

Ventilation system ComfoAir Luxe Manual for the user

zehnder

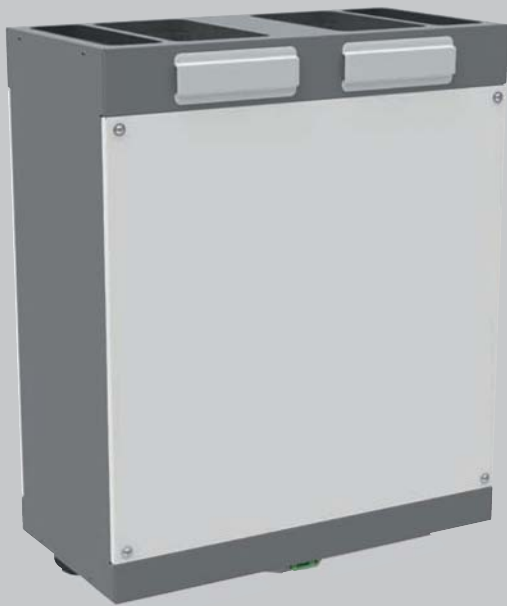
always
around you

Heating

Cooling

Fresh Air

Clean Air



ComfoAir 180



ComfoAir 200



ComfoAir 350



ComfoAir 550

Foreword



Read this document carefully before use.

This document provides all the information required for safe and optimal operation and maintenance of the ComfoAir 180, 200, 350 or 550. In this document they will be referred to as “the unit”. The unit is subject to continuous development and improvement. As a result, the unit may slightly differ from the descriptions.

The following pictograms are used in this document:



Point of attention.



Risk of:

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



Risk of personal injury for the user.



Maintenance



Questions

Please contact the supplier if you have any questions or would like to order a new document or new filters. The contact details of the main supplier can be found on the back page of this document.

Use of the unit

The unit may only be used when it is properly installed according to the instructions and guidelines in the installer manual of the unit. The unit can be used by:

- children aged from 8 years and above;
- persons with reduced physical capabilities;
- persons with reduced sensory capabilities;
- persons with reduced mental capabilities;
- persons with lack of experience and knowledge, if they have been given supervision or instruction concerning use of the unit in a safe way and understand the hazards involved.

Children shall not play with the appliance.

Cleaning and user maintenance shall not be carried out by children without supervision.









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The following information can be found in this document:


Information	Chapter
General information about the ventilation system.	1
Safety instructions which must be followed.	1
Operating devices available for the unit.	2
A summary of all the different parameters (P-menus).	2
Warranty and liability conditions.	3
What to do with the unit at the end of its life.	3
EEC declaration of conformity.	3
How to replace or clean the filters of the unit.	4
How to clean the valves of the ventilation system.	4
When the installer or service engineer must come by for the maintenance of the unit.	4
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1 Introduction and safety

The unit is a balanced ventilation system with heat recovery in order to create energy-efficient ventilation in houses. Balanced ventilation means that pollutants from the kitchen, bathroom, wc(s) and possibly the utility room are extracted, while the same amount of fresh air is blown into the living room and bedrooms. Gaps under or near doors ensure a good through-flow in the dwelling.

 **Ensure that the gaps under or near doors are never obstructed. For example by furniture, draught excluders or deep-pile carpet.**

