

This certificate is valid for building regulations and associated technical guidance in force at the time of the registration and for the regulations in Scotland only

## VENT-AXIA LO CARBON NBR dMEV FAN UNIT – “HYBRID” WHOLE HOUSE VENTILATION SYSTEM

### Description of Product

This Registered Detail is based on a mechanical extraction system, which provides continuous mechanical extract ventilation for whole house ventilation. The system application is designed to work with a natural background ventilation system depending upon the air permeability of the building.



### Key factors assessed

- Mechanical Resistance & Stability
- Safety in case of Fire
- Health, Hygiene and Environmental
- Safety in Use
- Energy, Economy and Heat Retention
- Durability serviceability and identification

### Validity

This certificate was first issued on 16 December 2019 and is valid until **27 November 2021**

# Scope of Registration

## Limitations of use: Environment

1. The design, installation and commissioning of a mechanical ventilation system should mean that it is capable of performing in a way that is not detrimental to the health of the occupants of the building and when necessary, is easily accessible for regular maintenance. **The Vent-Axia technical department must have due regard to the aims of the Building Standards in these respects.**

This Registered Detail makes reference to both the ventilation system and the provision of secondary ventilation. It should be noted that the primary ventilation source to the dwelling should conform to the requirements of Mandatory Standard 3.14 of the Domestic Technical Handbook, and in particular to Clause 3.14.9, which refers to the CIBSE Guide B2: 2001, Ventilation and air conditioning, which in turn refers to the [Approved Document F1 \(Means of ventilation\) \(2010 edition incorporating 2010 and 2013 amendments\)](#), issued by the DCLG in England and Wales.

*While the 2001 CIBSE Guide B2 2001 Ventilation and air conditioning document has been updated under "GVB2/16 CIBSE Guide B2: Ventilation and Ductwork 2016" verifiers and designers should be clear that this Registered Detail is issued on the basis of the 2001 Version*

The approach used for this Registered Detail makes use of guidance from the Approved Document F1 (Means of ventilation) which is not detailed in the [Building Standards Supporting Guidance for Domestic Ventilation 2<sup>nd</sup> Edition 2015](#).

**Conditions 2 to 4 summarise the ventilation strategy used for this Registered Detail.**

**NOTE: The Vent-Axia technical department must be contacted to assess the suitability of the dMEV system to confirm the system design and to consider the provision of trickle ventilation, the elimination for short circuiting and the number and configuration of the fans to meet Standard 3.14.**

2. Where a dMEV unit is installed in a wet area (a kitchen, bathroom, shower room, utility room or a space specifically for drying washing):
  - a. if fresh air from the trickle ventilator(s) will be short-circuited by the dMEV unit, trickle ventilation shall not be provided to the wet area. In such circumstances background ventilation should be made available by providing at least an 8mm undercut gap to the sill of the door that the wet area is accessed from, e.g. an en-suite off a bedroom. Any door that is required to have a period of fire resistance should not be subject to undercutting or altered in any way, but a suitably dimensioned fire door may be installed to provide the 8mm clearance.
  - b. if fresh air from the trickle ventilator(s) will not be short-circuited by the dMEV unit, trickle ventilation provision with an equivalent area of at least 2500mm<sup>2</sup> shall be provided to the wet area.
  - c. as part of a dMEV system to provide a partial or a whole house ventilation solution, the manufacturer shall confirm the requirement for any undercuts to all relevant internal doors to satisfy the ventilation design for the property. Where undercuts to internal doors are required, at least an 8mm undercut gap to the sill shall be provided. Any internal door that is required to have a period of fire resistance should not be subject to undercutting or altered in any way, but a suitably dimensioned fire door may be installed to provide the 8mm clearance.
  - d. when related to a flat with a protected enclosure, please refer to LABSS Information Note INFOP24/2019 Version 1 - DMEV/MEV Installation in a flat with a protected enclosure.
3. The number and configuration of the fans covered by this Registered Detail shall ensure that the minimum ventilation rate should be not less than 0.3l/s per m<sup>2</sup> of internal floor area (this includes all floors, e.g. for a two-storey building add the ground and first floor areas).

**The Vent-Axia technical department must be contacted to assess the suitability of the dMEV system to confirm the number and configuration of the fans to meet Standard 3.14.**

4. The suitability of a dMEV system is dependent upon the building's air permeability:
  - a) tighter (lower) than 3m<sup>3</sup>/m<sup>2</sup>.h @ 50Pa – a dMEV system is not suitable.
  - b) between 3 and 5m<sup>3</sup>/m<sup>2</sup>.h @ 50Pa – a dMEV system is suitable. Trickle ventilation provision with an equivalent area of at least 2500mm<sup>2</sup> shall be fitted to provide replacement air to all habitable rooms (for the purposes of this Registered Detail, this means a room used for dwelling purposes, but which is not solely a kitchen, bathroom, shower room, utility room or sanitary accommodation).
  - c) leakier (higher) than 5m<sup>3</sup>/m<sup>2</sup>.h @ 50Pa – a dMEV system may be used as an alternative to switchable single room extract fans. Trickle ventilation provision as detailed in 3.14.3 of the Domestic Technical Handbook shall be fitted, except to wet rooms (see Conditions 2 & 3 above).

