ComfoControl Ease
Installer manual

zehnder

Heating | Cooling | Fresh Air | Clean Air

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Foreword

Read this manual carefully before use.

This manual provides all the information required for safe and optimal installation, operation and maintenance of the ComfoControl Ease. The device is subject to continuous development and improvement. There is therefore a possibility that the ComfoControl Ease differs slightly from the descriptions given.

Applicable pictograms
The following pictograms are used in this manual:

Point to watch.

Risk of:
- damage to the system;
- system performance is compromised if instructions are not observed carefully.

Questions
Please contact Zehnder with any questions you might have on +1 603 422 6700 or via email at info@zehnderamerica.com.

You can find more information on Zehnder at: www.zehnderamerica.com.

1. Introduction

What is the purpose of this control unit?
The ComfoControl Ease, referred to further as CC Ease, enables users to easily and comfortably operate a balanced ventilation system with heat recovery. The CC Ease is usually mounted on the living room wall. It displays all important information about the ventilation system, referred to further as ComfoAir, being operated. This means it is not necessary to access the ComfoAir unit itself to check that everything is functioning properly.

The ComfoAir installer manual covers in greater detail ventilation issues and how the ComfoAir works. A copy of this manual can be obtained from Zehnder.

Safety instructions
Always comply with safety regulations in this manual. If the safety regulations, warnings, comments and instructions are not complied with, this can lead to personal injury or damage to the CC Ease.

- The CC Ease may only be fitted, connected and commissioned by an appropriately approved installer;
- Installation of the CC Ease must be carried out in accordance with the general and locally applicable construction, safety and installation instructions of the local council and electricity company;
- Store the manual in the vicinity of the CC Ease for its entire working life.

2. Checking the delivery

Checking the delivery
Contact your supplier immediately in case of damage or an incomplete delivery. The delivery must include:

- CC Ease front section with PCB and connector;
- CC Ease casing with PCB and connector;
- Documentation.

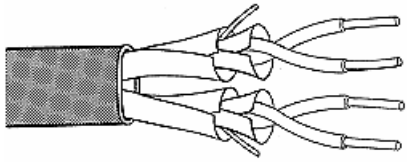
Transport and unpacking
Take care when transporting and unpacking the CC Ease.

☞ **Make sure the packing material is disposed of in an environmentally friendly manner.**

3. Installation conditions

In order to determine whether the CC Ease can be installed in a certain area, the following aspects must be taken into account:

- The CC Ease must be mounted at least 5 feet (1.5m) above the floor in a living area and be easily accessible for the user;
- The following facilities must be available in the living area concerned:
  - Flush-fit casing for the CC Ease.
  - 12V DC power supply from the ComfoAir.
  - Rx/Tx communication cable from the ComfoAir;
- The cable for connecting the CC Ease must comply with the following minimal requirements:
  - Cable type: 2-conductor shielded twisted pair 4 x 22 AWG ($4x0.34mm^2$).
  - Cable length: 131 feet (40m) maximum.

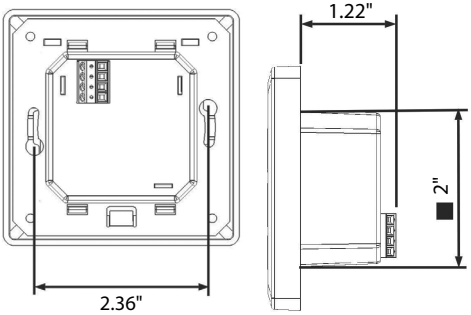


4. The System

4.1. Wall mounting

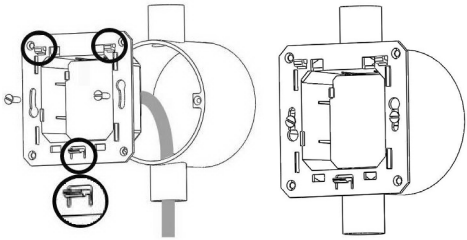
The CC Ease can be mounted in a standard wall-mounted or flush-fit casing. Wall-mounted casings in the same colour as the CC Ease are available from Zehnder.

Dimension sketch

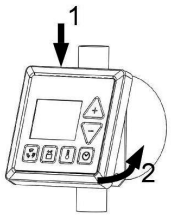


Mounting instructions

To ensure the CC Ease front section can be mounted correctly, the connector in the casing of the CC Ease must be located at the bottom.



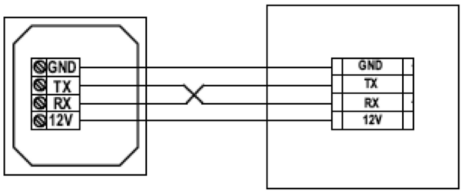
When mounting the front section, the connector must be plugged into the PCB in the wall-mounted casing.



4.2. Cabling

When connecting or disconnecting the CC Ease, the ComfoAir must first be fully disconnected from its power supply. This prevents current being supplied to the CC Ease unit's input/output system.