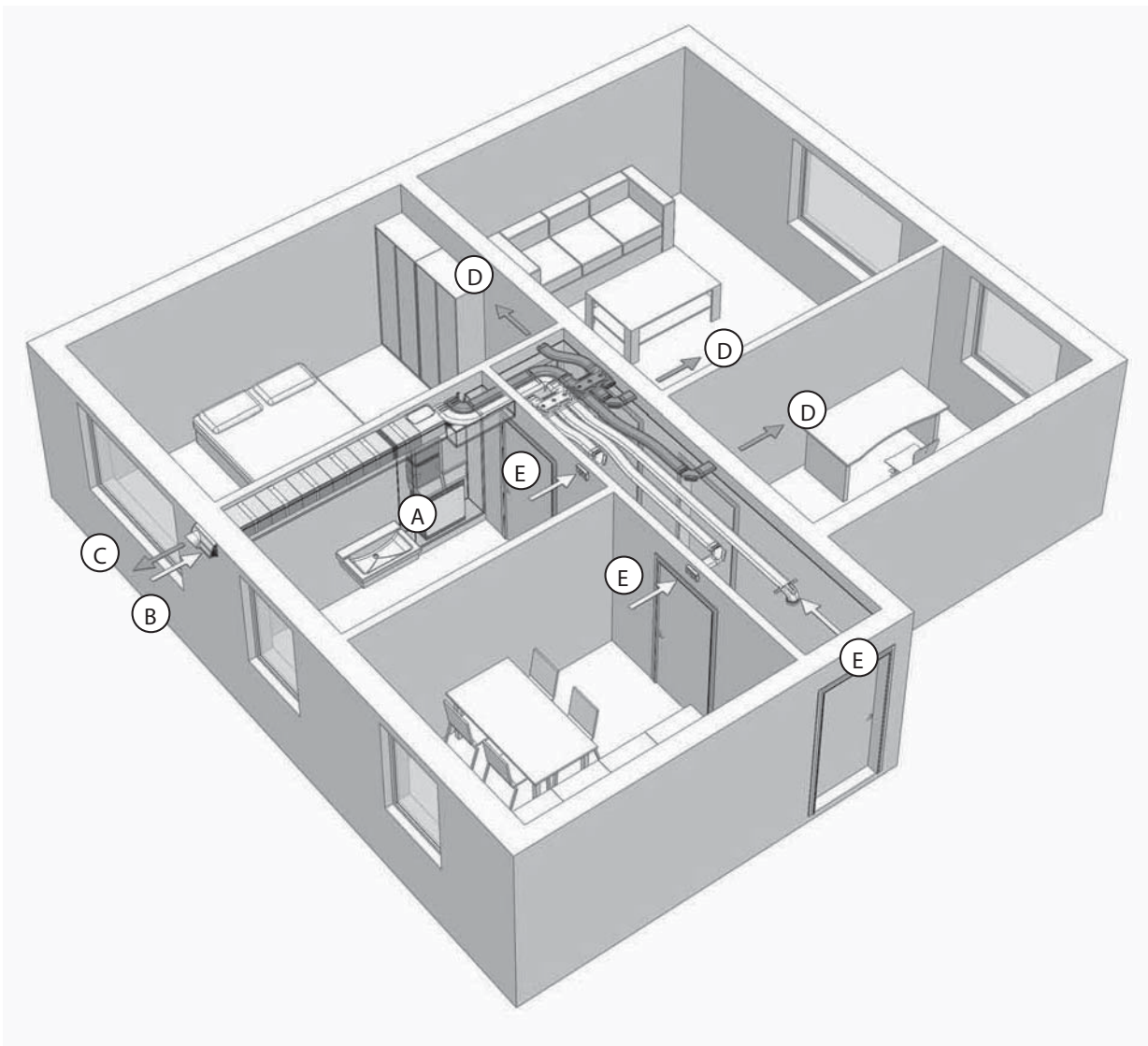
A balanced ventilation system consists of:

- The unit (A);
- Duct system for the intake of outdoor air (B);
- Duct system for the exhaust of indoor air (C);
- Supply valves in the living room and bedrooms (D);
- Exhaust valves in the kitchen, bathroom, wc and (if present) the utility room (E).

Safety instructions

Always follow the safety regulations, warnings, comments and instructions given in this document. Personal injury or damage to the unit can arise from non-compliance with the safety regulations, warnings, comments and instructions in this document.

- It is recommended to take out a maintenance contract so that the device is checked on a regular basis. The supplier can provide a list of registered installers nearby;
- The unit may only be installed, connected, rendered operational and maintained by an appropriately approved installer, unless otherwise indicated in this document;
- Store this document for the entire working life of the unit;
- Instructions with regard to maintenance of the filters must be carefully observed;
- When carrying out any work on the unit, make sure the power is disconnected and cannot be inadvertently reconnected;
- If the unit is disconnected from the power supply, mechanical ventilation of the dwelling will cease. This can lead to a buildup of moisture and result in problems with mould;
- The unit cannot be opened without using tools.








