

Airocle™

Think Natural.
Think Smarter.



5 Series

INSPIRED BY THE NATURAL FORCES FOR MAXIMUM ROOF-BASED VENTILATION



Roof

5 SERIES

VENTS & VENTILATORS

ROTARY ROOF VENTS

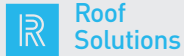
Previously **Gyro Series**

CSIRO CERTIFIED



Tested and certified by CSIRO® for
airflow, fire and weather performance

Rotary Roof Vents



Passive Natural Ventilation



Engineered Design



Market Leading Performance



Ideal For Sustainable Building Design



Tested and certified by CSIRO® for airflow, fire and weather performance

5 SERIES



The pinnacle of efficient and effective rotary ventilation design.

The **5 Series** is the pinnacle of efficient and effective rotary ventilation design. The large surface area of our spherical design, high coefficient of discharge and quality fabrication from Australian materials ensures that every vent provides the longevity and airflow performance your building deserves.



Design

The ability to provide reliable and cost effective natural ventilation to new and existing buildings makes the **5 Series** the optimal choice for building designers.

The spherical design of the **5 Series** head ensures maximum airflow by providing 25% more surface area than typical straight vane ventilators and maximises the suction effect of wind as air wraps around the spherical vent and draws from the leeward side.

A unique corrugated blade design combined with clever engineering ensures complete weather proof performance in all conditions including snow regions. Precision balancing and alignment and the use of quality componentry ensures the **5 Series** remain quiet, vibration free and last the life of the building.

Adequate make up air is essential for an effective natural ventilation system.

The **5 Series** has been successfully used on thousands of projects across a range of applications including:

- School & Educational Spaces
- Electricity Substations
- Factories & Processing Plants
- Warehouses & Storage Facilities
- Leisure Centres & Indoor Pools
- Security & Defence Buildings

Benefits

Performance

Independent research has found that the Spherical design of the **5 Series** can achieve up to 25% more airflow than typical straight vane ventilators under the same conditions*. CSIRO testing has also found that our unique Square-to-Round base helps provide 15% more airflow than traditional spigot bases. This means you get more airflow with smaller vents.

Fire and Cyclone Rating

The **5 Series** can also meet the demands of Cyclone Category C and D regions and is fire rated to 200°C/120min plus 300°C/30min (with the appropriate options) ensuring that your ventilation or smoke hazard management has the reliability and integrity it deserves.

Design Flexibility

Take advantage of manual/electric/pneumatic dampers to open/close vents for complete occupant control or link them to a BMS to operate on a timer, thermostat, humidity or occupant sensor. Or incorporate a booster fan to increase airflow in night purge systems or systems where increased flow is only required some of the time. The **5 Series** provides amazing flexibility in letting you achieve what you want from your ventilation design.

Energy and Environment

Reducing energy use in your building can improve your electricity costs and your environmental performance. Through reducing costs normally associated with mechanical ventilation such as electrical wiring, increased structural support and maintenance, using natural ventilation allows your project to make reductions in resource use and save money during the construction and operation lifecycle of your building.

Warranty

We back the **5 Series** with up to 20 years parts warranty and provide designers, builders and occupants confidence that they are installing a product that will work for the life of the building. Available in Zinalume, Colorbond, Colorbond Ultra, Aluminium and Stainless Steel, the **5 Series** is designed to meet all environments including corrosive coastal areas. A 12 month warranty exists on all damper motors and fans as per OEM warranties.

*Independent reports are available upon request.

Quality



RAIN
AS2428.1



WIND
AS2428.2



FIRE
AS2428.4 & 1668.2



COEFFICIENT OF DISCHARGE
AS2428.5



CYCLONE RATED

Using Airocle gives you access to not just the best products on the market, but over 90 years of experience and expertise and the assurance that your building will benefit from fully engineered designs that are manufactured with high quality Australian materials. Along with our focus on rigorous product development and engineering, the **5 Series** has been CSIRO tested.



5 Series > Rotary Roof Vents

Using natural thermodynamic forces that drive air up and through the ventilator ensures that your 5 Series ventilation system is directly responsive to internal and external conditions.



- WAREHOUSING + STORAGE
- INDUSTRIAL WORKSHOPS
- SCHOOLS + EDUCATION FACILITIES
- HALLS, GYMNASIUMS + INDOOR POOLS
- DEFENCE + GOVERNMENT BUILDINGS
- ELECTRICITY SUBSTATIONS + WATER PUMP HOUSES



Rotary Vents
5 Series
Aquatic Centre
Picton NSW

5S

ROTARY ROOF VENTS DESIGN



Scientific engineering principles has lead to our 5 Series providing optimal performance in all weather conditions and minimises the risk of back drafting and the entry of moisture.

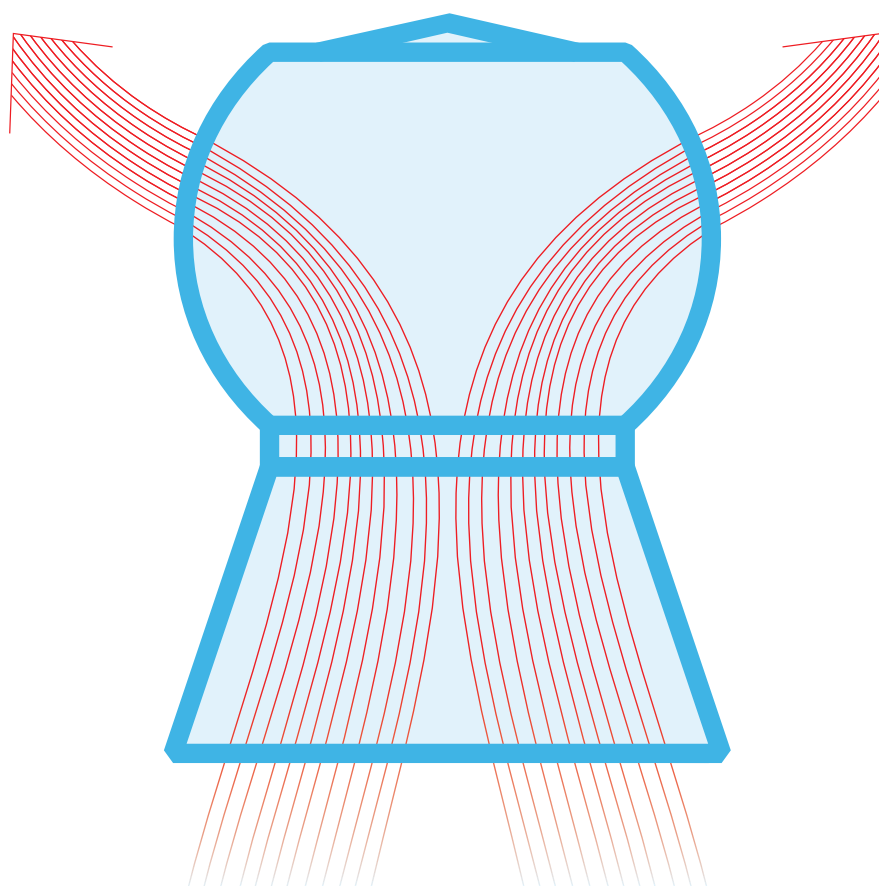
The spherical design of the 5 Series builds on this by promoting the effect of wind as it wraps around the spherical shaped head and draws from the leeward side. With a free open area 25% larger than a typical straight vane ventilator, we have maximised this wind effect ensuring high air flow performance rates. The unique blade design and large free open area maximises the efficiency of air moving through the ventilator and out of the building without compromising its weathertight capabilities. The 5 Series is CSIRO tested to AS2428 & AS1668 and has proven design advantages over other 'rotary roof vent' designs in the market.