**The Vent-Axia technical department must be contacted to assess the suitability of the dMEV system having regard to the air permeability within the building to meet Standard 3.14.**

#### **Safety – Installation parameters**

5. The fan and associated wiring should be installed in accordance with the general parameters of 4.5.

**Installers must refer to the fan settings information specific to the area and configuration of the house containing the fans(s) covered by the house specific calculation sheets provided by The Vent-Axia designer.**

#### **Inspection, Testing and Accreditation**

6. That the extract fan shall be installed strictly in accordance with the manufacturer's instructions, in accordance with the Registered Detail holder's instructions and fully in accordance with the accredited certification and supporting test reports.
7. That this Registered Detail is issued in the knowledge that the materials specified shall contribute to compliance with Mandatory Standards 3.14 and 4.5 of the Building (Scotland) Regulations 2004 when read with the accompanying Registered Details and associated test reports – see Supporting information Section below.
8. The fan settings should be added to the electrical certificate and be retained with the written information as part of the commissioning which will contribute to compliance with Mandatory Standard 6.8 of the Building (Scotland) Regulations 2004.

## Conditions of Certificate

1. That the specifications and materials referred to have been assessed and approved in accordance with the Building (Scotland) Regulations 2004 and in accordance with the supporting guidance in the Domestic Technical Handbooks which came into force with effect from **01 October 2019**.
2. That where reference is made on a plan or specification document to any Code of Practice, CIBSE Guide B2, BRE Digests, British or European Standard or manufacturer's instruction, it shall be construed as a reference to such publication in the form in which it is in force at the date of this Registered Detail.
3. That the manufacturers specifications and the materials specified shall not be changed without first gaining approval so to do from Local Authority Building Standards Scotland [LABSS]. Failure to do so will invalidate the Registered Detail.
4. **That the Registered Detail shall be valid until 27 November 2021.**
5. This Registered Detail should not be regarded as a formal approval under the building warrant process prescribed by the Building (Scotland) Act 2003 enacted from 01 May 2005.
6. That this Registered Detail shall contribute to compliance with relevant Mandatory Standards specified under the Building (Scotland) Regulations 2004 as amended, when read with the Limitations of Use Section to this Registered Detail.

This Registered Detail shall contribute to compliance with relevant Mandatory Standards specified under the Building (Scotland) Regulations 2004 as amended when read with the Scope of Registration and the Conditions of Certificate Sections to this Registered Detail.

## Regulations



LABSS consider that, **Vent-Axia** LO CARBON NBR dMEV FAN UNIT – “HYBRID” WHOLE HOUSE VENTILATION SYSTEM, will meet the functional requirements of the Building Regulations (listed below) if the criteria detailed in this certificate are met.

### **The Building (Scotland) Regulations 2004 (as amended)**

Technical Handbooks – Domestic and Non-Domestic

#### **Regulation 8 Durability, workmanship and fitness of materials**

0.8.5: Ways of establishing the fitness of materials

#### **Regulation 9 Building Standards applicable to construction**

Construction shall be carried out so that the work complies with the applicable requirements of schedule 5.

#### **Mandatory Standard 3.14 Ventilation (Domestic)**

3.14.3; Ventilation of dwellings; 3.14.9; Mechanical ventilation; 3.14.11; Mechanical ventilation and systems.

NOTE: That this Registered Detail is issued in the knowledge that the materials specified shall contribute to compliance with Mandatory Standards 3.14 of the Building (Scotland) Regulations 2004 when read with the accompanying Registered Details and associated test reports

#### **Mandatory Standard 4.5 Electrical Safety**

4.5.1 Electrical Installations

NOTE: That this Registered Detail is issued in the knowledge that the materials specified shall contribute to compliance with Mandatory Standards 4.5 of the Building (Scotland) Regulations 2004 when read with the accompanying Registered Details and associated test reports

#### **Mandatory Standard 6.8 Written Information**

6.8.1 Written information

NOTE: The fan settings should be added to the electrical certificate and be retained with the written information as part of the commissioning which will contribute to compliance with Mandatory Standard 6.8 of the Building (Scotland) Regulations 2004.



### **The Building Regulations 2010 (as amended) England & Wales**

#### **The Building Regulations 2010 (as amended) England**

If you would like to discuss a specific use of the product in England it will require an additional assessment under the English Building Regulations and accordingly, you should contact the LABC

#### **The Building Regulations 2010 (as amended) Wales**

If you would like to discuss a specific use of the product in Wales, it will require an additional assessment under the Welsh Building Regulations and accordingly you should contact the LABC Cymru

## Supporting Information

All supporting information to this certificate can be supplied by the manufacturer / installer and includes these primary documents:

Additional information is available to verifiers on the LABSS Website - <https://www.labss.org/vent-axia.com>

Test Report

**UL-EMC-RP93552JD02A (51 pages) dated 5 April 2013**

Test Report

**Assessment Report IEC/EN 60335-1 (22 pages) dated 18 April 2013**

**Sample Calculation Sheet (2 sample pages) and typical house type layout drawings showing fan numbers and configuration**

- Supporting Document 3A 3 Storey House
- Supporting Document 3B 2 Storey House

Test Dated 5<sup>th</sup> July 2013

**Electrical systems have been tested by UL VS Ltd, Pavillion A, Ashwood Park, Ashwood Way, Basingstoke, Hampshire RG23 8BG**

Test Dated 18th April 2013

**Sound power emission has been tested by Sound Research Laboratories, Holbrook House, Little Waldingfield, Sudbury, Suffolk, CO10 0TH**

**Specimen calculation sheets shall be provided as house type specific. Inclusive of installation setting information by Vent Axia, Fleming Way, CRAWLEY, RH10 9YX**

## Contact Information

VENT-AXIA, FLEMING WAY, CRAWLEY, RH10 9YX

E-mail: [shaun.macdonald@vent-axia.com](mailto:shaun.macdonald@vent-axia.com) or [vacas@vent-axia.com](mailto:vacas@vent-axia.com)

Mob: 07770-836582

Tel: 01293-526062