

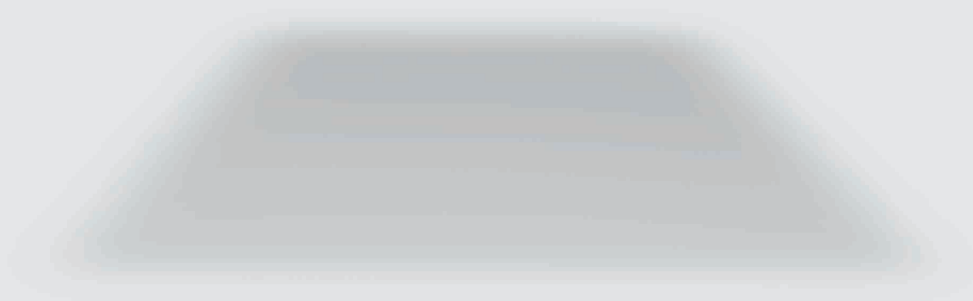
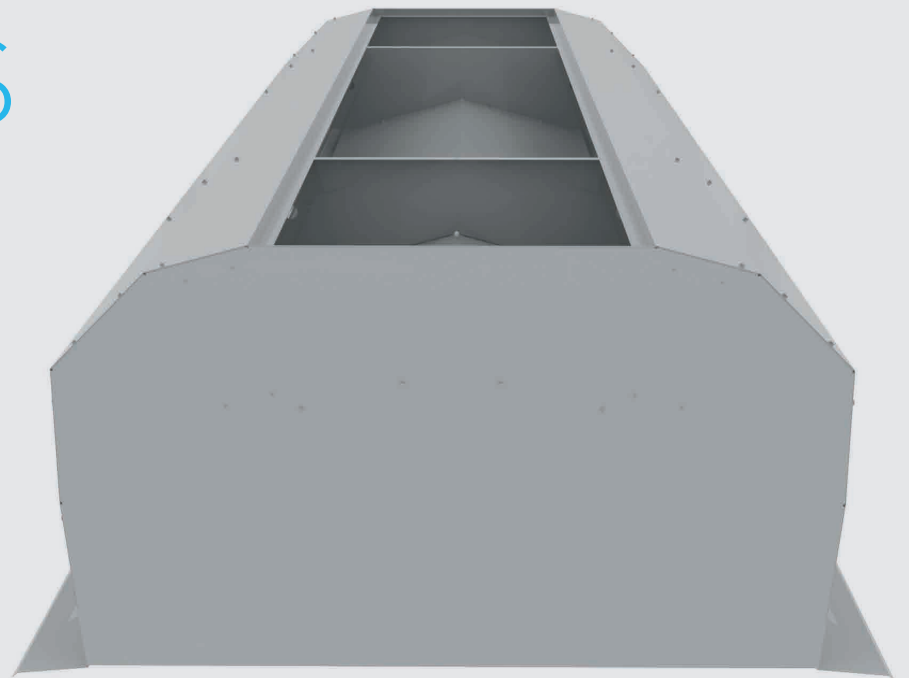
Airocle™

Think Natural.™
Think Smarter.



