

Zehnder ComfoFond L-Q

The Zehnder ComfoFond-L Q is a subsoil heat exchanger designed to pre-heat the incoming air during cold periods and temper the intake air during warm periods. It contains features to ensure it automatically activates and deactivates to provide a comfortable, healthy and energy-efficient indoor climate.



Key Features

- Pre-heating during the winter and air temperation during the summer.
- Hygienic closed loop system to prevent water, dust ingress and avoid the need for maintenance of a collector of open air to air systems.
- Plug and play with the ComfoAir Q unit.
- Maintain a balanced ventilation rate down to -22° C external conditions
- A class circulation pump.

Article Numbers

Description	Product Code
Zehnder ComfoFond-L Q, left handed	471310084
Zehnder ComfoFond-L Q, right handed	471310085
Support frame for ComfoFond-L Q	471310087
Filter for Zehnder ComfoFond-L Q, G4, 1 piece	400100060
Zehnder Option Box with additional connectivity for Zehnder ComfoAir Q350/450/600	471502105
Suitable for use with MVHR units:	
Zehnder ComfoAir Q350	471502015
Zehnder ComfoAir Q350 with pre-heater, right handed	471502016
Zehnder ComfoAir Q350 with pre-heater, left handed	471502017
Zehnder ComfoAir Q350 with enthalpy exchanger	471502018

Article Numbers

Description	Product Code
Zehnder ComfoAir Q450	471502019
Zehnder ComfoAir Q450 with pre-heater, right handed	471502020
Zehnder ComfoAir Q450 with pre-heater, left handed	471502021
Zehnder ComfoAir Q450 with enthalpy exchanger	471502022
Zehnder ComfoAir Q600	471502023
Zehnder ComfoAir Q600 with pre-heater, right handed	471502024
Zehnder ComfoAir Q600 with pre-heater, left handed	471502025
Zehnder ComfoAir Q600 with enthalpy exchanger	471502026

Technical Specification

Weight	47 Kg	Ideal brine pressure	1.5 bar
Ducting	Internal - 180 mm	Brine flow rate @ maximum 350m ³ /h	6-8 l/min
Condensate connection	32 mm	Brine flow rate @ maximum 450m ³ /h	8-10 l/min
Materials	Internal EPP / ABS	Brine flow rate @ maximum 600m ³ /h	8-10 l/min
	External coated sheet steel	Maximum head circulation pump	7 m
Supply voltage	230V / single-phase / 50Hz	Circulation pump class	A
Maximum power consumption	70W		
Current draw	0.58A		
Fuse rating	3 amp		

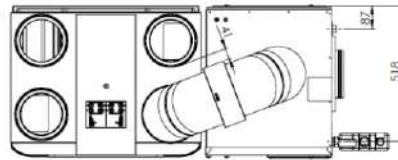
ComfoFond-L Q brine mixture	
Desired ethylene glycol percentage	
Maximum outside temperature (°C)	Percentage (%)
-15	35
-20	40
-25	45
-30	50

MVHR Unit	Pipe type	ComfoFond-L Q brine loop dimensions recommendations		
		Brine volume per 10m of pipe (l)	Minimum length of pipe in soil/ clay ground (m)	Minimum length of pipe in sandy ground (m)
CAQ350	25/20.4.PE	3.3	65	130
CAQ450	32/26.2 PE	5.3	100	200
CAQ600	32/26.2 PE	5.3	110	220

