

# Zehnder EVO 4

Technical data

always the best climate

## General features

Zehnder EVO 4 is an extremely high efficiency dual-flow controlled mechanical ventilation unit with constant flow rate.

Its compact design and slender thickness (just 27 cm) makes Zehnder EVO 4 ideal for mounting horizontal on false ceilings, in both new builds and renovation projects; it can also be installed vertically on walls.

The unit is available in sensitive exchanger (HRV) or enthalpy exchanger (ERV) versions, with or without electric preheater.

They can be controlled via a remote control unit, a building automation system or an app.

Zehnder EVO 4 combines to perfection with the Zehnder ComfoDew or Zehnder ComfoPost post-treatment systems and the Zehnder Multi Control device.

The choice of configurations available, and the wide range of optional filters, make Zehnder EVO 4 the ideal unit for maintaining optimal indoor comfort at all times of year.



## Characteristics

- Quick, straightforward, flexible installation horizontally in a ceiling or vertically on a wall, with no need to incline the unit to enable condensate drainage. The unit can easily be reversed during installation
- Constant-flow ventilation, quiet operation and low energy use
- High recovery efficiency and wide range of filters
- Automatic 100% bypass
- Monitoring and control via wired remote controls or wireless connectivity
- Can be combined with the Zehnder ComfoDew or ComfoPost post-treatment systems and the Zehnder Multi Control device
- Available in sensitive exchanger (HRV) or enthalpy exchanger (ERV) versions, with or without electric preheating

## Installation

Zehnder EVO 4 is quick, easy and safe to install.

Just 27 cm thick, Zehnder EVO 4 is ideal for installation in false ceilings and what's more it does not need to be inclined to enable condensate drainage. They can also be installed vertically on a wall, taking up very little space.

Their connections are adjustable, enabling easy, flexible hook-up to Zehnder distribution system.

Zehnder EVO 4 is also available in ERV version with enthalpy exchanger, which does not require a condensate drain.

The model with electric pre-heating, available for units with both sensitive and enthalpy heat exchangers, can meet the needs of any outdoor weather conditions.

## Supervision and control

Zehnder EVO 4 can be controlled via Zehnder wireless remote controls, connected to KNX or ModBus building automation systems or via Zehnder Multi Control unit.

These units combine to perfection with the Zehnder ComfoDew and Zehnder ComfoPost post-treatment systems.

Last but not least, CO<sub>2</sub> and air relative humidity sensors are available for "on demand" automatic operation.

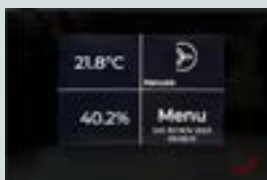
*EVO Sense, RF LCD control*



*EVO Switch, RF control*








*Zehnder Multi Control and Multi Controller App*



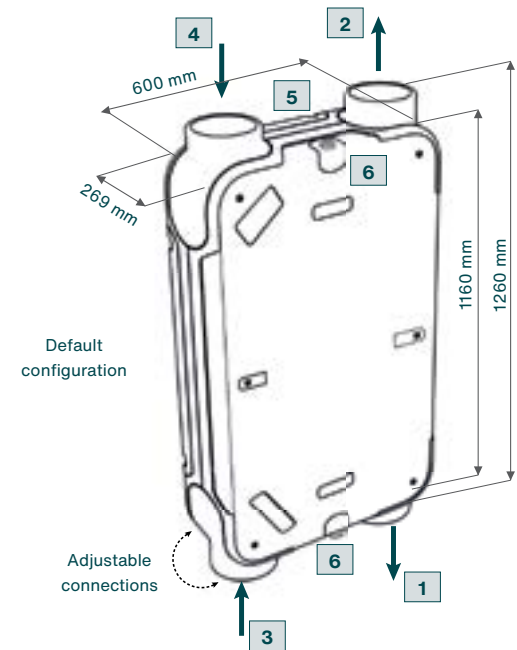
## Other benefits

- Its outstanding performance enables its application for air exchange in apartments requiring flow rates up to 400 m<sup>3</sup>/h.
- Silent operation in any residential context, thanks to centrifugal fans and particularly effective insulation.
- Low operating cost: the high-efficiency fans guarantee energy saving.
- Simple, safe air distribution:
  - thanks to DN 160 adjustable fittings, the unit is easily connected to the Zehnder distribution system;
  - connections between components are airtight thanks to seals in all fittings.
  - Zehnder vents, grilles and valves guarantee optimal air delivery and extract.
  - Zehnder's wide range of single or combined external grilles enables effective intake of external air and stale air exhaust in all conditions, while still meeting all facade design needs.
- Achieving an ideal indoor climate is easy thanks to balanced flow and extract, with a choice of sensitive (HRV) or enthalpy (ERV) exchanger, with heat and humidity recovery.
- Comfort during even the coldest winters, with no interruption in air delivery and no risk of exchanger freezing with the Zehnder EVO 4 PR models, with electric preheater.

