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Agrément Certificate

03/4043

Product Sheet 3 Issue 4

ENVIROVENT POSITIVE INPUT VENTILATION SYSTEMS

ENVIROVENT LOFT MOUNTED TWIN SPIGOT POSITIVE INPUT VENTILATION SYSTEMS

This Agrément Certificate Product Sheet⁽¹⁾ relates to EnviroVent Loft Mounted Twin Spigot Positive Input Ventilation Systems, for use as continuously running, low-energy, multiple input ventilation (MIV) system suitable for installation in the loft space of one-, two- and three-storey flats or dwellings.

(1) Hereinafter referred to as 'Certificate'.

The assessment includes

Product factors:

- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review



KEY FACTORS ASSESSED

- Section 1. Mechanical resistance and stability
- Section 2. Safety in case of fire
- Section 3. Hygiene, health and the environment
- Section 4. Safety and accessibility in use
- Section 5. Protection against noise
- Section 6. Energy economy and heat retention
- Section 7. Sustainable use of natural resources
- Section 8. Durability

The BBA has awarded this Certificate to the company named above for the systems described herein. These systems have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Fourth issue: 10 December 2024
Originally certified on 30 May 2013

A handwritten signature in black ink, appearing to read 'Hardy Giesler'.

Hardy Giesler
Chief Executive Officer

This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.

The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357).

Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation.

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that EnviroVent Loft Mounted Twin Spigot Positive Input Ventilation Systems, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations:



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	B1	Means of warning and escape
Comment:		Systems with the steel diffuser can contribute to satisfying this Requirement. See section 2 of this Certificate.
Requirement:	B2(1)	Internal fire spread (linings)
Comment:		The systems can contribute to satisfying this Requirement. See section 2 of this Certificate.
Requirement:	C2(c)	Resistance to moisture
Comment:		The systems can contribute to satisfying this Requirement. See section 3 of this Certificate.
Requirement:	F1(1)	Means of ventilation
Comment:		The systems can contribute to satisfying this Requirement. See sections 3 and 9 of this Certificate.
Requirement:	L1(b)(i)	Conservation of fuel and power
Comment:		The systems can contribute to satisfying this Requirement. See section 6 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The systems are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	25B	Nearly zero-energy requirements for new buildings
Regulation:	26	CO₂ emission rates for new buildings
Regulation:	26A	Primary energy rates for new buildings (applicable to Wales only)
Regulation:	26C	Target primary energy rates for new buildings (applicable to England only)
Regulation:	26C	Energy efficiency rating (applicable to Wales only)
Comment:		The systems can contribute to satisfying these Regulations. See section 6 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Fitness and durability of materials and workmanship
Comment:		The systems are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	9	Building standards - construction
Standard:	2.5	Internal linings
Comment:		The systems can contribute to satisfying this Standard, with reference to clauses 2.5.1 ⁽¹⁾ and 2.5.4 ⁽¹⁾ . See section 2 of this Certificate.

Standard: Comment:	2.9	Escape Systems with the steel diffuser can contribute to satisfying this Standard, with reference to clause 2.9.8 ⁽¹⁾ . See section 2 of this Certificate.
Standard: Comment:	3.14	Ventilation The systems can contribute to satisfying this Standard, with reference to clauses 3.14.1 ⁽¹⁾ , 3.14.2 ⁽¹⁾ and 3.14.6 ⁽¹⁾ . See sections 3 and 9 of this Certificate.
Standard: Comment:	3.15	Condensation The systems can contribute to satisfying this Standard, with reference to clause 3.15.1 ⁽¹⁾ . See section 3 of this Certificate.
Standard: Comment:	6.1(b)(c)	Energy demand The systems can contribute to satisfying this Standard, with reference to clause 6.1.1 ⁽¹⁾ . See section 6 of this Certificate.
Standard: Comment:	6.6(b)	Mechanical ventilation and air conditioning The systems can contribute to satisfying this Standard, with reference to clause 6.6.2 ⁽¹⁾ . See section 6 of this Certificate.
Standard: Comment:	7.1(a)	Statement of sustainability The systems can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard. In addition, the systems, depending on their operating mode, can contribute to a construction meeting a higher level of sustainability as defined in this Standard, with reference to clauses 7.1.4 ⁽¹⁾ , 7.1.6 ⁽¹⁾ and 7.1.7 ⁽¹⁾ . See section 6 of this Certificate.
Regulation: Comment:	12	Building standards - conversion All comments given for the systems under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾ and Schedule 6 ⁽¹⁾ .

