

Zehnder ComfoAir 180

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

Product data sheet

always the best climate



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.



Example controls - sold separately



ComfoSense 67



ComfoControl RFZ

Key Benefits

- 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.
- ISO Coarse / ISO ePM1 (G4 / F7) filter combination as standard.
- ISO Coarse (G4), ISO ePM10 (M5) and ISO ePM1 (F7) filter options.
- Internal pre-heater.
- Enthalpy cube option.
- Passive House certified.

Article Numbers

Description	Product Code
Unit Zehnder ComfoAir 180 Luxe with pre-heater	CA180LUXEPH
Controls Controls, Zehnder ComfoSense 67 controller for Zehnder ComfoAir Luxe/PH models (CCS)	655 010 215
Controls, ComfoControl RFZ wireless controller for use with ComfoSense 67/C67 (CCRFZ)	655 000 755
Controls, ComfoControl RFZ Timer wireless controller for use with ComfoSense 67/C67	655 000 780
Filters Filter for Zehnder ComfoAir 180, ISO Coarse (G4), 2 Pieces	400 100 090
Filter for Zehnder ComfoAir 180, ISO Coarse / ISO ePM10 (G4/M5), 2 Pieces	400 102 095
Filter for Zehnder ComfoAir 180, ISO Coarse / ISO ePM1 (G4 / F7), 2 Pieces	400 100 091
Accessories Heat exchanger for Zehnder ComfoAir 180	400 400 038
Enthalpy exchanger for Zehnder ComfoAir 180	400 400 039
CA180 Zehnder ComfoPipe adaptor, 2 x DN125	990 328 804

SAP PCDB

SEC Class

	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%	



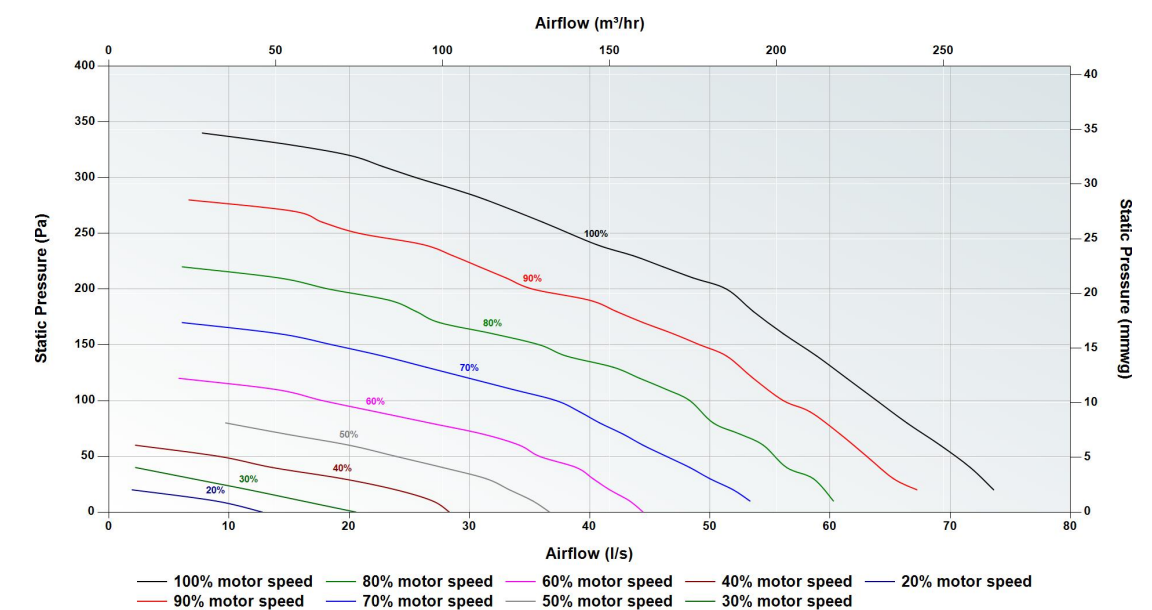
Based on average climate with local demand control

