

- Decorative radiators ■ Comfortable indoor ventilation
- Heating and cooling ceilings ■ Industrial air cleaning

# Zehnder EVO 4

**zehnder**

EN

EN Quick Guide



**always the best climate**

## Zehnder EVO 4 ventilation unit


Refer to the full installation and use manuals for additional information and instructions. To download them, scan the QR codes at the back of this quick guide.

Zehnder EVO 4 is a centralised mechanical ventilation unit with high-efficiency recovery unit (recovery of heat alone in HRV units, recovery of heat and humidity in ERV units) which expels stale air while simultaneously supplying fresh air to rooms.

It can be installed in homes, offices and similar locations.

### Safety instructions - General notes

- Zehnder EVO 4 can only be used if it has been installed by a specialist engineer in accordance with current regulations and the instructions provided in the full installation manual.
- Do not open or modify the ventilation unit. Physical or software changes cause the loss of warranty cover and may lead to malfunctions or personal injury.
- Do not start up the ventilation unit when open: the electrical voltage and the movement of the fans may cause personal injury.

 **Unless otherwise required in this manual, keep the unit operating at all times. Otherwise, damp may build up and mould may form.**

 **WARNING! Hazardous electric voltage.**

- In the event of a natural disaster, disconnect the power supply.

 **Safety instructions - Installation**

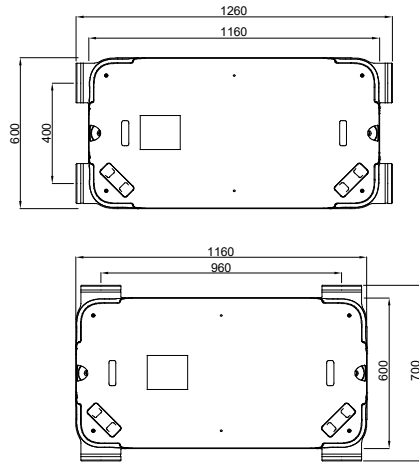
- Always comply with general and local regulations with regard to building construction, safety and installation. Install a safety circuit breaker for disconnection of the power supply. Comply with the instructions provided in the installer manual.
- Connected to a 230 V - 50 Hz mains power supply; a circuit breaker should be installed.
- Install the unit in a location where the temperature and humidity are always within the range specified in the installation manual.
- Do not install in locations with saunas or swimming-pools, excessive humidity, excessive dust or harmful or potentially corrosive substances.
- Check that there is sufficient space for the air distribution system in the installation area. Leave the ventilation unit completely accessible to enable maintenance procedures.

## Installation

**⚠️ Disconnect the power supply.**

Check the spaces available before starting installation.

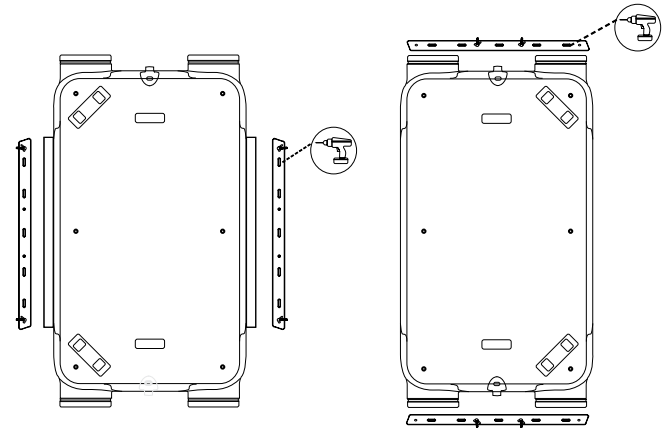
The fittings for connection to the distribution system can be turned through 90°. Follow the instructions provided in the installation manual.



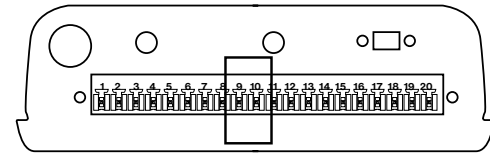
Handle the Zehnder EVO unit with care. Two people are always required to lift the unit. Do not lift the unit by the fittings as this may damage them.

