

Use

The ComfoAir (CA) 350 ventilation unit was specially developed for use in residential and commercial buildings with high ventilation demand. It combines maximum comfort, simple operation and high efficiency with flexible integration into building services. The CA 350 ventilation unit moves 218 cfm of air at an external pressure of 0.80" wc.

Efficiency

The integrated cross-counterflow heat exchanger achieves efficiencies of more than 90%. 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 two supply and extract fans are driven by 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 218 cfm on the Zehnder CA 350.

Filters

The CA 350 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 CA 350 ventilation unit is characterised by its extra compact design. All air connections are located on the top. The air connections provide all the possible flexible connection options. The insulating, sound-absorbing pipe connections can be rotated to suit your needs, thus simplify installation of the ventilation tubes to the unit and simultaneously offer acoustic decoupling from the air distribution system.

Operation

The ventilation unit is controlled using a control unit commonly employed in living areas. The ComfoAir 350 is controlled by the CC-Ease control unit as standard.

Servicing

Servicing of the Zehnder ComfoAir CA 350 ventilation unit is limited to regular replacement and cleaning of the filter integrated in the front of the unit. The heat exchanger should be cleaned every 3-4 years depending on how dirty the outside air is. Please see the unit manual for additional servicing tasks.

Frost protection

If the ventilation unit is operated without a geothermal heat exchanger, the condensate in the extract air may freeze. The frost protection setting prevents this by variably reducing the supply air volume. Conventional units must reduce the supply air volume by an entire step from 26.6 °F or switch off the supply air completely. Optional electric preheater prevents the heat exchanger freezing even at the lowest temperatures.


ComfoAir 350

CC-Ease remote control

Remote-controlled unit

Bypass

During summer nights and in the transition periods with strong sunshine, the house often becomes too warm, while the outside air remains pleasantly cool. In such cases 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 recovery system. The Zehnder CA 350 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

- **Moisture recovery with the Zehnder enthalpy exchanger**
The Zehnder enthalpy plate exchanger provides a hygienic ideal solution for excessively dry air in winter. Not only heat, but also up to 65% of the moisture contained in the extract air is transferred from the extracted air to the supply air. Supply and extract air flows are kept completely separate so there is no transfer of odors or bacteria.
- **Pollen filter**
A large pollen filter installed in the supply air line keeps the inside of the house pollen-free and reduces the particulate, spore and germ load: breathe freely in times of increasing allergies.
- **Zehnder ComfoFond-L brine geothermal heat exchanger**
The Zehnder ComfoFond-L utilises the ground as passive storage via a brine loop. In summer, it transfers heat to the ground and in winter it withdraws heat again and uses it to preheat the supply air. A control unit is available as both an external and an internal controller.
- **Electric air heater and hot water postheater**
An external electric air heater or hot water postheater guarantees a defined supply air temperature, even in extreme climatic conditions and on systems without a geothermal heat exchanger. A control unit is available as both an external and an internal controller.
- **Wireless remote control**
More installation freedom. With the Zehnder wireless remote control the ventilation unit can be wirelessly controlled from several switches distributed throughout the house or flat.

Benefits

- Comfort ventilation up to 218 cfm
- Heat recovery with an efficiency of more than 90%
- Moisture recovery with the Zehnder enthalpy exchanger (optional)
- Low power consumption thanks to DC motors
- Automatic 100% summer bypass
- Frost protection function: Efficient even at low temperatures
- Quick, safe installation and servicing
- Simple operation
- Integrated preheater and humidity control (optional)
- Wireless remote control and filter replacement indicator
- Geothermal heat exchanger control
- Electrical and hot water postheater integration possible
- Small minimum air volume, specially designed for single family houses
- Digital Ease control unit
- CO₂ control (optional)

Ventilation unit

Zehnder ComfoAir 350

Article numbers

L = supply air left, R = supply air right, V = preheater
Luxe = advanced controls