Performance Certification

The Flow Rate Performance Ratings for the 5 Series Ventilators in this publication are based on formulas & guidelines as outlined by The American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) on Natural Ventilation & combined with the Mechanical Effect (of wind on ventilation rates) by wind tunnel tests.

The 5 Series Ventilators have been tested for Wind Resistance, Rain Resistance & Discharge Coefficient (Effective Aerodynamic Area) by CSIRO Laboratories under AS2428:2004 parts 1, 2 & 5 (equivalent to AS/NZS4740:2000 Appendix H, C & D). The 5 Series Ventilators have also been tested for Fire by CSIRO Laboratories under AS/NZS 1668.1:1998.

The Airocle 5 Series Ventilators have not been tested for Flow Rate Performance to AS/NZS4740:2000 Appendix E, as no suitable/or agreed methods have been established to date for testing the performance for spherical vane rotary ventilators.



Installation

Custom fabricated bases to match the pitch and profile of your roof make installation quick and simple saving you time on the roof and ensuring your project runs efficiently even on the most complex roof.

Bushfire Rated

Apart from being tested for flame contact and fire rating by the CSIRO, the 5 Series can also incorporate bushfire rated mesh in the vent to ensure that embers cannot enter the internal environments and assists buildings comply with AS3959.

Quality

Engineered and manufactured in Australia using high quality materials, the 5 Series provides the integrity and longevity that is vital for the success of projects. With the ability to fabricate from aluminium, Zinalume®, Colorbond®, galvanised steel or stainless steel, this ventilator provides the design flexibility to meet the most demanding environments.

Weathertight

The unique corrugated blade design and precision engineering ensures that our vents are able to achieve high levels of airflow while maintaining complete weather tightness. Tested by the CSIRO to AS2428.1 & 2 (Rain and Wind), we have made sure we protect the integrity of your building from the elements.

Snow Resistance

The spherical rotary head design of the 5 Series ensures that snow is quickly expelled from the vent surface and does not build up against or on top of the vent - prohibiting the build up of snow melting into the ventilator and protecting your internal environment and ventilation performance.

Cyclone Rated

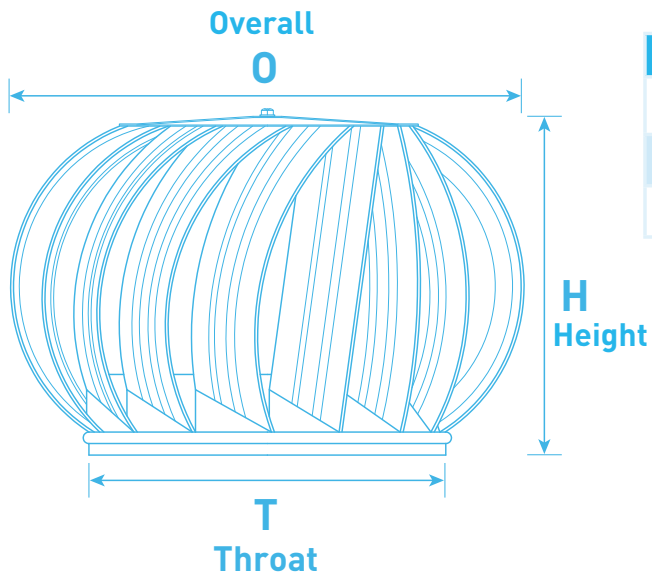
The 5 Series cyclone rated option can be rated for either Region C or D cyclone regions ensuring the structural integrity and performance across all parts of Australia. This has seen the 5 Series become common feature on buildings throughout tropical regions including mining operations and cyclone

Dimensions and Mass

Head Only

| MODEL | (T) (mm) | (O) (mm) | (H) (mm) | MASS (kg) | CYCLONE RATED (Cat C) (Cat D) | | FIRE RATED (AS1668.1) |
|----------|-------------|-------------|-------------|--------------|-----------------------------------|---|--------------------------|
| 50V.0300 | 305 | 430 | 385 | 5.0 | ✓ | ✓ | ✓ |
| 50V.0350 | 355 | 500 | 440 | 9.2 | ✓ | ✓ | ✓ |
| 50V.0400 | 406 | 540 | 473 | 11.2 | ✓ | ✓ | ✓ |
| 50V.0450 | 457 | 610 | 533 | 15.0 | ✓ | ✓ | ✓ |
| 50V.0500 | 508 | 692 | 593 | 17.5 | ✓ | ✓ | ✓ |
| 50V.0600 | 610 | 825 | 693 | 23.5 | ✓ | ✓ | ✓ |
| 50V.0685 | 686 | 950 | 780 | 27.0 | ✓ | ✓ | ✓ |
| 50V.0760 | 762 | 1010 | 870 | 32.0 | ✓ | ✓ | ✓ |
| 50V.0840 | 838 | 1090 | 920 | 40.0 | ✓ | ✓ | ✓ |
| 50V.0900 | 915 | 1170 | 970 | 43.0 | ✓ | ✓ | ✓ |
| 50V.1050 | 1067 | 1330 | 974 | 44.0 | ✓ | ✓ | ✓ |
| 50V.1200 | 1220 | 1480 | 1050 | 46.0 | ✓ | ✓ | ✓ |

Note: Mass is based on Zinalume fabrication. Fabrication for alternative materials will alter published mass figures. Please contact us for further details if required. For ventilator performance please refer to the air flow performance chart in this catalogue.



