

WindMaster Natural Roof Ventilator

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

Issue **A, 11/2023**

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 New Zealand Building Code

When correctly specified and installed, this product meets or contributes to compliance with the following performance requirements of the building code:

- **B2 Durability** B2.3.1(c) – The materials of construction of the Bradford Ventilation WindMaster have a well-established history of use in service.
- **E2 External Moisture** E2.3.2 – The Bradford Ventilation Windmaster has more than 20 years' history of use. It complies with the Australian NCC for use in all non-cyclonic wind zones and is tested to AS4046.9.
- **G4 Ventilation** G4.3.1, G4.3.3(Contribute to) - provides air changes to maintain air purity.
- **F2 Hazardous building materials** - F2.3.1 - The materials of construction of the Bradford Ventilation WindMaster do not emit or give rise to harmful concentrations of gas, liquid, radiation or solid particles.

Basis of Compliance

- CSR Research Laboratory Test Report ETR-00095, Windmaster Ventilator Dynamic Weather Resistance Test (in accordance with AS4046.9), 10 September 2021.
- Arcadis Report 30051677_4, CSR Bradford Roof Ventilator Weatherproofing Performance Solution, 17 December 2021.
- Acceptable Solutions and Verification Methods for New Zealand Building Code Clause B2 Durability Second edition (Amendment 12), 28 November 2019.
- Verification Methods E2/VM1 and Acceptable Solutions E2/AS1, E2/AS2 and E2/AS3 for New Zealand Building Code Clause E2 External Moisture Third edition (Amendment 10), 5 November 2020.
- Acceptable Solutions and Verification Methods for New Zealand Building Code Clause G4 Ventilation Fourth edition, 27 June 2019.

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 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.
- Do not use for exhausting hazardous, abrasive, acidic and alkaline vapour or areas containing explosive or corrosive materials.
- This product has not been tested for use in cyclonic wind regions.
- This product is not subject to any warning or ban declared by MBIE under section 26 of the Building Act 2004.
- Seek technical advice from Bradford Ventilation on application suitability if unsure.

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. (These tables are based on compliance with the Australian Building Code and provide design guidance for New Zealand).
- 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

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Specific Design or Installation Instructions cont.

Table 1 below indicates how many ventilators and vents are required for condensation management based on the longest horizontal dimension (e.g., the longest length of gutter) of the roof. 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. Ventilators and vents for condensation management

Products	WindMaster Roof Ventilator Requirement	Bradford Metal Eave Vent Requirement
Roof Pitch		
<10°		Install 1 Metal Eave Vent for every 0.7m 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 12.5m of the longest horizontal roof length.	1 Eave Vent for every 1.4m of the longest horizontal roof length.
≥15° and <75°	1 WindMaster for every 12.5m of the longest horizontal roof length.	1 Eave Vent for every 5.0m of the longest horizontal roof length.
≥15° and <75° Cathedral	1 WindMaster for every 12.5m of the longest horizontal roof length.	1 Eave Vent for every 1.4m 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 = $20/1.4 = 14.3$ eave vents which should be rounded up to 16 metal eave vents, evenly distributed around the roof.

Table 2 below indicates the ventilation opening requirements for condensation management when kitchen, bathroom, sanitary compartment or laundry exhaust systems are discharging into the roof space.

- Calculate the area (m²) 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 Table 2 below;
- Distribute the WindMaster(s) and Bradford Metal Eave Vents evenly.

Table 2. Ventilators and vents for condensation management when exhaust systems are discharging into the roof space

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

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

Bradford NZ, 14 The Furlong, Takanani, Auckland For further technical advice call 0800 277 123/ visit bradfordinsulation.co.nz/ email bradford@csr.co.nz

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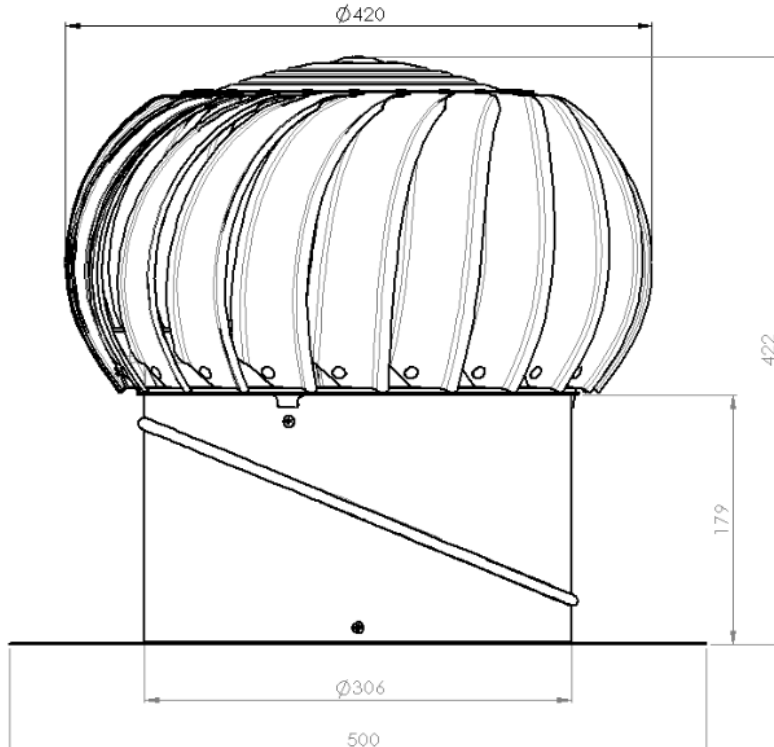
Applicable Product Codes (SKUs)

SKU	Finish
61141	Mill

Specifications

General		Material	
Ventilator Type	Natural Roof Ventilator	Turbine	Aluminium
Turbine Diameter	420 mm	Varipitch	Aluminium
Varipitch Diameter	306 mm	Flashing	Aluminium
Product Weight	1.90 kg	Shaft	Zinc passivate plated mild steel
Roof Pitch	Tiled Roofs 15° to 45° Metal Sheet Roofs 3° to 45° Note: Where applicable all roof pitches must comply to AS1562.1, the Building Code and associated standards.	Bearing Holder, Support Ring and Brackets	Glass-Filled Nylon
		Screws	Stainless Steel and Galvanised

Product Dimensions (in mm)



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