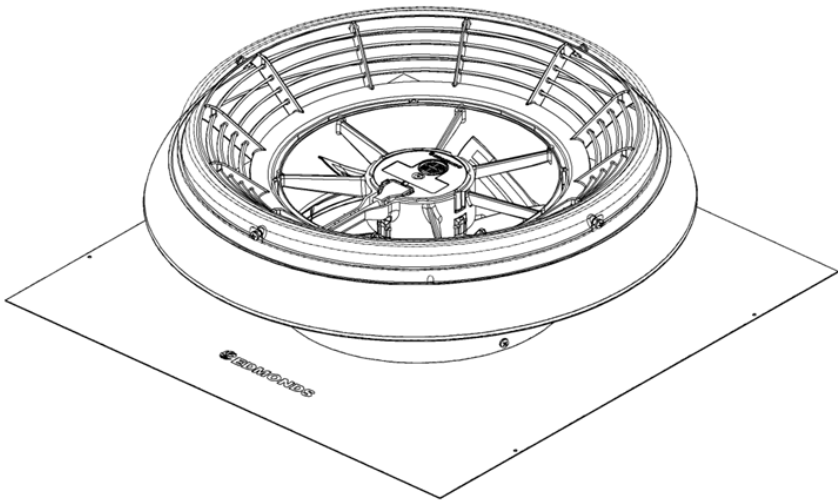


AiroMatic®

Product Manual



 **Bradford**[™]
Ventilation

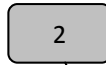
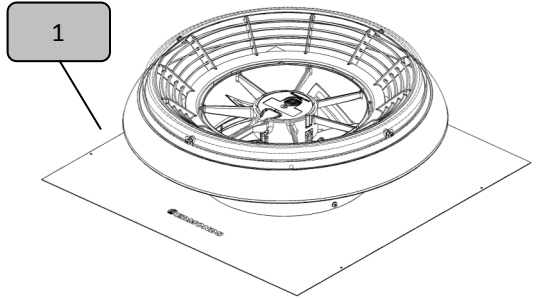
CSR

Item Checklist & Additional Tools Required For Installation

Included Parts:

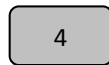
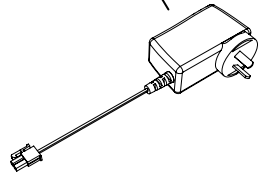
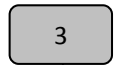
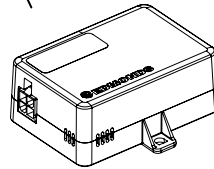
QTY:

1	AiroMatic	(1)
2	Smart Box	(1)
3	Power Supply	(1)
4	Fixing Strap	(1)
5	Smart Box Fixing Screws 6Gx13mm	(2)
6	Product Manual	(1)
7	Warranty Document	(1)



Additional Parts & Tools Required (Not Supplied)

Soft Rubber Hammer
Roof Sealant & Caulking Gun
Cable Ties
Cordless Drill & Screwdriver
Marker Pen
Foil Tape (Sarked Roofs Only)
Knife (Sarked Roofs Only)
Tek Screws or Sealed Rivets x 10 (Metal Roof Only)
Nibbler or Similar Cutting tool (Metal Roof Only)



WARNING: Do not proceed with the installation until you have read the entire instructions, including these warnings.

Install at your own risk

The installation of this product may be dangerous and includes the potential of death, personal injury or property damage. Please be aware of the following before installing this product.

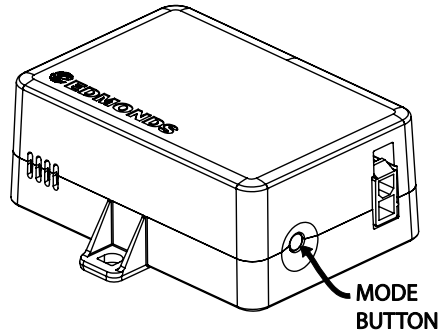
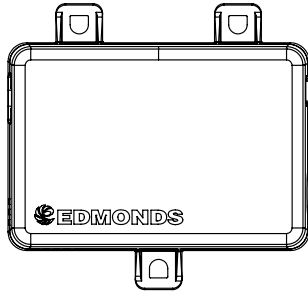
- Installation requires climbing and working at heights. Use caution to minimise risks by:
 - Clearing the area below the workspace
 - Avoid walking on surfaces that are slippery, wet or dusty
 - Using appropriate equipment (tie off ladders etc.)
- There are sharp edges on the flashing, Take care and wear appropriate personal protective equipment when handling and installing products
- DO NOT attempt to install if you are uncomfortable with working at heights or on sloping roof surfaces

Important Notes

- The Airomatic is designed for general household ventilation only. DO NOT use to exhaust hazardous or explosive materials and vapours
- The Airomatic has an unguarded fan assembly. DO NOT use in locations readily accessible to people or animals. The fan is intended for use facing an unoccupied space only.
- Always use the provided power supply and Smart Box to power the fan. Failure to do so can damage the product.
- Power supply and Smart Box are for dry indoor use only. Ensure that the power supply and Smart Box are not mounted on a damp surface or in a location where they could be exposed to moisture or liquid water. Fasten to the structure with screws or cable ties as required.
- Only use one Airomatic per Smart Box and power supply

Installation—Speed Control Mode

SMART BOX



DEFAULT AIROMATIC PROGRAMMING

All Airomatic units are default factory programmed to operate at a 30% power fixed speed ventilation mode to meet the Bradford NCC2019 Performance Solution. This mode runs continuously on a low power setting day and night to provide ventilation of heat and moisture in the roof cavity. For more information on how many Airomatics and eave vents are required to satisfy the National Construction Code via Performance Solution please see Page 5 of this Product Manual.

