Installation and service instructions for contractors

Vitovent 300-W Type H32S A225 Type H32S C325 Type H32S C400 Type H32S A600 Type H32E C325 Type H32E C400

Mechanical ventilation system with heat recovery for max. air flow rate of 225 m³/h, 325 m³/h, 400 m³/h and 600 m³/h

VITOVENT 300-W

VIERARI





Safety instructions

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Please follow these safety instructions closely to prevent accidents and material losses.

Safety instructions explained

Danger

This symbol warns against the risk of injury.

Please note

This symbol warns against the risk of material losses and environmental pollution.

Target group

These instructions are exclusively intended for qualified contractors. Note

Details identified by the word "Note" contain additional information.

- Work on electrical equipment may only be carried out by a qualified electrician.
- Ventilation units and systems may only be installed and commissioned by trained ventilation specialists.

Regulations to be observed

- National installation regulations
- Statutory regulations for the prevention of accidents
- Statutory regulations for environmental protection
- Codes of practice of the relevant trade associations
- Relevant country-specific safety regulations

Working on the system

 Switch off the power supply to the system, e.g. at a separate fuse or mains isolator. Check that the system is no longer live.

Note

In addition to the control circuit there may be several power circuits.

î∖ Danger

Contact with live components can result in severe injuries. Some components on PCBs remain live even after the power supply has been switched off. Prior to removing covers from the appliances, wait at least 4 min until the voltage has completely dropped out.

Safeguard the system against reconnection.

Repair work

Please note

Repairing components that fulfil a safety function can compromise the safe operation of the system. Replace faulty components only with genuine Viessmann spare parts.

Please note

I

Electronic assemblies can be damaged by electrostatic discharge. Before beginning work, touch earthed objects, such as heating or water pipes, to discharge any static.

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Safety instructions (cont.)

Auxiliary components, spare and wearing parts

Please note

Additional components, spare parts and wearing parts that have not been tested together with the system can compromise its function. Installing non-authorised components and making non-approved modifications or conversions can compromise safety and may invalidate our warranty. For installation and replacement, use only original Viessmann parts or components approved by Viessmann.

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Disposal of packaging

Please dispose of packaging waste in line with statutory regulations.

Symbols

Symbol	Meaning
V	Reference to other document containing further information
1.	Step in a diagram: The numbers correspond to the order in which the steps are carried out.
\bigwedge	Warning of personal injury
ļ	Warning of material losses and environ- mental pollution
4	Live electrical area
٩	Pay particular attention.
)))))))))))))))))))))))))))))))))))))	 Component must audibly click into place. or Acoustic signal
*	 Fit new component. or In conjunction with a tool: Clean the surface.
	Dispose of component correctly.
X	Dispose of component at a suitable collec- tion point. Do not dispose of component in domestic waste.

The steps in connection with commissioning, inspection and maintenance are found in the "Commissioning, inspection and maintenance" section and identified as follows:

Symbol	Meaning
ô	Steps required during commissioning
0	Not required during commissioning
	Steps required during inspection
	Not required during inspection
8	Steps required during maintenance
Je .	Not required during maintenance

Control modes for mechanical ventilation systems to ErP

Symbol	Meaning
٢	Manual control (ON/OFF)
	Time control (via time switch, time pro- grams)
†	Central demand control (central capturing of sensor data in addition to time control or manual control)
() ()	Control according to local demand (captur- ing of multiple sensor data in addition to time control or manual control)

Symbols on the ventilation unit

Symbol	Meaning
(t)	Supply air
	Exhaust air
(t)	Extract air
	Outdoor air

Intended use

The appliance is only intended to be installed and operated in ventilation systems that comply with EN 1946-6, with due attention paid to the associated installation, service and operating instructions. It is only designed for the controlled mechanical ventilation of living spaces.

Intended use presupposes that a fixed installation in conjunction with permissible, system-specific components has been carried out.

Commercial or industrial usage for a purpose other than mechanical ventilation of living spaces shall be deemed inappropriate. Any usage beyond this must be approved by the manufacturer for the individual case.

Incorrect usage or operation of the appliance (e.g. the appliance being opened by the system user) is prohibited and results in an exclusion of liability. Incorrect usage also occurs if the components in the ventilation system are modified from their intended function.

Note

The appliance is intended exclusively for domestic use, i.e. even users who have not had any instruction are able to operate the appliance safely.

Passive house use

Vitovent 300-W meets the requirements for passive house use.

Product information

The Vitovent 300-W is a mechanical ventilation unit for single-family houses or apartments with up to 750 m^2 of living space. The Vitovent 300-W is available in left or right-hand versions. In the left-hand version, the supply air and extract air connections are on the left side of the unit. In the right-hand version, these connections are on the right side of the unit.