Passive House Certification

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



Pressure Curve



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	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	28.2
	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	

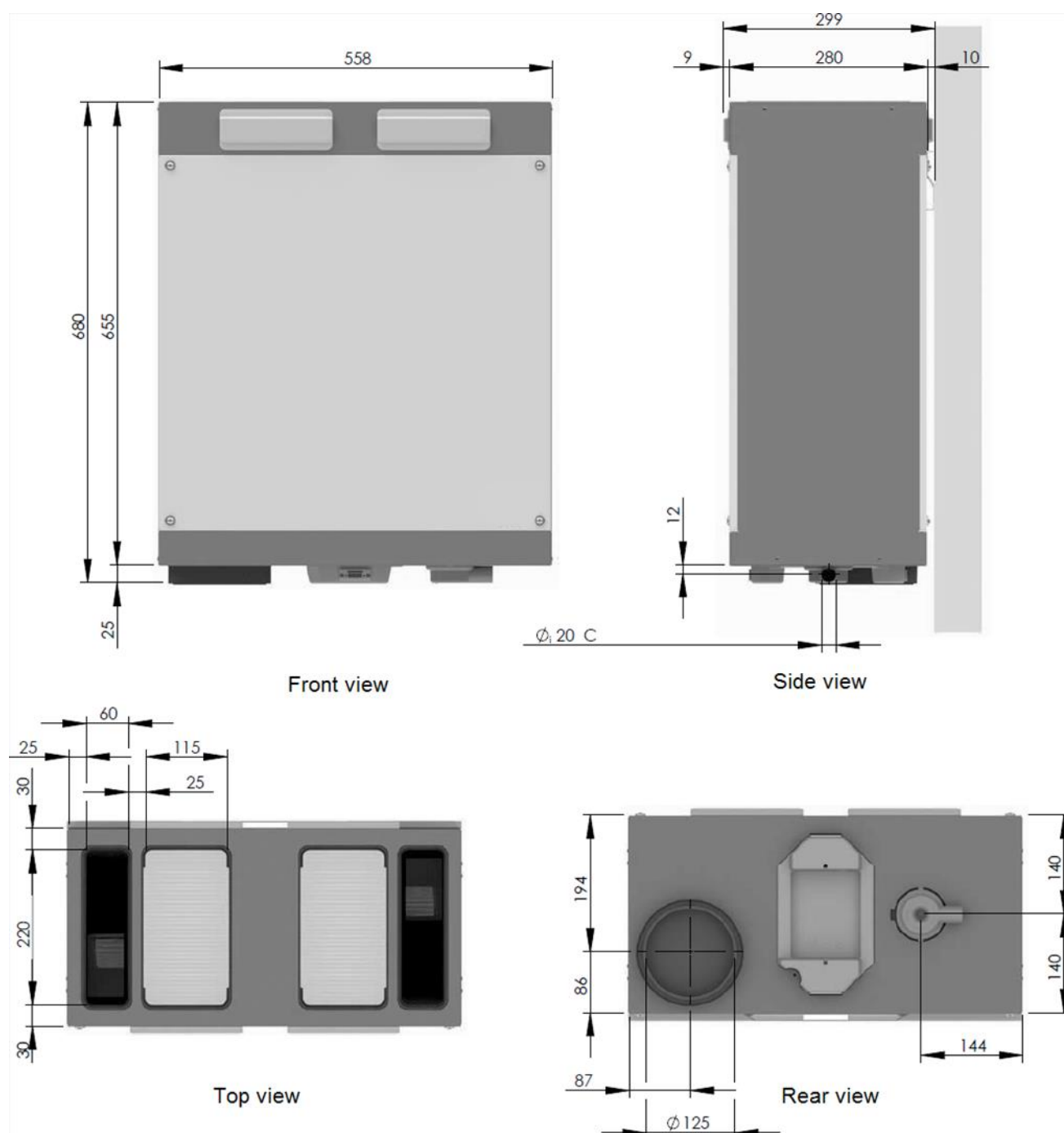
Casing tested according to ISO 3741:2010. Supply and Extract tested according to ISO 5135:1997 showing induct sound power level corrected for end duct reflection according EN 13053:2019. Casing dB(A) @ 3 m given as hemispherical.

