

# Hurricane<sup>®</sup> Natural Ventilation





Established in 1934, Edmonds® is a pioneer in home, commercial and industrial ventilation solutions in Australia as well as across the globe.

Edmonds is passionate about delivering superior comfort and performance whilst reducing the overall impact on the environment. It is this vision of a 'sustainable future' which has resulted in the design and development of many energy efficient innovations. These include natural, wind-driven; hybrid and turbine ventilation technology.

Regarded as a leading industry innovator, Edmonds Ventilation products are engineered and manufactured at its ISO9001 accredited facility in Seven Hills, Australia. Edmonds was awarded the AIRAH Excellence in Sustainability Award in 2013 and Achiever Award in 2008. It was also recognised with a Good Design Award at the 2013 Australian International Design Awards and Master Builders Australia 2012 National Export Award.

With strong synergies between insulation and ventilation in the building industry, Edmonds was acquired by CSR Building Products Limited in 2005. Its mission remains to create Technologies for a Sustainable Future.



Hurricane® was installed in Indoor Swimming Centres to reduce condensation and humidity.



Hurricane (93 x H900) was installed at the Qantas Engineering Workshops, Mascot, Sydney to improve ventilation for employees.

## Hurricane®

For over 25 years, the Hurricane® range of Australian-engineered natural ventilation technology has been built to endure the toughest of climatic conditions and operating environments.

From Melbourne to the Middle East and to the Midwest of USA, you can be confident that Hurricane will provide years of superior operation.



National Export Award for Edmonds Business



HVAC Achiever award for EcoPower®



Excellence in Sustainability award for Odyssey®



Global-Mark.com.au®  
Quality Management standard for Edmonds Seven Hills facility

# NATURAL VENTILATION TECHNOLOGY

# Hurricane®

## EFFECTIVE NO COST OPERATION

- Natural, wind-driven ventilation to maximise energy savings through free-air cooling.
- Improved indoor air quality by removing pollutants.
- Improved humidity control by removing moisture build-up.
- Improved occupant comfort by removing heat build-up.

## HIGH PERFORMANCE EDMONDS VERTICAL VANE™ TECHNOLOGY

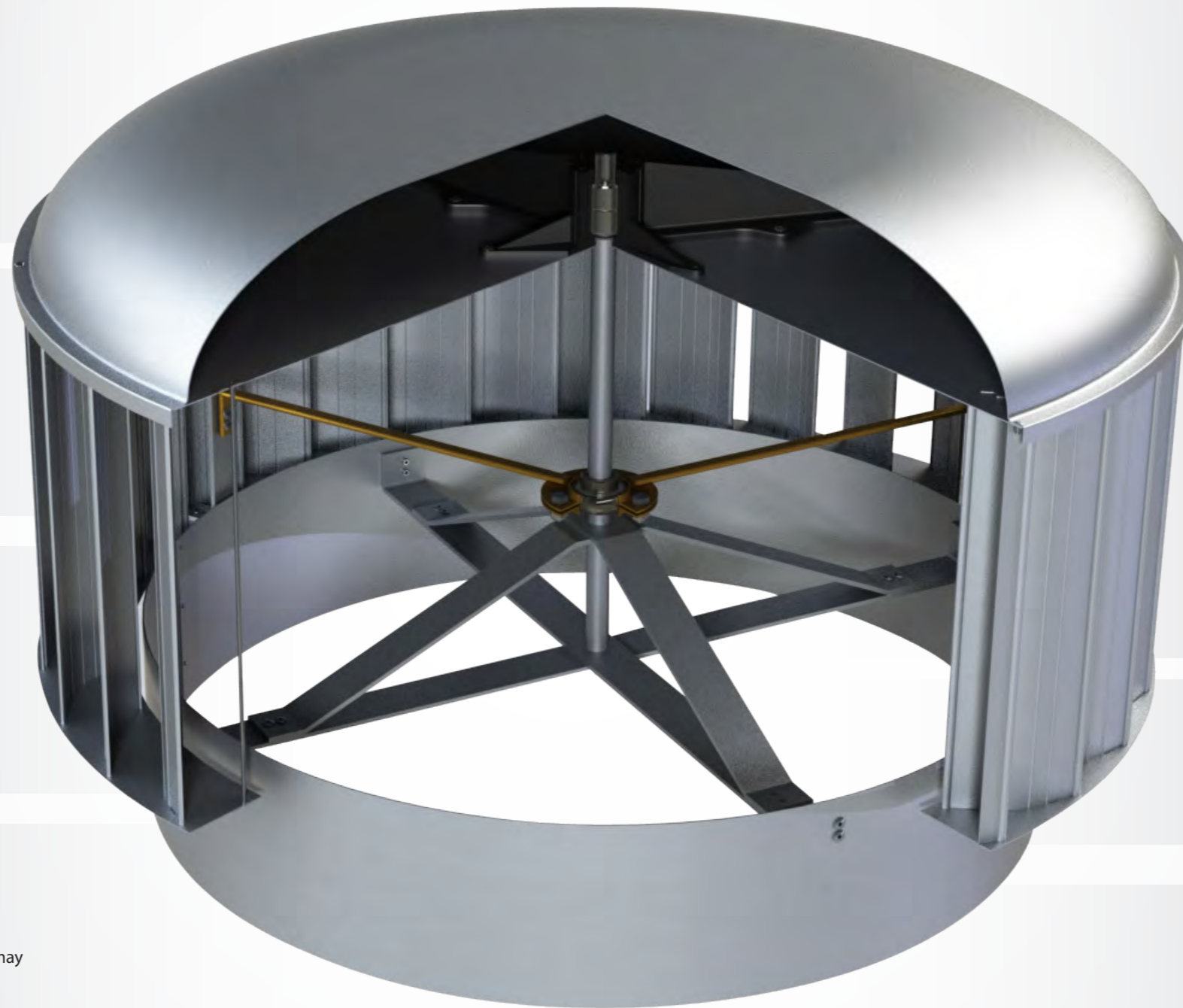
- Unique design allows wind turbine to act as a centrifugal impeller.
- Improved co-efficient of flow (Cf) compared to similar sized traditional spherical vents.

