

Centair

CMEV.4 / CMEV.4e / CMEV.4eHT

Mechanical Extract Ventilation (MEV) System

User / Homeowner Guide



Commissioning and Inspection Record:

Located on page 5 of this guide, should have been completed by the Commissioning Engineer.

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1.0 Ventilation In Your Home

Overview

Your home has a continuously running ventilation (MEV) system installed. This consists of a central extract system that is linked by a network of ducts to extract air on a continual basis from the following areas in residential dwellings –

- Kitchen
- Bathroom
- Utility Room
- WC/Cloakroom
- Ensuite Bath/Shower Room

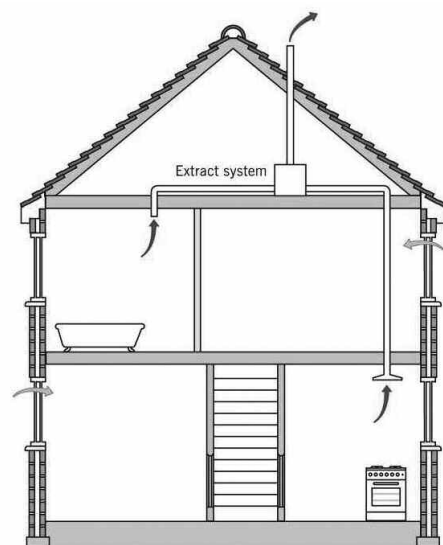


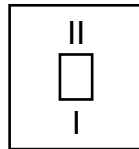
Figure 1

2.0 General Overview

2.1.1 Depending on the way your MEV unit has been installed, the specific operation of your fan may vary. The unit has three speeds available, but may not have been wired to use them all. Options are –

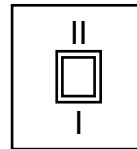
- 1) Trickle Speed: Operating on a continual basis.
- 2) Medium Speed: Activated manually using our GS1 switch or similar.
- 3) Boost Speed: Activated manually using our GS1 / GS2 switch or similar.

Note; Not all three speeds may be operational. Medium speed may be disconnected (when using a GS2 switch or similar).



GS2 switch markings -

Trickle (I) & Boost (II)
Operation



GS1 switch markings -

Trickle (Centre), Medium (I)
& Boost (II) Operation

Note; Other manufacturers switches may show different markings.

2.1.2 To maintain good indoor air quality within the dwelling it is important that the ventilation system remains in operation at all times unless powered down periodically for maintenance/repair.

2.1.3 Depending on when your home was built, background window trickle ventilators may be provided in dry habitable rooms. Trickle vents should not be installed in the same rooms as the mechanical extract valves, as overall ventilation effectiveness can be reduced.

2.1.4 **Warning:** This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

2.1.5 Where an open-flued oil or gas-fuelled appliance is installed, precautions must be taken to avoid a back-flow of gases into the room.

2.1.6 **If the supply cord is damaged, it must be replaced by a special cord/assembly available from the manufacturer or its service agent. The replacement must be carried out by a qualified Electrician in accordance with IEE or local regulations.**

2.1.7 SMART Technology - CMEV.4eHT Only

To maintain a healthy indoor environment the CMEV.4eHT includes SMART technology for Over-run Timer (Greenwood TimerSMART™) and Humidity (Greenwood HumidiSMART™).

Greenwood TimerSMART™ monitors the length of time that there is an occupancy presence within a wet-room and provides a fixed over-run time period to best match the length of time that the 'switch live' is active (as shown below):

Time 'Switch Live' is Active	Over-run Boost Period
0 – 5 minutes	No over-run
5 – 10 minutes	5 minutes
10 – 15 minutes	10 minutes
15+ minutes	15 minutes

Greenwood HumidiSMART™ monitors the ambient humidity within the wet-room environment and looks for short peaks of humidity made by either showering or bathing. This SMART technology ensures that your CMEV.4eHT is not on boost for prolonged periods of time due to the higher ambient humidity levels caused during the hot summer months.

2.1.8 To disassemble the unit, disconnect from mains supply and use a screwdriver to segregate the electronic components and motor from the plastic housing. Dispose items in accordance with WEEE.

2.1.9

WEEE Statement

This product may not be treated as household waste. Instead it should be handed to an appropriate collection point for the recycling of electrical and Electronic equipment.