1 Series

THE MOST EFFECTIVE LOW PROFILE VENTILATOR IN ITS CLASS



Roof

1 SERIES

VENTS & VENTILATORS

RIDGE & SLOPE VENTILATORS

Previously **Admiral Series**

CSIRO CERTIFIED



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

Vents & Ventilators

Ridge & Slope Ventilators



Roof Solutions



Passive Natural Ventilation



Engineered Design



Market Leading Performance



Ideal For Sustainable Building Design



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

1 SERIES

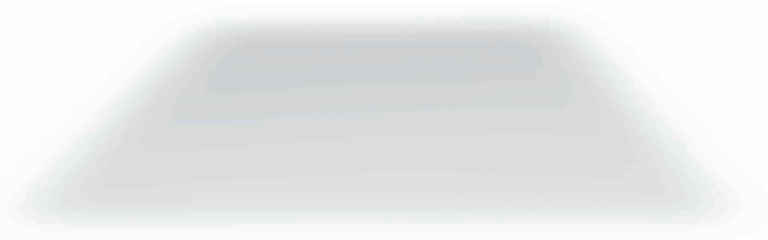
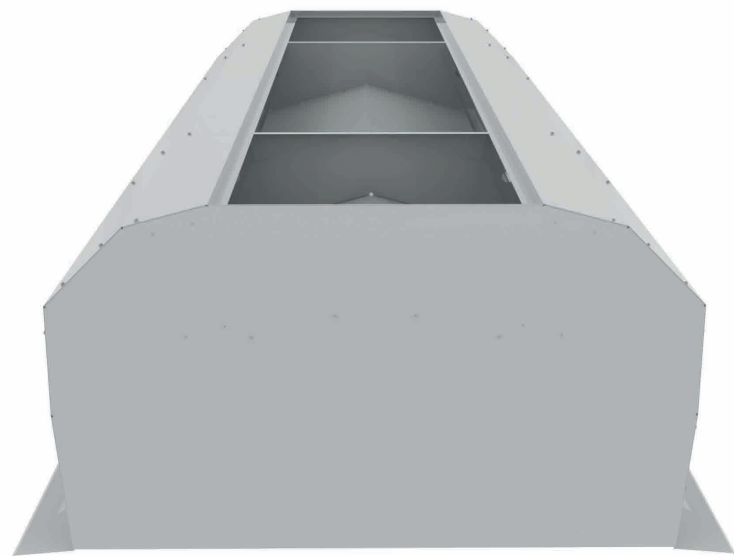


Removing heat and humidity in buildings with ease.

Perfect for low-medium heat loads, the **1 Series** ridge and slope ventilators provides a low-profile and aesthetically pleasing approach to performance-based natural ventilation.

This design allows for maximum performance with only minimal visual impact!

Tested and certified by CSIRO® for airflow, fire and weather performance, the **1 Series** delivers secure, reliable, weathertight ventilation in a low profile and economical way.



Design

Utilising the same internal guidevane engineering principles that are unique to all Airocle® ridge and slope ventilators, the **1 Series** offers market leading performance making this the perfect ridge and slope vent allrounder.

Projects benefiting from the **1 Series** include:

- Warehousing and Storage
- Defence and Government buildings
- School Classrooms and Halls
- Gymnasiums and Sports Centres
- Industrial Workshops
- Commercial Offices

Benefits

Low Profile

The **1 Series** is acclaimed for its discreet low profile appearance making it a favourite for projects with strict visual demands and building height requirements. The 0.36 coefficient of discharge and unique Airocle® guidevane system means that this design will still provide high performance natural ventilation across a range of environments.

Weathertight

The advantage of having our own engineering design team is that we understand how to make our products properly. Through incorporating guidevanes (with option of operable dampers), it ensures our vents meet and exceed AS2428.1 & .2 (Rain and Wind) allowing them to operate in the most extreme weather.

Pressure Relief

CSIRO® tested and certified with a 0.36cd, the **1 Series** allows engineers and building designers to factor this known coefficient of discharge into their projects. This has allowed projects to make large cost savings by reducing structural steel through improved building pressure relief.

Cost and Energy Efficiency

Passive ventilation is by far the most effective way of reducing construction and operating costs in building design. Eliminating the need for electrical wiring and running costs normally associated with mechanical ventilation, the **1 Series** continues to make buildings more sustainable and cheaper to run.

Tailor-Made

Designing and manufacturing our ventilation products in-house means we can tailor any product to suit the complexities that your project may require.

Quality



RAIN
AS2428.1



WIND
AS2428.2



FIRE
AS2428.4



COEFFICIENT OF DISCHARGE
AS2428.5



CYCLONE RATED

We believe in providing you the best products on the market by using Australian materials in our Australian manufacturing facilities

Along with using high quality materials and workmanship, the 1 Series is proven to perform and CSIRO tested to AS-2428, Parts 1, 2 Rain and Wind, Part 4 Fire and Part 5 Cd.

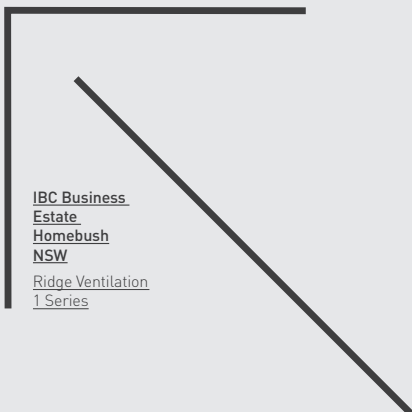


1 Series > Ridge + Slope

Scientific engineering principles
has lead to our 1 Series providing
optimal performance in all weather
conditions and minimises the risk
of back drafting and the entry of
moisture.