## MATERIALS

- Marine grade equivalent aluminium as standard.
- Options for highly corrosive environments also available.
- Mill finish or powder coated options to match most COLORBOND® colours. Refer to Edmonds colour chart for available colours.
- Bearing system designed to prevent ingress of fine dust particulates in harsh environments.

## INSTALLATION BENEFITS

- Significant weight advantage (<40kg). Two-person lift may be achieved versus crane-lift for heavier competitor options.
- Lightweight design means additional structural strengthening of roof may not be required.
- Variable pitch base design can adapt to most roof angles. Special Bases can be custom made for known roof pitch.



## SPECIAL VARIATIONS



FR900 Fire-Rated option meets the fire-resistant test to AS 1668.1-1998. The use of ventilation and air conditioning in buildings, Part 1: Fire and smoke control in multi-compartment buildings Section 4.8. Smoke-Spill fan.



BFR Bush Fire Rated option for buildings in Bushfire Prone Vegetation Category 1 areas. It is designed to comply with the Deemed to Satisfy provisions of AS3959.



S2 Corrosion Resistant option for water reservoirs or environments that are oxidative or slightly acidic (non-caustic).



HI Heavy Industrial option with polyolefin coating for highly corrosive environments.

## ACCESSORIES

- Manual or electric dampers
- Special Bases
- EC damper grilles

## WARRANTY

15 year warranty on Hurricanes other than Special Variations and Accessories.

Please refer to [edmonds.com.au](http://edmonds.com.au) for full warranty conditions.



Note: Image for illustrative purposes only.

# APPLICATIONS

## ENGINEERED FOR HARSH CLIMATES

The Hurricane ventilator has been engineered to withstand harsh climatic conditions around the globe.

In 2004, the Toyota Spare Parts Distribution facility, a Saud Bahwan owned property in Muscat, Oman installed 425 Hurricane H900 units. The climatic conditions include high average monthly maximum ambient temperatures of over 40°C.

Hurricane was selected by the Toyota Spare Parts facility in Muscat Oman, for its ability to perform in high ambient conditions >40°C.

## WATER RESERVOIRS, HEAVY INDUSTRIAL AND CORROSIVE ENVIRONMENTS.

The HI ventilator is built for highly corrosive environments with fumes between pH 4-7. Applications include ceramic plants, power coating facilities and gritty environments.

The S2 is ideal for water reservoirs and other highly oxidative environments that require reliable ventilation to minimise condensation under metal roofs to prolong life of metal structure. Applications include pool complexes, water storage/tanks, caustic soda and sulphuric acid handling plants.

## FIRE AND SMOKE RELEASE BUSHFIRE PRONE AREAS.

The FR ventilator provides both continuous ventilation and smoke release capability in the event of a fire (AS1668.1-1998 Section 4.8.1). Advantages versus traditional pneumatically released ventilators include both constant ventilation and responsive smoke release capacity which will be boosted by the buoyancy effect of rising hot air. Hurricane FR does not interfere with Early Suppression Fast Response sprinkler systems.

The BFR ventilator for Bushfire Prone Areas is designed to comply with the Deemed to Satisfy provisions of AS3959 Construction of Buildings in Bush Fire Prone areas.

## RETAIL AND LIGHT COMMERCIAL

With heating and cooling system contributing up to 70% of a commercial building's electricity consumption<sup>1</sup>, the Hurricane ventilator can provide significant savings by reducing the building's thermal load on the air conditioning system.

Applications include large retail spaces and warehouse stores.

