Zehnder ComfoAir Flex 250

Technical specification for ceiling mounted ventilation unit

always the best climate

General

The Zehnder ComfoAir Flex has been developed as an ideal solution for apartments and small dwellings, where an efficient use of space for living is important. Thanks to its compact design with minimal dimensions of 1068 x 868 x 327 mm (L x W x H), the Zehnder ComfoAir Flex enables space-saving installation in suspended ceilings for a harmonious integration into any apartment.

The Zehnder ComfoAir Flex delivers an impressive performance with air volumes up to 250 m³/h at an external pressure of 200 Pa, to guarantee a comfortable and healthy indoor climate. Additionally the innovative ventilation unit from Zehnder is fitted with what have been proven to be the quietest fans on the market in their size. Even during full operation, the residential ventilation unit convinces with low casing radiation which provides an incredibly quiet noise level for more comfort in your home. In conjunction with the custom made heat exchanger, it is possible for our ceiling mounted unit to achieve an excellent energy efficiency with very low electrical consumption.

Due to high quality components which are custom made to work together in harmony, the ComfoAir Flex enables an efficient, reliable and durable operation. With the enhanced filter concept with standard ISO coarse ≥ 65% (G4) filters for supply and extract air and the optional ePM1 ≥ 55% (F7) filter, the Zehnder ComfoAir Flex can deliver pollen free fresh air. Moreover the filter replacement is always at the right time, due to a time and flow based filter alert.



Top Benefits

- The best automatically adjusted indoor climate all year round guaranteed by the Climate Switch® technology.
- Reduces pollutants entering the home: enhanced filter concept filter for supply of clean fresh air into your dwelling.
- Space-saving installation in suspended ceilings for a harmonious integration into any apartment due to its minimal dimensions of 1068 x 868 x 327 mm (L x W x H).
- Increased comfort thanks to incredibly quiet noise levels even during full operation.
- An impressive performance in a compact design with air volumes up to 250 m³/h at an external pressure of 200 Pa to guarantee a comfortable and healthy indoor climate.
- High level of heat recovery combined with very low energy consumption: due to a custom made heat exchanger and the latest fan technology.



Zehnder ComfoControl App



Zehnder ComfoSwitch C



Zehnder CO_2 Sensor C



Zehnder ePM1 filter

Flexibility

The Zehnder ComfoAir Flex impresses with an easy and flexible installation which allows trouble free mounting on the ceiling, thanks to the 4 x 45 degrees turnable bends and adjustable mounting brackets. Each air connection can be individually turned to connect to a duct inline with the unit, or rotated 90 degrees. For even more flexibility in planning and installation the right and left orientation is achieved through one single unit and can be changed with the ComfoControl App. This reduces installation time, and also reduces the risk of ordering the incorrect unit. Thanks to its ingenious design with focus on accessibility of components, the ceiling mounted ventilation unit is also easy to maintain.

Compact configuration

- Can be mounted in suspended ceilings with a height of > 330 mm;
- Very compact solution - in combination with Zehnder ComfoWell 320 the system has a max. width of 966 mm;
- Condensate drain runs along the notch and does not increase the installation width of the unit, thanks to the unique and compact double dry siphon;
- 45 degrees turnable bends ensure the most suitable connection to the ductwork;
- Integrated inclination insures the correct condensation drainage angle, without increasing the build in height;
- Easy to install due to multiple solid mounting brackets;
- Supplied with 1.1 m cable and plug.

