

## Datasheet

For part no. and prices: see pricelist



### **VITOVENT 300-W**

Central mechanical ventilation system with heat recovery for demand-dependent mechanical ventilation with purified and heated outdoor air

- Wall mounted or floorstanding installation with mounting base
- Demand-dependent flow rate control via Vitocal control unit or digital programming unit and sensors (optional)
- Air flow rate up to **325 m<sup>3</sup>/h** or **400 m<sup>3</sup>/h**
- Integral bypass circuit and electric preheating coil
- Integral countercurrent heat exchanger or enthalpy heat exchanger (accessory)

## Product description

### Mechanical ventilation system for detached houses or apartments with up to 440 m<sup>2</sup> living space

Fresh outdoor air is drawn in via a wall outlet and the outdoor air duct. When it enters the ventilation unit, this outdoor air is first routed through a filter, purified and then preheated by the integral counter-current heat exchanger or enthalpy heat exchanger (accessory). The preheated outdoor air is then routed through the ductwork to the supply air areas.

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 counter-current principle and is then routed out of the building via the exhaust air duct.

Heat recovery can be switched off automatically in line with the temperatures inside and outside the building. This is achieved by closing the bypass damper. This enables the inside of the building to be cooled by the outdoor air, e.g. on cooler summer nights: See page. In ventilation units with an enthalpy heat exchanger, not only heat is recovered from the extract air but also some of the humidity. This protects rooms from excessively dry air, e.g. in winter.

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.

The ventilation unit must always remain switched on to expel any moisture.

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

The ventilation unit features active monitoring of the installed outdoor air and extract air filters. Required filter changes are indicated and will therefore be carried out as necessary.

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.

#### Operation

All the comfort and energy saving functions of the ventilation unit can be used efficiently with the ventilation programming unit, type LB1 (accessories), e.g. time programs. Additionally, extensive diagnostic functions are available.

The ventilation unit can be controlled in an integrated system via the control units of various Viessmann heat pumps. The functionality is almost identical to the ventilation programming unit, type LB1. Common control unit accessories can also be used.

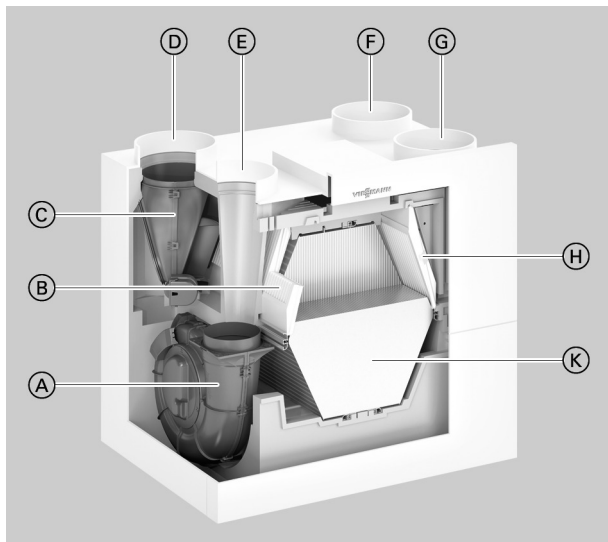
The Vitotronic 200 heat pump control unit, type WO1C, can be connected via the Vitocal/Vitovent connecting cable (accessories).