If the Airomatic is not required for new-build NCC2019 compliance, Bradford Air iQ smart box can be activated by holding down the 'Mode Button' for at least 5 seconds.

Important Note The default setting of 30% motor speed must not be changed if using the Airomatic to meet the National Construction Code. **If this setting is changed, it cannot be reactivated.**

Once the Bradford Air iQ Smart Box is activated the order of modes are: LO. MED. HI, AUTO. When engaging AUTO mode the fan will activate to full speed and then slow down to a stop to provide feedback that AUTO has been selected. Once this startup procedure is complete the fan will analyse the environment and run at the appropriate speed.

MODES: **LO** - Continuous operation, low speed, low flow rate, very quiet, very low power consumption.

MED - Continuous operation, moderate speed, moderate flow rate.

HI - Continuous operation, high speed, high flow rate.

AUTO - Variable speed. The Airomatic will automatically increase or decrease the speed of the fan depending on roof cavity temperature (30 °C - 45 °C) and roof cavity relative humidity (65%rH–80%rH).



In AUTO mode the Airomatic will respond to the temperature and humidity conditions stated above. When the conditions are deemed suitable for no ventilation the unit will enter power saving mode and the motor will not run.

Bradford NCC2019 Performance Solution

The Bradford NCC2019 Performance Solution provides an alternate method to comply with the Deemed-To-Satisfy roof ventilation requirements listed in NCC2019 Volume 1 Clause F6.4 and NCC2019 Volume 2 Clause 3.8.7.4

Please note, compliance with the NCC2019 is only mandatory for new build residential homes, and may not apply to reroof, or installation onto existing homes.

How To Comply with NCC2019 Performance Solution

To comply, the installation of both AiroMatic and Metal Eave vents are required. The number of AiroMatics and Metal Eave vents required is determined by the ceiling size directly under the roof space of the home.

General requirements for implementation of this performance solution

- Calculate the area (m²) of ceiling directly under the roof space;
- Install Airomatic(s) running at 30% power[^] according to the table below
- Install Bradford metal eave vents according to the table below
Note: Bradford metal eave vents cannot be substituted for any other type of eave vent including poly eave vents due to the specific openness factor required.
- Distribute the metal eave vents evenly as per NCC2019

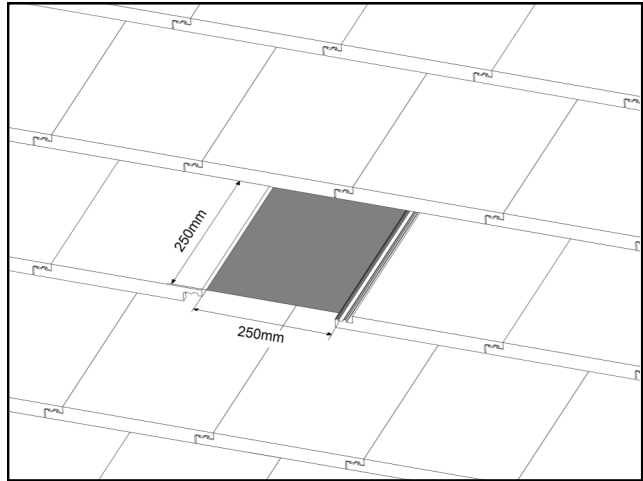
[^]All AiroMatics are default set to a continuous 30% fixed speed. To comply with NCC2019 Performance Solution this setting must not be changed. See Page 4 for more details.

	Total Ceiling Area * (m ²)	Number of AiroMatics at Default Speed required	Number of Bradford Metal Eave Vents required
Roof Pitch > 22°	< 203	1	4
	< 407	2	6
Roof Pitch ≤ 22°	< 127	1	4
	< 254	2	6
	< 381	3	8

STEP 1

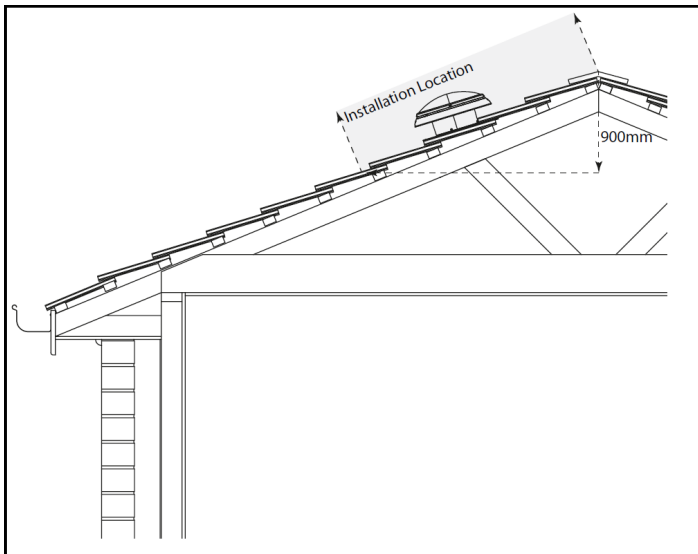
Remove one tile from the third row down from ridge cap.

