- Decorative Radiators
- Comfortable indoor ventilation
- Heating and cooling ceiling systems
- Clean air solutions



zehŵ

Always the best climate for



The next generation of MVHR units - ComfoAir Q

ntroduction and Contents

Zehnder has everything you need for optimum indoor ventilation for every project.

Zehnder ComfoAir Q is the next generation of heat recovery ventilation units, with state of the art design and intelligent technology, regardless of whether you are working on a new build or an old building, with Zehnder comfortable ventilation you have an innovative, tried and tested complete system.

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Zehnder ComfoAir Q

With Zehnder ComfoAir Q, you are provided with the highest level of living comfort. The innovative ventilation units contribute significantly to comfortable room ventilation, quiet in operation, ensure healthy, dust-free air and protect against excessive humidity.

> Zehnder ComfoAir Q350 Zehnder ComfoAir Q450

> Zehnder ComfoAir Q600



Passive House Certified



Passive House is an internationally recognised standard for high quality, low energy buildings.

The standard requires that only those components which have been rigorously tested and approved can be used within the building. It is imperative when building to a Passive House specification that certified MVHR units are used, as poorly performing, uncertified products which don't live up to their claims can disrupt the performance of the whole property. Meeting stringent Passive House standards for quality, performance and energy efficiency, all three Zehnder ComfoAir Q units have been independently tested and certified by the Passive House Institute ensuring reliable and effective performance with minimum running costs.



Specification

- World class heat recovery of 96%
- 3 models available 350m³/hr, 450m³/hr and 600m³/hr
- Suitable for medium and large size properties:
 - Q350 up to 250m^{2*}
 - Q450 up to 300m^{2*}
 - Q600 up to 350m^{2*}
- All units have been certified as an official Passive House component by the Passivhaus Institute
- Left or right hand unit configuration combined in one device for installation flexibility

* System pressure needs to be <200Pa. Additional attenuation may be required.

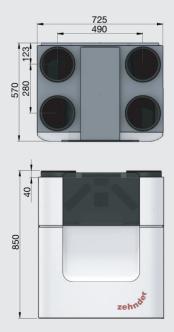
Dimensions

All measurements in mm unless otherwise indicated

Dimensions are the same across all models

Physical Specification

- Spigot size:
 - 160mm: Q350
 - 180mm: Q450/Q600
- Fans: EC with Zehnder flow control
- Filters: ISO Coarse >65% (G4) and ISO ePM1 >65% (F7) for CAQ350 / CAQ450 and ISO ePM1 >55% (F7) for CAQ600
- On board LCD display
- Mounting bracket for wall fixing or free standing on mount
- Weight: 50kg
- Power lead complete with 3 pin plug
- Condensate connection (32mm) comes with options of both a threaded or socket weld attachment
- Dust cover to prevent dust ingress during second fix
- ComfoAir Q models with pre-heater and enthalpy cube are also available



Driving system performance through innovation

Zehnder ventilation systems innovative technology make for less complexity, increased heat recovery efficiency, lower specific fan power and significant noise reduction.

A perfect combination of outstanding technical performance and excellent features makes ComfoAir Q the best in class achieving top efficiency ratings.

Heat recovery performance

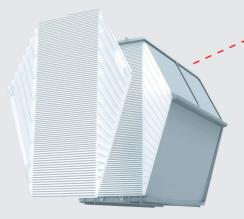
Heat Recovery Performance is an important factor in unit specification as it has a direct impact on the heating load and offers savings to the homeowner.

When comparing two MVHR units with 87% and 94% heat recovery efficiency you can achieve up to a 25% reduction in heating costs (from ventilation loss) if selecting the higher performing unit.

Noise reduction

Did you know that for every increase of 3dB (A) the sound power is doubled?

ComfoAir Q's sound performance of 28*dB(A) means one competitor unit is equivalent to 8 ComfoAir Q units in operational noise!