The CC Ease should always be crosslinked (Rx to Tx) with a 2-conductor shielded twisted pair 4 x 22 AWG (4x0.34mm^2) of up to 131 feet (40m).



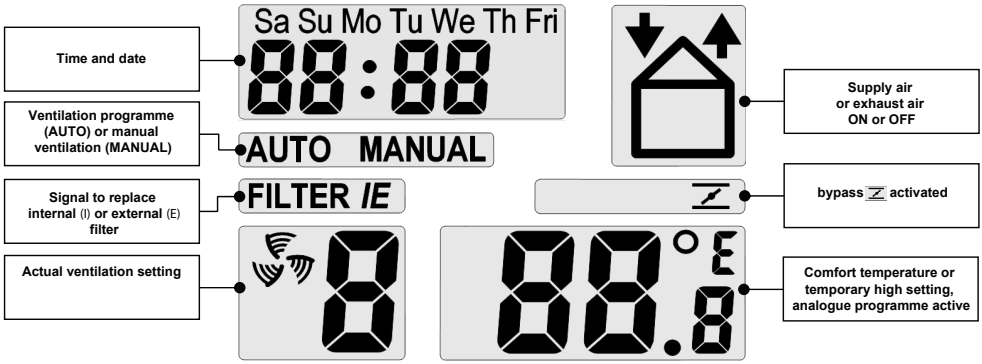
CC Ease ComfoAir

The ComfoAir installer manual indicates the connection point on the side of the ComfoAir.

5. Commissioning

5.1 Use of the ComfoControl Ease

The overview below summarizes the information that will be displayed on the CC Ease.



The CC Ease has a number of buttons to operate the ComfoAir and to enter the settings. These buttons are illustrated below.

	This button switches to the highest ventilation setting. - Press once → Boost setting ON. - Press twice → Boost setting OFF.
	This button allows you to switch between supply/exhaust. - Press once → SUPPLY OFF (and EXHAUST ON). - Press twice → EXHAUST OFF (and SUPPLY ON). - Press 3 times → SUPPLY and EXHAUST both ON.
	This button allows you to display or set the comfort temperature. - Press for less than 2 seconds → READ. - Press for longer than 2 seconds → SET.
	This button allows you to adjust two settings. - Press for less than 2 seconds → Programme ventilation setting (AUTO / MANUAL). - Press for longer than 2 seconds → Set date and time.
+ −	These buttons allow you to adjust various settings: - In P menu or comfort temperature screen → Set values. - In main screen → enter ventilation setting (A, 1, 2, 3).

☞ **While the open fire programme is activated the supply and exhaust fan cannot be manually switched off.**

☞ **Not all CC Ease operating functions are supported by each ventilation system.**

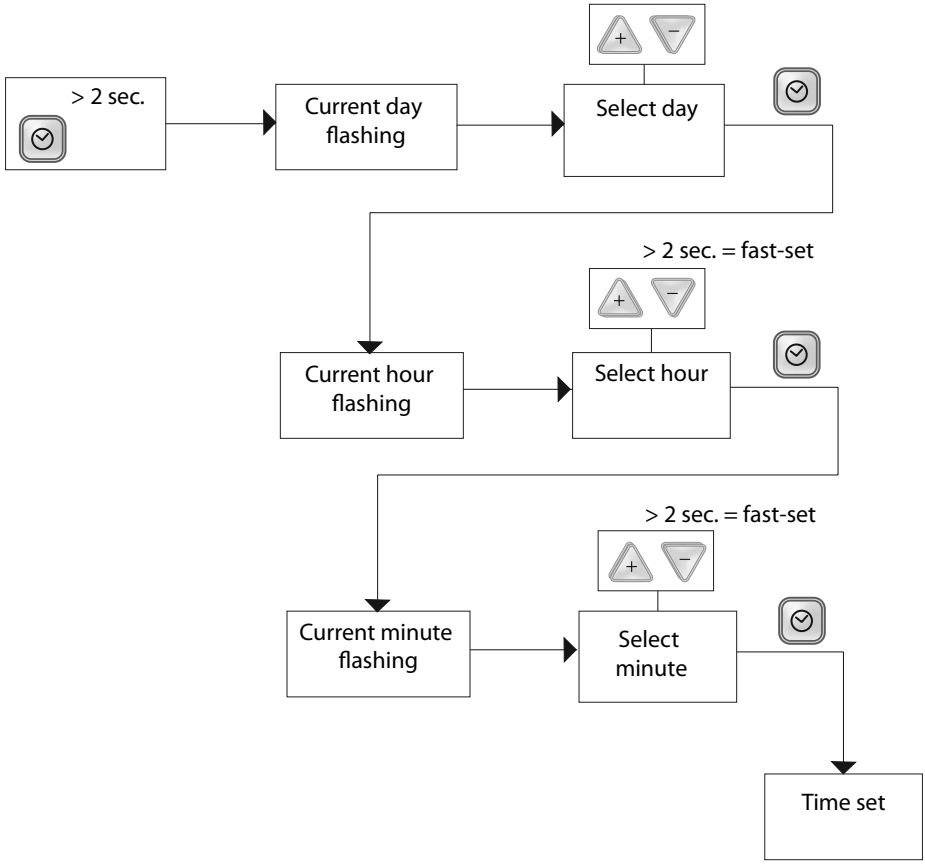
The CC Ease allows the following functions to be programmed and displayed:

