

# Zehnder Eversky



Technical specification for air handling units

always the best climate

## General

The Zehnder Eversky range creates a healthy and comfortable learning environment, ideal for classroom and nursery applications.

Its compact design, standard equipped ePM1 55% filters on both sides and low sound production support this intention. Air flow rates vary from 150 up to 1,100 m<sup>3</sup>/h and a programmable weekly/vacation clock function boost ventilation when requested, e.g. for breaks between classes. The highly efficient heat recovery technology does not require windows to be opened and make Zehnder Eversky the perfect solution for school refurbishment projects.

All necessary components are factory-fitted and pre-programmed according to the selected configuration. This allows for easy plug-and-play installation. Zehnder Eversky is available in 4 sizes and can be mounted on a ceiling or semi-flush mounted in a false ceiling for quick and easy room-by-room installations, without creating a network.

The Zehnder Eversky range is based on 4 patented innovations for more performance and ease of installation:

- Patented support frame for quick and easy installation
- Patented removable panels for safe handling and a wide choice of airflow configurations
- Patented internal check valve principle to isolate the unit from outside air in case of shutdown
- Mobile and articulated hinges open from the bottom for easy maintenance and quick access to filters and all components of the unit.



Touch screen remote control

LCD remote control



## User benefits

- 4 different unit sizes with volume flows from 150 m<sup>3</sup>/h to 1,100 m<sup>3</sup>/h allow application in a variety of classroom sizes and offers multiple refresh rates dependent on classroom occupancy.
- Due to its flat design, the unit offers the flexibility of installation on ceiling and in suspended ceilings, especially in school renovation situations.
- Temperature and CO<sub>2</sub> control for optimal comfort and adapted air change management.
- Low noise level for better acoustic comfort. The fans are acoustically treated and casing insulated to guarantee the most efficient sound level of this category of equipment: <35 dB(A) at 1 m at high speed.
- Optimum air quality thanks to high-quality ePM1 55% filters as standard on both outdoor and extract air. Double stage filtration option on supply to ePM1 80% for higher indoor air quality.
- Aluminum counterflow heat exchangers with high thermal efficiency up to 90% (EN308) provide extremely efficient system operation.

## Features and functions

The unit is equipped as standard with an EASY control system, communicating in Modbus or BACnet (choice of language can be activated locally). It has an LCD display for easy commissioning and maintenance.

- 100% bypass, internal to the unit, equipped with actuators automatically controlled by the integrated control system to manage the free-cooling and night-cooling functions (night over-ventilation with adjustable flow rate).
- To ensure optimal and controlled indoor air quality according to use, the Zehnder Eversky unit is equipped with flow modulation:  
DIVA: Proportional modulation of the flow rate of each fan according to the CO<sub>2</sub> level. Sensor integrated into the unit at the extraction point.
  - Internal time switches for dual-flow operation, programmable locally as required.
  - Weekly time switch and holiday switch.
- Supply air filter contamination pressure switch with fault return on the control housing. Timer for scheduled periodic filter changes.
  - Air flow control switch on each fan with fault indication on control casing.
- Lockable proximity switch on the faceplate.
- Fire safety function to control the supply and extract fans based on 5 modes available in the control unit parameters (function can be activated locally). An alarm will then be displayed in the „Fire Alarm“ screen:
  - „Stop“: Complete stop of the ventilation unit.
  - „Permanent operation“ Starts or maintains the unit in HS. The fire function will take precedence over any other alarm.
  - „Auto“: Keeps the unit running according to the settings entered locally (Off/LS/HS).
  - „Supply fan only“: Starts or keeps the supply fan at high speed (air extraction off).
  - „Extraction fan only“ Starts or keeps the extraction fan at high speed (supply fan off).

The Zehnder Eversky unit also has a digital „Remote Stop“ function which enables local connection to a manual controller.

In this case, the external controller has priority over the fire safety system, which may be activated by one of the 5 modes above.

## More User benefits

- **Direct-driven, backwards-curved fans with very low energy consumption, equipped with EC motors and overheating protection ensure a safe and efficient operation.**
- **Optional post-heating with electric or hot water heating coil and completed with an electric pre-heating element for application in colder climates.**
- **Factory-fitted with Modbus, BACnet or WEB communication (choice on site).**
- **L1 (leakage classification), T3 (thermal transmission) and TB3 (thermal bridges) according to EN1886.**
- **Fully Eurovent-certified and complies with the ErP2018 requirements.**

## Application

- Self-regulating, decentralised, very high efficiency and high performance ventilation and energy recovery in room-by-room installations. Particularly suitable for renovation, no network required: classrooms, nurseries, offices and shops. Numerous air inlet/outlet configurations possible (top, rear and/or sides).
- Thermal efficiency above 90% (EN308). Air filtration, temperature and CO<sub>2</sub> control.
- One-piece, compact, extra-flat, plug-and-play unit for quick and easy installation.

## Range

Available in 4 models, the Zehnder Eversky range covers flow rates from 150 to 1,100 m<sup>3</sup>/h.

The Zehnder Eversky range is available in 2 finishes: PREMIUM: Equipped with either a hot water coil or an electric element for outdoor temperatures down to -10°C.

INFINITE: same as PREMIUM finish with an electric pre-heating element as standard for outdoor temperatures down to -20°C.

Enjoy all the performance of the Zehnder Eversky with hot water coil at the desired operating point in our online Softwair tool. Maximum pressure drop 30 Pa at nominal flow rate, delivery air temperature >23°C for INFINITE, hot water coil version at -15°C outside.

## Set-up

- Eurovent certified Airflat bodywork: D2/L1/L1/F9/T3/TB3. Double skin panels with a thickness of 1 mm.
- Insulation: high density M0 mineral wool 25 mm - 60 kg/m<sup>3</sup> A2-S1. Outside: pre-painted sheet metal, white RAL9010, with protective film. Inside: galvanised steel sheet.
- Round unit connectors with lip seals to ensure the air tightness of the networks (ATEC CSTB no. 13-224-12). Removable panels allow for numerous air inlet/outlet configurations. This removable panel system is patented. It enables installation suitable for the installation configurations, facilitates the assembly of the unit, protects the connectors during transport and handling, and provides a patented mounting frame for simplified ceiling installation.
- EASY technical compartment containing the electrical components and the control system.
- Access through a panel mounted on mobile and articulated hinges following a patented principle, opening from below for easy maintenance and quick access to filters and all the components of the unit. Inclined and removable condensate tray means that the unit can be installed without inclination, condensate drainage by capillary action or with a condensate pump (optional).