| Series | Description |
|----------|-------------------------------|
| 5AV.xxxx | Signifies transition base |
| 5BV.xxxx | Signifies spigot base |
| 50V.xxxx | Signifies no base (Head Only) |

Materials and Finishes

The 5 Series is available in a wide range of materials and finishes ensuring that your ventilation system will meet the engineering and aesthetic demands of your project.

| MATERIAL | MILL FINISH | COLOURBOND | COLOURBOND METALIC | COLOURBOND ULTRA | DULUX COLOURS |
|--------------------------------|-------------|------------|--------------------|------------------|---------------|
| ZINCALUME | ✓ | ✓ | ✓ | ✓ | ✓ |
| ALUMINIUM | ✓ | ✓ | ✓ | ✓ | ✓ |
| ALUMINIUM (MARINE GRADE) | ✓ | ✓ | ✓ | ✓ | ✓ |
| STAINLESS STEEL | ✓ | ✓ | ✓ | ✓ | ✓ |
| STAINLESS STEEL (MARINE GRADE) | ✓ | ✓ | ✓ | ✓ | ✓ |
| GALVANISED STEEL | ✓ | ✓ | ✓ | ✓ | ✓ |

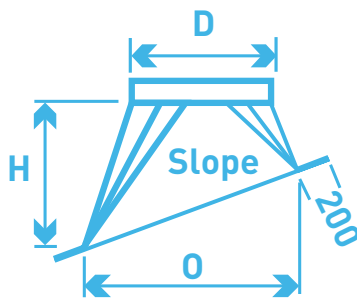
Note: 50V.1050 and 50V.1200 models are not available in Zinalume fabrication and will be fabricated in Aluminium as standard.

NOTE: Colourbond Finish is Two Pack Vitre-coat coating, matching Colorbond® colours.

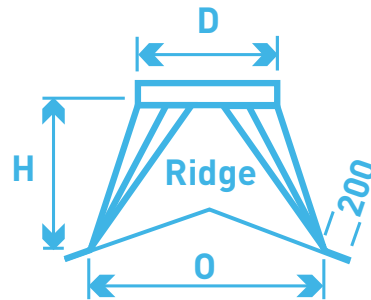
Transition Base

Providing 15% better airflow performance than traditional spigot bases, the transition base by Airocle continues our proud tradition of maximising air flow performance for your building. The square-to-round design promotes improved airflow through funnelling air into the ventilator while providing a stronger more stable base for harsh environments including for cyclone regions.

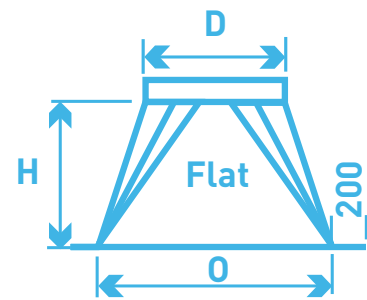
Base Type 1 Slope Mounted



Base Type 2 Ridge Mounted



Base Type 3 Flat Base



Details

| Base Diameter | D (mm) | O (mm) | H (mm) | Mass (kg) |
|---------------|--------|--------|--------|-----------|
| 5AV.0300 | 300 | 400 | 200 | 4.0 |
| 5AV.0350 | 350 | 470 | 250 | 4.6 |
| 5AV.0400 | 400 | 500 | 250 | 6.0 |
| 5AV.0450 | 450 | 570 | 300 | 7.6 |
| 5AV.0500 | 500 | 620 | 300 | 9.1 |
| 5AV.0600 | 600 | 800 | 400 | 10.3 |
| 5AV.0685 | 685 | 850 | 400 | 11.5 |
| 5AV.0760 | 760 | 910 | 450 | 12.6 |
| 5AV.0840 | 840 | 1005 | 450 | 14.3 |
| 5AV.0900 | 900 | 1100 | 450 | 16.4 |
| 5AV.1050 | 1050 | 1220 | 600 | 18.1 |
| 5AV.1200 | 1200 | 1400 | 600 | 21.4 |

| Series | Description |
|----------|-------------------------------|
| 5AV.xxxx | Signifies transition base |
| 5BV.xxxx | Signifies spigot base |
| 5OV.xxxx | Signifies no base (Head Only) |

Transition Base Options

| Base Diameter | OPERABLE DAMPERS | | | BOOSTER/ SMOKE FAN | CYCLONE RATED | | Fire Rated [AS1668.1] | Bushfire Mesh [AS3959] |
|---------------|------------------|------------|-------------|-----------------------|---------------|---------|--------------------------|---------------------------|
| | (Manual) | (Electric) | (Pneumatic) | | (Cat C) | (Cat D) | | |
| 5AV.0300 | ✓ | ✓ | ✓ | X | ✓ | ✓ | ✓ | ✓ |
| 5AV.0350 | ✓ | ✓ | ✓ | X | ✓ | ✓ | ✓ | ✓ |
| 5AV.0400 | ✓ | ✓ | ✓ | X | ✓ | ✓ | ✓ | ✓ |
| 5AV.0450 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 5AV.0500 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 5AV.0600 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 5AV.0685 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 5AV.0760 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 5AV.0840 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 5AV.0900 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 5AV.1050 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 5AV.1200 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

When ventilation is used in high cyclonic regions, it is highly recommended and advised that vents are made operable to close off in undesirable weather conditions.

Installation Made Easy

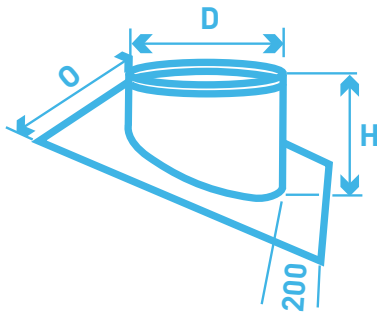
Rather than supply you with complicated adjustable throat design, every transition base we supply is built to suit the pitch and profile of the roof, making it simpler, safer and reducing the amount of time you need to be on the roof, supported by detailed installation instructions.



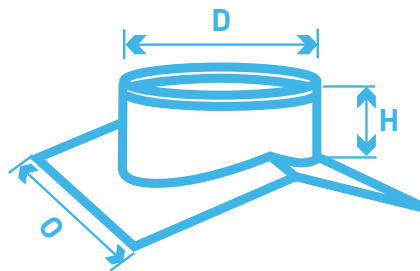
Spigot Base

The traditional spigot base delivers economy and a low profile to the 5 Series. Built from quality Australian materials, the spigot base provides installers and designers a simple, economical yet effective solution for implementing natural ventilation in their building.