(1) Technical Handbook (Domestic).



The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation: Comment:	23(1)(a)(i) (iii)(b)(i)(ii)	Fitness of materials and workmanship The systems are acceptable. See sections 8 and 9 of this Certificate.
Regulation: Comment:	29	Condensation The systems can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation: Comment:	33(c)	Means of escape The systems can contribute to satisfying this Regulation. See section 2 of this Certificate.
Regulation: Comment:	34(a)(b)	Internal fire spread — Linings The systems can contribute to satisfying this Regulation. See section 2 of this Certificate.
Regulation: Comment:	39(b)	Conservation measures The systems can contribute to satisfying this Regulation. See section 6 of this Certificate.

Regulation:	40(2)	Target carbon dioxide emission rate
Regulation:	43(B)	Nearly zero-energy requirements for new buildings
Comment:		The systems can contribute to satisfying these Regulations. See section 6 of this Certificate.
Regulation:	65(1)	Means of ventilation
Comment:		The systems can contribute to satisfying this Regulation. See sections 3 and 9 of this Certificate.

Fulfilment of Requirements

The BBA has judged EnviroVent Loft Mounted Twin Spigot Positive Input Ventilation Systems to be satisfactory for use as described in this Certificate. The systems have been assessed as continuously running, low-energy, MIV systems for use in one-, two- and three-storey flats or dwellings to contribute to providing whole dwelling ventilation and reducing the risk of condensation.

The BBA has not assessed the units in respect of radon or other harmful gas mitigation.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the systems under assessment.

The EnviroVent Loft Mounted Twin Spigot Positive Input Ventilation Systems are continuously running, low-energy multiple input ventilation systems consisting of:

- outer casing of the fan unit
- centrifugal impeller
- filter(s)
- ducting
- ceiling diffuser (acrylonitrile butadiene styrene (ABS) or steel) - the steel diffuser incorporates intumescent materials which provide resistance to the spread of fire.

The systems are as follows (see Figure 1):

- Standard (EVL-TS, EVL-H-TS and EVL-HW-TS) — air drawn from the loft space via wraparound side filters
- Air Source (MIVAS-H and MIVAS-HW) — air drawn from the loft space via the top filter, or from outside when the temperature in the loft rises above 25°C.

Figure 1 Loft-mounted ventilation units



The systems comprise a fan unit mounted in the loft space, together with filter(s) and plastic ducting. Two diffusers (see Figure 3) are mounted in the ceiling. Air is drawn through the filters or from outside by the fan and expelled through the ducting and out of the diffusers into the dwelling (see Figure 2 and Table 1).

All units incorporate a selector button, which allows four settings. The setting required depends on the size, layout and occupancy of the property.

Figure 2 Loft-mounted ventilation unit



Table 1 EnviroVent Loft Mounted Twin Spigot Multiple Input Ventilation Systems – summary

Model code	Model name		Heater	Remote Control ⁽¹⁾
	Standard	Air Source		
EVL-TS	✓			
EVL-H-TS	✓		✓	
EVL-HW-TS	✓		✓	✓
MIVAS-H		✓	✓	
MIVAS-HW		✓	✓	✓

(1) See ancillary items.

Airflow rate automatically increases by about 10% when the loft or external air is > 19°C.

Depending on the system, when the incoming temperature is above 25°C, the sensor either switches the unit off until a fall in temperature re-activates the fan (in the case of the Standard loft system) or switches the unit to draw air from outside until a fall in loft temperature de-activates the bypass and the unit reverts to drawing air from the loft space (in the case of the Air Source system).