- Internal bypass 100%, self-regulating and modulating (0-100%), motorised, integrated air law.
- Patented internal flap system allowing the isolation of the unit from the outside air in case of shutdown.
- Long-span double deflection supply grille in the body colour white RAL9010.

## Motorised fans

- Direct drive DC motor fans with high-efficiency electronic commutation (EC), integrated thermal protection and speed variation. EC technology is an energy-efficient solution that guarantees low energy consumption for the management, control and monitoring of the operating point (flow rate regulation from 10 to 100%).
- Low noise level for improved acoustic comfort. Specific treatment of the fans with attenuators to guarantee the best sound level in this category of equipment: <35 dB(A) at 1 m at high speed.

## Heat exchanger

High-efficiency static counterflow heat exchanger made of aluminium plates. Efficiency above 90% (EN 308). Automatic cascade pre-heating by internal bypass 100%, self-regulating and modulating (0-100%) opening of the bypass, then by self-regulating electric pre-heating coil for the INFINITE version and finally by modulation of the supply air volume.

## Filters

As standard, the Zehnder Eversky unit is fitted with ePM1 55% (F7) opacimetric filter (large filter surface) on the supply air and ePM10 50% (M5) filter on the extract air.

The Zehnder Eversky unit is fitted with the Cleardust device, which allows the integration of a double filtration stage on the outdoor air as standard by adding (as an option) an M5 ePM10 50% or F9 ePM1 80% filter. The filters are always installed upstream of the components to protect them. Mounted on slides for easy replacement.

### Flow modulation

**DIVA:** Proportional modulation of the flow rate of each fan according to the CO<sub>2</sub> level. Sensor integrated into the unit at the extraction point.

### Installation

- Installation on the ceiling or semi-recessed in false ceiling requiring no specific accessories or trim pieces.
- Quick and easy installation thanks to the patented support frames.
- Quick and easy selection of air inlet/outlet configurations via patented removable panels.

### Climate versions

The Zehnder Eversky unit is finished to ensure optimum climate comfort. These functions are managed automatically by the EASY control system. The water or electric coils are integrated into the unit and the associated temperature sensors are fitted, wired and tested at the factory:

Temperature sensors (x4) integrated in the unit: supply, extract, bypass pre-heating, outdoor temperature and for the INFINITE version a sensor for the pre-heating coil.

Integrated safety thermostats with manual reset (THS) to protect the electric pre-heating and heating elements for the PREMIUM electric element and INFINITE electric element versions.

### Unit versions with different coils

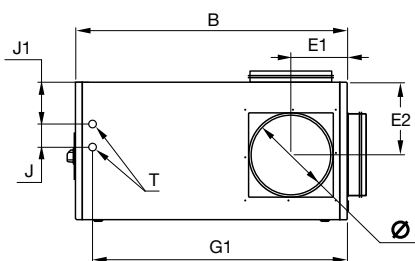
Zehnder Eversky	Internal coil		
	Defrost	Heating	
		Electric	Electric
PREMIUM BE	-	√	-
PREMIUM BC	-	-	√
INFINITE BE	√	√	-
INFINITE BC	√	-	√

**Dimensions**

Zehnder Eversky	Ø	A	A1	A2	B	C	E	E1	E2	F	F1	M	M1	N	Weight
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
500	250	1670	490	645	815	445	1297	185	230	742	384	332	170	130	132
750	315	1985	535	830	900	510	1547	220	260	927	449	415	170	170	170
900	315	1985	535	830	900	510	1547	220	260	927	449	415	170	170	180
1100	315	2365	615	1085	1050	530	1924	220	280	1185	510	565	170	190	220

Zehnder Eversky	Position of passage for BC connection						
	Ø	Side			Side		
	T male	J mm	J1 mm	A2 mm	B mm	C mm	E mm
500	3/8	55	135	725	55	675	320
750	3/8	90	140	835	90	750	385
900	3/8	90	140	835	90	750	385
1100	3/8	90	160	985	80	865	445

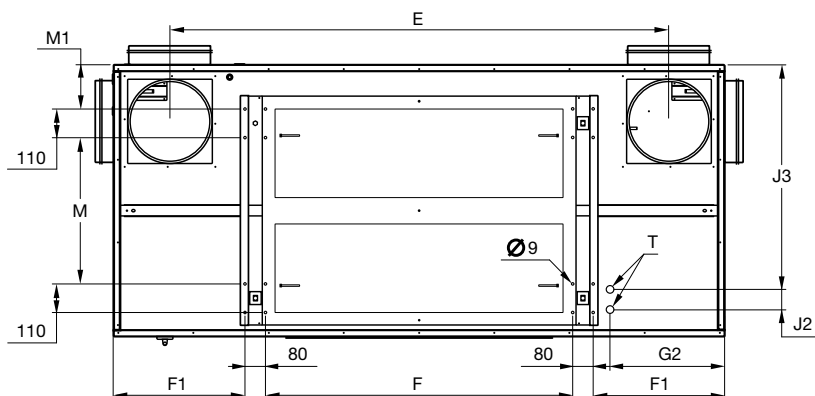
Side View



Front View



Top View  
(centre distances of support frames)



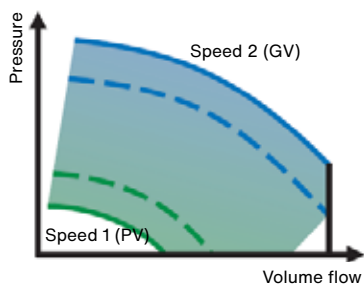
(1): Dimensions of opening panels.  
Location of connectors according to installation/configuration.