If the gap produced is less than a 250mm square opening then either push the tiles above upwards or cut the tiles to provide clearance



The removal of a tile higher than this may damage the integrity of the ridge tile pointing and is NOT recommended

Note If installing in accordance with the NCC2019 Performance Solution, the Airomatic must be located not more than 900mm below the ridge or the highest point of the roof space when measured vertically.

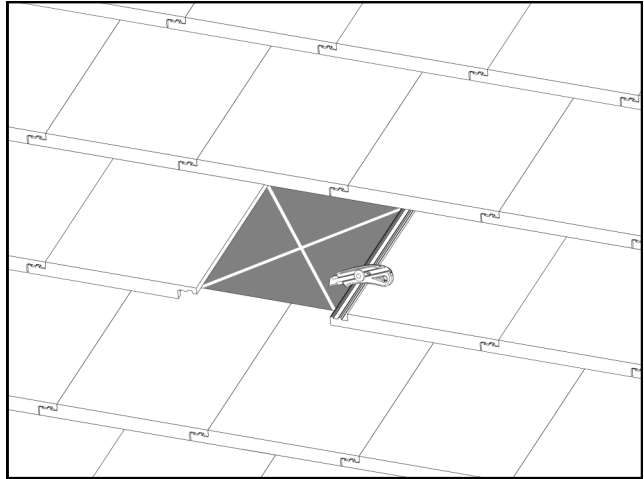


Installation—Tiled Roof

STEP 2

If the roof is 'sarked', Cut sarking in a cross folding back the corners outwards to give a 250mm square opening.

Tap the corners down with foil tape to prevent them from fouling the fan

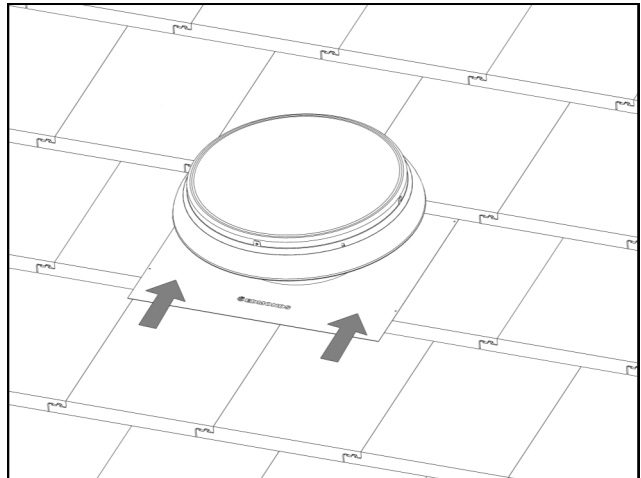


STEP 3

Taking the Airomatic unit slide the flashing under the tiles above the opening.

Ensure the motor cable is on the low side for correct orientation.

Centre the unit over the opening.

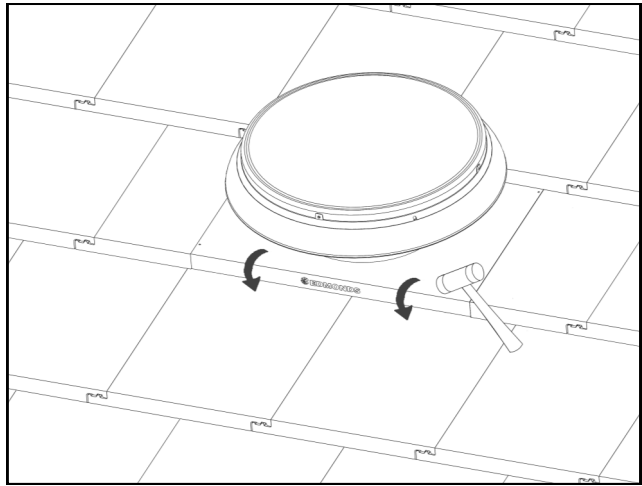


Make sure that the cable is through the opening and not caught under the flashing.

STEP 4

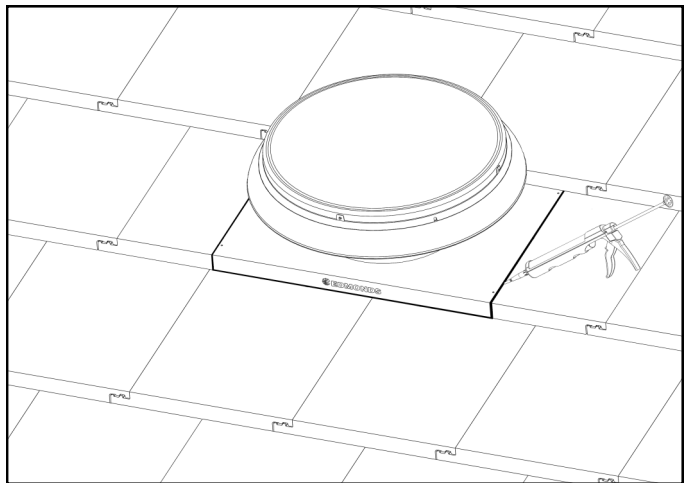
Fold down the bottom edge of the flashing to seal against the lower tiles.

Using a soft hammer if required, carefully dress the front and sides of the flashing into the shape of the tiles.



