Data Sheet

ComfoAir 350

Wall mounted mechanical supply and extract ventilation with heat recovery (MVHR)

ComfoAir 350

The 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.

Key Benefits

- 100% full and filtered summer bypass.
- Rotatable spigots for horizontal or vertical duct connections.
- Tool free filter access.
- Volt free contact boost capability.
- ISO Coarse (G4), ISO ePM10 (M5) and ISO ePM1 (F7) filter options.
- Enthalpy cube option.
- Passive House certified.

Example controls - sold separately

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Article Numbers

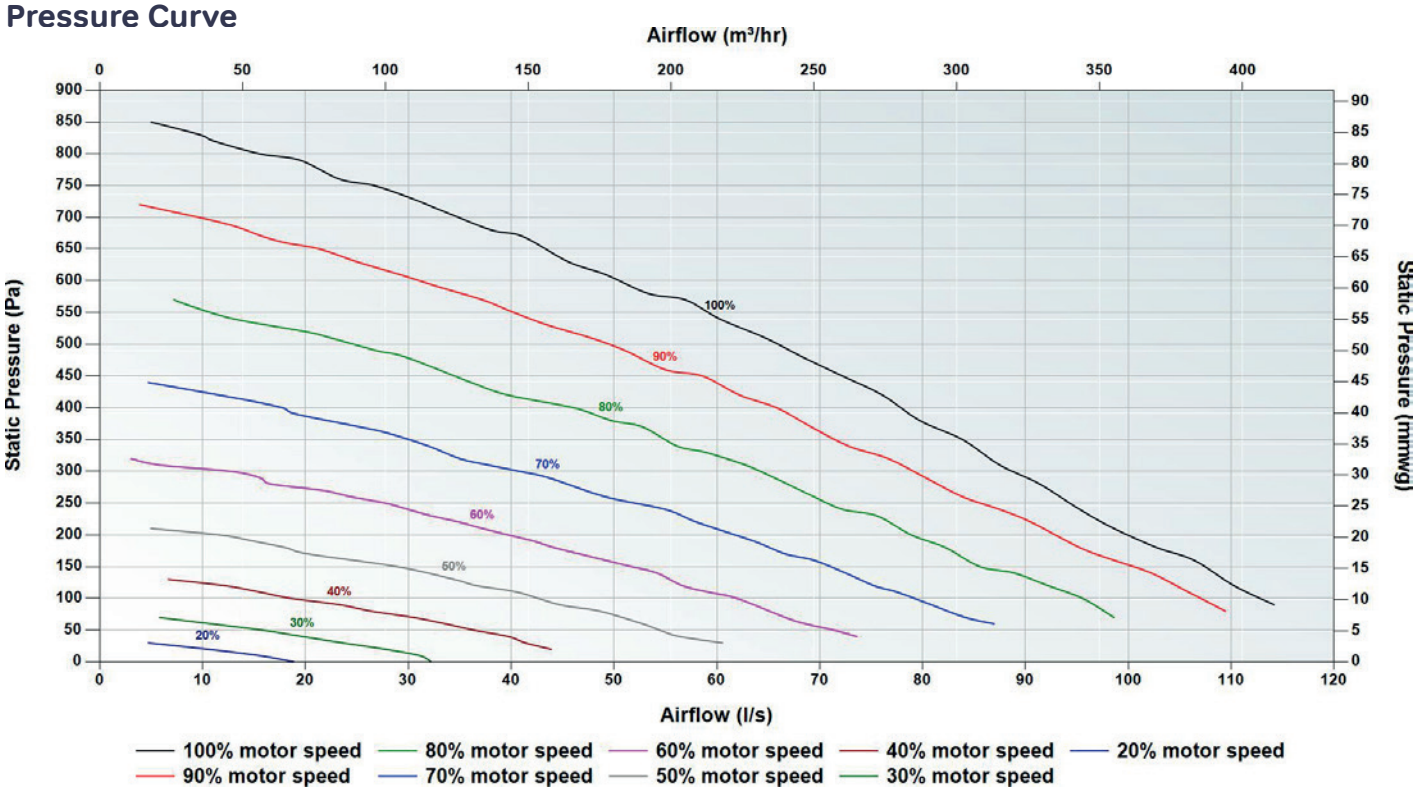
Description	Product Code
ComfoAir 350, left handed unit	80CS35L
ComfoAir 350, right handed unit	80CS35R
Controls, CCBL, three position switch with service indicator for ComfoAir standard models	35CS35E
Filter for Zehnder ComfoAir 350, ISO Coarse (G4), 2 Pieces	80CS35A
Filter for Zehnder ComfoAir 350/550, ISO Coarse / ISO ePM10 (G4/M5), 2 Pieces	80CS35C
Filter for Zehnder ComfoAir 350, ISO ePM1 (F7), 2 Pieces	80CS35B

SAP PCDB					SEC Class
	SFP (W/l/s)		Efficiency (%)		
	2009	2012	2009	2012	
K+1	0.77	0.71	88%	88%	A+
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%		

