

Application

Zehnder ComfoSpot 50 is a decentralised comfort ventilation unit with heat and humidity recovery using synchronous supply or extract air operation. It is often used in apartment renovations as well as in new residential builds. The comfort ventilation unit is suitable for venting individual rooms. An enthalpy exchanger, which ensures a high degree of heat and humidity recovery, is standard on the unit, which therefore provides a comfortable indoor climate, especially in winter.

Level of efficiency

The generously proportioned enthalpy exchanger, the core of the ventilation unit, functions particularly energy-efficiently. It uses both the sensitive and the latent energy in the extract air. Heat recovery of up to 82% and humidity recovery of up to 70% is possible. Using humidity recovery, the unit functions at temperatures as low as -5 °C without the need for a pre-heater or frost protection. This also saves energy and provides the best possible, comfortable indoor climate.

Fans

Supply and extractor fans are driven by energy-efficient EC direct-current motors. The high-quality radial fans are particularly resistant to wind loads. The unit operates very quietly due to the arrangement of the fans in the sound-insulated unit housing in the wall.

The fans can be set to any of four speeds.

Filters

Standard equipment on Zehnder ComfoSpot 50 includes G4 supply and extract air filters (coarse dust filters).

After the expiry of a certain interval, an indicator on the control panel visually indicates that the filter must be replaced. The filter should then be replaced as soon as possible.

A Class F7 pollen filter (optional) can be installed in the supply air inlet.

Installation

The comfort ventilation unit is installed in an outside wall. No condensate forms in the unit, therefore there is no condensate drain; the façade of the house always remains clean and dry. Installation of the unit is quick and easy. Two different wall installation tubes are available: either a round tube that is used for renovations and is inserted in the core hole of the outside wall, or a square tube that can be embedded in the wall. ComfoSpot 50 is inserted from inside the room. A 230 VAC mains power supply is connected behind the inside wall cover of the unit. After the insulated housing tube is adjusted, the weather-resistant outside wall panel is fixed to the outside wall. It is that easy to install the unit and have it ready for operation without great intrusion into the living space.



Zehnder ComfoSpot 50

Operation

Zehnder ComfoSpot 50 has a built-in control panel on the inside wall cover. Depending on where the unit is installed, this can be removed from the bottom of the unit and mounted on the top.

The control panel facilitates easy and uncomplicated control of the unit. By briefly pressing the plus/minus buttons, 4 fan speeds can be set or the unit can be switched off. To avoid heat recovery in summer, it is possible to select only supply air or only extract air.

Operating status, filter replacement and fault messages are indicated.

The unit has automatic frost protection regulation.

In the event of power failure, or when the unit is switched off, the supply and extract air opening is closed with the manually operated shutters.



Zehnder ComfoSpot 50 control panel

Maintenance

Routine maintenance of Zehnder ComfoSpot 50 is easy to carry out and should be performed regularly to keep the unit operating in a flawlessly hygienic manner.

After the cover is removed, the filters can be pulled out of the housing without tools. The enthalpy exchanger can also be pulled out of the unit in the same way and can be washed out with water.

Please see the user manual for information about servicing tasks.

Frost protection

Using the enthalpy exchanger for humidity recovery, the unit functions at temperatures as low as -5 °C without need of a pre-heater. Should the outside temperature fall below that level, frost protection is activated to regulate the supply of cold outdoor air. If the outside temperature falls further, the unit switches to standby mode at -15 °C. Unit operation is regulated by a temperature sensor. The unit begins to work automatically when the outside temperature rises again. Frost protection prevents the unit from freezing.