### Electrical data

Model Zehnder Eversky	Output Electric motor (W)	Operating temp. (°C / °C)	Degree of protection	Thermal protection class *	PREMIUM BE/ INFINITE BC		INFINITE BC		INFINITE BE	
					Supply voltage (V/Ph/Hz)	Current draw (A)	Supply voltage (V/Ph/Hz)	Current draw (A)	Supply voltage (V/Ph/Hz)	Current draw (A)
500	2 x 169	-20 / 60	IP54/B	PTI	230/1/50	7.0	230/1/50	2.7	230/1/50	11.4
750	2 x 170	-20 / 60	IP54/B	PTI	230/1/50	8.2	230/1/50	2.8	230/1/50	13.7
900	4 x 169	-20 / 60	IP54/B	PTI	230/1/50	10.8	230/1/50	5.3	230/1/50	16.3
1100	4 x 170	-20 / 60	IP54/B	PTI	230/1/50	11.0	230/1/50	5.5	230/1/50	16.5

\* IPT: Integrated Thermal Protection

### Operating modes



How Zehnder Eversky DIVA works  
Demand-dependent control unit between two  
volume flows adjustable per fan



Remote control with LCD display max.  
100 m or 1,000 m with repeater (optional).

## Integrated components

Equipment	PREMIUM BE	PREMIUM BC	INFINITE BE	INFINITE BC
EC fans with low consumption	●	●	●	●
Outdoor air, ePM1 55% (F7)	●	●	●	●
Extract air filter, ePM1-50% (F7)	●	●	●	●
Counterflow plate heat exchanger with high efficiency (>90 %), Eurovent certified	●	●	●	●
Internal proportional bypass 100%	●	●	●	●
Removable inclined condensate trays below plate counterflow exchanger	●	●	●	●
Double-walled 25 mm, RAL9010	●	●	●	●
Round unit connectors with double lip seal (ATEC CSTB No. 13-224-12)	●	●	●	●
LCD remote control (max. 10 m)	●	●	●	●
Controller with communication via Modbus in RS485 or TCP/IP, BACnet IP, WEB TCP/IP (selection in menu)	●	●	●	●
Fan speed(s) setting (LS-HS) in EASY control system	●	●	●	●
Supply air temperature sensor	●	●	●	●
Extract air temperature sensor	●	●	●	●
External temperature sensor	●	●	●	●
Bypass defrost sensor				
Defrost battery sensor	-	-	●	●
Frost protection thermostat on heating coil	-	●	-	●
Safety thermostat, electric pre-heating coil	-	-	●	●
Safety thermostat, electric post-heating coil	●	-	●	-
Lockable main switch	●	●	●	●
Power cable feedthrough	●	●	●	●

●: Standard equipment or functions

■: Optional equipment or functions. Supplied factory assembled and wired

◆: Optional equipment or functions. Supplied unassembled

**Unit functions**

Functions	PREMIUM BE	PREMIUM BC	INFINITE BE	INFINITE BC
Defrosting in several phases: Bypass + coil/coil (INFINITE) + modulation of the supply air volume	●	●	●	●
Self-regulated electric pre-heating coil	-	-	●	●
Self-regulated electric post-heating coil	●	-	●	-
Self-regulating hot water coil	-	●	●	●
Internal bypass 100%, self-regulating and modulating (0-100%)	●	●	●	●
Optimal free-cooling management	●	●	●	●
Optimal free-heating management (off-season)	●	●	●	●
Night-cooling management (night-time over-ventilation)	●	●	●	●
Optimal cold recovery management	●	●	●	●
Optimal heat recovery management	●	●	●	●
Supply air temperature management (air law)	●	●	●	●
Room temperature management (extract)	●	●	●	●
Weekly time switch	●	●	●	●
Holiday and public holiday time switch	●	●	●	●
Pressure box for monitoring the supply air filter	●	●	●	●
Potential-free fire alarm input (supply air and extract air)	●	●	●	●
Fire security with 5 available modes	●	●	●	●

Functions	PREMIUM BE	PREMIUM BC	INFINITE BE	INFINITE BC
DIVA: CO <sub>2</sub> proportional flow modulation between 2 flows (LS/HS)	■	■	■	■

Additional options	PREMIUM BE	PREMIUM BC	INFINITE BE	INFINITE BC
Condensate pump	◆	◆	◆	◆
ED-Touch remote control (up to 100 m)	◆	◆	◆	◆
Outdoor air pre-filter, M5 ePM10 50%	◆	◆	◆	◆
Outdoor air filter, F9 EPM1 80%	◆	◆	◆	◆

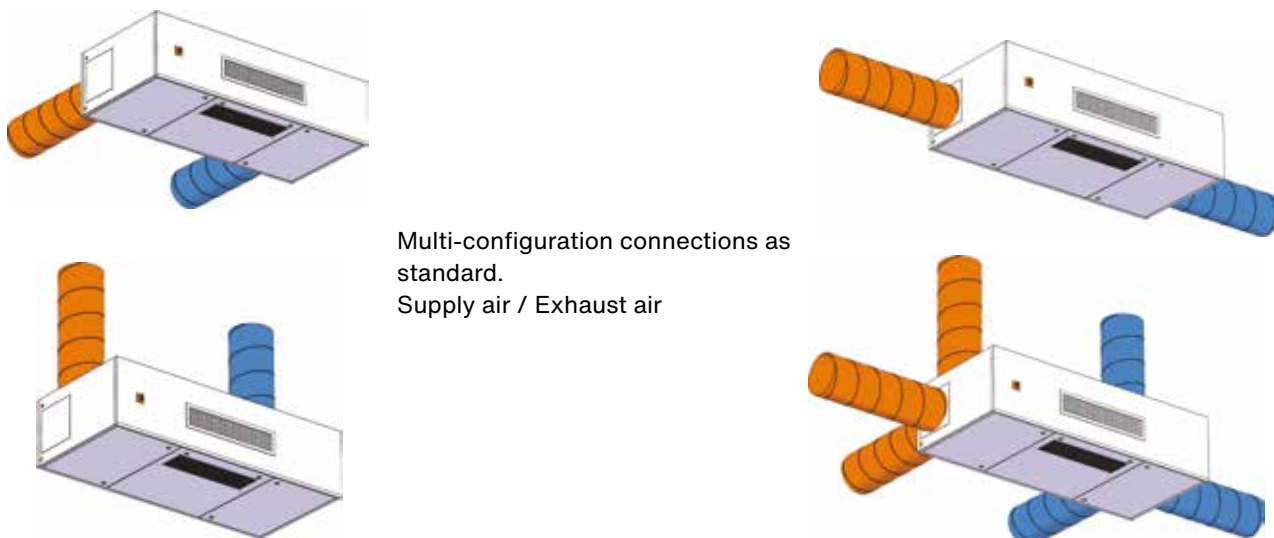
- : Standard equipment or functions
- : Optional equipment or functions. Supplied factory assembled and wired
- ◆ : Optional equipment or functions. Supplied unassembled



