

Zehnder ComfoClima 24

Technical specification for air temperation module

always the best climate

General

The Zehnder ComfoClima 24 air temperation module was developed as the ideal solution for apartments and houses in which a high energy efficiency is desired. Thanks to its flexibility regarding the performance range and retrofit option, the unit can be simply and optimally installed not only in new buildings but also in properties with existing ventilation systems from Zehnder.

With the Zehnder ComfoClima 24 air temperation module you can prevent overheating in residences. The system can be combined with the Zehnder ComfoAir Q350 or Q450 balanced ventilation units.

The system can also provide additional heat in winter. The Zehnder ComfoClima 24 is only intended for combination with a heating system and cannot replace it.

The Zehnder ComfoClima 24 allows temperature control and dehumidification of supply air between 200 m³/h and 400 m³/h.



Top benefits

- Quick and easy commissioning thanks to constant airflow and the Zehnder ComfoClima Control app that guides users through the individual steps
- The most advanced room temperature control throughout the year thanks to the ClimateSwitch® technology
- Reduced pollution load in the residence with our filter concept for the supply of clean fresh air into the living area
- Easy and convenient operation: The integrated WLAN connection allows direct control via the Zehnder ComfoClima Control app
- Flexible and reliable planning and installation, because the unit can be set up with a right-hand or left-hand orientation

Complementing the functions of the Zehnder ComfoAir Q350 and Q450 balanced ventilation units, the system ensures that the units are automatically activated and deactivated.

The aim of the Zehnder ComfoClime 24 is to combine the “passive” energy recovery of the Zehnder ComfoAir Q with the “active” contribution of a reversible air heat pump that operates with the efficient refrigerant R32. The Zehnder ComfoClime 24 can provide up to 2.8 kW in the cooling mode and up to 4.2 kW in the heating mode (sensible + latent heat). This makes it a fast reacting system that quickly generates a comfortable room climate.

Flexibility

The Zehnder ComfoClime 24 is distinguished by simple and flexible installation that allows convenient mounting to a Zehnder ComfoAir Q350 or Q450 ventilation unit. In addition, thanks to the Zehnder ComfoPipe Compact 4 x 45 degree pivoting spigots (ordered and delivered separately) every air connection can be pivoted separately to optimise the installation options of the system.

The unit offers even more planning and mounting flexibility, as it is available as a right-hand and left-hand version that automatically adjusts itself during the commissioning of the Zehnder ComfoAir Q ventilation unit. Thanks to its cleverly conceived design, which focuses on the accessibility of the components, the floor-mounted Zehnder ComfoClime 24 system with front operation is easy to maintain and service.

Compact configuration

- Installation on a Zehnder ComfoAir Q350 TR or Q450 TR balanced ventilation unit;
- Condensate drain on the side of the Zehnder ComfoClime 24 – free choice of left or right side;
- Pivoting spigots (accessories) ensure optimal connection to the air distribution system;
- Available as a right-hand or left-hand unit, depending on the ComfoAir Q configuration;
- Plug-and-play installation – simply connect the Zehnder ComfoNet cable to the Zehnder ComfoAir Q balanced ventilation unit;
- 2 m-long cable and plug included.

More benefits

- Low noise operation, even when the unit operates at full capacity
- High heat recovery level with very low energy consumption: Thanks to a tailored heat exchanger and the latest ventilation technology

Technical specifications

Zehnder ComfoClime 24

Key facts	
Max. air volume	200 to 400 m ³ /h
Length	580 mm
Width	720 mm
Height	840 mm
Height with CA Q	1695 mm
Height with CA Q and base mount	1950 mm
Weight	60 kg
Installation	Floor mounting with wall anchoring, on the ventilation unit ComfoAir Q350 TR or Q450 TR
Main technical data	
Temperature range	-10 °C to +50 °C during transport and storage; +5 °C to +50 °C and 0 – 90% relative humidity at the installation point
Condensate drain (Ø)	32 mm
Air connection size (Ø)	175 mm (Zehnder ComfoPipe Compact DN160)
Supply voltage	230 V, 50 Hz
Maximum power consumption	1100 W
Electrical consumption	4.87 A
Other technical data	
Housing	Metal sheet
Front panel	White plastic RAL 9003
Internal housing material	Metal sheet, thermal insulation
Heating capacity	Up to 4.2 kW
Cooling capacity	Up to 2.8 kW
Global warming potential / GWP AR4	675
Coolant (weight)	R32 (0.65 kg)
Maximum pressure (PS)	38 bar

Climate Switch®

It's essential that your ventilation system keeps you warm in the winter and cool in the summer. Zehnder's groundbreaking Climate Switch technology uses advanced algorithms to continuously monitor and adjust your home's temperature, humidity, and airflow, providing optimal comfort and a healthy indoor environment. All of this is done automatically, meaning you don't have to do anything. Climate Switch makes for a more pleasant home and helps you save money by lowering energy consumption.