#### Passive house use

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

## Benefits

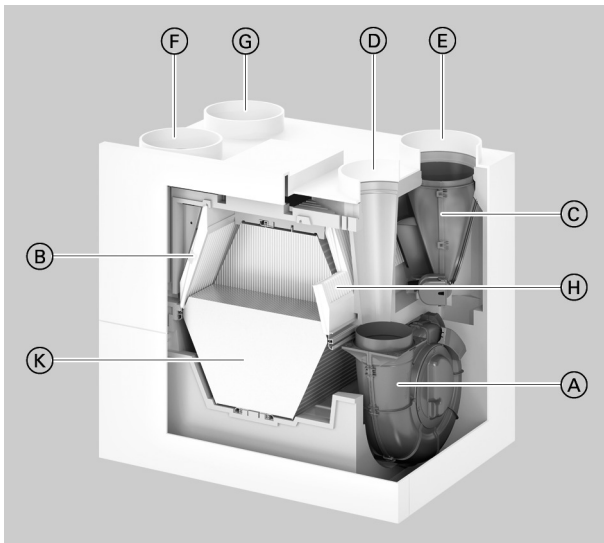
### Ventilation unit in left-hand version



- Ⓐ Centrifugal DC fan
- Ⓑ Extract air filter
- Ⓒ Bypass
- Ⓓ Extract air
- Ⓔ Supply air
- Ⓕ Exhaust air
- Ⓖ Outdoor air
- Ⓗ Outdoor air filter
- Ⓚ Countercurrent heat exchanger

## Benefits (cont.)

### Ventilation unit in right-hand version



- (A) Centrifugal DC fan
- (B) Extract air filter
- (C) Bypass
- (D) Extract air
- (E) Supply air
- (F) Exhaust air
- (G) Outdoor air
- (H) Outdoor air filter
- (K) Countercurrent heat exchanger

- Ensures thermal comfort and a healthy indoor environment.
- Reduced odour nuisance
- Convenient operation with the Vitotronic 200 control unit of the heat pump and use of common accessories
- Alternatively, operation via a separate programming unit (accessories)
- Full parameter setting via digital programming unit
- Balanced humidity management prevents building damage.
- More protection against burglary and noise due to closed windows
- Filtering of the outdoor air — important for allergy sufferers
- Economical DC motors with a constant flow rate and balance control maintain a constant air flow, independent of the static pressure.
- A very high heat recovery level minimises ventilation heat losses and lowers heating bills.
- Low power consumption during frost protection due to detection of the degree of ice formation
- Ventilation units with enthalpy heat exchanger support balanced humidity management in the building.
- Suitable for passive houses





### Delivered condition

#### Compact ventilation units

- Type H32S C325 with outdoor air filter and extract air filter G4/G4 to EN 779 (ISO Coarse 60 % to ISO 16890) and countercurrent heat exchanger for heat recovery, max. air flow rate 325 m<sup>3</sup>/h:  
Right-hand version: **Part no. Z019040**  
Left-hand version: **Part no. Z019041**
  - Type H32S C400 with outdoor air filter and extract air filter G4/G4 to EN 779 (ISO Coarse 60 % to ISO 16890) and countercurrent heat exchanger for heat recovery, max. air flow rate 400 m<sup>3</sup>/h:  
Right-hand version: **Part no. Z019042**  
Left-hand version: **Part no. Z019043**
  - Casing made from sheet steel, colour: Vitopearlwhite, powder coated, with sound and thermal insulation
  - 2 DC fans with constant flow rate and balance control, commissioning and parameter setting with self-regulating air flow rate
  - 4 connectors with protection from thermal bridging, for outdoor air, supply air, extract air and exhaust air:
    - Type H32S C325: DN 160
    - Type H32S C400: DN 180
  - Power cable with standard plug
  - Accessories for wall mounting
  - Balance control
  - Constant flow rate control
  - Automatic summer bypass (100 %), temperature controlled
  - Integral electric preheating coil (demand-controlled up to max. 1 kW)
  - Waterless trap
- Note**  
A programming unit must be ordered separately to operate the ventilation unit.