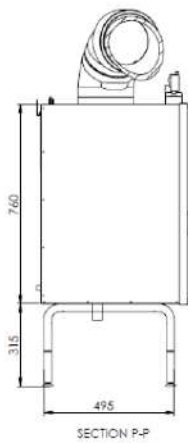
Dimensions

Height	1440 mm
Width	1215 mm
Depth	570 mm

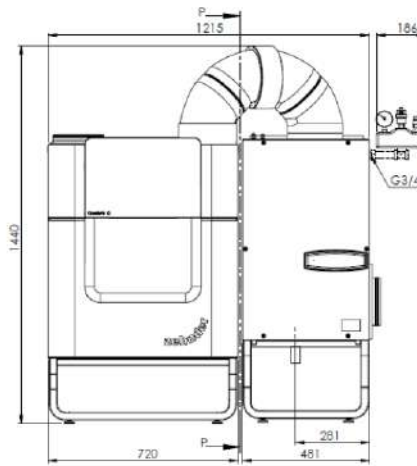
Left hand version



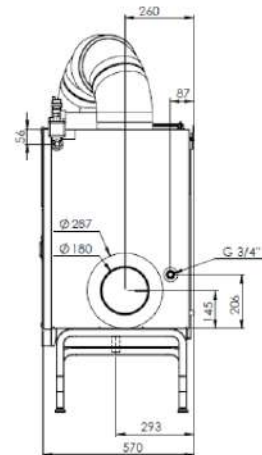
Top view



Side view

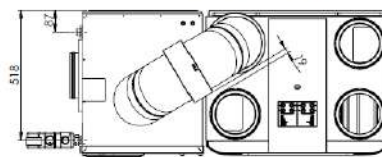


Front view

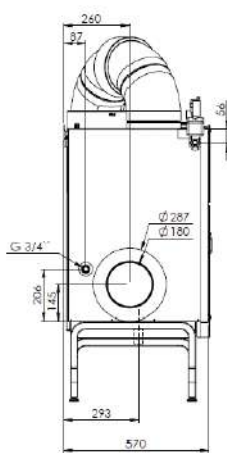


Side view

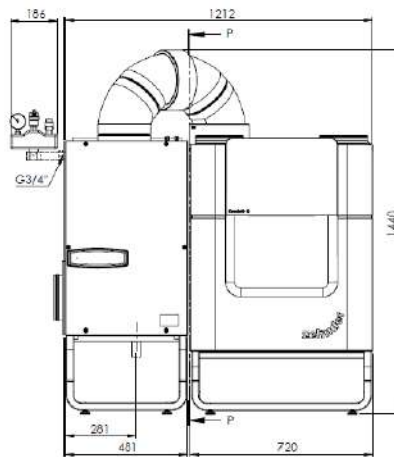
Right hand version



Top view



Side view



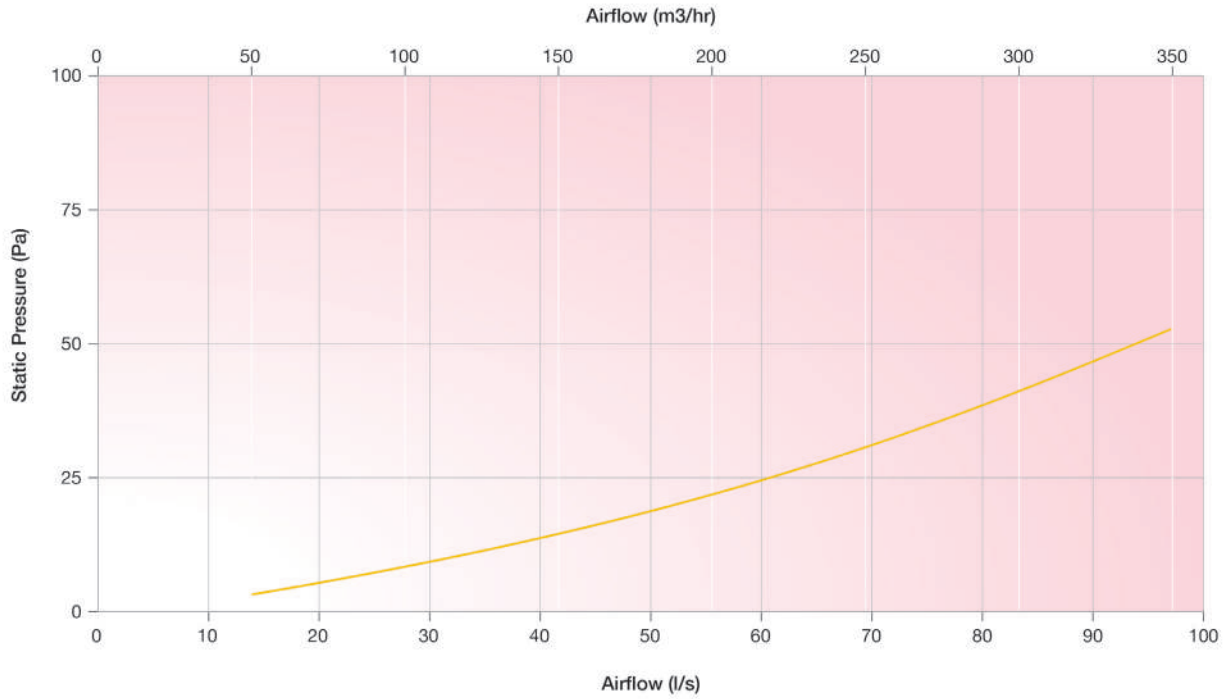
Front view



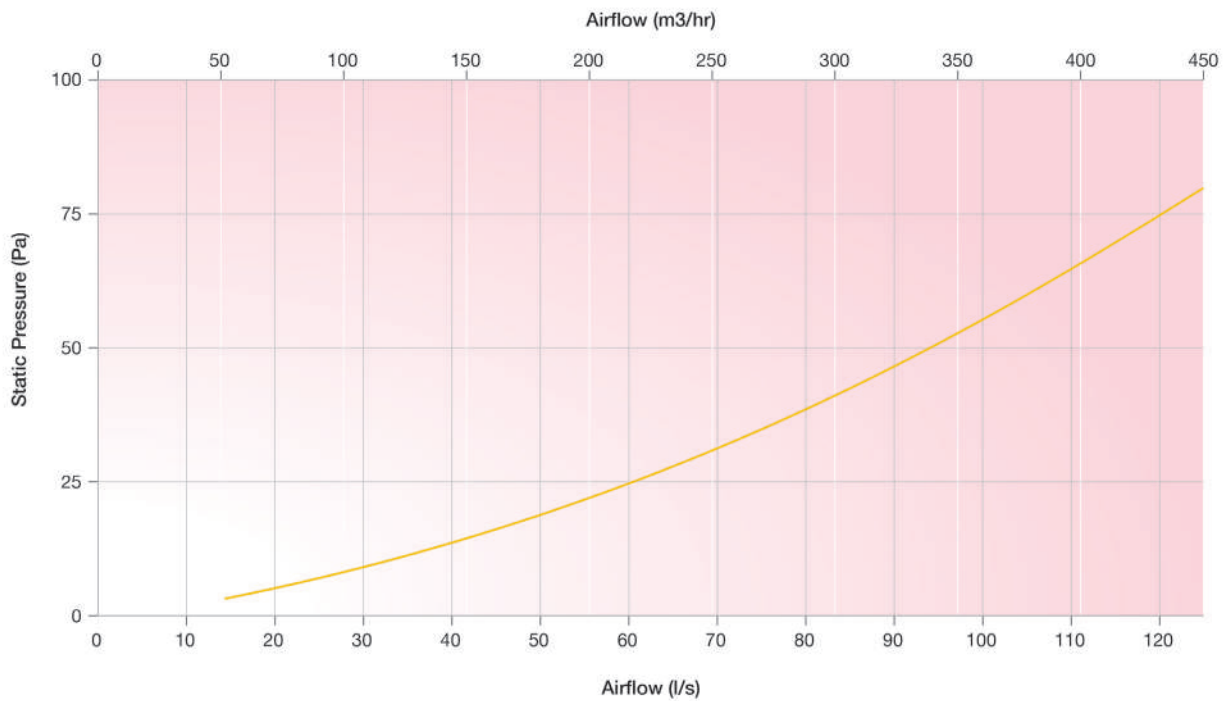
Side view

Pressure Curve

ComfoFond-L Q resistance when using ComfoAir Q350

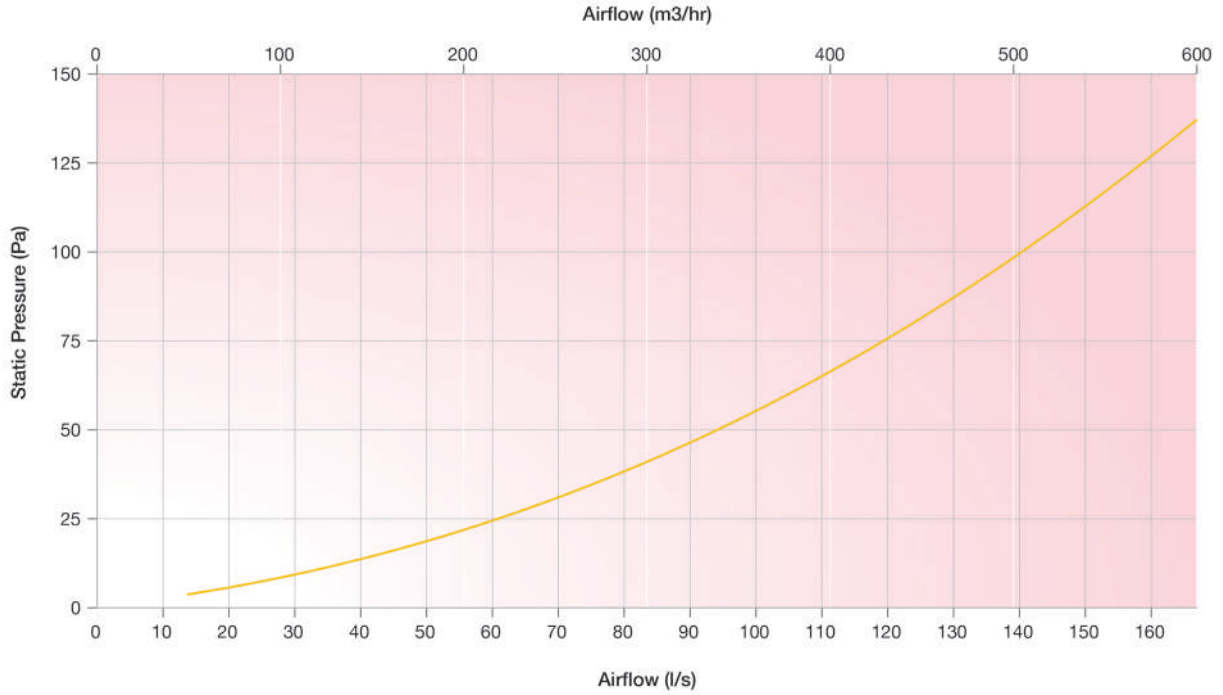


ComfoFond-L Q resistance when using ComfoAir Q450



