

Zehnder ComfoAir 350

The Zehnder ComfoAir 350 is a heat recovery unit designed to enable better and easier specification of ventilation in new properties due to its versatile duct connections. It can be wall or floor mounted and has rotatable spigots to duct vertically or horizontally. It contains features such as its automatic true summer by-pass, high heat recovery efficiency and upgradable high grade filters providing a comfortable, healthy and energy-efficient indoor climate.



CCB Switch



CCBL Switch

Key Features

- 100% full and filtered summer bypass.
- Rotatable spigots for horizontal or vertical duct connections.
- Tool free filter access.
- Volt free contact boost capability.
- F7 filter option.
- Enthalpy cube option.
- Passive House certified.

SAP PCDB Test Results

	SFP (W/l/s)		Efficiency (%)	
	2009	2012	2009	2012
K+1	0.77	0.71	88%	88%
K+2	0.70	0.71	88%	88%
K+3	0.69	0.80	88%	87%
K+4	0.72	0.93	87%	86%
K+5	0.79	1.07	87%	86%
K+6	0.88	1.23	86%	85%
K+7	1.00		86%	

Passive House Certification

Air flow range	Standard heat exchanger 71-293m³/h
Heat recovery rate	nHR=84%
Specific electric power	PeI,spec=0.29 Wh/m³



SEC Class



Based on average climate
with local demand control

Article Numbers

Description	Product Code	9 digit code
Zehnder ComfoAir 350, left handed	CA350L	471233400
Zehnder ComfoAir 350, right handed	CA350R	471233405
Controls, three position switch for Zehnder ComfoAir standard models	CCB	659000120
Controls, three position switch with service indicator for Zehnder ComfoAir standard models	CCBL	659000300
Controls, remote air quality sensor	AQR	
Controls, remote humidity sensor	HHRW	
Controls, remote passive infra-red movement sensor	PIRR	
Controls, remote temperature sensor	THR	

Article Numbers

Description

Product Code

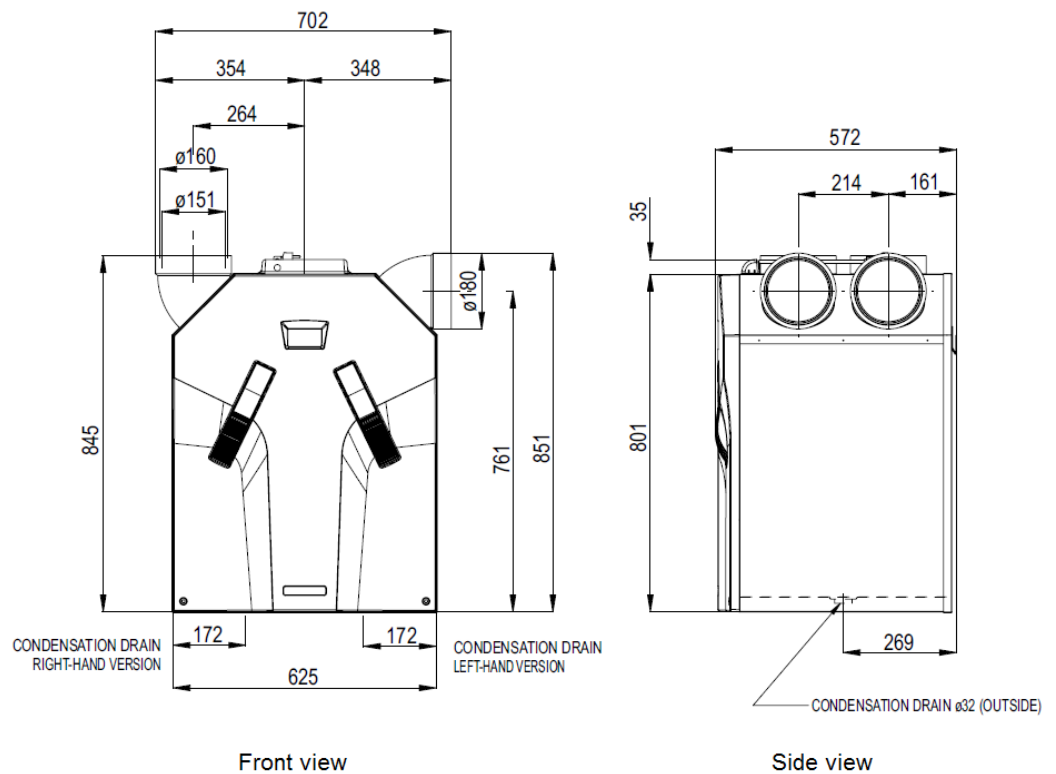
Zehnder ComfoAir 350 support frame, height 300mm	642300135
Filter set for Zehnder ComfoAir 350, G4/G4	400100085
Filter set for Zehnder ComfoAir 350, G4/F7	400100084
Filter set for Zehnder ComfoAir 350, F7/F7	400100086
Heat exchanger for Zehnder ComfoAir 350	400400010
Enthalpy exchanger for Zehnder ComfoAir 350	400400013