- Reading and setting the day and time;
- Reading and setting the comfort temperature;
- Reading and setting the ventilation volume;
- Activating the temporary high setting;
- Switching the supply and exhaust fan on/off (optional);
- Setting a personal ventilation programme;
- Setting additional ventilation programmes/options in the P menus.

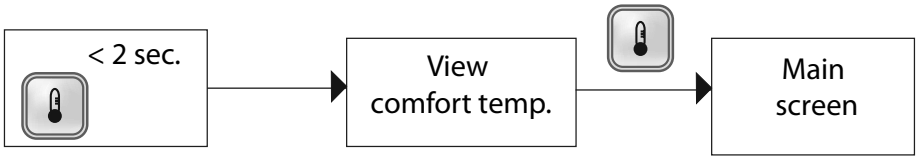
A concise explanation of the above listing is given in the paragraphs below.

After 30 seconds, the CC Ease will return to the main menu automatically.

Reading and setting the comfort temperature

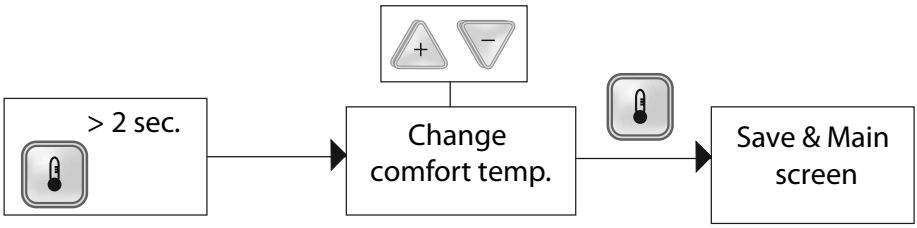


Reading and setting the comfort temperature



The comfort temperature can be set to the required indoor temperature. Based on this temperature, the ComfoAir will then automatically switch to free cooling using the bypass if required.

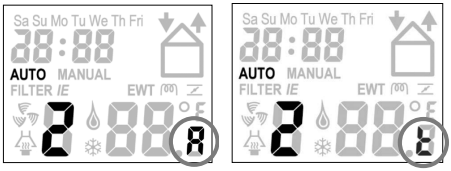
It is best to set the comfort temperature to the same temperature as the room thermostat (of the central heating system).



Reading and setting the ventilation volume

The actual ventilation level, e.g. “2”, will always be displayed on the CC Ease. The ComfoAir regulates the required ventilation levels automatically in accordance with a preset ventilation programme. During automatic ventilation mode “AUTO” will be displayed on the CC Ease.

Besides showing the programmed ventilation setting, the CC Ease also displays whether a temporary control system (such as a CO_2 sensor or a bathroom switch) is overriding the ventilation setting.
In the event a required ventilation setting is being overridden by a time delay function (such as the bathroom switch deactivation delay), a “t” is displayed in the bottom right-hand corner of the CC Ease.



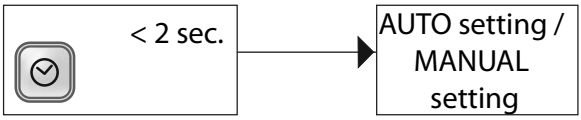
In the event a required ventilation setting is being overridden by a signal from a sensor (such as a CO_2 sensor), an “A” is displayed in the bottom right-hand corner of the CC Ease.

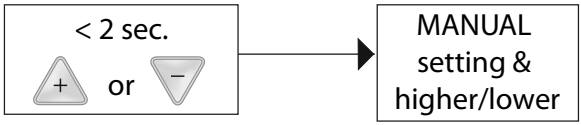
Setting the ventilation levels

The ventilation level can also be set manually by setting this higher or lower. A total of 4 ventilation volumes/levels can be set. These are:

- Setting A → Absent.
  - Use when house is unoccupied;

At level A, the house is ventilated using the minimum prescribed ventilation volume.

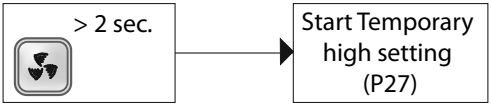


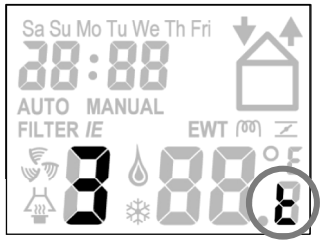


The ComfoAir will switch to the highest ventilation position set in the house unless overruled by an automated software programme.