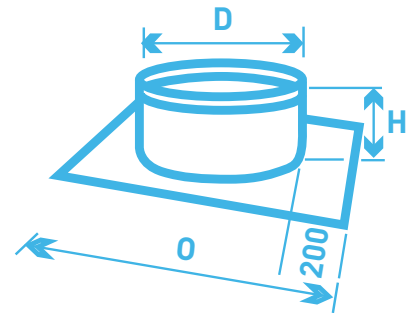
Base Type 4
Slope Mounted



Base Type 5
Ridge Mounted



Base Type 6
Flat Base



Details

| Base Model | D (mm) | O (mm) | H (mm) | Mass (kg) |
|------------|----------------------------|--------|--------|-----------|
| 5BV.0300 | 300 | 700 | 100 | 3.2 |
| 5BV.0350 | 350 | 750 | 100 | 3.7 |
| 5BV.0400 | 400 | 800 | 100 | 4.8 |
| 5BV.0450 | 450 | 850 | 100 | 6.1 |
| 5BV.0500 | 500 | 900 | 150 | 7.3 |
| 5BV.0600 | 600 | 1,000 | 150 | 8.2 |
| 5BV.0685 | 685 | 1,085 | 175 | 9.2 |
| 5BV.0760 | 760 | 1,140 | 200 | 10.1 |
| 5BV.0840 | 840 | 1,240 | 200 | 11.5 |
| 5BV.0900 | 900 | 1,300 | 200 | 13.1 |
| 5BV.1050 | SPIGOT BASES NOT AVAILABLE | | | |
| 5BV.1200 | SPIGOT BASES NOT AVAILABLE | | | |

| Series | Description |
|----------|-------------------------------|
| 5AV.xxxx | Signifies transition base |
| 5BV.xxxx | Signifies spigot base |
| 5OV.xxxx | Signifies no base (Head Only) |

Note: Mass is based on Zinalume fabrication. Fabrication for alternative materials will alter published mass figures. Please contact us for further details if required.

Spigot Base Options

| Base Model | OPERABLE DAMPERS | | | BOOSTER FAN | CYCLONE RATED | | Fire Rated [AS1668.1] | Bushfire Mesh [AS3959] |
|------------|------------------|------------|-------------|-------------|---------------|---------|-----------------------|------------------------|
| | (Manual) | (Electric) | (Pneumatic) | | (Cat C) | (Cat D) | | |
| 5BV.0300 | X | X | X | X | X | X | ✓ | ✓ |
| 5BV.0350 | X | X | X | X | X | X | ✓ | ✓ |
| 5BV.0400 | X | X | X | X | X | X | ✓ | ✓ |
| 5BV.0450 | X | X | X | X | X | X | ✓ | ✓ |
| 5BV.0500 | X | X | X | X | X | X | ✓ | ✓ |
| 5BV.0600 | X | X | X | X | X | X | ✓ | ✓ |
| 5BV.0685 | X | X | X | X | X | X | ✓ | ✓ |
| 5BV.0760 | X | X | X | X | X | X | ✓ | ✓ |
| 5BV.0840 | X | X | X | X | X | X | ✓ | ✓ |
| 5BV.0900 | X | X | X | X | X | X | ✓ | ✓ |

Installation Made Easy

We believe in making your life easier. Rather than supply you with complicated adjustable throat design, every spigot base we supply is built to suit the pitch and profile of the roof, making it simpler, safer and reducing the amount of time you need to be on the roof.



Performance

To provide our customers with the best experience, we are working on upgrading our website to include a new calculator that will allow you to have all relevant information in a few clicks. In the meantime, please contact our sales team for assistance with any airflow calculations.

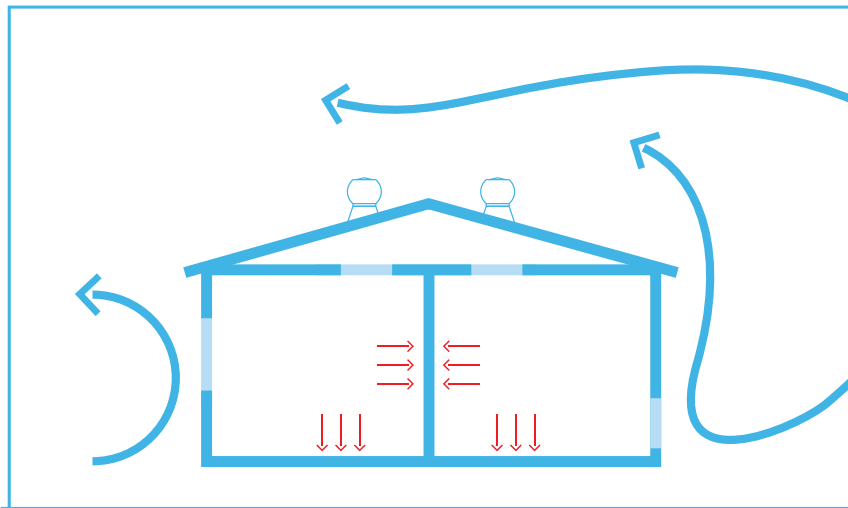
Inlet/Makeup Air

Due to the need for makeup air, adequate inlets are essential for any ventilation system to operate effectively. While it is recommended an inlet ratio of 1.5 : 1 (inlet : discharge) exist, Airocle can assist in designing or developing a ventilation system to suit custom circumstances.

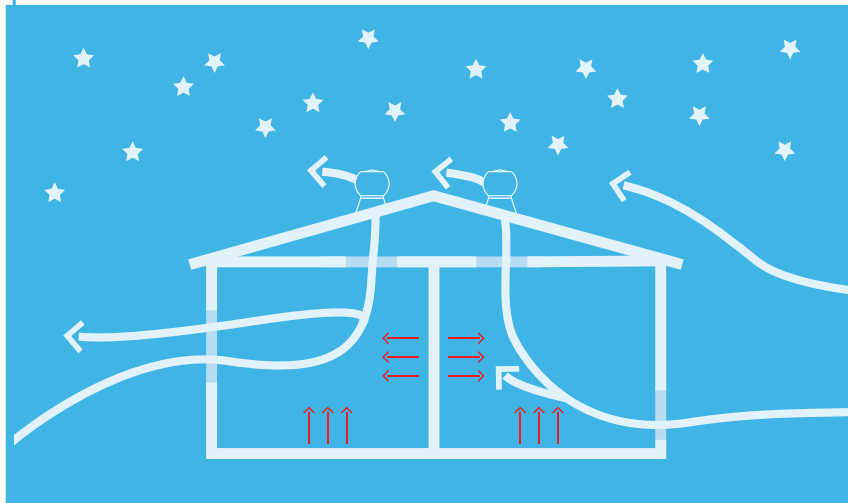
Night Purge

Night flushing works by opening up the Natural Ventilation system throughout the night, to cool down the thermal mass in a building by convection. Early in the morning before temperatures rise too far, the building is closed and kept sealed throughout the day to prevent hot air from outside entering. During the day, the cool mass absorbs heat from occupants and other internal loads.