The systems use two 100 mm diameter thermoplastic diffusers (see Figure 3) to provide airflow to separate locations within the building.

Two 125 mm steel diffusers are used with Standard units EVL-HW-TS for installations with a floor more than 4.5 m above ground.

The control electronics of the systems have not been assessed by the BBA.

Ancillary Items

The Certificate holder recommends the following ancillary items for use with the systems, but these materials have not been assessed by the BBA and are outside the scope of this Certificate:

- a 500 watt internal heater (see Table 1) – intended to ensure that air supplied to the dwelling does not fall below 10°C
- flexible and rigid ducting
- external grille
- fixing kits to enable the installer to fix the unit in position
- timber battens 50 x 25 mm
- optional remote-control system⁽¹⁾ incorporating five mode settings (including four airflow modes): 1, 2, 3, 4 and an auto mode that enables or disables the auto heater.

(1) The remote-control system uses wireless technology which enables the user to control the main unit functions from anywhere within the property.

Product assessment – key factors

The systems were assessed for the following key factors, and the outcome of the assessments are shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Not applicable.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 Reaction to fire

2.1.1 The thermoplastic diffuser was tested for reaction to fire and the result is given in Table 2

Table 2 Reaction to fire

Component assessed	Assessment method	Requirement	Result ⁽¹⁾
Acrylonitrile Butadiene Styrene (ABS) sheet 3 mm thick	BS 2782-0 : 2004 Method 508A	Value achieved	TP(b)

(1) Report reference 323051, issued by Exova Warrington copies available from the Certificate holder on request.

2.1.2 The Certificate holder has not declared a reaction to fire classification to BS EN 13501-1 : 2018.

2.1.3 On the basis of data assessed, the thermoplastic diffuser can be installed in one- and two-storey dwellings with an upper storey a maximum of 4.5 m above ground level. It cannot be installed in protected stairways or, in Scotland, escape stairs.

2.2 Resistance to fire

2.2.1 The steel diffuser was tested for resistance to fire according to BS EN 1365-2 : 1999 and the results are given in Table 3 of this Certificate.

Table 3 Resistance to fire

Product assessed	Assessment method	Construction	Result ⁽¹⁾
Tenmat Intumescent fire rated valve (80, 125 and 200 mm)	BS EN 1365-2 : 1999	Timber joist floor clad with a double layer of 12.5 mm GTec fire board incorporating 6 valves and a walking surface of 22 mm tongue and groove chipboard	Load bearing capacity – 70 minutes Integrity – 70 minutes Insulation – 70 minutes

(1) Report reference BTC 18074F, issued by The Building Test Centre, copies available from the Certificate holder on request.

2.2.2 The steel diffuser incorporates an intumescent pad which expands to seal the ducting in a fire. This provides a 60 minute fire rating to BS EN 1365-2 : 2014 and may therefore be used in protected stairways (or, in Scotland, escape stairs) in dwellings with one floor more than 4.5 m above ground. In such cases, only one steel diffuser from a single spigot unit can be installed, where fire dampers activated by smoke detection are fitted to ductwork when entering or leaving a protected escape route.

2.2.3 Where protected stairways (or, in Scotland, escape stairs) exist, smoke detectors must be provided by the contractor and must be wired into the fan using the correct connections.

2.2.4 Designers must ensure in the building that in a fire, either:

- (a) the air movement in the building is directed away from escape routes, or
- (b) the system is closed down.



3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Ventilation

The systems were tested for air flow rate to ISO 5801 : 2017 and the results are given in Table 4 of this Certificate.