2 Operation

How to use and read the operating devices of the unit is mentioned in the document of the operating device.

2.1 Available operating devices

One or more of the following operating devices can be present to operate the unit:

Appearance	Name	Functions
 <p>Example switch</p>	Bathroom switch	Activating the overrun timer.
	RFZ	Set the desired ventilation level: ■ 1 = Low; ■ 2 = Normal; ■ 3 = High; ■ ☺ = Overrun timer. Indicating a malfunction or filter alert.
	ComfoSense	Indicating and setting the desired ventilation level: ■ ☺ = Absent ■ ☺ = Low; ■ ☺ = Normal; ■ ☺ = High; ■ PARTY TIMER = Overrun timer; ■ AUTO = Preset programme. Indicating a malfunction or filter alert; Indicating if the bypass, pre heater, ComfoFond-L ² , preset programme, analogue programme ³ or overrun timer is activated; Turning the supply and/or exhaust fan on and off; Indicating and setting the comfort temperature; Setting the P-menus; Resetting the malfunctions and filter alert; Setting a preset ventilation programme; Setting and showing date and time.
	CC Luxe ²	Indicating and setting the desired ventilation level: ■ A = Absent ■ 1 = Low; ■ 2 = Normal; ■ 3 = High; ■ ☺ 3 = Overrun timer; ■ AUTO = Preset programme. Indicating a malfunction or filter alert; Indicating if the bypass, pre heater, ComfoFond-L, preset programme, analogue programme or overrun timer is activated; Indicating outside and inside temperatures; Turning the supply and/or exhaust fan on and off; Turning the ComfoCool on and off; Indicating and setting the comfort temperature; Setting the P-menus; Resetting the malfunctions and filter alert; Setting a preset ventilation programme; Setting a preset comfort temperature programme; Setting and showing date and time; Setting languages and screen configuration.
	CO ₂ sensor ³	Indicating and setting the desired ventilation level: ■ I = Low; ■ II = Normal; ■ III = High; ■ Auto = Automatic (according to measured CO ₂ level); Indicating the CO ₂ level.

² Only available on the ComfoAir350Luxe and ComfoAir550Luxe.

³ Not available on the ComfoAir 180.

2.2P menus for the user

The software of the unit can be customised to the users requirements by changing the values in the P-menus of the software.

The P-menus can be accessed by the ComfoSense or CC-Luxe² of the unit.

Menu P1 and menu P9 are read-only menus, menu P2 is for setting time delays among other things.

A summary of all the accessible P-menus is given below.

Menu P1 > Status of time programmes

		Status
Submenu	Description	Activated
P10 ²	Is menu P20 currently active?	Yes (1) / No (0)
P11	Is menu P21 currently active?	Yes (1) / No (0)
P12	Is menu P22 currently active?	Yes (1) / No (0)
P13	Is menu P23 currently active?	Yes (1) / No (0)
P14	Is menu P24 currently active?	Yes (1) / No (0)
P15	Is menu P25 currently active?	Yes (1) / No (0)
P16	Is menu P26 currently active?	Yes (1) / No (0)
P17	Is the Summermode currently active?	Yes (1) / No (0)
P19 ²	Is menu P29 currently active?	Yes (1) / No (0)






Menu P9 > Status of additional programmes

		Status
Submenu	Description	Activated
P90	Open fire programme active?	Yes (1) / No (0)
P91	Bypass open?	Yes (1) / No (0)
P92 ²	ComfoFond-L ² valve open?	Yes (1) / No (0)
P93 ²	Post heater on?	Yes (1) / No (0)
P94 ³	Analogue input (0-10V) active?	Yes (1) / No (0)
P95	Frost protection or pre heater active?	Yes (1) / No (0)
P96	n/a	Yes (1) / No (0)
P97	Enthalpy programme active?	Yes (1) / No (0)

² Only available on the ComfoAir350Luxe and ComfoAir550Luxe.

³ Not available on the ComfoAir 180.