STEP 5

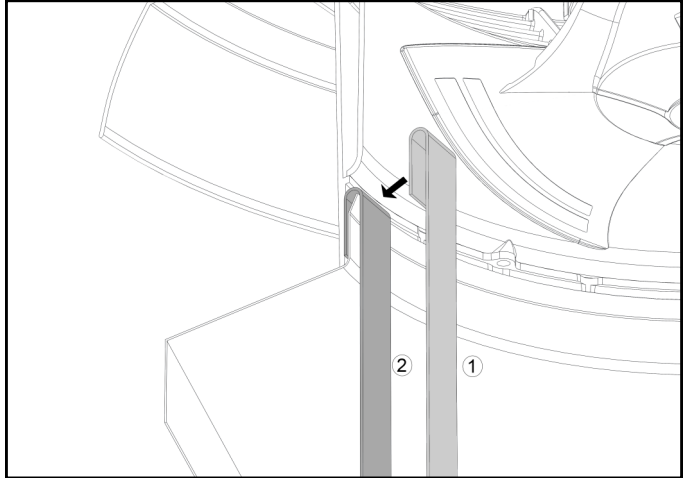
To ensure a weatherproof installation, apply a bead of silicone under the side and front edges of the flashing.



STEP 6

From within the roof space, fit the fixing strap by hooking it between the flashing up stand and the outer housing.

The fixing strap should be hooked near to the cable exit.



Ensure the fixing strap is seated firmly and that it DOES NOT interfere with the fan

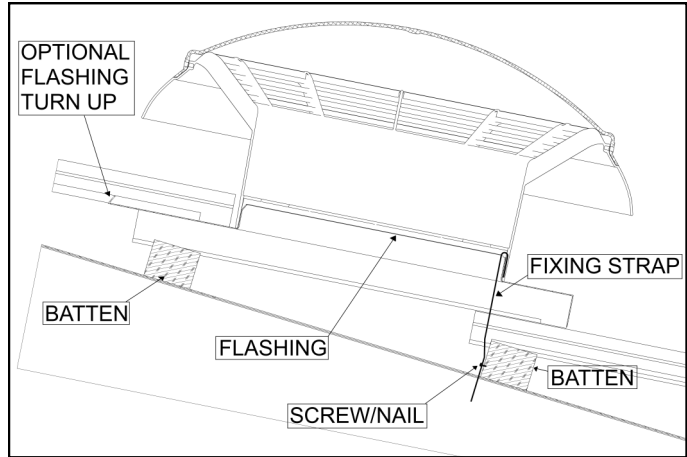
Installation—Tiled Roof

STEP 7

Take the fixing strap and screw/nail (not supplied) it to the bottom batten

The strap can be deformed as required to achieve this.

For additional weather proofing turn the rear edge of the flashing up so that it seals against the tiles above.



Turning the rear of the flashing upwards allows it to act as a gutter to prevent any wind driven water from entering the roof space.

Proceed to 'Electrical Installation Step A' 

Important Note If using the Airomatic to comply with NCC2019 Performance Solution additional Airomatics and eave vents may be required depending on the ceiling area of the home. For more information see Page 5 of this Product Manual.

Installing an eave vent

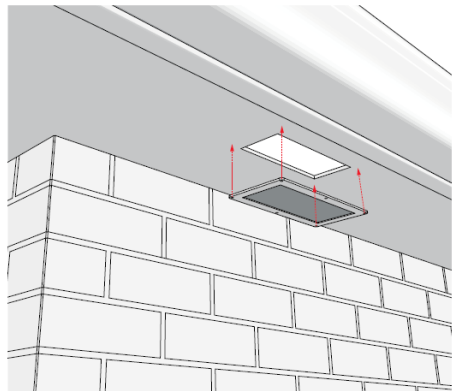
Mark a 185mm x 385mm rectangle on the eave lining

Drill holes to mark out the rectangle

Use a hacksaw to cut out the rectangle

Attach the vent using the screw provided

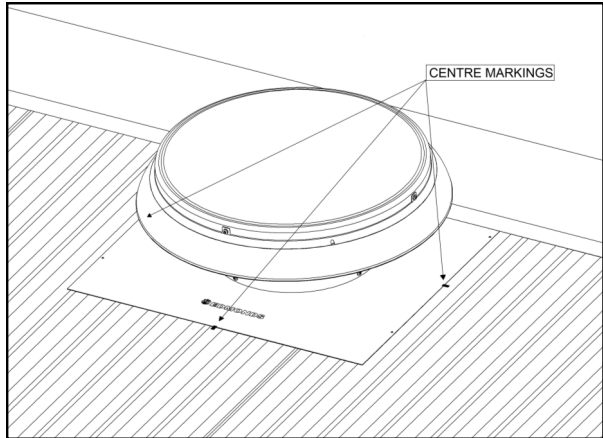
Eave vents should be evenly distributed around the perimeter of the home