## Specification

### Specification

Type		H32S C325	H32S C400
<b>Max. air flow rate</b>	m <sup>3</sup> /h	325	400
<b>Max. external pressure drop</b> at max. air flow rate	Pa	250	250
<b>Factory setting of air flow rates</b>			
Background ventilation	m <sup>3</sup> /h	50	50
Reduced ventilation	m <sup>3</sup> /h	100	100
Nominal ventilation	m <sup>3</sup> /h	150	200
Intensive ventilation	m <sup>3</sup> /h	250	300
<b>Setting ranges for air flow rates</b>			
Background ventilation	m <sup>3</sup> /h	0/50	0/50
Reduced ventilation	m <sup>3</sup> /h	50 to 325	50 to 400
Nominal ventilation	m <sup>3</sup> /h	50 to 325	50 to 400
Intensive ventilation	m <sup>3</sup> /h	50 to 325	50 to 400
<b>Air intake temperature</b>			
Min.	°C	-20	-20
Max.	°C	35	35
<b>Humidity</b>			
Max. relative room air humidity	%	70	70
Max. absolute extract air humidity	g/kg	12	12
<b>Casing</b>			
Material		Sheet steel	
Colour		Vitopearlwhite	
Material of profiles for noise attenuation and thermal insulation		EPS plastic	
<b>Dimensions</b> excluding connectors			
Total length (depth)	mm	560	560
Total width	mm	750	750
Total height	mm	650	650
<b>Total weight</b>	kg	41.0	42.5
<b>Number of radial DC fans</b>			
With constant flow rate control, inlet on one side only, with backward curved impeller vanes		2	2
<b>Filter class</b> to EN 779			
Outdoor air filter (delivered condition/accessories)		G4/F7	G4/F7
Extract air filter (delivered condition/accessories)		G4/G4	G4/G4
<b>Heat recovery</b>			
Rate of temperature change to ErP	%	91	92
Rate of temperature change to EN 308:1997	%	Up to 98	Up to 99
Heat recovery level to DIBt	%	91	92
Heat recovery level to PHI	%	91	90
Material of countercurrent/enthalpy heat exchanger		PETG	PETG
<b>Rate of humidity change</b>	%	—	—
<b>Rated voltage</b>		1/N/PE 230 V/50 Hz	
<b>Specific power consumption</b> to DIBt	W/(m <sup>3</sup> /h)	0.15	0.17
<b>Max. power consumption</b>			
Operation without preheating coil	W	144.5	178
Operation with integral electric preheating coil	W	1144.5	1178
<b>Energy efficiency class</b> to Commission Delegated Regulation (EU) No 1254/2014			
– Manual control		—	—
– Time control		A	A
– Central demand control		A+	A+
– Control according to local demand		A+	A+

#### Filter types to ISO 16890

G4 = ISO Coarse 60 %

F7 = ISO ePM1 50 %

M5 = ISO ePM10 50 %

## Specification (cont.)

### Sound power in the installation room

#### Note

Measured inside the installation room in accordance with EN ISO 3741:2010.

Different values may result in the installation areas (due to specific room conditions). Consequently, these measurements cannot replace the correct engineering of the overall system.

#### Vitivent 300-W, type H32S C325

Air flow rate in m <sup>3</sup> /h	Pressure drop output range in Pa		Sound power in dB(A)	
	From	To	From	To
100	25	25	27.0	27.0
150	25	50	33.5	34.5
200	50	100	40.0	41.0
250	100	150	45.5	45.5
325	100	150	50.0	50.5

#### Vitivent 300-W, type H32S C400

Air flow rate in m <sup>3</sup> /h	Pressure drop output range in Pa		Sound power in dB(A)	
	From	To	From	To
100	25	25	29	29
150	25	50	35.5	37
200	25	100	41.5	43
250	50	100	43.5	49
300	100	150	48	48.5
350	100	150	52	56.5
400	100	150	55	57.5