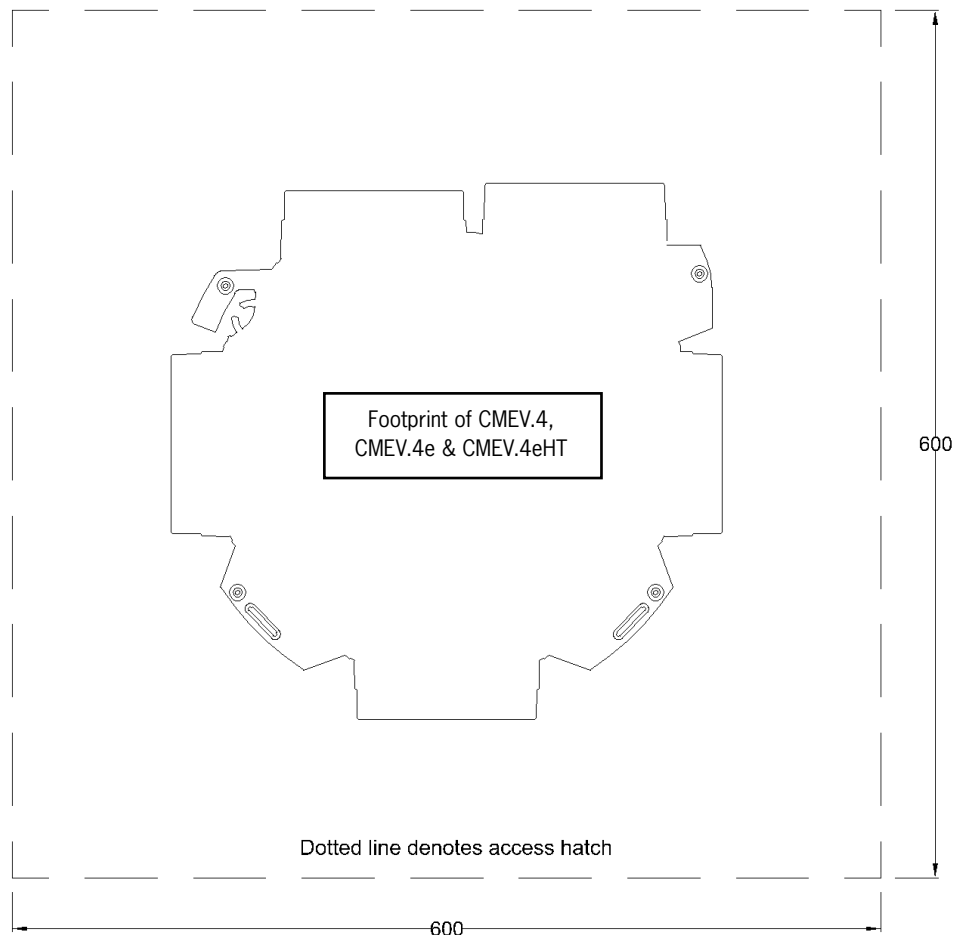
For more detailed information about the recycling of this product, please contact your local council office or your household waste disposal service.



3.0 Servicing / Maintenance

- 3.1.1 CMEV.4, CMEV.4e & CMEV.4eHT units contain a self-cleaning backward curved impellor that requires no servicing. **The fan motor has sealed for life bearings, which do not require lubrication.**
- 3.1.2 Periodic cleaning of the ceiling extract valves should be carried out as required, taking care not to adjust the valves set position, as this may cause either under ventilation or unnecessary over ventilation to occur.
- 3.1.3 Consideration should be given to access for complete unit replacement. For installations where the unit is hidden behind a panel, we recommend a minimum size access panel of 600mm². This is to ensure that the ducts can be disconnected and reattached with ease. (See Figure 2).

3.1.4 Figure 2 – Access for Maintenance



4.0 Commissioning & Inspection Record

4.4.1 This section should be used to record all installation details. The Commissioning Engineer should use the following Parts 1 to 3, to record important information relating to the installation, of which, should be incorporated into the Home Information Pack for the homeowner to keep.

- Part 1 – System details and declarations
- Part 2a – Installation details
- Part 2b – Inspection of installation
- Part 3 – Air flow measurement test and commissioning details

Part 1 – System details and declarations

1.1 Installation Address Details	
Dwelling Name/Number	
Street	
Locality	
Town	
County	
Post Code	
1.2 Installation Details	
System Classification*	System 3 – Mechanical Extract Ventilation
Manufacturer	Zehnder Group UK Limited
Model Number	
Serial Number (where available)	
Location of MEV Unit	

*Note. If a system has been installed that is not defined by System 1 to 4 in Approved Document F, further installation checks and commissioning procedures may be required. Seek particular guidance from the manufacturer for these systems.