Technical Specification

Weight	24 Kg
Ducting ø	ComfoPipe Plus Twin Duct
Condensate connection ø	20 mm
Filter grade	Standard - ISO Coarse / ISO ePM1 (G4 / F7) Optional - ISO Coarse / ISO Coarse (G4 / G4)
Materials	Internal EPP / ABS External coated sheet steel
Supply voltage	230 V / single-phase / 50Hz
Maximum power consumption including / excluding pre-heater	1250 W / 100 W
Current draw including / excluding pre-heater	5.77 A / 0.78 A
Fuse rating including / excluding pre-heater	6 / 3 amp
Specific Fan Power	0.7 W/l/s
Heat Recovery Efficiency	0.89
Preheater power	1.15 kW

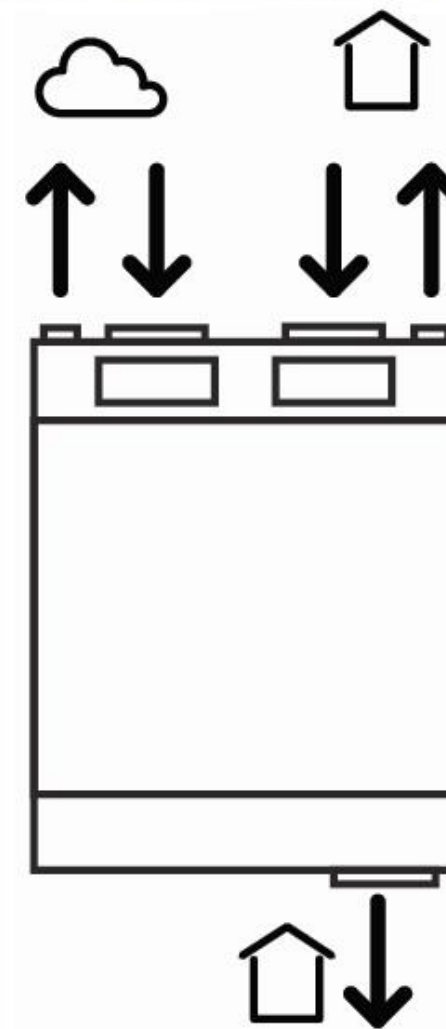
Dimensions

Height	680 mm
Width	558 mm
Depth	299 mm



Air Direction/Connection

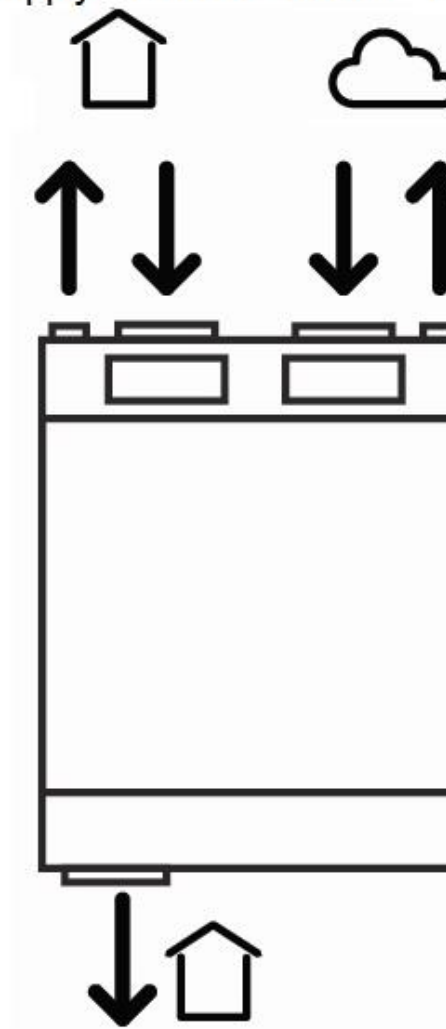
Exhaust Intake Extract Supply



Supply (optional)