### Sound power at the connectors

#### Note

Sound power measured in accordance with EN ISO 3741:2010

#### Vitivent 300-W, type H32S C325

Connector	Air flow rate in m <sup>3</sup> /h	Pressure drop in duct-work in Pa	Sound power level in dB at octave centre frequency in Hz								Total in dB(A) up to
			63	125	250	500	1000	2000	4000	8000	
Supply air	100	25	56.1	53.1	43.3	42.3	35.1	23.6	<10.3	<7.3	43.5
	150	25	<61.7	55.2	49.6	47.4	41.5	33.5	<20.6	<11.3	48.5
	150	50	61.2	60.4	52.5	48.9	43.1	35.4	24.5	<12.1	51.0
	200	50	<66.2	58.4	60.4	52.8	47.9	42.5	31.9	<17.5	55.0
	200	100	62.8	61.0	62.2	55.1	49.9	43.9	35.1	22.6	57.0
	228	50	<66.2	59.8	60.2	54.8	49.7	44.8	35.0	<22.1	56.0
	228	75	<67.0	60.8	60.2	55.6	50.6	46.1	36.9	<23.2	57.0
	250	100	<67.1	62.6	66.5	58.1	53.4	49.4	40.9	28.4	61.0
	250	150	65.6	64.4	67.2	58.6	53.7	48.3	40.8	29.9	61.5
	325	100	<68.8	66.3	75.9	61.3	57.3	54.5	46.9	35.8	69.5
Extract air	325	150	<70.2	66.5	73.6	62.9	58.3	55.5	47.8	37.3	68.5
	100	25	<54.3	43.5	36.3	24.3	15.2	<8.7	<0.4	<5.6	32.0
	150	25	<65.9	49.3	43.8	29.3	21.5	<15.6	<5.4	<12.2	39.5
	150	50	53.8	49.7	41.6	31.1	23.4	19.3	<7.0	<5.6	37.5
	200	50	<64.1	50.7	54.9	36.1	27.9	24.0	<12.0	<7.4	45.5
	200	100	<55.8	55.9	49.2	38.9	30.3	26.6	18.7	<8.1	44.0
	228	50	<65.6	55.4	55.5	38.2	29.9	26.6	<17.3	<17.4	47.5
	228	75	<64.9	51.0	54.6	37.7	31.1	28.3	<17.5	<10.0	46.0
	250	100	<63.0	54.8	56.5	39.9	33.7	30.7	<21.3	<9.8	49.0
	250	150	<61.0	58.8	54.4	42.8	35.3	31.6	24.1	<10.4	48.5
Outdoor air	325	100	<67.7	61.8	60.7	46.3	37.7	36.0	28.9	<21.6	54.0
	325	150	<63.4	58.7	60.8	44.8	38.4	36.6	28.0	<13.8	54.5
	250	100	61.5	55.8	55.3	41.7	34.8	30.3	19.7	<8.4	48.5
	325	150	62.9	58.5	62.4	45.7	39.4	36.4	27.4	<14.7	56.0
Exhaust air	250	100	64.2	60.8	64.4	55.8	51.2	45.9	38.4	26.7	59.0
	325	150	67.7	65.0	73.1	60.9	56.1	52.2	45.8	35.1	67.5