The type of heat exchanger differs depending on the type:

- Vitovent 300-W, types H32S A225/C325/C400/A600: Countercurrent heat exchanger (standard)
- Vitovent 300-W, types H32E C325 and H32E C400: Enthalpy heat exchanger

The ventilation unit can be operated via the following accessory and device:

- Ventilation programming unit, type LB1 or
- Vitotronic 200 heat pump control unit, type WO1C

In conjunction with the Vitoconnect V, operation is also possible via the following devices and apps:

- Vitotrol 300-E remote control
- ViCare app
- Four-level pushbutton
- Parameterisation, diagnostics and troubleshooting via ViGuide

When fresh outdoor air is drawn into the ventilation unit, it is first passed through a filter. The outdoor air is then preheated in the heat exchanger by the energy from the extract air, without the two air flows mixing. The cleaned and preheated outdoor air is then routed through the ductwork as supply air to the rooms. If an enthalpy heat exchanger is installed, part of the extract air humidity is also transferred to the outdoor air. The extract air is drawn out of rooms where moisture and odours are created (kitchen, bathroom, WC) and then transported to the ventilation unit via the ductwork. There, the extract air is purified by means of a filter to protect the heat exchanger. At the heat exchanger, the extract air preheats the cooler outdoor air according to the cross-countercurrent principle and is then routed out of the building via the exhaust air duct.

Heat recovery is switched off automatically in line with the temperatures inside and outside the building. This is achieved by closing the bypass damper. This enables the interior of the building to be cooled by the outdoor air, e.g. on cooler summer nights.

The constant flow rate control ensures a defined, constant air flow rate on the supply and extract air side, irrespective of the static pressure of the ductwork. The built-in preheating coil ensures balanced operation even at outside temperatures down to about -10 °C and so ensures a consistently high heat recovery level. For operation below this temperature, an additional electric preheating coil (accessories) can be built into the outdoor air duct.

Product information (cont.)

In order to adapt the mechanical ventilation system to suit requirements, time programs can be set on the programming units, devices and apps (depending on the system equipment level).

The ventilation unit must always be switched on in order to remove moisture.

Shutting down the system creates a risk of condensation forming inside the ventilation unit and on the building structure (moisture damage).

Maintenance parts and spare parts

Maintenance parts and spare parts can be identified and ordered directly online.

Viessmann Partnershop

Login: https://shop.viessmann.com/



KOMFOF

Viessmann spare part app

www.viessmann.com/etapp





Information about parameter settings, diagnosis and troubleshooting



Installation and service instructions for "Ventilation programming unit, type LB1", heat pump control unit "Vitotronic 200, type WO1C" or the "Vitoconnect V"

The ventilation unit has active monitoring of the installed supply air and extract air filters. Required filter changes are indicated on the respective programming unit and can therefore be carried out as necessary.

Siting requirements

- Preferably site the ventilation unit inside the airtight and thermally insulated building envelope.
 - Please note
 - The installation room must be dry and free from the risk of frost. Ensure ambient temperatures between 2 and 35 °C.
- The ventilation unit can be mounted on the wall or on a mounting base.
- Keep ductwork to the extract air and, where appropriate, supply air areas short.
- If supply air and extract air ducts are routed through unheated areas of the building, they must be thermally insulated in accordance with DIN 1946-6 (not applicable to EPP pipes or bends).
- A standard socket is required for the power supply.
- Connect the condensate drain to a waste water pipe.
- The ventilation unit must be accessible for maintenance purposes.

Danger

Contaminated air drawn in via the outdoor air duct can pose a health hazard to people in the room.

- Outside the building, combustion engines or other machinery that emits exhaust gases or other harmful substances must not be operated in the vicinity of the wall outlet for outdoor air.
- Do not store or use toxic substances near the wall outlets.
- Prevent pollen getting in. If necessary, place plants close to the wall outlets elsewhere.

Possible installation rooms:

- Separate mechanical room, storage room or utility room on the ground floor
- Cellar
- Frostproof room in the attic

Open flue combustion equipment and ventilation units



Danger

The simultaneous operation of open flue combustion equipment (e.g. an open fireplace) and the Vitovent in a space with combustion air interconnection results in dangerous negative pressure in the interior. Negative pressure can result in flue gas re-entering the room.

In order to prevent health risks, observe the following:

- **Never** operate the Vitovent simultaneously with **open** flue combustion equipment (e.g. open fireplace).
- Only operate combustion equipment in room sealed mode with a separate combustion air supply. We recommend combustion equipment that has general building approval as room sealed combustion equipment of the Deutsches Institut für Bautechnik (DIBt) [Germany].
- Keep doors to boiler rooms that are not part of the combustion air interconnection with the living space airtight and shut.

Information regarding the operation of the Vitovent in conjunction with open flue combustion equipment

- On-site safety equipment must be installed that will switch off the ventilation unit when there is negative pressure inside the room.
- The relevant flue gas inspector **must** give his/her approval [check local regulations].
- Frost protection for the heat exchanger is ensured by means of an integral preheating coil. For operation at even lower outside temperatures, provide an additional external electric preheating coil (accessories) or a geothermal heat exchanger (on site) in the outdoor air duct.

Extractor hood, extracting tumble dryer, central vacuum cleaning systems and Vitovent

Please note

The simultaneous operation of extractor hoods, extracting tumble dryers or central vacuum cleaning systems and the ventilation unit in interconnected rooms results in negative pressure inside the room.

Never link extractor hoods, extracting tumble dryers and central vacuum cleaning systems into the ventilation unit ductwork.