Product	Article number	Reference number
ComfoAir 350 L Luxe	471 239 520	9244
ComfoAir 350 R Luxe	471 239 525	9245
ComfoAir 350 VL Luxe	471 239 540	9304
ComfoAir 350 VR Luxe	471 239 545	9452
ComfoAir 350 L Luxe Enthalpy	471 239 530	9246
ComfoAir 350 R Luxe Enthalpy	471 239 535	9247
ComfoAir 350 VL Luxe Enthalpy	471 238 540	9428
ComfoAir 350 VR Luxe Enthalpy	471 238 545	9429

Accessories

ComfoControl CC-Ease control unit	655 010 100	9257
Housing for surface mounting for CC-Ease control unit	659 000 250	9259
Wireless remote control	655 000 755	9238
ComfoAir 550 assembly base	642 300 140	9287

Filters

Filter for ComfoAir 350 G4 (MERV 7/8)	006 040 201	9240
Filter for ComfoAir 350 F7 (MERV 13)	006 040 211	9241

Description

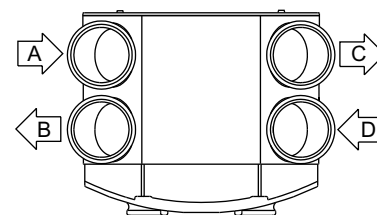
Comfort ventilation unit Zehnder ComfoAir 350

with plastic cross-counterflow heat exchanger, thermal efficiency of more than 90%, direct control in 1% increments variable supply and extract fans with EC direct current motors, automatically controlled, integrated 100% bypass, housing with rotating insulated pipe connections, maximum air volume 218 cfm at 0.4 in. w.c., H x W x D: 31.5" x 24.6" x 22.5", version left/right unit with preheater, CO₂ control, humidity, timer, postheater and geothermal heat exchanger possible.

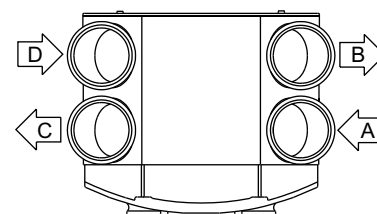
Air directions

The figures on the right show the air directions (top view).

- A = extract air
- B = supply air
- C = exhaust air
- D = outside air



Version supply air left (L)



Version supply air right (R)