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



IBC Business
Estate
Homebush
NSW
Ridge Ventilation
1 Series

1 S

RIDGE + SLOPE DESIGN



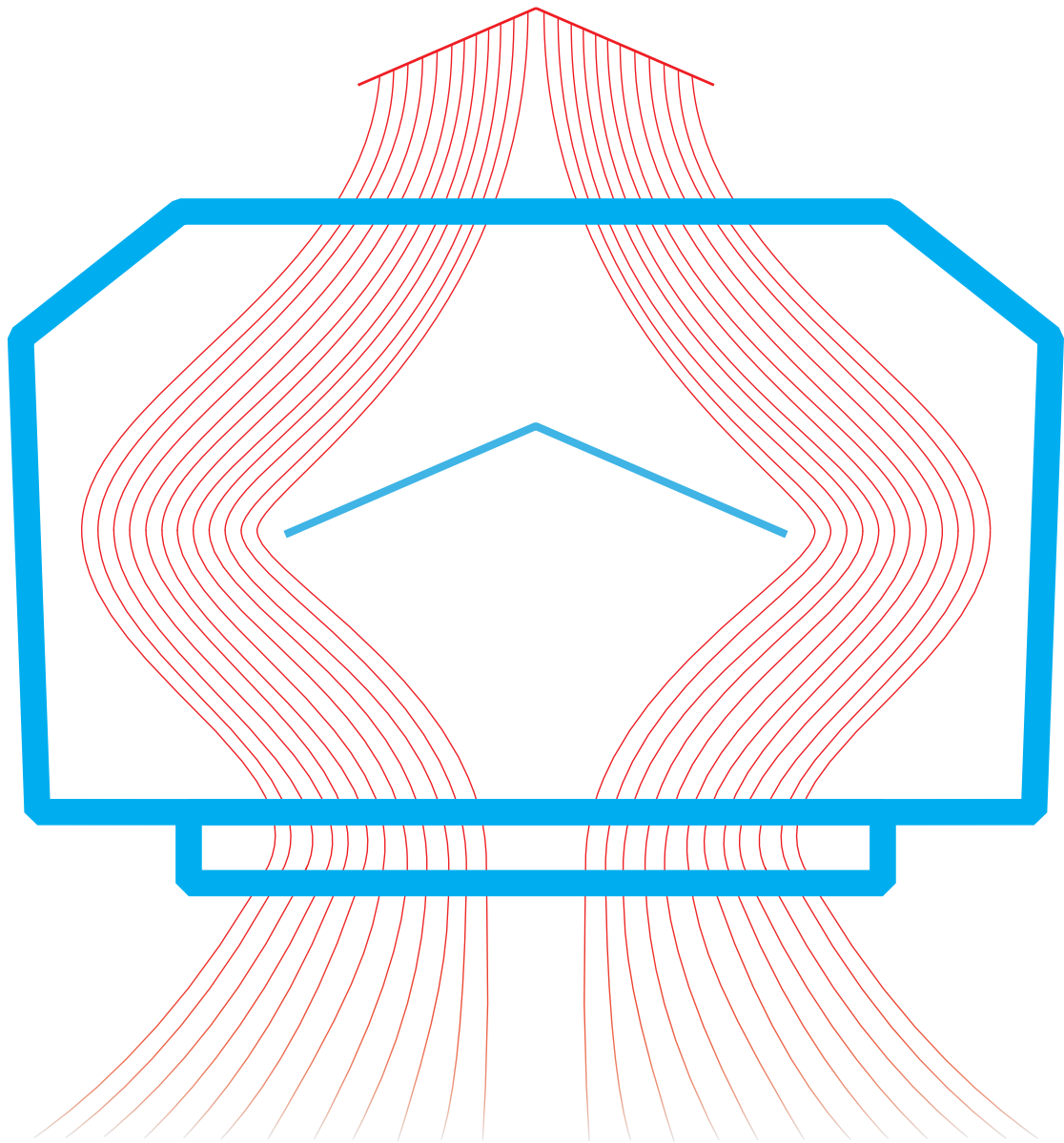
Scientific engineering principles has lead to our 1 Series providing optimal performance in all weather conditions and minimises the risk of back drafting and the entry of moisture.