Open the top of the cardboard packaging. Lift the ventilation unit and place it on a clean, soft surface. Use the cardboard box as template for drilling the holes required for installation.

The brackets supplied can be used on either the long or the short side of the unit. In the latter case, the supports already installed on the unit have to be moved to new positions. Refer to the installation manual.

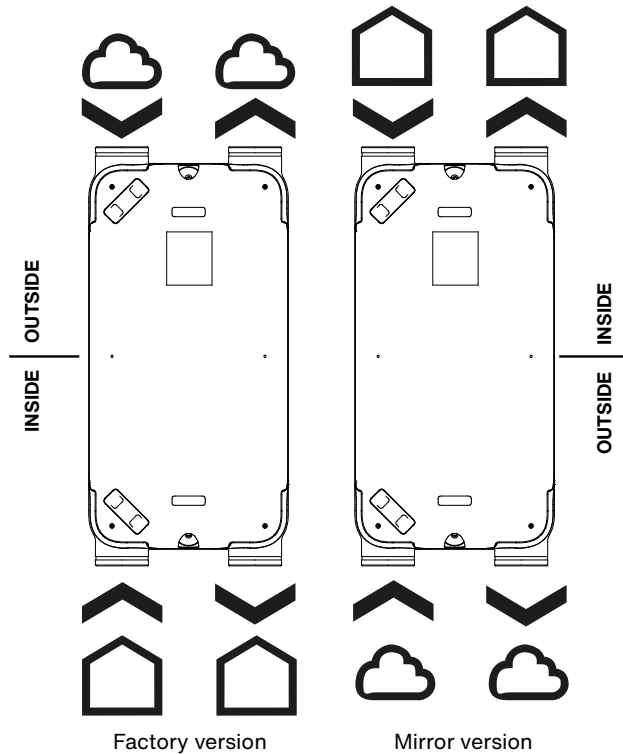


The unit can be ceiling-mounted in the default “factory version” or in “mirror version”, obtained by placing a jumper over connectors 9 and 10.



When ceiling-mounted, the unit must NOT be sloping; it must be levelled.

**!** This diagram **ONLY** applies for ceiling-mounting



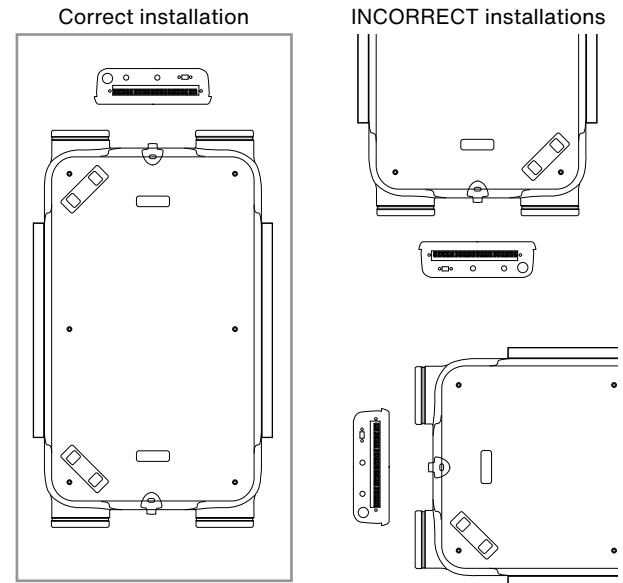
**IMPORTANT!**

Modification of the model from right-hand to left-hand "Mirror version" is **NOT** possible for models: EVO 4 HRV PR and EVO 4 ERV PR

