

Datasheet

For part no. and prices: see pricelist



VITOVENT 200-C

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

- Wall or ceiling mounting
- Operated via digital step switch, digital programming unit or Vitotronic 200 heat pump control unit, remote control unit (heat pump accessories) or Vitotrol app
- Air flow rate up to **200 m³/h**
- Automatic bypass, electric preheating coil that can be integrated (accessories)
- Integral countercurrent heat exchanger or enthalpy heat exchanger

Product description

Mechanical ventilation system for detached houses or apartments with up to 120 m² living space

Fresh outdoor air is drawn in via a wall duct 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 countercurrent heat exchanger or enthalpy heat exchanger. The preheated outdoor air is then channelled through the ductwork to the rooms to be ventilated.

Via the ductwork, the extract air is drawn out of the rooms where moisture and odours are created (kitchen, bathroom, WC) and transported to the ventilation unit. There, the extract air is purified by means of a filter to protect the countercurrent heat exchanger or enthalpy heat exchanger. At the heat exchanger, the extract air preheats the cooler outdoor air according to the countercurrent 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.

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.

Constant flow rate control ensures a defined, constant air flow rate on the supply air and extract air side, irrespective of the static ductwork pressure. To protect the heat exchanger from icing up, the supply air flow rate is reduced incrementally. The overall flow rate can be set on the appliance without the need for additional measuring instruments.

The preheating coil (accessory) ensures balanced operation even at low outdoor air temperatures. It can be integrated.

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 (moisture damage). The ventilation unit features time-controlled monitoring of the installed outdoor air and extract air filters. Required filter changes are indicated.

Operation

4 ventilation levels for the ventilation unit can be set via the step switch (accessory).

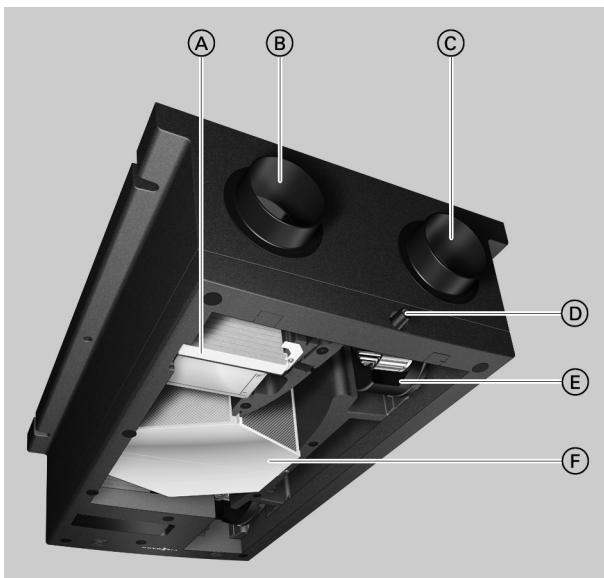
Additional comfort and energy saving functions are available with the ventilation programming unit, type LB1 (accessory), e.g. time programs. A full range of diagnostic functions are also available.

As an alternative to the step switch and ventilation programming unit, the ventilation unit can be connected to a heat pump with a Vitotronic 200, type WO1C control unit using the Vitocal/Vitivent connecting cable (accessory). This allows the ventilation unit to be controlled in an integrated system via the heat pump control unit. The functionality is almost identical to the ventilation programming unit, type LB1. You can also use common control unit accessories.

Passive house use

Vitivent 200-C meets the requirements for passive house use.

Benefits



- Ⓐ Outdoor air filter
- Ⓑ Outdoor air
- Ⓒ Exhaust air
- Ⓓ Condensate drain connector
- Ⓔ Extract air fan
- Ⓕ Countercurrent/enthalpy heat exchanger

- Compact ventilation unit for installation in recesses or under suspended ceilings
- Convenient operation with the Vitotronic 200 control unit of the Vitocal and use of common accessories
- Alternatively, operation via a separate programming unit (accessory)
- Lightweight construction makes for a straightforward and quick installation
- Full parameter setting via digital programming unit
- Ensures thermal comfort and a healthy ambience with self-regulating flow rate.
- Balanced humidity management prevents building damage.
- More protection against burglary and noise due to closed windows
- Filtration 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.
- 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 icing
- Demand-dependent flow rate control via digital step switch, heat pump programming unit or ventilation programming unit, type LB1
- Ventilation units with enthalpy heat exchanger support the balanced humidity management in the building.
- Display of fault and filter messages via analogue output (0 to 10 V), e.g. for BMS

Benefits (cont.)