**Installation and unit versions**

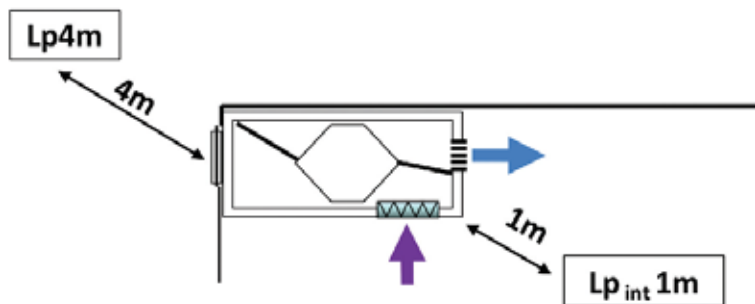


Positioning can be chosen locally without specific accessories: on the ceiling or semi-recessed in a false ceiling. Access to all components from below via 3 opening panels. Patented hinge device.

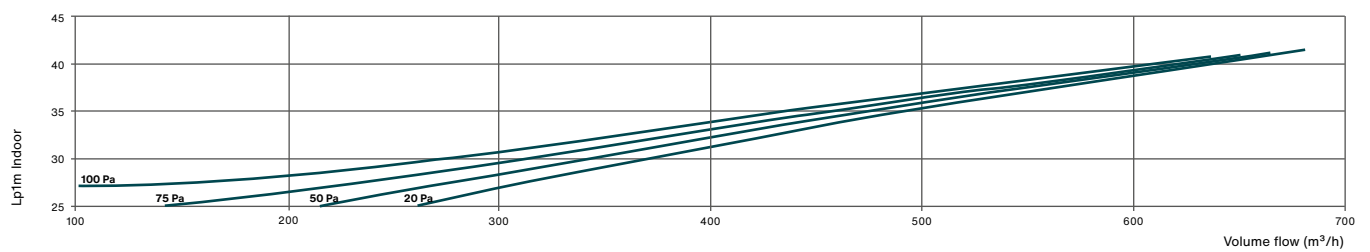
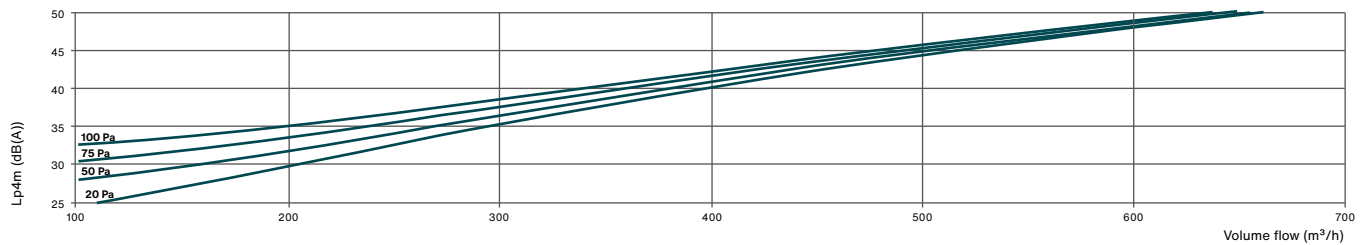
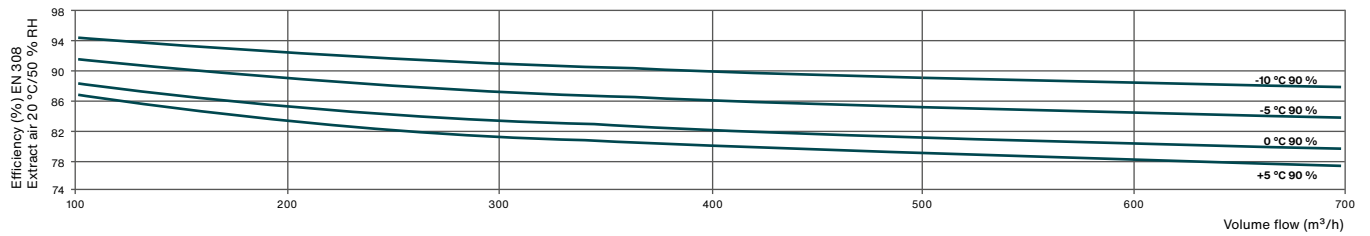
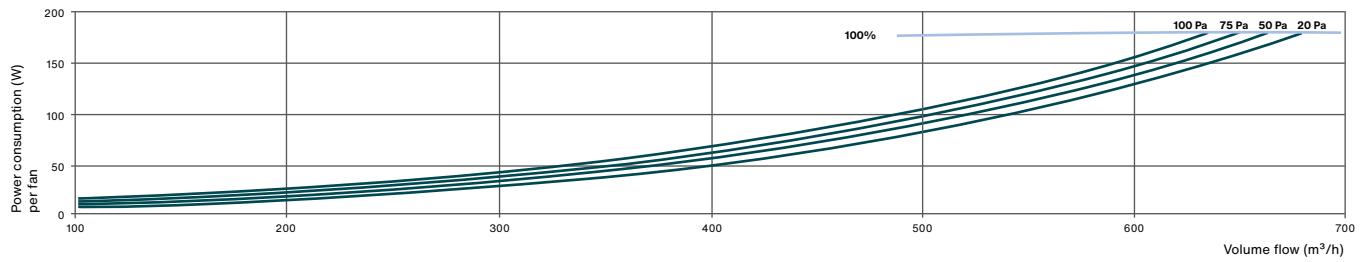