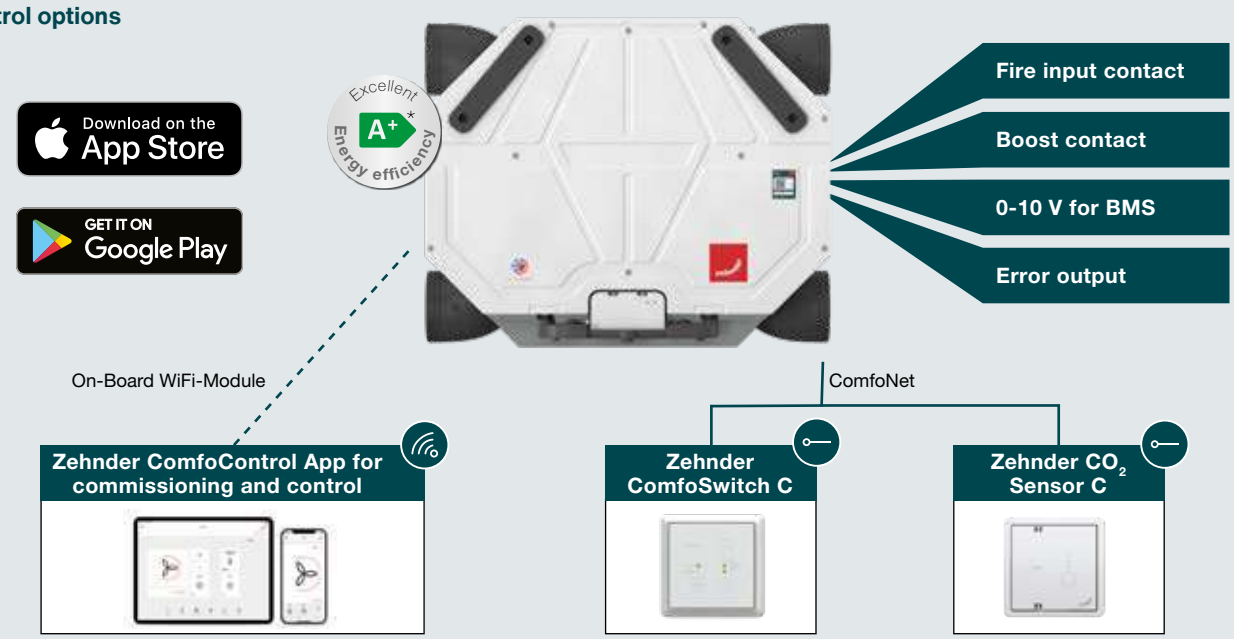
More Benefits

- Easy and convenient operation: built-in WiFi connection enables a direct control via the Zehnder ComfoControl App.
- Flexibility and security for planning and installation as one unit combines right and left orientation, which can be changed through the Zehnder ComfoControl App.
- Easy and flexible mounting on the ceiling, thanks to the 4 x 45 degrees turnable bends.
- Quick and easy commissioning by constant air flow with assistance via the Zehnder ComfoControl App which guides you through the steps.
- The double dry siphon included in the delivery allows an easy and enhanced installation of the ComfoAir Flex.

Technical specifications

Zehnder ComfoAir Flex 250	
Key facts	
Max. air volume	250 m³/h
Length	1061 mm - 1068 mm
Width	868 mm
Height	327 mm
Weight	38 kg
Installation	Ceiling installation
Main technical data	
Temperature range	-20 °C to +50 °C during transport and storage -20 °C to +50 °C moved air +7 °C to +40 °C in the installation room
Condensate drain (Ø)	32 mm
Air connection size (Ø)	160 mm internal
Supply voltage	230 V, 50 Hz
Maximum power consumption	1820 W (with preheater) 119 W (without preheater)
Current draw	8,35 A (with preheater) 0.96 A (without preheater)
Specific fan power	0.21 Wh/m³
Cos ϕ	0.39 - 0.53
Sound power level Lwa	42 dB(A)
Other technical data	
Protection class	IP20
Housing	Sheet metal
Front panel	Sheet metal, RAL 9003
Inner zone	EPP / ABS
Heat exchanger	PS
ISO-classification	B

Control options



Control units	Article number
Zehnder ComfoSwitch C55 control panel	655 010 245
Zehnder ComfoSwitch C67 control panel	655 010 255
Zehnder CO2 sensor RF 55 (built-in)*	655 000 860
Zehnder CO2 sensor RF 67 (built-in)*	655 000 865
Zehnder CO2 sensor RF 67 (on-wall)*	655 000 870
Zehnder CO2 sensor C55 (built-in)	655 000 875
Zehnder CO2 sensor C67 (built-in)	655 000 880
Zehnder CO2 sensor C67 (on-wall)	655 000 885
Zehnder RF upgrade kit	400 502 016
Zehnder RFZ control panel*	655 000 755
Zehnder Timer RF control panel*	655 000 780
ComfoConnect LAN C interface	655 011 100

* only in conjunction with the RF PCB

Article numbers

Comfort ventilation unit	Article number
ComfoAir Flex 250 HRV SI	471 234 190

Additional options	Article number
Pre-heater	400 300 105

Filters	Article number
Filter set for CA Flex 250/350: ISO coarse ≥ 65% (G4/G4), (contains 2 filters)	400 100 121
Filter set for CA Flex 250/350: ISO coarse ≥ 65% / ePM1 ≥ 55% (G4/F7), (contains 2 filters)	400 100 122
Filter set for CA Flex 250/350: 5 x ISO coarse ≥ 65% / 5 x ePM1 ≥ 55% (G4/F7), (contains 10 filters)	400 100 123
Filter set for CA Flex 250/350: 10 x ePM1 ≥ 55% (F7), (contains 10 filters)	400 100 124
Filter set for CA Flex 250/350: 10 x ISO coarse ≥ 65% (G4), (contains 10 filters)	400 100 125

Energy efficiency classes

Energy efficiency classes in accordance with EU Regulation no. 1254/2014.