Set up kitchen extractor hoods as **recirculating extractors**, which is more energy efficient.

Never connect existing **extractor hoods** to the extract air duct of the mechanical ventilation system for the following reasons:

- Hygiene, contamination: Grease deposits in the extract air system
- Noise from the supply air vents: Extractor hoods operate with a substantially greater air flow rate (> 300 m³/h) than the ventilation unit. The generated negative pressure creates a "short circuit" inside the system, as the differential air volume has to be replenished via the ventilation ductwork.

Connect extractor hoods via a coaxial exhaust air system to enable the differential air volume to be replenished.

Cleaning concept

According to VDI 6022, a cleaning concept must be drawn up before installation for central ventilation systems with a customised design: See page 33 and page 38.

Please note

Dust entering the ventilation unit and the ductwork can result in faulty operation of the mechanical ventilation system. Prevent the ingress of dust whilst building work is in progress by the following measures:

In the case of extractor hoods in conjunction with open

flue combustion equipment, provide an interlock sys-

tem for the extractor hood: See chapter "Open flue

combustion equipment and Vitovent".

- Following installation, seal off all supply air and extract air apertures, for example with self-adhesive film.
- Do not start the ventilation unit until all other construction work inside the building has been completed.

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Dimensions, right-hand versions

Type H32S A225 (R)



Installation

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Connections: DN 125

Type H32S C325 (R)/C400 (R), type H32E C325 (R)/C400 (R)



- A Extract air
- B Exhaust air
- $\overline{\underline{\mathbb{C}}}$ Outdoor air
- D Supply air

Connections

Туре	Connections
H32S C325 (R)	DN 160
H32S C400 (R)	DN 180
H32E C325 (R)	DN 160
H32E C400 (R)	DN 180

- (E) Electrical terminal area
- F Waterless trap (standard delivery) with continuing connection DN 32

Type H32S A600 (R)



- (A) Extract air
- B Exhaust air
- C Outdoor air
 D Supply air

Connections: DN 200

- (E) Electrical terminal area
- (F) Waterless trap (standard delivery) with continuing connection DN 32

Installation

Dimensions, left-hand versions

Type H32S A225 (L)



- A Extract air
- B Exhaust air
- © Outdoor air
- D Supply air

Connections: DN 125

(E) Electrical terminal area

(F) Waterless trap (standard delivery) with continuing connection DN 32

Type H32S C325 (L)/C400 (L), type H32E C325 (L)/C400 (L)



- (A) Extract air
- B Exhaust air
- $\bar{\mathbb{C}}$ Outdoor air
- D Supply air

Connections

Туре	Connections
H32S C325 (L)	DN 160
H32S C400 (L)	DN 180
H32E C325 (L)	DN 160
H32E C400 (L)	DN 180

- (E) Electrical terminal area
- F Waterless trap (standard delivery) with continuing connection DN 32

Installation

Preparing for installation

Siting (cont.)

Type H32S A600 (L)



- (A) Extract air
- B Exhaust air
- $\overset{\smile}{\mathbb{C}}$ Outdoor air
- D Supply air

Connections: DN 200

- (E) Electrical terminal area
- F Waterless trap (standard delivery) with continuing connection DN 32

Minimum clearances



(A) Vitovent 300-W



Installing the Vitovent

Wall mounting



Fig. 8

- (A) Rubber washers as anti-vibration measure
- B Spacer
- **3.** Secure the wall mounting bracket with countersunk screws.

Floorstanding installation

 In order to safeguard that the condensate can drain off freely, site the Vitovent 300-W on a mounting base (accessories). Vibrations are isolated by means of adjustable anti-vibration feet.

Note

After hooking the unit into the wall mounting bracket, check that it is mounted securely.

2. Level the Vitovent 300-W horizontally.

Connecting the ductwork



Routing the cables and lines:

"Air distribution systems" installation and service instructions

Please note

If water penetrates the external wall of the building, structural damage can occur.

For the external wall outlet, provide a weatherproof seal on site between the core hole and the wall sleeve.

Connection without reducer

Push ducts onto the respective ventilation unit connectors or the reducer (install check valve on site if necessary). The connectors or the reducers must be completely covered by the duct, otherwise condensate may appear on the colder connectors or reducers. Ensure seamless insulation.



Fig. 9

2. Fit the connection pipes on the connectors of the ventilation unit to be airtight. Depending on the type of duct used and how it is seated, secure with a clamp or cold-shrink tape.

Connecting the ductwork (cont.)

Connection with reducer on type H32S A600 (R)



- A Outdoor air
- B Exhaust air
- 5. Fit the reducers and connection pipes on the connectors of the ventilation unit to be airtight. Depending on the type of duct used and how it is seated, secure with a clamp or cold-shrink tape.

Note

D Extract air

Use insulated reducers for the outdoor air and exhaust air connectors. Use uninsulated reducers for the supply air and extract air connectors.

Connecting the ductwork (cont.)

Connection with reducer on type H32S A600 (L)



- (A) Extract air
- B Supply air
- Fit the reducers and connection pipes on the connectors of the ventilation unit to be airtight. Depending on the type of duct used and how it is seated, secure with a clamp or cold-shrink tape.