Multi-configuration connections as standard.  
Supply air / Exhaust air

**Sound specifications**



### Technical data Zehnder Eversky 500 ventilation unit



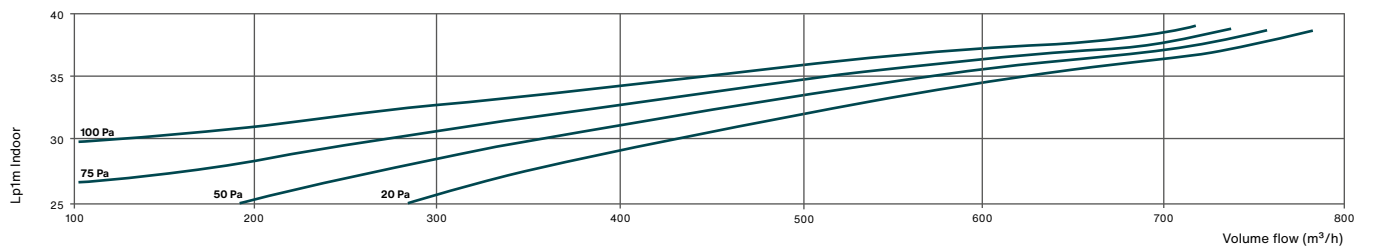
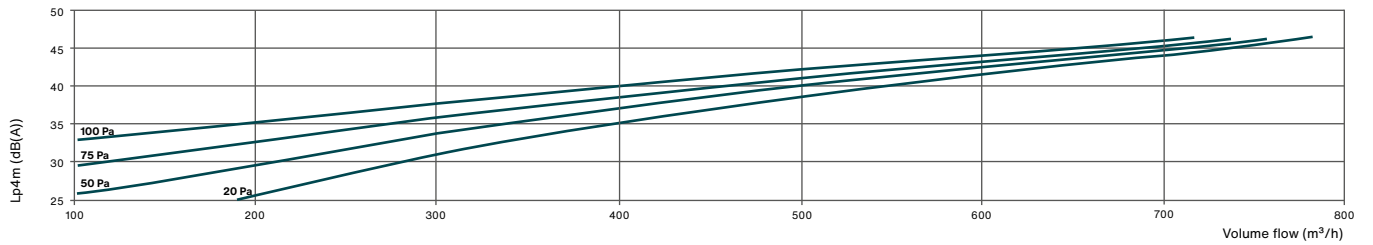
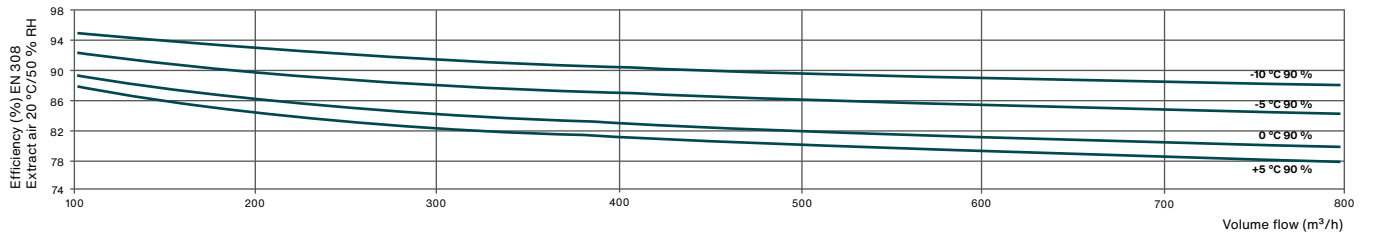
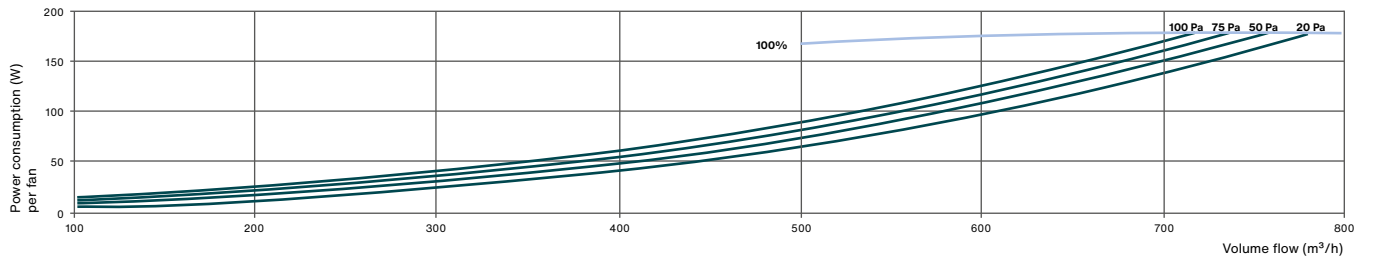
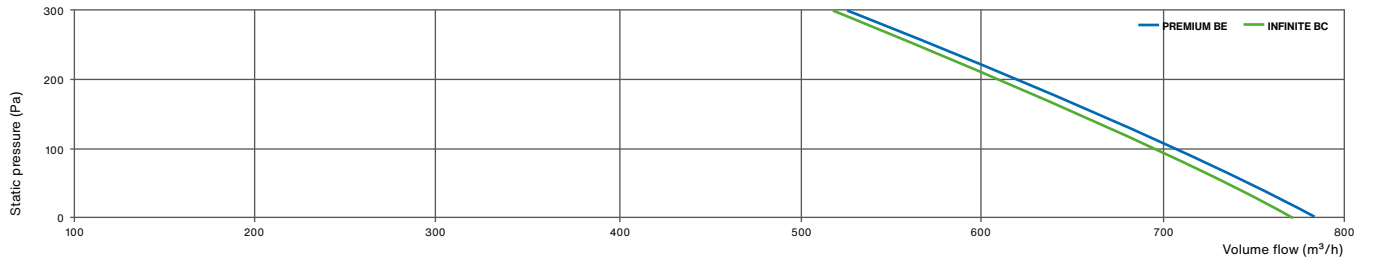
## Performance data for Zehnder Eversky 500 heating coil

BE for PREMIUM and INFINITE unit versions						Electrical coil	
Outdoor air (m <sup>3</sup> /h)	0 °C 500	-5 °C 500	-10 °C 500	-10 °C 500	0 °C 500	-15 °C 500	-15 °C 500
Unit variant	PREMIUM BE Heating coil			INFINITE BE Pre-heating coil + heating coil			
Power (kW)	1			1 + 1			
Temperature on output from the unit (°C)	22.2	22.3	19.6	25.6	22.3	20.6	25.4

This data is based on an optimum configuration of the control system using the outdoor temperatures shown. Permanent supply temperature of the unit, taking account of the proportional opening of the bypass to avoid frosting of the heat exchanger.

