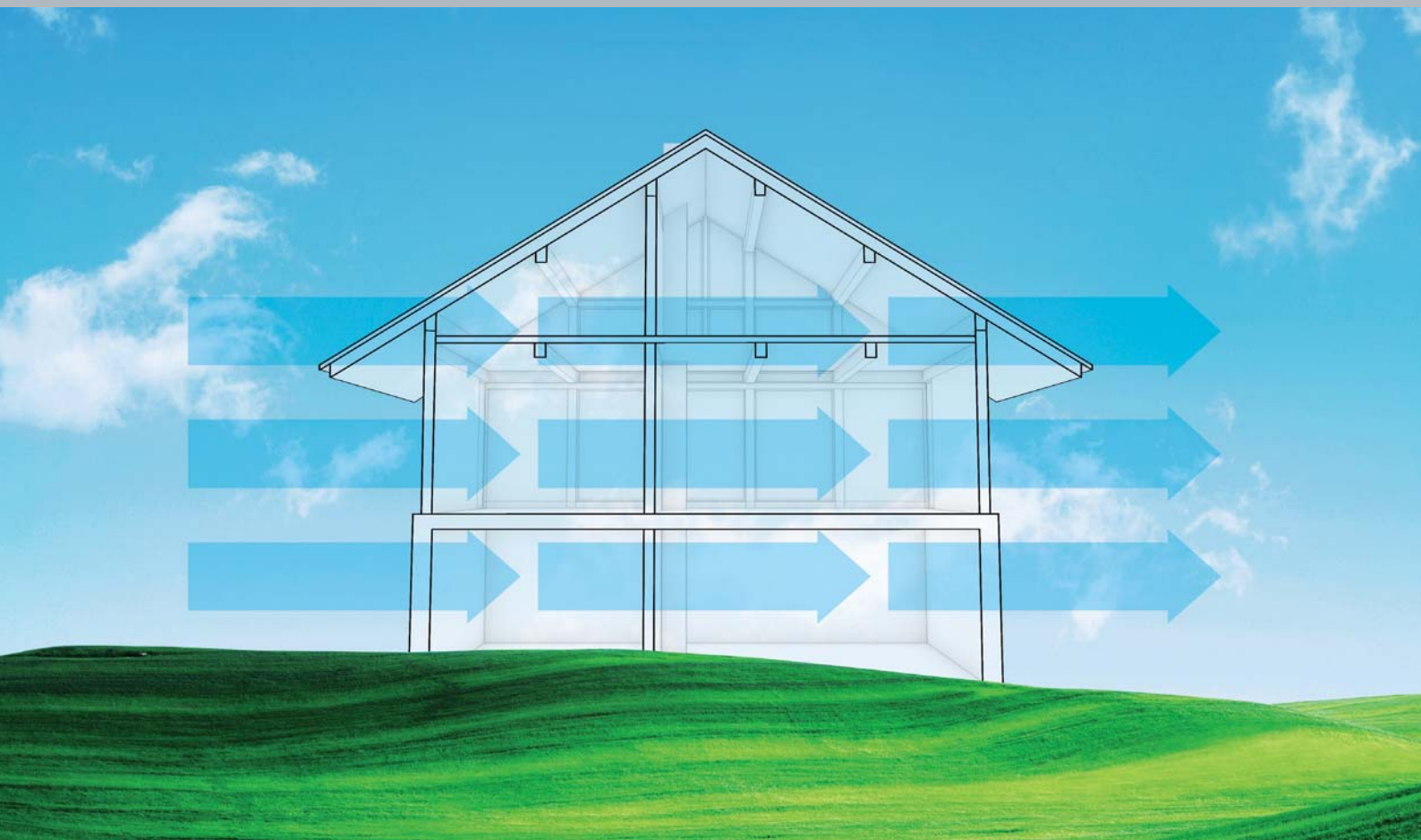


Mechanical ventilation systems





About this brochure

Mechanical ventilation systems from Viessmann offer tailor-made solutions for both new build and modernisation. This brochure provides you with all you need to know about the current product range, accessories and service.



Controlled mechanical ventilation ensures a healthy
ambience and protects the fabric of the building

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Centralised ventilation in new buildings

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Decentralised ventilation for existing buildings
and modernisation projects

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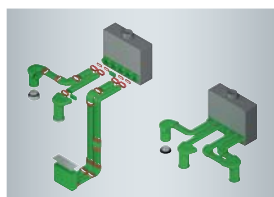
Reliable, durable technology – it's essential

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Mechanical ventilation systems for every demand:
Appliances for centralised and decentralised
mechanical ventilation

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Reliable air distribution with practical duct system

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Durable in use – easy to maintain
Which system for which application?

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Controlled mechanical ventilation ensures a comfortable ambience and protects the fabric of the building

In recent years, more stringent building regulations have led to sustainable energy savings, particularly in the construction of new houses and apartments. For example, in existing housing, the annual heat demand for a detached house is approx. 200 kWh/m². For a comparable new house, built in line with the new 2014 Energy Savings Ordinance

(EnEV [Germany]), this annual heat demand is only around a quarter of that figure.

Use of new building and insulating materials results in an airtight construction that no longer provides the necessary minimum air change rate in the interior.

Controlled mechanical ventilation for a consistently sound room air quality

An adequate air change rate is essential for health and well-being, as well for protecting the fabric of the building.

The answer is a mechanical ventilation system: It provides the air change rate that is required and regulates humidity levels in the interior. Such a system prevents mould growth and ensures the controlled replacement of stale indoor air with fresh, filtered outdoor air, thereby providing a comfortable ambiance for residents and protection for the fabric of the building.

Controlled mechanical ventilation continuously extracts stale air from, for example, bathrooms, kitchens and toilets, and replaces it with fresh air in living areas, playrooms and bedrooms. This ensures consistently high air quality.

In an average detached house, up to 15 litres of humidity are transferred to the indoor air every day. An amount accounted for in less than a minute when showering. In older buildings, this humidity condenses at cold points on the walls, resulting in a risk of mould growth.

In the past, this problem was contained by natural ventilation through draughty door and window frames. However, such draughts no longer arise in energy efficient new buildings and existing buildings modernised in line with EnEV specifications.

Moisture damage needs to be prevented by means of controlled ventilation.