Air duct connections

- ODA Outdoor air
- SUP Supply air
- ETA Extract air
- EHA Exhaust air

Article numbers

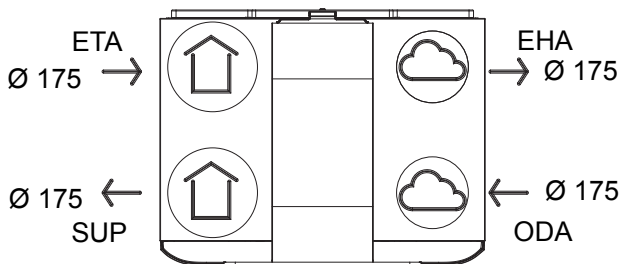
Description	Article number
Zehnder ComfoClime 24 air temperature module	471 420 010
ComfoPipe Compact bend 45° DN160 as unit connection bend	990 328 694
Adapter for ComfoAir Q350/450 TR	990 328 763
Floor stand for ComfoAir Q	471 502 008

Control options

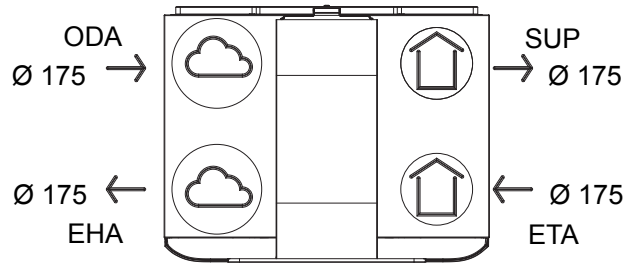
The Zehnder ComfoClime 24 is WLAN compatible as standard and can be conveniently controlled by a smart phone or a tablet with the associated mobile app. What is more, Zehnder ComfoClime 24 allows immediate commissioning thanks to plug-and-play installation.

- Adaptive comfort profile
- A3 comfort levels
- Weekly schedule and manual mode
- Frost protection function

Left-hand alignment of the ComfoAir Q



Right-hand alignment of the ComfoAir Q



Installation of Zehnder ComfoClime 24

The entire system must be placed on the floor. Zehnder ComfoAir Q is placed on a base mount (the base mount must be ordered separately). The Zehnder ComfoClime 24 air temperation module is directly connected to the Zehnder ComfoAir Q350 TR or Q450 TR ventilation unit. For this purpose, the separate adapter (adapter must be ordered separately) is placed on top of the ventilation unit.

This way, the Zehnder ComfoClime 24 air temperation module can be easily put in position. A ComfoNET interface allows communication of the control unit with the ventilation unit. Anchoring to the wall via the included adjustable wall bracket is mandatory (tilt protection related to the safety of inspection/ Maintenance activities). For details, see the installation instructions.

Installation conditions

The system must comply with the following conditions:

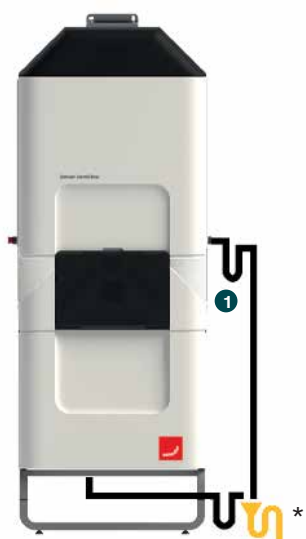
- The outdoor air duct to the unit and the exhaust air duct must be insulated vapour-tight. This means no condensate can form on the outside of the duct;
- Similarly, the supply air duct in the residence must be insulated vapour-tight. Due to temperature losses in the ducts, we therefore recommend also thermally insulating the supply air ducts;
- A motorised extractor hood should not be connected to the system under any circumstances;
- The ventilation tube connections must have a diameter of at least DN 160 mm. It should also be ensured that the outdoor and exhaust air ducts and openings are designed accordingly;
- The building must have effective sun protection (sun blinds, interior blinds);
- The number and size of the outlets must be planned for an air volume of at least 200 m³/h.