Table 4 Air flow rate

System assessed	Assessment method	Requirement	Result	
			Fan speed setting	Airflow (l.s ⁻¹)
 Standard loft	EVL-TS, EVL-H-TS, EVL-HW-TS, thermoplastic ceiling diffusers two flexible ducting each with a 90° bend	Values achieved	1	15
			2	20
			3	26
			4	34
	EVL-HW-TS, 100 mm steel ceiling diffusers two flexible ducting each with a 90° bend	Values achieved	1	19
			2	24
			3	29
			4	35
	EVL-HW-TS, 125 mm steel ceiling diffusers two flexible ducting each with a 90° bend	Values achieved	1	24
			2	28
			3	37
			4	45
EVL-HW-TS, 150 mm steel ceiling diffusers two flexible ducting each with a 90° bend	Values achieved	1	25	
		2	33	
		3	41	
		4	49	
 Air Source	MIVAS-H, MIVAS-HW thermoplastic ceiling diffuser, two flexible ducting each with a 90° bend.	Values achieved	1	19
			2	24
			3	30
			4	36

Note:

Airflow rate automatically increases by about 10% when the loft air is > 19°C. Longer ducting, flexible ducting, bends and complex air inlet vents/grilles are available, but will significantly reduce the volume airflow rates.

One blanking plate can reduce volume airflow rate by up to 10% and two plates by up to 20%.

3.2 Condensation risk

On the basis of data assessed, the systems will contribute to eliminating or reducing condensation in dwellings when installed in accordance with the Certificate holder's instructions and this Certificate. The systems supply the building with air drawn from the loft space, or outside, which, normally, will have a moisture content less than that of the occupied part of the building.

4 Safety and accessibility in use

Data were assessed for the following characteristics.

4.1 Electrical safety

4.1.1 For electrical safety, provision of an electrical supply and the connection of the unit to the supply must be carried out by an experienced and competent electrician or domestic installer.

4.1.2 The systems must be connected to a suitable mains electrical supply through an isolating spur. A fuse rated at a maximum of 3A must be used. The provision of the electrical supply must be in accordance with the IET Wiring Regulations.

4.1.3 In England and Wales, all installations must satisfy the requirements of the Building Regulations 2010 (England and Wales) (as amended), Part P *Electrical Safety*. Notification must be made to the Local Authority Building Control in advance of installation. As an alternative to this procedure, electrical connections can be carried out by a person registered with a government-approved Competent Person's Scheme (CPS) for electrical work, using materials suitable for the purpose.

4.1.4 In Scotland, to satisfy the requirements of Mandatory Standard 4.5, with reference to clause 4.5.1⁽¹⁾ of the Building (Scotland) Regulations 2004 (as amended), all installations must be designed, constructed and tested in accordance with the requirements of BS 7671 : 2018.

(1) Technical Handbook (Domestic).


5 Protection against noise

Data were assessed for the following characteristics.

5.1 Self-generated noise

5.1.1 A representation of the systems was tested, in accordance with ISO 13347-3 : 2004 and the results are given in Table 5 of this Certificate.

Table 5 Self-generated noise

System assessed	Assessment method	Requirement	Result		
			Speed setting	Sound power level (L _p dB(A))	
 Standard loft	EVL-H-TS, flexible ducting, two 100 mm diffusers	ISO 13347-3 : 2004	Values achieved	3	25.2
				4	26.3

5.1.2 On the basis of data assessed, the outlet noise depends on the fan setting but should not be considered intrusive.



6 Energy economy and heat retention

Data were assessed for the following characteristics.

6.1 Energy performance

6.1.1 The systems were tested to ISO 5801 : 2017 and the results are given in Table 6 of this Certificate.

Table 6 Specific fan power – Standard system

	System assessed	Assessment method	Requirement	Result		
				Speed setting	Power (W)	Specific fan power (SFP) ($W \cdot l^{-1} \cdot s^{-1}$) ⁽¹⁾
 Standard loft	EVL-TS, EVL-H-TS, EVL-HW-TS Thermoplastic ceiling diffuser, flexible ducting - 90° bend	ISO 5801 : 2017	Values achieved	1	4	0.24
				2	4	0.22
				3	6	0.21
				4	9	0.25
	EVL-HW-TS, 100 mm steel ceiling diffusers two flexible ducting each with a 90° bend	ISO 5801 : 2017	Values achieved	1	3	0.17
				2	4	0.19
				3	7	0.23
				4	11	0.30
	EVL-HW-TS, 100 mm steel ceiling diffusers two flexible ducting each with a 90° bend	ISO 5801 : 2017	Values achieved	1	3	0.14
				2	5	0.16
				3	7	0.19
				4	11	0.25
EVL-HW-TS, 100 mm steel ceiling diffusers two flexible ducting each with a 90° bend	ISO 5801 : 2017	Values achieved	1	3	0.13	
			2	5	0.14	
			3	7	0.18	
			4	11	0.23	
 Air Source	MIVAS-H Thermoplastic ceiling diffuser, flexible ducting - 90° bend	ISO 5801 : 2017	Values achieved	1	3	0.16
				2	4	0.18
				3	7	0.23
				4	11	0.31