Technical Specification

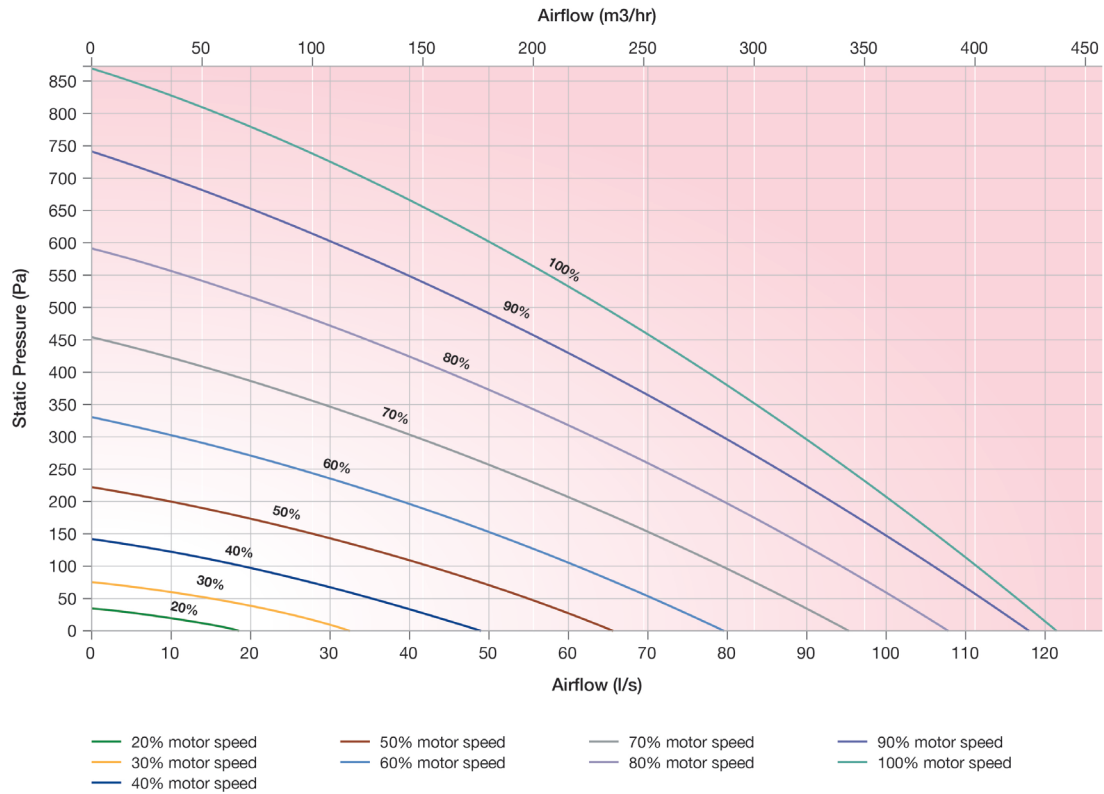
Dimensions

Weight	39 Kg
Ducting ø	Internal - 151 mm External - 180 mm
Condensate connection ø	32 mm
Filter grade	Standard - G4 / G4 Optional - G4 / F7
Materials	Internal EPP / ABS External coated sheet steel
Supply voltage	230V / single-phase / 50Hz
Maximum power consumption	243W
Current draw	1.77A
Fuse rating	3 amp

