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Ventilation unit

Zehnder ComfoAir 200

Use

The Zehnder ComfoAir 200 comfort ventilation unit was developed for use in residential settings with high ventilation demand. It combines maximum comfort, simple operation and high efficiency with flexible integration into building services. The ComfoAir 200 ventilation unit moves max. 118 cfm of air at an external pressure of 0.40" WC.

Efficiency

The integrated cross-counter flow heat exchanger achieves efficiencies of > 90% HRV. For user comfort, this means no unpleasant draft effects, because the supply air is heated almost to room temperature even when external temperatures are around freezing.

Fans

The supply and return fans are driven by high efficient DC motors. Differential pressures in the supply and extract air distribution systems can be compensated thanks to direct control. The especially quiet fans can be adjusted to the required volumetric flow in 1% increments. The air volumes of the selectable stages can be set to between 29 cfm and 118 cfm on the Zehnder ComfoAir 200.

Filters

The ComfoAir 200 ventilation unit is equipped with a class G4 filter (MERV 7/8). An optional F7 pollen filter (MERV 13) is available for outside air.

Installation

The Zehnder ComfoAir 200 ventilation unit is characterized by its compact design. The supply and return air connections are located on the top of the unit, those for the outside and exhaust air are on the bottom. The ventilation unit is suitable for ceiling and wall installation.

Operation

The ComfoAir 200 is controlled by the ComfoSense control unit. This unit is usually installed in the Living area. Optional wired remote-control units are installed in the bathrooms.

ComfoSense Controller

Servicing

Servicing of the Zehnder ComfoAir CA 200 ventilation unit is limited to regular replacement and cleaning of the filters integrated in the front of the unit. The heat exchanger should be cleaned every 3-4 years depending on the dirt load of the outside air. Please see the unit manual for additional servicing tasks.

Frost protection

When the ventilation unit is operated without preheating, the condensate in the extract air may freeze. The frost protection setting prevents this by variably reducing the supply air volume. In order to ensure reliable operation even at extreme outside temperatures, an optional integrated, electrical preheater register is available.

Bypass

During summer nights and in transitional seasonal periods with strong sunshine, interiors can become too warm, while the outside air remains pleasantly cool. In this case heat removal by what is known as *free cooling* helps: The cooler outside air is fed to the rooms in the living area, bypassing the heat exchanger. The Zehnder ComfoAir 200 ventilation unit is equipped with an automatic bypass for just this purpose. The bypass is a standard component and takes 100% of the extract air past the heat exchanger.

Options

- **Wired remote control**
  The ventilation unit can be controlled from several switching points throughout the house.

- **“Open-fire” program**
  The ventilation system can be installed in a home with an open flue fireplace. This must be registered in the control unit to prevent a controller-related negative pressure. In a frost protection situation both fans are stopped. Supply or extract ONLY mode is not possible.

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Technical specifications

Unit dimensions	
Max. air volume	118 cfm
Min. air volume	29 cfm
Height	47.25"
Width	21.40"
Depth	12.50"

Benefits

- Comfort ventilation up to 118 cfm
- Heat recovery with an efficiency > 90% (HRV)
- Low energy consumption thanks to EC direct current motors
- Automatic 100% summer bypass
- Infinitely variable frost protection function: efficient even at low temperatures
- Quick, safe installation and servicing
- Simple operation
- Integrated preheater (optional)
- Digital control unit: ComfoSense
- CO2 control (optional)
- With weekly timer as standard
- “Open-fire” program

ComfoAir 200 L Luxe
ComfoAir 200 R Luxe
ComfoAir 200 VL Luxe
ComfoAir 200 VR Luxe
ComfoAir 200 L Luxe Enthalpy