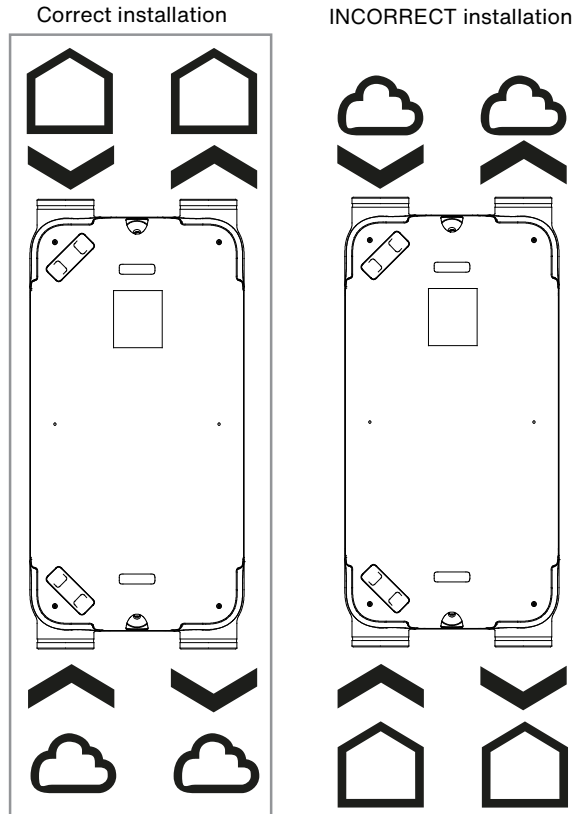
**!** For wall-mounting, the following instructions **MUST** be complied with.

The unit must be installed vertically, and levelled on the vertical plane, to enable effective condensate drainage.

The unit must only be installed with the control board connector facing upward.



The HRV unit must **ONLY** be installed in “mirror version”, with the outside air inlet and stale air outlet connection point facing downward



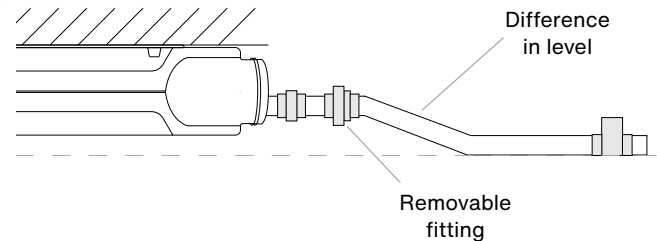
### Installing the condensate drain

Zehnder EVO 4 HRV and Zehnder EVO 4 HRV PR units must be connected to a condensate drain system with unobstructed flow, protected from frost.

Screw the 1/2" male threaded siphon (not included in the supply package, must be ordered separately) onto the unit's condensate drain fitting. Install the siphon so that it can easily be removed during maintenance.

The unit's condensate drain connection may be pointing horizontally or downwards.

In the event of horizontal installation, the gradient of the condensate drain system must not be horizontal or towards the unit.

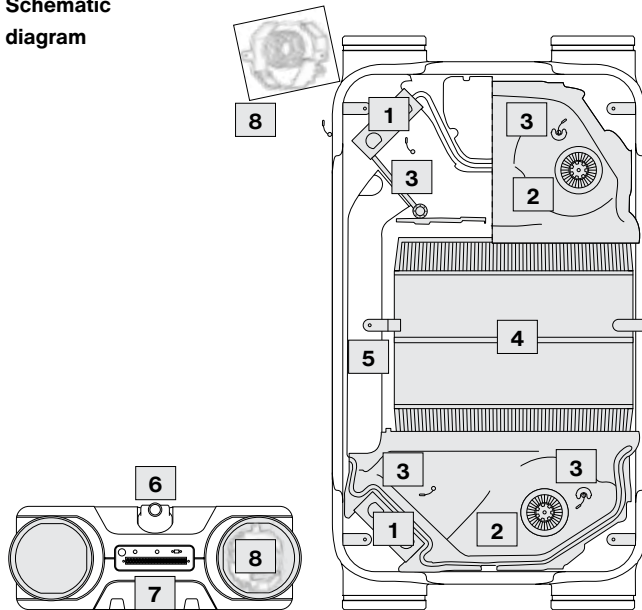


**In EVO 4 HRV and EVO 4 HRV PR units only one condensate drain is connected; the other one must be plugged.**

**In EVO 4 ERV and EVO 4 ERV PR units both condensate drains must be plugged.**

**The plugs are supplied.**

## Schematic diagram

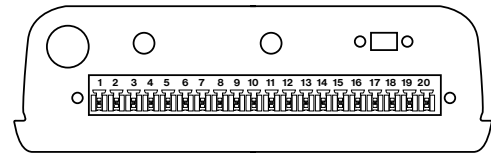


1	High-performance filters
2	Energy-saving fans
3	Temperature sensors
4	High-efficiency heat exchanger
5	Automatic bypass
6	Condensate drain
7	Electrical connections
8	Electric preheater (in HRV PR and ERV PR versions)