DAY



NIGHT



Booster fans with manual or automatic timing controls can play a fundamental role in getting the most out of your night purge system. By overcoming the often still air during night time periods, booster fans have successfully allowed classrooms, laboratories, halls and offices to achieve comfortable environments throughout the day while keeping windows and doors closed, and the noise outside.

Booster Fan

Incorporating a booster fan into your [5 Series](#) gives building designers the combination of reliable natural and mechanical ventilation. Switch between the economy and sustainability of natural airflow and the reliability of mechanical extraction, and embrace the cost and environmental benefits of using a truly hybrid system.

Airocle [5 Series](#) give you the sustainability and energy efficiency of natural ventilation during normal operation with the security and reliability and flexibility of increased airflow performance in night purge situations with the activation of booster fans.

Higher Performance

We have focused on providing designers a high performance natural ventilation product with the ability to reliably boost this natural force with established fan principles when required - achieving much higher air flow rates than comparative hybrid designs.

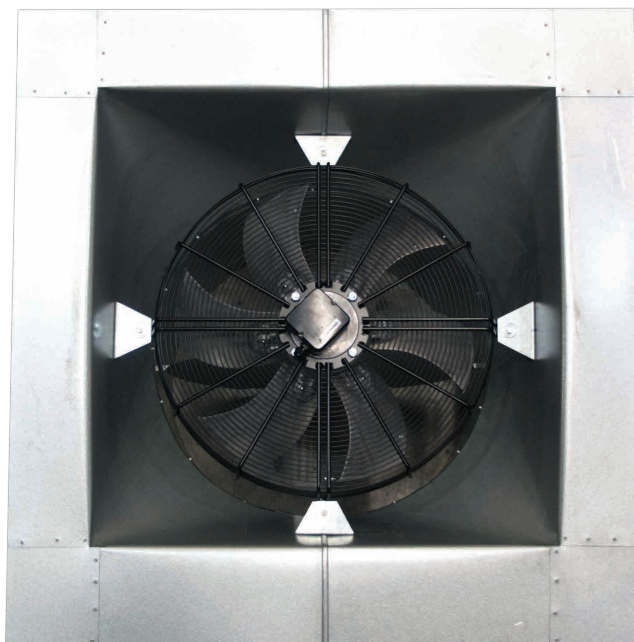
No Reduction In Throat Area

Our booster fan arrangement ensures that the throat area of each ventilator is not restricted.

By mounting each booster fan in the larger volumetric area of the underneath transition base, it allows air to move freely through to the ventilator during natural mode and deliver uninterrupted airflow.

Note: All installation must be in accordance with Airocle's fixing and connection details.

Series 5 Hybrid Ventilation Booster Fan Performance Table



Airocle Booster Fan

A Fire Rated Smoke Hazard Management Solution

The Fire Rated (FR) smoke spill fan option along with our fire rated (FR) 5 Series product range ensures that your smoke hazard management system has the capability to be incorporated into high sensitivity and demanding environments.

Rated for 200°C for 120 minutes; 300°C for 30 minutes, Airocle 5 Series meet all relevant fire brigade requirements, standards and building codes, while improving sustainability and project budgets.

Incorporating a smoke spill fan into your fire rated 5 Series gives building designers the option of reliable smoke hazard management and natural ventilation. Switch between the economy and sustainability of natural airflow for ventilation and the reliability of mechanical smoke extraction in the event of fire situations. The smoke spill fans allow for increased airflow performance for smoke management during a fire with the fans triggered from the FIP.

Note: Smoke spill fans are not to be used for general ventilation purposes. They must only used for smoke clearance.

****All smoke spill fans are custom made to order. Should you require a hybrid system for smoke spill, please contact Airocle****

| Smoke Spill Fan | Airflow @ 50Pa | Motor Type | Electrical Supply | kW & Amps | SPLA @ 3m (dB) |
|-----------------|----------------|---|-------------------|--------------|----------------|
| | 3000-5000L/sec | Class F (200degC @ 2hrs) Class H (300degC @ 1/2hr) | 3 phase | Upon Request | Upon Request |

Note: All installation must be in accordance with Airocle’s fixing and connection details.

Dampers

Description

Using European designed electric actuators; the ability to open, close or restrict airflow through the ventilator makes it perfect for summer/winter operations or link to a range of control sensors. With the ability to be power or spring return open/close or even modulating, it provides an excellent way of controlling airflow while remaining weathertight.

Pneumatically Operable Dampers

Pneumatic operable dampers provide the ability to control ventilation airflow and operate under power failure situations through our compressor and receiver tank design – making them an excellent weathertight way to reliably perform smoke hazard management and operate during emergencies.

Manually Operable Dampers

Manually operated dampers make ventilation control easy. Supplied with cord, guides and a return spring shut damper blade, this option allows smaller buildings an economical and simple way of keeping building occupants in comfort.

Mesh

Bird Guards, Insect Mesh, Bushfire Mesh

Keeping birds, insects, debris and fire embers from entering the ventilator is important for sensitive internal environments and in bushfire prone zones. Our ability to incorporate a range of mesh materials and apertures within the [5 Series](#) ensures your building is secure.

| MESH TYPE | APPERTURE (mm) | WIRE DIAMETER (Ømm) | OPEN AREA (%) | MATERIAL |
|-----------|----------------|---------------------|---------------|------------------|
| Bushfire | 1.4 | 0.56 | 61 | Stainless Steel |
| Insect | 1.4 | 1.6 | 67 | Aluminium |
| Bird | 11.2 | 1.6 | 77 | Galvanised Steel |

Cyclone Rated

The [5 Series](#) (transition base only) can be rated for up to Category D cyclone regions under AS1170 ensuring the structural integrity and performance across all parts of Australia. This has seen the [5 Series](#) become common feature on buildings throughout tropical regions including mining operations and cyclone shelters.