- Setting 1 → Low.
  - Use for low ventilation levels;
- Setting 2 → Medium.
  - Use if you require normal ventilation;
- Setting 3 → High.
  - Use this position during cooking, showering and when additional ventilation is needed;
- Timer → Temporary high setting
  - Use this position during cooking, showering and when extra ventilation is briefly required.

Temporarily activating high setting





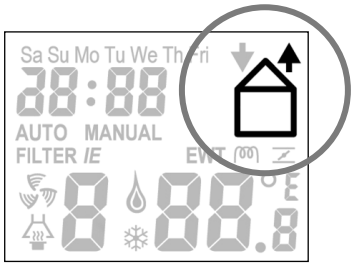
Once the programmed time delay is complete, the ComfoAir automatically switches back to the former ventilation setting.

The timer of the temporary high setting can be switched off early by pressing , or .

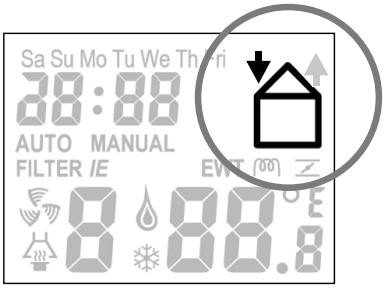
Switching supply and exhaust fan on/ off (optional)

While the open fire programme is activated, the supply and exhaust fan cannot be manually switched off.

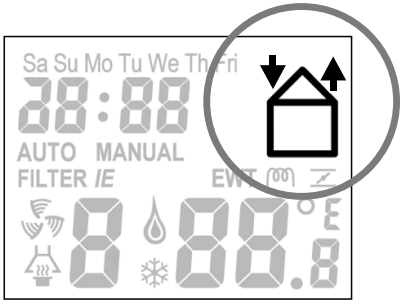
Bear in mind that switching off the supply or exhaust fan will temporarily immobilize your dwelling's balanced ventilation system.



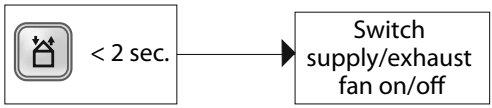
Supply fan switched off



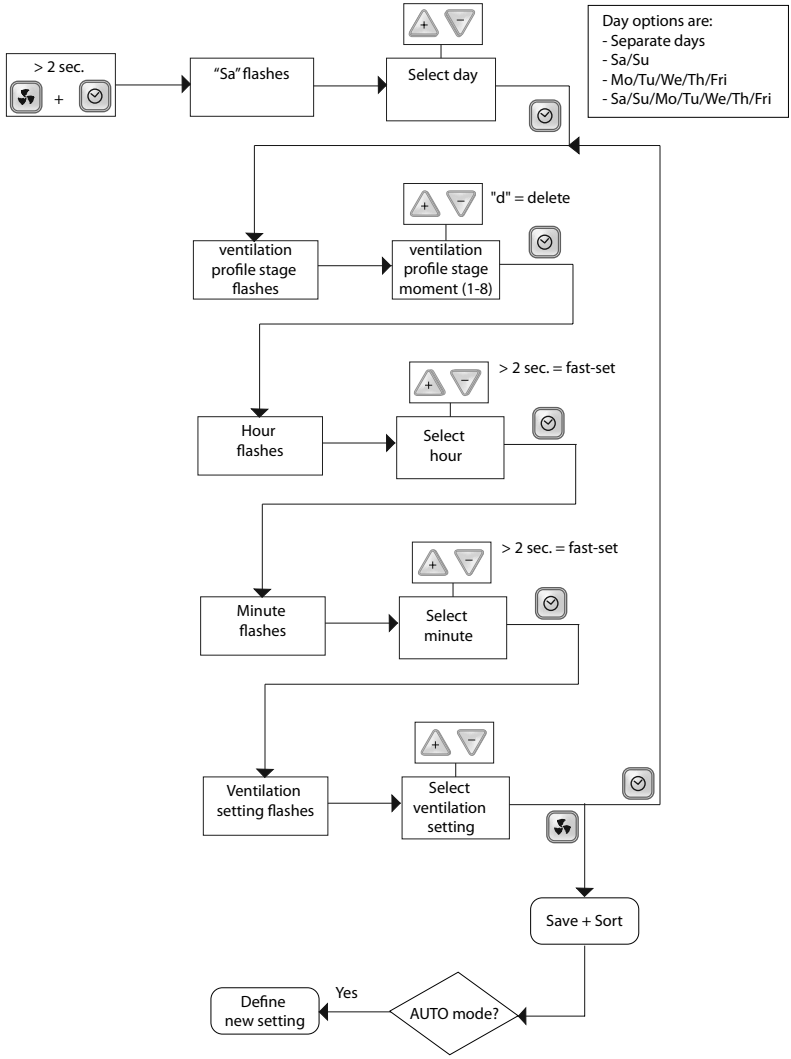
Exhaust fan switched off



Supply and exhaust fans switched on

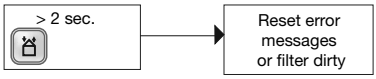


Setting ventilation programme

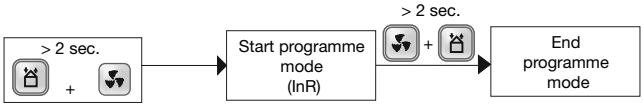


Selecting factory reset will reload the default ventilation programme (setting 2).