Wall mounting or positioning the ComfoClime 24 to the side of Zehnder ComfoAir Q is not possible!

Installation note

On site, a siphon with a minimum water sealant height of 100 mm must be connected to the condensate drain ①



Zehnder ComfoClime 24 with ComfoAir Q350 or Q450

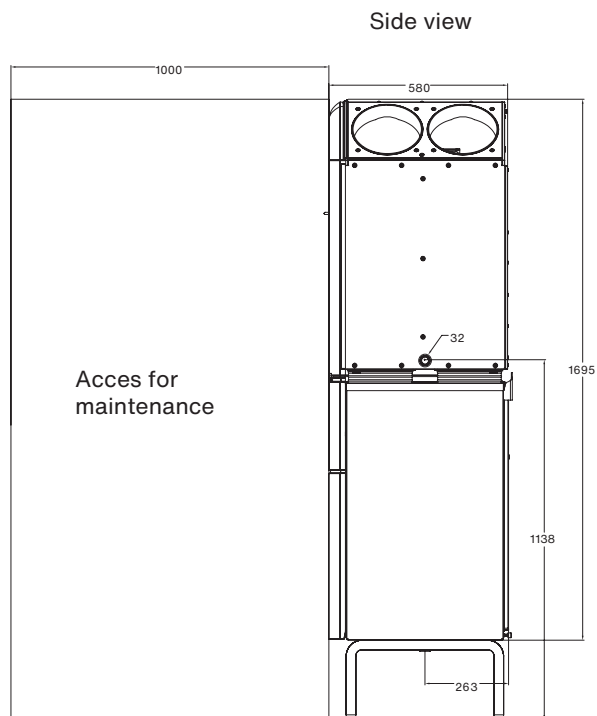
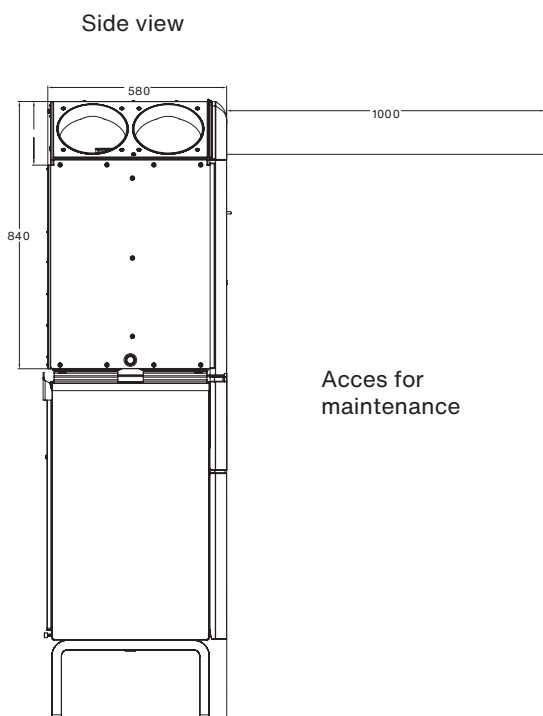
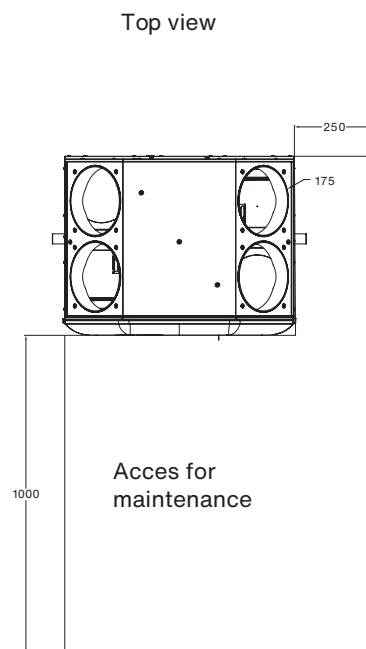
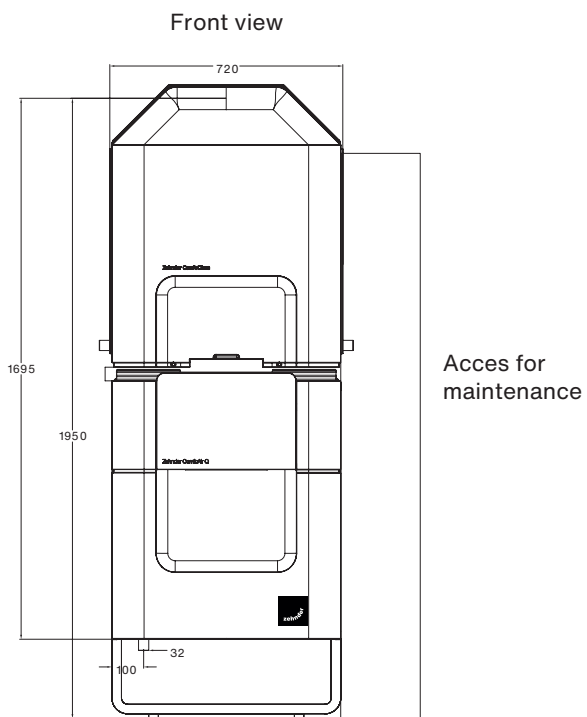