Part 2a – Installation details

2.1 Installation Checklist – General (all Systems)	Tick as appropriate	
Has the system been installed in accordance with manufacturer's requirements?	Yes	No
Have relevant system installation clauses been followed as detailed in Tables 1, 3, 5 and 7 as 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 manual/override controls		

2.2 Installation Engineers 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 before completing Part 3.

2.3a Visual Inspections – General (all Systems)

Tick as appropriate

	Tick as appropriate	
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 satisfy 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 from 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

2.3b 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
Condensate 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
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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 Inspection (completion)	

Part 3 – Air flow 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 5.1a ADF	Measured Air Flow Low Rate (l/s)	Design Air Flow Low Rate (l/s) Refer to Table 5.1a in ADF
Kitchen				
Bathroom				
En Suite				
Utility				
Other...				
Other...				
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 unauthorised 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 Number (if applicable)	
Date of Test	

5.0 Declaration of Performance

Declaration of Performance Residential Ventilation Unit Greenwood Centair CMEV.4												
Supplier Name or Trade Mark	Greenwood Airvac			Greenwood Airvac			Greenwood Airvac			Greenwood Airvac		
Supplier Model Identifier and Options Installed	Manual Control (via manual switch)			Clock Control (via 7 day timer control)			Central Demand Control (with 1 sensor)			Local Demand Control (with 2 or more sensors)		
SEC in [kWh/(m ² a)] for Each Climate (Cold, Average, Warm)	-30.1	-13.7	-4.3	-33.5	-15.5	-5.3	-40.2	-19.2	-7.2	-53.6	-26.5	-11.0
SEC Class (Cold, Average, Warm)	B	E	F	B	E	F	A	E	F	A+	B	E
Declared Typology	Unidirectional			Unidirectional			Unidirectional			Unidirectional		
Type of Motor Drive Installed	Multi-Speed			Multi-Speed			Multi-Speed			Multi-Speed		
Type of Heat Recovery ¹	None			None			None			None		
Heat Recovery Efficiency ²	n/a			n/a			n/a			n/a		
Maximum Flow Rate in (m ³ /h) / (l/s) ³	347 / 97			347 / 97			347 / 97			347 / 97		
Electric Power Input at Maximum Flow Rate (W) ⁴	58			58			58			58		
Sound Power Level (L _{wa}) in dB(A) ⁵	52			52			52			52		
Reference Flow Rate in (m ³ /h) / l/s ⁶	245 / 68			245 / 68			245 / 68			245 / 68		
Reference Pressure Difference	50			50			50			50		
SPI in [W/(m ³ /h)] ⁷	0.11			0.11			0.11			0.11		
Control Factor and Typology	1			.95			.85			.65		
Declared Maximum Internal and External Leakage (%) ⁸	Internal: n/a External: n/a			Internal: n/a External: n/a			Internal: n/a External: n/a			Internal: n/a External: n/a		
Position and Description of Visual Filter Warning	n/a			n/a			n/a			n/a		
Internet Address for Preassembly / Disassembly Instructions	www.greenwood.co.uk			www.greenwood.co.uk			www.greenwood.co.uk			www.greenwood.co.uk		
AEC (kWh electricity/a) for Each Climate (Cold, Average, Warm)	3.5	3.5	3.5	3.2	3.2	3.2	2.7	2.7	2.7	1.8	1.8	1.8
AHS (kWh electricity/a) for Each Climate (Cold, Average, Warm)	33.6	17.2	7.8	36.7	18.7	8.5	42.9	21.9	9.9	55.4	28.3	12.8

1. Type of Heat Recovery: Recuperative is without humidity recovery and renewable is with humidity recovery.
2. Efficiency according to EN13141-7:2010 at reference airflow rate @50Pa; and according to EN13141-8:2014 systems without connection.
3. Maximim flow at 100 Pa external pressure (shown in both m³/h and l/s).
4. Electrical power input at the maximum airflow rate (Watts).
5. Casing noise radiation at reference flow rate at 50Pa external pressure.
6. Reference flow rate is 70% of the maximim airflow at 50Pa external pressure according to EN13141-7:2010 (shown in both m³/h and l/s).
7. In accordance with EN13141-7:2010 at reference flow rate.
8. In accordance with EN13141-7:2010 at reference flow rate and EN13141-8:2014 systems without connection.