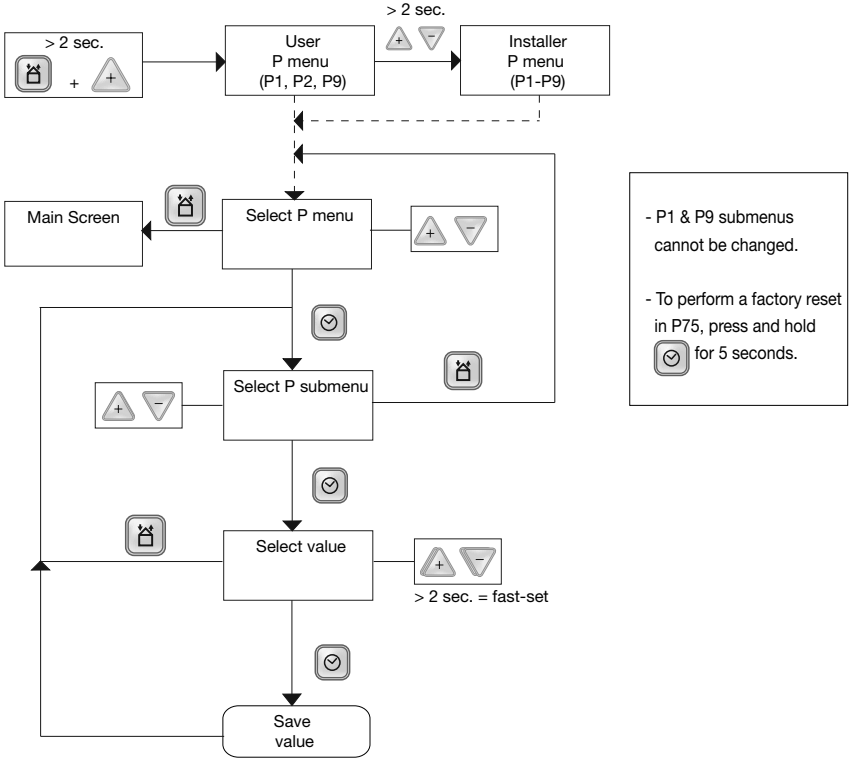
Resetting malfunctions



Programme mode



Using P menus



5.2 P menus

Not all functions are supported by every ComfoAir.
This might result in certain P menus not being visible. It is also possible that some changes you enter appear to have no effect.

The ComfoAir installer manual states which functions are supported. This manual will also mention the effects of the different functions.

P menus for the user.

Menu P1 → Status of programmes

		Status
Sub-menu	**Description**	**Activated**
P10	Is menu 20 currently active?	Yes (1) / No (0)
P11	Is menu 21 currently active?	Yes (1) / No (0)
P12	Is menu 22 currently active?	Yes (1) / No (0)
P13	Is menu 23 currently active?	Yes (1) / No (0)
P14	Is menu 24 currently active?	Yes (1) / No (0)
P15	Is menu 25 currently active?	Yes (1) / No (0)
P16	Is menu 26 currently active?	Yes (1) / No (0)
P19	Is menu 29 currently active?	Yes (1) / No (0)

Menu P2 → Setting time delays

		Time delay values		
Sub-menu	**Description**	**Minimum**	**Maximum**	**Factory reset**
P20	n/a	0 Min.	180 Min.	0 Min.
P21 (Optional) Note: Only applies to systems fitted with a corded switch and a second switch in the bathroom.	Activation delay for the bathroom switch (to switch to high setting). ■ "x" minutes after operating the bathroom switch, the ComfoAir switches to the high setting. - Low voltage input	0 Min.	15 Min.	0 Min.
P22 (Optional) Note: Only applies to systems fitted with a corded switch and a second switch in the bathroom.	Deactivation delay for the bathroom switch (to switch to normal setting). ■ "x" minutes after operating the bathroom switch, the ComfoAir switches to the normal setting. - Low voltage input	0 Min.	120 Min.	30 Min.
P23	n/a	0 Min.	120 Min.	0 Min.