Based on average climate with local demand control

Passive House Certification		
	Standard heat exchanger	
Air flow range	71–293 m³/h	
Heat recovery rate	HR = 84%	
Specific electric power	Pel,spec = 0.29 Wh/m³	

Pressure Curve



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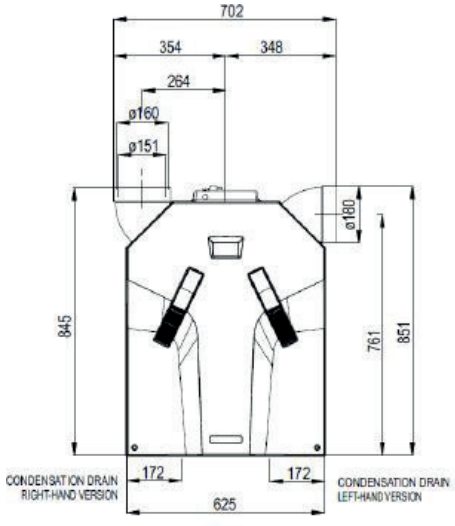
Sound Data

Speed	Test area	Octave Band (Hz) Sound Power Level, dB								dB(A) @ 3 m
		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	

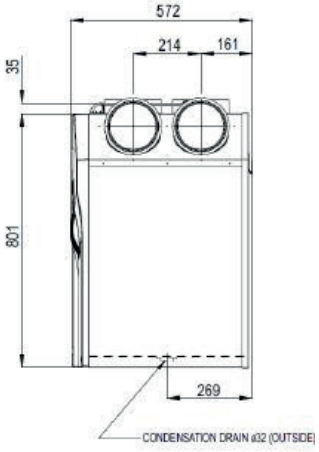
Casing tested according to ISO 3741:2010. Supply and Extract tested according to ISO 5135:1997 showing induct sound power level corrected for end duct reflection according EN 13053:2019. Casing dB(A) @ 3 m given as hemispherical.

Technical Specification	
Weight	39 Kg
Ducting ø	Internal - 151 mm External - 180 mm
Condensate connection ø	32 mm
Filter grade	Standard - ISO Coarse / ISO Coarse (G4 / G4) Optional - ISO Coarse / ISO ePM1 (G4 / F7)
Materials	Internal EPP / ABS External coated sheet steel
Supply voltage	230 V / single-phase / 50Hz
Maximum power consumption	243 W
Current draw	1.77 A
Fuse rating	3 amp
Specific Fan Power	0.69 W/l/s
Heat Recovery Efficiency	0.88

Dimensions	
Height	851 mm
Width	625 mm
Depth	572 mm

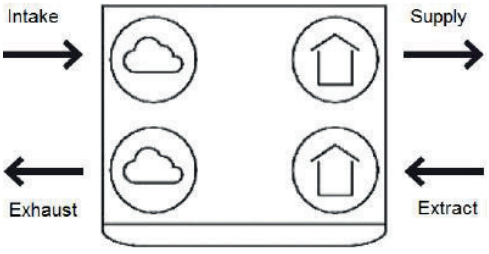


Front view

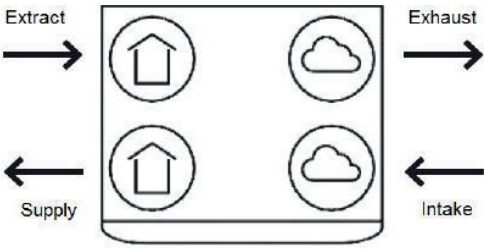


Side view

Air Direction/Connection



Right Hand



Left Hand

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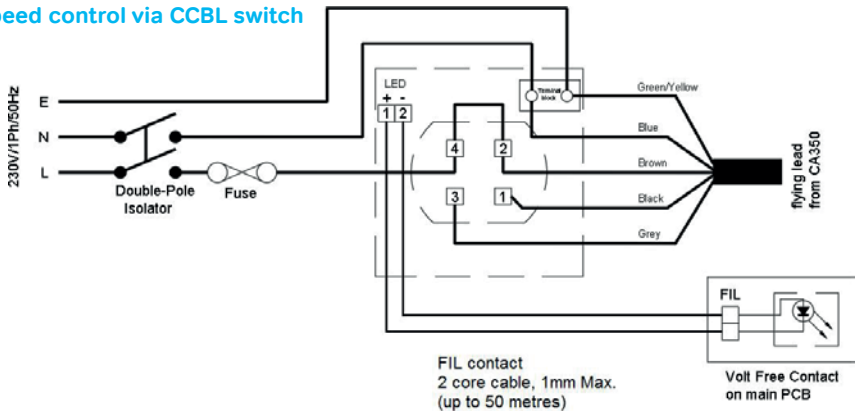
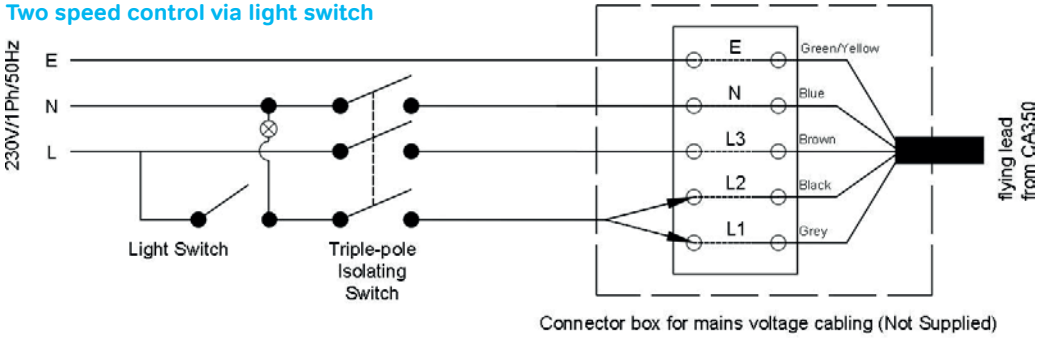
Wiring