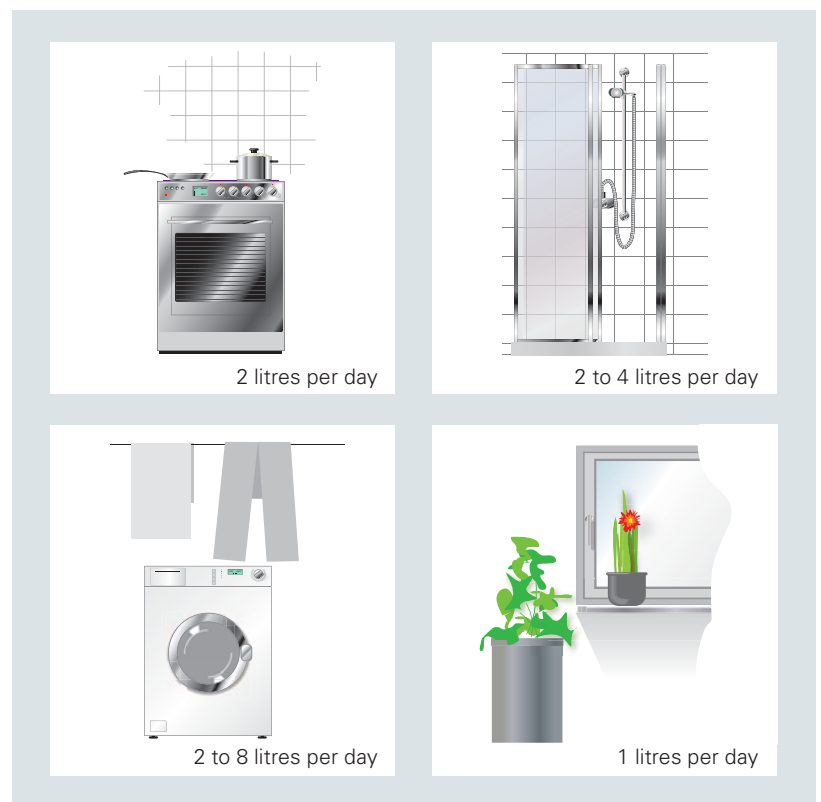
Legal requirements stipulate a minimum air change rate

EnEV specifications go so far as compelling building owners to guarantee an adequate minimum air change rate in their buildings. Residents are usually out of the house during the day, which means that the necessary ventilation does not take place.

A mechanical ventilation system operates continuously, thereby preventing adverse effects for residents as well as damage to the building.

Allergy sufferers can breathe more easily

Allergy sufferers really appreciate mechanical ventilation systems: Fitted with effective pollen filters, they reduce the pollution level so those affected suffer less from allergic reactions, while still being able to breathe fresh air.



Humidity is released here:
Up to 15 litres a day in a 4-person household.

New build



Centralised ventilation in new buildings

It is now often the case that modern buildings are already equipped with mechanical ventilation systems. On the one hand, this requires a high level of energy insulation in order to regulate indoor air humidity as effectively and reliably as possible. On the other, it is regarded as a comfort feature for well equipped apartments or buildings.

Mechanical ventilation in detached houses

The installation of mechanical ventilation systems in new detached houses is already standard, especially in low energy and passive houses.

Consequently, no heat is lost through accidental ventilation in the colder months and the continuous air change ensures a consistently high level of indoor air quality.

Heat recovery from extract air

Advanced mechanical ventilation systems are particularly energy efficient: A powerful heat exchanger recovers up to 98 percent of the latent heat contained in the extract air and uses it to heat incoming fresh air. This reduces household expenditure perceptibly thanks to a significantly lower energy demand. Furthermore, CO₂ emissions are reduced.

Every new building equipped with mechanical ventilation has a central unit that supplies all rooms with fresh air via a duct system. In most cases, the duct system is concealed in the floor or integrated into the walls. Only the air vents remain visible. The air change rate is regulated automatically by the central ventilation unit.



Vitocal 343-G heat pump with Vitovent 300-F: A central mechanical ventilation system is now standard in new buildings.

Modernisation



Decentralised ventilation for existing buildings and modernisation projects

Ever rising energy costs have encouraged the housing industry to bring existing buildings up to current energy standards. The old housing stock is being modernised comprehensively and now offers its residents such comforts as new, energy efficient windows and doors, wall insulation or a new heating system with convenient domestic hot water provision.

Risks associated with modernisation

Modernisation also results in older apartments being so airtight that no adequate fresh air exchange can take place. The consequence is high humidity levels in the interior, which can lead to mould growth, especially in buildings with insulated walls. Areas that are particularly at risk are the corners of rooms next to external walls, as this is where humidity condenses.

A central ventilation system can be ruled out in most existing buildings, since there is frequently insufficient space to install ventilation ducts in the interior.

A decentralised system with heat recovery is the most suitable solution in this case.

Ventilating rooms individually

Decentralised ventilation units can be installed purposefully in individual rooms. All that is required for a straightforward installation is a wall opening or a hole through the exterior wall of the respective room and a 230 V power supply. No ventilation ducts need to be installed for this system.

Residential units can be equipped with several units that operate independently from each other. These are ideal for providing a comfortable ambience with the required minimum air change rate. These units feature a heat recovery level of up to 90 percent.



Use of decentralised mechanical ventilation units in existing buildings

Reliable, durable technology – it's essential

Viessmann mechanical ventilation systems are characterised by their innovative technology. They are durable, reliable and operate particularly quietly. With different equipment levels, they can be employed flexibly in the widest range of applications imaginable, no matter whether in a new building or for the modernisation of an existing building.

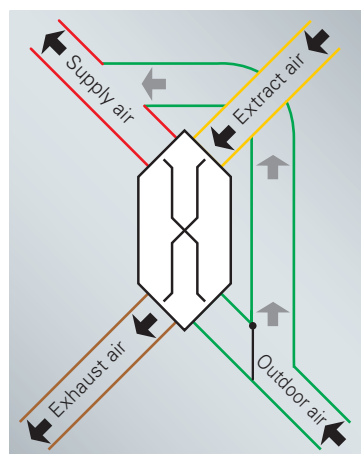
Overview of technology and functions

CO₂ and humidity control

Air is considered to be fresh when the CO₂ concentration is below 0.1 percent by volume and it is as free as possible from odours. Vitovent systems exchange the air continuously to create a pleasant and healthy ambience. They remove odours and noxious substances, replacing more or less air depending on the prevailing humidity levels, thereby removing humidity (subject to outdoor air humidity and weather conditions).

Bypass function for cooling in summer

During the warmer months of the year and depending on outside and room temperatures, the fresh night air can be used for cooling the interior. For this purpose, the outdoor air is routed past the cross-countercurrent heat exchanger by a bypass.



Function of the integral bypass damper:
Fresh outdoor air (green) is routed past the cross-countercurrent heat exchanger.

On the Vitovent 300-W, Vitovent 300-F and Vitovent 300-C, the bypass dampers are controlled automatically subject to outside temperature.

