

# Maestro BAL® Bushfire Rated Powered Roof Ventilator

Refer to product table below for applicable product codes covered by this document

Issue **C**

## Product Type & Application

Maestro BAL is a bushfire rated powered roof ventilator with low voltage electronic commutating motor that provides exceptional energy efficiency, high flow rate and low operating noise. The product is specifically designed to meet the requirements of BAL12.5 to BAL40 when tested in accordance with AS3959-2018.

## Compliance with the NCC

When correctly specified and installed this powered roof ventilator;

- Meets the requirement of the NCC2019 Volume 1 Part G5 - Construction in Bushfire Prone Areas
- Meets the requirement of the NCC2019 Volume 2 Part 3.10.5 - Construction in Bushfire Prone Areas
- Meets the requirement of the NCC2019 Ventilation of Roof Spaces Volume 1 Clause F6.4 and Volume 2 Clause 3.8.7.4 as a performance solution.

## Evidence of Suitability

- CSIRO BAL Assessment Report FCO-3032 Rev G
- Cardno Performance Solution Report 80820109
- CSR Lab Report ETR00075 – AS4740 Natural Ventilators Classification and Performance
- CSR Lab Report ETR00067 – ISO5801 Industrial Fans – Performance testing using standardized airways
- CSR Lab Report ETR00068 – ISO5801 Industrial Fans – Performance testing using standardized airways

## Conditions of Storage, Use & Maintenance

- Store in the original packaging in a cool and dry area.
- The electronics and electrical components are for indoors installation only and should not come into contact with water.
- Do not attempt to repair – contact Bradford Ventilation.

Refer to the product warranty at [bradfordventilation.com.au](http://bradfordventilation.com.au) for more information.

## Limitations of Use

- The Maestro BAL is designed for Class 1 and Class 10 building roof ventilation in non-cyclonic regions.
- Do not use for exhausting hazardous or explosive materials and vapour.
- This product is not suitable for BAL-FZ rated areas.

## Specific Design or Installation Instructions

- This product compliant with the requirements of AS3959-2018 up to BAL40 when installed as per the installation guide in the Maestro BAL product manual.
- This product must be installed in a dry location and sealed against water ingress.
- Replacement outside air must be provided via evenly distributed openings such as eave vents positioned to facilitate crossflow ventilation and help the powered ventilator to work more effectively and efficiently.
- Electrical connection requires 240VAC GPO for operation.
- Isolate power before installation.
- The power supply and speed controller are for dry indoor use only. Ensure that the power supply and speed controller are not left on damp surfaces - fasten to the internal structure with screws or cable ties as required.
- Only use one powered ventilator per speed controller and power supply as supplied by Bradford Ventilation.
- The Maestro has an unguarded fan assembly and should not be used in locations readily accessible to people or animals - the fan is intended for use facing an unoccupied space only.
- Use only the default fixed speed Maestro BAL (identified by yellow sticker) to comply with NCC2019 Ventilation of Roof Spaces performance solution.

## NCC2019 Ventilation of Roof Spaces Performance

### Solution Requirements:

- Calculate the area (m<sup>2</sup>) of ceiling directly under the roof space;
- Determine the pitch of the roof;
- Install Airomatic(s) and Metal Eave Vents according to the Bradford Ventilation Performance Solution Table;
- Distribute the powered ventilator(s) and metal eave vents evenly.

Bradford Ventilation Performance Solution Table

Roof Pitch	Total Ceiling Area <sup>1</sup>	Maestro BAL Required	Metal Eave Vents	Make-Up Air Open Area <sup>2</sup>
> 22°	< 203 m <sup>2</sup>	1	4	0.15 m <sup>2</sup>
	< 407 m <sup>2</sup>	2	6	0.21 m <sup>2</sup>
≤ 22°	< 127 m <sup>2</sup>	1	4	0.15 m <sup>2</sup>
	< 254 m <sup>2</sup>	2	6	0.21 m <sup>2</sup>
	< 381 m <sup>2</sup>	3	8	0.28 m <sup>2</sup>

<sup>1</sup> Total Ceiling Area is defined as the total ceiling area directly under the roof/attic space.

<sup>2</sup> The Make-Up Open Area air is an alternate solution to replace Bradford Metal Eave Vents.

**For general installation guidance refer to the product installation guide at [www.bradfordventilation.com.au](http://www.bradfordventilation.com.au)**

## Maestro BAL® Bushfire Rated Powered Roof Ventilator

### Applicable Product Codes (SKU)

Variant	Material Code
Maestro BAL - Headland	134207
Maestro BAL – Night Sky	134205
Maestro BAL - Surfmist	134206
Maestro BAL – Woodland Grey	129247