Ventilation unit

Zehnder ComfoAir 350

Technical specifications

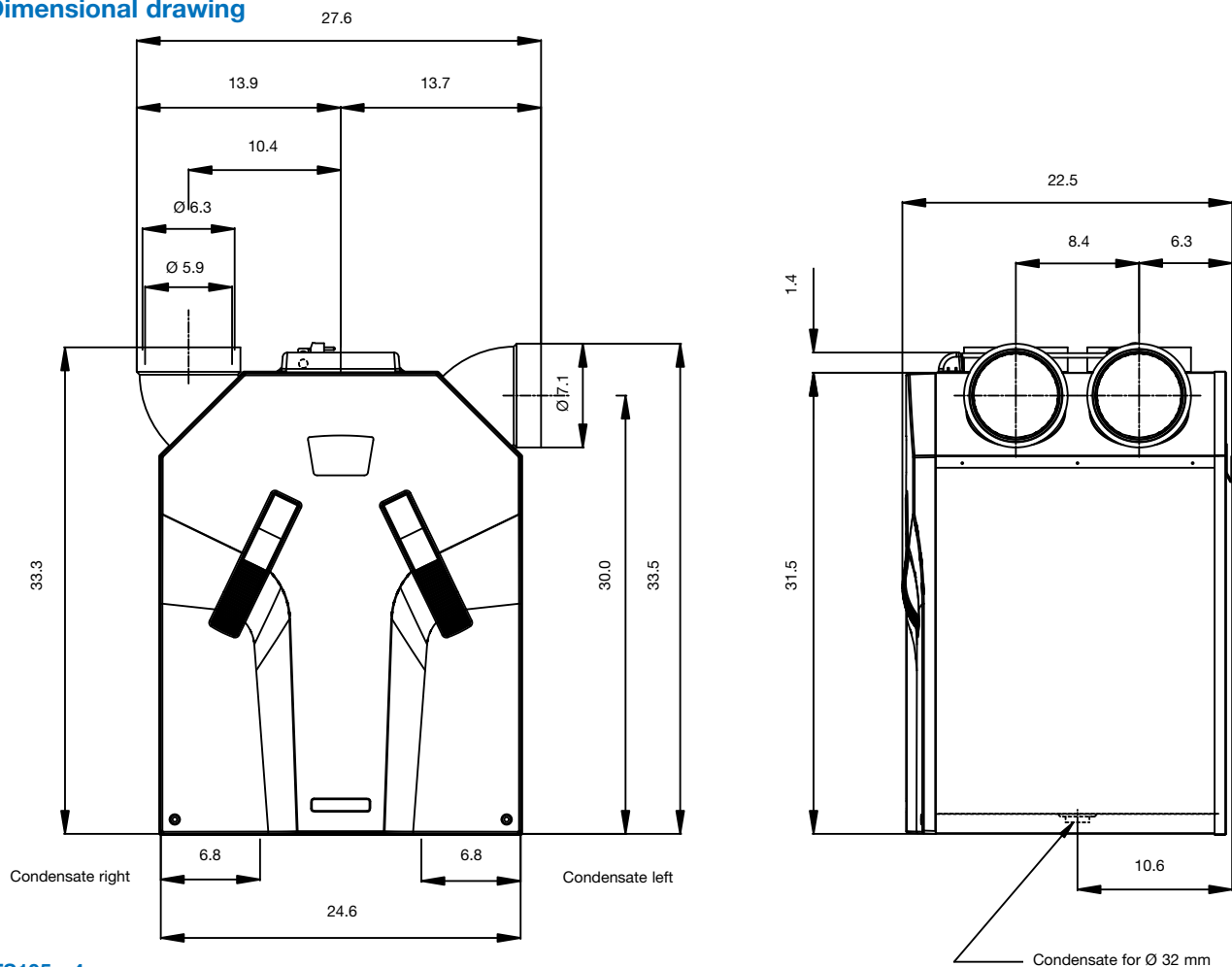
Dimensions

Height (")	31.5
Overall height (")	33.9
Width (")	24.6
Overall width (")	27.6
Depth (")	22.5
Electrical connection	230 V, 50-60 Hz

Specification

HR exchanger material	Polystyrene
Interior lining material	(E) PP / PA / PA
Thermal output	Up to 95 %
Weight	77.2 lb

Dimensional drawing



Ventilation unit

Zehnder ComfoAir 350

Certificates

- General Building Regulations [Germany] approval applied for
- HVI listed
- Passive House Certified

Equipment

Equipment	CA 350 Luxe	CA 350 V Luxe
Bypass	x	x
Preheater		x
Digital clock with weekly programme	x	x
Right-handed version	x	x
Pipe connections DN 150/160	x	x
Rotating pipe connections	x	x
Geothermal heat exchanger controller, NE, filter	x	x
Ready to plug in design	x	x
CC-Ease control unit	x	x
Wireless remote control unit (optional)	x	x