## Control accessories

The unit is supplied WITHOUT control accessories. Refer to the user manual or installation manual for the accessories available.

The following is an overview of the electrical connections



1	Home automation - 10 V	11	Not used
2	Home automation - 0 V	12	Selector switch 1V common
3	Home automation - volt free contact	13	Selector switch 2V
4	Home automation - volt free contact	14	Selector switch 3V
5	Not used	15	Preheater 230 V output (**)
6	Not used	16	Preheater ground output (**)
7	After-heater 10 V output (*)	17	Preheater neutral output (**)
8	After-heater 10 V output 0 V (*)	18	Not used
9	"Mirror mode" NO/NC (*)	19	Not used
10	"Mirror mode" NO/NC (*)	20	Not used

(\*) Pin not used on models Zehnder EVO 4 HRV PR and Zehnder EVO 4 ERV PR

(\*\*) In models with preheater included as standard, these pins are used for the after-heater (optional) and not for the preheater

## Declaration of performance – Zehnder EVO 4 HRV / EVO 4 HRV PR

Release data: 15/11/2024

## Product Datasheet According to Regulation (EU) NO.1254/2014 – ANNEX IV

Supplier's name or trade mark	Zehnder Group			Zehnder Group			Zehnder Group					
Supplier's model identifier	Zehnder EVO 4 HRV / EVO 4 HRV PR			Zehnder EVO 4 HRV / EVO 4 HRV PR			Zehnder EVO 4 HRV / EVO 4 HRV PR					
SEC [kWh/(m <sup>3</sup> a)] specific energy consumption (cold, average, warm)	-65,9	-39,8	-13,3	-66,7	-40,5	-13,8	-68,2	-41,7	-14,8	-71	-43,8	-16
SEC class (cold, average, warm) climate	A+	A	E	A+	A	E	A+	A	E	A+	A+	E
Typology of unit of ventilation	UVR bidirectional											
Typology of drive installed	Multi-speed control			Multi-speed control			Variable speed control			Variable speed control		
Type of heat recovery system	Heat Recovery Static			Heat Recovery Static			Heat Recovery Static			Heat Recovery Static		
Thermal efficiency [%]	88,3			88,3			88,3			88,3		
Maximum flow rate [m <sup>3</sup> /h]	400			400			400			400		
Electric power input of the fan drive [W]	236,6			236,6			236,6			236,6		
Level of power acoustics (LWA) [dB(A)]	49			49			49			49		
Reference flow [m <sup>3</sup> /h]	280			280			280			280		
Reference pressure difference [Pa]	50			50			50			50		
Specific Power Input of reference flow (SPI) [W/(m <sup>3</sup> /h)]	0,34			0,34			0,34			0,34		
Control factor and typology installed or destined tube installed	"1 Manual control"			"0,95 Timer"			"0,85 Control environmental centralized"			"0,65 Control of demand local"		
Maximum internal and external leakage rate declared [%]	Internal: 2,7 External: 4,2			Internal: 2,7 External: 4,2			Internal: 2,7 External: 4,2			Internal: 2,7 External: 4,2		
Position and description of the warning of the filter visual	Warning in the screen of the unit or controller of hall			Warning in the screen of the unit or controller of hall			Warning in the screen of the unit or controller of hall			Warning in the screen of the unit or controller of hall		
Internet address for technical documentation	www.zehnder.it			www.zehnder.it			www.zehnder.it			www.zehnder.it		
Annual electricity consumption by climate (cold, average, warm) per surface area of 100 m <sup>2</sup> (AEC) [kWh/a]	1008	471	426	966	429	384	890	353	308	762	225	180
Annual heating savings in a (cold, average, warm) climate for an apartment with a surface area of 100 m <sup>2</sup> (AHS) [kWh/a]	7600	4454	1757	7638	4477	1765	7714	4521	1783	7870	4611	1820

**Important notice**

Ensure there are air filters to keep the recovery unit's energy efficiency high, and regularly carry out cleaning and replacement maintenance. Read the instructions in the use and maintenance manual.