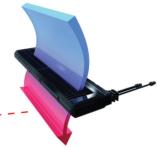
Unique, ultra-powerful heat exchanger – for maximum energy efficiency

The unique diamond heat exchanger features an especially large surface, which allows it to achieve a higher level of efficiency. Variable channel heights ensure a constant flow and lower pressure loss. As a result, less energy is required to overcome the air resistance.



Innovative air volume balancing – for maximum heat recovery

New and patented: innovative sensor technology automatically ensures balanced supply air and extract air volumes. This flow control guarantees maximum heat recovery. What's more, you save time during commissioning because of the unit's dial-a-duty feature where the required air flow is input and the unit will automatically adjust the motors to achieve this.



Intelligent temperature control of the intake air – for the best possible energy efficiency

The pre-heater adapts its operation taking into consideration temperature, air flow and humidity to ensure consistent supply air temperature is achieved no matter what is going on outside. Thanks to its large surface and delta shape, the level of pressure loss is negligible – and that also reduces the power consumption.

State-of-the-art fan technology – for quiet, energy-saving operation

The flow grid, scroll housing and impeller ensure the best possible air flow. This not only means an extremely quiet operation, but also particularly low power consumption. A high-quality, future-proof solution, based on tried-and-tested technology.

Ensuring the best in class for heat recovery efficiency, noise and energy performance

ComfoAir Q is easy to design, simple to install and provides optimum comfort levels to the home throughout the year thanks to its innovative performance focused design.

Ensures optimum comfort through the modulating by-pass The modulating inline by-pass adapts to the outside temperature, to ensure ideal comfort conditions regardless of the outdoor temperature, minimising heat loss in the process.







Efficient fan

guarantees an improved performance, with less energy consumption The powerful fan generates more power with less energy consumption. Optimum airflow through the flow grid and scroll housing means that the energy consumption for overcoming the air resistance is low. Sensor technology also ensures that the speed is only adapted if a permanent change is made, ensuring energy and cost savings (Specific Fan Power of just 0.53 w/l/s for the Zehnder ComfoAir Q 350/450).

Improving air quality through filtration

Healthy air is another important feel-good factor. As a result, the new filter concept reduces the amount of dust in the unit and air distribution system. Filters are available in two grades, ISO Coarse >65% (G4) and ISO ePM1 >65% (F7) for CAQ350 / CAQ450 and ISO ePM1 >55% (F7) for CAQ600 with a pleated design for optimum filtration. Maintenance is easy with the warning indicator on the start-up wizard to indicate when filters may need attention or changing.

Adaptable for each unique installation

The intuitive start up wizard offers a simple installation process on-site including left and right hand configuration in one single unit.

Flexibility is at the heart of ComfoAir Q.

Installation wizard facilitates ease of set-up The start-up wizard guides you step by step through the set up process including an automatic self-test.

Using the design drawings you can simply type in the required airflow rates for low, medium and boost and the system automatically sets these across the installed system.

On-site interchangeable orientation Right and left handing can be modified on-site easily when required helping save time and money on-site and reducing risk of incorrect installations.



7.5° → 18.0°

Wo 14-30

Ensuring an optimum room temperature – at all times The most important feel-good factor is comfort, through regulation of temperature and humidity. Zehnder ComfoAir Q's intelligent temperature control factors in the varying outdoor temperature at different times of the year, to ensure ideal comfort conditions indoors.





The ideal ventilation unit for every project

There is a Zehnder ventilation unit and indoor ventilation solution for every area of use. Combined with other components, they form the optimum system.





Sub soil heat exchanger (or regulated sub-soil heat exchanger)

Pre-conditions the temperature of the outdoor airflow before it enters the unit. This ancillary is connected to the Option Box. (see page 12)

- Uses the constant temperature of the soil for heat recovery and to control the temperature of the air
- Sustainable use of geothermal energy
- Saves having to use a pre-heater in winter, supplies tempered supply air in the summer



Zehnder ComfoCool Q600

Air Tempering Unit

The Zehnder ComfoCool Q600 is an air temperation device designed to help reduce the risk of overheating in homes. It combines with the ComfoAir Q600 and compliments its features to ensure it automatically activates and deactivates to provide a comfortable, healthy and energy-efficient indoor climate.