Installation—Metal Roof

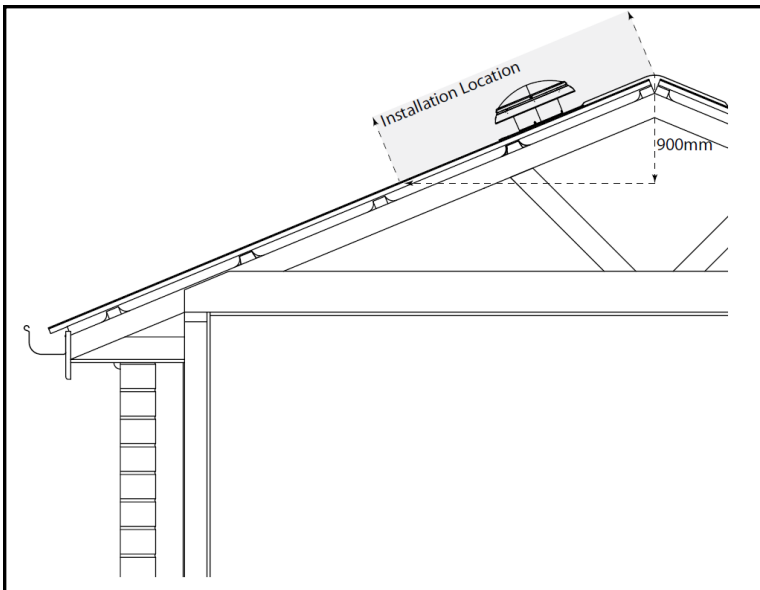
STEP 1

Position the AiroMatic and slip the top edge of the flashing up under the ridge capping. Mark the centre of each side to determine where the centre of the vent will be.



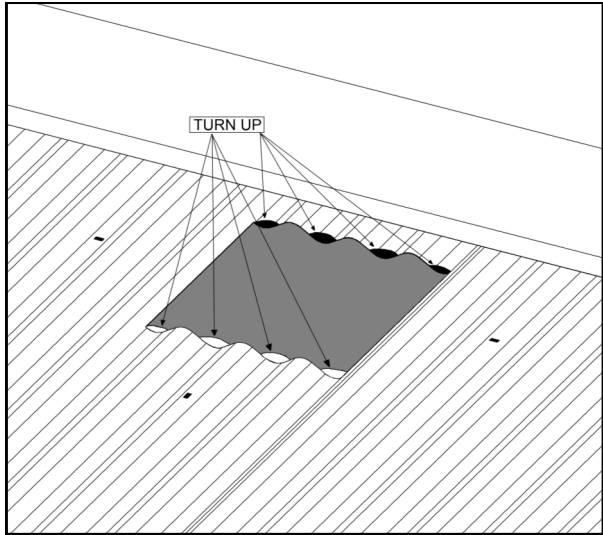
Ensure the flashing covers the corrugations or ribs equally and that it is located between the roof joists.

Note If installing in accordance with the NCC 2019 Performance Solution, the AiroMatic must be located not more than 900mm below the ridge or the highest point of the roof space when measured vertically.



STEP 2

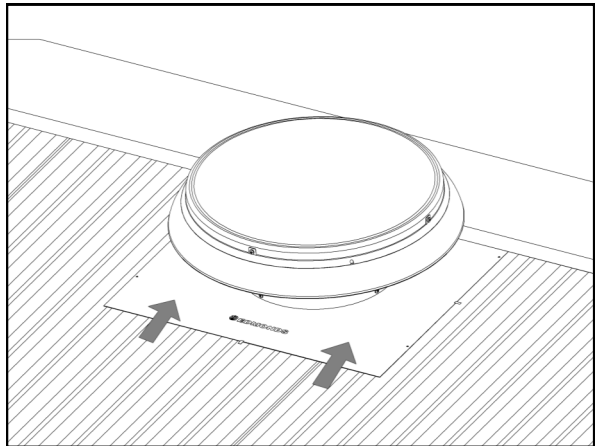
Remove the vent and using the marks to determine the centre cut a 250mm square opening. Turn up corrugations or pans around the opening



STEP 3

Place the vent back on the roof by slipping the top of the flashing under the ridge capping.

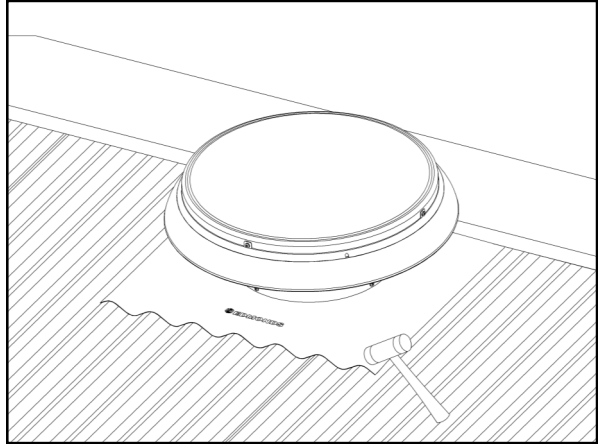
Line up the centre marks made earlier to ensure that the vent is centred on the opening



Ensure that the cable is through the opening and not caught under the flashing.

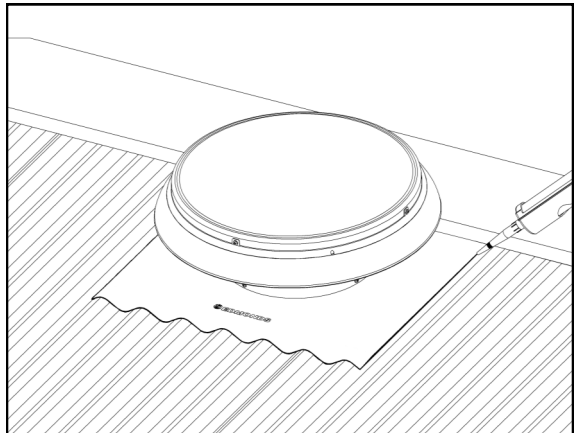
STEP 4

Using a soft hammer, carefully dress the flashing into the corrugations of the metal sheet profile.