Cross-countercurrent heat exchanger for heat recovery

In accordance with the countercurrent principle, the heat exchanger utilises up to 98 percent of the heat in the extract air. This saves on heating energy and helps to protect the environment.

Heating passive houses with warm air

In a passive house, a combination of a Vitovent 300-F and a Viessmann compact heat pump can be used for space heating. A hydraulic reheater coil for temperate heating with up to 1.5 kW output is available from the range of accessories. In addition, an optional heating water buffer cylinder with a capacity of 25 litres is integrated into the Vitovent 300-F.

Air flow rate for a constant air change

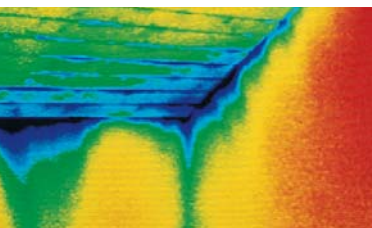
Contaminated filters present greater air resistance. Central ventilation systems make automatic readjustments to ensure that the necessary air volume for comfort and hygiene is still supplied and extracted at all times.

Central mechanical ventilation units control a constant air flow rate internally. This ensures that the required flow rate is always delivered, even with variable degrees of filter contamination.

Automatic filter monitoring

The integral filters comply with strict requirements. They must filter dust and pollen reliably from the fresh air. Vitovent 300-F and Vitovent 200-D are both equipped as standard with an integral pollen filter. F7 grade filters are available as options for alternative ventilation units.

Regular filter changes are required to ensure that everything runs smoothly. The active monitoring system indicates the need for replacement in good time.



Temperature curve in the corner of a room – this is where condensate can form



Cross-countercurrent heat exchanger in the Vitovent 300-W

Just one unit for supply and extract air

In order to ensure continuous operation, the Vitovent 200-D decentralised ventilation unit is equipped with two integral fans – one for supply and one for extract air. Heat is recovered by means of a cross-countercurrent heat exchanger. This turns the Vitovent 200-D into a complete ventilation system with heat recovery, which can be used for single room ventilation.



Continuously operating decentralised ventilation unit Vitovent 200-D



Dust and pollen are filtered reliably

Mechanical ventilation
systems for every need



Central mechanical ventilation units



VITOVENT 300

Wall mounted, mechanical ventilation system with heat recovery
Max. air flow rate: 180 m³/h
Up to 92 % heat recovery

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VITOVENT 300-W

Wall mounted, mechanical ventilation system with heat recovery
Max. air flow rate:
300/400 m³/h
Up to 93 % heat recovery

Page 14



VITOVENT 300-C

Ceiling or wall mounted, mechanical ventilation system with heat recovery
Max. air flow rate: 150 m³/h
Up to 89 % heat recovery

Page 16



VITOVENT 300-F

Floorstanding mechanical ventilation system with heat recovery
Max. air flow rate:
280 m³/h
Up to 98 % heat recovery
In conjunction with heat pump compact appliances

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VITOCAL 161-A

DHW heat pump with ventilation function
Max. air flow rate:
300 m³/h

Page 20

Decentralised mechanical ventilation unit



VITOVENT 200-D

Regulated, single room ventilation with heat recovery
Max. air flow rate: 55 m³/h
Up to 90 % heat recovery

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Viessmann offers the Vitovent 300 and Vitovent 300-W mechanical ventilation systems for a healthy environment



Remote control for Vitovent 300



Remote control for Vitovent 300-W

Enclosed spaces need to be ventilated regularly by opening windows. However, ventilation is not particularly reliable in most cases: Excessive ventilation results in the loss of expensive heating energy; too little, and humidity is not removed adequately, making indoor air unpleasant.

The Vitovent 300 and Vitovent 300-W mechanical ventilation systems replace the air continuously for a pleasant and healthy ambience, while removing odours and noxious substances.

Prevent mould, protect the building fabric

One of the main causes of mould growth is humid indoor air. Mould can harm the health of residents and cause permanent damage to the fabric of the building. Investing in a mechanical ventilation system is cheaper than remedying building damage caused by fungal growth and mould.

Allergy sufferers can breathe more easily

The Vitovent 300 and Vitovent 300-W mechanical ventilation systems allow allergy sufferers to enjoy fresh air too. A filtration system, featuring an effective optional pollen filter, cleans the supply air of allergens and harmful substances. This significantly reduces the growth and spread of mites and mildew, thereby creating an irritant-free environment.

Enjoy peace and security

Thanks to continuous air replacement with the Vitovent 300 and Vitovent 300-W, windows only ever need to be opened for cleaning. Not only does this improve security against burglary, it also keeps traffic noise out.

Ventilating virtually without energy loss

The Vitovent 300 and Vitovent 300-W ventilation systems are particularly energy efficient. During the colder months of the year, the powerful heat exchanger utilises up to 93 percent of the heat contained in the extract air for heating incoming fresh air.

The integral electric preheater coil ensures continuous frost-free operation of the Vitovent 300-W, even at low outside temperatures.

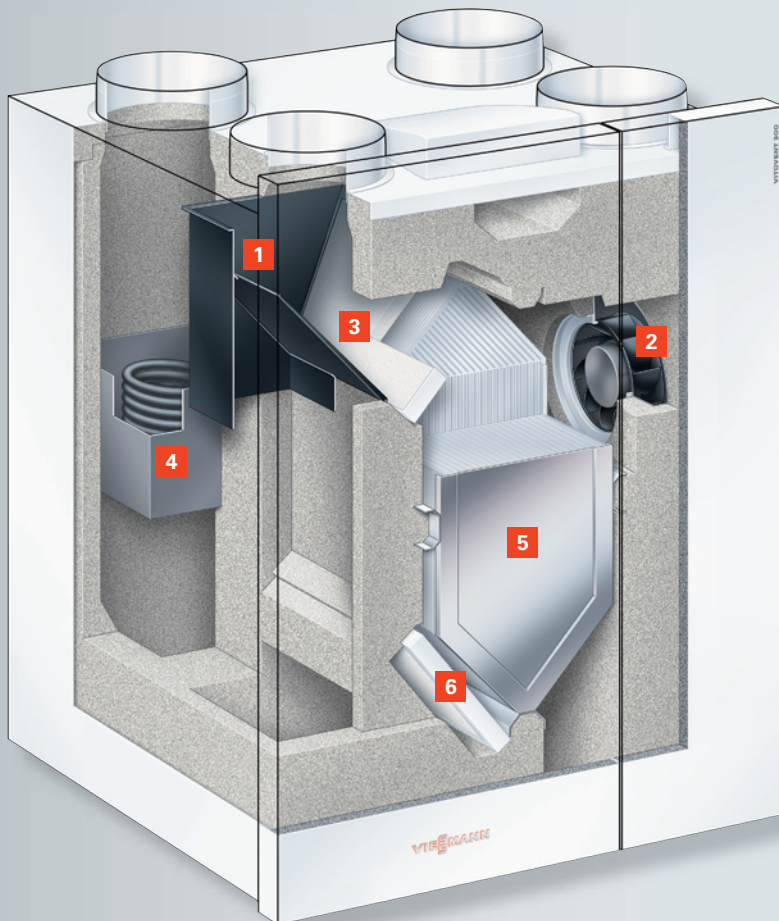
Natural cooling

At warmer times of the year, the heat exchanger of the Vitovent 300-W can be bypassed completely via the integral, automatic bypass damper. An optional summer cassette is available for the Vitovent 300.