Technical specifications

Zehnder EVO 4						
Dimensions (Length x Width x Depth)		1160 x 600 x 269 mm				
Weight		39 kg				
Installation		Horizontally in ceiling or vertically on wall				
Condensate drain connection (Ø)		1/2"				
Size of aeraulic connections (Ø)		Ø 160				
Mains voltage		230 V / 50 Hz				
Maximum air flow rate		400 m³/h				
Standard filters		2x ISO Coarse 65 % (G4) for flow and extract				
Optional filters		ISO ePM1 55% (F7) / ISO Coarse 65 % (G4) for flow and extract				
Default flow rate settings						
EVO Sense remote control		0	1	2	3	Boost
Ventilation flow rate (m³/h)		180	275	300	350	400

Configurations and installation




Symbol	Meaning
1	Flow of fresh air into apartment
2	Exhaust of stale air outdoors
3	Extraction of stale air from apartment
4	Intake of fresh air from outdoors
5	Electrical connections
6	Condensate drain *

\* Connection to the condensate drainage system is necessary for EVO 4 HRV and EVO 4 HRV PR units.

Wall units can be installed with the electrical connectors facing upwards; units with HRV exchanger can ONLY be installed in “mirror mode” configuration, i.e. with outdoor air intake and air exhaust outlet facing downwards. Units with preheater can only be installed in the default configuration.