STEP 5

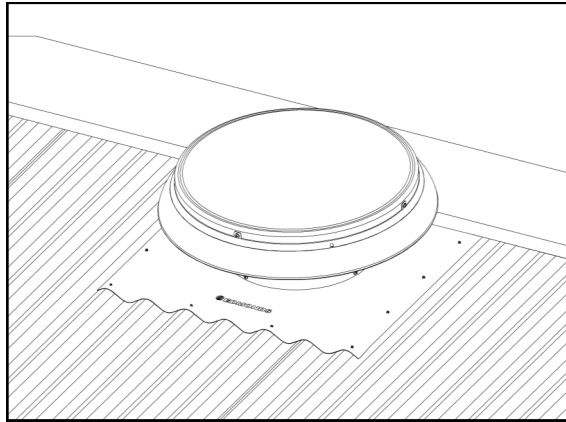
Lift the flashing and run a bead of silicone along the underside of the flashing, following the edge along the three exposed sides.



The fixing strap is not required for metal roof installations and can be discarded

STEP 6

Secure the flashing to the metal sheeting with Tek screws or sealed rivets along the 3 exposed edges of the flashing. Approximately 10 required (not supplied)



Proceed to 'Electrical Installation' Step A

Important Note If using the Airomatic to comply with NCC 2019 Performance Solution additional Airomatics and eave vents may be required depending on the ceiling area of the home. For more information on the number of Airomatics and eave vents required see Page 5 of this Product Manual.

Installing an eave vent

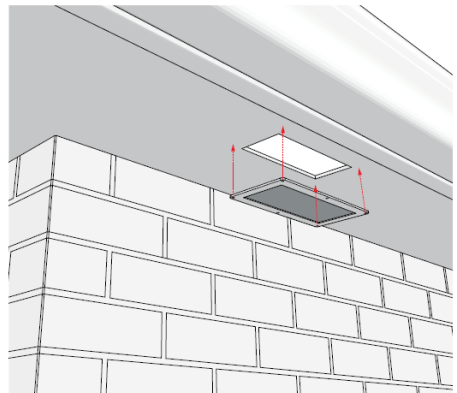
Mark a 185mm x 385mm rectangle on the eave lining

Drill holes to mark out the rectangle

Use a hacksaw to cut out the rectangle

Attach the vent using the screw provided

Eave vents should be evenly distributed around the perimeter of the home



Installation—Electrical Connection

STEP A

Connect the lead from the AiroMatic fan unit to the Smart Box

STEP B

Connect the power supply lead to the Smart Box

STEP C

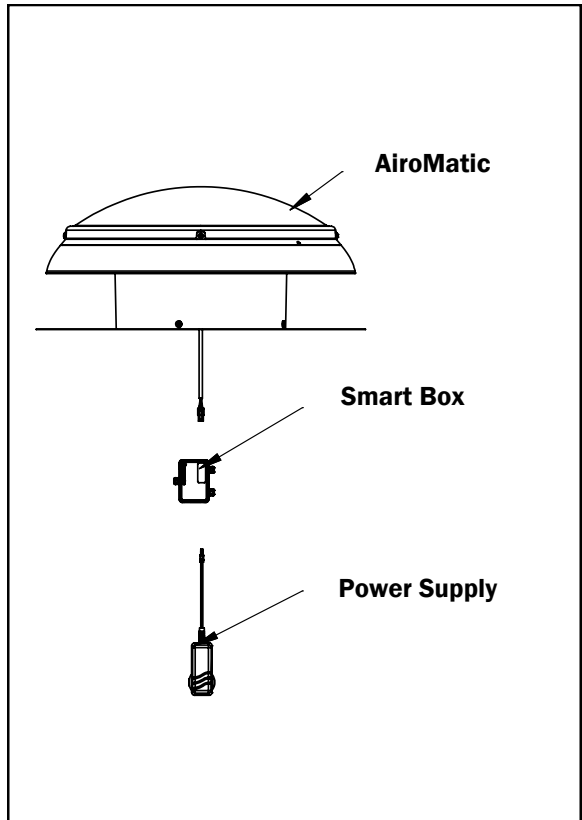
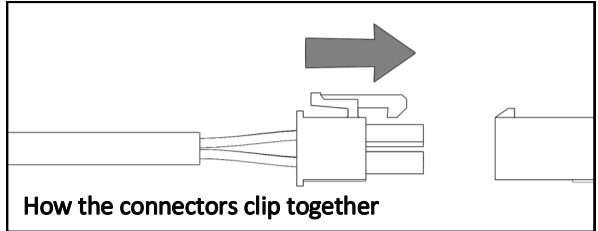
Connect the power supply to a mains socket. Turn on and check fan runs freely

STEP D

Using either the supplied screws or cable ties, mount the Smart Box on a suitable piece of structure that does not place it near direct sunlight or the airflow of the AiroMatic™

STEP E

Set the control mode by pressing the button on the side of the Smart Box. Please note the default 30% fixed speed cannot be reactivated if changed.