Right Hand (factory setting)

Supply Extract Intake Exhaust



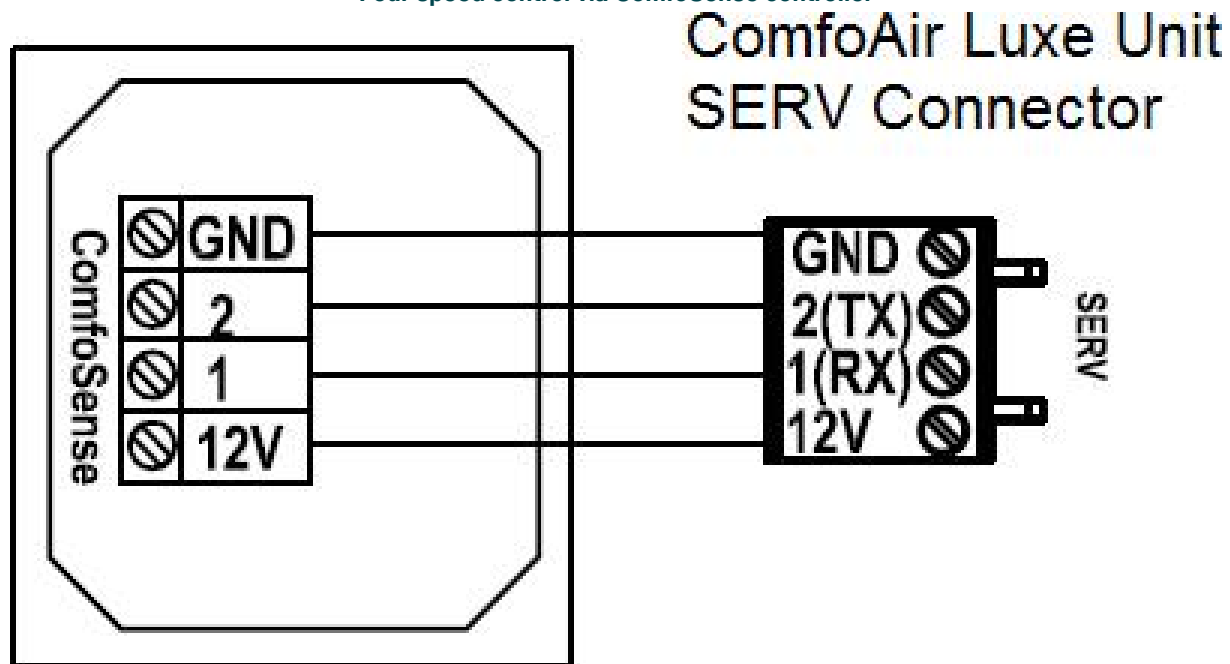
Supply (optional)