- Cooling is automatically activated by a user defined comfort temperature in combination with monitoring both intake air and internal air temperatures
- Equipped with a compression cooling system, as is used in refrigerators to reduce the temperature, in this case of the incoming supply of filtered air to provide 1.5kW of cooling capacity
- Differs from traditional air-conditioning by using the air performance of our MVHR system to deliver the available cooling power

Zehnder Option Box

Provides additional connectivity options

Zehnder ComfoConnect KNX C

Provides KNX connectivity options

Zehnder ComfoConnect LAN C

Provides LAN connectivity options for remote control









Zehnder ComfoWell

Air Distribution Manifold and Attenuator

- All air treatments available: attenuator, fine filter, active carbon filter, manifold box
- Modular design
- High levels of sound attenuation
- Components connected with locking slides for easy mounting
- Directly connected to all components of the ComfoWell system
- Easy to clean

Zehnder ComfoAir Q Pre-Heater

Increases the temperature of the outdoor airflow in order to protect the heat exchanger against frost.

- Accurate modulation based on flow rate and temperature
- Interchangeable (left/right)
- Low resistance
- Tilt switch: orientation defines left/right unit
- No mounting errors

Simply making every step easier

Easy, reliable plug-and-play installation, guidance through commissioning, easy maintenance and remote monitoring. Combine several devices with the ComfoAir Q unit to extend possibilities.

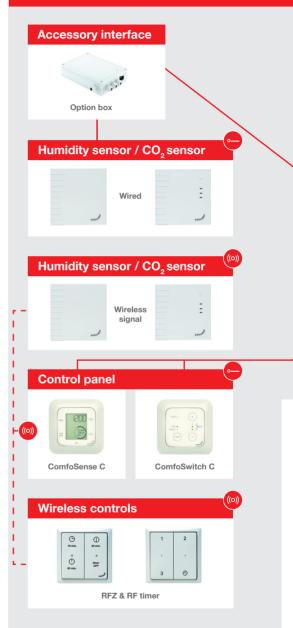
A range of control options

Easy operation from switch to mobile app*



Anything is possible – from a simple display on the unit, to a practical app that can be used on the go, right through to fully automated, demand-based ventilation using sensors. You can also integrate Zehnder ComfoAir Q into a building control system via the KNX interface.

* App is only available on IoS and Android





Zehnder ComfoControl App



- Control and monitor the ventilation system via the ComfoControl App
- Control ventilation flow rate, temperature profile, temporary high speed setting and external sensor
- Monitor ventilation flow rates, temperatures and external sensors
- 7 day flow rate programmer
- Access the ventilation system remotely from anywhere in the world
- Service and Maintenance alert direct to your phone
- User menu access
- Installer menu access

Perfect integration

With a full range of components designed to work together, Zehnder ComfoAir Q can be integrated into a home simply and effectively to provide fresh air and comfort.



How it works

1. Supply of fresh air:

Fresh air is fed into the system via an external wall vent. The fresh outside air can optionally flow through a sub-soil heat exchanger beforehand which uses geothermal energy to pre-temper the outside air.

2. Ventilation unit:

Up to 96% of the heat is recovered from the extract air and transferred to the fresh air. This can be humidified, dehumidified, heated and cooled using optional components.

3. Air distribution:

The air distribution system channels fresh air at the right temperature to individual rooms as needed and vents the extract air to the outside. The air volume can be individually adjusted for each room.

Easier, more efficient and more comfortable

Ventilation systems from Zehnder ensure the legally required minimum air exchange, lower heating costs and provide for a comfortable indoor climate all the year round. Over 40 years' experience developing and producing form the basis for Zehnder complete systems. The individual components, intelligently designed to work together, are characterised by the highest level of functionality and durability. With Zehnder ComfoAir Q, Zehnder has launched the next generation of ventilation units: Thanks to optimum design and coordination of the main components, they offer the best in sound power level values and particularly low energy consumption.