Height	851 mm
Width	625 mm
Depth	572 mm



Pressure Curve

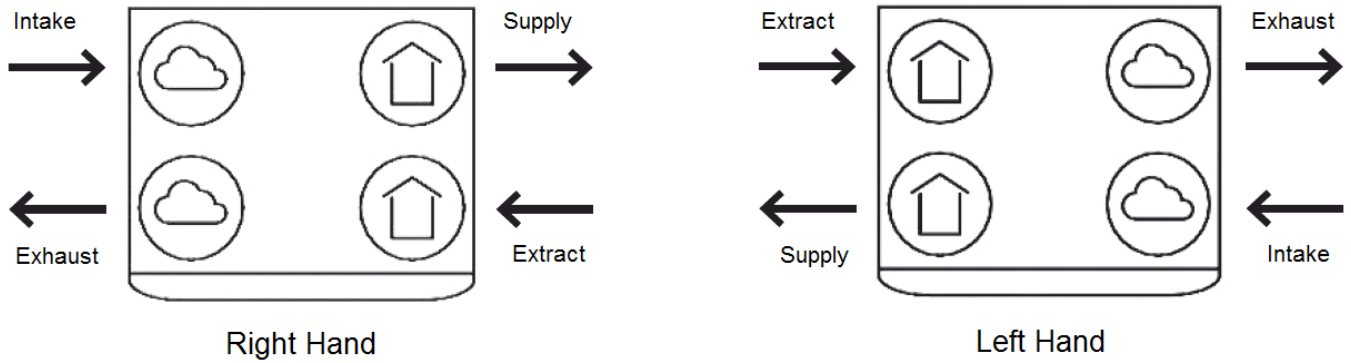


Sound Data

Speed	Test Area	Octave Band (Hz) Sound Power Level, dB								dB(A)@3m
		63	125	250	500	1000	2000	4000	8000	
20%	Casing		27.4	16.5	17.8	14.5	13.0			2.6
	Supply	57.2	48.0	39.6	28.0	17.8	4.5	5.0	12.2	
	Extract	63.5	49.8	33.6	23.3	19.0	10.4	7.1	11.8	
40%	Casing		35.9	37.2	33.3	30.7	28.7			18.5
	Supply	65.2	59.6	58.9	49.0	43.0	34.5	25.0	11.8	
	Extract	66.1	52.8	49.3	35.5	28.3	21.9	10.3	10.6	
60%	Casing		45.7	44.0	44.4	42.7	41.6			29.9
	Supply	68.2	70.5	68.4	61.7	56.0	48.8	41.6	29.4	
	Extract	66.0	57.3	56.4	50.8	38.9	34.1	24.8	13.2	
80%	Casing		51.0	49.2	52.3	50.4	49.4			37.6
	Supply	72.2	76.0	73.0	68.8	63.9	57.2	51.2	39.0	
	Extract	67.6	62.6	61.0	57.0	45.9	41.5	33.2	23.1	
100%	Casing		52.3	52.5	55.2	54.6	53.6			41.4
	Supply	75.5	78.5	76.0	73.5	69.4	62.4	56.9	44.9	
	Extract	72.2	65.1	64.8	60.8	50.3	45.7	38.0	29.9	

Casing tested according to ISO 3741:2010. Supply and Extract tested according to ISO 5135:1997 showing induct sound power level corrected for end duct reflection according to EN13053:2006. Casing dB(A) @ 3m given as hemispherical.