## CONDENSATION CONTROL

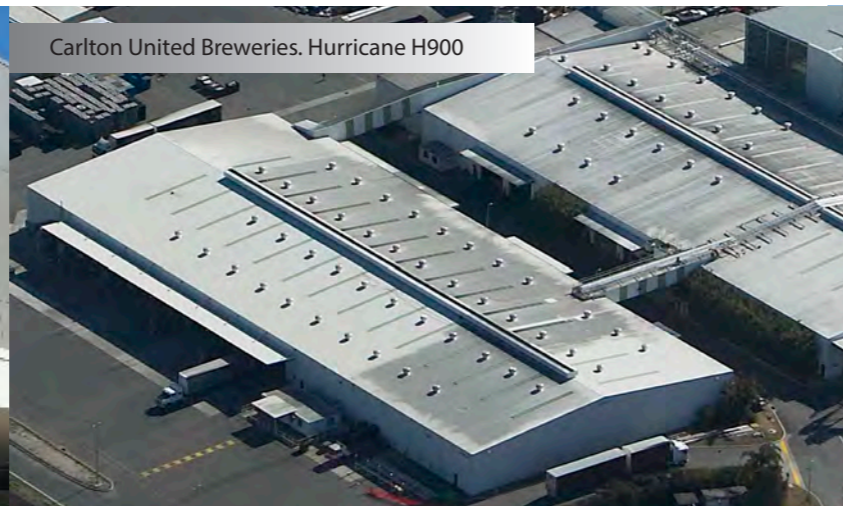
Poorly addressed condensation may result in equipment damage, plus additional repair and maintenance costs from wet ceilings, spoilt goods or disruption to production processes. One way to minimise condensation is to ventilate the building with ambient air. Applications include refrigerated warehouses, dry goods storage, meat and dairy processing plants and livestock sheds.

List of Hurricane case studies available at [edmonds.com.au](http://edmonds.com.au)

Harvey Norman. Hurricane H900



Carlton United Breweries. Hurricane H900



Water Reservoir Installation. Hurricane S2



Sydney Markets Banana Store. Hurricane FR



<sup>1</sup> Council of Australian Governments (2012) Guide to Best Practice Maintenance and Operation of HVAC Systems for Energy Efficiency, Department of Climate Change and Energy Efficiency

Model	H100	H150	H300	H400	H450	H500	H600	H700	H800	H900
Power Source	Wind & Stack Effect									
Dimensions on varipitch*										
Height Overall (mm)	313	363	480	564	634	700	724	796	848	936
Diameter Turbine (mm)	290	332	477	561	648	702	766	876	1003	1096
Flashing Length (mm)	430	430	600	750	750	750	1000	1000	1200	1200
Flashing Width (mm)	430	430	500	700	700	700	1000	1000	1200	1200
Throat area (m <sup>2</sup> )	0.006	0.017	0.062	0.112	0.142	0.175	0.258	0.358	0.466	0.594
Mass* (kg)	1.80	2.40	4.90	6.30	8.1	9.2	11.8	15.8	20.6	24.1
Roof slope range - varipitch	0-45°	0-45°	0-45°	0-45°	0-45°	0-45°	0-45°	0-22.5°	0-22.5°	0-22.5°
Flow rate capacity #										
m <sup>3</sup> /hr	29	93	365	631	874	1,021	1,099	1,503	2,340	2,944
m <sup>3</sup> /s	0.01	0.03	0.10	0.18	0.24	0.28	0.31	0.42	0.65	0.82
l/hr	28,800	93,600	363,600	630,000	874,800	1,018,800	1,098,000	1,501,200	2,340,000	2,944,800
l/s	8	26	101	175	243	283	305	417	650	818
Material										
Turbine Top	Aluminium 5005									
Varipitch	Aluminium 5005									
Flashing	Aluminium 5005									
Finish	Mill / Powdercoat									
Accessories (optional)										
Electric Dampers	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Manual dampers	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Special bases - spigot slope	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Special bases - spigot ridge	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Special bases - square to round slope	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Special bases - square to round ridge	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Special bases - spigot curb mount	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Special bases - square to round pyramid	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Special bases - spigot pyramid	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Special bases - EX base	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sparkguard	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Special Variations										
FR : Fire-rated to meet AS 1668.1-1998 Section 4.8.1	No	No	No	No	No	No	No	No	No	Yes
BFR : Bush Fire Rated to meet AS3959	No	No	Yes	Yes	No	No	No	No	No	No
S2 : Corrosion Resistant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
HI : Heavy Industrial	No	No	No	No	No	No	No	No	No	Yes
Australian designed and built	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Manufactured in ISO 9001 facility	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Designed and tested to AS4740	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

\* Tolerance: Dimension +/- 5mm. Weight +/- 0.5kg

# Flow rate figures are based on testing conducted by CSR Edmonds and in accordance to AS4740. Published flow rate results are optimal figures based on precision testing input and the other formulas are derived from fluid mechanics. Application results may vary due to external environmental factors, internal heat load, supply air capacity, construction materials and installation factors etc.

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CSR Edmonds.

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