Note

Use insulated reducers for the outdoor air and exhaust air connectors. Use uninsulated reducers for the supply air and extract air connectors.

Routing the cables and lines:

Installation and service instructions for the "Air distribution system"

Connecting the condensate drain

Heat recovery generates condensate in the heat exchanger.

- © Exhaust air
- D Outdoor air

Please note

If water penetrates the external wall of the building, structural damage can occur. For the external wall outlet, provide a weatherproof seal on site between the core hole and the wall sleeve.

Connecting the condensate drain (cont.)

Please note

Condensate can cause damage to the appliance.

Condensate must be able to drain freely. Route condensate pipes with a fall. Do not allow pipes to sag. Make sure that the waste water pipe can drain freely.

- Connect the condensate pipe to the waste water pipe via a waterless trap and a siphon with a stench trap.
- Route the condensate pipe outside the appliance with a fall.

- Should the condensate drain run through unheated rooms, protect it from frost in such areas (e.g. thermal insulation or ribbon heater).
- Because of the risk of back pressure, connecting the condensate pipe to downpipes is not permissible.

Waterless trap (standard delivery)



- (A) Ventilation unit (right-hand version)
- (B) Waterless trap (standard delivery)
- © Waste water pipe DN 32 (on site)
- D Connection for waterless trap for ventilation unit, left-hand version

Please note

The waterless trap can be damaged or leaks can occur if any load is applied to it from the side.

When fitting the waste water pipe (step 2), do not apply any stress to the waterless trap from the side.

- (E) Example for stench trap (on site)
- F Rubber ring

Note

We recommend also installing the condensate drain if using an enthalpy heat exchanger (accessories).

Installation sequence

Electrical connections



Danger

Damaged wiring insulation can lead to serious injury from electrical current and result in appliance damage.

Route cables so that they cannot touch very hot, vibrating or sharp-edged components.



Danger

Incorrect wiring can lead to serious injury from electrical current and result in appliance damage.

- Route extra low voltage (ELV) leads < 42 V separately from cables > 42 V/230 V~.
- Strip as little of the insulation as possible from cables, keeping close to the terminals, and bundle tightly to the corresponding terminals.
- Secure cables/leads with cable ties.

Note

If 2 components are connected to the same terminal, press both cores together in a **single** wire ferrule.



Overview of electrical connections



Fig. 13

- A Power cable with standard plug (1/N/PE 230 V/ 50 Hz, factory-fitted)
- B Signal output (X19)
- © 24 V= connection (X18)
- Bus connection (X17), additional preheating coil, CO₂ sensor
- (E) 24 V --- output (X16), connection to ventilation programming unit, type LB1
- (F) Modbus connection (X15), for connecting cable to ventilation programming unit, type LB1, Vitocal/Vitovent connecting cable or Vitoconnect V connecting cable
- G Wireless receiver for wireless operating switch (X14)

Fitting and connecting the ventilation programming unit

Installation and service instructions for "Ventilaition programming unit, type LB1"

Connecting the heat pump



Heat pump installation and service instructions

Connecting the Vitoconnect V

Installation and service instructions for "Vitoconnect V"

Installing the wireless operating switch (accessories)

The ventilation unit can be operated via max. 6 wireless operating switches.

When selecting an installation site for the wireless receiver and wireless operating switches, note that the range may be reduced due to the following factors. There may be no wireless reception.

- On their way between transmitter and receiver, wireless signals are damped, e.g. by air or walls.
- Wireless signals are reflected by metallic objects, e.g. reinforcements embedded in walls, metal foil on thermal insulation, thermal glazing with metallised thermal vapour deposit.
- Wireless signals are **isolated** by service ducts and lift shafts.
- Wireless signals suffer interference from devices that also operate with high frequency signals, such as
 - Computers
 - Audio and video systems
 - WiFi
 - Electronic transformers
 - Pre-ballasts

Where to install wireless components

- Choose the installation location such that the radio signals impinge on walls and other equipment as horizontally as possible.
- Install at mid wall height, at least 1 m below the ceiling
- Distance to other transmitters (GSM, DECT, WiFi) at least 2 m
- Distance from room corners at least 0.2 m
- Do not install in wall recesses.

Installing and connecting the wireless receiver



Fig. 14

2. On smooth surfaces, the wireless receiver can be affixed with the supplied adhesive film.



Fig. 15

Installing the wireless operating switch on the wall



Fig. 16

1. On smooth surfaces, the wireless operating switch can be affixed with the supplied adhesive strip.

Enabling the wireless operating switch



- Press the "LRN/SET" button on the wireless receiver. The "LRN/SET" button flashes red.
- Press A once on the wireless operating switch. The "LRN/SET" button lights up red for approx. 2 s. The button then flashes again.
- Press the "LRN/SET" button on the wireless receiver. The "LRN/SET" button stops flashing. The wireless operating switch is now enabled.

Note

To enable additional wireless operating switches, repeat steps 1 to 3.

 Close the wireless receiver; perform steps in Fig. 14 in reverse order.

Fig. 17

Air pressure switch (on site)

Fit the air pressure switch in rooms where open flue combustion equipment operates.