This temperature controlled circuit allows cool outdoor air to enter the interior at night, thereby ensuring a pleasantly fresh environment.

Remote control

The remote control included in the standard delivery allows the ventilation unit to be regulated conveniently from the living space.



Vitovent 300-W

- 1** Bypass damper
- 2** DC fan with impeller vanes bent backwards
- 3** Extract air filter
- 4** Preheater coil
- 5** Countercurrent heat exchanger
- 6** Outdoor air filter



Vitovent 300

Take advantage of these benefits

- Mechanical ventilation system
 - Vitovent 300 up to 180 m³/h
 - Vitovent 300-W up to 300 m³/h or up to 400 m³/h
- Thermal comfort
- Healthy ambience
- Reduced odours
- Balanced humidity management prevents mould growth and building damage
- Greater protection against burglary and traffic noise due to windows that stay shut
- Filtration of the outdoor air – important for allergy sufferers
- Economical DC motors with a constant flow rate and balance control keep the air flow constant, independent of static pressure
- A very high heat recovery level minimises ventilation heat losses and lowers heating bills
- Convenient regulation via directly connected remote control unit

Space saving mechanical ventilation system for ceiling or wall mounting with heat recovery for modernisation projects

With the new Vitovent 300-C mechanical ventilation unit, Viessmann offers a solution that is particularly suitable for the controlled ventilation of apartments. Especially after implementing energy saving measures in a building and insulating exterior walls, the shell of the old building becomes more airtight and requires adequate ventilation to protect the building fabric. Otherwise, there is a risk of mould growth due to excessive humidity in the interior.

Fits easily in recesses

The Vitovent 300-C impresses with its compact, slimline design. It can be concealed quite easily in suspended ceilings. For example in a hallway, where the ventilation ducts to the rooms on either side can also be installed.

Vertical installation in a wall is equally possible, for example in a storeroom.

Ideal for most apartments

The unit's maximum air delivery of 150 m³/h is sufficient for ventilating interiors of between 65 and 90 m² quite comfortably.

Heat recovery and summer bypass

The Vitovent 300-C ventilation unit utilises up to 89 percent of the latent heat in extract air, warming the cool outdoor air with the assistance of a cross-countercurrent heat exchanger. This saves energy and reduces heating costs all year round.

An automatic bypass circuit for the warmer months of the year is integrated as standard. Fresh, cool supply air can then be routed past the heat exchanger and directly into the interior, thereby achieving a passive cooling effect.

Additional sound insulation on request

Although this compact appliance already operates very quietly, additional insulation measures can be implemented depending on the intended installation site. Matching system accessories include a silenced compressor for integration into the unit, as well as outdoor and exhaust air silencers.

Allergy sufferers can breathe more easily

The Vitovent 300-C mechanical ventilation system also allows allergy sufferers to breathe more easily. A filtration system, featuring an effective pollen filter, cleans the supply air of allergens and harmful substances, thereby creating an irritant-free environment.

Remote control included

The standard delivery includes a remote control for convenient regulation of the unit from the living space.



Vitovent 300-C

- 1 Bypass
- 2 Radial DC fans
- 3 Cross-countercurrent heat exchanger
- 4 Electric preheater coil
- 5 Condensate drain
- 6 Outdoor air filter
- 7 Sensor and remote control connection, accessible from the outside
- 8 Outdoor air
- 9 Exhaust air
- 10 Extract air filter
- 11 Extract air
- 12 Supply air



Remote control – part of the standard delivery

Take advantage of these benefits

- Mechanical ventilation system up to 150 m³/h
- Ventilated interior up to approx. 90 m²
- Compact design for ceiling or wall mounted installation – ideal for smaller houses and apartments
- High heat recovery rate of up to 89 % reduces heat losses in the building
- Protection of the building substance and high air quality thanks to adapted air change rate
- Filtering outdoor air
- Constant flow rate and balance control keep the air flow rate constant regardless of the static pressure and allow quick and easy adjustment of the flow rates via the remote control.
- Integral preheater coil for frost protection and efficient heat recovery all year round
- Passive cooling via automatic summer bypass
- High operating convenience thanks to the supplied remote control unit

Mechanical ventilation unit plus heat pump – a perfect system combination for new build

Together with an air source or ground source heat pump, the Vitovent 300-F mechanical ventilation unit combines the benefits of an integral appliance with the flexibility of Viessmann heat pumps. The heat pumps that can be combined with this ventilation system offer a heating output of between 3.0 and 10.6 kW. The system as a whole can be used for interiors with up to 210 m².

All functions on the smallest of footprints

The system combination is particularly suitable for new buildings, since all functions, such as ventilation, heating/cooling and domestic hot water heating, can be implemented in the smallest of spaces. The Vitovent 300-F can be installed directly to the right or left of the heat pump, thereby forming a harmonious unit with a small footprint.

High operating convenience

The Vitovent 300-F ventilation module is connected directly to the heat pump. All settings can be made from either the heat pump's Vitotronic 200 control unit, a common remote control unit or the Vitotrol app. At the same time, operation of heat pump and ventilation are matched automatically to each other.

Up to 98 percent heat recovery

The Vitovent 300-F recovers up to 98 percent of the latent heat in extract air, using it to heat the incoming outdoor air.

Air tempering in passive houses

Combining a Vitovent 300-F and a heat pump is highly appropriate for air tempering in passive houses. By and large it makes a hydraulic distribution system superfluous. A reheater coil with an output of up to 1.5 kW is integrated for this purpose. In addition, an optional heating water buffer cylinder with a capacity of 25 litres is integrated into the Vitovent 300-F.