Menu P2 > Setting time delays

Submenu	Description	Time delay values		
		Minimum	Maximum	General reset
P20	n/a	0 Min.	180 Min.	0 Min.
P21	Delay timer for the bathroom switch (to switch to high position). ■ 'x' minutes after operating the bathroom switch, the unit switches to the high setting.	0 Min.	15 Min.	0 Min.
 Only applies to systems fitted with a bathroom switch.				
P22	Overrun timer for the bathroom switch (to switch to normal position). ■ 'x' minutes after operating the bathroom switch, the unit switches back to the normal setting.	0 Min.	120 Min.	30 Min.
 Only applies to systems fitted with a bathroom switch.				
P23	n/a	0 Min.	120 Min.	0 Min.
P24	Filter warning ■ 'x' weeks after cleaning or replacing the filters the "filter dirty" alert will reappear.	10 weeks	26 weeks	16 weeks
P25	Overrun timer for ventilation setting 3 (using ☺). ■ After pressing ☺ briefly (< 2 sec.), the unit will switch to the high setting for 'x' minutes and then automatically returns to the normal setting. If any switch is operated during this lagging time the unit will instantly revert to the ventilation position as set at that time.	1 Min.	20 Min.	10 Min.
 Only applies to systems fitted with an RFZ switch.				
P26	Overrun timer for ventilation setting 3 (using ☺). ■ After pressing ☺ continuously (> 2 sec.), the unit will switch to the high setting for 'x' minutes and then automatically returns to the normal setting. If any switch is operated during this lagging time the unit will instantly revert to the ventilation position as set at that time.	1 Min.	120 Min.	30 Min.
 Only applies to systems fitted with an RFZ switch.				
P27	Time for the boost setting. ■ After pressing  3 on the CC Luxe ² or after turning on the PARTY TIMER on the ComfoSense, the unit will switch to the high setting for 'x' minutes and then automatically returns to the normal setting. If any switch is operated during this lagging time the unit will instantly revert to the ventilation position as set at that time.	0 Min.	120 Min.	30 Min.
 Only applies to systems fitted with a ComfoSense or CC Luxe².				
P29	n/a	1%	99%	10%

² Only available on the ComfoAir350Luxe and ComfoAir550Luxe.

3 CE certification and warranty

Warranty conditions

The unit 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 unit 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 installer.

The warranty becomes invalid if:

- The guarantee period has elapsed;
- The device is used without filters;
- Parts are used that have not been supplied by the manufacturer;
- Non-authorized changes or modifications have been made to the unit;
- Installation has not been carried out according to the applicable regulations;
- The defects are due to incorrect connection, inexperienced use, or contamination of the system.

On-site (dis)assembly costs are not covered by the terms of the warranty. This also applies to normal wear and tear. The manufacturer retains the right to change the construction and/or configuration of its products at any time without being obliged to alter previously delivered products.

CE certification

Zehnder Group Nederland B.V.
Lingenstraat 2 • 8028 PM Zwolle-NL
T +31 (0)38 4296911 • F +31 (0)38 4225694
Company register Zwolle 05022293

Liability

The unit has been designed and manufactured for use in balanced ventilation systems incorporating Zehnder heat recovery systems. Any other application is seen as inappropriate use and can result in damage to the unit 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 document;
- The use of components not supplied or recommended by the manufacturer.
Responsibility for the use of such components lies entirely with the installer;
- Normal wear and tear.

End of useful life

Consult with the supplier about what should be done with the unit at the end of its useful life. If the unit cannot be returned to the supplier, avoid disposing of it with the domestic waste, and ask your local council about the options for recycling the components or processing the materials in an environmentally friendly manner.

Furthermore, do not dispose of batteries from the wireless (RF) switches with the normal waste, but take them to the specially designated disposal locations.

Machine description

EEC declaration of conformity

Heat recovery units: ComfoAir 180, 200, 350, 550 series

Complies with the following directives

Machinery Directive	(2006/42/EEC)
Low Voltage Directive	(2006/95/EEC)
EMC Directive	(2004/108/EEC)


Zwolle, 15-01-2014

Zehnder Group Nederland B.V.