Article numbers

L = supply air left, R = supply air right, VV = integrated electric preheater

Product	Article number	Ref. no.
ComfoAir 200 HRV L	**471 226 710**	**9280**
ComfoAir 200 HRV R	**471 226 715**	**9276**
ComfoAir 200 HRV VV L	**471 226 730**	**9282**
ComfoAir 200 HRV VV R	**471 226 735**	**9338**
ComfoAir 200 ERV L	**471 226 840**	**9357**
ComfoAir 200 ERV R	**471 226 845**	**9364**
ComfoAir 200 ERV VV L	**471 229 470**	**9422**
ComfoAir 200 ERV VV R	**471 229 475**	**9423**

Accessories	
ComfoSense control unit	9257
Wired remote control	9556

Filters		
Filter for ComfoAir 200 G4 (MERV 7/8)	400 100 014	9282
Filter for ComfoAir 200 F7 (MERV 13)	400 100 013	9283

Zehnder ComfoAir 200

Functions

- Frost protection function/automatic defrost
- Supply and extract air separate and infinitely variably programmable
- Filter replacement indicator
- Supply and extract air can be switched off separately

Description

Comfort ventilation unit ComfoAir 200 Luxe

The Zehnder ComfoAir 200 is a centralized, compact ventilation unit with heat recovery and integrated summer bypass. This ventilation unit is suited to new construction as well as for renovation projects. The ComfoAir 200 can be installed as a wall-hanging unit or to be mounted under the ceiling. It is connected by 4 DN 5"/6"/6.3" pipe connections on the top and bottom of the unit. The housing, made of galvanized or painted steel, is sound absorbing and thermally insulated. EC (direct current) fans guarantee energy-saving operation and high electrical efficiency. Supply and exhaust fans can be controlled separately and can be precisely adjusted to balance the air volume within one percent. The core of the ComfoAir 200 is a cross-counter flow heat exchanger with an efficiency of > 90% heat recovery (HRV). It is controlled by the ComfoSense unit. All operating status and error messages will be displayed on the control unit. The ComfoAir 200 is equipped with a grounded plug (NEMA 6-15) . The filters can be easily replaced from the front of the unit without opening the housing.

Options:

- Integrated electrical preheater (CA 200 VVL and CA 200 VVR)
- Class F7 (MERV 13) pollen filter available

Controller features:

- Automatic frost protection
- Timer-controlled filter servicing display
- Automatic and temperature-controlled 100% summer bypass
- Fault history including the last three error messages
- Separate control of supply and extraction fans.
- Comfort temperature controller
- “Open fire” program
- Weekly timer program