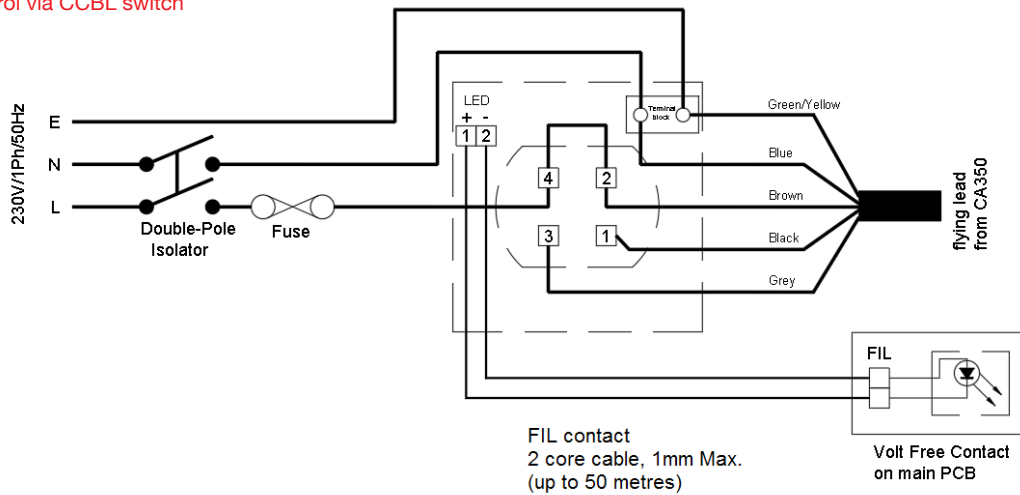
Air Direction / Connection



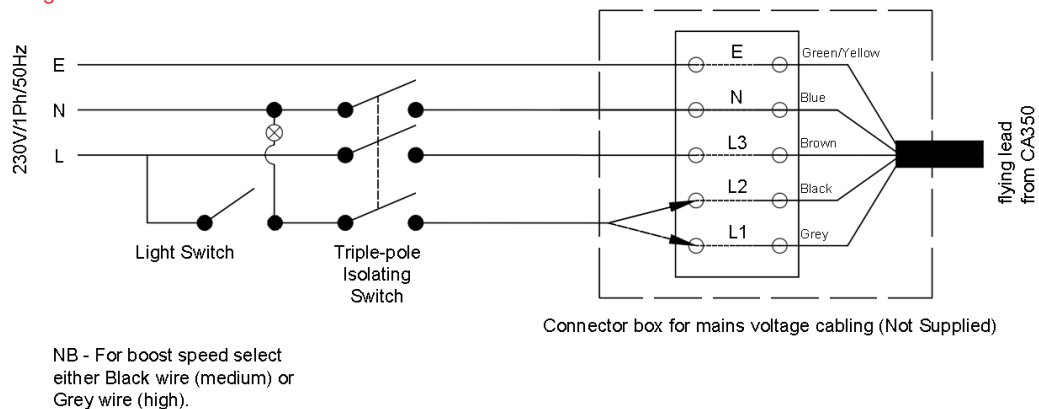
Wiring

Electrical connections should be carried out in accordance to IEE regulations by a qualified electrician. The unit is supplied with a flying lead for connection to the mains supply.