Additional external electric preheating coil

Additional external electric preheating coil (accessories) for continuous operation of the ventilation unit when outside temperatures are very low (application in passive houses): Installation in the outdoor air duct, close to the unit connector.

Central humidity sensor (accessories)

Installation instructions for the "humidity sensor"

CO₂ sensor (accessories)



Installation instructions for "CO₂ sensor"



Power supply

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Danger

Incorrectly executed electrical installations can result in injuries from electrical current and in appliance damage.

Connect up the power supply and implement protective measures (e.g. RCD) in accordance with VDE regulations, e.g. VDE 0100-410.

Please note

Using an on-site power cable may result in damage to the appliance.

Only use the factory-connected power cable. If the power cable of this appliance is damaged, the power cable must be replaced. The power cable may only be replaced by a qualified electrician or Viessmann Technical Service. A separately fused standard socket is required for the power supply of the appliance:

- 230 V/50 Hz
- Fuse rating B16 A

The Vitovent 300-W is delivered fully wired. Insert the power plug into a standard socket (230 V/50 Hz) with separate fuse/MCB protection.



💣 👁 🗲 Steps - commissioning, inspection and maintenance

			Commissioning steps	
			- Inspection steps	
			- Maintenance steps F	'age
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Checking the mechanical ventilation system



Danger

lowing:

The simultaneous operation of open flue combustion equipment (e.g. an open fireplace) and the Vitovent in a space with combustion air interconnection results in dangerous negative pressure in the interior. Negative pressure can result in flue gas re-entering the room. In order to prevent health risks, observe the fol-

 Never operate the Vitovent simultaneously with open flue combustion equipment (e.g. open fire-

place).
Only operate combustion equipment in room sealed mode with a separate combustion air supply. We recommend combustion equipment that has general building approval as room sealed combustion equipment of the Deutsches Institut für Bautechnik (DIBt) [Germany].

Keep doors to boiler rooms that are not part of the combustion air interconnection with the living space airtight and shut.

Information regarding the operation of the Vitovent in conjunction with open flue combustion equipment

- On-site safety equipment must be installed that will switch off the ventilation unit when there is negative pressure inside the room.
- The relevant flue gas inspector **must** give his/her approval [check local regulations].
- Frost protection for the heat exchanger is ensured by means of an integral preheating coil. For operation at even lower outside temperatures, provide an additional external electric preheating coil (accessories) or a geothermal heat exchanger (on site) in the outdoor air duct.

Starting the ventilation unit

Please note

Dust entering the ventilation unit and the ductwork can result in faulty operation of the mechanical ventilation system.

Do not start the ventilation unit until all other construction work inside the building has been completed.

Please note

Operating the ventilation unit with closed supply air and extract air apertures will result in damage to the appliance.

If supply air and extract air apertures were sealed off with adhesive film during construction work, remove the adhesive film completely **prior** to starting the ventilation unit. Please note

The simultaneous operation of extractor hoods or extracting tumble dryers and the Vitovent in interconnected rooms results in negative pressure inside the room.

- Never link extractor hoods or extracting tumble dryers into the Vitovent ductwork.
- Set up kitchen extractor hoods as recirculating extractors, which is more energy efficient.

We recommend the mechanical ventilation system is checked for the following characteristics:

- Clear cross-section of outdoor air intake and exhaust air discharge.
- Sizing and routing of ducts according to design.
- Correct appliance siting and fitting of ducts, silencers, air distribution boxes, supply and extract air vents.
- Correct condensate draining, correct thermal insulation of ducts in cold areas.

Note

The ductwork may be cleaned via the supply air and extract air vents.



Insert the power plug of the ventilation unit into a standard socket with separate fuse/MCB protection



Danger

(230 V/50 Hz).

- Contaminated air drawn in via the outdoor air duct can pose a health hazard to people in the room.
- If the smell of flue gas or fire is perceptible in the room from the outdoor air, immediately disconnect the power plug of the ventilation unit.



Setting the language, time and date

Coperating instructions

Not required in conjunction with Vitoconnect V.



Setting air flow rates

Installation and service instructions for "Ventilation programming unit, type LB1", heat pump control unit "Vitotronic 200, type WO1C" or "Vitoconnect V"



Adjusting the air flow rates





Fig. 18

- (A) Supply air/extract air vent
- B Measuring funnel with defined cross-section for determining the air velocity
- © Impeller air speed meter
- (D) Test at the floor diffuser without measuring funnel: Where available, the test can also be carried out with a suitable measuring funnel.

- 1. With ventilation programming unit LB1 or heat pump control unit Vitotronic 200:
 - Set ventilation level 2.
 - If installed, disable the monitoring of relative humidity and CO₂ concentration.
 - Set "C1B0" to "0".
 - Installation and service instructions for "Ventilation programming unit, type LB1" or heat pump control unit "Vitotronic 200, type WO1C"

With Vitoconnect V:

- Follow the instructions in the ViGuide app during commissioning.
- With an impeller air speed meter, check the air velocity (or the air flow rate directly) at the supply air and extract air vents. Observe the instructions of the test equipment manufacturer. Record actual values in the commissioning report.