Benefits

- Enthalpy exchanger for especially good indoor climate and a high degree of energy efficiency
- Particularly quiet due to high-quality radial fans and good insulation
- Synchronous supply and extract air operation for continuous heat and humidity recovery
- Separate supply or extract air operation without heat recovery for summer ventilation
- Minimal intrusion into the living space
- Inside and outside wall panels can be painted over to match the colour of the wall
- Control panel on the bottom of the unit can also be mounted on the top
- No condensate to dispose of down the façade of the house and no condensate container
- Hygienically flawless, enthalpy exchanger is washable
- Simple and quick installation

Article numbers

Description	Article number
Zehnder ComfoSpot 50, plastic outside wall panel	527 005 370
Zehnder ComfoSpot 50, stainless steel outside wall panel	527 005 380

Accessories	
Round wall installation tube, made of plastic, Ø 315 mm, length = 600 mm, with 2 blanking plugs, for retrofitting	527 005 440
Square wall installation tube, made of EPP, 360 x 360 (W x H), length = 600 mm, with 2 blanking plugs, for new builds	527 005 450
Filter set for ComfoSpot 50, G4, 2 pieces	527 005 390
Filter set for ComfoSpot 50, F7/G4, 2 pieces	527 005 400
Filter set for ComfoSpot 50, G4, 10 pieces	527 005 410
Filter set for ComfoSpot 50, G4/F7, 10 pieces	527 005 420



Plastic inside and outside wall panel



Plastic inside wall panel and stainless steel outside wall panel

Scope of delivery

To install Zehnder ComfoSpot 50 into the wall, a wall installation tube is required which must be ordered separately. The unit is delivered ready to install with the chosen outside wall panel.

Tender specifications

Zehnder ComfoSpot 50 is a decentralised, compact ventilation unit with heat recovery and enthalpy exchanger. The ventilation unit is perfectly suited for use in the renovation of single- and two-family houses, vacation apartments, student accommodation and retirement homes, apartment blocks and new builds. The housing is made of high-quality plastic, the inside and outside wall panels can be painted over to match the colour of the wall. The unit housing is made of expanded polypropylene (EPP) to provide heat and sound insulation. The high-quality radial fans are driven by energy-efficient direct-current motors and are particularly resistant to wind loads. This enables economical operation with a high degree of electrical efficiency.

The core of Zehnder ComfoSpot 50 is its plastic cross-counterflow enthalpy exchanger. With heat recovery of up to 82% and humidity recovery of up to 70%, it ensures the maximum in energy recovery. No condensate forms in the unit. It functions at temperatures as low as -5 °C without need of a pre-heater or frost protection.

The control panel on the inside wall panel of the unit can be removed from the bottom of the unit and mounted on top if needed. This facilitates flexible unit installation. There is a choice of four fan speeds, supply air or extract air is possible and the unit can be switched off.

The control panel displays fault and filter replacement messages.

Zehnder ComfoSpot 50 is delivered ready to connect to the 230 VAC mains power supply with plastic outside wall panel.

The wall installation tube must be ordered separately. The filters are located at the front and can be easily replaced by the user without tools after removing the cover.

Zehnder ComfoSpot 50 is mounted in an outside wall and vents outdoor and exhaust air directly via the outside wall panel.

- Four fan speeds, manual selection
- Supply or extract air operation for summer ventilation
- Automatic frost protection controller
- Manual shutter fastener
- Time-controlled filter replacement indicator
- Fault indicator

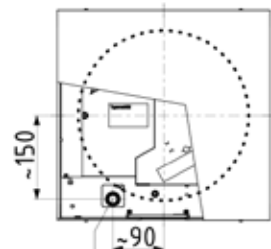
Option

- Class F7 pollen filter
- Unit with stainless steel outside wall panel
- Round wall installation tube, made of plastic, Ø 315 mm, length = 600 mm, with 2 blanking plugs, for retrofitting
- Square wall installation tube, made of EPP, 360 x 360 (W x H), length = 600 mm, with 2 blanking plugs, for new builds