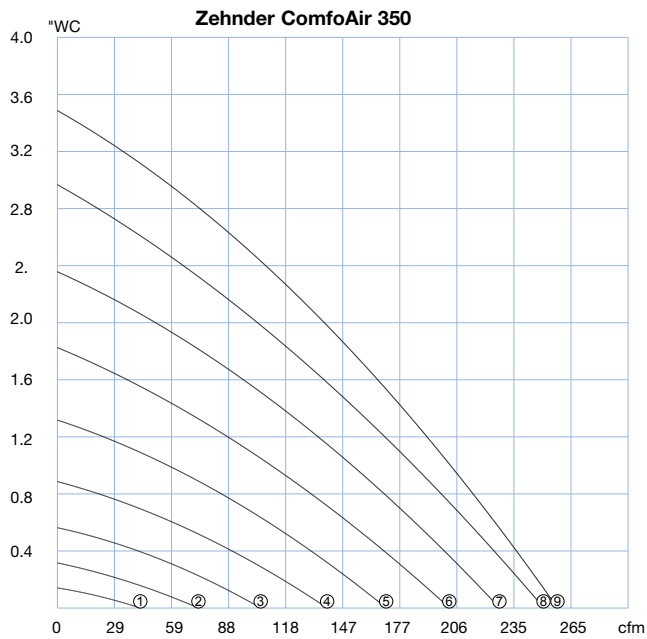
Function

- Frost protection function/automatic defrost
- Supply and extract air separate and infinitely variably programmable
- Switch on and off delay for bathroom switch
- Adjustable comfort temperature
- Controller for geothermal heat exchanger
- Controller for electrical air heater
- Controller for hot water postheater
- Fault indicator interface
- Filter replacement indicator
- Supply air + extract air can be switched off
- Fast heat-up (using postheater)
- Fireplace circuit

Ventilation unit

Zehnder ComfoAir 350

Switch setting	Speed	Air volume	Pressure	Power consumption	Current consumption	COS ϕ	Acoustic performance		Weight
Factory setting (speed)	%	Qv cfm	ΔP_{st} "WC	W	A	(-)	Extract air dB(A)	Supply air dB(A)	lb
ComfoAir 350									
(1)	15	24	0.016	10	0.08	0.50	34	32	77.2
(2)	30	59	0.080	17	0.13	0.57	37	45	
(3)	40	82	0.161	27	0.21	0.56	43	53	
(4)	50	106	0.261	44	0.35	0.55	47	59	
(5)	60	132	0.402	70	0.55	0.55	52	64	
(6)	70	153	0.562	105	0.81	0.56	54	68	
(7)	80	177	0.703	145	1	0.58	57	71	
(8)	90	191	0.863	198	1.42	0.60	59	74	



Technical specifications
Sound, supply air

Acoustic performance at the supply air connection at a distance of 0 ft

Ventilation unit								
Type	Speed	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
ComfoAir350	1	46	35	23	11	4	5	13
ComfoAir350	2	55	49	40	33	22	12	12
ComfoAir350	3	60	59	49	43	35	25	12
ComfoAir350	4	66	64	56	50	43	34	22
ComfoAir350	5	71	68	62	56	49	42	29
ComfoAir350	6	74	70	66	60	53	47	35
ComfoAir350	7	76	73	69	64	57	51	39
ComfoAir350	8	78	76	72	68	61	55	43
ComfoAir350	9	79	76	74	69	62	57	45

Sound, extract air

Acoustic performance at the extract air connection at a distance of 0 ft

Ventilation unit								
Type	Speed	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
ComfoAir350	1	50	34	3	23	10	7	12
ComfoAir350	2	51	41	30	30	12	7	12
ComfoAir350	3	53	49	39	39	22	10	11
ComfoAir350	4	55	54	45	45	29	19	7
ComfoAir350	5	57	56	51	51	34	25	13
ComfoAir350	6	60	60	54	54	38	29	19
ComfoAir350	7	63	61	57	57	42	33	23
ComfoAir350	8	65	64	59	59	44	36	27
ComfoAir350	9	65	65	61	61	46	38	29

Sound, unit emission

Ventilation unit							
Type	Speed	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	dB (A)
ComfoAir350	1	27	17	17	14	4	19
ComfoAir350	2	32	29	24	19	16	26
ComfoAir350	3	36	36	32	29	27	35
ComfoAir350	4	41	40	39	36	35	41
ComfoAir350	5	46	44	44	42	41	47
ComfoAir350	6	50	47	50	46	45	52
ComfoAir350	7	52	49	52	50	49	55
ComfoAir350	8	53	52	55	54	52	58
ComfoAir350	9	53	53	56	55	54	59

ZA-CSY-FLYERTS105, V1211, en_us, subject to changes