Left Hand

Wiring

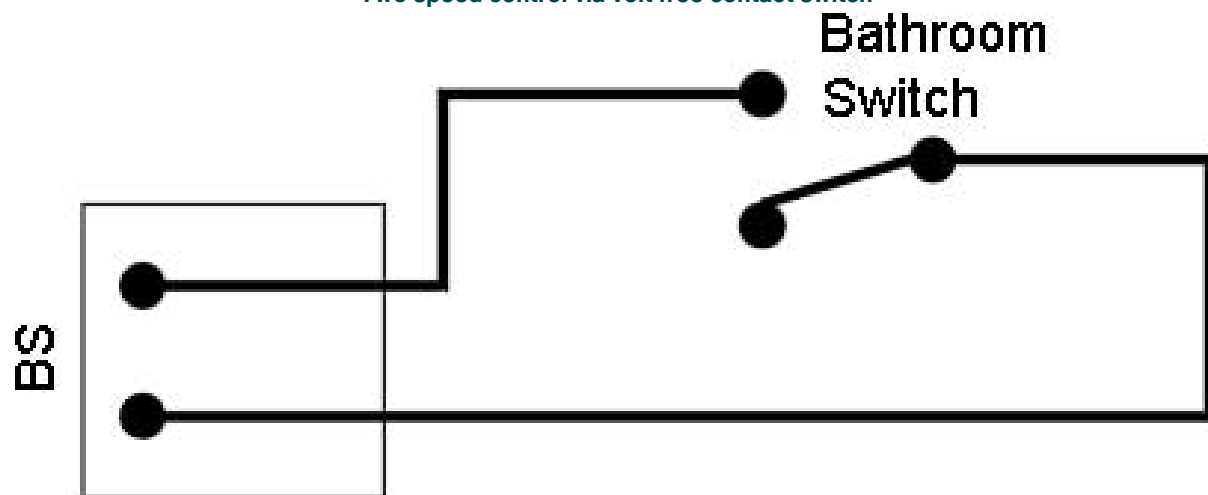
Electrical connections should be carried out in accordance to [IEE regulations](#) by a qualified electrician. The unit is supplied with a flying lead for connection to the mains supply.

Four speed control via ComfoSense controller



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

Two speed control via volt free contact switch



Fan terminals
on main PCB

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

CA180 Zehnder ComfoPipe adaptor, 2 x DN125

Article number: 990 328 804

Description

Adaptor:

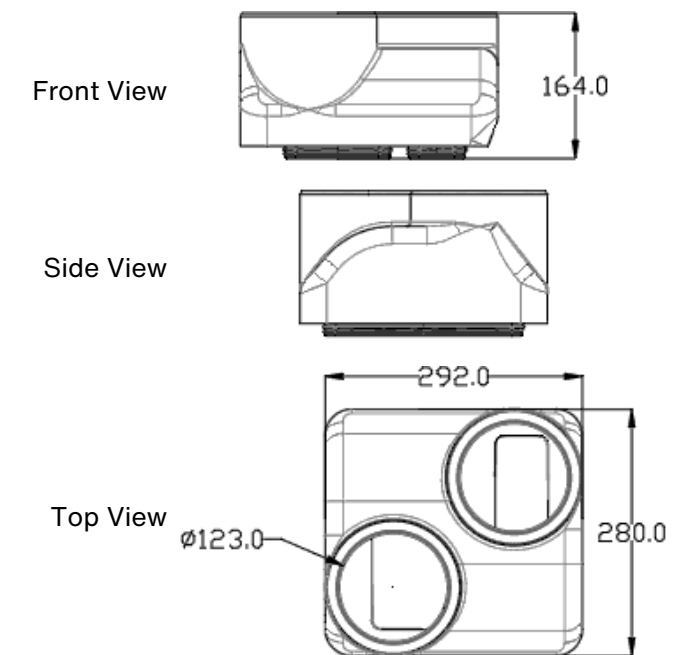
Adaptor for insulated duct system to securely connect to the ComfoAir 180 to enable a connection to 2 x straight length of \varnothing 125 mm insulated pipe or bend.