\* Flow rate reduction of 20 % on supply air (standard function).

### Technical data Zehnder Eversky 750 ventilation unit



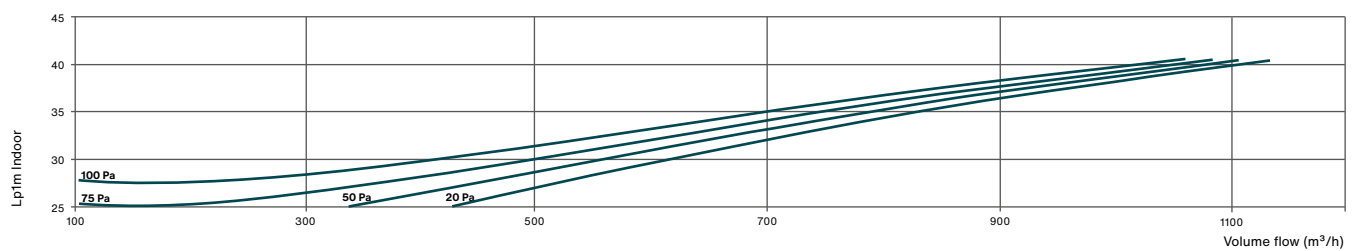
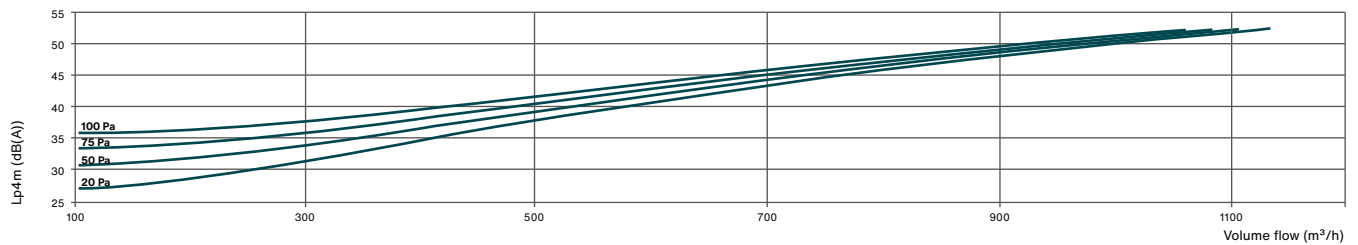
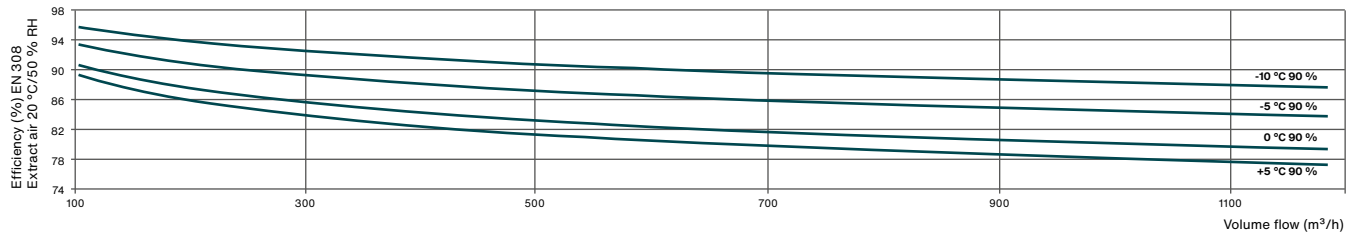
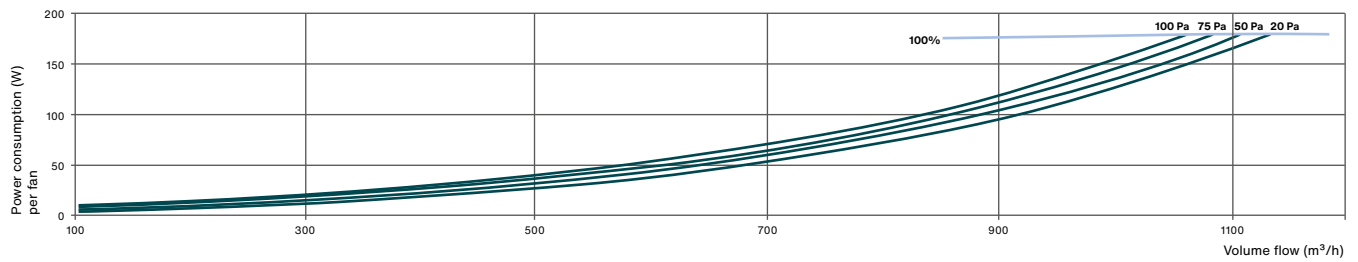
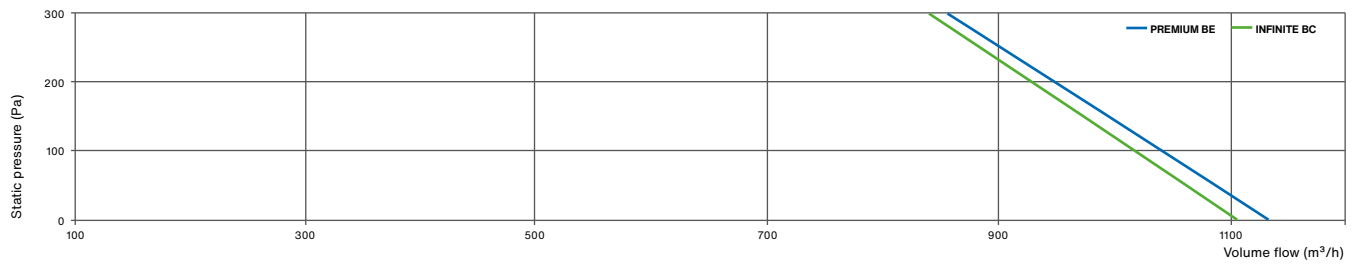
### Performance data for Zehnder Eversky 750 heating coil