		Time delay values		
Sub-menu	**Description**	**Minimum**	**Maximum**	**Factory reset**
P24	Filter warning ■ Here the user can indicate when the “filter dirty” alert must appear.	10 weeks	26 weeks	16 weeks
P25	n/a	1 Min.	20 Min.	10 Min.
P26	n/a	1 Min.	120 Min.	30 Min.
P27	Time for the temporary high setting. ■ After pressing and holding (>2 sec.) , the ComfoAir runs at the high setting for “x” minutes and then switches back automatically to the normal ventilation setting. If a switch is operated during the time delay mode, then the ComfoAir switches immediately to the selected ventilation setting.	0 Min.	120 Min.	30 Min.
P29	n/a	1%	99%	10%

Menu P9 → Status of programmes (from menus P5 and P6: additional programmes)

		Status
Sub-menu	**Description**	**Factory reset**
P90	Open fire programme active?	Yes (1) / No (0)
P91	Bypass Open?	Yes (1) / No (0)
P92	n/a	Yes (1) / No (0)
P93	Post-heater on?	Yes (1) / No (0)
P94	Analogue ports (0-10V) active?	Yes (1) / No (0)
P95	Frost protection on?	Yes (1) / No (0)
P96	n/a	Yes (1) / No (0)
P97	Enthalpy programme on?	Yes (1) / No (0)

P menus for installer.

Menus without minimum and maximum values are read-only menus.

Menu P3 → Setting ventilation programmes

		Ventilation programme values		
Sub-menu	**Description**	**Minimum**	**Maximum**	**Factory reset**
P30	Setting the capacity (in %) of the exhaust fan in absent setting.	0% or 15%	97%	nL / HL 15% / 15%
P31	Setting the capacity (in %) of the exhaust fan in low setting.	16%	98%	nL / HL 35% / 40%
P32	Setting the capacity (in %) of the exhaust fan in normal setting.	17%	99%	nL / HL 50% / 70%
P33	Setting the capacity (in %) of the exhaust fan in high setting.	18%	100%	nL / HL 70% / 90%
P34	Setting the capacity (in %) of the supply fan in absent setting.	0% or 15%	97%	nL / HL 15% / 15%
P35	Setting the capacity (in %) of the supply fan in low setting.	16%	98%	nL / HL 35% / 40%
P36	Setting the capacity (in %) of the supply fan in normal setting.	17%	99%	nL / HL 50% / 70%
P37	Setting the capacity (in %) of the supply fan in high setting.	18%	100%	nL / HL 70% / 90%
P38	Current capacity (in %) of the exhaust fan.	-	-	Current %
P39	Current capacity (in %) of the supply fan.	-	-	Current %

Menu P4 → Reading temperatures

		Temperature values		
Sub-menu	**Description**	**Minimum**	**Maximum**	**Factory reset**
P40 (Optional)	Current value of TAH (= Temperature of the Post-heater)	-	-	Current ˚ C
P41	Comfort temperature	12 ˚C	28 ˚C	20 ˚C
P44	n/a	-	-	Current ˚C
P45	Current value of T1 (= Outside air temperature)	-	-	Current ˚C
P46	Current value of T2 (= Supply air temperature)	-	-	Current ˚C
P47	Current value of T3 (= Stale air temperature)	-	-	Current ˚C
P48	Current value of T4 (= Exhaust air temperature)	-	-	Current ˚C
P49	n/a	-	-	Current ˚C

All temperatures are in degrees Celsius (°C). In the back of this document you can find an conversion table. (°F = °C × 1.8 + 32)

Menu P5 → Setting additional programmes

		Additional programme values		
Sub-menu	**Description**	**Minimum**	**Maximum**	**Factory reset**
P50	Activation of the open fire programme.	0 (= No)	1 (= Yes)	0
P51	n/a	0 (= No)	1 (= Yes)	0
P52	n/a	0	3	2
P53	n/a	0 (= No)	1 (= Yes)	0
P54	Confirming the presence of a bypass.	0 (= No)	1 (= Yes)	1
	⚠ The standard ComfoAir configuration includes a bypass. Leave the value at “1”.			
P55 (Optional)	Confirming the presence of a Post-heater. ■ 0; Post-heater not fitted. ■ 1; Post-heater fitted. ■ 2; Post-heater is fitted and is regulated by a Pulse. Width Modulation (PWM) signal.	0 (= No)	1 (= Yes)	0
P56	Setting the required air volume in the house. ■ nL: “normal air volume”. ■ HL: “high air volume”.	nL	HL	HL
	Note: Setting the air volume is the starting point for programming the air specifications and setting the fans.			
P57	Setting the ComfoAir type. ■ Li = “Left-hand version”. ■ Re = “Right-hand version”.	Li	Re	Li
	Note: The ComfoAir is correctly preprogrammed at the factory. ⚠ This setting is lost during a factory reset and will then have to be reprogrammed. The correct setting can be found on the ComfoAir's identification plate.			
P58	Enter controller priorities. ■ 0; In the AUTO mode the signals of the analogue (0-10V) ports are included when defining the high setting. ■ 1; In the AUTO mode the signals of the analogue (0-10V) ports are ignored when defining the high setting.	0	1	0
	Note: In the MANUAL mode all signals are always included when defining the high setting.			
P59 (Optional)	Confirming the presence of an enthalpy exchanger. ■ 0; Enthalpy exchanger fitted ■ 1; Enthalpy exchanger with RH sensor. ■ 2; Enthalpy exchanger without RH sensor.	0 (= No)	2 (= Yes)	0
	⚠ If an enthalpy exchanger without a sensor is selected, then the protection programme will not be activated and malfunction alerts EA1 & EA2 will never occur.			