Fire Rated

The fire rated (FR) 5 Series option gives designers the ability to use natural ventilation in fire and smoke environments, meeting all relevant fire brigade requirements, standards and building codes, while improving sustainability and budget outcomes.

The fire rated (FR) 5 Series, and optional dampers and smoke spill fans are all rated for:

- a) 200°C for 120 minutes
- b) 300°C for 30 minutes



FIRE TESTED
AS/NZS1668.2 &
AS/NZS2428.4

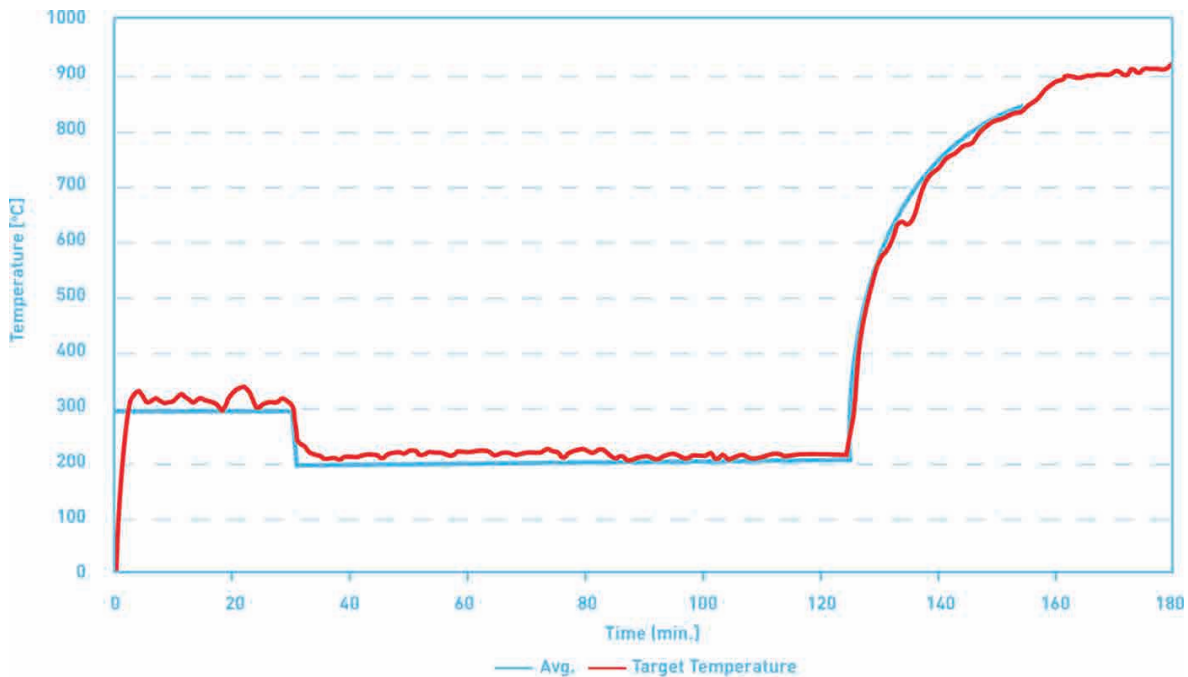


FIG 1. FURNACE TEMPERATURE

Tested to AS1668.1-1998 part 4.8.1, the 5 Series delivers reliable smoke exhaust, greater safety for occupants, and increases the ability for emergency services to safely access the building and fire.



Tested and certified by CSIRO®

Note: All installation must be in accordance with Airocle's fixing and connection details.

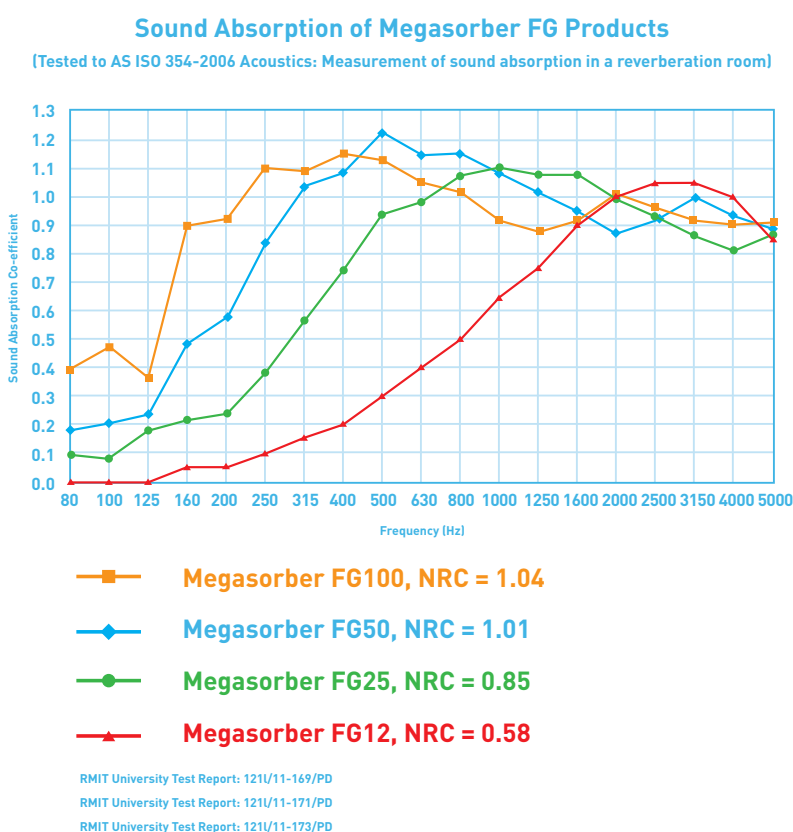
Acoustic Dampening

Our unique Phonic acoustic dampening system can be fully integrated into the 5 Series. An efficient method of noise attenuation, the use of ignition retardant and hydrolysis resistant insulation allows vents to reduce noise transmission both out of and into the building, and retain their high discharge coefficient heat and smoke ventilation properties.