(1) Specific fan power S.f.p ($W \cdot l^{-1} \cdot s^{-1}$) = $\frac{\text{Power (W)}}{\text{Airflow (l} \cdot \text{s}^{-1}\text{)}}$

Note:

Longer ducting, flexible ducting, bends and complex air inlet vents/grilles are available, but will significantly reduce the volume airflow rates.

6.1.2 On the basis of data assessed the specific fan power of the system does not exceed the maximum design limit of $0.5 W \cdot l^{-1} \cdot s^{-1}$ specified in the documents supporting the national Building Regulations.

6.1.3 For the purposes of SAP calculations, the energy used by the fan in 'loft mode' may be taken as counterbalanced by the effect of using slightly warmer air from the loft space compared with outside. For other modes, the specific fan power of $0.5 W \cdot l^{-1} \cdot s^{-1}$ must be used.

7 Sustainable use of natural resources

Not applicable.

8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in these systems were assessed.

8.2 Under normal service conditions, the fan unit case and diffusers, will have a life equal to that of the dwelling in which they are installed provided they are designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions,

8.3 The ducting, fan motor and other electrical components may require replacing during the lifetime of the system.

PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors:

9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed by the BBA and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 It is essential that the loft space is adequately ventilated to the outside (for example, as described in BS 5250 : 2021) and that any ceiling penetrations (for example, pipes and loft hatches) are well sealed.

9.1.3 Designers may choose a twin spigot positive input ventilation system over a single spigot system where the following conditions apply:

- If a single diffuser is too large to install in the space available within the ceiling of the hallway or landing.
- If a small hallway has an irregular shape — a twin spigot may distribute the air more evenly.
- If air is required to ventilate a remote zone, such as a bedroom.

9.1.4 The thermoplastic diffuser is suitable for use in one- and two-storey dwellings with no floor more than 4.5 m above ground level.

9.1.5 The steel diffuser is for use in dwellings with one floor more than 4.5 m above ground level.

9.1.6 The first diffuser must be mounted in the ceiling of the upper landing as near as possible to the centre, as far as possible from all doors and, preferably, above the stairwell.

9.1.7 The use of positive input ventilation systems is detailed in BRE Report BRE 12/00.

9.1.8 It is essential that the ceiling construction minimises any circulation of air from the dwelling to the roof space.

9.1.9 Where protected stairways (or, in Scotland, escape stairs) exist, smoke detectors must be provided by the contractor and wired into the fan unit using the correct connections to ensure that smoke and fire is not transferred through the building.

9.1.10 Specifiers must ensure that in the overall design:

- (a) all rooms have an appropriately sized ventilation opening (for example, an opening window) for rapid (purge) ventilation
- (b) any kitchen, bathroom, utility room or sanitary accommodation is directly accessible from the central hallway or landing into which the unit delivers air
- (c) internal doors are not tight fitting; an undercut of 10 mm above the floor finish should be sufficient (standard methods of construction should provide sufficient leakage)
- (d) the dwelling volume is $> 120 \text{ m}^3$ and as-built⁽¹⁾ airtightness is $> 3 \text{ m}^3 (\text{h m}^2)^{-1}$ at 50 Pa for two storeys
- (e) the dwelling volume is $> 120 \text{ m}^3$ and as-built⁽¹⁾ airtightness is $> 5 \text{ m}^3 (\text{h m}^2)^{-1}$ at 50 Pa for three storeys.