The unit may not be connected to the on site drain!

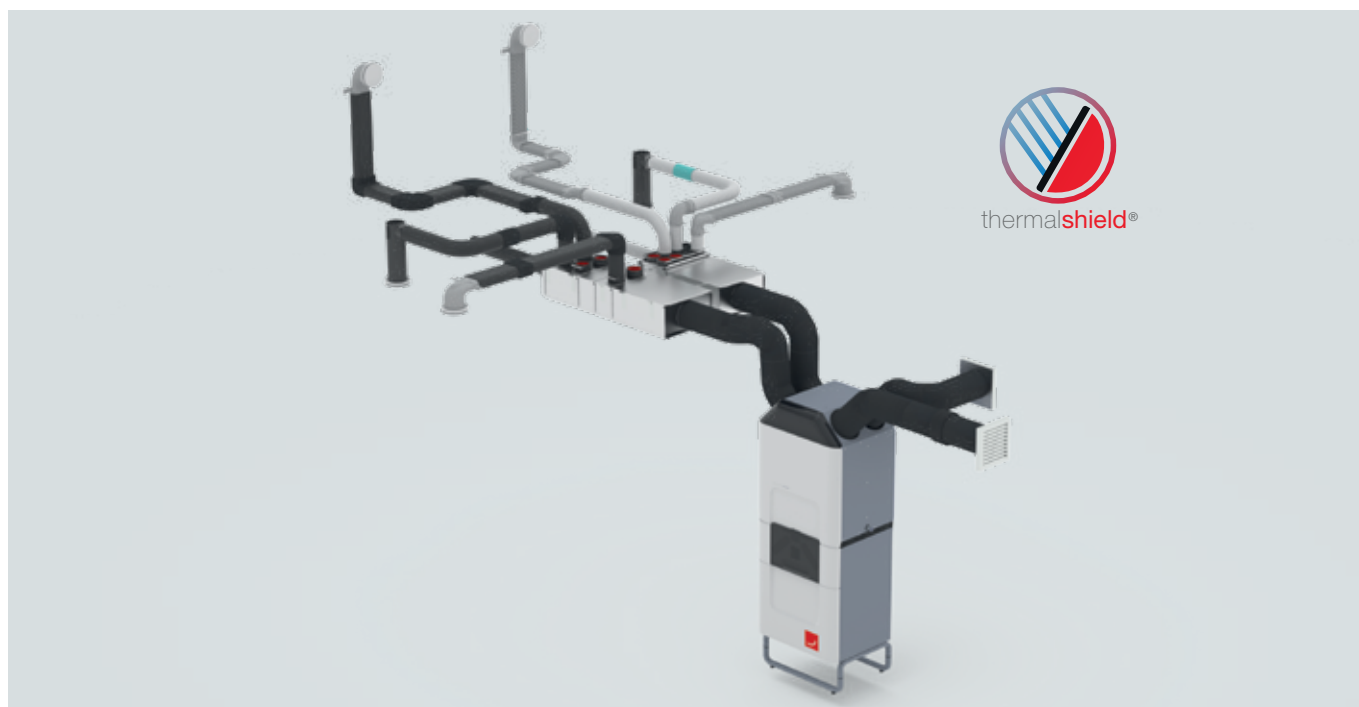
*only for Germany

Dimensional drawings

Zehnder ComfoClima 24



Pre-insulated air distribution components



Zehnder ThermalShield

- ThermalShield from Zehnder guarantees an indoor environment that is refreshingly cool in the summer and pleasantly heated in the winter.
- Our new pre-insulated air distribution components with ThermalShield are distinguished by their minimum energy loss during the transport of tempered air, thus allowing energy-efficient heating and cooling.
- With ThermalShield you can use your indoor climate system solution sustainably to create a healthy and comfortable room climate.