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

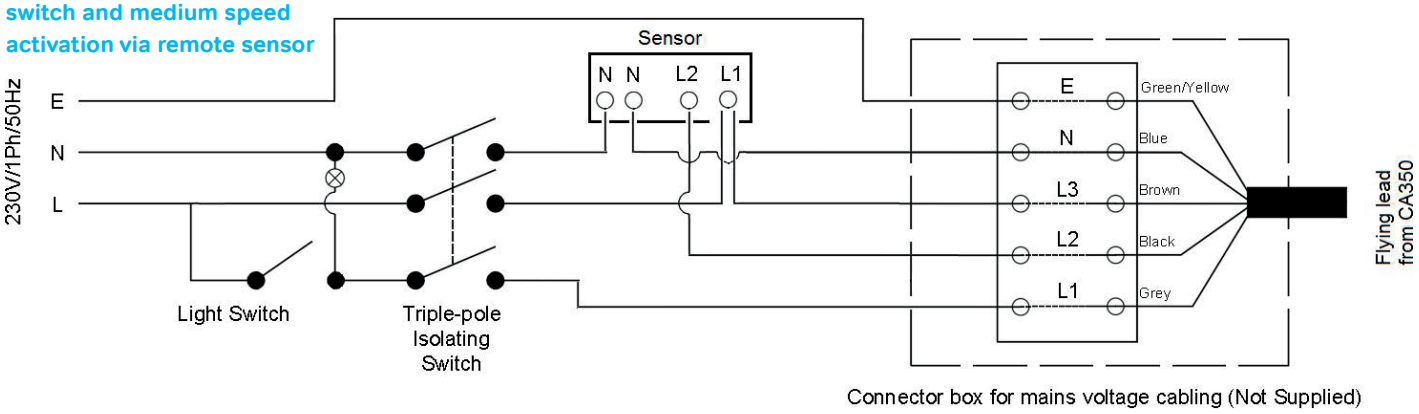


Two speed control via light switch

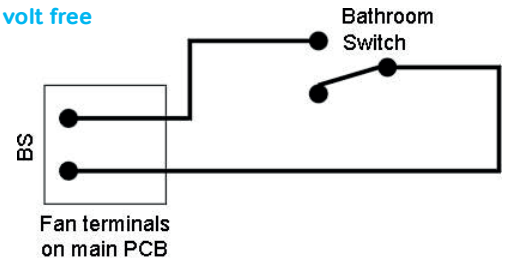


NB - For boost speed select either Black wire (medium) or Grey wire (high).

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



Two speed control via volt free contact switch



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

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ComfoControl Basic LED

Product code: **80CS35E**

The CCBL is a three position switch designed to enable the user to manually select the desired ventilation systems flow rate and provide system notifications

Key Benefits

- 3 separate ventilation flow rate options to select in 1 controller
- Service and Maintenance alert

Technical Specification		Dimensions (recessed)	
Mounting options	Recessed / Surface	Height	83 mm
Supply voltage	Mains power - 230 V / single-phase / 50Hz	Width	83 mm
IP rating	IP20	Depth	7 mm
Recommended cable	FIL contact only - 2 core cable, 1 mm Max. (up to 50 metres)	**Dimensions (surface mounted)**	
RAL colour	9010	Height	83 mm
Recommended mounting box	659 000 310	Width	83 mm
		Depth	44 mm

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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 impellors 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 ISO Coarse (G4) standard with the option to upgrade to ISO ePM1 (F7). The filters shall be pleated to reduce the pressure drop and required cleaning time. The unit shall have rotatable 150 mm duct connections, and be suitable for vertical wall mounting or floor stand.

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 conform to UK Electrical Equipment (Safety) Regulations and Electromagnetic Compatibility Regulations and be UKCA Marked. The unit shall be manufactured by Zehnder.

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
- 3 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

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