

# WindMaster™ Natural Roof Ventilator

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

Issue **H**

## Product Type & Application

The Bradford Ventilation WindMaster is a wind driven natural ventilator designed to exhaust heat & moisture from the roof space, without the use of electrical energy.

## Compliance with the NCC

When correctly specified and installed this natural roof ventilator:

### NCC2022

- **Ventilation of Roof Spaces** - Meets the requirements of NCC2022 Volume 1 F8D5 and ABCB Housing Provisions Standard 2022 10.8.3 as a Deemed to Satisfy solution for condensation management for NCC Climate Zones 6, 7 and 8.
- **Weatherproofing** - Meets the requirements of the NCC 2022 Volume 2 Weatherproofing Performance Requirement H2P2 via Deemed-to-Satisfy (DtS) and performance solution pathways.

### NCC2019

- **Ventilation of Roof Spaces** - Meets the requirements of the NCC2019 Volume 1 Amend.1 F6.4 and NCC 2019 Volume 2 Amend.1 3.8.7.4 as a Deemed-To-Satisfy solution.
- **Weatherproofing** - Meets the requirements of the NCC 2019 Volume 2 Amend. 1 Weatherproofing Performance Requirement P2.2.2 via Deemed-to-Satisfy (DtS) and performance solution pathways.

## Evidence of Suitability

- Ventilation of roof spaces - Bradford Ventilation DTS Solution Calculation.
- Weatherproofing - Arcadis Report 30051677\_4.

## Conditions of Storage, Use & Maintenance

- Store in the original packaging in a cool and dry area.
- Do not attempt to repair – contact Bradford Ventilation for service advice.

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

## Limitations of Use

- **IMPORTANT** - Do Not Modify This Product: Compliance with the evidence of suitability data referenced in this document is only achieved by the product or configuration listed in this PTS.
- This product has not been tested for use in cyclonic wind regions C or D.
- Do not use for exhausting hazardous, abrasive, acidic and alkaline vapour or areas containing explosive or corrosive materials.
- This product is not suitable for bushfire BAL-12.5 to BAL-40 or FZ rated areas.

## Specific Design or Installation Instructions

- Isolate power before installation.
- This product requires specific areas to be sealed against water entry and other areas to be left unsealed to allow internal condensation drainage – refer to the installation guide for details.
- New construction – refer to the tables below for recommended ventilation levels. Note that there are differences in requirements between NCC 2019 and NCC 2022.
- Retro-fit construction - for each 90sqm of ceiling area it is recommended that 1 WindMaster and 2 Bradford metal eave vents should be installed.
- The rotating head of this product must be installed horizontally to ensure correct operation.

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

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### Specific Design or Installation Instructions cont.

#### NCC2022 Ventilation of Roof Spaces Deemed-To-Satisfy Solution Requirements Calculation in Table 1:

The table below indicates the ventilation opening requirements for condensation management in NCC Climate Zones 6, 7 and 8. The NCC gives an open area requirement per meter length of the longest horizontal dimension (e.g., the longest length of gutter) of the roof, the table indicates how many products are required based on this. Ventilation openings should be evenly distributed.

WindMaster vents should be installed not more than 900mm below the ridge or highest point of the roof space, measured vertically.

**Table 1. NCC 2022 Bradford Deemed-To-Satisfy Solution**

Products	WindMaster Roof Ventilator Requirement	Bradford Metal Eave Vent Requirement	Bradford Poly Eave Vent Requirement
Roof Pitch			
<10°		Install 1 Metal Eave Vent for every <b>0.7m</b> of the longest horizontal roof length. These must be equally divided between the two opposing ends of the roof.	Install 1 Poly Eave Vent for every <b>0.4m</b> of the longest horizontal roof length. These must be equally divided between the two opposing ends of the roof.
≥10° and <15°	1 WindMaster for every <b>12.5m</b> of the longest horizontal roof length.	1 Metal Eave Vent for every <b>1.4m</b> of the longest horizontal roof length.	1 Poly Eave Vent for every <b>0.9m</b> of the longest horizontal roof length.
≥15° and <75°	1 WindMaster for every <b>12.5m</b> of the longest horizontal roof length.	1 Metal Eave Vent for every <b>5.0m</b> of the longest horizontal roof length.	1 Poly Eave Vent for every <b>3.3m</b> of the longest horizontal roof length.
≥15° and <75° Cathedral	1 WindMaster for every <b>12.5m</b> of the longest horizontal roof length.	1 Metal Eave Vent for every <b>1.4m</b> of the longest horizontal roof length.	1 Poly Eave Vent for every <b>0.9m</b> of the longest horizontal roof length.