## Specification (cont.)

### Vitovent 300-W, type H32S C400

Connector	Air flow rate in m <sup>3</sup> /h	Pressure drop in duct-work in Pa	Sound power level in dB at octave centre frequency in Hz								Total in dB(A) up to
			63	125	250	500	1000	2000	4000	8000	
Supply air	100	25	63.2	50.8	47.5	42.9	36.4	24.8	15.7	-	44.5
	150	25	65.8	58.8	51.3	47.8	42.0	33.5	21.9	20.3	50.0
	150	50	61.9	55.1	52.8	49.7	43.9	36.5	25.1	25.5	50.5
	200	25	66.8	56.3	55.3	51.6	46.9	40.7	30.0	22.1	53.0
	200	100	65.1	59.7	58.7	55.6	50.5	45.0	35.9	23.6	57.0
	250	50	65.6	58.0	61.5	56.5	51.6	47.2	38.7	25.0	58.0
	250	100	66.5	60.2	66.2	57.4	53.1	48.6	40.3	27.5	60.5
	280	50	<65.4	59.4	66.6	57.5	53.6	49.7	42.0	28.7	61.0
	280	75	66.2	60.4	67.5	58.1	54.0	50.1	42.4	29.3	62.0
	300	100	66.4	61.9	67.6	59.7	55.6	52.2	44.8	32.6	63.0
	300	150	68.0	63.4	75.3	61.2	56.7	53.3	46.0	34.7	69.5
	350	100	69.0	65.0	74.8	62.5	58.1	55.6	49.2	38.1	69.5
	350	150	69.1	65.8	80.0	64.9	58.8	55.9	49.5	38.7	74.0
	400	100	71.2	68.2	75.9	66.9	60.8	58.8	53.1	42.7	71.0
	400	150	71.7	67.6	75.5	71.7	61.2	59.1	53.4	43.2	72.0
Extract air	100	25	<53.8	48.0	41.5	29.2	<16.9	<10.6	<11.2	<17.0	36.0
	150	25	<61.0	56.0	48.6	39.1	24.0	<18.8	<10.7	<18.0	43.5
	150	50	<59.3	55.6	48.5	38.7	25.4	<21.3	<11.7	<17.4	43.5
	200	25	<64.6	60.7	54.6	46.3	29.7	25.6	<16.5	<19.3	49.0
	200	100	<59.7	57.1	51.2	39.0	31.1	29.2	<18.1	<16.6	45.0
	250	50	<55.4	56.6	55.0	38.8	31.4	30.9	<19.4	<16.5	46.5
	250	100	<55.4	57.6	55.1	40.6	33.3	32.6	<21.8	<16.7	48.0
	280	50	<55.4	55.0	59.1	40.2	33.2	33.4	<22.3	<16.7	51.0
	280	75	<58.2	56.4	58.6	40.9	34.0	34.0	<23.3	<17.4	50.5
	300	100	<59.3	58.7	66.4	42.7	35.6	35.9	<25.6	<17.5	58.0
	300	150	<61.9	61.2	58.2	43.8	36.9	37.0	<27.3	<18.3	52.0
	350	100	<61.3	60.0	56.4	44.4	38.1	39.0	<29.1	<18.5	51.0
	350	150	<62.6	62.1	61.9	46.6	39.1	39.6	<30.0	<19.0	56.0
	400	100	<62.9	64.9	66.9	52.8	40.7	41.9	32.3	<20.4	61.0
	400	150	<62.9	65.3	62.6	57.8	41.3	42.5	33.1	<21.1	58.0
Outdoor air	310	100	60.9	57.9	64.0	45.2	38.2	36.3	25.1	18.3	56.5
	400	150	62.7	64.3	62.2	54.3	43.7	42.7	32.9	22.5	57.0
Exhaust air	310	100	68.8	63.2	67.5	60.2	55.5	52.3	44.9	-	63.0
	400	150	71.8	68.0	74.4	67.8	61.0	58.6	52.5	42.7	70.5