Technical Specification

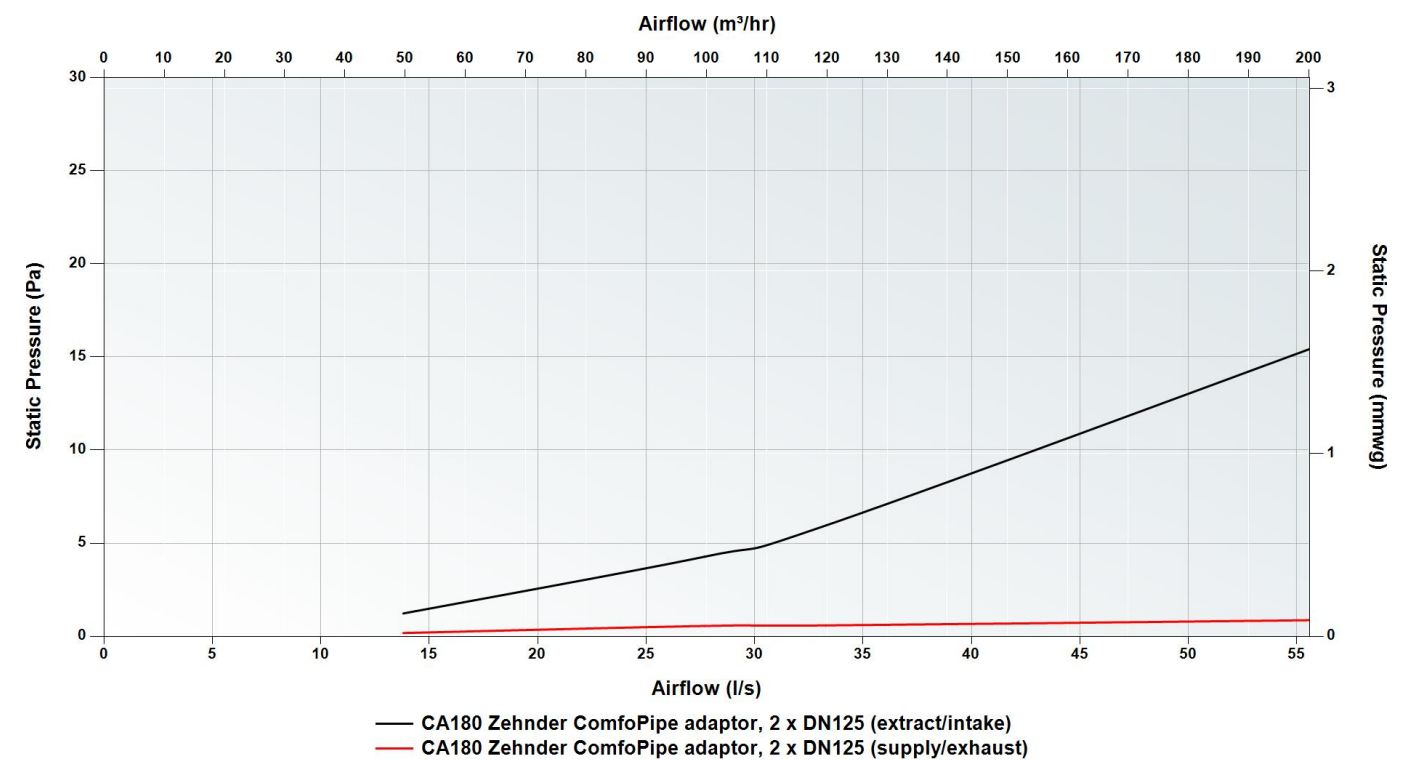
Height	164 mm
Width	292 mm
Depth	280 mm
Weight	0.1 kg



Dimensions



Pressure Curve



Controls

ComfoSense 67

Product code: 655 010 215



The Zehnder ComfoSense 67 is a four position switch designed to enable the user to manually select the desired ventilation systems flow rate and provide system notifications

Key Benefits

- 4 separate ventilation flow rate options to select in 1 controller
- 7 day flow rate programmer
- Summer bypass indicator
- Frost protection indicator
- Service and Maintenance alert
- Clock function
- User menu access
- Installer menu access
- RF bridge to enable use of the CCRFZ (655 000 755) controller

Technical Specification

Mounting options	Recessed / Surface
Supply voltage	Low voltage direct from the MVHR units PCB connector
IP rating	IP44
Recommended cable	4 core cable, 1 mm Max. (up to 50 metres)
RAL colour	9016
Maximum number per unit	1
Supplied mounting box	655 010 270