Energy figures

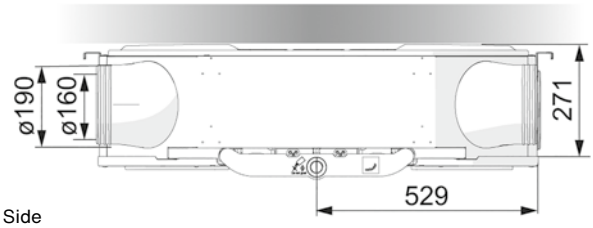
EU Energy Consumption Label

Energy efficiency class	A+ **
Maximum air volume flow [m^3/h]	250
Sound power level L_{WA} dB(A)	42

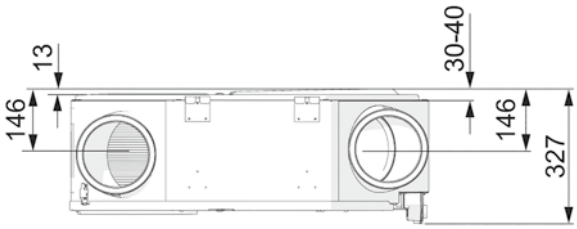
** depending on the control unit/sensor technology chosen.

Dimensional drawings

Zehnder ComfoAir Flex ceiling mounting

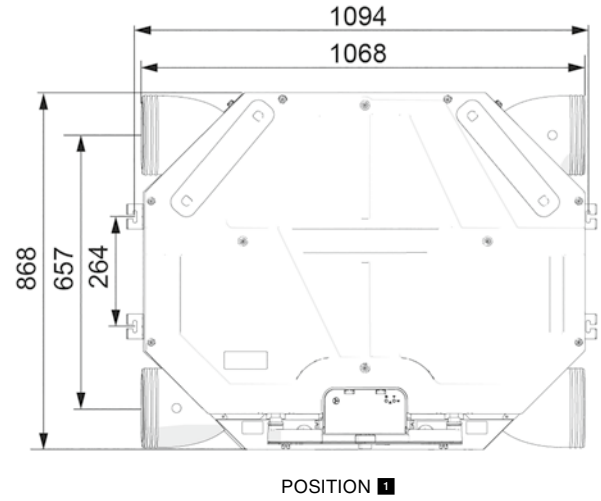


Side



Inclination of 2 degrees to guarantee optimum condensation drainage

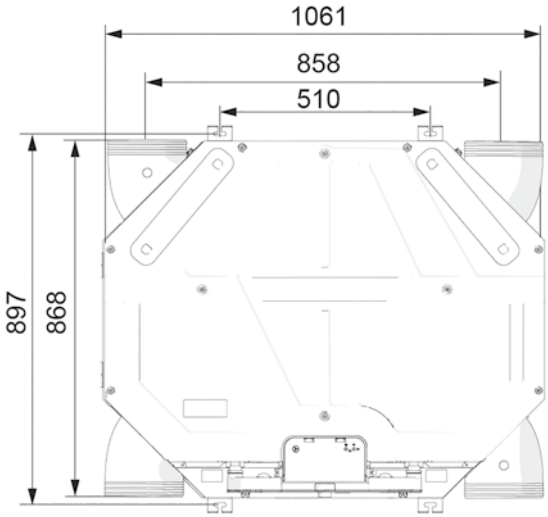
Zehnder ComfoAir Flex built-in size in width