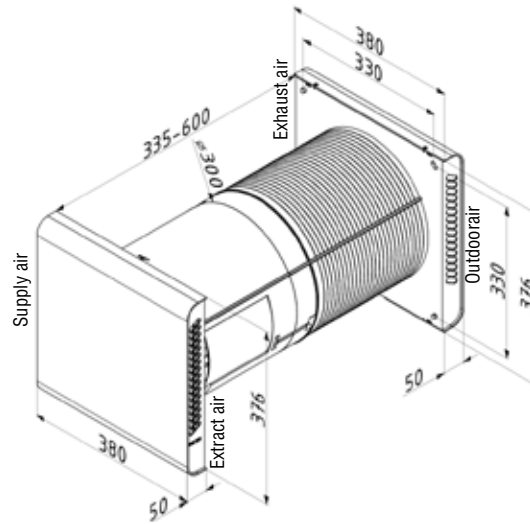
Technical specifications

Ventilation unit model	Decentralised comfort ventilation unit
Dimensions inside/outside wall panel (H x W x D)	376 x 380 x 50 mm
Outside wall thickness	Min. 335 to 600 mm
Wall installation tube	Ø 315 mm, 600 mm long
Core hole drilling	Ø approx. 340 mm
Fans	DC radial fan
Filter class	G4 supply/extract air (optional F7 supply air)
Heat exchanger	Cross-counterflow enthalpy exchanger
Wall panels	Inside/outside wall panel made of plastic that can be painted over
Unit core	Expanded polypropylene (EPP)
Electrical connection	230 VAC / 50–60 Hz
Max. current draw	0.07 A
Power consumption	5 W to 15 W (standby: < 1 W)
Shutters	Manually operated shutters for supply and extract air
Protection class	SELV Class II
Degree of protection	IP11
Volume flow	15–25–40–55 m ³ /h
Energy efficiency	Up to 82% heat recovery Up to 70% humidity recovery
Weight	6.0 kg
Application	-20 °C to 40 °C
Frost protection control	From -5 to -15 °C, unit then switches to standby mode
Control	4 fan speeds, unit off, supply or extract air operation, filter message, fault message

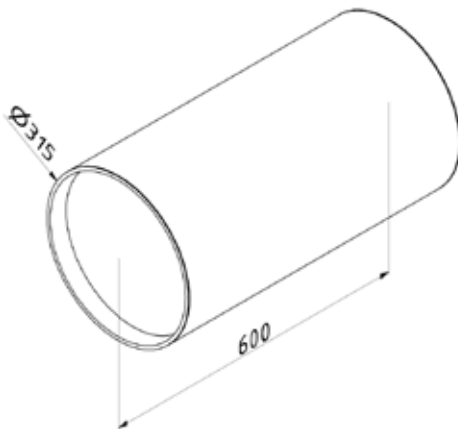
Dimensional drawing



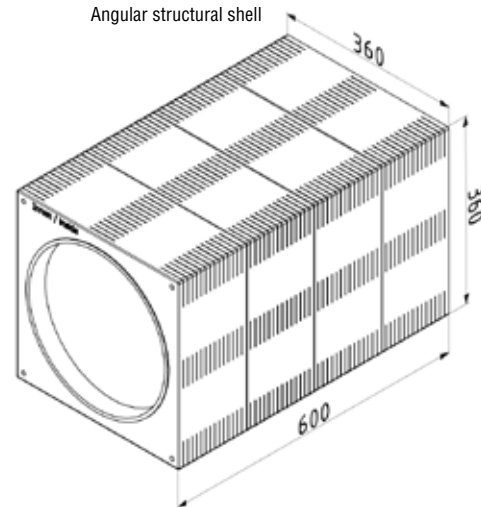
Introduction of mains cable



Round structural shell



Angular structural shell



Sound specifications

Noise level at a distance of 3 m, open space*

	Noise level
Resting state	
Fan speed 1	11.0 dB(A)
Fan speed 2	18.0 dB(A)
Fan speed 3	24.9 dB(A)
Fan speed 4	30.6 dB(A)