The product series is complemented by the modular connection and distribution system Zehnder ComfoWell Therm, consisting of an attenuator, two connection modules, an extension module, a mounting plate and an end plate. The modules not only have efficient internal insulation, but also insulated connectors for connection to the insulated ventilation tube Zehnder ComfoTube Therm 90.



Zehnder ComfoTube Therm 90



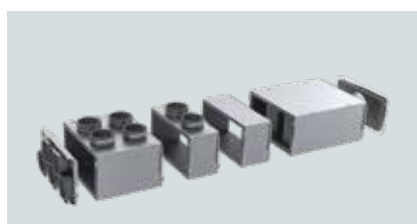
Zehnder ComfoTube Therm flat 51



Zehnder ComfoFit Therm sleeve DN 90



*Zehnder ComfoFit Therm convertor
DN 90 - flat 51, 90°*



Zehnder ComfoWell Therm



*Zehnder ComfoPipe Compact flex
element DN200 as optional unit
connection*

Thermal output

Heating capacity

T ODA	rel. hum. ODA	Volume flow	Net thermal output		Electrical power consumption		COP	
			CC 24	Total CA Q + CC 24	CC 24	Total CA Q + CC 24	CC 24	Total CA Q + CC 24
°C	%	m³/h	W	W	W	W		
-7	-8	200	746.5	2428.5	392.6	486.0	1.90	5.00
		300	1138.2	3499.1	520.1	735.6	2.19	4.76
		400	1344.7	4118.2	536.2	813.2	2.51	5.06
2	1	200	837.8	1952.9	410.1	437.4	2.04	4.46
		300	1272.5	2823.9	538.5	597.0	2.36	4.73
		400	1394.9	3222.5	508.0	615.0	2.75	5.24
7	6	200	1053.4	1752	424.4	451	2.48	3.88
		300	1407.4	2375.8	519.9	580.3	2.71	4.09
		400	1607.6	3139.9	445.1	606.1	3.61	5.18

Performance measured with ETA of 20 °C, 40% rel. hum. according to EN 14511 and EN 16573
All data measured with CA Q450 enthalpy exchanger and pre-heater

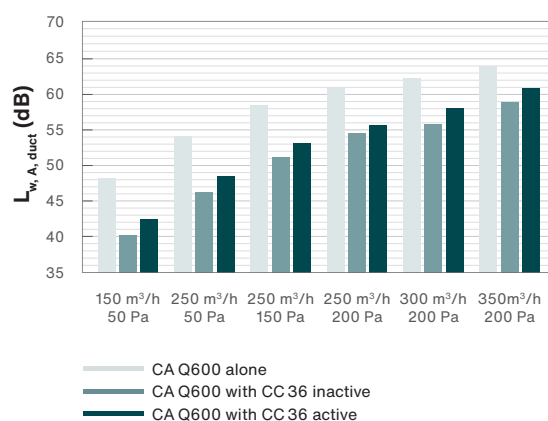
Cooling capacity

T ODA	rel. hum. ODA	Volume flow	Net cooling performance		Electrical power consumption		EER	
			CC 24	Total CA Q + CC 24	CC 24	Total CA Q + CC 24	CC 24	Total CA Q + CC 24
°C	%	m³/h	W	W	W	W		
35	24	200	831.2	1660.5	319.4	362.4	2.60	4.58
		300	1333.3	2435.4	500.1	571.3	2.67	4.26
		400	1637.5	2843.1	531.8	661.9	3.08	4.30
31	22	200	877.9	1291.7	295.5	324.9	2.97	3.98
		300	1540.8	2078.7	515.2	585.1	2.99	3.55
		400	1736.8	2337.9	507.8	632.5	3.42	3.70
27	19	200	837.6	813.8	259.1	288.0	3.23	2.83
		300	1372.6	1298.9	397.0	465.3	3.46	2.79
		400	1543.2	1433.6	399.8	522.0	3.86	2.75