Note

Use measuring funnel (B) for supply air and extract air vents. This enables the entire air flow rate at the annular gap of the supply air/extract air vent to be captured.

The measuring funnel may not be suitable for larger supply air and extract air apertures (e.g. floor diffusers). Take several measurements across the area. Calculate the average value of the measurements.

- **3.** Determine the deviation between the calculated (from engineering plans) and actual air flow rates.
- Adjust the supply air/extract air apertures in accordance with the deviation. Record the new aperture widths/annular gap in the commissioning report.
- Repeat the air velocity test. Check readjustment. Record the new values in the commissioning report.

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Adjusting the air flow rates (cont.)

- 6. Fix the supply air/extract air apertures after the final adjustment (if necessary fix with a locknut).
- 7. If previously disabled, re-enable monitoring of the humidity and CO_2 concentration.
 - Set "C1B0" to "1".

Note

Adjusting air flow rates with the use of an impeller air speed meter will **not** provide high accuracy. Deviations of ± 10 % are possible. What is important is the proportional distribution of the air flow rates for the supply air and the extract air areas.

Balancing the air flow rates on the supply air / extract air sides

Installation and service instructions for "Ventilation programming unit, type LB1" or heat pump control unit "Vitotronic 200, type WO1C" Not required in conjunction with Vitoconnect V.



Shutting down the ventilation unit

When working on an open appliance:



Danger Contact with live components can lead to serious injury from electric current. Disconnect the power plug before working on the unit. Safeguard against reconnection.

Please note

If shutting down the ventilation unit for an extended period of time, condensate can form on the installed components, e.g. on the filters. This results in a risk of mould formation.

- Always leave the ventilation unit switched on, even if there is nobody in the room.
- Only disconnect the power plug when working on the unit or in the event of a fault.



Cleaning and replacing filters

Hygiene inspection

According to VDI 6022, the operator of the system is obliged to have a hygiene inspection carried out every 3 years. This inspection must be carried out by a person trained in accordance with VDI 6022 Part 4, Category A and employed by the system operator or a service provider.

Please note

Dust deposits in the appliance can result in damage to the appliance Only operate the appliance with outdoor air and extract air filters.

- If one of the following programming units displays a filter warning, clean the outdoor air and extract air filters with a vacuum cleaner:
 - Ventilation programming unit LB1
 - Heat pump programming unit
- If Vitoconnect V is installed, the filter warning is also indicated via the following control options:
 - Vitotrol 300-E remote control
 - ViCare app

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- Four-level pushbutton
- If the filters have already been cleaned several times, replace **both** filters.

- Replace **both** filters at least **annually**.
- Dispose of contaminated filters through domestic waste.





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Cleaning and replacing filters (cont.)

Please note

Weight applied to the opened-out front panel can cause damage to the unit. Do not place any objects on the open front panel. Do not lean on the front panel.

Note

Since increased dust exposure is to be expected after the construction phase, we recommend carrying out the first filter change after just 2 months.





- For fine filters F7 (= ISO ePM1 50 %), dispose of the entire filter in the domestic waste.
 - For coarse filters G4 (= ISO Coarse 60 %), only replace the filter fleece that is in the filter frame; see Fig. 21.





3. Note the position of the filter frame.



Fig. 22 Position of the filter frame, type HS32S A225





Fig. 23 Position of the filter frame, type HS32S C325, type H32S C400, type HS32E C325 and type H32E C400



Fig. 24 Position of the filter frame, type HS32S A600

	Ventilation unit	
Pos.	Right-hand version	Left-hand version
A	Outdoor air filter G4 = ISO Coarse 60 % or Fine filter F7 = ISO ePM1 50 %	Extract air filter G4 = ISO Coarse 60 %
B	Extract air filter G4 = ISO Coarse 60 %	Outdoor air filter G4 = ISO Coarse 60 % or Fine filter F7 = ISO ePM1 50 %



Cleaning and replacing filters (cont.)

Resetting the filter maintenance display

Operating instructions for "Ventilation program- \mathbf{r} ming unit, type LB1", heat pump control unit "Vitotronic 200, type WO1C" or "Vitoconnect V"



Removing the front panel

Type H32S A225





Type H32S C325, type H32S C400, type H32E C325 and type H32E C400



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Removing the front panel (cont.)

Type H32S A600





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Cleaning the heat exchanger

Please note

Mechanical impact can damage the fins of the heat exchanger.

- Do not grip the heat exchanger by its fins.
- Only pull out by the loop.
- When inserting, push evenly with both hands against the front. Apply force square-on.

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Cleaning the heat exchanger (cont.)



Cleaning information



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Danger

Chemical deposits on the heat exchanger can cause damage to health and to the appliance.

- Only clean the heat exchanger with clean water; max. temperature 45 °C.
- Rinse the heat exchanger with a hand shower. Do not clean it mechanically. Leave it to dripdry before refitting in the ventilation unit.

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Commissioning, inspection, maintenance

Cleaning the interior

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Fig. 29

- 1. Remove the front panel: See page 36. Pull out the outdoor air filter, extract air filter and heat exchanger: See page 34 and page 39.
- Wipe the interior with a damp cloth. Clean with a vacuum cleaner if required. Do not use cleaning agents!