Pressure Curve

ComfoFond-L Q resistance when using ComfoAir Q600



Sound Data

ComfoAir Q350 including ComfoFond-L Q

Speed	Test Area	Octave Band (Hz) Sound Power Level, dB							dB(A) @3m
		125	250	500	1000	2000	4000	8000	
20%	Casing	34.4	30.2	24.5	18.6	13.6	9.5	16.4	9.4
	Supply/Exhaust	50.1	42.7	38.3	30.8	23.3	12.1	11.1	
	Extract/Intake	40.6	32.5	23.2	17.8	15.6	11.2	18.5	
40%	Casing	38.4	35.5	29.8	23.7	19.8	15.1	17.7	14.4
	Supply/Exhaust	53.6	48.7	43.9	36.7	30.8	20.8	17.0	
	Extract/Intake	44.0	38.0	28.2	21.9	19.1	14.2	18.6	
60%	Casing	42.8	41.3	35.5	29.4	26.6	21.1	19.1	20.0
	Supply/Exhaust	57.4	55.4	49.9	43.2	39.0	30.2	23.4	
	Extract/Intake	47.8	43.9	33.6	26.5	22.9	17.4	18.7	
80%	Casing	46.4	45.9	40.1	33.9	32.2	26.0	20.2	24.7
	Supply/Exhaust	61.0	61.5	55.5	49.2	46.5	38.9	29.3	
	Extract/Intake	50.8	48.8	38.0	30.2	26.0	20.0	18.8	
100%	Casing	51.0	52.0	46.1	39.8	39.3	32.3	21.7	30.8
	Supply/Exhaust	64.6	67.7	61.2	55.2	54.2	47.7	35.3	
	Extract/Intake	54.8	55.1	43.7	35.0	30.0	23.3	19.0	

Sound Data

ComfoAir Q450 including ComfoFond-L Q

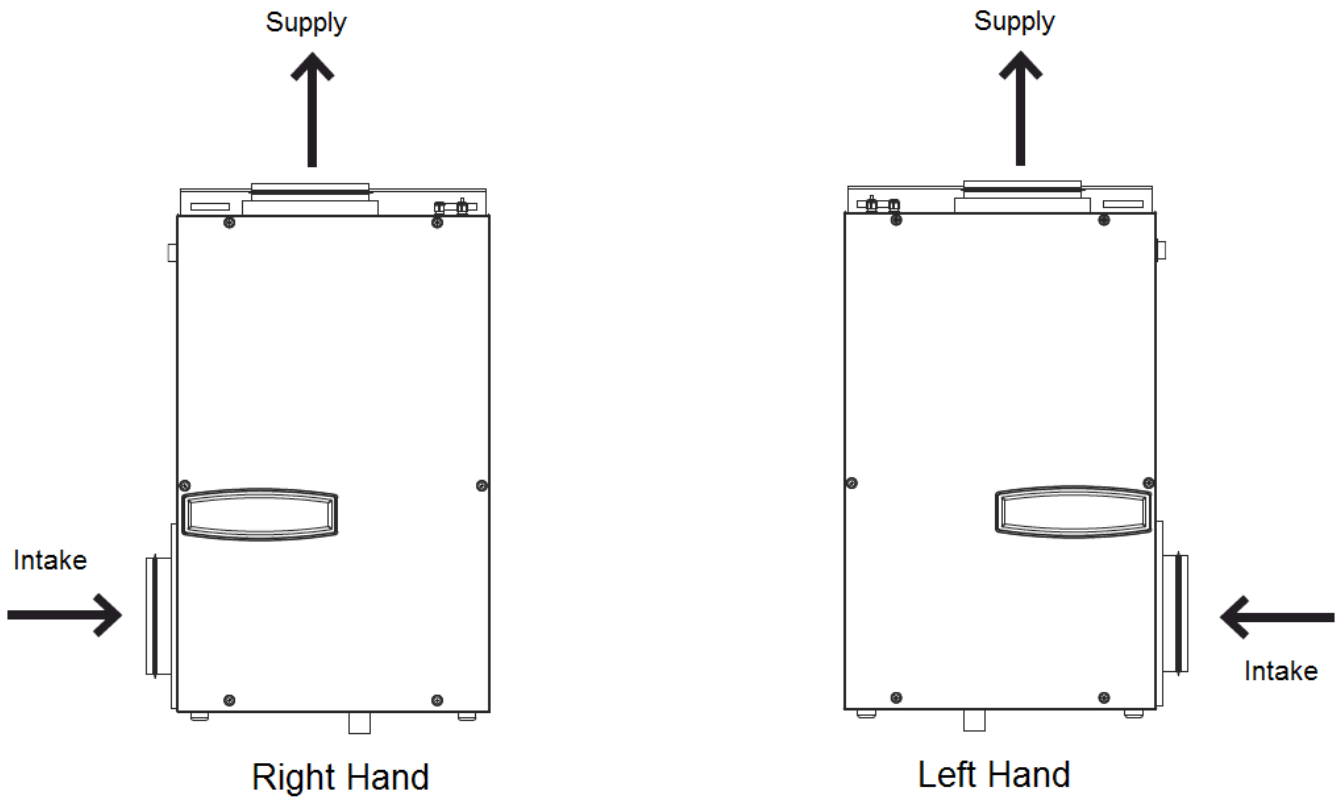
Speed	Test Area	Octave Band (Hz) Sound Power Level, dB							dB(A) @3m
		125	250	500	1000	2000	4000	8000	
20%	Casing	35.3	31.4	25.7	19.8	15.0	10.8	16.7	10.5
	Supply/Exhaust	50.9	44.0	39.6	32.1	25.0	14.1	12.5	
	Extract/Intake	41.4	33.7	24.3	18.7	16.4	11.9	18.5	
40%	Casing	46.2	48.0	39.5	34.3	33.2	26.1	20.2	20.7
	Supply/Exhaust	53.7	55.2	46.6	41.5	38.7	29.5	13.0	
	Extract/Intake	46.0	46.9	32.4	24.7	20.0	14.3	17.1	
60%	Casing	45.7	47.6	38.9	33.8	32.7	25.4	19.6	25.5
	Supply/Exhaust	58.0	60.0	52.8	46.7	44.9	37.3	24.9	
	Extract/Intake	50.7	50.8	38.4	29.8	25.6	19.9	43.9	
80%	Casing	51.1	51.8	45.7	39.4	39.1	33.6	25.4	30.6
	Supply/Exhaust	62.3	64.9	59.0	52.0	51.0	45.1	36.8	
	Extract/Intake	55.4	54.7	44.4	34.9	31.1	25.4	20.7	
100%	Casing	56.0	55.7	51.8	44.6	45.0	41.1	30.8	35.9
	Supply/Exhaust	66.7	69.8	65.3	57.2	57.2	53.0	48.7	
	Extract/Intake	60.2	58.6	50.4	40.0	36.7	31.0	22.5	