The 1 Series is CSIRO tested to AS2428 and has proven design advantages over other 'vented ridge' designs in the market.



Upflow Design

The clever upflow design of the 1 Series provides an efficient path for air to pass through the vent while remaining weather resistant. Unlike traditional 'vented ridge' designs which provide an inefficient design which is at risk to back-drafting from air moving up the roof, the 1 Series Series operates by optimising the flow path through the ventilator. By letting air exit at the top of the ventilator, it allows natural forces such as Bernoulli's Principle to help draw air out of the building, improving performance.



Wind Jump Diaphragms

Our vents have wind jump diaphragms at nominated points in the ventilator. These diaphragms create air pressure edges when the wind is blowing across the ventilator, as well as along the ventilator, guaranteeing high performance regardless of wind direction.

Effective Water Drainage

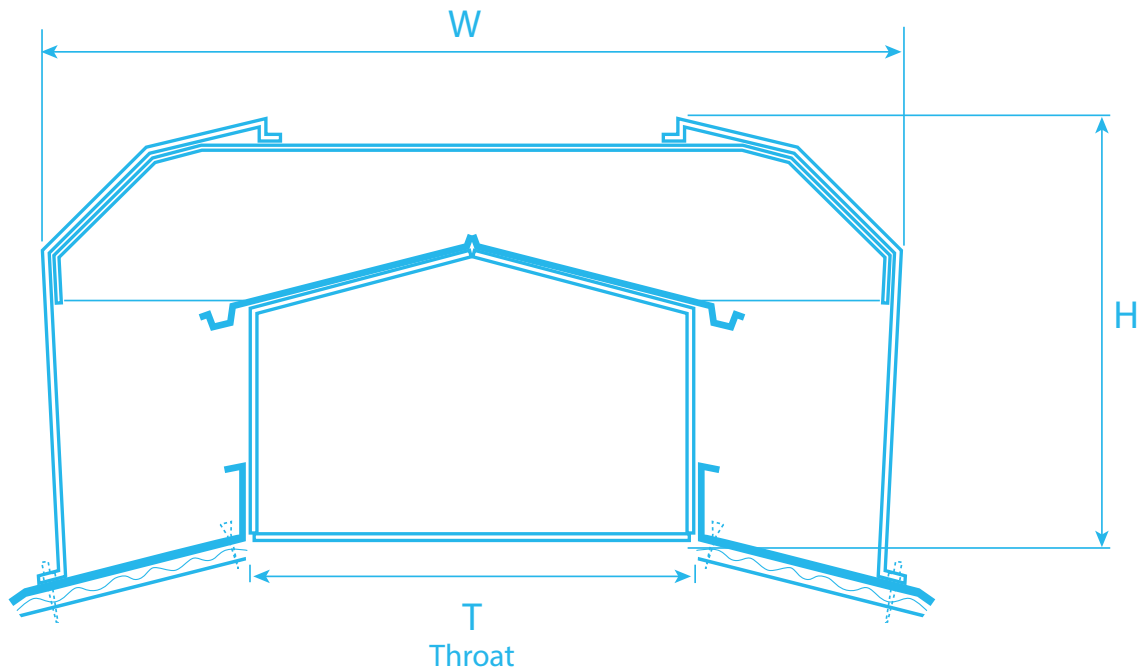
Rather than fighting the natural elements, the 1 Series incorporates a unique drainage system which guides water that enters the vent straight back out, ensuring weathertight performance even in cyclone conditions.

Size & Dimensions

Scientific engineering principles has lead to our 1 Series providing optimal performance in all weather conditions and minimises the risk of back drafting and the entry of moisture.