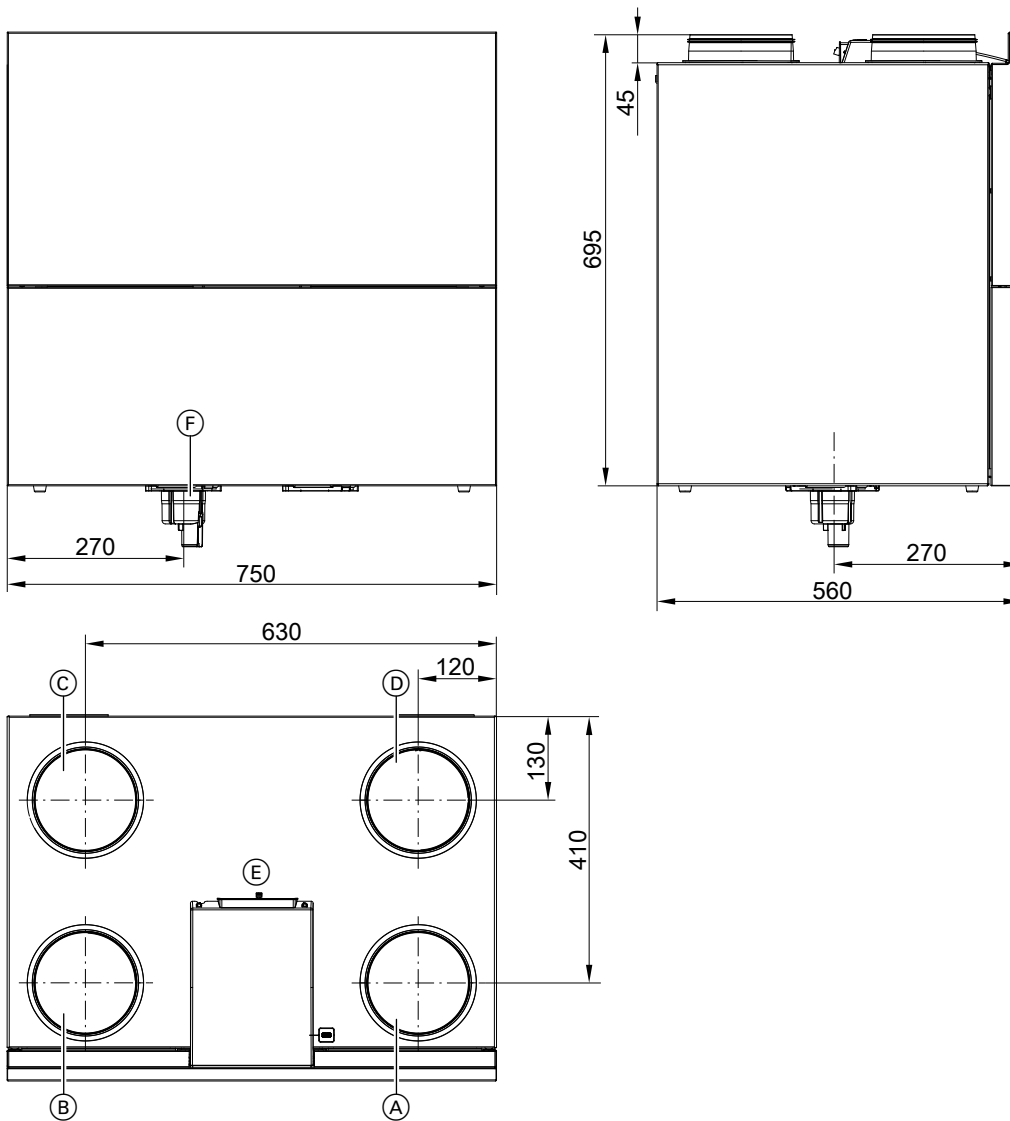
#### Note

Other operating conditions, e.g. a higher pressure drop in the duct-work or a higher air flow rate may lead to different sound power levels.

