

TurboBeam™ Wind Driven Turbine Ventilator

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

Issue **H**

Product Type & Application

The Bradford Ventilation TurboBeam is a wind driven ventilator with a clear turbine, designed to remove heat and provide natural light to the roof space or storage area, without the use of electrical energy.

Compliance with the NCC

For use in Australia, when correctly specified and installed, this product provides the following compliance:

NCC 2025

- **Ventilation of Roof Spaces** - Meets the requirements of NCC 2025 Volume 1 F8D5, F8D6 and ABCB Housing Provisions Standard 2025 10.8.3, 10.8.4 as a Deemed to Satisfy solution for condensation management for NCC Climate Zones 6, 7 and 8.
- **Weatherproofing** - Meets the requirements of the NCC 2025 Volume 2 Weatherproofing Performance Requirement H2P2 via Deemed-to-Satisfy (DtS) and performance solution pathways.

NCC2022

- **Ventilation of Roof Spaces** - Meets the requirements of NCC2022 Volume 1 Amend. 2 F8D5 and ABCB Housing Provisions Standard 2022 Amend. 2 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 Amend. 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 -Excelo Consulting Engineers Performance Solution Report ECE24168 Class 1 & 10.

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, and is not suitable 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 use in Bush Fire BAL-12.5 to BAL-40 or BAL-FZ rated areas.

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 [csrbradford.com.au](https://www.csrbradford.com.au) for more information.

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.
- Installation must be accordance with the Bradford Ventilation Residential Turbine Ventilator Installation Instruction.
- The rotating head of this product must be installed horizontally to ensure correct operation.
- Refer to the tables below for recommended ventilation levels. Note that there are differences between NCC 2019, NCC 2022 and NCC 2025

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

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Specific Design or Installation Instructions cont.

NCC2025 Ventilation of Roof Spaces Deemed-To-Satisfy Solution Requirements Calculation in Tables 1 and 2:

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 total plan dimension of the roof, the table indicates how many products are required based on this. Ventilation openings should be evenly distributed.

TurboBeam vents should be installed not more than 900mm below the ridge or highest point of the roof space measured vertically, or not more than 1/3 of the height of the roof below the highest point of the roof, whichever is smaller.

Table 1. NCC 2025 F8D5 and 10.8.3 Bradford Deemed-To-Satisfy Solution for roofs where the primary insulation layer is *not parallel* to the roof plane

Products	TurboBeam Roof Ventilator Requirement	Bradford Metal Eave Vent Requirement	Bradford Metal Eave Vent Requirement <i>Mono pitch or Skillion Roof</i>	Bradford Poly Eave Vent Requirement	Bradford Poly Eave Vent Requirement <i>Mono pitch or Skillion Roof</i>
Roof Pitch/Detail					
<10°		Install 1 Metal Eave Vent for every 0.88m of the longest total plan dimension.	Install 1 Metal Eave Vent for every 1.75m of the longest total plan dimension.	Install 1 Poly Eave Vent for every 0.59m of the longest total plan dimension.	Install 1 Poly Eave Vent for every 1.18m of the longest total plan dimension.
	1 TurboBeam for every 9.20m of the longest total plan dimension.	Install 1 Metal Eave Vent for every 0.88m of the longest total plan dimension.	Install 1 Metal Eave Vent for every 1.75m of the longest total plan dimension of roof length.	Install 1 Poly Eave Vent for every 0.59m of the longest total plan dimension of roof length.	Install 1 Poly Eave Vent for every 1.18m of the longest total plan dimension of roof length.
	<10° with roof area <10m ² ≥10° and <75°	Install 1 Metal Eave Vent for every 2.50m of the longest total plan dimension.	Install 1 Metal Eave Vent for every 5.0m of the longest total plan dimension.	Install 1 Poly Eave Vent for every 1.69m of the longest total plan dimension.	Install 1 Poly Eave Vent for every 3.38m of the longest total plan dimension.