Ventilation unit

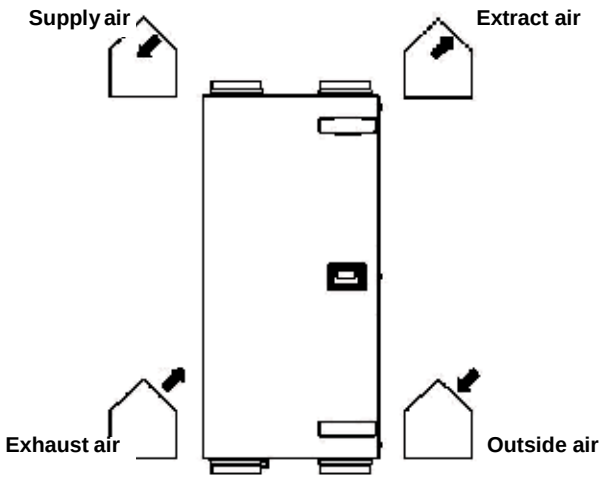
Zehnder ComfoAir 200

Descriptions

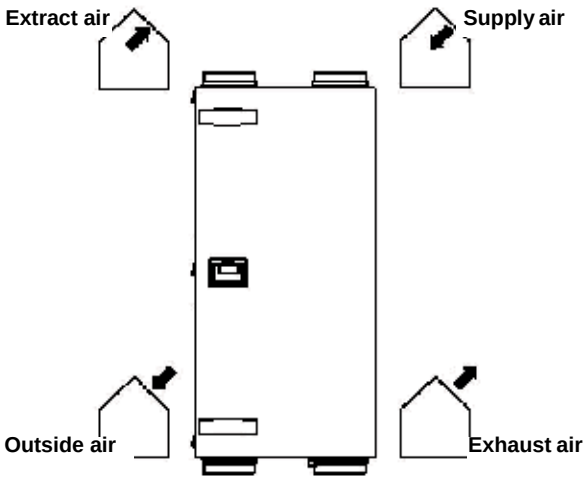
Technical specifications

Heat exchanger:	Plastic
Fans:	EC (direct current) radial fans
Filters:	Extract air/Outside air: G4 (MERV 7/8) optional F7 (MERV 13) pollen filter
Condensate connection:	20 mm
Air duct connections:	2x top, 2x bottom
	DN 5"/6"/6.3"
Electrical connection:	230 V, 50-60Hz
Temperature range:	44.6 °F to 104 °F
Acoustic performance (min./max.):	Extract air 30 dB(A)/57 dB(A)
	Supply air 36 dB(A)/73 dB(A)
Heat recovery:	> 90% HRV
Volumetric flow:	Maximum 150 cfm at 0.50" WC external
	Minimum 29 cfm at 0.02" WC external
Power consumption:	Maximum 143 Watt
	Minimum 9 Watt
Dimensions:	Height: 43.5" (with connections: 47.3")
	Width: 21.4", Depth 12.7"
Weight:	66 lbs.

Air direction



ComfoAir 200 - left



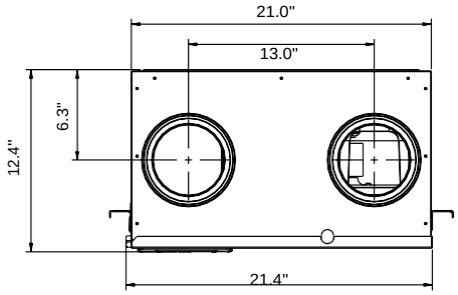
ComfoAir 200 - right

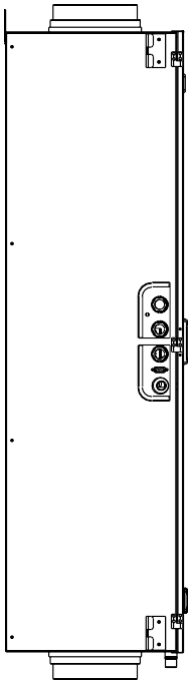
Zehnder ComfoAir 200

Dimensions

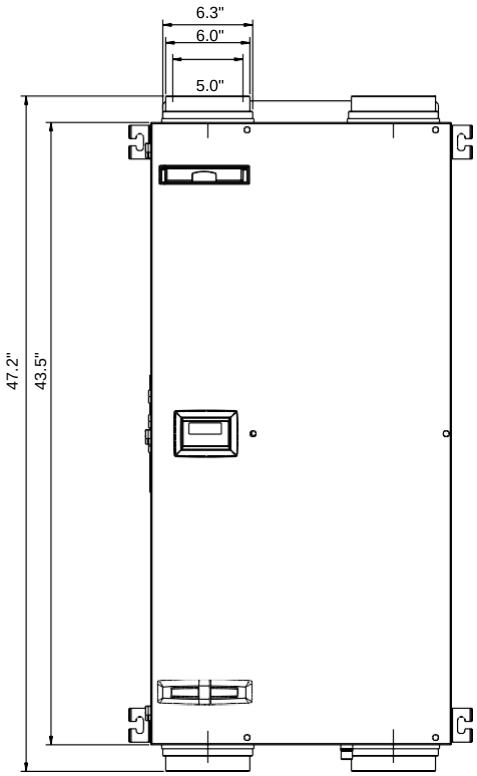
(Right Version Shown)