Ensure the power supply is not in contact with damp or wet areas

Warning: If using AiroMatic to comply with NCC Performance Solution, be careful not to accidentally press the 'Mode Button' on the smart box

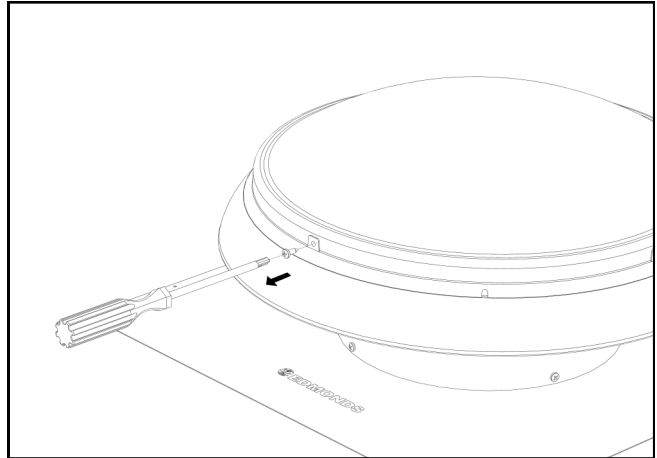
(Optional) Painting the Airomatic

WARNING: Do not disassemble the Airomatic unless you are confident that you understand the process. Damage caused by incorrect disassembly and reassembly can void the product warranty.

STEP 1

Remove the 4 screws securing the dome.

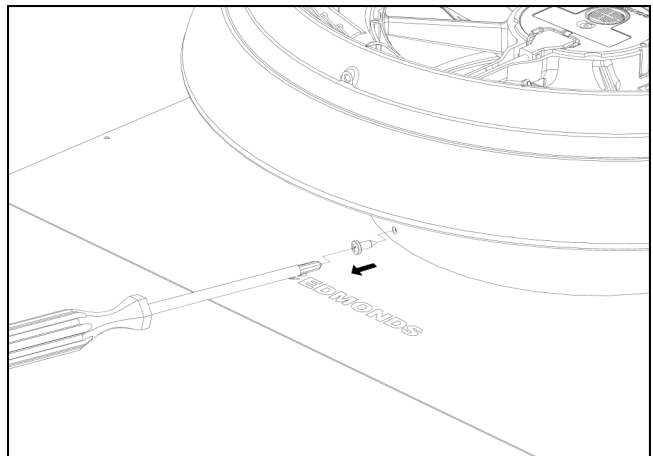
Lift the dome off the Airomatic and place on a soft surface to prevent marks or scratches.



STEP 2

Remove the 4 screws securing the flashing to the Airomatic housing.

Remove flashing from Airomatic, being careful not to damage the cable

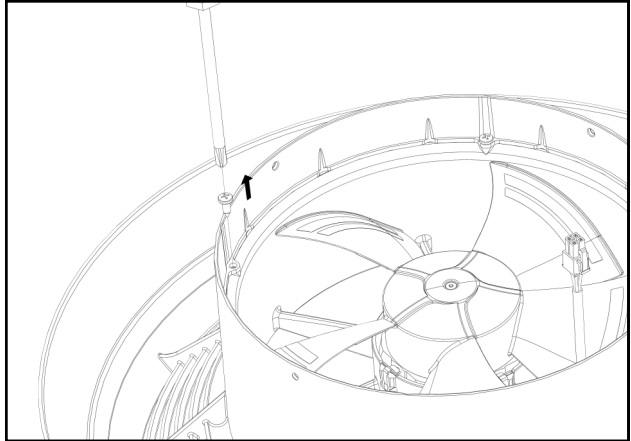


Painting the Airomatic

STEP 3

Turn the Airomatic over and whilst supporting the fan housing remove the 4 screws securing it.

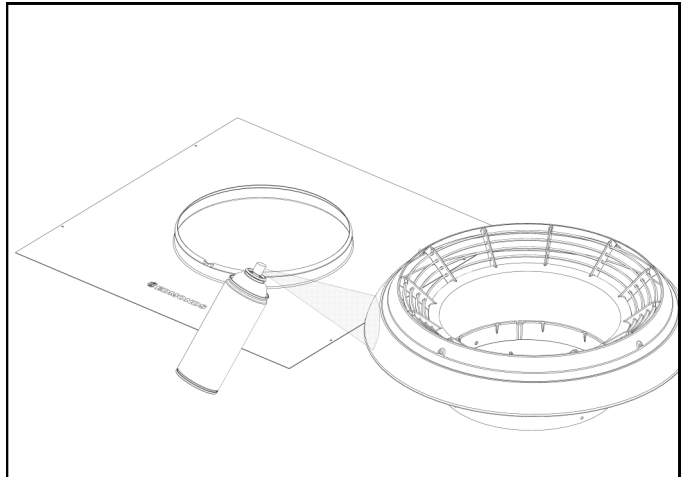
Be careful to prevent the housing from dropping away as the screws are removed



The plastic used for the Airomatic housing is suitable for painting with standard spray paints without priming. The surface must be clean before painting.

STEP 4

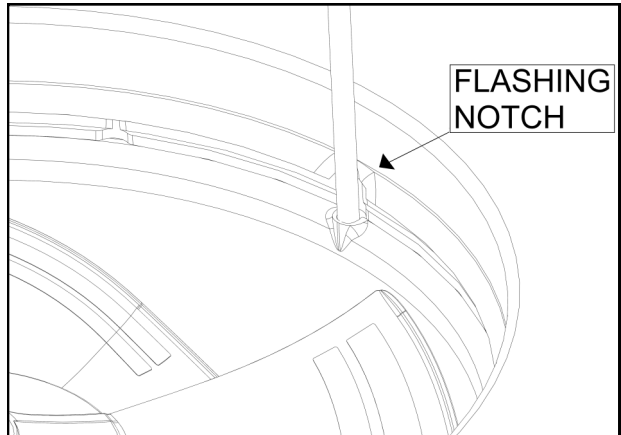
Paint Airomatic housing and flashing and allow to dry.