P6 → Setting additional programmes (Optional)

		Additional programme values		
Sub-menu	**Description**	**Minimum**	**Maximum**	**Factory reset**
P60	n/a	0 (= No)	3 (= Yes)	0
P61	n/a	0%	99%	0%
P62	n/a	0°C	15°C	7°C
P63	n/a	10°C	25°C	23°C
P64 (Optional)	Tah (= temperature of the Post-heater), required	5°C	40°C	18°C
	Note: The Post-heater will be deactivated once the set temperature has been reached.			

All temperatures are in degrees Celsius (°C). In the back of this document you can find an conversion table. (°F = °C × 1.8 + 32)

Menu P7 → Reading malfunctions (and system information)

		(Malfunction) information values		
Sub-menu	**Description**	**Minimum**	**Maximum**	**Factory reset**
P70	Current software version.	Version number of the software (without “v”)		
P71	Most recent malfunction.	Code in accordance with alarm and malfunction alert		
P72	Second most recent malfunction	Code in accordance with alarm and malfunction alert		
P73	Third most recent malfunction	Code in accordance with alarm and malfunction alert		
P74	Resetting a malfunction ■ Set the value to “1” and press ⊙	0	1(= activate)	0
P75	Factory reset ■ Set the value to “1” and press ⊙ for at least 5 seconds. All original software settings are restored following a factory reset.	0	1(= activate)	0
	Note: ⚠ After a general reset, the ComfoAir will ask you to reset the “nL / HL” (see P56) and “Li / Re” (see P57) settings. ⚠ After a general reset, all settings and programmes must be checked and set to the correct values where necessary.			

		(Malfunction) information values		
Sub-menu	**Description**	**Minimum**	**Maximum**	**Factory reset**
P76	Self-testing the ComfoAir.	0	1(= activate)	0
	Note: ■ The LEDs on the display of the ComfoAir will start flashing. ■ The ComfoAir will start running at its maximum speed (RPM). ■ The bypass valve of the ComfoAir will open and close. ■ The frost-free element valve of the ComfoAir will open and close once the bypass valve is closed (if a frost-free element is registered).			
P77	Resetting filter dirty counter.	0	1(= activate)	0
	Note: This resets the counter that triggers a dirty filter alert on the ComfoAir. This allows the filter to be cleaned or replaced before the dirty filter alert appears.			

Menu P8 → Setting the analogue ports (0-10V)

		Values of analogue port		
Sub-menu	**Description**	**Minimum**	**Maximum**	**Factory reset**
810	Analogue input 1 0= not fitted 1 = fitted	0	1	0
811	0= control 1 = programme (analogue input 1)	0	1	0
812	set point analogue input 1 (programme)	0	100	50
813	min. setting analogue input 1	0	99	0
814	max. setting analogue input 1	0	100	100
815	0=positive analogue port 1 1=negative setting analogue port 1	0	1	0
816	read-out analogue input	0	100	-
820	Analogue input 2 0= not fitted 1 = fitted	0	1	0
821	0= control 1 = programme (analogue input 1)	0	1	0
822	set point analogue input 2 (programme)	0	100	50
823	min. setting analogue input 2	0	99	0
824	max. setting analogue input 2	0	100	100
825	0=positive analogue input 2 1=negative setting analogue input 2	0	1	0
826	read-out analogue input 2	0	100	-
830	Analogue input 3 0= not fitted 1 = fitted	0	1	0
831	0= control 1 = programme (analogue input 1)	0	1	0
832	set point analogue input 3 (programme)	0	100	50
833	min. setting analogue input 3	0	99	0
834	max. setting analogue input 3	0	100	100
835	0=positive analogue input 3 1=negative setting analogue input 3	0	1	0
836	read-out analogue input 3	0	100	-
840	Analogue input 4 0= not fitted 1 = fitted	0	1	0
841	0= control 1 = programme (analogue input 4)	0	1	0
842	set point analogue input 4 (programme)	0	100	50
843	min. setting analogue input 4	0	99	0
844	max. setting analogue input 4	0	100	100
845	0=positive analogue input 4 1=negative setting analogue input 4	0	1	0

		Values of analogue port		
Sub-menu	Description	Minimum	Maximum	Factory reset
846	read-out analogue input 4	0	100	-
850	n/a	0	1	0
851	n/a	0	1	0
852	n/a	0	100	50
853	n/a	0	99	0
854	n/a	0	100	100
855	n/a	0	1	0
856	n/a	0	100	-

6. Maintenance

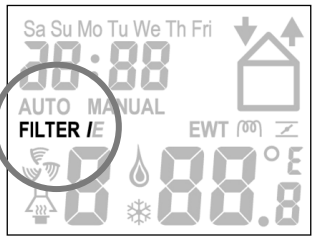
The CC Ease does not require maintenance. However, the ComfoAir controlled by the CC Ease does require periodic maintenance. The maintenance required by the ComfoAir is stipulated in the ComfoAir's manual.