Zehnder ComfoFresh air distribution system

Hygienic and clean: in addition to the ventilation unit, the air distribution system also plays an essential role in the optimum functionality of comfortable indoor ventilation: it influences ventilation performance, noise level, appearance, energy efficiency, hygiene and ease of maintenance.

Clinside, the smooth inner skin of the ventilation tubes prevents the build-up of dust. Only minimal maintenance is required for optimal operation. The air distribution system is SKZ certified and approved by the Hygiene Institute.

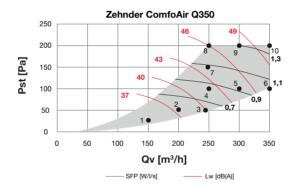
- The air distribution system can be incorporated into ceilings, walls and floors using round tubes, flat tubes, or a combination of the two a sophisticated system for any situation
- Perfectly matched components for every installation situation
- ComfoPipe Plus outdoor and exhaust air connections with optimum insulation
- Designer grille for harmonious integration into any setting



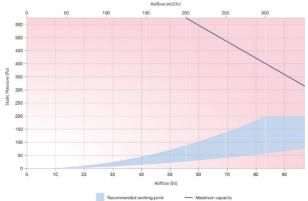


Data performance tables

Zehnder ComfoAir Q350					
Reference	Airflow [m³/h]	Ра	P [W]	Sound Pressure level @3m [dB(A)]	
1	150	25	16	16.0	
2	200	50	31	20.1	
3	245	50	43	22.6	
4	250	100	59	24.9	
5	300	100	77	27.6	
6	350	100	98	30.5	
7	250	150	74	26.9	
8	250	200	88	28.9	
9	300	200	108	31.0	
10	350	200	131	33.4	

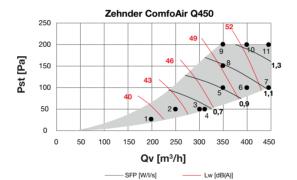




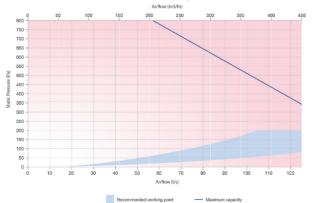


Data performance tables

Zehnder Comfo	Zehnder ComfoAir Q450				
Reference	Airflow [m³/h]	Ра	P [W]	Sound Pressure level @3m [dB(A)]	
1	200	25	19	22.0	
2	250	50	37	25.0	
3	300	50	53	27.3	
4	315	50	59	28.0	
5	350	100	89	30.8	
6	400	100	113	33.1	
7	450	100	140	35.6	
8	350	140	106	31.9	
9	350	200	122	33.0	
10	400	200	148	35.2	
11	450	200	177	37.5	

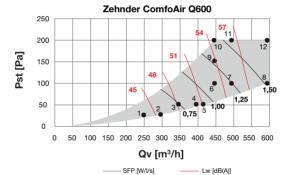






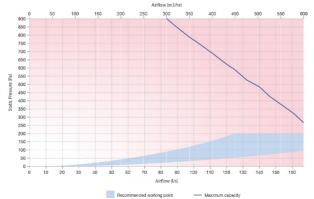
Data performance tables

Zehnder ComfoAir Q600				
Reference	Airflow [m³/h]	Ра	P [W]	Sound Pressure level @3m [dB(A)]
1	250	25	28	26.3
2	300	25	44	28.3
3	350	50	72	30.9
4	400	50	97	33.0
5	420	50	107	33.9
6	450	100	143	35.9
7	500	100	176	38.1
8	600	100	254	42.7
9	450	150	162	36.7
10	450	200	180	37.5
11	500	200	215	39.6
12	600	200	296	43.9