Dimensions (recessed)

Height	80 mm
Width	80 mm
Depth	12 mm

Dimensions (surface mounted)

Height	80 mm
Width	80 mm
Depth	48.5 mm

ComfoControl RFZ

Product code: 655 000 755



The Zehnder CCRFZ is a three position switch designed to enable the user to manually select the desired ventilation systems flow rate and provide system notifications. This controller can only be used in conjunction with the ComfoSense or ComfoSense C.

Key Benefits

- Wireless controller
- 3 separate ventilation flow rate options to select in 1 controller
- 2 temporary high speed activation settings
- Service and Maintenance alert

Technical Specification

Mounting options	Surface
Supply voltage	Powered by a coin cell lithium battery (type: CR 2032)
IP rating	IP40
RAL colour	9010
Maximum number per unit	40

Dimensions (surface mounted)

Height	80 mm
Width	80 mm
Depth	14 mm

ComfoControl RFZT

Product code: 655 000 780



The Zehnder CCRFZT is a multi position switch designed to enable the user to manually select the desired overrun timer duration.

This controller can only be used in conjunction with the ComfoSense or ComfoSense C.

Key Benefits

- Wireless controller
- 3 separate ventilation overrun timer options to select in 1 controller
- Manual override to prematurely turn off the overrun timer
- Controller service and connection alert

Technical Specification

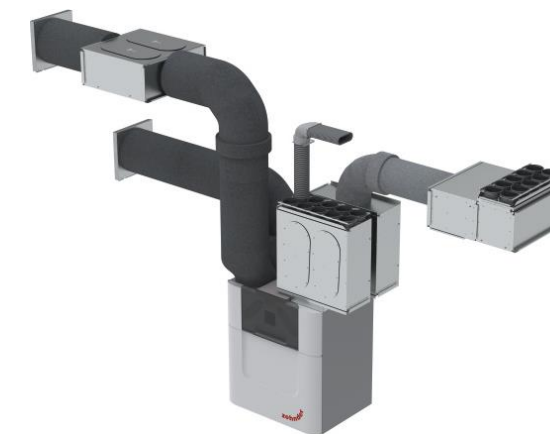
Mounting options	Surface
Supply voltage	Powered by a coin cell lithium battery (type: CR 2032)
IP rating	IP40
RAL colour	9010
Maximum number per unit	40

Dimensions (surface mounted)

Height	80 mm
Width	80 mm
Depth	14 mm

For use with

Our range of ComfoAir MVHR units can be used in conjunction with ComfoWell. The modular ComfoWell manifold can be combined with multiple circular connections for rigid round or semi-rigid connections. Along with filter boxes and attenuated manifold options, the ComfoWell is the perfect bespoke air distribution system for our ComfoAir MVHR units.



TO VIEW OUR COMFOWELL INFORMATION

[CLICK HERE](#)

BIM/CAD Components

If you would like to download the BIM / CAD files for this or any other of our products then please visit our BIM library.

TO VISIT OUR BIM/CAD LIBRARY

[CLICK HERE](#)

Installation Instructions

If you would like to download the installation files for this or any other of our products then please visit our download page by clicking the link below.

[TO VISIT OUR DOWNLOAD PAGE](#)

[CLICK HERE](#)

Our Informational Videos



Watch our video on how the ComfoAir 180 works.

[TO WATCH OUR VIDEO](#)

[CLICK HERE](#)



Watch our video on how to clean the install ComfoTube Flat 51 ductwork.

[TO WATCH OUR VIDEO](#)

[CLICK HERE](#)

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 [ISO Coarse \(G4\)](#) standard on the extract and [ISO ePM1 \(F7\)](#) on the intake air. 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 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 separate controller. 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
- Control input for capacitive touch speed controller with 7 day programmer capabilities