

Zehnder ComfoAir 180

The Zehnder ComfoAir 180 is a heat recovery unit designed to enable better and easier specification of ventilation in new or refurbishment properties due to its compact size and unique ductwork. It can be left or right handed in addition to being small enough to mount in a kitchen cupboard. 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



CCRZ
Radio Frequency



ComfoSense
CCS

Key Features

- 100% full and filtered summer bypass.
- Left or right hand configuration in one unit.
- Easy installation to wall, cupboard or kitchen cupboard.
- Light to handle.
- Tool free filter access.
- Volt free contact boost capability.
- BMS capability via RS232 protocol.
- RFZ wireless connectivity option.
- F7 filter option.
- Internal pre-heater option.
- Enthalpy cube option.
- Passive House certified.

SAP PCDB Test Results

	SFP (W/l/s)		Efficiency (%)	
	2009	2012	2009	2012
K+1	0.73	0.72	89%	89%
K+2	0.70	0.79	89%	86%
K+3	0.74	0.94	86%	84%
K+4	0.86	1.20	85%	82%
K+5	0.98		84%	
K+6	1.16		82%	

Passive House Certification

	Standard heat exchanger
Air flow range	90-145m ³ /h
Heat recovery rate	nHR = 82%
Specific electric power	Pel,spec = 0.27 Wh/m ³



SEC Class



Based on average climate with local demand control

Article Numbers

Description	Product Code	9 digit code
Zehnder ComfoAir 180	CA180	471212370
Zehnder ComfoAir 180 Luxe	CA180LUXE	471212380
Zehnder ComfoAir 180 Luxe with pre-heater	CA180LUXEPH	471212385
Controls, Zehnder ComfoSense 67 controller for Zehnder ComfoAir Luxe and Luxe PH models	CCS	655010215
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
Zehnder ComfoControl RFZ wireless controller for use with Zehnder ComfoSense 67/C67	CCRZ	655000755

Article Numbers

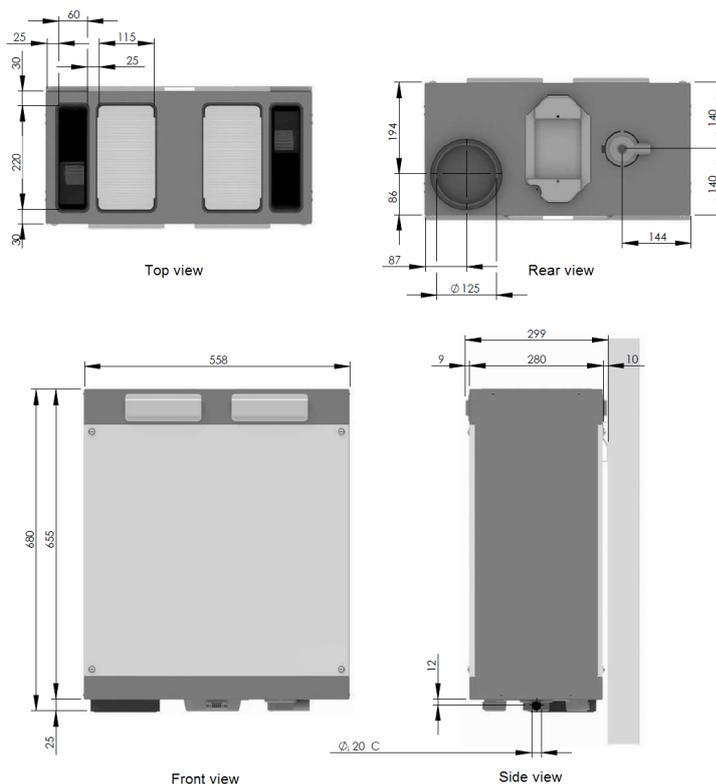
Description	Product Code
Zehnder RF-PCB to offer wireless connectivity to the CCRFZ without the use of a ComfoSense 67	655000770
Controls, remote air quality sensor	AQR
Controls, remote humidity sensor	HHRW
Controls, remote passive infra-red movement sensor	PIRR
Controls, remote temperature sensor	THR
Filter set for Zehnder ComfoAir 180, G4/G4	400100090
Filter set for Zehnder ComfoAir 180, G4/F7	400100091
Heat exchanger for Zehnder ComfoAir 180	400400038
Enthalpy exchanger for Zehnder ComfoAir 180	400400039