Additional utilisation of solar energy

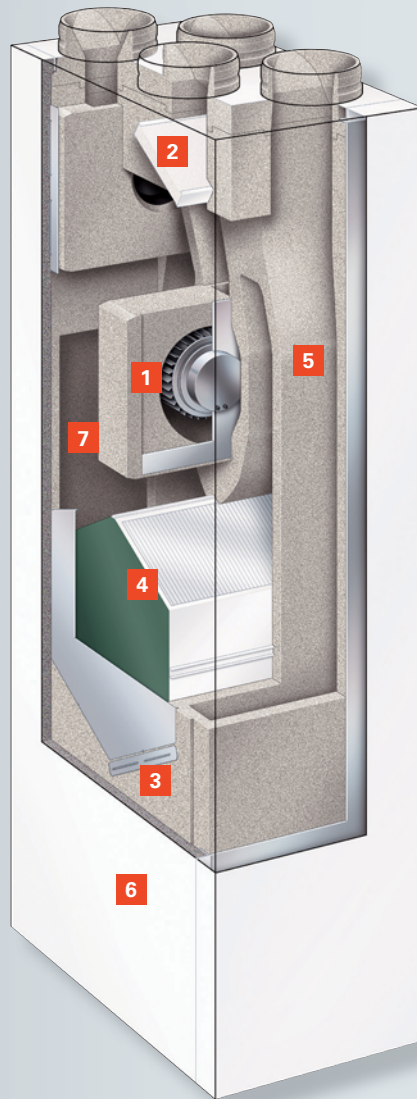
If the Vitocal 343-G/242-G or Vitocal 242-S heat pump is used, then direct connection of solar collectors is possible for domestic hot water heating. Energy costs can be slashed thanks to the integral solar function for solar DHW heating. Lastly, utilisation of power generated on site by means of a photovoltaic system contributes to further energy savings.

Quick installation with flat duct system

A flat plastic duct system makes routing in unfinished buildings particularly easy. From air distribution boxes with integral silencers, the supply and extract air valves are connected individually via a flexible flat plastic duct. The smooth internal walls of the flat plastic ducts are anti-bacterial and anti-static.



* The Vitovent 300-F can be combined with the following heat pumps: Vitocal 222-S/242-S, 200-A, 222-G/242-G, 333/343-G, 300-A (301.B11 and B14), 200-G, 300-G (301.B06 and B17), 350-G (351.A07) and Vitocaldens 222-F.



Vitovent 300-F
Domestic ventilation system with heat recovery

- 1 Fan
- 2 Extract air filter
- 3 Supply air filter
- 4 Heat exchanger
- 5 Active filter monitoring
- 6 Buffer cylinder
(optional for air tempering in passive houses)
- 7 Reheater coil
(optional for air tempering in passive houses)



Vitovent 300-F mechanical ventilation unit with
 Vitocal 200-A air source heat pump

Take advantage of these benefits

- Combination with an air source or ground source heat pump
- Matching, integrated system with little space requirement
- Flexible domestic ventilation system for low energy and passive houses
- Up to 98 % heat recovery from stale air
- Convenient control via Vitotronic 200 in the heat pump
- Optional reheater bank for air tempering in passive houses
- Frost protection function by means of supplied electric preheater coil
- Economical DC motors with a constant flow rate and balance control, keep the air flow constant, independent of static pressure
- Effective F7 grade pollen filter with active monitoring – beneficial for allergy sufferers
- Modular construction for easy handling

Heat domestic hot water efficiently and economically with indoor air



Label for heat pumps with control technology that enables them to be incorporated into a Smart Grid.

The DHW heat pump Vitocal 161-A operates independently from any other heating system, utilising indoor air for economical DHW heating. It is equally suitable for detached houses and smaller commercial premises. Ideal application areas include restaurants, bakeries and spaces that need cooling (e.g. wine cellars or food stores).

For either recirculation or extract air

The recirculation air version of the Vitocal 161-A draws in air from the room where it is installed. The heat pump raises the heat contained in the recirculation air to 65 °C for increased DHW hygiene. At the same time, the air is dehumidified, thus protecting the fabric of the building and improving quality of life for all concerned.

Heat pump usable as central extractor

By replacing the recirculation air cover with an extract air cover (accessory), the Vitocal 161-A can be made to draw in warm extract air via ducts (to be installed on site) from other rooms in the detached or two-family house, such as the bathroom or kitchen.

Economical and efficient DHW heating

The compact appliance is equipped with all components required for efficient DHW heating. The space efficient casing houses the heat pump module, as well as a 300 l DHW cylinder, plus the control unit.

The Vitocal 161-A is available in two versions: one without internal indirect coil for mono mode operation and one with integral indirect coil for use in a dual mode heating system, for example in combination with a solar thermal system.

Outstanding design

The Vitocal 161-A has been presented with the "red dot award: product design" for its high grade timeless design.



reddot design award



Vitocal 161-A DHW heat pump



- 1 Highly efficient compressor
- 2 Evaporator with large surface area for efficient heat transfer
- 3 Control unit
- 4 300 l DHW cylinder with Ceraprotect enamel coating
- 5 Magnesium anode
- 6 Internal indirect coil (type WWKS)



Space saving installation of heat pump Vitocal 161-A

Take advantage of these benefits

- Attractively priced DHW heat pump for recirculation or extract air mode, optionally with internal indirect solar coil and solar control unit for connecting flat-plate or tube collectors
- Output: 1.7 kW
- Cylinder capacity: 300 l
- Extract air version with maximum flow rate of 300 m³/h
- High COP of 3.7 (COP = coefficient of performance) to EN 255 (at air 15 °C/water 15-45 °C)
- Fully wired system and preset control unit for easy commissioning
- DHW temperature with heat pump: up to 65 °C
- Quick heat-up function with optional immersion heater
- Prepared for optimised consumption of PV power generated on site
- Ready for smart grids

Decentralised mechanical ventilation unit

Vitovent 200-D Air flow rate up to 55 m³/h

Decentralised mechanical ventilation unit Vitovent 200-D – perfect for modernisation and new build



Round wall sleeve with
exterior wall cover



Square wall sleeve with
exterior wall cover

The compact Vitovent 200-D mechanical ventilation unit has been designed for the controlled ventilation of individual rooms. The incoming air is filtered and heated via the cross-counter-current heat exchanger with the heat extracted from the indoor air. Up to 90 percent of the heat in the extract air is recovered. Up to 55 m³ of air is replaced per hour. A comprehensive ventilation concepts can also be realised if several units are employed.

The installation of the ventilation unit requires only one opening in the external wall. No additional air ducts need to be installed – only one power supply (230 V) is required. A choice is available between angular and rounded casing designs for high flexibility plus quick and easy installation.

The Vitovent 200-D mechanical ventilation unit is very well suited, for example, to combating problems with damp as part of a modernisation project or conveniently maintaining a comfortable ambience.

At the same time, heat recovery saves energy when compared, for example, to essential window ventilation. That reduces heating bills.

