Bradford™ SAINT-GOBAIN

Product Technical Statement

Hurricane® CR Cyclonic Rated Ventilator

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

Issue F

Product Type & Application

The Bradford Hurricane® CR Cyclonic is a wind-driven turbine ventilator designed to exhaust heat and moisture from non-BAL commercial roofs (Class 2 to 9) in AS/NZS 1170.2 cyclonic wind region C.

Compliance with the NCC

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

NCC2022

- **Design of Buildings in Cyclonic Areas** - Meets the requirements of NCC 2022 Volume 1 Amend. 2 Specification 4 for connections to roof cladding in AS/NZS 1170.2 wind region C.
- **Weatherproofing** - Meets the requirements of the NCC 2022 Volume 1 Amend. 2 Weatherproofing Performance Requirement F3P1 via Deemed-to-Satisfy (DtS) and performance solution pathways.

NCC 2019

- **Design of Buildings in Cyclonic Areas** - Meets the requirements of NCC 2019 Volume 1 Amend. 1 Specification B1.2 for connections to roof cladding in AS/NZS 1170.2 wind region C.
- **Weatherproofing** - Meets the requirements of the NCC 2019 Volume 1 Amend. 1 Weatherproofing Performance Requirement FP1.4 via Deemed-to-Satisfy (DtS) and performance solution pathways.

Evidence of Suitability

- Design of Buildings in Cyclonic Areas –
  - Stantec Report 304000859.
  - James Cook University NATA Report TS1293.
- Weatherproofing –
  - Excelo Consulting Engineers Performance Solution Report ECE24168 Commercial.

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.
- This product requires regular checking for wear/tear.
- Do not use high pressure water cleaning, mechanical cleaning devices or chemical agents.

Refer to the product warranty at bradfordventilation.com.au for more information.

Specific Design or Installation Instructions

- Isolate power before installation.
- **Caution**: The turbine head of this product can rotate without warning (even during installation) – always keep body parts away from moving components.
- This is a purpose-designed product for cyclonic regions and the additional security fixings must be installed in accordance with the Installation Guide to achieve compliance.
- Testing on this product shows it has the capacity to withstand region C Cyclonic, Region A Non-Cyclonic and Region B Non-Cyclonic wind conditions as stipulated in AS 1170.2.
- The table below shows the minimum make-up air requirement per ventilator that should be provided in accordance with AS1668.2

Product	Make-Up Air per ventilator
Hurricane CR900 Cyclonic	≥ 0.9m²

- Make- up air ingress should be provided via evenly distributed openings which are permanently open and positioned to help the ventilator work more effectively and efficiently (refer to the product installation guide for guidance).
- If make-up air is insufficient the ventilators will draw make-up air from each other. This will diminish the system effectiveness - air will be drawn inward through ventilators which are meant to be exhausting air. It will also increase the risk of drawing external water into the building during periods of rain. Further to this, it is recommended that ventilators of the same size are used together to prevent make-up air being drawing between ventilators of different sizes.
- The rotating head of this product must be installed horizontally to ensure correct operation – adjustment of the varipitch and base flashing is critical to achieve this orientation (refer to the installation guide for details)
- 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.
- The Roof system specification and design must be in accordance with the design wind loads.
- The product is suitable for all terrain categories under AS/NZS 1170.2.
- This product is suitable for a maximum building height of 15m.

For general installation guidance refer to the product installation guide at www.bradfordventilation.com.au

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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.
- Not suitable for AS/NZS 1170.2 wind region 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 high moisture environments such as water storage areas or aquatic centres.
- This product is not suitable for use in Bush Fire BAL-12.5 to BAL-40 or BAL-FZ rated areas.
- This product is not suitable for use within 500m of a saltwater body.
- Seek technical advice from Bradford Ventilation on application suitability if unsure.
- Damper and Pest Guard options are not available with this product.
- Special Base options are not available with this product.