O. Schulte,
Directeur Productie Zwolle


4 Maintenance

 **Failure to carry out (periodic) maintenance on the unit ultimately compromises the performance of the ventilation system.**


The unit should be inspected and cleaned every 2 years by a specialist. To ensure a hassle free lifespan for your unit, we recommend you take out a service agreement with an expert company.

 **Ensure the unit has been disconnected from mains power before carrying out any maintenance work.**

The power to the unit should not be disconnected unless the unit is to be taken out of service due to a serious malfunction, or for filter replacement or any other compelling reasons.

 **If the power to the unit is disconnected, mechanical ventilation of the dwelling will cease. This can lead to a build-up of moisture and result in problems with mould.**

4.1 Cleaning or replacing the filters

 **Replace the filters (at least) every six months and clean the filters every 2 or 3 months.**

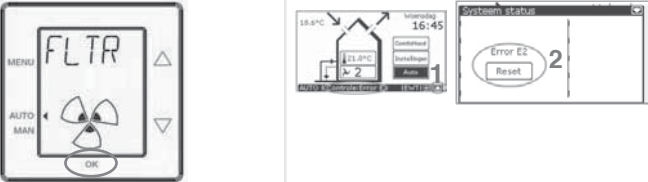


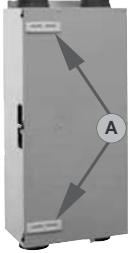

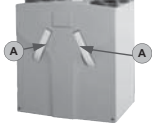
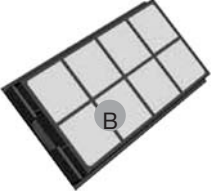

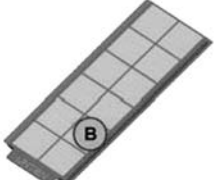

When indicated on the ComfoSense or CC Luxe² you must clean or replace the filters.

The installer of the unit can provide the necessary new filters.

Unit type	Filter type	Order number
ComfoAir 180	2x G4	400100090
	1x F7 / 1x G4	400100091
ComfoAir 200	1x F7 / 1x G4	400100013
	2x G4	400100014
	2x F7	400100017
ComfoAir 350	2x G4	400100085
ComfoAir 550	1x F7 / 1x G4	400100084
	2x F7	400100086

² Only available on the ComfoAir350Luxe and ComfoAir550Luxe.

4.1.1 Replacing the internal filters

	Action	Explanation
1		Reset the filter error as mentioned in the manual of the ComfoSense or CC Luxe ² .
2		Disconnect the power from the unit.
3	<div style="display: flex; justify-content: space-around;"> <div data-bbox="300 622 587 913">  <p>ComfoAir 180</p> </div> <div data-bbox="587 622 970 913">  <p>ComfoAir 200</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div data-bbox="300 936 587 1137">  <p>ComfoAir 350</p> </div> <div data-bbox="587 936 970 1137">  <p>ComfoAir 550</p> </div> </div>	Remove the handles (A) from the unit.
4	<div style="display: flex; justify-content: space-around;"> <div data-bbox="225 1167 456 1391">  <p>ComfoAir 200</p> </div> <div data-bbox="456 1167 711 1391">  <p>ComfoAir 180</p> </div> <div data-bbox="711 1167 951 1391">  <p>ComfoAir 350/550</p> </div> </div>	Remove the dirty filters (B) from the unit.
5		Install the clean filter back into the unit and reconnect the power.

² Only available on the ComfoAir350Lux and ComfoAir550Lux.

4.1.2 Cleaning the internal filters

Vacuum the filters (B) with a vacuum cleaner instead of replacing them with new filters.



When using the unit for the first time, it is recommended to clean the filters (and valves) first. During the construction phase the ventilation system could have become dirty with building dust.

4.1.3 Replacing or cleaning the external filter

If so indicated on the ComfoSense or CC Luxe² you must clean or replace the filter as is mentioned in the external filter document.

4.2 Cleaning the valves

Clean the valves (at least) twice a year.

1. Mark the setting of the valve;
2. Remove the valve from the wall or ceiling;
3. Clean the valve in a solution of soap and warm water;
4. Rinse the valve thoroughly and wipe dry;
5. Place the valve back WITH EXACTLY THE SAME SETTING (and IN THE SAME HOLE);
6. Repeat this procedure for the other valves.