BE for PREMIUM and INFINITE unit versions						Electrical coil	
Outdoor air (m <sup>3</sup> /h)	0 °C 750	-5 °C 750	-10 °C 750	-10 °C 750	0 °C 750	-15 °C 750	-15 °C 750
Unit variant	PREMIUM BE Heating coil				INFINITE BE Pre-heating coil + heating coil		
Power (kW)	1.25				1.25 + 1.25		
Temperature on output from the unit (°C)	21.5	21.7	18.6	24.9	21.7	18.6	24.9

This data is based on an optimum configuration of the control system using the outdoor temperatures shown. Permanent supply temperature of the unit, taking account of the proportional opening of the bypass to avoid frosting of the heat exchanger.

\* Flow rate reduction of 20 % on supply air (standard function).

### Technical data Zehnder Eversky 900 ventilation unit



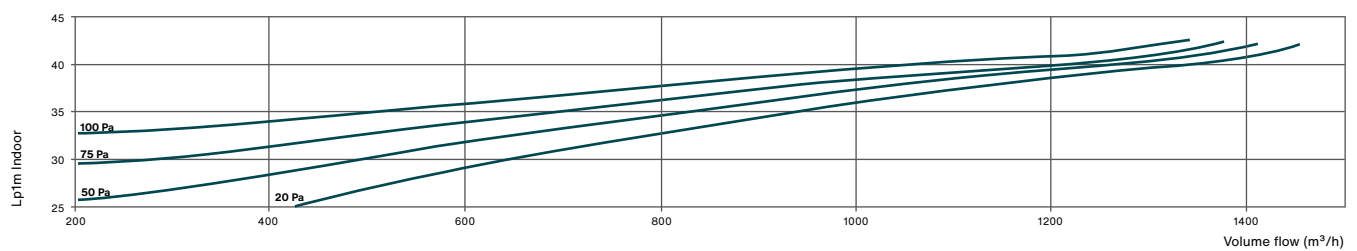
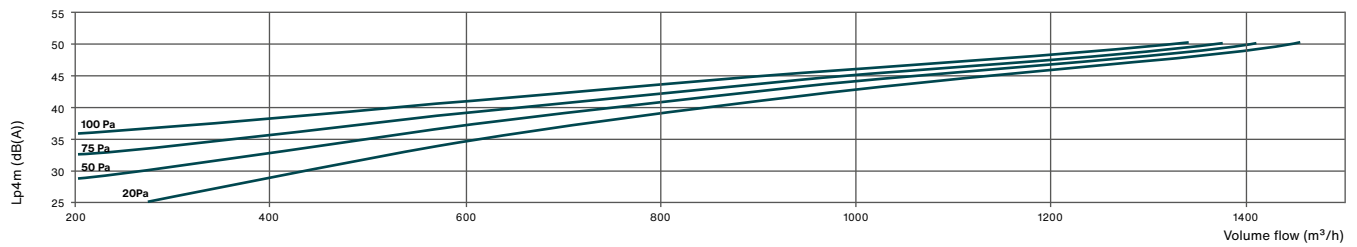
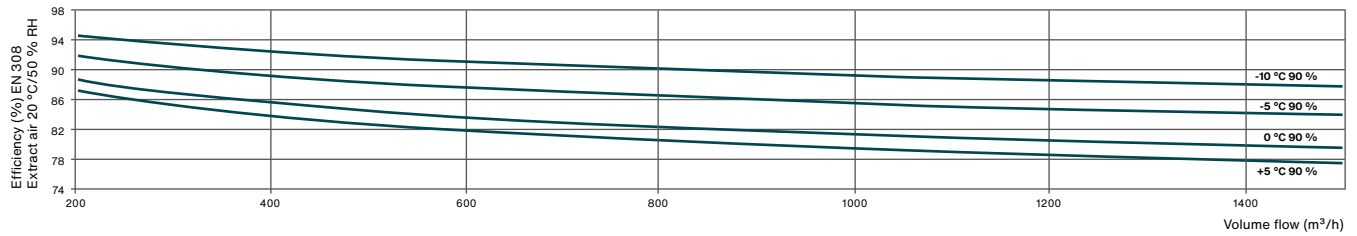
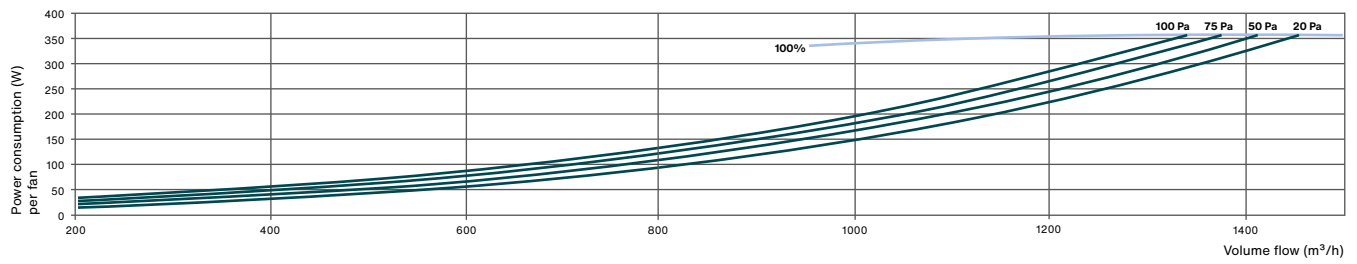
### Performance data for Zehnder Eversky 900 heating coil

BE for PREMIUM and INFINITE unit versions						Electrical coil	
Outdoor air (m <sup>3</sup> /h)	0 °C 900	-5 °C 900	-10 °C 900	-10 °C 900	0 °C 900	-15 °C 900	-15 °C 900
Unit variant	PREMIUM BE Heating coil			INFINITE BE Pre-heating coil + heating coil			
Power (kW)	1.25			1.25 + 1.25			
Temperature on output from the unit (°C)	20.5	20.7	17.7	23.7	20.8	17.0	23.7

This data is based on an optimum configuration of the control system using the outdoor temperatures shown. Permanent supply temperature of the unit, taking account of the proportional opening of the bypass to avoid frosting of the heat exchanger.