😚 👁 🖌 Checking the condensate drain



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Fig. 30

- (A) Condensate drain
- B Waterless trap
- © Fan fixing. Removal only required for type H32S C325, type H32S C400, type H32E C325, type H32E C400 and H32S A600 (different illustration of fan fixing for H32S A600)

Note

The position of the trap connection depends on the unit version.

- Left-hand version: Trap connection on the right
- Right-hand version: Trap connection on the left
- **1.** Check that the condensate can drain freely. If necessary, clean the condensate drain and trap.
- **2.** Check the trap and condensate pipe for leaks and ensure firm seating.

Checking the firm seating of electrical plug-in connectors and cable entries

💣 👁 🌽 Closing the unit and commissioning the mechanical ventilation system



Instructing the system operator

The installer must instruct the user in the operation of the system.

Removing the PCB cover



Danger

Contact with live components can lead to serious injury from electric current. Disconnect the power plug before removing the cover. Safeguard against reconnection.



Fig. 31

Assembly in reverse order

Temperature sensor resistance curve



Controller PCB



Fig. 33

- X01 Earth
- X02 Power supply 1/N/PE 230 V/50 Hz
- X03 Power supplies
 - A Supply air fan
 - B Internal preheating coil
 - © Extract air fan
- X04 Control cable
 - D Supply air fan
 - E Extract air fan
 - (F) Outside temperature sensor
 - G Bypass damper
- X05 Do not connect anything here!
- X06 Do not connect anything here!
- X07 Humidity sensor (accessories)
- X08 Do not connect anything here!

- X10 Do not connect anything here!
- X12 Jumper for terminator Modbus 120 Ω
- X13 USB connection
- X14 Wireless receiver for wireless operating switches
- X15 Modbus connection, ventilation programming unit, type LB1, connecting cable to Vitocal/Vitovent or connecting cable to Vitoconnect V
- X16 24 V output: Power supply for ventilation programming unit, type LB1
- X17 External electrical preheating coil and CO₂ sensor
- X18 24 V output-
- X19 Signal output

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Air flow rates for 0.5 x air change rate			
Appliance settings	Total flow rate		Power consumption
	Supply air	Extract air	

ừ=	.m³/h		m³/h	h ³ /h		N		
Supply and extrac	xt air vents							
Supply air	Intended flow	Supply air/ Extract air valve	Preset aperture width	First test (average)	0	Readjusted aperture width	Second te (average)	st
	rate [m³/h]			Air velocity [m/s]	Air flow rate [m³/h]		Air velocity [m/s]	Air flow rate [m³/h]
Living room								
Living room								
Dining room								
Bedroom								
Study								
Child's room 1								
Child's room 2								
Total supply air								
Extract air								
Kitchen								
Bathroom								
Guest WC					2			
Utility room					T			

Commissioning report

Total extract air

or Mechanical ventil، فا	ation system w	ith Vitovent						
System:		Heating contra	ctor:	Contact:		Date:		
Sample person	_							
Air flow rates for (0.5 x air chang∈	e rate		-				
Appliance settin	Sb	Tot	al flow rate		Power cor	Isumption		
ý =160	.m³/h	Sup 16	oply air 33m³/h	Extract air .152m³/h	46	M.		
Supply and extract	ct air vents							
Supply air	Intended flow	Supply air/ Extr. air valve	Preset aperture width	First test (average)	5	Readjusted aperture width	Second 1 (average	est)
	rate [m³/h]			Air velocity [m/s]	Air flow rate [m³/h]		Air velocity [m/s]	Air flow rate [m³/h]
Living room	25	Wall installation	5.5	3.5	22	+	3.3	25
Living room	25	Wall installation	5.5	3.5	22	+	3.3	25
Dining room	25	Wall installation	5.5	3.5	22	+	3.3	25
Bedroom	30	Ceiling installat.	9	3.0	24	+2	3.2	36
Study								
Child's room 1	30	Ceiling installat.	9	4.0	36	5	3.8	30
Child's room 2	25	Ceiling installat.	5	2.5	20	+	2.6	22
Total supply air	160				146			163
Extract air								
Kitchen	60	Kitchen Extr. air valve	+12	6.3	50		4.0	20
Bathroom	45	Extr. air valve	6+	5.2	38	+4	4.4	42
Guest WC	20	Extr. air valve	+10	5.0	15	+3	4.2	20
Utility room	25	Extr. air valve	φ	6.0	20	+۲	3.2	20
Total extract air	160				137			152

Example of commissioning report

Commissioning report with existing room sealed combustion equipment

Contractor	Owner/system operator	
Name:	Name:	
Street:	Street:	
Postcode, town:	Postcode,	
	town:	
Telephone:	Telephone:	
Email	Email	
Customer no.:	Project no.:	
Sales office:	Other details	
Contact		
Ventilation unit		
Name, type	Serial no.	