Some valves have a filter behind them. If a filter is present, clean it in the same way as the valve.

About the valve settings

The ventilation air is supplied and discharged by means of valves. Gaps under or near doors in the dwelling ensure that the air flows in the right direction. In order to ensure that the correct ventilation volumes are maintained in the rooms, the following must be observed:

- Do not seal the gaps under or near doors. For example with furniture, draught excluders or deep-pile carpet. The gap should be at least 10mm;
- Do not change the settings of the valves;
- Do not replace the valves with one another.

The installer will have set all the valves to ensure the optimum performance of the ventilation system. Therefore, do not change the setting of the valves.

4.3 Condensation drain

Ensure that the water seal (u-bend) connected to the domestic waste-water system is always full of water.

4.4 Maintenance by the installer or maintenance mechanic

Not all necessary maintenance can be done by the user.



Once every 2 years the installer or a maintenance mechanic should come by for the maintenance inside the balanced ventilation system.




Some installers offer a full maintenance contract package where the user maintenance can also be integrated.

5 Malfunctions

In the event of a malfunction, the corresponding malfunction code will be displayed on the ComfoSense or CC Luxe² of the unit.

In event of a filter malfunction the filter must be cleaned or replaced as described in the „Maintenance“ chapter.

In the event of all other malfunction:

	Action	Explanation
1		Note down the malfunction code that appears on the ComfoSense or CC Luxe ² of the unit.
2		Note down the unit type. This is given on the identification plate on the unit near the power supply.
3		Contact the installer or maintenance mechanic and give him the noted information.

The system should not be disconnected from the power supply, unless the unit must be taken out of service due to a serious malfunction, or for filter cleaning/replacement or any other compelling reasons.



If the unit is disconnected from the power supply, mechanical ventilation of the dwelling will cease. This can lead to a build-up of moisture and result in problems with mould.



If the unit is installed in an area with a higher average humidity (such as bathroom or wc) the probability of condensation on the outside of the unit is high. This is similar to condensation on a window and no action is needed.

² Only available on the ComfoAir350Luxe and ComfoAir550Luxe.

I Commissioning & Inspection Record

Part 2a - Installation details

2.1 Installation Checklist - General (all systems)		Tick as appropriate	
Has the system been installed in accordance with manufacturer's requirement		Yes	No
Have relevant systems installation clauses been followed as details in tables 1, 3, 5 and 7 applicable		Yes	No
Type of ductwork installed (e.g. rigid, semi-rigid)			
If any deviation from tables 1, 3, 5 and 7, these should be detailed here			
Description of installed controls (e.g. timer, central control humidistat, PIR, etc.)			
Location of document/override controls			
Signature			
Number (if applicable)			
Date of Installation (completion)			

2.2 Installation Engineer's Details	
Engineer's Name	
Company	
Address Line 1	
Address Line 2	
Telephone Number	
Post Code	
Signature	
Competent Person Scheme/ Registration number (if applicable)	
Date of installation (completion)	

2.3d Inspector's Details	
Name	
Company	
Address Line 1	
Address Line 2	
Telephone Number	
Post Code	
Signature	
Competent Person Scheme/ Registration number (if applicable)	
Date of installation (completion)	

Part 2b - Inspection of installation

This section should be completed by the commissioning engineer prior to completing Part 3.