ComfoAir Q600 including ComfoFond-L Q

Speed	Test Area	Octave Band (Hz) Sound Power Level, dB							dB(A) @3m
		125	250	500	1000	2000	4000	8000	
20%	Casing	36.7	33.3	27.6	21.6	17.2	12.7	17.2	12.3
	Supply/Exhaust	52.1	46.2	41.5	34.2	27.6	17.1	14.5	
	Extract/Intake	42.6	35.7	26.1	20.2	17.7	12.9	18.5	
40%	Casing	50.3	52.0	47.1	41.1	38.1	33.3	27.3	31.1
	Supply/Exhaust	57.5	58.1	50.6	45.8	42.8	35.4	24.5	
	Extract/Intake	50.9	48.7	38.5	31.5	27.2	20.9	19.3	
60%	Casing	50.0	51.5	46.5	40.6	37.4	32.4	26.6	30.6
	Supply/Exhaust	62.2	64.3	58.2	52.3	50.3	45.0	35.9	
	Extract/Intake	56.0	53.8	45.7	36.8	32.8	27.7	22.3	
80%	Casing	53.8	56.4	53.5	46.4	45.0	42.1	34.9	37.0
	Supply/Exhaust	66.8	70.4	65.7	58.8	57.8	54.7	47.4	
	Extract/Intake	61.1	59.0	52.9	42.0	38.4	34.4	25.2	
100%	Casing	57.3	61.0	59.9	51.8	51.9	50.9	42.5	43.2
	Supply/Exhaust	71.5	76.6	73.3	65.4	65.3	64.4	58.9	
	Extract/Intake	66.3	64.1	60.1	47.3	44.0	41.2	28.2	

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 EN13053:2006. Casing dB(A) @ 3m given as hemispherical.