TOP

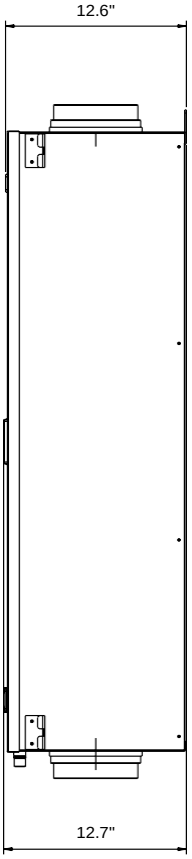




LEFT

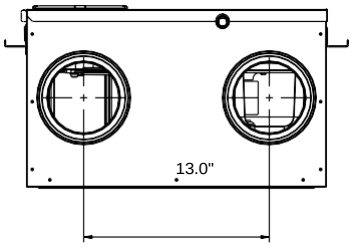


FRONT



RIGHT

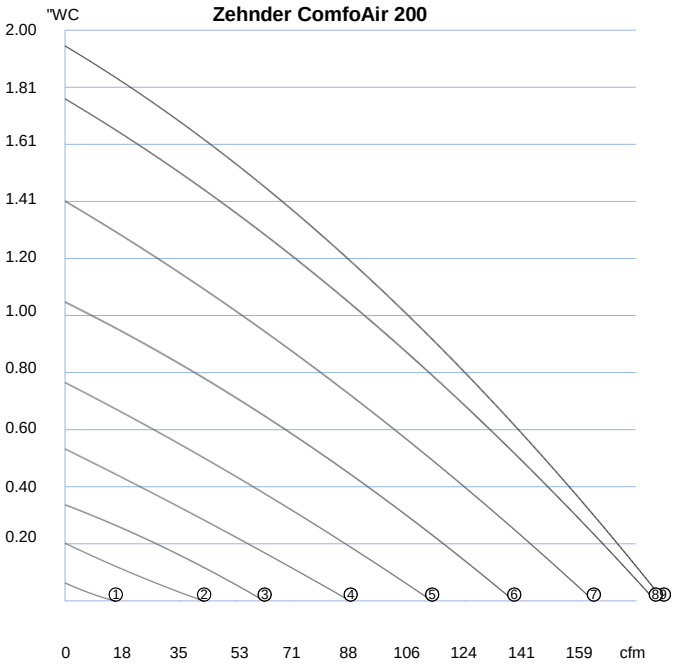
BOTTOM



Ventilation unit

Zehnder ComfoAir 200

Stage	Setting	Capacity	Pressure	Power consumption	Current consumption	COS φ	Installed noise level		Weight
	Percent	Qv	Δ P st				Extract air	Supply air	
	%	cfm	" WC	W	A	(-)	dB(A)	dB(A)	lb
Zehnder ComfoAir 200									
(1)	15%	12	0.012	9	0.08	0.48	30	36	66.2
(2)	30%	35	0.028	14	0.11	0.54	35	46	
(3) Low	40%	53	0.060	20	0.16	0.55	37	53	
(4)	50%	71	0.120	30	0.25	0.52	43	59	
(5)	60%	91	0.180	46	0.37	0.55	47	63	
(6) Medium	70%	109	0.281	68	0.55	0.54	51	66	
(7)	80%	127	0.402	98	0.77	0.55	54	69	
(8) High	90%	144	0.482	128	0.99	0.56	56	72	
(9) Maximum	100%	150	0.502	143	1.1	0.57	57	73	