(1) A higher design target will be required.

9.1.11 Where a design condition specified in section 9.1.10 is not met, additional measures must be considered, as appropriate. For example, wet rooms with no openable window must have continuous, low-level-rate mechanical extract ventilation with a boost facility. Remote wet rooms with openable windows must have air transfer grilles or continuous, low-level-rate mechanical extract ventilation with a boost facility or (for toilets) only trickle vents. Small and airtight dwellings [see section 9.1.10(d)] must include trickle ventilators.

9.1.12 For detailed guidance, designers must refer to the documents supporting the national Building Regulations.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions.

9.2.3 The diffuser (see Figure 3) must not be allowed to discharge air if there is an obstruction (such as a wall or smoke alarm) within one metre of the sides of the diffuser.

Figure 3 Thermoplastic and steel ceiling diffusers



9.2.4 A hole for each diffuser is cut in the ceiling (using the template supplied), between two convenient joists. The distance from the loft-mounted unit can be used to balance/favour airflow. If equal air supply is required, the diffusers are positioned equidistant from the unit. If more air supply is required, for example in the hallway, then the unit is positioned closer to the hallway.

9.2.5 The unit should be positioned on 50 by 25 mm timber battens (not supplied) laid across the joists or raised platform if the loft insulation is thicker than the joists, to ensure the flexible ducting between the unit and the diffusers is not impeded.

9.2.6 The battens are fastened with screws to the joist through the rubber mounts and washer provided. The trunking is fitted to the unit spigots using the tape provided.

9.2.7 The flexible ducting is connected to the twin spigot and pushed through the holes in the ceiling and connected to the neck of the diffusers, without stretching, using the tape provided. After ensuring the diffusers are aligned correctly with the walls of the hallway, the diffusers are fixed in position using plasterboard plugs and screws provided.

9.2.8 The flexible ducting is connected to the neck of the diffuser, as taut as possible, using the tape provided, and the ducting is pushed through the hole in the ceiling. After ensuring the diffuser is aligned correctly within the walls of the hallway, the diffuser is fixed in position using the plasterboard plugs⁽¹⁾ and screws⁽¹⁾ provided.

(1) Outside the scope of this Certificate.

9.2.9 For systems taking air from outside (MIVAS-H and MIVAS-HW), the external grille can be located in the gable wall or roof.

9.2.10 The selector button on the fan unit should be set to the required setting, depending on the size, occupancy and layout of the property and the level of moisture being produced in the property.

Figure 4 Typical installation of Standard units



Figure 5 Typical installation of Air Source units



9.3 Workmanship

9.3.1 Practicability of installation was assessed on the basis of Certificate holder's information. To achieve the performance described in this Certificate, installation of the systems must be carried out by a competent general builder or a contractor experienced with these types of systems.

9.3.2 The provision of an electrical supply and the connection of the unit to the supply must be carried out only by a suitably experienced and competent electrician.

9.4 Maintenance and repair

9.4.1 Ongoing satisfactory performance of the systems in use requires that they are suitably maintained. The guidance provided by the Certificate holder was assessed by the BBA and found to be appropriate and adequate.

9.4.2 The following requirements apply in order to satisfy the performance assessed in this Certificate:

9.4.3 Under normal operating conditions, the filters must be replaced every five years.

9.4.4 The intumescent closure elements of the steel diffuser must be inspected annually for mechanical damage or blockage. The elements must not be exposed to water.

9.4.5 The ducting will not require maintenance unless it is subject to impact damage.

9.4.6 The motor is fitted with a sealed-for-life bearing that does not require maintenance or lubrication.

9.4.7 Reasonable provision must be made to ensure that the owner/occupier of the building is provided with sufficient information about the installed system so that it can be operated and maintained.