Delivered condition

Compact ventilation units with max. air flow rate 200 m³/h

- Type H11S A200 with outdoor air filter and extract air filter G4/G4 to EN 779 (ISO Coarse 65 %/ISO Coarse 65 % to ISO 16890) and countercurrent heat exchanger for heat recovery:

– Supply air connection and electrical terminal area on the left:

Part no. Z014599 (L)

– Supply air connection and electrical terminal area on the right:

Part no. Z015391 (R)

- Type H11E A200 with outdoor air filter and extract air filter F7/M5 to EN 779 (ISO ePM1 70 %/ISO ePM10 50 % to ISO 16890) and enthalpy heat exchanger for heat recovery and humidity control:

– Supply air connection and electrical terminal area on the left (L):

Part no. Z014584 (L)

– Supply air connection and electrical terminal area on the right:

Part no. Z015392 (R)

- Casing made of EPP plastic, black, thermally insulated
- 2 DC fans with constant flow rate and balance control, commissioning and parameter setting with self-regulating air flow rate





- 4 DN 125 connectors with protection from thermal bridging, for outdoor air, supply air, extract air and exhaust air
- Power cable with standard plug
- Accessories for ceiling or wall mounting
- Balance control
- Constant flow rate control
- Digital variable flow rate adjustment
- Automatic summer bypass (100 %), temperature controlled
- Filter change indicator
- Output for external filter change indication and fault messages

Note

A programming unit must be ordered separately to operate the ventilation unit.

Specification

Specification

Type		H11S A200	H11E A200
Max. flow rate	m ³ /h	200	200
Max. external pressure drop at max. air flow rate	Pa	215	215
Factory setting of air flow rates			
Background ventilation (level 1)	m ³ /h	50	50
Reduced ventilation (level 2)	m ³ /h	75	75
Nominal ventilation (level 3)	m ³ /h	115	115
Intensive ventilation (level 4)	m ³ /h	155	155
Setting range for air flow rates			
Background ventilation (level 1)	m ³ /h	50	50
Reduced ventilation (level 2)	m ³ /h	55 to level 3 minus 5	
Nominal ventilation (level 3)	m ³ /h	Level 2 plus 5 to level 4 minus 5	
Intensive ventilation (level 4)	m ³ /h	Level 3 plus 5 to 200	
Air intake temperature			
Min. (in conjunction with electric preheating coil)	°C	-20	-20
Max.	°C	+35	+35
Ambient temperature			
Min.	°C	5	5
Max.	°C	35	35
Humidity			
Max. relative room air humidity	%	70	70
Max. absolute extract air humidity	g/kg	12	12
Casing			
Material		EPP	
Colour		Black	
Dimensions excluding connectors			
Total length	mm	1000	1000
Total width	mm	650	650
Total height	mm	300	300
Total weight	kg	18	20
Number of radial DC fans			
With constant flow rate control		2	2
Filter class to EN 779			
Outdoor air filter (delivered condition/accessories)		G4/F7	F7/—
Extract air filter (delivered condition/accessories)		G4/G4	M5/—
Heat recovery			
Rate of temperature change to ErP	%	89	80
Heat recovery level to DIBt	%	90	79
Heat recovery level to PHI	%	85	78
Material of countercurrent/enthalpy heat exchanger		PET	PEM
Rate of humidity change	%	—	Up to 80
Rated voltage			
		1/N/PE 230 V/50 Hz	
Specific power consumption to DIBt	W/(m ³ /h)	0.35	0.32
Max. power consumption			
Operation without preheating coil	W	175	175
Operation with integral electric preheating coil (accessories)	W	1675	1675
Energy efficiency class to EU Regulation no. 1254/2014			
– Manual control		A	—
– Time control		A	B
– Central demand control		A	A
– Control according to local demand		—	—

Filter types to ISO 16890

G4 = ISO Coarse 65 %

F7 = ISO ePM1 70 %

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, this measurement cannot replace the correct engineering of the overall system.

Air flow rate in m ³ /h	Pressure drop in ductwork in Pa	Sound power level in dB at octave centre frequency in Hz							Total in dB(A) up to
		125	250	500	1000	2000	4000	8000	
140	50	31	52	49	44	42	34	26	47.0
200	100	31	58	57	51	43	36	27	54.0

Approximation for sound power levels with other air flow rates and/or pressure drops:

- A reduction of the air flow rate by 10 m³/h reduces the sound power level by approx. 0.6 dB(A).
- A reduction of the pressure drop in the ductwork by 10 Pa reduces the sound power level by approx. 1.4 dB(A).