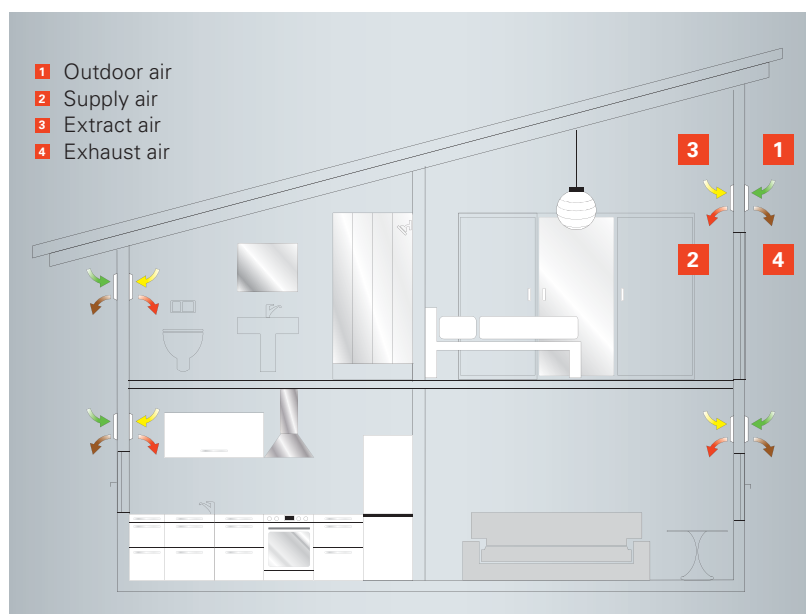
The supply air function provides additional comfort in summer: At night, the heat exchanger can be bypassed and cool night air fed into the interior.

Straightforward operation and maintenance

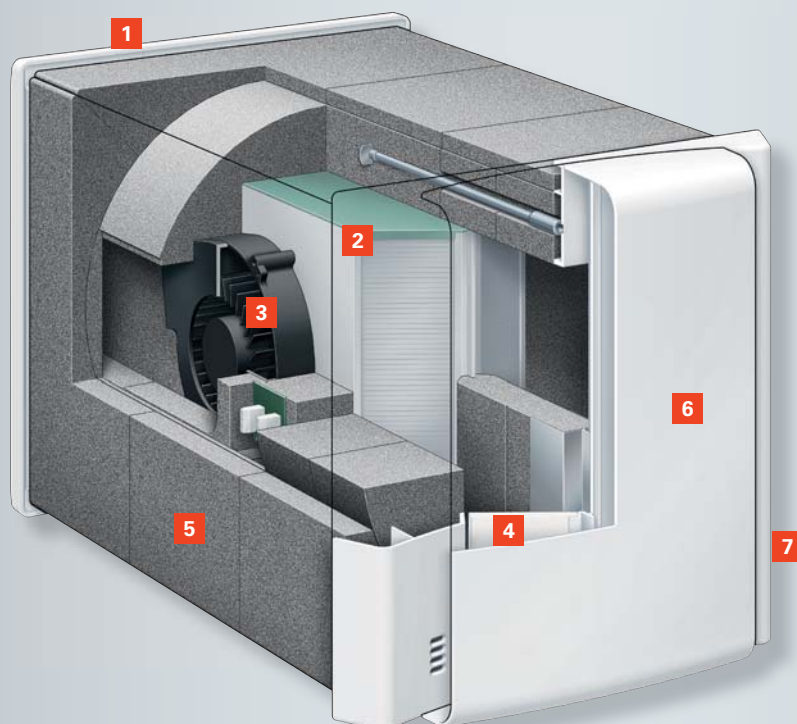
The programming unit is integrated into the internal wall cover. Supply and outdoor air filters can be replaced and central components cleaned and inspected quite comfortably from the inside.

The wireless operating switch (accessory) with no batteries allows convenient changing of the operating mode of one or more appliances simultaneously. Technology based on the piezo-electrical effect means that no cable connection or battery changes are required, so the switch can be positioned without incursion into the building fabric.

The quiet, energy efficient fans in the Vitovent 200-D are continuously regulated subject to air quality by means of the optional air quality sensor. In automatic mode, the fan speed is only as high as that required for a healthy and thermally comfortable indoor environment.



Installation options for Vitovent 200-D



Vitovent 200-D

- 1 Exterior wall cover
- 2 Cross-counterflow heat exchanger
- 3 DC fan (outdoor/supply air)
- 4 Extract air filter
- 5 Casing made from expanded polypropylene (EPP)
- 6 Internal wall cover
- 7 Programming unit (on the right-hand side)



Vitovent 200-D – elegant wireless operating switch

Take advantage of these benefits

- Continuous operation ensures comfortable indoor environment
- Reduced heat losses in fresh air supply thanks to high level of heat recovery from extract air, which helps to lower heating bills.
- Quiet energy efficient fans
- Balanced humidity management prevents building damage
- Straightforward installation in the exterior wall with no air ducts – recommended for both modernisation and new build
- Kit for unfinished walls simplifies subsequent ventilation unit installation
- Ideal for allergy sufferers, thanks to filtered outdoor air with pollen filter as standard
- Supply air function also ensures pleasantly cool temperatures in summer (type HRM)
- Programming unit for straightforward control
- Closed windows improve security against burglary and keep traffic noise out.

Reliable air distribution with practical duct system



Routing through external walls



Exhaust air roof outlet



Flat plastic duct system – quick and easy to install

The flat plastic duct system is tailored to the central mechanical ventilation system. From central air distribution boxes with integral silencers, the supply and extract air valves are connected individually via the flat plastic duct. Ducts are flexible and pliable. Suitable bends are available for sharp angles.

The smooth insides of the air distribution ducts have an antibacterial and antistatic effect to prevent bacterial growth and dust deposits.

The system is crush-resistant and can be routed under screed, in unfinished concrete or suspended ceilings. The air duct is plugged together quickly and easily. A lip seal on each element makes connections airtight.

A metal duct system is available as an alternative.

Restrictors regulate the air volume

The air volume is set individually for each room depending on the room size. The air throughput of the individual ducts is calculated and preset by means of the restrictors at the air distribution boxes. This in turn saves time for precise adjustment of the complete system.

Plastic or metal valves

Supply and extract air valves made from metal or plastic are available to match the duct system. The supply air can also be fed into the room via a floor outlet with a walk-on stainless steel grate.