10 Manufacture

10.1 The production processes for the systems have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors.

10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.3 The quality control procedures and product testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

† 10.2 The BBA has undertaken to review the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

11 Delivery and site handling

11.1 The Certificate holder stated that the systems are delivered to site in packaging bearing the system name, the Certificate holder's name, batch number, health and safety information, weight of contents in kilograms and the BBA logo incorporating the number of this Certificate

11.2 Delivery and site handling must be performed in accordance with the Certificate holder's instructions and this Certificate, including:

11.2.1 The units are supplied in cardboard cartons and include the fan unit, ducting, diffusers, fixing kit, installation and user guide.

11.2.2 Boxes must be stored inside and kept dry.

Supporting information in this Annex is relevant to the systems but has not formed part of the material assessed for the Certificate.

Construction (Design and Management) Regulations 2015

Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

The Electrical Equipment (Safety) Regulations 2016

The Electrical Equipment (Safety) Regulations 2016 relate to the making available on the market electrical equipment designed for use within certain voltage limits. The BBA has not assessed the systems for compliance with these Regulations.

The Electromagnetic Compatibility Regulations 2016

The Electromagnetic Compatibility Regulations 2016 relate to electromagnetic compatibility. The BBA has not assessed the systems for compliance with these Regulations.

UKCA marking

The Certificate holder has taken the responsibility of UKCA marking the systems in accordance with:

Electromagnetic Compatibility Regulations 2016

Electrical Equipment (Safety) Regulations 2016

The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

CE marking

The Certificate holder has taken the responsibility of CE marking the systems in accordance with:

Low Voltage Directive 2014/35/EU

EMC Directive 2014/30/EU

Commission Regulations (EU) No 1253/2014 and 1254/2014 implementing ErP Directive 2009/125/EC with regard to eco-design requirements for ventilation units.

RoHS Directive 2011/65/EU.

Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by The British Assessment Bureau (Certificate 185037).

Bibliography

- BRE IP/94 : 1994 *Passive stack ventilation systems: design and installation*
- BS 2782-0 : 2004 *Methods of testing plastics – Part 0 : Introduction Method 508A Rate of burning, laboratory method*
- BS 5250 : 2021 *Management of moisture in Buildings – Code of practice*
- BS 7671 : 2018 + A1 : 2020 *Requirements for electrical installations – IET Wiring Regulations*
- BS EN 1365-2 : 1999 *Fire resistance tests for loadbearing elements – Floors and roofs*
BS EN 1365-2 : 2014 *Fire resistance tests for loadbearing elements – Floors and roofs*
- BS EN 13501-1 : 2018 *Fire classification of construction products and building elements – Classification using data from reaction to fire tests*
- BS EN ISO 9001 : 2015 *Quality management systems – Requirements*
- Building Standards Supporting Guidance Domestic Ventilation – 2nd Edition*
- Domestic Ventilation Compliance Guide – 2013 Edition*
- IEC 60335-1 : 2010 incl Corr. 1 : 2010 and Corr. 2 : 2011 + A1 : 2013 *Household and similar electrical appliances*
IEC 60335-2-80 : 2002 + A1 : 2004 + A2 : 2008 *Household and similar electrical appliances – Safety – Particular requirements for fans*
- ISO 5801 : 2017 – *Fans – Performance testing using standardized airways*
- ISO 13347-3 : 2004 + A1 : 2010 *Industrial fans – Determination of fan sound power levels under standardized laboratory conditions – Envelope surface methods.*

Conditions of Certificate

Conditions

1 This Certificate:

- relates only to the product that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- has to be read, considered and used as a whole document – it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- and any matter arising out of or in connection with it or its subject matter (including non-contractual disputes or claims) is governed by and construed in accordance with the law of England and Wales.
- the courts of England and Wales shall have exclusive jurisdiction to settle any matter arising out of or in connection with this Certificate or its subject matter (including non-contractual disputes or claims).

2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

3 This Certificate will be displayed on the BBA website, and the Certificate Holder is entitled to use the Certificate and Certificate logo, provided that the product and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

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- actual installations of the product, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to UKCA marking and CE marking.

6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product which is contained or referred to in this Certificate is the minimum required to be met when the product is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.

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