Sound transmission*

	Weighted sound reduction index R_w [dB]	Weighted normalised level difference D_n [dB]
Shutter open	30	48
Shutter closed	32	51


Operation data (manufacturer's specifications)

	Volume flow [m ³ /h]	Thermal efficiency [%]	Humidity efficiency [%]	Power consumption [W]
Resting state				< 1
Fan speed 1	15	81.8	69.6	5
Fan speed 2	25	75.2	58.4	7
Fan speed 3	40	67.7	48.2	12
Fan speed 4	55	63.5	44	15

* measured by independent test laboratory

Energy efficiency classes

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

Comfort ventilation unit	Article number	Manual control
ComfoSpot 50	527 005 370 527 005 380	

ComfoSpot 50 Declaration of Performance

Information requirement for RVUs as per EU Regulation No. 1253/2014 Zehnder heat recovery unit ComfoSpot 50												
Supplier name or trade mark	Zehnder Group											
Supplier's model identifier	ComfoSpot 50											
SEC in [kWh/(m ² *a)] for each applicable climate zone (cold, average, warm)	-62,6	-29,5	-7,9									
SEC class	A	B	F									
Type of ventilation unit	RVU, bidirectional											
Type of drive installed	multi-speed drive											
Type of heat recovery system ¹⁾	recuperative											
Thermal efficiency ²⁾	79%											
Thermal efficiency as per PHI ³⁾	-											
Maximum flow rate [m ³ /h] ⁴⁾	55											
Electric power input [W] ⁵⁾	15											
Sound power level (L _{WA}) [dB(A)] ⁶⁾	43											
Reference flow rate [m ³ /h] ⁷⁾	38,5											
Reference pressure difference [Pa]	0											
SPI [W/(m ³ /h)] ⁸⁾	0,30											
Control factor and control typology	1 manual control											
Declared maximum internal and external leakage rates [%] ⁹⁾	not yet determined											
Mixing rate ¹⁰⁾	not yet determined											
Position and description of visual filter warning	Symbolized message "filter run-time expired" on control panel											
Internet address for pre-/dis-assembly instructions	www.international.zehnder-systems.com											
Airflow sensitivity to pressure variations [%] ¹¹⁾	not yet determined											
Indoor/outdoor air tightness [m ³ /h] ¹²⁾	not yet determined											
AEC (in kWh electricity/a) for each climate zone (cold, average, warm)	16,2	10,8	10,3									
AHS (in kWh primary energy/a) for each climate zone (cold, average, warm)	78,7	40,2	18,2									

1) Type of heat recovery: recuperative or regenerative acc. EN 13141-7:2010 or acc. EN 13141-8:2014 for non-ducted units
2) Thermal efficiency at reference flow rate: acc. EN 13141-7:2010 or acc. EN 13141-8:2014 for non-ducted units
3) Heat recovery as per alternative standard (country-specific, e.g. as per PHI regulations, EN 308 for BE, or NEN 5138 for NL)
4) Maximum flow rate acc. EN 13141-7:2010; acc. EN 13141-8:2014 for non-ducted units
5) Electric power input at maximum flow rate
6) Noise emitted from housing at reference flow rate
7) Reference flow rate: 70 % of maximum flow rate (at 50 Pa acc. EN 13141-7:2010; at 0 Pa acc. EN 13141-8:2014 for non-ducted units)
8) As per EN 13141-7:2010 or EN 13141-8:2014 for non-ducted units each at reference flow rate
9) As per EN 13141-7:2010; as per EN 13141-8:2014 for non-ducted units
10) As per EN 13141-8:2014 for non-ducted units
11) As per EN 13141-8:2014 for non-ducted units: airflow sensitivity to pressure variations at +20 Pa and -20 Pa
12) As per EN 13141-8:2014 for non-ducted units
SPI: specific power input
SEC: specific energy consumption
AEC: annual electricity consumption
AHS: annual heating saved

CDE-FLYERTS127, V0116, en, subject to change without notice