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 total plan dimension is calculated as follows:

- The ventilator requirement (1 per 9.2m) is calculated as follows: 20m divided by the TurboBeam spacing of 9.2m = $20/9.2 = 2.2$ vents which should be rounded up to 2 TurboBeams, to be evenly distributed along the roof.
- The metal eave vent requirement (1 per 2.5m) is calculated as follows: 20m divided by the recommended metal eave vent spacing of 2.5m = $20/2.5 = 8$ eave vents which should be evenly distributed around the roof.

Table 2. NCC 2025 F8D6 and 10.8.4 Bradford Deemed-To-Satisfy Solution for roofs where the primary insulation layer is *parallel* to the roof plane

Products	TurboBeam Roof Ventilator Requirement	Bradford Metal Eave Vent Requirement	Bradford Poly Eave Vent Requirement
Roof Pitch/Detail			
Roof area <10m ²	1 TurboBeam for every 9.20m of the longest total plan dimension	Install 1 Metal Eave Vent for every 5.00m of the longest total plan dimension.	Install 1 Poly Eave Vent for every 3.38m of the longest total plan dimension.
All other roofs		Install 1 Metal Eave Vent for every 1.75m of the longest total plan dimension of roof length.	Install 1 Poly Eave Vent for every 1.18m of the longest total plan dimension of 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.

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NCC2022 Amend. 2 Ventilation of Roof Spaces Deemed-To-Satisfy Solution Requirements Calculation in Table 3:

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.

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

Table 3. NCC 2022 Amend. 2 Bradford Deemed-To-Satisfy Solution

Products	TurboBeam Roof Ventilator Requirement	Bradford Metal Eave Vent Requirement	Bradford Poly 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.	Install 1 Poly Eave Vent for every 0.4m of the longest horizontal roof length. These must be equally divided between the two opposing ends of the roof.
≥10° and <15°	1 TurboBeam for every 9.2m of the longest horizontal roof length.	1 Metal Eave Vent for every 1.4m of the longest horizontal roof length.	1 Poly Eave Vent for every 0.9m of the longest horizontal roof length.
≥15° and <75°	1 TurboBeam for every 9.2m of the longest horizontal roof length.	1 Metal Eave Vent for every 5.0m of the longest horizontal roof length.	1 Poly Eave Vent for every 3.3m of the longest horizontal roof length.
≥15° and <75° Cathedral	1 TurboBeam for every 9.2m of the longest horizontal roof length.	1 Metal Eave Vent for every 1.4m of the longest horizontal roof length.	1 Poly Eave Vent for every 0.9m 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 9.2m) is calculated as follows: 20m divided by the recommended TurboBeam spacing of 9.2m = $20/9.2 = 2.2$ vents which should be rounded up to 3 TurboBeam Vents, 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 Amend. 1 Ventilation of Roof Spaces Deemed-To-Satisfy Solution Requirements Calculation in Table 4:

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 (m²) of ceiling directly under the roof space;
- Determine the pitch of the roof;
- Look up the recommended number of TurboBeam and Bradford Metal Eave vents in the Deemed-To-Satisfy Solution Table below;
- Distribute the TurboBeam(s) and Bradford Metal Eave Vents evenly.

Table 4. NCC 2019 Amend. 1 Bradford Deemed-To-Satisfy Solution

Roof Pitch	Total Ceiling Area (m ²)	Number of TurboBeams required	Bradford Metal Eave Vents required	Bradford Poly Eave Vents required
> 22°	46	1	4	5
	92	2	7	10
	138	3	10	14
	184	4	13	19
	231	5	16	23
	277	6	19	28
	323	7	22	32

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

Where the roof pitch is ≤ 22°, the number of ventilators and eave vents specified must be doubled for the same ceiling area.

TurboBeamTM Wind Driven Turbine Ventilator

Applicable Product Codes (SKU)

CLEAR 61183

Product Specifications

General		Material	
Ventilator Type	Wind Driven Natural Ventilator	Turbine	High Impact Acrylic
Turbine Diameter	327.5 mm	Varipitch	Aluminium
Varipitch Diameter	255.5 mm	Flashing	Aluminium
Minimum Open Area	46215 mm ²	Shaft	Aluminium
Product Weight	1.9 kg	Bearings	Twin Stainless-Steel Bearings
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 NCC & Australian Standards		

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Product Dimensions (in mm)