Technical specification

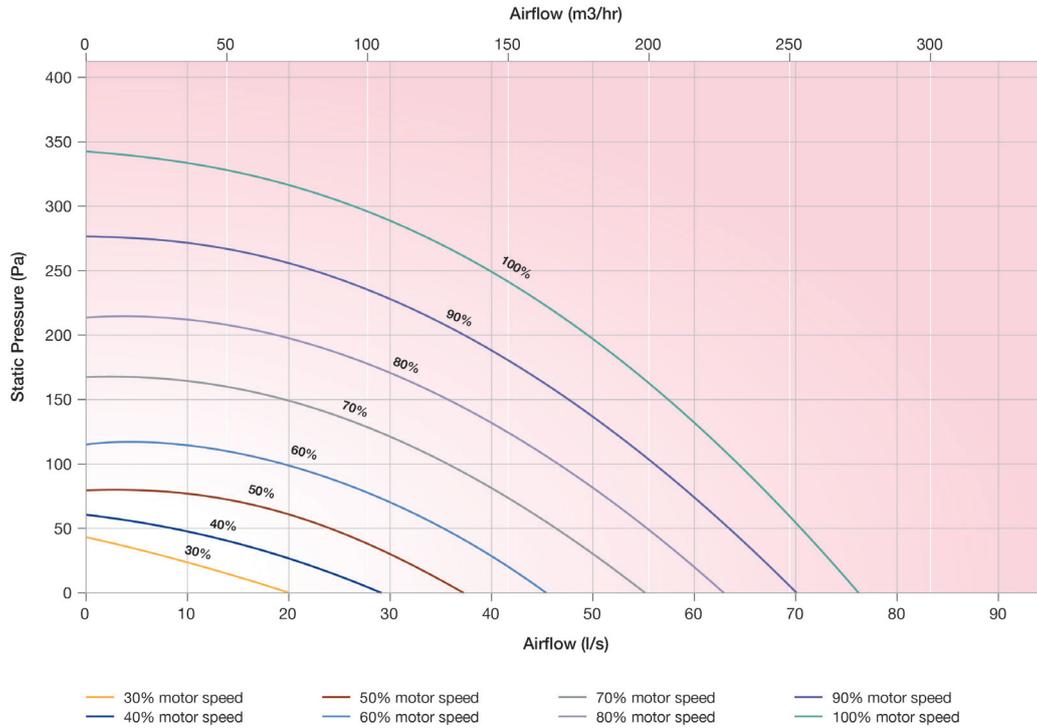
Weight	24 Kg
Ducting ø	ComfoPipe Plus Twin Duct
Condensate connection ø	20 mm
Filter grade	Standard - G4 / G4 Optional - G4 / F7
Materials	Internal EPP / ABS External coated sheet steel
Supply voltage	230V / single-phase / 50Hz
Maximum power consumption including / excluding pre-heater	1250W / 100W
Current draw including / excluding pre-heater	5.77A / 0.78A
Fuse rating including / excluding pre-heater	6 / 3 amp