Sound power at the connectors

Note

Sound power measured in the connectors in accordance with EN ISO 5136:2003

	Air flow rate in m ³ /h	Pressure drop in ductwork in Pa	Sound power level in dB at octave centre frequency in Hz							Total in dB(A) up to
			125	250	500	1000	2000	4000	8000	
Extract air connector	140	50	62	56	46	38	28	25	17	47.0
	200	100	68	63	53	44	37	33	24	57.0
Exhaust air connector	140	50	68	61	57	54	47	46	39	60.0
	200	100	75	70	65	61	57	56	51	68.0
Outdoor air connector	140	50	50	55	44	39	27	24	15	52.0
	200	100	72	63	51	45	36	32	19	59.0
Supply air connector	140	50	73	62	60	57	51	50	44	63.0
	200	100	79	72	67	63	60	59	54	70.0

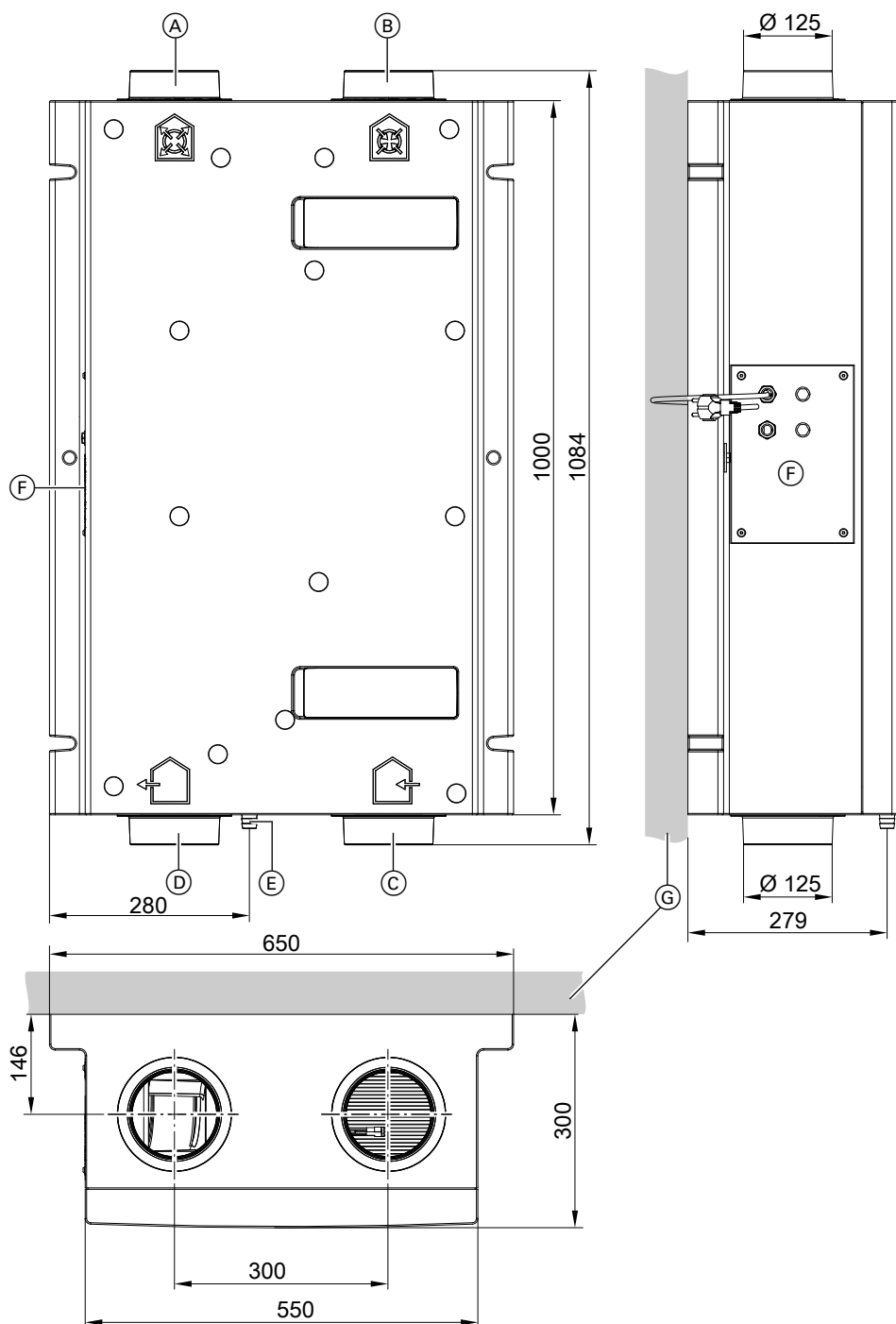
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Specification (cont.)