SEC: Specific Energy Consumption

SPI: Specific Power Input

AEC: Annual Electricity Consumption

AHS: Annual Heating Saved

Declaration of Performance Residential Ventilation Unit Greenwood Centair CMEV.4e / HT

Supplier Name or Trade Mark	Greenwood Airvac			Greenwood Airvac			Greenwood Airvac			Greenwood Airvac		
Supplier Model Identifier and Options Installed	Manual Control (via manual switch)			Clock Control (via 7 day timer control)			Central Demand Control (with 1 sensor)			Local Demand Control (with 2 or more sensors)		
SEC in [kWh/(m ² a)] for Each Climate (Cold, Average, Warm)	-31.8	-15.4	-6.0	-35.1	-17.1	-6.9	-41.6	-20.6	-8.6	-54.6	-27.5	-12.0
SEC Class (Cold, Average, Warm)	B	E	F	A	E	F	A	D	F	A+	B	E
Declared Typology	Unidirectional			Unidirectional			Unidirectional			Unidirectional		
Type of Motor Drive Installed	Variable Speed			Variable Speed			Variable Speed			Variable Speed		
Type of Heat Recovery ¹	None			None			None			None		
Heat Recovery Efficiency ²	n/a			n/a			n/a			n/a		
Maximum Flow Rate in (m ³ /h) / (l/s) ³	352 / 98			352 / 98			352 / 98			352 / 98		
Electric Power Input at Maximum Flow Rate (W) ⁴	36			36			36			36		
Sound Power Level (L _{wa}) in dB(A) ⁵	51			51			51			51		
Reference Flow Rate in (m ³ /h) / l/s ⁶	245 / 68			245 / 68			245 / 68			245 / 68		
Reference Pressure Difference	50			50			50			50		
SPI in [W/(m ³ /h)] ⁷	0.06			0.06			0.06			0.06		
Control Factor and Typology	1			.95			.85			.65		
Declared Maximum Internal and External Leakage (%) ⁸	Internal: n/a External: n/a			Internal: n/a External: n/a			Internal: n/a External: n/a			Internal: n/a External: n/a		
Position and Description of Visual Filter Warning	n/a			n/a			n/a			n/a		
Internet Address for Preassembly / Disassembly Instructions	www.greenwood.co.uk			www.greenwood.co.uk			www.greenwood.co.uk			www.greenwood.co.uk		
AEC (kWh electricity/a) for Each Climate (Cold, Average, Warm)	1.8	1.8	1.8	1.6	1.6	1.6	1.3	1.3	1.3	0.8	0.8	0.8
AHS (kWh electricity/a) for Each Climate (Cold, Average, Warm)	33.6	17.2	7.8	36.7	18.7	8.5	42.9	21.9	9.9	55.4	28.3	12.8

1. Type of Heat Recovery: Recuperative is without humidity recovery and renewable is with humidity recovery.
2. Efficiency according to EN13141-7:2010 at reference airflow rate @50Pa; and according to EN13141-8:2014 systems without connection.
3. Maximim flow at 100 Pa external pressure (shown in both m³/h and l/s).
4. Electrical power input at the maximum airflow rate (Watts).
5. Casing noise radiation at reference flow rate at 50Pa external pressure.
6. Reference flow rate is 70% of the maximim airflow at 50Pa external pressure according to EN13141-7:2010 (shown in both m³/h and l/s).
7. In accordance with EN13141-7:2010 at reference flow rate.
8. In accordance with EN13141-7:2010 at reference flow rate and EN13141-8:2014 systems without connection.

SEC: Specific Energy Consumption

SPI: Specific Power Input

AEC: Annual Electricity Consumption

AHS: Annual Heating Saved



6.0 The Guarantee Period

- 6.1.1 This Greenwood product (**CMEV.4/CMEV.4e/CMEV.4eHT**) has a 2 Year Guarantee.
- 6.1.2 This does not affect your statutory rights.
- 6.1.3 Full details available on request from +44 (0) 1276 408404 or www.greenwood.co.uk / info@greenwood.co.uk

All information is believed correct at time of going to press. E&OE.

All goods are sold according to Zehnder Group UK Ltd's Standard Conditions of Sale which are available on request. All dimensions referred to are in millimetres unless otherwise stated.

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