Installation in false ceiling



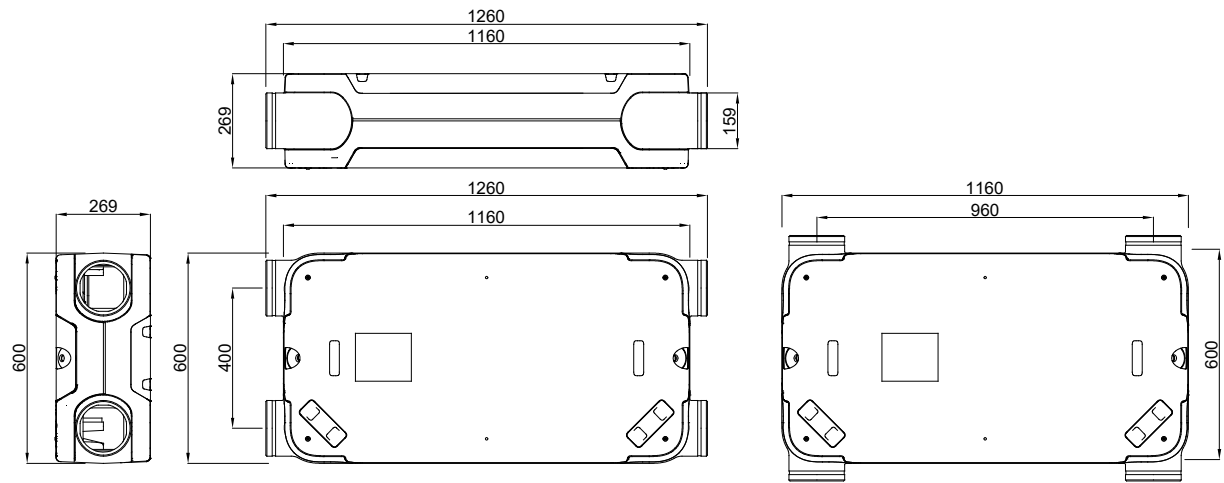
27 cm thick

Horizontal or vertical installation

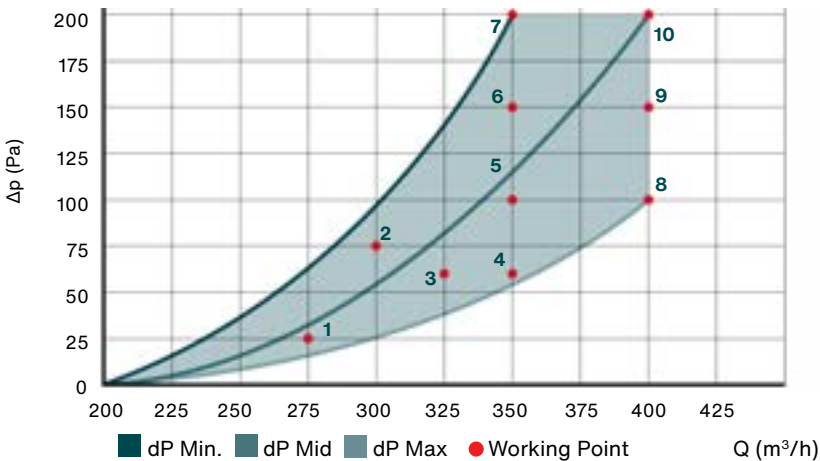
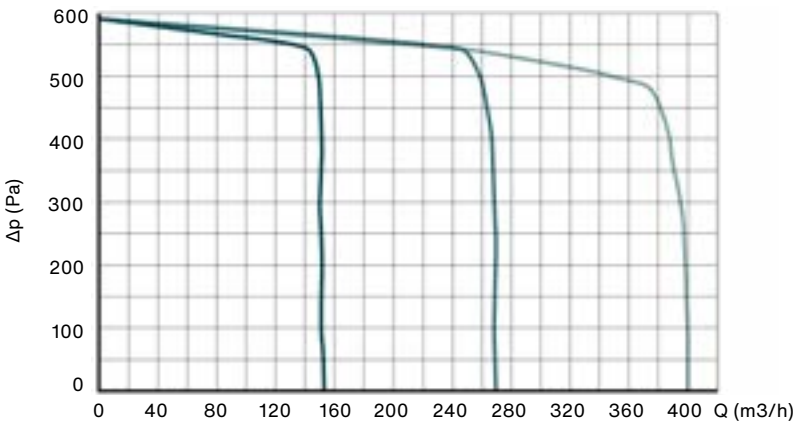
No inclination required

Unbeatable flexibility with adjustable connections

Dimensions



Flow rate - pressure drop graph



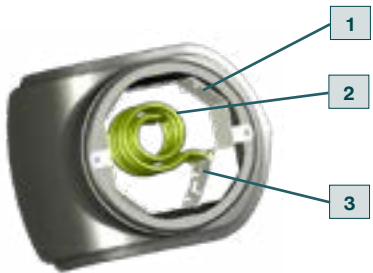
Working points

Point	Flow Rate [m³/h]	Pressure [Pa]	Power [W]	SFP [W/l/s]
1	275	25	86	1.13
2	300	75	122	1.46
3	325	60	143	1.58
4	350	60	168	1.73
5	350	100	162	1.67
6	350	150	192	1.97
7	350	200	234	2.41
8	400	100	235	2.12
9	400	150	257	2.31
10	400	200	280	2.52

Electric preheating (only for EVO 4 HRV PR and EVO 4 ERV PR)

The electric preheater is installed as standard on EVO 4 HRV PR and EVO 4 ERV PR models, on the outdoor air inlet fitting. It increases the incoming air temperature by 10 °C, protecting the recovery unit on the coldest days of the year.

1. Heating elements in AISI304L stainless steel
2. Power 1 kW
3. Automatic cutout at 40 °C prevents overheating



## Acoustic data

Sound levels			
Reference flow rate	(m <sup>3</sup> /h)	275	
Reference head	(Pa)	50	
Sound power Lw (A)	Unit noise output	(dB(A))	45
	Extract duct	(dB(A))	47
	Flow duct	(dB(A))	59
Sound pressure Lp (A) at 1.5 m	Unit noise output	(dB(A))	30

## Energy efficiency classes

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

Energy data	
EU energy consumption label for EVO 4 HRV	
Energy efficiency class	<b>A<sup>+</sup></b> **
Maximum volume air flow rate [m <sup>3</sup> /h]	400
Certified energy efficiency	88.3%
Sound power level LWA dB(A)	49

\*\* depending on the control unit/type of sensors chosen.

Energy data	
EU energy consumption label for EVO 4 ERV	
Energy efficiency class	<b>A</b> **
Maximum volume air flow rate [m <sup>3</sup> /h]	400
Certified energy efficiency	71%
Sound power level LWA dB(A)	49

## Product code and accessories

Comfort ventilation unit	Article number
Zehnder EVO 4 HRV	471 100 013
Zehnder EVO 4 HRV PR	471 100 014
Zehnder EVO 4 ERV	471 100 015
Zehnder EVO 4 ERV PR	471 100 016

Filters	Article number
Set of filters for Zehnder EVO 4: ISO Coarse ≥ 65% (G4/G4) (contains 2 filters)	471 100 066
Set of filters for Zehnder EVO 4: ISO ePM1 ≥ 55% and ISO Coarse ≥ 65% for flow and extract (F7/G4) (contains 2 filters)	471 100 067

Unit control accessories	Article number
Zehnder EVO Sense RF	471 100 018
Zehnder EVO Switch RF	471 100 017
RF CO <sub>2</sub> sensor	471 100 022
RF humidity sensor	471 100 023
EVO Connect ModBus	471 100 024
EVO Connect Modbus / KNX	471 100 020
Zehnder Multi Control	399 000 200
Zehnder Multi Control Black	399 000 201

Other accessories	Article number
Dry siphon	471 100 021