Dimensions

Supply air connection and electrical terminal area on the left (L)

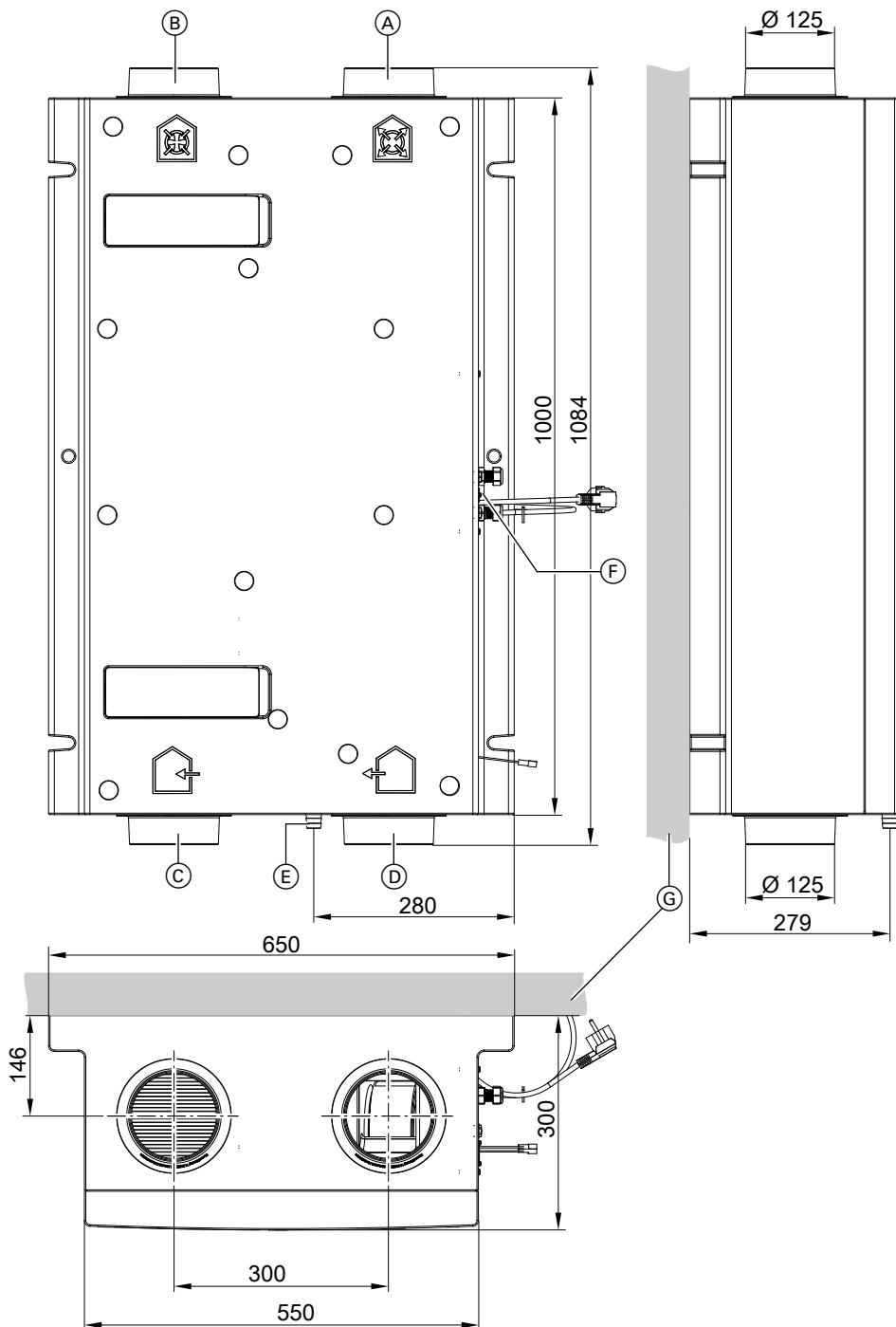


- (A) Supply air DN 125
- (B) Extract air DN 125
- (C) Outdoor air DN 125
- (D) Exhaust air DN 125

- (E) Condensate drain connector for hose with 20 mm internal diameter
- (F) Electrical terminal area
- (G) Wall/ceiling

Specification (cont.)

Supply air connection and electrical terminal area on the right (R)



- (A) Supply air DN 125
- (B) Extract air DN 125
- (C) Outdoor air DN 125
- (D) Exhaust air DN 125

- (E) Condensate drain connector for hose with 20 mm internal diameter
- (F) Electrical terminal area
- (G) Wall/ceiling

Subject to technical modifications.

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