Ridge Type 1 Series

Dimensions + Mass

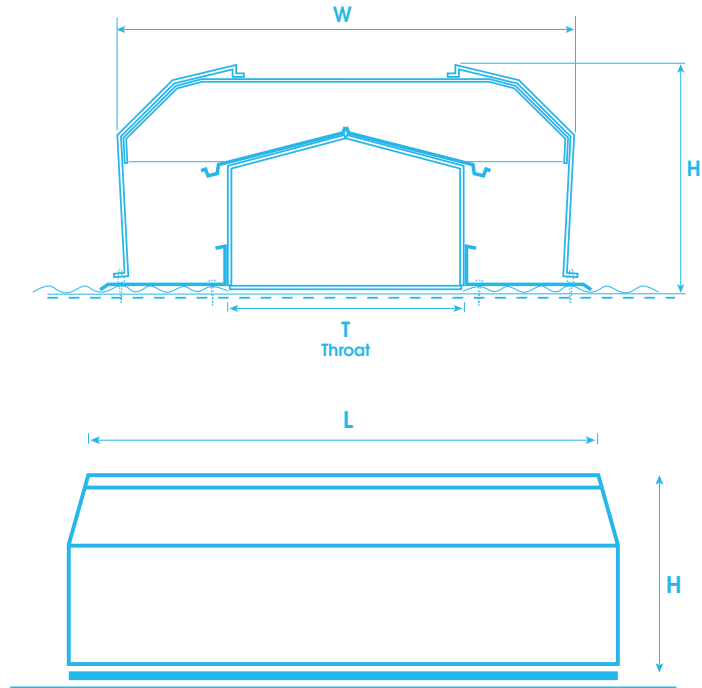


MODEL	(T) THROAT (mm)	(W) WIDTH (mm)	(H) HEIGHT (mm)	THROAT AREA (m ² /m)	MASS (kg/m)
1RV.0200	200	388	248	0.200	10.5
1RV.0300	300	525	270	0.300	12.0
1RV.0400	400	746	338	0.400	14.0
1RV.0500	500	963	502.3	0.500	17.0
1RV.0600	600	1138	570.5	0.600	21.0
1RV.0750	750	1412	707.5	0.750	25.0
1RV.0900	900	1560	768.5	0.900	29.0
1RV.1050	1050	1711	777.2	1.050	31.0
1RV.1200	1200	1858.8	787.1	1.200	32.0

Note: For ventilator performance use this chart combined with the airflow performance chart to calculate ventilator airflow rates.

Slope Type 1 Series

Dimensions + Mass



MODEL	(T) THROAT (mm)	(W) WIDTH (mm)	(L) LENGTH (mm)	HEIGHT (mm)	THROAT AREA (m ²)	MASS (kg)
1SV.0200	200	388	1525	248	0.305	15.8
1SV.0200	200	388	3050	248	0.610	31.5
1SV.0200	200	388	4575	248	0.915	47.3
1SV.0300	300	525	1525	270	0.458	18.0
1SV.0300	300	525	3050	270	0.915	36.1
1SV.0300	300	525	4575	270	1.373	54.0
1SV.0400	400	746	1525	338	0.610	21.1
1SV.0400	400	746	3050	338	1.220	42.0
1SV.0400	400	746	4575	338	1.830	63.2
1SV.0500	500	963	1525	502.3	0.763	25.5
1SV.0500	500	963	3050	502.3	1.525	51.0
1SV.0500	500	963	4575	502.3	2.288	76.5
1SV.0600	600	1138	1525	570.5	0.915	31.5
1SV.0600	600	1138	3050	570.5	1.830	63.1
1SV.0600	600	1138	4575	570.5	2.745	94.5
1SV.0750	750	1412	1525	707.5	1.144	37.5
1SV.0750	750	1412	3050	707.5	2.288	75.2
1SV.0750	750	1412	4575	707.5	3.431	112.5
1SV.0900	900	1560	1525	768.5	1.373	43.5
1SV.0900	900	1560	3050	768.5	2.745	87.1
1SV.0900	900	1560	4575	768.5	4.118	130.5
1SV.1050	1050	1711	1525	777.2	1.601	46.5
1SV.1050	1050	1711	3050	777.2	3.203	93.1
1SV.1050	1050	1711	4575	777.2	4.804	139.5
1SV.1200	1200	1960	1525	787.1	1.830	48.0
1SV.1200	1200	1960	3050	787.1	3.660	96.1
1SV.1200	1200	1960	4575	787.1	5.490	144.3

Note: For ventilator performance use this chart combined with the airflow performance chart to calculate ventilator airflow rates.