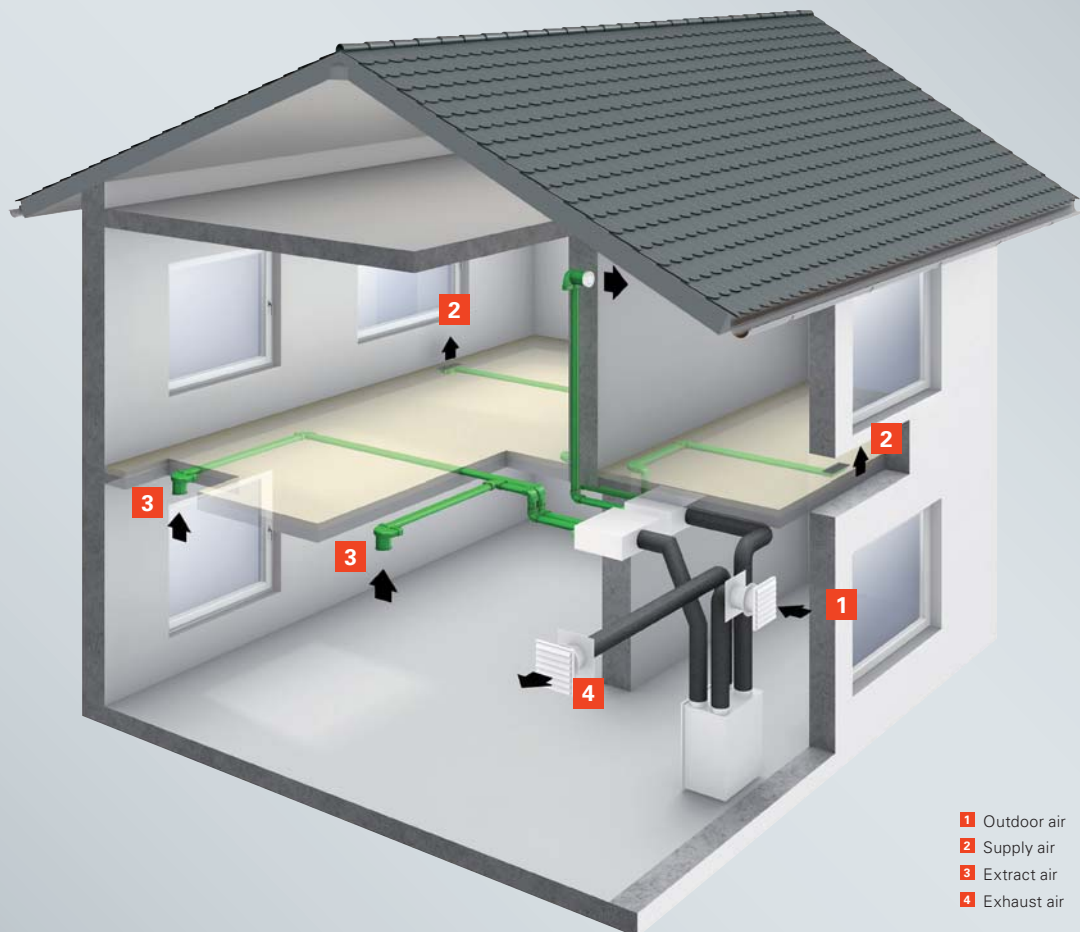
Insulation against condensation

Components in contact with outside air are fitted with special insulation to prevent the formation of condensate and thermal bridges in the building envelope.

All-round service from Viessmann

On request, Viessmann can provide extensive services for engineering Vitovent systems:

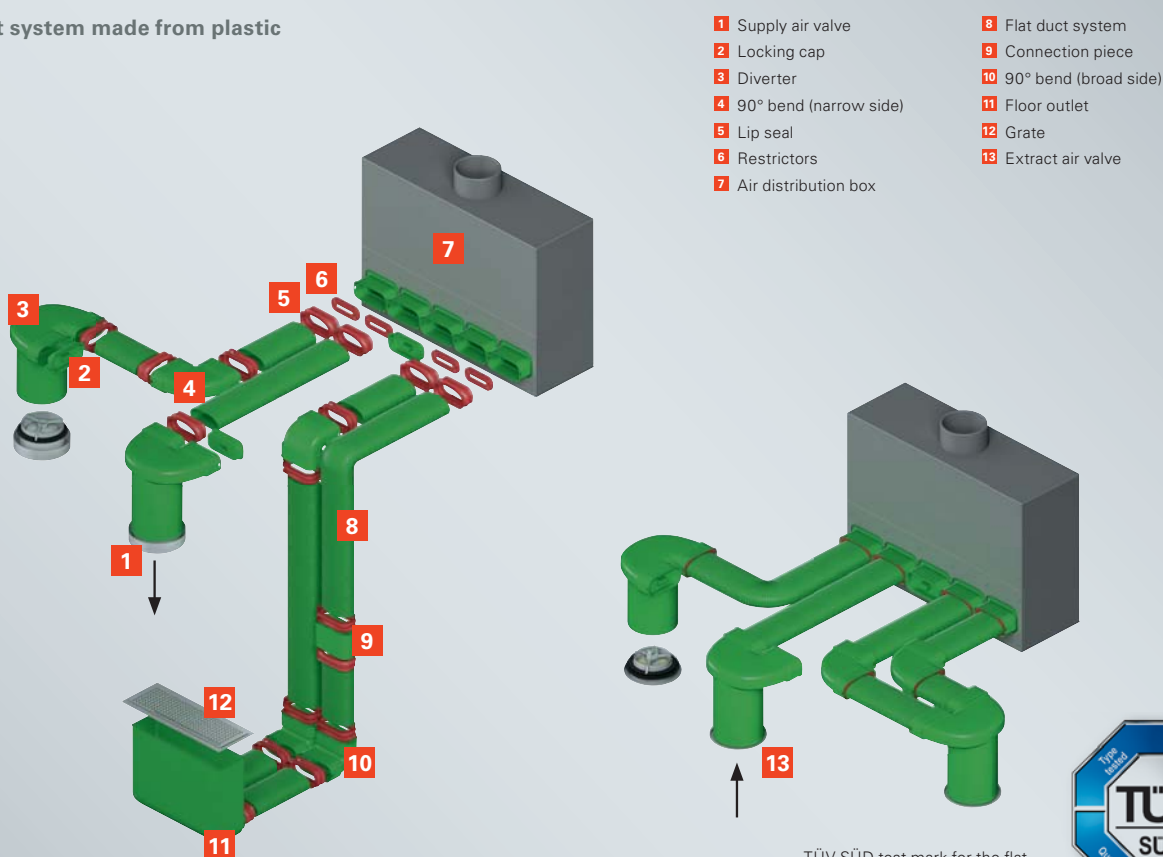
- Calculation of air flow rates
- Calculation of the restrictors for presetting the individual air flow rates
- Layout for the flat duct system
- Precise installation instructions
- Commissioning
- Adjustment



- 1 Outdoor air
- 2 Supply air
- 3 Extract air
- 4 Exhaust air

Example air duct layout
for a Vitovent system

Flat duct system made from plastic



TÜV SÜD test mark for the flat
plastic duct system



Servicing and maintenance



Durable in use – easy to maintain

Although Vitovent mechanical ventilation systems operate discretely and reliably, they still need to be serviced from time to time, just like any other technical appliance. Only regularly maintained systems ensure a consistently high quality of indoor air: by filtering out dust and pollen.