\* Flow rate reduction of 20 % on supply air (standard function).

### Technical data Zehnder Eversky 1100 ventilation unit





### Performance data for Zehnder Eversky 1100 heating coil

BE for PREMIUM and INFINITE unit versions						Electrical coil	
Outdoor air (m <sup>3</sup> /h)	0 °C 1100	-5 °C 1100	-10 °C 1100	-10 °C 1100	0 °C 1100	-15 °C 1100	-15 °C 1100
Unit variant	PREMIUM BE Heating coil			INFINITE BE Pre-heating coil + heating coil			
Power (kW)	1.25			1.25 + 1.25			
Temperature on output from the unit (°C)	19.8	20.0	17.1	22.8	20.2	18.7	22.8

This data is based on an optimum configuration of the control system using the outdoor temperatures shown. Permanent supply temperature of the unit, taking account of the proportional opening of the bypass to avoid frosting of the heat exchanger.

\* Flow rate reduction of 20 % on supply air (standard function).

## Options

### Control



**ED-Touch control unit**

Not compatible with SEASON unit. Max. 100 m

### Safety and control



**Pressure boxes for filter monitoring (DEP)**

Extract air filter (IP54)



**Trigger box (BD)**

TBTS 24 or 48Vcc housing (IP67)



**Condensate pump ref. PRC ESI10**

Direct connection to EASY control system and overflow safety management.

### Airflow control



**Comfort remote control (CDC1V2)**

START/STOPP 2 fans housing (IP54)



**Comfort remote control (CDC PVGV2)**

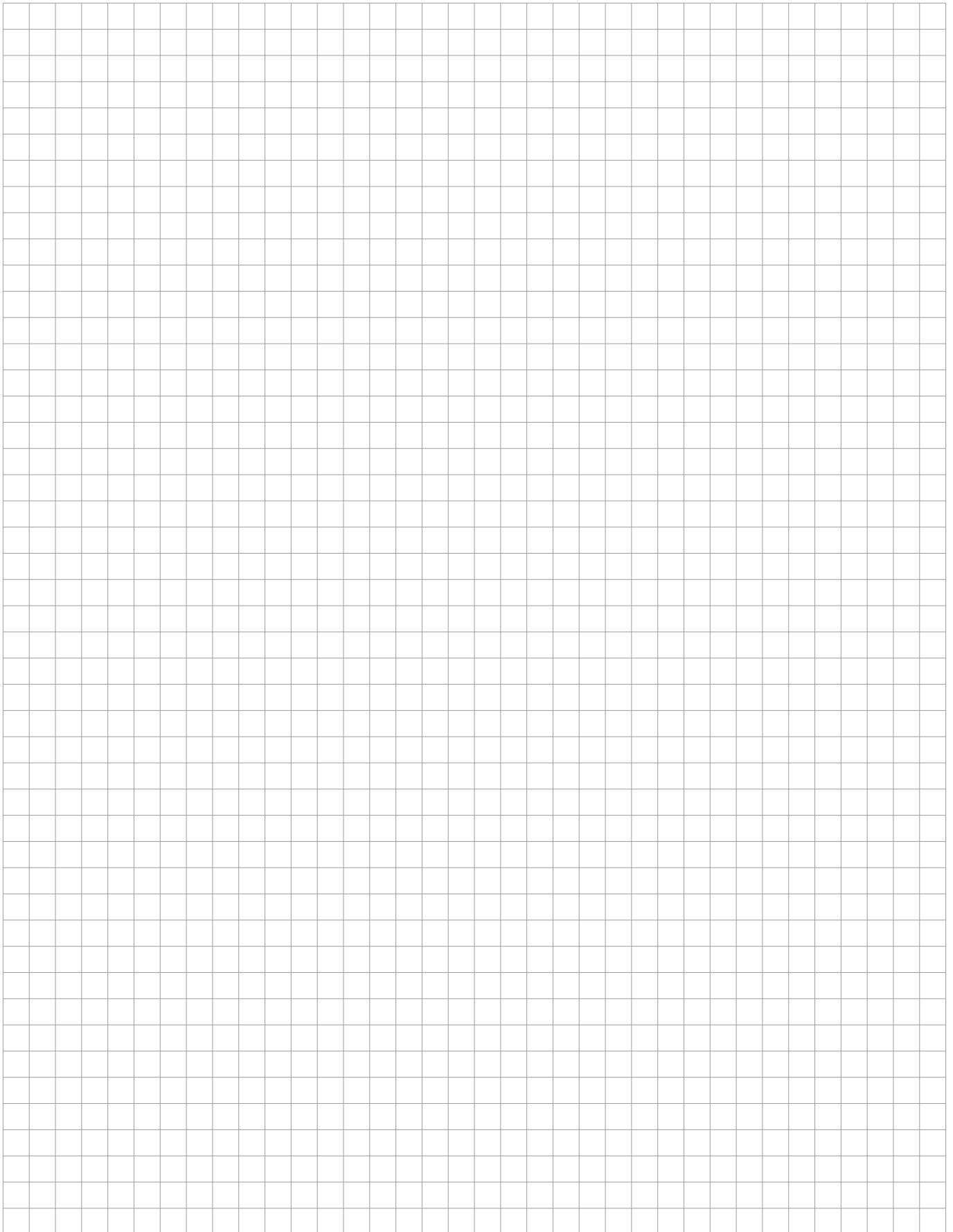
PV/GV 2 fans housing (IP54)

### Installation



**Flanged collar (MTS MO)**

**Notes**



**Company**

1st line of address ▪ Town ▪ Country  
email ▪ web