Performance

Stack height (m)	Temp diff (°C)	Velocity (km/hr)	1 Series	2 Series
			Calculated (m ³ /s / m ²)	
3	3	0	0.29	0.31
6	3	0	0.41	0.45
9	3	0	0.51	0.55
12	3	0	0.58	0.63
15	3	0	0.65	0.70
3	6	0	0.41	0.45
6	6	0	0.58	0.63
9	6	0	0.72	0.77
12	6	0	0.83	0.89
15	6	0	0.92	1.00
3	9	0	0.51	0.55
6	9	0	0.72	0.77
12	9	0	0.88	0.94
12	9	0	1.01	1.09
15	9	0	1.13	1.22
3	12	0	0.58	0.63
6	12	0	0.83	0.89
9	12	0	1.01	1.09
12	12	0	1.17	1.26
15	12	0	1.31	1.41
3	15	0	0.65	0.70
6	15	0	0.92	1.00
9	15	0	1.13	1.22
12	15	0	1.31	1.41
15	15	0	1.46	1.57

A 0.36 Cd sees the 1 Series providing effective airflow which easily exceeds many other products on the market with similar throat widths. Combining airflow performance, a low profile design, quality Australian materials and a fully engineered design, the 1 Series withstands even the most extreme wind loads without compromising performance.

Capacity Table

This table provides a useful reference for estimating airflow performance for the 1 Series based on a range of temperature difference, effective stack and wind speed factors. Figures are stated as m³/sec for every m² of vent throat area.

Note: The above table capacities are based upon CSIRO testing for Coefficient of Discharge and performance calculations. Figures are indicative only and should only be used as a guide to determine the approximate size of the opening required. Design elements such as inlet air, building design, internal impediments as well as geographic, meteorological and topographic factors are required to ensure specific performance rates.

Architects and engineers are invited to contact Airocle for the early design stages of their projects, when exact requirements and system designs can be determined.

Performance Options

The advantage of using an Airocle solution is our ability to tailor our vents to meet exactly what is required. Our constant drive for design lead product innovation and tailored engineering solutions means your project has the ability of integrating a range of optional features leading to more efficient, effective and sustainable building designs.

Ridgelite® Natural Lighting

All 1 Series models are able to benefit from our Ridgelite® UV stabilised internal solar lighting system. Meeting AS4256.3 and letting in an abundance of natural light through the vent, incorporating this option can reduce lighting costs and improve internal working environments while not impeding the high levels of air flow and weather performance. Ridgelite® is available in 3 options:

	Material	Light Transmission (%)	Heat Transmission (%)	UV Transmission	Notes
Ridgelite Standard	Fibre Reinforced Polyester	64.7	68	< 0.1	
Ridgelite Cool-lite	Fibre Reinforced Polyester	38	23.5	< 0.237	Incorporates 25 micron oven cured film
Ridgelite 30+R Fire Retardant	Fire Retardant GPP	58	68	< 0.1	Tested to AS1530.3

Bird Guards, Insect Mesh, Bushfire Mesh

Airocle understand that keeping birds, insects and fire embers from entering the ventilator is important for sensitive internal environments. Our ability to incorporate a range of mesh materials and apertures in to the 1 Series allows you the peace of mind knowing that your project is secure.

Mesh Type	Aperture (mm)	Wire Diameter (Ømm)	Open Area (%)	Material
Bird	11.2	1.6	77	Galvanized Steel
Insect	1.4	1.6	67	Aluminium
Bushfire	1.4	0.56	61	Stainless Steel