STEPS 5,6,7

Reassemble the Airomatic using the reverse of the steps used to disassemble.

When attaching the flashing make sure to align the notch in the flashing up stand with the cable exit



All screws should be hand tightened until snug. Do not over tighten screws as this may cause them to strip out of the plastic

STEP 8

Post assembly check.

- Check that the cable is sitting in the notch of the flashing.
- Check that the fan is orientated correctly with the motor/fan unit in exhaust configuration
- Check all screws are in place
- Check that the fan blades rotate freely and are not impeded

Technical Data

Material:

Dome:	Plastic (PMMA – Clear, High Impact)
Housing:	Plastic (ASA)
Flashing:	Aluminium (Soft)
Fan & Motor Housing:	Plastic (PP-TD20)
Fan Impeller:	Plastic (PA6-GF30)

Weight:

2.7 kg

Electrical:

Power Supply

Type:	Electronic Switching Mode
Input:	100-240VAC, 1~, 50/60Hz, 2A
Output:	24 VDC

<i>Fan Motor:</i>	Electronic Commutating (EC) motor
Input Voltage:	24 VDC
Protection Class:	IP54

Speed Control

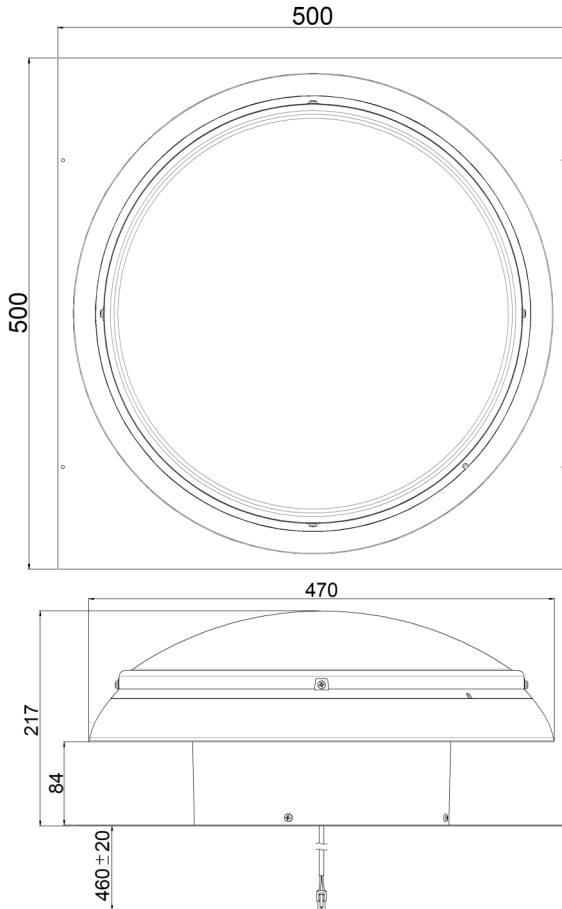
Type:	Temperature & Humidity Sensing Electronic Variable Smart Box
Input Voltage:	24 VDC
Fixed Speed Operation:	30% Continuous fixed speed operation*

Variable Speed Options:	Three alternate speeds (LO, MED & HI), and an additional variable speed response (AUTO) relative to environmental conditions. Manually selectable via button. - See tech data sheet for additional information.
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Performance Data & Product Dimensions

Speed	Sound Pressure Level (SPL) L_A @ $p_{sF}=0$ [dB(A)]	Max. running power consumption [W]	Flow rate q_v @ $p_{sF}=0$ [m ³ /hr]
LO	35.4	4	291
Default	40.3	6.45	350
MED	45.1	12	434
HI	52.9	30	647

NOTE—Sound pressure level measured 1m from fan inlet



FAQ & Troubleshooting

Q: Do I need an electrician to install the Airomatic?

A: If you have an available power point that can be reached then no electrician is required. If a power point is unavailable then an electrician will be required to install one.

Q: Can I wire it directly into the mains power?

A: No, you must use the supplied power supply and Smart Box for the Airomatic to work correctly. Failure to do so may damage the product.

Q: Can I duct the Airomatic?

A: Yes, however a suitable collar or adaptor would be required to attach the ducting (Not Supplied). This must allow the cable of the Airomatic to be passed through.

Q: Can I paint the Airomatic?

A: Yes, standard spray paint can be used to paint the Airomatic. No plastic primer is required, however the surface must be clean before paint application. Do not get any paint on the motor/fan module. The Airomatic can be disassembled to facilitate easier painting. Instructions for disassembly can be seen on pages 13-15 of this manual.

Troubleshooting	
Problem	Possible Actions
Motor / Fan Not Running	The Smart Box may be in AUTO Mode and may have determined that no ventilation is necessary. Change to LO to confirm Smart Box is functioning correctly
	Check all connections are secure
	Check power supply is plugged in
	Check power point is turned on
Water leaks when raining	Check installation integrity
	Reseal around edge of flashing

Contact Details

General Enquiries and Support

PH: 1300 858 674

Email: Sales@csr.com.au

Technical Ventilation Enquiries

PH: +61 2 8824 0444

Please fill out for your reference in case support is required	
Serial Number	Purchase Date
_____	___ / ___ / ___

Feb 2020

I-040-B

Bradford | business division of CSR Building Products Limited ABN 55 008 631 356 10
Stanton Road, Seven Hills NSW 2147 Australia | www.bradfordventilation.com.au



bradfordventilation.com.au