Ventilation unit

Zehnder ComfoAir 200

Sound, supply air

Ventilation unit	Speed	Acoustic performance						
Type		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
ComfoAir 200	1	41.1	39.6	35.2	30	20.8	12.9	8.7
ComfoAir 200	2	50.3	48.8	44.4	39.2	30	22.1	17.9
ComfoAir 200	3	56	54.8	50.7	48.3	39.4	33.7	24.6
ComfoAir 200	4	61.3	60.4	54.7	54.9	46.1	42.2	35.7
ComfoAir 200	5	66.5	65.4	58.1	58.6	51.8	48.1	43.5
ComfoAir 200	6	69.4	69.3	61.1	61.1	56.5	52.5	49
ComfoAir 200	7	73.2	72.2	63.8	63.4	60.9	56.4	53.6
ComfoAir 200	8	74.9	75.2	66.2	64.9	64	59.1	57
ComfoAir 200	9	75.9	75.9	67.5	65.7	64.8	60.1	58.1

Sound, extract air

Ventilation unit	Speed	Acoustic performance						
Type		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
ComfoAir 200	1	43.4	35.2	18.4	12.8	3.2	7.3	14.9
ComfoAir 200	2	47.6	39.4	22.6	17	7.4	11.5	19.1
ComfoAir 200	3	47.5	43.6	28.2	24.7	11.5	11.5	19
ComfoAir 200	4	52	50.1	33.1	31.2	17.4	12.4	18.7
ComfoAir 200	5	57	53.4	39.9	34.4	22.8	14.5	18.8
ComfoAir 200	6	60.1	58	40.6	37	27.3	18.4	19.2
ComfoAir 200	7	63.1	60.8	41.7	38.5	30.5	22.2	19.6
ComfoAir 200	8	65.1	62.8	44.9	40.4	33.3	25.9	20.3
ComfoAir 200	9	65.2	63.9	46.3	41.3	34.3	27.3	21

Sound, unit emission

Ventilation unit	Speed	Acoustic performance					
Type		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	db(A)
ComfoAir 200	2	28.5	35.2	23.1	14.5	10.5	23.9
ComfoAir 200	3	34.6	39.4	27.3	19.8	11.8	29.1
ComfoAir 200	4	40.3	43.6	32.4	24.9	18.9	34.6
ComfoAir 200	5	45.3	50.1	35.6	28.7	24.5	39
ComfoAir 200	6	46.8	53.4	43.5	31.9	28.5	43.3
ComfoAir 200	7	49.7	58	41.4	34.1	31.9	44.3
ComfoAir 200	8	52.3	60.8	43.6	36	34.6	46.7
ComfoAir 200	9	53.8	62.8	44.7	36.7	35.5	47.9