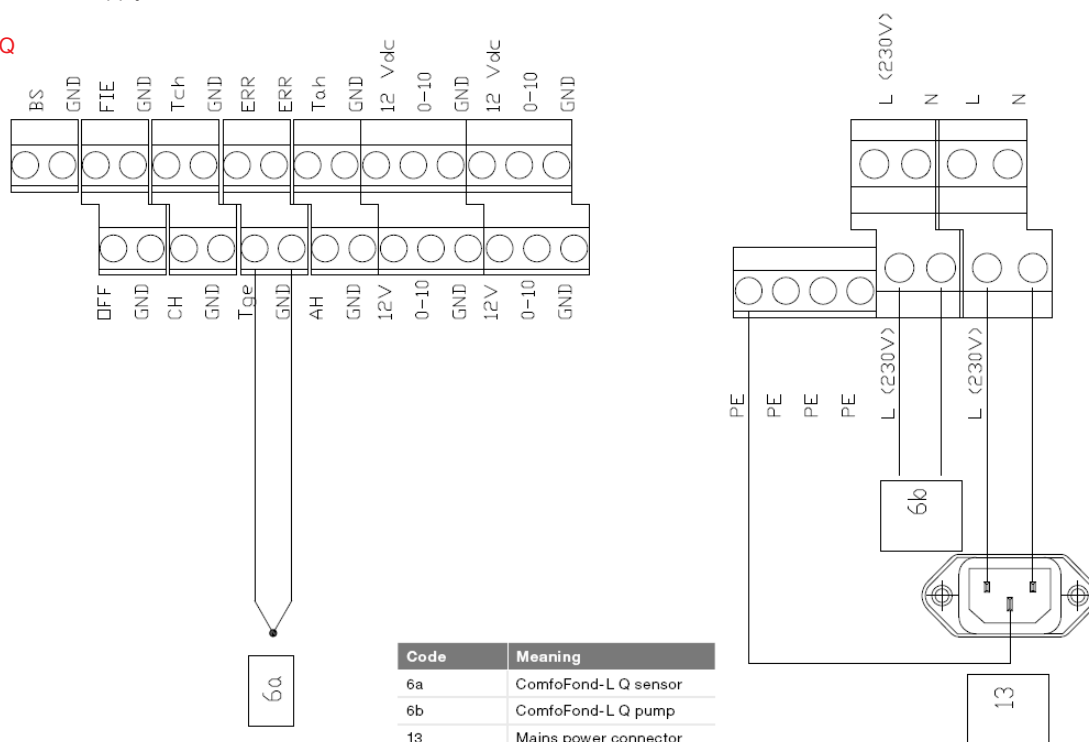
Air Direction/Connection



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.

ComfoFond-L Q



Consultant specification

Specification

The unit shall consist of a body manufactured in powder coated steel. The unit shall be fully insulated using high quality EPP to maintain excellent thermal characteristics and prevent shrinkage over time.

The unit shall be capable of working in conjunction with the whole house ventilation system with heat recovery ComfoAir Q. The unit shall temper the intake air from outside before it enters the ComfoAir Q unit.

The unit shall be constructed to have a removable cover to allow full maintenance access. The removable cover shall enable access to the electrical connections, sensors and pump. The pump shall be suitable for removal without the requirement for the unit to be removed from situ and be available as a spare part 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.

Operation

The unit shall be a ComfoFond-L manufactured by Zehnder and shall be suitable mount on a floor stand or wall next to a ComfoAir Q unit in accordance with the specification.

The unit shall transfer heat energy from the ground to the intake air. The unit shall require a suitable brine loop size and length to match the desired flow rate.

The unit shall have the ability to activate or deactivate automatically based on the selected temperature profile.

Controls

The ComfoFond-L Q unit shall contain the following functions within the unit pre-wired and factory fitted by the manufacturer:

- Temperature sensor to monitor external conditions

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