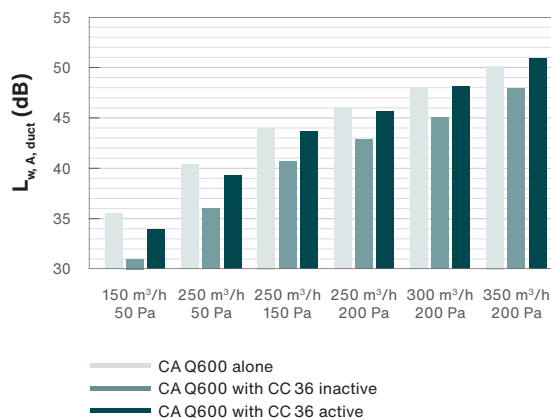
Performance measured with ETA of 27 °C, 47 % rel. hum. according to EN 14511 and EN 16573
All data measured with CA Q450 enthalpy exchanger and pre-heater

Acoustic data Zehnder ComfoClima 24 with Zehnder ComfoAir Q350

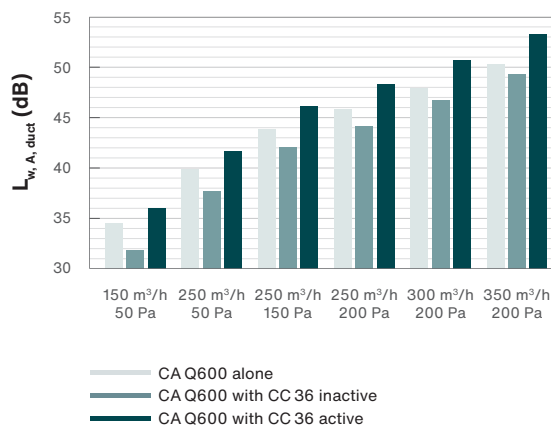
Noise level SUP Zehnder ComfoAir Q 350
with and without Zehnder ComfoClima 24



Noise level ETA Zehnder ComfoAir Q 350
with and without Zehnder ComfoClima 24

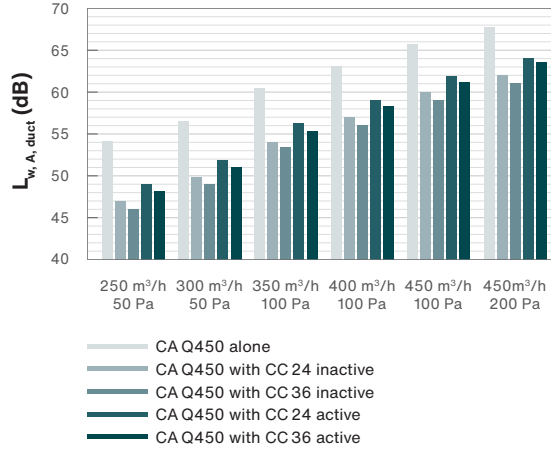


Unit radiant heat Zehnder ComfoAir Q 350
with and without Zehnder ComfoClima 24

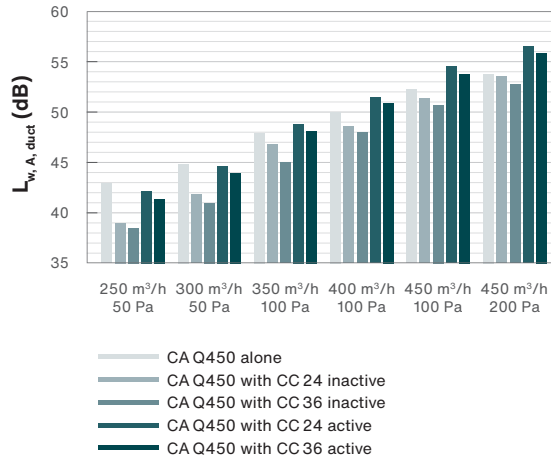


Acoustic data Zehnder ComfoClima with Zehnder ComfoAir Q450

Noise level SUP Zehnder ComfoAir Q 450
with and without Zehnder ComfoClima 24 / 36



Noise level ETA Zehnder ComfoAir Q 450
with and without Zehnder ComfoClima 24 / 36



Unit radiant heat Zehnder ComfoAir Q 450
with and without Zehnder ComfoClima 24 / 36