Three speed control via CCBL switch

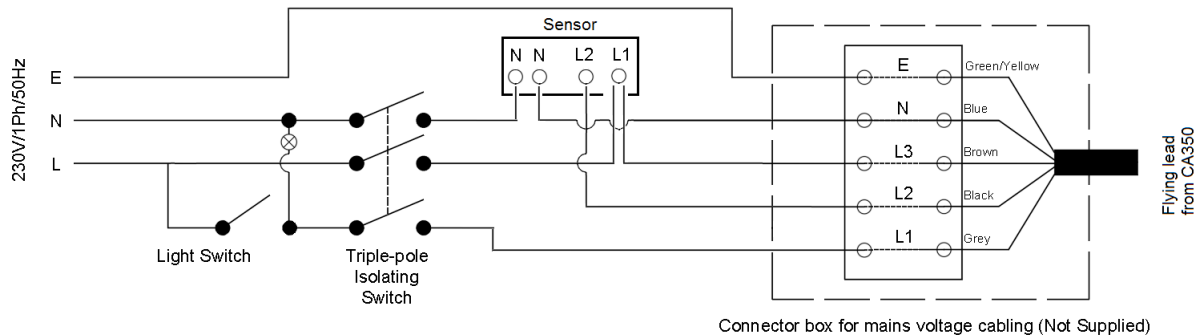


Two speed control via light switch

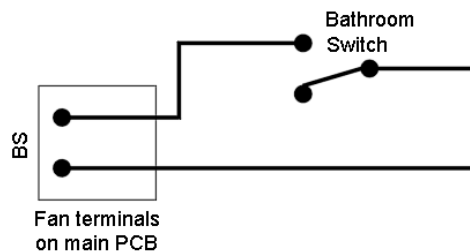


Wiring

Two speed control via light switch and medium speed activation via remote sensor



Two speed control via light switch



1 core cable, 1mm Max.
(up to 50 metres)

Consultant Specification

Specification

The unit shall consist of a body manufactured in powder coated sheet steel. The unit shall be fully insulated using high quality EPP to maintain excellent thermal characteristics and prevent shrinkage over time. It shall have EC motors with sealed for life bearings. The fans impellers should be low pressure centrifugal type with forward curved blades within ABS scroll housing. The heat exchanger shall be a multi-plate, counter flow design constructed from Polystyrene with laser welded joints and shall retain up to 88% of the temperature differential of outgoing air with the option to upgrade to an enthalpy heat exchanger for latent and sensible heat transfer plus moisture recovery negating the need for a condensate drain.

The unit shall contain filters manufactured from synthetic material which has been tested to a minimum of G4 standard with the option to upgrade to F7. The filters shall be pleated to reduce the pressure drop and required cleaning time. The unit shall have rotatable 150mm duct connections, and be suitable for vertical wall mounting or floor stand. Integrated preheater options shall be available to enable balanced ventilation with external air temperatures -10°C.

The unit shall have 100% full summer by-pass and provide filtered supply air 365 days of the year, even under bypass conditions. The unit shall contain a temperature sensor for each air stream to ensure correct and logical operation of the bypass damper by evaluating differential as well as absolute temperature to maximise the opportunity for free cooling.

The unit shall be constructed to have a removable cover to allow full maintenance access. The removable cover shall enable access to the supply/extract fan, heat exchanger and access to electrical connections. The motors shall be suitable for removal without the requirement for the unit to be removed from situ and be available as spare parts for a minimum of 10 years even after ceasing manufacture of the unit.

The unit shall conform to LVD and EMC standards and be CE Marked in addition to having an EU compliant energy rating label (SEC) with a minimum grade of A. The unit shall be manufactured by Zehnder.

Consultant Specification

Operation

The supply and extract unit shall be a ComfoAir manufactured by Zehnder and shall be suitable for vertical wall or horizontal ceiling mounting in accordance with the specification.

The fresh filtered air from outside shall be supplied to each of the habitable rooms and pre-heated by the warm extract air from the wet areas, such as kitchen or bathroom, via the plastic counter flow heat exchanger. The unit shall vary its speed of the EC motors automatically when it receives a signal from one of the inbuilt sensors or via external switches.

The unit shall have the ability to adjust and commission the supply and extract motors independently via the front mounted in-built interface. The motors shall both offer 100% variable speed control.

Controls

All ComfoAir units shall contain the following functions within the unit pre-wired and factory fitted by the manufacturer:

- 100% variable supply and extract motor control
- 4 Variable speed flow rate set points
- Automatic filtered summer bypass
- Heat exchanger frost protection
- Integral service, fault and operation indicators
- Control panel PIN protection
- Tool free filter access
- Variable overrun and delay on timer
- Switched live input
- Volt free contact