POSITION 1

Front

Zehnder ComfoAir Flex built-in size in length

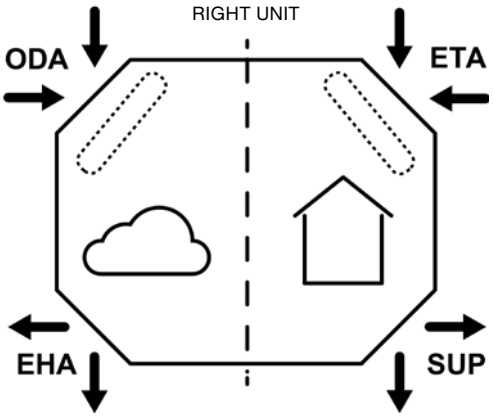


POSITION 2

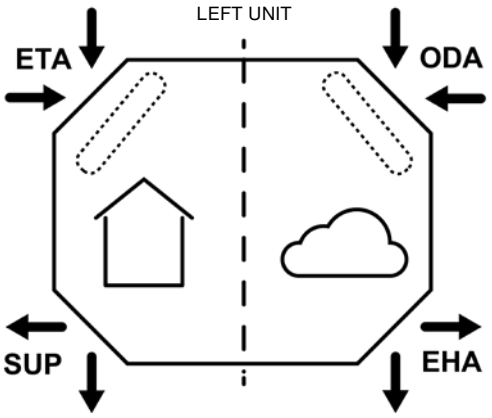
Front

Air directions

Zehnder ComfoAir Flex R/L unit - modify via software



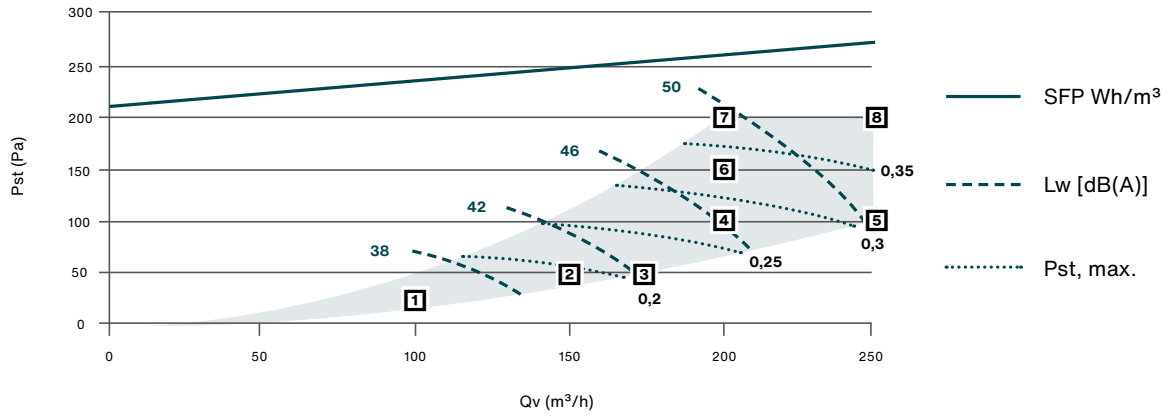
Supply and extract air to right



Supply and extract air to left

Performance data

Zehnder ComfoAir Flex 250



Performance values

Performance data* ComfoAir Flex 250

Measurement point	qv [m³/h]	pst [Pa]	P [W]	cos ϕ	SFP [Wh/m³]	Lw, supply/ exhaust [dB(A)]	Lw, extract/ outdoor [dB(A)]	Lw, casing [dB(A)]
1	100	25	13	0,39	0,13	51	33	35
2	150	50	29	0,45	0,19	55	38	40
3	175	50	36	0,46	0,21	57	40	42
4	200	100	55	0,49	0,28	61	43	46
5	250	100	77	0,51	0,31	65	47	50
6	200	150	65	0,50	0,33	62	44	48
7	200	200	76	0,51	0,38	64	46	49
8	250	200	99	0,53	0,39	67	49	53

*SFP in Wh/m³ calculated using data measured according EN13141-7:2010

Sound specifications

Sound (supply air/exhaust air)* ComfoAir Flex 250

Measurement point	125 Hz [dB(A)]	250 Hz [dB(A)]	500 Hz [dB(A)]	1 kHz [dB(A)]	2 kHz [dB(A)]	4 kHz [dB(A)]	8 kHz [dB(A)]	Total [dB(A)]
1	57	54	50	43	33	29	18	51
2	61	58	55	48	39	37	25	55
3	62	60	57	50	42	40	27	57
4	64	63	60	53	47	45	32	61
5	67	66	64	57	52	51	38	65
6	65	64	62	55	49	48	35	62
7	66	65	64	57	51	50	37	64
8	68	68	67	60	55	55	41	67

Sound (extract air/outdoor air)*

Measurement point	125 Hz [dB(A)]	250 Hz [dB(A)]	500 Hz [dB(A)]	1 kHz [dB(A)]	2 kHz [dB(A)]	4 kHz [dB(A)]	8 kHz [dB(A)]	Total [dB(A)]
1	41	34	34	24	11	12	18	33
2	44	38	39	29	16	16	18	38
3	46	39	41	31	18	18	19	40
4	48	42	44	34	21	20	19	43
5	50	45	48	38	25	23	19	47
6	49	43	46	36	23	21	19	44
7	50	44	47	38	25	23	19	46
8	52	47	50	41	28	25	20	49

Case radiation*

Measurement point	125 Hz [dB(A)]	250 Hz [dB(A)]	500 Hz [dB(A)]	1 kHz [dB(A)]	2 kHz [dB(A)]	4 kHz [dB(A)]	8 kHz [dB(A)]	Total [dB(A)]
1	41	34	34	24	11	12	18	33
2	44	38	39	29	16	16	18	38
3	46	39	41	31	18	18	19	40
4	48	42	44	34	21	20	19	43
5	50	45	48	38	25	23	19	47
6	49	43	46	36	23	21	19	44
7	50	44	47	38	25	23	19	46
8	52	47	50	41	28	25	20	49

*Lw in dB(A) reference 10^{-12}W
Casing radiation measured according to ISO 3741:2010
Supply noise and extract noise measured according ISO 5135:1997 (values include end duct correction)

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