## Specification (cont.)

### Dimensions

Type H32S C325/C400 (R), right-hand version



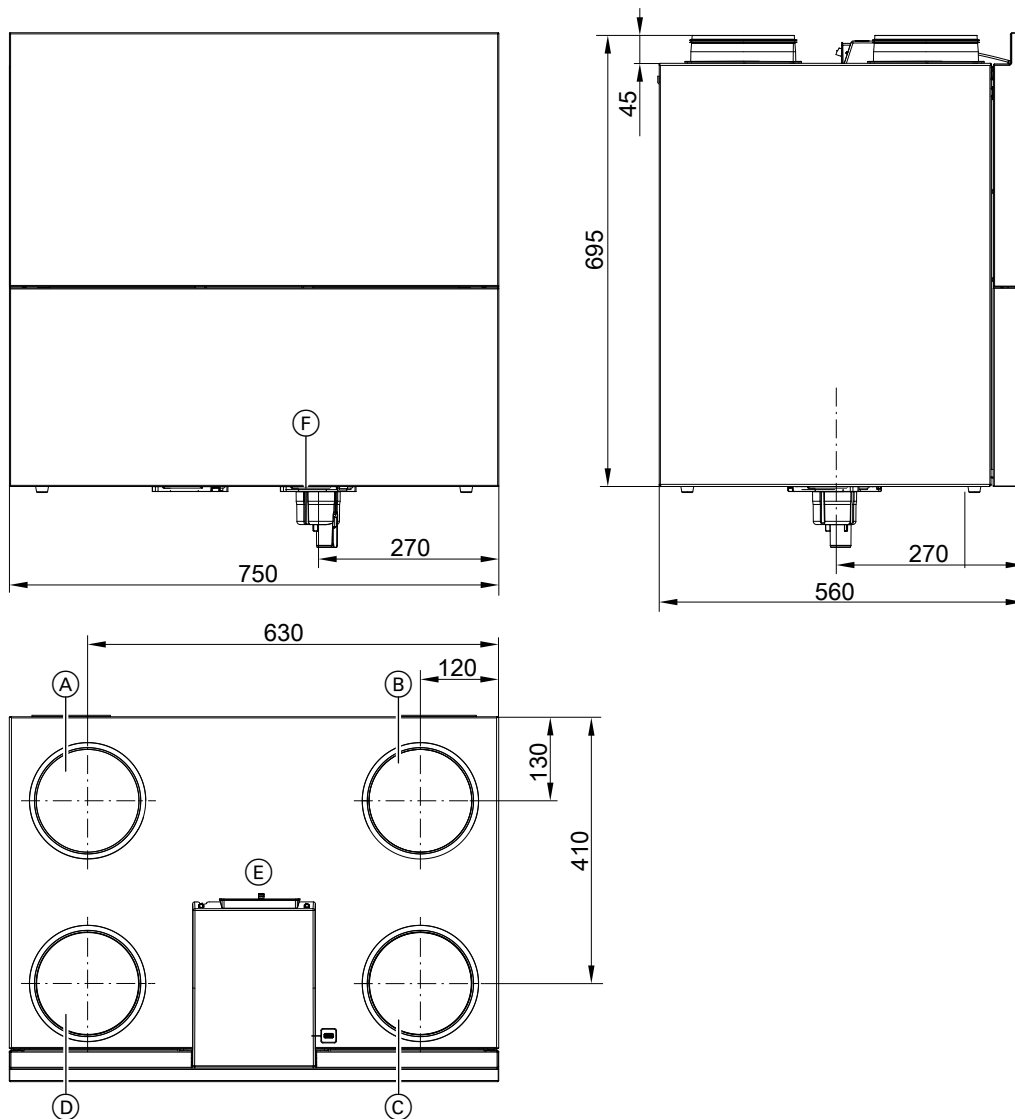
- (A) Extract air
- (B) Exhaust air
- (C) Outdoor air

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

Type	Connections
H32S C325 (R)	DN 160
H32S C400 (R)	DN 180

## Specification (cont.)

### Type H32S C325/C400 (L), left-hand version



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

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

Type	Connections
H32S C325 (L)	DN 160
H32S C400 (L)	DN 180

Subject to technical modifications.

Viessmann Werke GmbH & Co. KG  
 D-35107 Allendorf  
 Telephone: +49 6452 70-0  
 Fax: +49 6452 70-2780  
 www.viessmann.com

Viessmann Limited  
 Hortonwood 30, Telford  
 Shropshire, TF1 7YP, GB  
 Telephone: +44 1952 675000  
 Fax: +44 1952 675040  
 E-mail: info-uk@viessmann.com

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