Performance Graph



SAP Product Characteristics Database

Zehnder ComfoAir Q350

				Passive House Data		
Exhaust terminal configuration	Specific fan power (W/l/s)	Heat exchange efficiency (%)		Standard heat exchanger	Enthalpy heat exchanger	
Kitchen + 1 additional wet room	0.60	96	Airflow range	70–270m³/h	70–270m³/h	
Kitchen + 2 additional wet rooms	0.53	95				
Kitchen + 3 additional wet rooms	0.57	94	Heat recovery rate	ηHR = 90%	ηHR = 86%	
Kitchen + 4 additional wet rooms	0.64	94				
Kitchen + 5 additional wet rooms	0.72	93	Specific electric power	$P_{el,spec} = 0.24 Wh/m^3$	$P_{\rm el,spec} = 0.22 \rm Wh/m^3$	
Kitchen + 6 additional wet rooms	0.89	93				
Kitchen + 7 additional wet rooms	1.03	93	Humidity recovery		η _x = 73%	
Zehnder Co	nfoAir Q45	i0				
Zehnder Cor	nfoAir Q45	i0		Passive House Data	a	
Zehnder Con Exhaust terminal configuration	mfoAir Q45 Specific fan power (W/I/s)	Heat exchange efficiency (%)		Passive House Data Standard heat exchanger		
Exhaust terminal	Specific fan	Heat exchange	Airflow range			
Exhaust terminal configuration Kitchen	Specific fan power (W/I/s)	Heat exchange efficiency (%)	Airflow range	Standard heat exchanger	Enthalpy heat exchanger	
Exhaust terminal configuration Kitchen + 1 additional wet room Kitchen	Specific fan power (W/I/s) 0.54	Heat exchange efficiency (%) 96	Airflow range Heat recovery rate	Standard heat exchanger	Enthalpy heat exchanger	
Exhaust terminal configuration + 1 additional wet room Kitchen + 2 additional wet rooms Kitchen	Specific fan power (W/I/s) 0.54 0.53	Heat exchange efficiency (%) 96 95		Standard heat exchanger 70–345m ⁹ /h	Enthalpy heat exchanger 70–345m ³ /h	
Exhaust terminal configuration + 1 additional wet room Kitchen + 2 additional wet rooms Kitchen + 3 additional wet rooms Kitchen	Specific fan power (W/l/s) 0.54 0.53 0.55	Heat exchange efficiency (%) 96 95 94		Standard heat exchanger 70–345m ⁹ /h	Enthalpy heat exchanger 70–345m ³ /h	
Exhaust terminal configuration Xitchen + 1 additional wet room Kitchen + 2 additional wet rooms Kitchen + 4 additional wet rooms Kitchen	Specific fan power (W/I/s) 0.54 0.53 0.55 0.62	Heat exchange efficiency (%) 96 95 94 94	Heat recovery rate	Standard heat exchanger	Enthalpy heat exchanger 70–345m³/h ηHR = 83%	

Zehnder ComfoAir Q600

Exhaust terminal configuration	Specific fan power (W/I/s)	Heat exchange efficiency (%)
Kitchen + 1 additional wet room	0.63	96
Kitchen + 2 additional wet rooms	0.60	95
Kitchen + 3 additional wet rooms	0.63	94
Kitchen + 4 additional wet rooms	0.71	94
Kitchen + 5 additional wet rooms	0.79	93
Kitchen + 6 additional wet rooms	0.91	93
Kitchen + 7 additional wet rooms	1.06	93

Passive House Data

Standard heat exchanger Enthalpy heat exchanger

Airflow range	70–460m³/h	70–460m³/h
Heat recovery rate	ηHR = 87%	ηHR = 80%
Specific electric power	$P_{el,spec} = 0.24 \text{ Wh/m}^3$	P _{el.spec} = 0.22 Wh/m ³
Humidity recovery		$\eta_{k}=68\%$

Future-proof solution: easy transition from Zehnder ComfoAir to Zehnder ComfoAir Q