2.3a Visual inspections - General (all systems)		
Total installed equivalent area of background ventilators in dwelling		mm
Total floor area of dwelling		m ²
Does the total installed equivalent ventilator area meet the requirements given in tables 5.2a, 5.2b, or 5.2c in ADF?	Yes	No
Have all background ventilators been left in the open position?	Yes	No
Have the correct number and location of extract fans/terminals been installed that satisfies table 5.2a in ADF?	Yes	No
Is the installation complete with no obvious defects present?	Yes	No
Do all internal doors have sufficient undercut to allow air transfer between rooms (i.e. 10 mm over and above final floor finish)	Yes	No
Has all protection/packaging been removed (including background ventilators) such that system is fully functional?	Yes	No
For ducted systems, has the ductwork installation been installed in such manner that air resistance and leakage is kept to a minimum?	Yes	No
Are the correct number and size of background ventilators provided that satisfy ADF?	Yes	No
Has the entire system been installed such that there is sufficient access for routine maintenance and repair/replacement of components?	Yes	No
2.3a Visual inspections - General (systems 3 and 4 only)		
Have appropriate air terminal devices been installed to allow system balance?	Yes	No
Has the heat recovery unit (System 4 only) and all ductwork been effectively insulated where installed in unheated spaces?	Yes	No
Condensation connection is complete and drains to an appropriate location (System 4 only)?	Yes	No
2.3c Other inspections - General (systems 1, 3 and 4 only)		
Upon initial start up, was any abnormal sound or vibration experienced, or unusual smells detected?	Yes	No

Part 3 - Airflow measurement test and commissioning details

3.1 Test Equipment	
Schedule of air flow measurement equipment used (model and serial)	Date of last UKAS calibration
1.	
2.	
3.	

3.3 Air Flow Measurements (extract) - system 3 and 4 only				
Room reference (location of terminals)	Measured Air Flow High Rate (l/s)	Design Air Flow High Rate (l/s) Refer to Table 5.1b ADF	Measured Air Flow Low Rate (l/s)	Design Air Flow Low Rate (l/s) Refer to Table 5.1b in ADF
Kitchen				
Bathroom				
En Suite				
Utility				
Other...				
Other...				
Other...				

3.4 Air Flow Measurements (supply) - system 4 only				
Room reference (location of terminals)	Measured Air Flow High Rate (l/s)	Design Air Flow High Rate (l/s) Refer to Table 5.1b ADF	Measured Air Flow Low Rate (l/s)	Design Air Flow Low Rate (l/s) Refer to Table 5.1b in ADF
Living Room 1				
Living Room 2				
Dining Room				
Bedroom 1				
Bedroom 2				
Bedroom 3				
Bedroom 4				
Bedroom 5				
Study				
Other...				

3.5 Commissioning - systems 3 and 4 only		
Have controls been set-up in accordance with the manufacturer's recommendations?	Yes	No
Have all distribution grilles been locked to prevent un authorised adjustment?	Yes	No

3.6 Test Engineer's Details

Name	
Company	
Address Line 1	
Address Line 2	
Telephone Number	
Post Code	
Signature	
Competent Person Scheme/Registration (if applicable)	
Date of test	

II Maintenance log

2 or 3 months after installation:

Activity	Y1	Y2	Y3	Y4	Y5	Y6	Y7
Clean the filters							

6 months after installation:

Activity	Y1	Y2	Y3	Y4	Y5	Y6	Y7
Replace the filters							
Clean the valves							

9 months after installation:

Activity	Y1	Y2	Y3	Y4	Y5	Y6	Y7
Clean the filters							

12 months after installation:

Activity	Y1	Y2	Y3	Y4	Y5	Y6	Y7
Replace the filters							
Clean the valves							
Inspect and clean the condensation drain							
Inspect and clean the air ducts							
Inspect and clean the casing of the unit							
Inspect and clean the heat exchanger							
Inspect and clean the fans							
Inspect and clean the pre heater filter							

Date	Activity	Initials

2 or 3 months after installation:

Activity	Y8	Y9	Y10	Y11	Y12	Y13	Y14
Clean the filters							

6 months after installation:

Activity	Y8	Y9	Y10	Y11	Y12	Y13	Y14
Replace the filters							
Clean the valves							

9 months after installation:

Activity	Y8	Y9	Y10	Y11	Y12	Y13	Y14
Clean the filters							

12 months after installation:

Activity	Y8	Y9	Y10	Y11	Y12	Y13	Y14
Replace the filters							
Clean the valves							
Inspect and clean the condensation drain							
Inspect and clean the air ducts							
Inspect and clean the casing of the unit							
Inspect and clean the heat exchanger							
Inspect and clean the fans							
Inspect and clean the pre heater filter							

Date	Activity	Initials