Inlet/Makeup Air

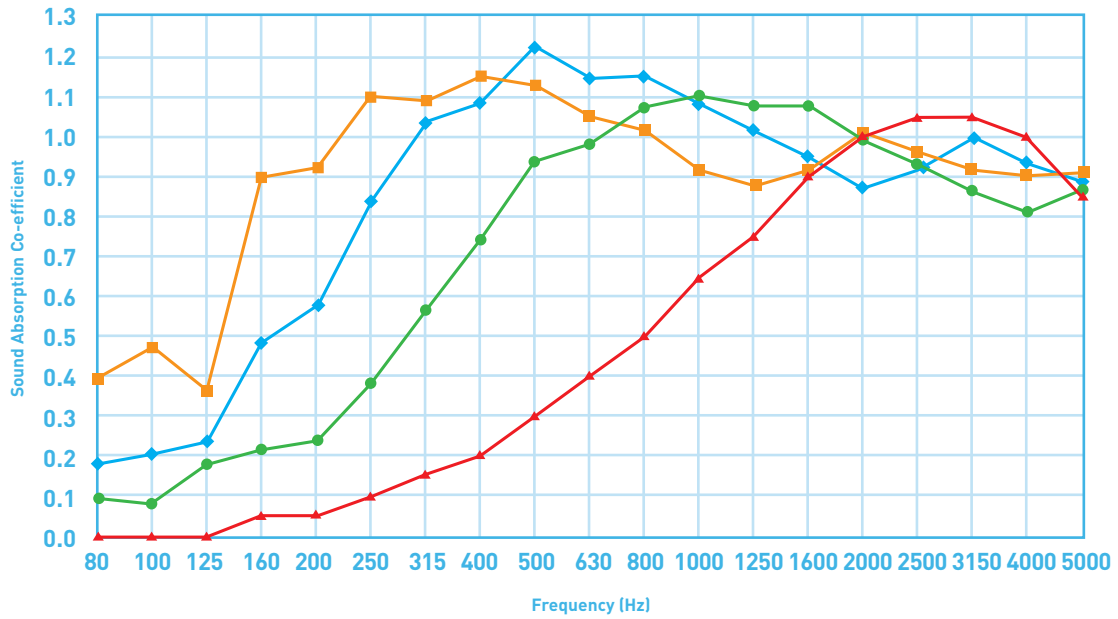
Due to the need for makeup air, adequate inlets are essential for any ventilation system to operate effectively. While it is recommended an inlet ratio of 1.5 : 1 (inlet : discharge) exist, Airocle can assist in designing or developing a ventilation system to suit custom circumstances.

Phonic Acoustic Treatment

Tested to AS1045-1988 Reverberation Room.

Sound Absorption of Megasorber FG Products

(Tested to AS ISO 354-2006 Acoustics: Measurement of sound absorption in a reverberation room)

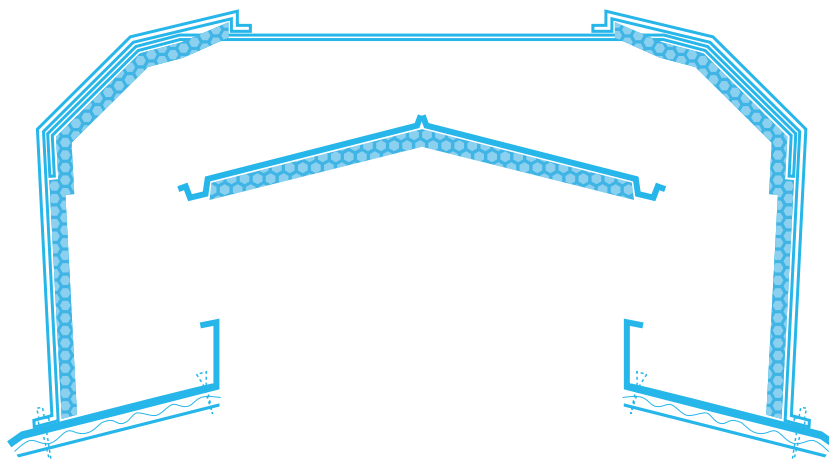


- **Megasorber FG100, NRC = 1.04**
- ◆ **Megasorber FG50, NRC = 1.01**
- **Megasorber FG25, NRC = 0.85**
- ▲ **Megasorber FG12, NRC = 0.58**

RMIT University Test Report: 121U/11-169/PD

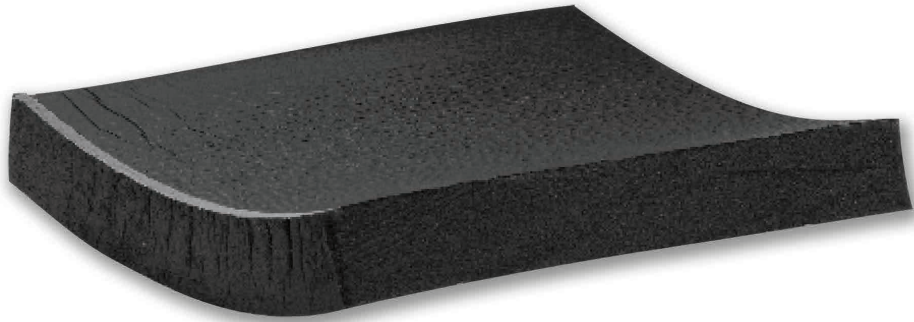
RMIT University Test Report: 121U/11-171/PD

RMIT University Test Report: 121U/11-173/PD



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 [1 Series](#) and achieve a minimum NATA tested Sound Transmission Class (STC) ensures that your ventilation system keeps the noise where it's meant to be.