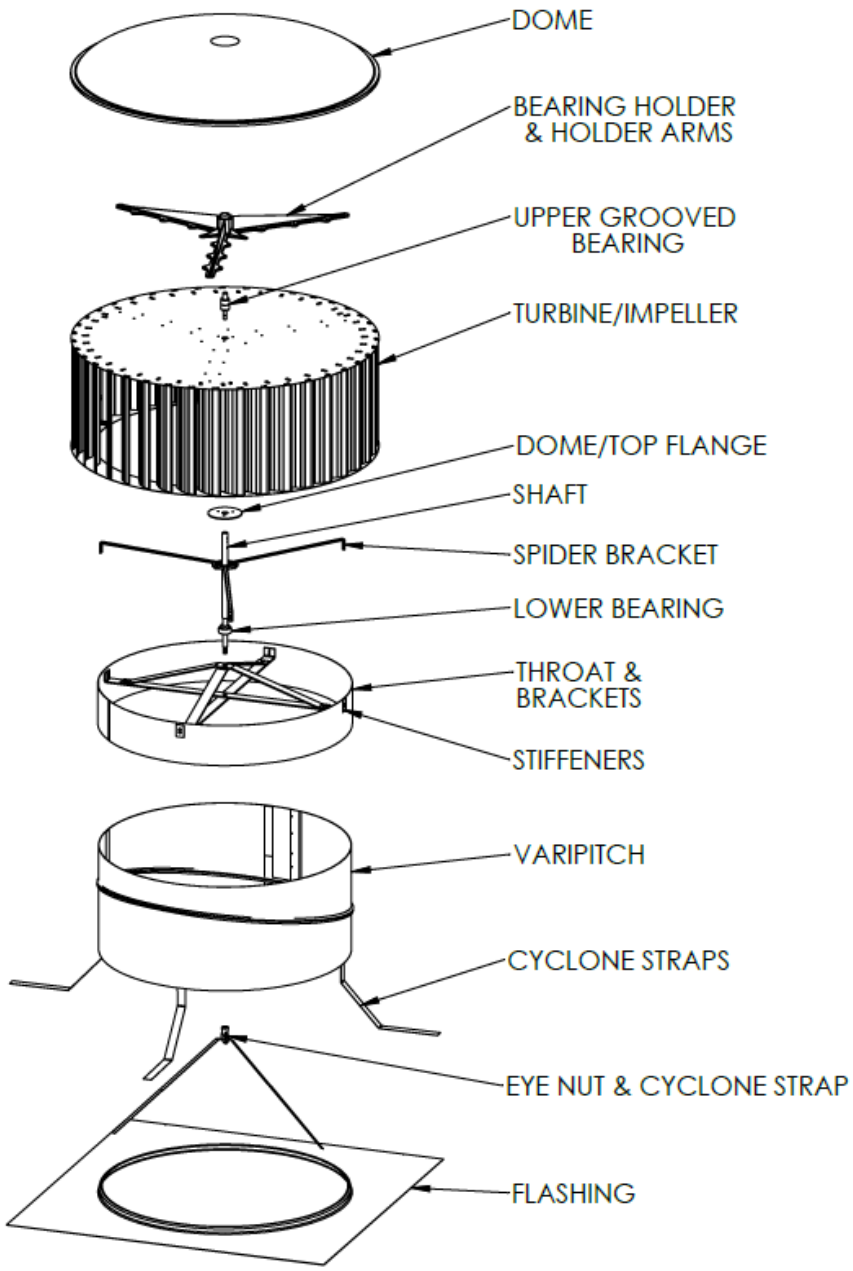
Applicable Product Codes (SKU)

Hurricane CR900mm Cyclonic	
Mill Finished	600677
Custom Colour	600677

Hurricane® CR Cyclonic Rated Ventilator

Product Specifications (in exploded view)

Hurricane CR900 Cyclonic



Materials	
Dome	Aluminium
Turbine	Aluminium
Varipitch	Aluminium
Flashing	Aluminium
Shaft	Stainless Steel
Cyclone Straps	Galvanised Steel

Hurricane® CR Cyclonic Rated Ventilator

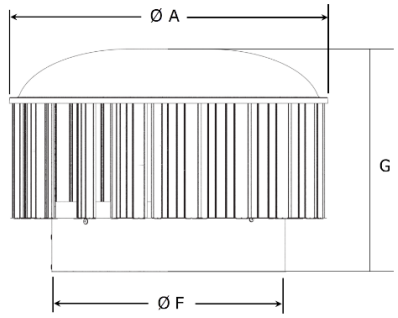
Product Information Summary CR900

Ventilator Range	Hurricane
Ventilator Model	CR 900 Cyclonic
Pitch:	3°-22.5° Note: Where applicable all roof pitches must comply to AS1562.1, the NCC & Australian Standards weatherproofing requirements within the ranges above.
Ventilator Type (AS/NZS 4740:2000 cl 1.5)	Type 4 – Rotating Wind-Driven Roof Ventilator
Ventilator Performance Class (AS/NZS 4740:2000 Table 1.2)	
Effective Aerodynamic Area, EAA	0.372 m^2
Discharge Coefficient, C_d	0.63 - Class 2
Flow Coefficient, C_f	0.221 - Class 4
Nominal Performance* (m^3/h)	
0 m/s	3175 m^3/h
3 m/s	3297 m^3/h
6 m/s	3638 m^3/h

**In accordance to AS/NZS 4740:2000 nominal performance parameters where h = 6m, ΔT = 14°C, T = 20°C*

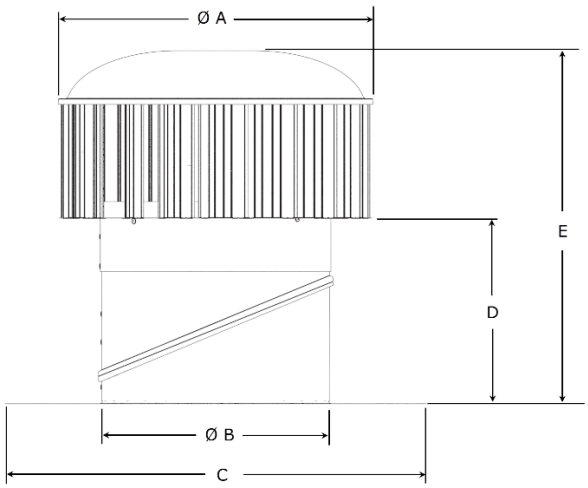
Product Dimensions (in mm)

Turbine



Model	Dimension (mm)			Weight (kg)
	ØA	ØF	G	
CR900 Cyclonic	1096	897 ID	643	19.5

Assembly



Model	Dimension (mm)					Weight (kg)	Roof Slope Range
	ØA	ØB	C	D	E		
CR900 Cyclonic	1096	895 ID	1200 x 1200	421	936	25.5	3° - 22.5°

CSR Bradford Locked Bag 1345 North Ryde BC NSW 1670
csrbradford.com.au

For further technical advice
call **1300 850 305** or visit **csrbradford.com.au**

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Cyclone Straps