Acoustic Performance

Tested to AS1045-1988 Reverberation Room.

| FREQUENCY (HZ) | RANDOM INCIDENCE ABSORPTION COEFFICIENT | | |
|----------------|---|-----------------|------------------|
| | Megasorber FG25 | Megasorber FG50 | Megasorber FG100 |
| 100 | 0.08 | 0.21 | 0.47 |
| 125 | 0.18 | 0.24 | 0.37 |
| 160 | 0.22 | 0.49 | 0.90 |
| 200 | 0.24 | 0.58 | 0.92 |
| 250 | 0.38 | 0.85 | 1.10 |
| 315 | 0.56 | 1.04 | 1.09 |
| 400 | 0.74 | 1.09 | 1.15 |
| 500 | 0.94 | 1.23 | 1.13 |
| 630 | 0.98 | 1.15 | 1.05 |
| 800 | 1.07 | 1.15 | 1.01 |
| 1000 | 1.11 | 1.08 | 0.92 |
| 1250 | 1.08 | 1.02 | 0.88 |
| 1600 | 1.08 | 0.95 | 0.91 |
| 2000 | 0.99 | 0.87 | 1.01 |
| 2500 | 0.93 | 0.92 | 0.96 |
| 3150 | 0.86 | 1.00 | 0.91 |
| 4000 | 0.81 | 0.94 | 0.90 |
| 5000 | 0.86 | 0.89 | 0.91 |
| NRC | 0.85 | 1.01 | 1.04 |
| Δw | 0.7(MH) | 1.00 | 1.00 |

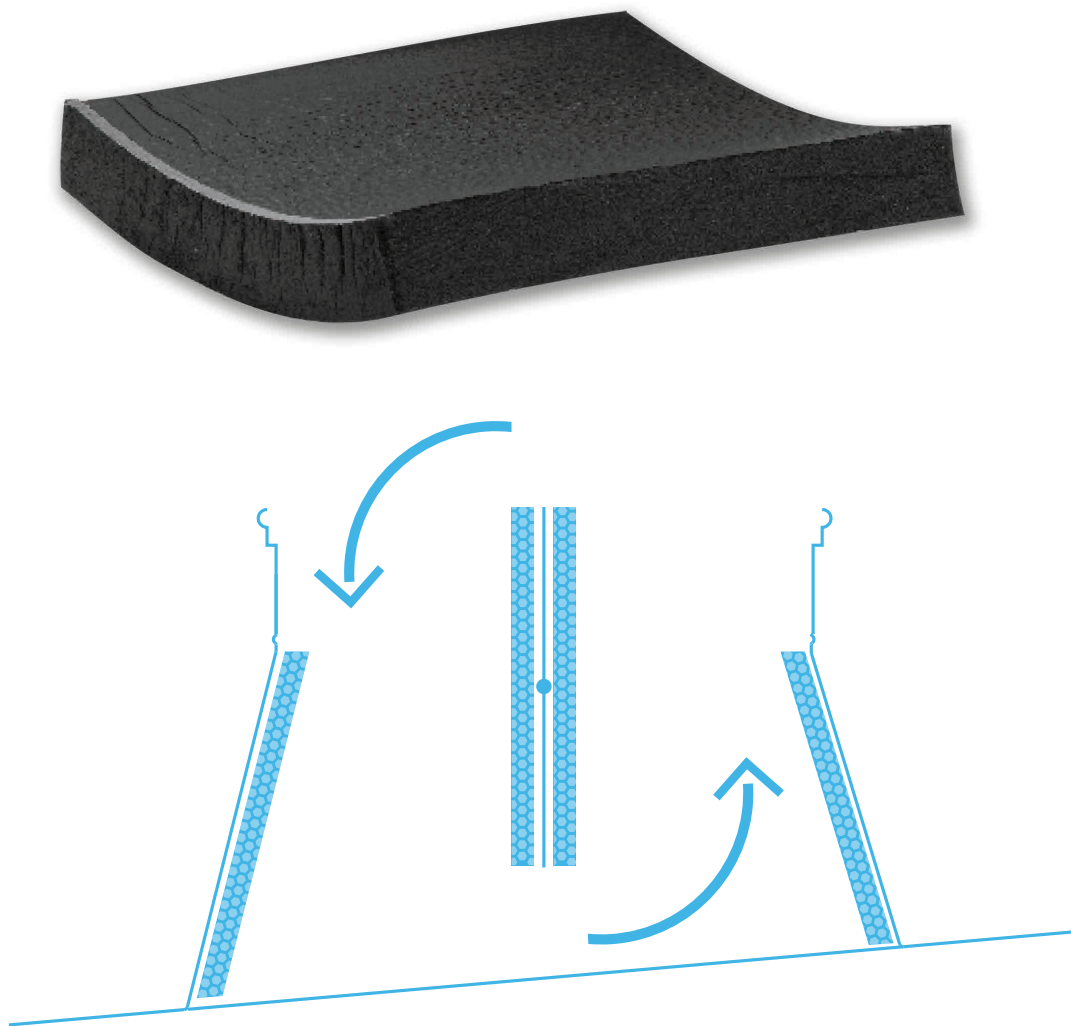


Airflow Control

Take control of your natural ventilation system through Airocle’s range of air flow controls and sensors. Whether it be for emergency response, safeguarding optimal internal conditions or ensuring efficient airflow performance, the 5 Series has a range of sensors, controls and air flow dampers to ensure that your system can achieve what you want it to.

A Sound Advantage

Finding a way to minimise the transmission of noise out of or into buildings while passively ventilating your building is easy. The ability to acoustically treat the 5 Series and achieve a minimum NATA tested Sound Transmission Class (STC) of 10 ensures that your ventilation system keeps the noise where it's meant to be. (Tested in NATA approved laboratory to AS119-1985 and for AS1045-1988).



Material Properties

| COLOUR (Facing) | RECOMMENDED MAXIMUM SERVICE TEMPERATURE (°c) | THERMAL CONDUCTIVITY (W/mK) |
|-----------------|--|-----------------------------|
| Black | 100 | 0.003 |

Chemical Resistance (facing)

| ACETONE | MEK | PETROL | DIESEL |
|---|---------|--------|--------|
| Swells* | Swells* | Good | Good |
| *Swells and then returns to normal on drying. | | | |

Flammability Properties

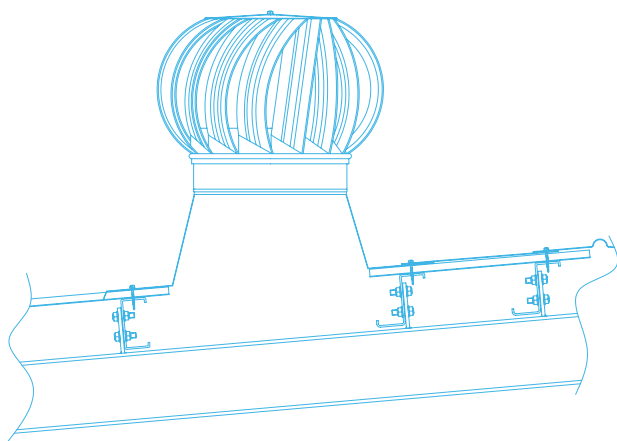
| TEST METHOD | INDEX | RESULTS | DESCRIPTION |
|-------------|------------------------------|--------------------|-------------------------------|
| UL94 | After flame time ≤ 2 seconds | HBF* | Horizontal Burn Test for foam |
| FMVSS-302 | Burn rate - mm/min | Self Extinguishing | Automotive burn rate test |

*Result applies to 12mm thickness.