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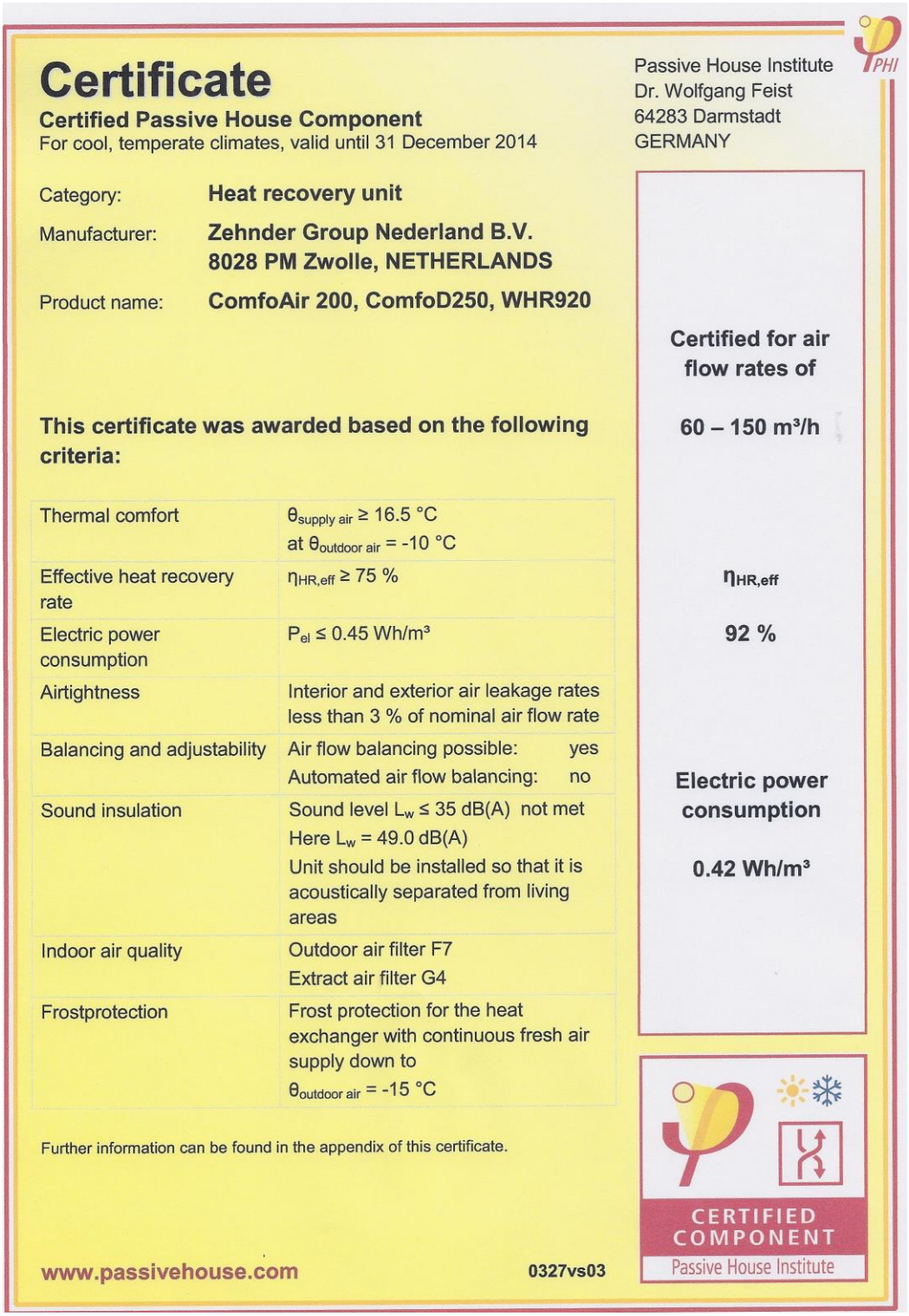
Ventilation unit

Zehnder ComfoAir 200



Certificate

Certified Passive House Component
For cool, temperate climates, valid until 31 December 2014

Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
GERMANY

Category: **Heat recovery unit**

Manufacturer: **Zehnder Group Nederland B.V.**
8028 PM Zwolle, NETHERLANDS

Product name: **ComfoAir 200, ComfoD250, WHR920**

This certificate was awarded based on the following criteria:

Thermal comfort	$\theta_{supply\ air} \geq 16.5$ °C at $\theta_{outdoor\ air} = -10$ °C
Effective heat recovery rate	$\eta_{HR,eff} \geq 75$ %
Electric power consumption	$P_{el} \leq 0.45$ Wh/m³
Airtightness	Interior and exterior air leakage rates less than 3 % of nominal air flow rate
Balancing and adjustability	Air flow balancing possible: yes Automated air flow balancing: no
Sound insulation	Sound level $L_w \leq 35$ dB(A) not met Here $L_w = 49.0$ dB(A) Unit should be installed so that it is acoustically separated from living areas
Indoor air quality	Outdoor air filter F7 Extract air filter G4
Frostprotection	Frost protection for the heat exchanger with continuous fresh air supply down to $\theta_{outdoor\ air} = -15$ °C

Further information can be found in the appendix of this certificate.

Certified for air flow rates of

60 – 150 m³/h

$\eta_{HR,eff}$

92 %

Electric power consumption

0.42 Wh/m³

CERTIFIED COMPONENT
Passive House Institute

www.passivehouse.com

0327vs03

CA 200 Update RBO_ SEP2017

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