Dimensions

Height	680 mm
Width	558 mm
Depth	299 mm



Pressure Curve

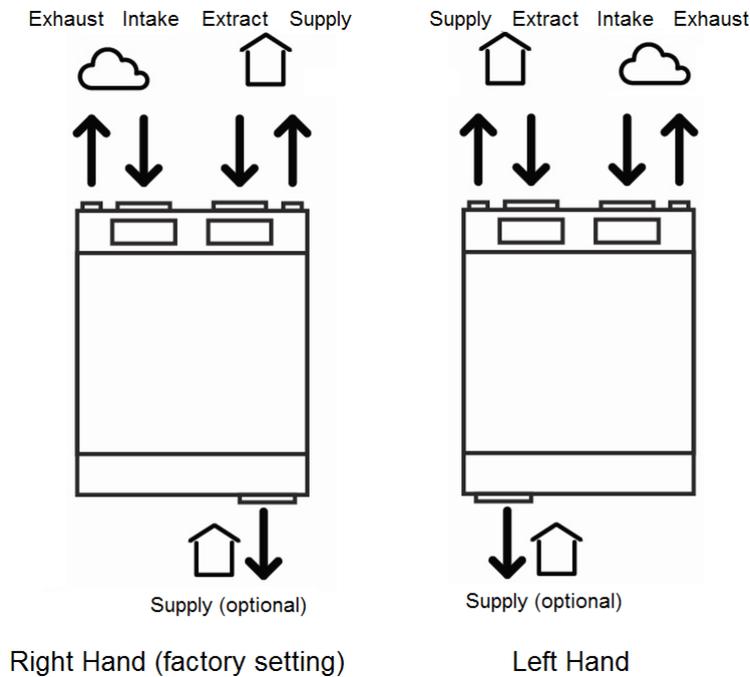


Sound Data

Speed	Test Area	Octave Band (Hz) Sound Power Level, dB								dB(A)@3m
		63	125	250	500	1000	2000	4000	8000	
20%	Casing	38.3	29.0	30.6	21.1	15.2	11.7	16.1	24.3	10.0
	Supply	63.1	48.1	38.4	27.0	26.8	13.8	14.3	24.0	
	Extract	61.5	45.0	34.1	21.9	19.3	9.1	13.4	23.9	
40%	Casing	39.9	33.4	36.4	31.2	24.0	16.4	16.3	24.4	15.2
	Supply	67.2	57.4	49.2	39.5	38.3	29.2	23.1	24.6	
	Extract	63.1	49.7	42.1	33.0	29.8	16.3	17.5	24.3	
60%	Casing	43.9	41.0	45.0	36.1	31.8	22.6	17.7	24.4	21.9
	Supply	71.4	65.3	58.2	49.8	47.6	41.4	32.2	28.5	
	Extract	64.8	54.9	49.9	43.0	39.0	24.2	22.1	24.7	
80%	Casing	46.2	47.0	51.0	43.7	37.7	29.2	22.6	25.2	26.2
	Supply	75.8	71.7	65.2	57.7	54.6	50.0	41.6	36.0	
	Extract	66.4	60.0	56.2	50.2	45.1	31.9	26.5	25.0	
100%	Casing	52.0	51.4	55.5	47.6	41.8	33.8	27.7	27.7	32.5
	Supply	79.7	76.0	69.6	62.4	58.5	54.3	50.1	45.9	
	Extract	68.0	64.7	61.1	54.6	48.4	39.2	30.6	25.4	

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.