Servicing by the operator

Viessmann mechanical ventilation systems are designed in such a way that operators can carry out essential service work themselves quite easily. This includes:

- Cleaning and changing of filters as often as twice a year
- Resetting the status display for filter replacement
- Recognising fault messages on the control unit (such as the need for a filter change)

No additional accessories are required for this purpose. The service indicators can be controlled conveniently via the ventilation unit remote control.

Servicing by a contractor

Scope and frequency depend ultimately on individual circumstances (e.g. the location). In order to ensure consistent system quality, we recommend having the following steps taken every two years as part of an inspection by a qualified contractor:

- Filter changes at air outlets and valves
- Cleaning the heat exchanger
- Visual inspection of all air outlets and valves

Straightforward servicing of the mechanical ventilation system (in this case the Vitovent 300-W): Visual inspection of the filters (top left) and filter replacement in the case of severe contamination. The heat exchanger can be cleaned by means of a brush, vacuum cleaner or jet spray.

Which system for which application?

The following checklist shows which Vitovent mechanical ventilation system comes into question for which application, based on specifications and applications:



VITOVENT 300



VITOVENT 300-W

Specifications and equipment		
Air flow rate	180 m ³ /h	300/400 m ³ /h
Living space (approx.)	110 m ²	230/370 m ²
Dimensions excluding connectors		
Length (depth) x width x height	310 x 560 x 600 mm	540 x 677 x 843 mm
Weight:	25 kg	39 kg
Outdoor air filter (filter class to EN 779)		
Delivered condition/accessory	G3/F7	G4/F7
Extract air filter (filter class to EN 779)		
Delivered condition/accessory	G3/G3	G4/G4
Allergy filter	option	option
Countercurrent heat exchanger with heat recovery	up to 92 %	up to 93 %
Constant flow rate control	•	•
Variable air flow rate control	•	•
Monitoring of humidity/CO ₂ concentration	–	option
Integral automatic summer bypass	–	•
Frost protection function	•	•
Electric preheater coil	option	•
Time programs	•	•
Remote control	•	•
Certified according to the criteria of the Passive House Institute (PHI)	–	•
Application areas and benefits		
New build	•	•
Modernisation	–	–
Detached/two-family house	•	•
Apartment	–	–
Commercial use	–	–



VITOVENT 300-F



VITOVENT 300-C



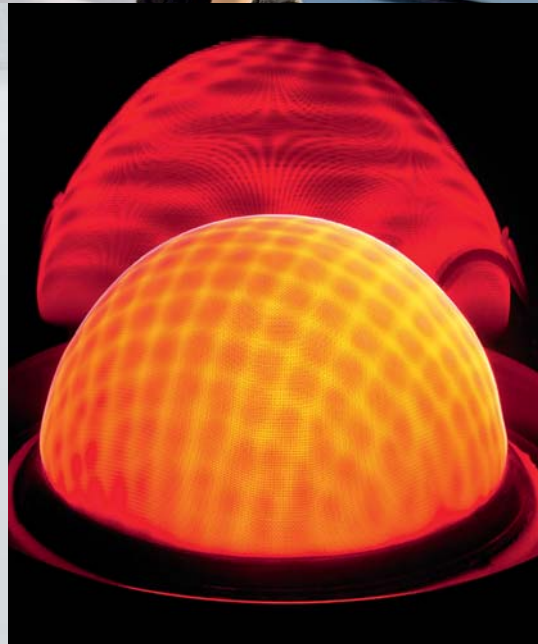
VITOVENT 200-D



VITOCAL 161-A

285 m ³ /h	150 m ³ /h	55 m ³ /h	300 m ³ /h
210 m ²	90 m ²	25 m ²	230 m ²
680 x 400 x 1486 mm	1000 x 660 x 198 mm	70 x 340 x 340 mm	664 x 735 x 1800 mm
80 kg	25 kg	4 kg	160 kg
F7	G4/F7	F7	
G4	G4/G4	G4	
•	option	•	
up to 98 %	up to 89 %	up to 90 %	
•	•	–	
•	•	option	•
option	option	option	–
•	•	–	
•	–	•	–
•	•	–	–
•	•	–	•
option	•	option	
•	•	–	–
•	•	•	•
–	•	•	•
•	–	–	•
–	•	•	–
–	–	–	•

The company



Viessmann – climate of innovation

Viessmann is one of the world's leading manufacturers of intelligent, convenient and efficient systems for heating, air conditioning/ventilation, cooling and decentralised power generation.

As a third generation family run business, Viessmann has been supplying highly efficient and clean heating systems for many decades.

A strong brand creates trust

Together with our brand label, our key brand message is an identifying feature throughout the world. "Climate of innovation" is a promise on three levels: It is a commitment to a culture of innovation. It is also a promise of enhanced product benefits and, at the same time, an obligation to protect the environment.

Acting in a sustainable manner

For Viessmann, taking responsibility signifies a commitment to acting sustainably.

This means bringing ecology, economy and social responsibility into harmony with each

other, ensuring that current needs are satisfied without compromising the quality of life for the generations to come.

We consider climate protection, environmental responsibility and resource efficiency to be key priorities throughout our company, which has more than 11,400 employees worldwide.

Example of Best Practice

With its strategic sustainability project, Viessmann demonstrates at its own head office in Allendorf (Eder) that the energy and climate policy goals set for 2050 can in fact be achieved today with commercially available technology. The results speak for themselves:

- Expansion of renewables to 60 percent
- CO₂ emissions reduced by 80 percent

The long-term goal is for the company to sustainably meet all of its own heating energy requirements.



2009/2011/2013:
German Sustainability Award for
production, brand, efficiency with
resources



Energy Efficiency Award 2010

Viessmann Group

Company details

- Established in: 1917
- Employees: 11,400
- Group turnover: €2.1 billion
- Export share: 55 percent
- 27 production companies in 11 countries
- Sales companies and representations in 74 countries
- 120 sales offices worldwide

The comprehensive product range from the Viessmann Group for all energy sources and output ranges

- Boilers for oil or gas
- Combined heat and power units
- Heat pumps
- Wood combustion technology
- Biogas production plants
- Biogas upgrading plants
- Solar thermal systems
- Photovoltaic systems
- Accessories
- Refrigeration technology



climate of innovation

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9441 685 GB 08/2014

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