### Product Specifications

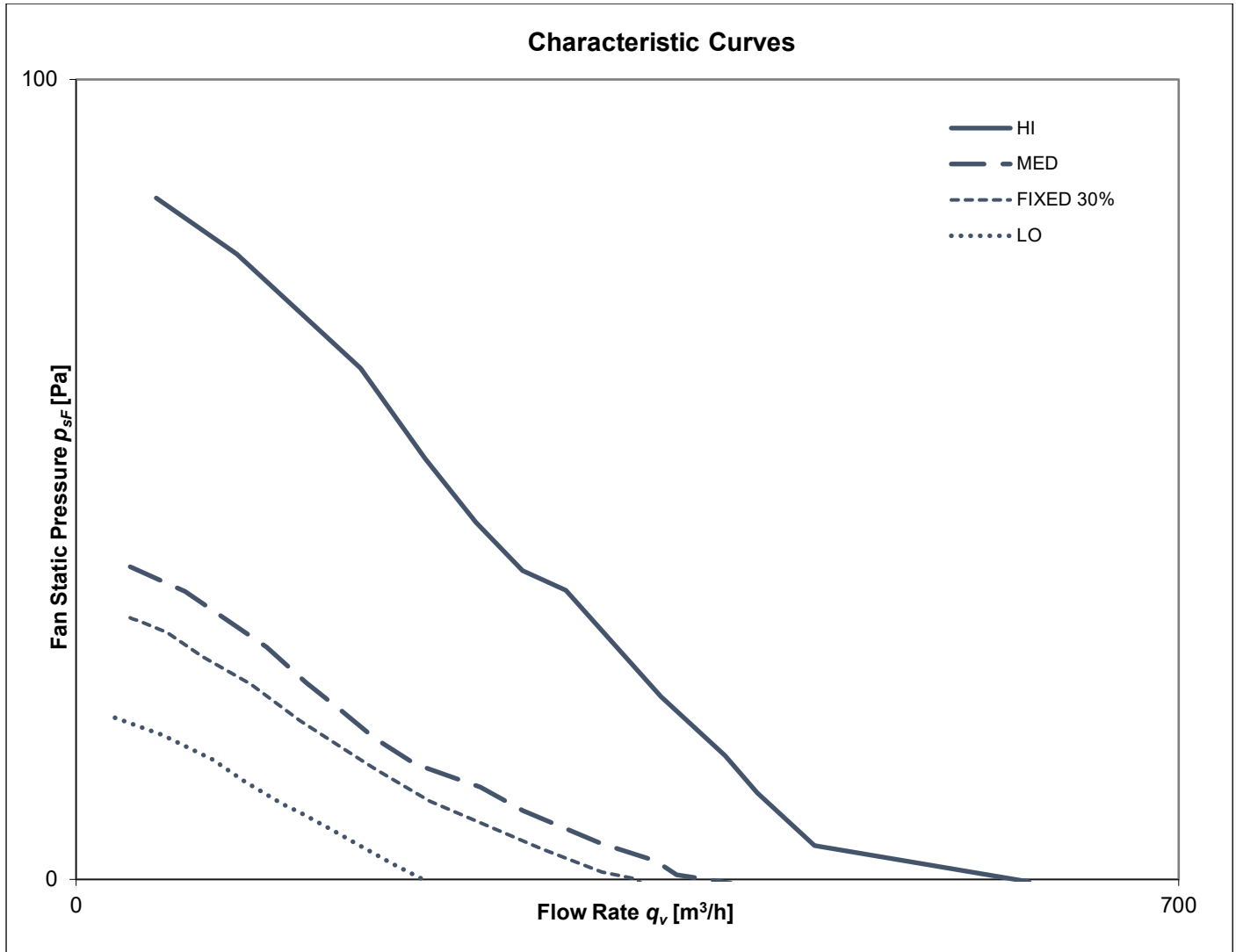
General	
Ventilator Type	BAL Powered Ventilator
Fan Diameter	230 mm
Throat Diameter	300 mm
Product Weight	4.1 kg
Packaged Weight	5.0 kg
Roof Slope Installation Range	3° to 35°

Material	
Dome	Aluminium
Housing	Aluminium
Flashing	Aluminium
Fan and Motor Housing	Polypropylene
Fan Impeller	Glass-Filled Nylon
Screws	Stainless Steel and Galvanised

Electrical	
Power Supply Type	Electronic Switch Mode
Input Voltage	100-240VAC, 1A, ~50/60Hz
Output Voltage	24 VDC
Cable Length	Approx. 1.8 m
Installation Location	Indoor, Dry Area
Fan Type	Electronic Commutating Motor
Internal Voltage	24 VDC
Protection Class	IP54
Maximum Flow Rate	596 m³/hr

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## Product Performance – Ventilator Flowrate