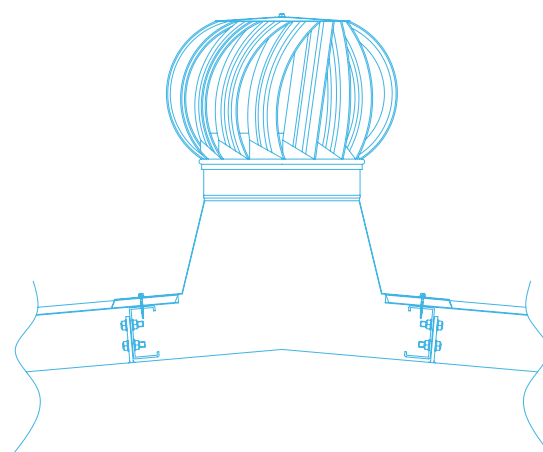
Typical Installation

An even distribution across the roof area is appropriate for flat or very shallow roofs, but venting in steep roofs would be more effective if located near the apex.

Slope Mounted



Ridge Mounted



Installing on Roofs

Installation is simple and quick due to each base being custom made to suit the pitch and profile of your roof. Vents are assembled fully assembled as head and base components.

The building contractor must ensure that the vent is fitted appropriately to the roof structure and that any internal structural supports do not impede the flow path through the vent under normal operating conditions.

Vents will be provided with a full installation manual to ensure ease of installation.

Installation details are available from Airocle on request. Please contact us on 1800 805 062 as we are more than willing to help.

Determining Vent Location

Vents should generally be located at 6 metre spacing to optimise airflow performance of each ventilator. Ventilators should generally be placed at the highest point of a roof to maximise the impact of stack effect.



Ridge Line



Ridge Line



Ridge Line



Ridge Line

Avoid locating ventilators directly next to each other or against surfaces which may restrict the ability for efficient exhaust and wind effect.

Materials & Finishing

We have ability to suit every application including corrosive environments by fabricating the **5 Series** in:

- Colorbond
- Colorbond Ultra
- Zinalume
- Galvanised steel
- Aluminium
- Stainless steel
- Copper

Our manufacturing process also allows us to colour match custom colours as well as provide all Colorbond, Colorbond Metallic and Dulux colour finishes.

How to Specify

Description

Roof ventilator(s) shall be of a rotary design incorporating a sealed bearing axle system. Design shall include all applicable dampers, accessories, fixings and flashings. Install to manufacturers recommendations.

Size

Roof ventilator(s) shall be ____ mm in diameter and located as per architectural drawings. Refer to architectural drawings or contact Airocle (1800 805 062) to calculate number of ventilators required, internal and external heat loads and air change required to maintain acceptable internal ambient temperature, and to provide proof of adequacy of design for purpose.

Base

Roof ventilator(s) shall be fitted with a 5AV.xxxx transition base or 5BV.xxxx spigot base to suit the ventilator diameter.






Performance

Each roof ventilator shall be capable of achieving ____ m³/sec under ____ km/h wind speed, ____ °ΔT and ____ m effective stack height parameters or

Each roof ventilator shall be capable of achieving ____ m³/sec under design conditions of _____.

Testing

Roof ventilator(s) shall be designed and made in Australia using Australian materials. Roof ventilator(s) shall have a minimum coefficient of discharge (Cd) of 0.70 and be tested to:

| | | |
|--|--|---|
|  RAIN AS2428.1 |  WIND AS2428.2 |  FIRE AS2428.4 & 1668.2 |
|  COEFFICIENT OF DISCHARGE AS2428.5 |  CYCLONE RATED | |

Proprietary Item

5 Series Model _____ as manufactured by Airocle
(www.airocle.com.au or 1800 805 062)

Features

Ventilator shall incorporate:

- Internal acoustic insulation with a sound transmission class (STC) of 13
- Fire Rated construction to 200°C/120min plus 300°C/30min as per AS1668.1
- Spring return open/close disc damper with pneumatic /240v/24v electric/ manual control to be located in the base throat
- Spring return open/close fire rated damper with pneumatic/electric/ manual control to be located in the base throat
- Booster Fan shall be of an axial fan design located in a transition base to ensure no throat area restriction, and be capable of achieving _____ m³/hr
- Stainless steel bush fire mesh to be located in the throat of the base to meet AS3959 consisting of a 2.0mm aperture, 0.56mmØ, 61% open area
- Security Mesh in 0.9mm 304 grade stainless steel with tamper resistant screws and frame with ≥61% FOA

Fabrication and Finish

Ventilator(s) to be constructed in Zincalume®/Colorbond®/Aluminium/ Stainless Steel/Galvanised Steel/Marine Grade Aluminium/Marine Grade Stainless Steel complete with standard/stainless steel working parts

Base(s) shall be constructed in Zincalume®/Colorbond®/Aluminium/ Stainless Steel/Galvanised Steel/ Marine Grade Aluminium/Marine Grade Stainless Steel

Colour to match adjacent roof sheeting unless specified. Refer to External Finishes Schedule.

Disclaimer

The information contained in this work has been provided with every effort having been made to ensure accuracy and completeness. However, many of the statements contained in the catalogue are of a general nature and no guarantee is given, nor responsibility taken by Airocle for errors or omissions and Airocle does not accept responsibility in respect of any information or advice given in relation to or as a consequence of anything contained herein. Purchasers should seek their own independent advice as to the suitability of the products and materials contained in the catalogue for their particular circumstances. As Airocle are committed to ongoing product development, all dimensions, designs, specifications, descriptions, text results and exhaust capacities represented in this catalogue are subject to change without prior written notice.

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Australian owned, Airocle provides customers with a comprehensive and balanced portfolio of innovative natural ventilation solutions for sustainable commercial, industrial and community building design.

Think Natural. Think Smarter.

To find out more visit our website
Airocle.com.au or call **1800 805 062.**



KNOWLEDGE BANK
INSPIRE + EDUCATE

The Airocle Knowledge Bank is an online resource centre designed to inspire and educate you and your clients on the benefits of natural ventilation. To find out more visit [Airocle.com.au](https://www.airocle.com.au)

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OWNED + MADE**

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