7. Malfunctions

If the ComfoAir has a malfunction, then in most cases a malfunction alert will appear in the CC Ease screen. Malfunction alerts appear on the CC Ease as:

- A flashing "A" with a number extension in the field that normally displays the ventilation setting;
- A flashing "E" with a number extension in the field that normally displays the ventilation setting;
- A flashing "E A" with a number extension in the field that normally displays the ventilation setting;.

- A flashing "Filter I" or "Filter E" below the field displaying the ventilation modes.



All these malfunction alerts on the CC Ease can be reset by following the steps below:

- Press [⏰] until the malfunction alert disappears (min. 3 sec.).

Filter malfunction

The filters must be cleaned or replaced if one of the filter warnings below appears on the CC-Ease:

- " FILTER I " → The internal filters must be cleaned or replaced;
- " FILTER E " → The external filters must be cleaned or replaced (optional).

The internal filters are included in the standard configuration of the ComfoAir. The external filters (optional) form part of the ducting of the ComfoAir, yet do not form part of the ComfoAir itself.

⚠ **To replace (or clean) any filters, please refer to the ComfoAir's manual.**

Malfunction alerts

Alerts of possible malfunctions can be found in the ComfoAir's manual.

The system should remain connected to its power supply unless the ComfoAir requires taking out of service due to a serious malfunction or for filter cleaning/ replacement or any other compelling reasons. When the unit is disconnected, the dwelling will no longer enjoy mechanical ventilation, and this can lead to problems with damp and mould. Long-term deactivation of the ComfoAir must be prevented.

Meanings of malfunction alerts

Code	Description
A0	n/a
A1	NTC sensor T1 is defective. (= outside air temperature)
A2	NTC sensor T2 is defective. (= supply air temperature)
A3	NTC sensor T3 is defective. (=return air temperature)
A4	NTC sensor T4 is defective. (= exhaust air temperature)
A5	Malfunction in the bypass motor.
A6	n/a
A10	n/a
A11	NTC sensor Tah is defective. (= temperature of the Post-heater)
E1	Exhaust fan not rotating.
E2	Supply fan not rotating.
E4	The ComfoAir has been switched off by external contact.
EA1	Enthalpy sensor measures excessive Relative Humidity (RH) values.
EA2	The ComfoAir is not communicating with the enthalpy sensor.
NC	CC Ease is not communicating with the ComfoAir.
FilterI	Internal Filter is dirty.
FilterE	External Filter is dirty.

8. Warranty and liability

Warranty conditions

The CC Ease is covered by a manufacturer's warranty for a period of 24 months after fitting up to a maximum of 30 months after the date of manufacture. Warranty claims may only be submitted for material faults and/or construction faults arising during the warranty period. In the case of a warranty claim, the CC Ease must not be dismantled without written permission from the manufacturer. Spare parts are only covered by the warranty if they were supplied by the manufacturer and have been installed by an approved fitter.

The warranty becomes invalid if:

- The guarantee period has elapsed;
- Parts are used which were not supplied by the manufacturer;
- Unauthorized alterations and/or modifications have been made to the unit.

Liability

The CC Ease is designed and manufactured for use with a balanced ventilation system with heat recovery. Any other application is seen as inappropriate use and can result in damage to the CC Ease or personal injury, for which the manufacturer cannot be held liable.
The manufacturer is not liable for any damage originating from:

- Non-compliance with the safety, operating and maintenance instructions in this manual;
- The use of components not supplied or recommended by the manufacturer (the responsibility for the use of such components lies entirely with the fitter);
- Normal wear and tear.

Temperature conversion table

°C	°F	°C	°F
5	41.0	23	73.4
6	42.8	24	75.2
7	44.6	25	77.0
8	46.4	26	78.8
9	48.2	27	80.6
10	50.0	28	82.4
11	51.8	29	84.2
12	53.6	30	86.0
13	55.4	31	87.8
14	57.2	32	89.6
15	59.0	33	91.4
16	60.8	34	93.2
17	62.6	35	95.0
18	64.4	36	96.8
19	66.2	37	98.6
20	68.0	38	100.4
21	69.8	39	102.2
22	71.6	40	104.0

°F = °C × 1.8 + 32

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