The system is equipped with the following functions to prevent imbalance:

- The ventilation unit is equipped at the factory/as standard with a preheating coil to prevent the heat exchanger from freezing. Alternatively, a geothermal heat exchanger is available.
- The imbalance as a frost protection strategy of the ventilation unit was manually deactivated.
- The ventilation unit is equipped with a constant flow rate control that balances the flow rates during regular operation.
- The ventilation unit is equipped with a safety function which also switches off the 2nd fan in the event of a fault in the first fan.
- The system was commissioned for balanced operation (see design including acceptance report). *Note*

Regular maintenance and inspection are required to ensure long-term balanced operation of the ventilation unit. The final technical safety assessment of the system is carried out by the responsible flue gas inspector.

The system operator's attention was drawn to the following: Activation of the imbalance can lead to negative pressure in the building. This means that there is a **risk to life and limb** when the ventilation unit is operated at the same time as combustion equipment!

Place/date

Signature of commissioning	J
engineer	

Signature of system user

Specification

Туре		H32S A225	H32S C325	H32S C400	H32S A600	H32E C325	H32E C400
Max. air flow rate	m ³ /h	225	325	400	600	325	400
Max. external pressure drop at max. air flow rate	Ра	250	250	250	200	250	250
Factory setting of air flow rates							
Background ventilation	m³/h	40	50	50	100	50	50
Reduced ventilation	m³/h	50	100	100	150	100	100
Nominal ventilation	m³/h	100	150	200	300	150	200
Intensive ventilation	m³/h	150	250	300	500	250	300
Setting ranges for air flow rates							
Background ventilation	m³/h	0/40	0/50	0/50	0/100	0/50	0/50
Reduced ventilation	m³/h	40 to 225	50 to 325	50 to 400	100 to 600	50 to 325	50 to 400
Nominal ventilation	m³/h	40 to 225	50 to 325	50 to 400	100 to 600	50 to 325	50 to 400
Intensive ventilation	m³/h	40 to 225	50 to 325	50 to 400	100 to 600	50 to 325	50 to 400
Air intake temperature							
Min.	°C	-20	-20	-20	-20	-20	-20
Max.	°C	35	35	35	35	35	35
Humidity							
Max. relative room air humidity	%	70	70	70	70	70	70
Max. absolute extract air humidity	g/kg	12	12	12	12	12	12
Casing							
Material				Shee	t steel		
Colour				Vitopea	arlwhite		
Material of moulded parts for noise at- tenuation and thermal insulation				EPS	olastic		
Dimensions excluding connectors							
Total length (depth)	mm	455	560	560	660	560	560
Total width	mm	600	750	750	850	750	750
Total height	mm	650	650	650	800	650	650
Total weight	kg	29.5	41.0	42.5	53	48.0	49.5
Number of radial DC fans With constant flow rate control, inlet on one side only, with backward curved im- peller vanes	-	2	2	2	2	2	2
Filter class to EN ISO 16890							
Outdoor air filter • Delivered condition • Accessories				ISO Coa ISO ePI	rse 60 % M1 50 %		
Extract air filter Delivered condition Accessories 				ISO Coa ISO Coa	rse 60 % rse 60 %		

▸►

Specification

Specification (cont.)

Туре		H32S A225	H32S C325	H32S C400	H32S A600	H32E C325	H32E C400
Heat recovery							
Rate of temperature change to ErP	%	92	91	92	92	83	81
Rate of temperature change to EN 308:1997	%	Up to 94	Up to 98	Up to 99	Up to 94	_	
Heat recovery level to DIBt	%	92	91	92	93	80	79
Heat recovery level to PHI	%	89	91	90	92	86	84
Type of heat exchanger							
 Countercurrent (standard) 		X	X	X	X		
 Enthalpy 						X	X
Heat exchanger material		PETG	PETG	PETG	PETG	ABS PE	ABS PE
Rate of humidity change	%	_	_			_	
Rated voltage				1/N/PE 23	0 V/50 Hz		
Specific power consumption to DIBt	Wh/(m ³)	0.19	0.15	0.17	0.25	0.16	0.17
Max. power consumption							
Operation without preheating coil	W	170	144.5	178	288	144.5	178
Operation with integral electric preheating coil	W	870	1144.5	1178	1288	1144.5	1178
Energy efficiency class to Commission Delegated Regulation (EU) No 1254/2014							
 Manual control 	٢	_	_	_	_	A	A
 Time control 		A	A	A	A	A	A
 Central demand control 	③	A+	A+	A+	A	A	A
 Control according to local demand 	? ?	A+	A+	A+	A+	A+	A+

Filter classes ISO 16890 – EN 779 ISO Coarse 60 % ≙ G4 ISO ePM1 50 % ≙ F7

Final decommissioning and disposal

Viessmann products can be recycled. Components and substances from the system are not part of ordinary domestic waste. For decommissioning, isolate the system from the power supply and allow components to cool down where appropriate.

All components must be disposed of correctly.



Certificates

Declaration of conformity

We, Viessmann Climate Solutions SE, D-35108 Allendorf, declare as sole responsible body that the named product complies with the European directives and supplementary national requirements in terms of its design and operational characteristics.

Using the serial number, the Declaration of Conformity can be found on the following website: www.viessmann.co.uk/eu-conformity

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