**IMPORTANT APPLICATION NOTE:** The number of vents required should be rounded up, not down, to ensure that the ventilation provided meets or exceeds the recommended requirement. For example, the ventilation requirement for a 10° pitched roof 20m long in the longest horizontal direction is calculated as follows:

- The ventilator requirement (1 per 12.5m) is calculated as follows: 20m divided by the recommended WindMaster spacing of 12.5m =  $20/12.5 = 1.6$  vents which should be rounded up to 2 WindMasters, to be evenly distributed along the roof.
- The metal eave vent requirement (1 per 1.4m) is calculated as follows: 20m divided by the recommended metal eave vent spacing of 1.4m =  $20/1.4 = 14.2$  eave vents which should be rounded up to 16 metal eave vents, evenly distributed around the roof.

#### NCC2019 Ventilation of Roof Spaces Deemed-To-Satisfy Solution Requirements Calculation in Table 2:

The table below indicates the ventilation opening requirements for condensation management in all NCC Climate Zones when kitchen, bathroom, sanitary compartment or laundry exhaust systems are discharging into the roof space.

- Calculate the area (m<sup>2</sup>) of ceiling directly under the roof space;
- Determine the pitch of the roof;
- Look-up the recommended number of WindMasters and Bradford metal eave vents in the Deemed-To-Satisfy Solution Table 2 below;
- Distribute the WindMaster(s) and Bradford Metal Eave Vents evenly.

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### Specific Design or Installation Instructions cont.

Table 2. NCC 2019 Bradford Deemed-To-Satisfy Solution

Roof Pitch	Total Ceiling Area <sup>1</sup> (m <sup>2</sup> )	Number of WindMasters required	Bradford Metal Eave Vents required	Bradford Poly Eave Vents required
> 22°	< 62	1	5	7
	< 124	2	9	13
	< 187	3	13	15
	< 249	4	17	21
	< 312	5	22	26
	< 374	6	26	32
≤ 22°	< 62	2	10	14
	< 124	4	18	26
	< 187	6	26	30
	< 249	8	34	42
	< 312	10	44	52
	< 374	12	52	64

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

### Applicable Product Codes (SKUs)

Classic Cream 61151	Paperbark 61152	Cove 125754	Gully 125751	Loft 90674	Surfmist 61143
Evening Haze 90673	Mangrove 125755	Pale Eucalypt 61147	Wilderness 61150	Cottage Green 61148	Headland 61145
Jasper 61161	Terrain 125753	Manor Red 61146	Shale Grey 61155	Dune 61153	Windspray 61154
Basalt 125752	Wallaby 125756	Woodland Grey 61149	Deep Ocean 61159	Ironstone 61166	Monument 90675
Night Sky 61144	Mill 61141	Bluegum 481726	Dover White 481724	Southerly 481725	

### Product Specifications

General		Material	
Ventilator Type	Natural Roof Ventilator	Turbine	Aluminium
Turbine Diameter	420 mm	Varipitch	Aluminium
Varipitch Diameter	306 mm	Flashing	Aluminium
Throat Open Area	62,500 mm <sup>2</sup>	Shaft	Zinc passivate plated mild steel
Product Weight	1.90 kg	Bearing Holder, Support Ring and Brackets	Glass-Filled Nylon
Roof Pitch	<b>Tiled Roofs</b> 15° to 45° <b>Metal Sheet Roofs</b> 3° to 45° Note: Where applicable all roof pitches must comply to AS1562.1, the NCC & Australian Standards	Screws	Stainless Steel and Galvanised

## WindMaster™ Natural Roof Ventilator

### Product Dimensions (in mm)