**Warning**

Always ensure a filter is used. To prevent reduced effectiveness of your energy recovery ventilation, be sure to clean dirt and dust from the filter and heat exchange element at regular intervals. See the operating instructions manual.

## Declaration of performance – Zehnder EVO 4 ERV / EVO 4 ERV PR

Release data: 15/11/2024

## Product Datasheet According to Regulation (EU) NO.1254/2014 – ANNEX IV

Supplier's name or trade mark	Zehnder Group			Zehnder Group			Zehnder Group					
Supplier's model identifier	Zehnder EVO 4 ERV / EVO 4 ERV PR			Zehnder EVO 4 ERV / EVO 4 ERV PR			Zehnder EVO 4 ERV / EVO 4 ERV PR					
SEC [kWh/(m <sup>3</sup> a)] specific energy consumption (cold, average, warm)	-60,7	-28,0	-6,3	-62,7	-29,6	-7,6	-66,5	-32,6	-10,5	-73,5	-37,8	-14,2
SEC class (cold, average, warm) climate	A+	B	E	A+	B	E	A+	B	E	A+	A	E
Typology of unit of ventilation	UVR bidirectional											
Typology of drive installed	Multi-speed control			Multi-speed control			Variable speed control			Variable speed control		
Type of heat recovery system	Heat Recovery Static			Heat Recovery Static			Heat Recovery Static			Heat Recovery Static		
Thermal efficiency [%]	71			71			71			71		
Maximum flow rate [m <sup>3</sup> /h]	400			400			400			400		
Electric power input of the fan drive [W]	236,6			236,6			236,6			236,6		
Level of power acoustics (LWA) [dB(A)]	49			49			49			49		
Reference flow [m <sup>3</sup> /h]	280			280			280			280		
Reference pressure difference [Pa]	50			50			50			50		
Specific Power Input of reference flow (SPI) [W/(m <sup>3</sup> /h)]	0,34			0,34			0,34			0,34		
Control factor and typology installed or destined tube installed	"1 Manual control"			"0,95 Timer"			"0,85 Control environmental centralized"			"0,65 Control of demand local"		
Maximum internal and external leakage rate declared [%]	Internal: 0,6 External: 0,3			Internal: 0,6 External: 0,3			Internal: 0,6 External: 0,3			Internal: 0,6 External: 0,3		
Position and description of the warning of the filter visual	Warning in the screen of the unit or controller of hall			Warning in the screen of the unit or controller of hall			Warning in the screen of the unit or controller of hall			Warning in the screen of the unit or controller of hall		
Internet address for technical documentation	www.zehnder.it			www.zehnder.it			www.zehnder.it			www.zehnder.it		
Annual electricity consumption by climate (cold, average, warm) per surface area of 100 m <sup>2</sup> (AEC) [kWh/a]	1033	496	451	989	452	407	908	371	326	773	236	191
Annual heating savings in a (cold, average, warm) climate for an apartment with a surface area of 100 m <sup>2</sup> (AHS) [kWh/a]	7779	3977	1798	7870	4023	1819	8051	4115	1861	8412	4300	1944

**Important notice**

Ensure there are air filters to keep the recovery unit's energy efficiency high, and regularly carry out cleaning and replacement maintenance. Read the instructions in the use and maintenance manual.

**Warning**

Always ensure a filter is used. To prevent reduced effectiveness of your energy recovery ventilation, be sure to clean dirt and dust from the filter and heat exchange element at regular intervals. See the operating instructions manual.



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