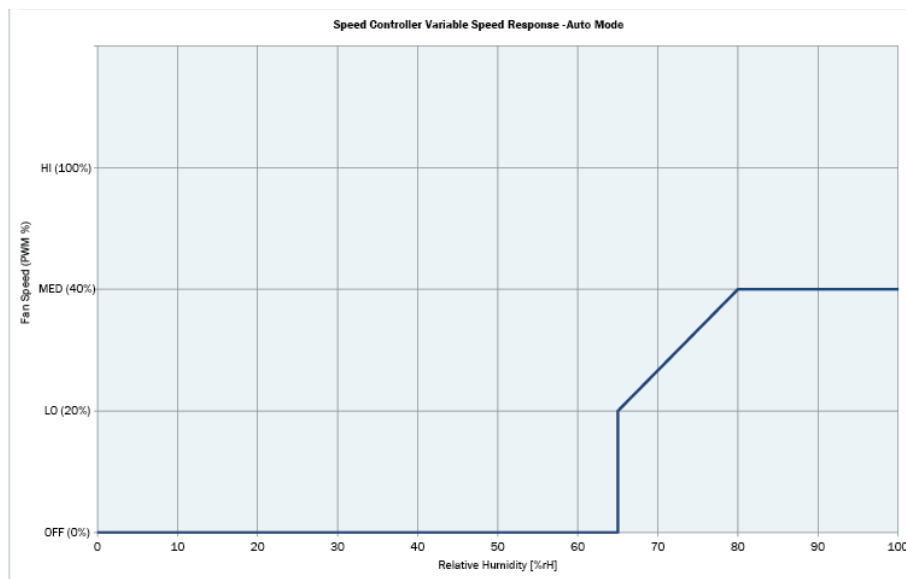
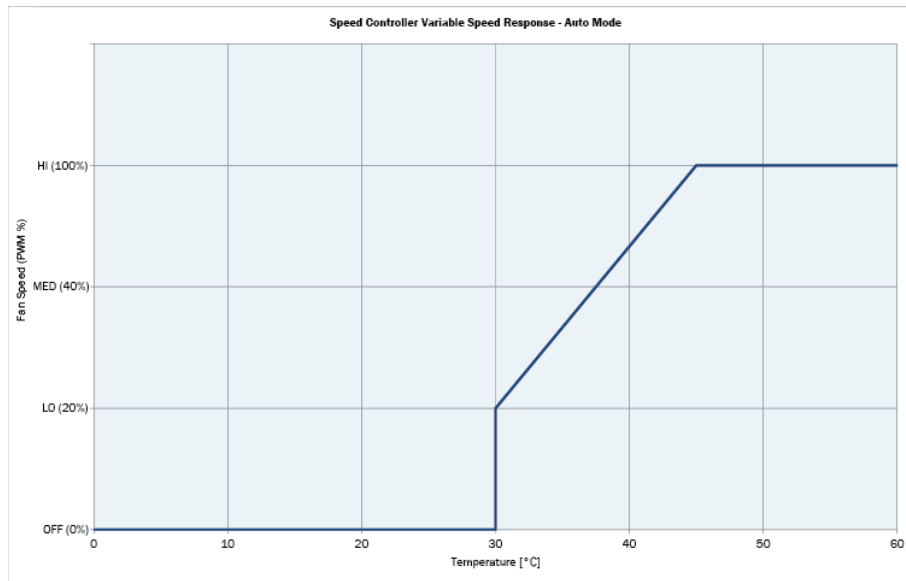
## Maestro BAL® Bushfire Rated Powered Roof Ventilator

### Ventilator Fan Speed Option

Maestro BAL has 3 fixed speed options available (LO, MED, HI) or a variable (AUTO) speed which responds to both ambient temperature and to ambient relative humidity.

- In AUTO when measuring the temperature, the fan response will be off below 30°C, LO speed at 30°C and a linear increase in speed until HI speed is reached at 45°C.
- In AUTO when measuring relative humidity, the fan response will be off below 65%rH. At 65%rH the fan will start in LO speed and there will be a linear increase in speed until MED speed is reached at 80%rH.

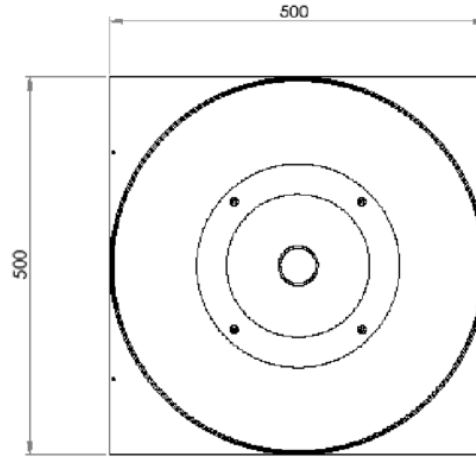
The two charts below summarise the fan response.



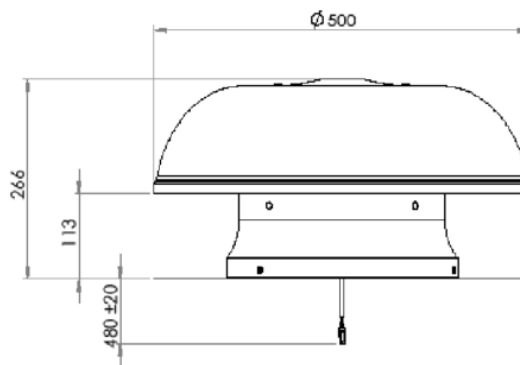
# Maestro BAL® Bushfire Rated Powered Roof Ventilator

## Product Dimensions

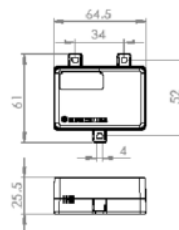
Top View



Front View



Speed Controller



Power Supply