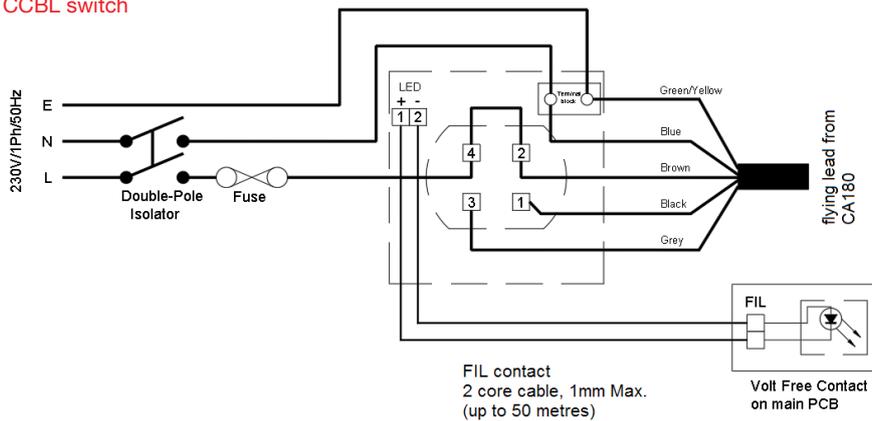
Air Direction/Connection



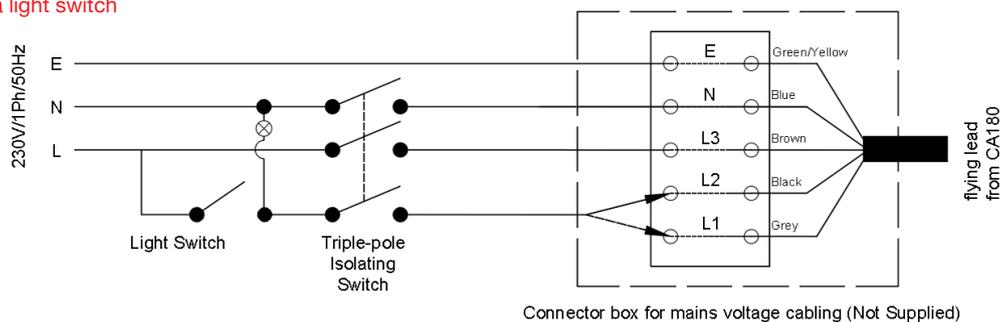
Wiring

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 controller via CCBL switch



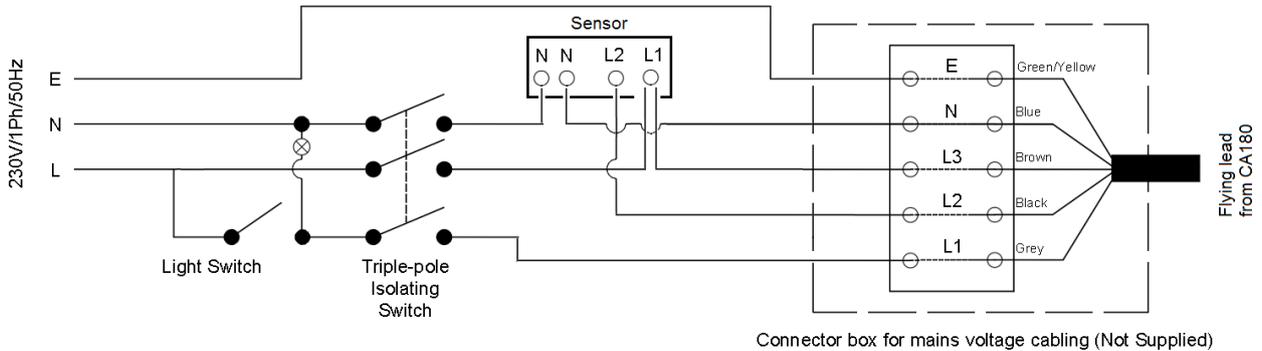
Two speed control via light switch



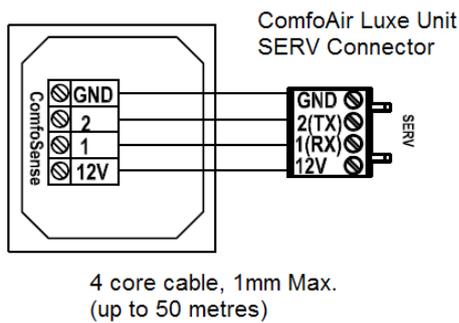
NB - For boost speed select either Black wire (medium) or Grey wire (high).

Wiring

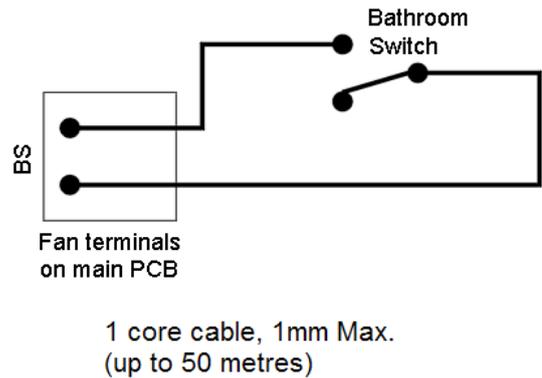
Two speed control via light switch and medium speed activation via remote sensor



Four speed control via ComfoSense controller
LUXE UNIT ONLY



Two speed control via volt free contact switch



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 backward 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 89% 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 duct connections for use with ComfoPipe Plus Twin Duct, and be suitable for vertical wall mounting. 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 in a cupboard 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
- BMS compatibility via RS232 protocol option
- RFZ wireless connectivity option
- Pre-heater frost protection option
- Control input for capacitive touch speed controller with 7 day programmer capabilities

zehnder
always the
best climate