	Zehnder ComfoAir	Zehnder ComfoAir Q	Your benefits
Planning/Ordering	ng		
Versions	Zehnder ComfoAir 350Zehnder ComfoAir 550	Zehnder ComfoAir Q350Zehnder ComfoAir Q450Zehnder ComfoAir Q600	 Higher maximum airflow Three units instead of two: optimum system design in projects
Connections	Left-hand or right-hand version	 Left-hand and right-hand version in a single unit for adaptation to the installation on site 	Always the right unit even when there are last-minute changesReduced stock levels
Certificates	• PHI, DIBT, EPBD, SAP PCDB, NF 205, NEN 5138, EN 308	• PHI, DIBT, EPBD, SAP PCDB, NF 205, ERP energy label, NEN 5138, EN 308	Future-proofWorry-free installationMuch better figures
Pre-heater	• The pre-heater is built into the unit	• The pre-heater is easy to retrofit	Easy to retrofitReduces unit versions
Installation			
Connections	• Fixed right/left supply and extract air connection	 Supply air and extract air connection easy to switch between right and left 	• Always the right unit in just a few steps
Compatibility	Zehnder overall system compatible with ComfoAir 350 and ComfoAir 550	 Zehnder overall system compatible with ComfoAir Q350, ComfoAir Q450 and ComfoAir Q600 (e.g. air distribution system, ComfoCool Q600, ComfoFond-L Q) 	 The ventilation unit still matches the air distribution 100% The range of connection components has also been expanded to make installation even easier.
Commissioning			
Commissioning wizard	Manual commissioning via the parameter menu	 Commissioning is easy with the start-up wizard which takes you through the simple process step by step 	Simple and quick commissioningReliable system function
Volume flow balance	 Fixed fan speed setting during commissioning 	 Sensor technology guarantees optimum air volume balance Flow Control maintains the set volume flow by automatically adjusting the fan speed 	 Simple and quick commissioning Maximum heat recovery Comfort for the occupant

	Zehnder ComfoAir	Zehnder ComfoAir Q	Your benefits
Maintenance/Us	se		
Filter concept	 Standard filter concept Time-based filter alert Improved industry standards aid selection of air filters 	 Filters tested to the new standard ISO 18890 Unit filter directly on the air intake Filter flap for an even better seal Larger filter material surface due to it being pleated tighter Intelligent filter alert according to air volume and time Filter change wizard 	 Filter gradings are easier to understand because they show the efficiency relative to the particle matter size No build-up of dust in the unit and in the air distribution system Filter replacement as needed thanks to indicator Larger surface means lower pressure loss Lower pressure loss means reduced running costs Simple, error-free filter replacement
Pre-heater	Pre-heater off/on	Pre-heater works in a modulating manner	 Optimum energy efficiency thanks to intelligent temperature control of the drawn-in outdoor air Reduced electrical power consumption
Operating concept	 No direct operation on the unit possible. For operation with: ComfoSense, 3-position switch, RF, ComfoControl Luxe 	 Intuitive display on the unit with plain text in the language of the country and a real-time indicator ComfoSwitch C, ComfoSense C, RFZ remote control operation and RF timer, Zehnder ComfoControl app, KNX interface 	 Easy and convenient operation Individual choice of operating concept
User comfort	 Fixed comfort temperature (can be selected on an individual basis) By-pass switched on or off, 0 or 100% 	 Adaptive comfort technology: factors in temperature perception according to the outside temperature pattern Modulating by-pass: automatically adjusts heat recovery to calculated comfort temperature One of the quietest ventilation units on the market. 	 Automatically creates the optimum supply air temperature, for a perfect well-being climate The easy way to ensure a quiet, comfortable indoor climate

Notes

Notes

Notes		

Terms and conditions of business

A handling charge of £15 will be applied to all orders less than £350 net.

Standard delivery for stock items is 3 days, subject to availability.

Delivery times for non-stock items can be up to 35 days.

Morning and overnight deliveries are available subject to conditions and will incur a £25 minimum additional charge.

Orders must be placed before 11am to be eligible for overnight delivery.

All quotations are valid for 30 days.

The basis for our offer, acceptance of orders, order confirmations or sales contracts is the current valid price list.

Sales are subject to our standard terms and conditions which are available on request.

Due to our policy of continuous change and improvement, product specification, price and availability may be subject to change without prior notice.

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All dimensions are in millimetres unless otherwise shown. Zehnder Group UK reserves the right to change specifications and prices without prior notice.

Zehnder Group UK Ltd

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