Material Properties

Colour (Facing)	Recommended Maximum Service Temperature (°c)	Thermal Conductivity (w/mk)
Black	100	0.033

Chemical Resistance (Facing)

Acetone *Swells and then returns to normal on drying	MEK *Swells and then returns to normal on drying	Petrol	Diesel
Swells	Swells	Good	Good

Flammability Properties

Test Method	Index	Results *Result applies to 12mm thickness	Description
UL94	After flame time ≤ 2 seconds	HBF*	Horizontal Burn Test for foam materials.
FMVSS-302	Burn rate - mm/min	Self Extinguishing	Automotive burn rate test.

Purlin Spacings

Ensuring that your vent is incorporated into the structure of your building is essential for the optimal performance of your system. Flexibility over purlin spacing ensures your design can easily incorporate the 1 Series. Here we've provided you an easy to follow guide on how to design your steelwork so that your vent can be fitted with minimum effort.

150 C & Z Purlin Spacings																		
ROOF PITCH	1RV-200		1RV-300		1RV-400		1RV-500		1RV-600		1RV-750		1RV-900		1RV-1050		1RV-1200	
	C&Z	C	C&Z	C	C&Z	C	C&Z	C	C&Z	C	C&Z	C	C&Z	C	C&Z	C	C&Z	C
	U	D	U	D	U	D	U	D	U	D	U	D	U	D	U	D	U	D
0°	177	113	214	150	254	190	314	250	364	300	439	375	514	450	589	525	664	600
2.5°	177	113	214	150	254	190	314	250	364	300	439	375	514	450	590	526	665	601
5°	177	113	215	151	255	191	315	251	365	301	440	376	516	452	591	527	666	602
7.5°	177	113	215	151	256	192	316	252	367	303	442	378	518	454	594	530	669	605
10°	178	114	216	152	257	193	318	254	369	305	445	381	521	457	597	533	673	609
12.5°	179	115	218	154	259	195	320	256	371	307	448	384	525	461	602	538	679	615
15°	180	116	219	155	261	197	323	259	375	311	452	388	530	466	608	544	685	621
17.5°	182	118	221	157	263	199	326	262	378	314	457	393	536	472	614	550	693	629
20°	184	120	224	160	266	202	330	266	383	319	463	399	543	479	623	559	703	639

200 C & Z Purlin Spacings																		
ROOF PITCH	1RV-200		1RV300		1RV-400		1RV-500		1RV-600		1RV-750		1RV-900		1RV-1050		1RV-1200	
	C&Z	C	C&Z	C	C&Z	C	C&Z	C	C&Z	C	C&Z	C	C&Z	C	C&Z	C	C&Z	C
	U	D	U	D	U	D	U	D	U	D	U	D	U	D	U	D	U	D
0°	189	113	226	150	266	190	326	250	376	300	451	375	526	450	601	525	676	600
2.5°	189	113	226	150	266	190	326	250	376	300	451	375	526	450	602	526	677	601
5°	189	113	227	151	267	191	327	251	377	301	452	376	528	452	603	527	678	602
7.5°	189	113	227	151	268	192	328	252	379	303	454	378	530	454	606	530	681	605
10°	190	114	228	152	269	193	330	254	381	305	457	381	533	457	609	533	685	609
12.5°	191	115	230	154	271	195	332	256	383	307	460	384	537	461	614	538	691	615
15°	192	116	231	155	273	197	335	259	387	311	464	388	542	466	620	544	697	621
17.5°	194	118	233	157	275	199	338	262	390	314	469	393	548	472	626	550	705	629
20°	196	120	236	160	278	202	342	266	395	319	475	399	555	479	635	559	715	639

Key:

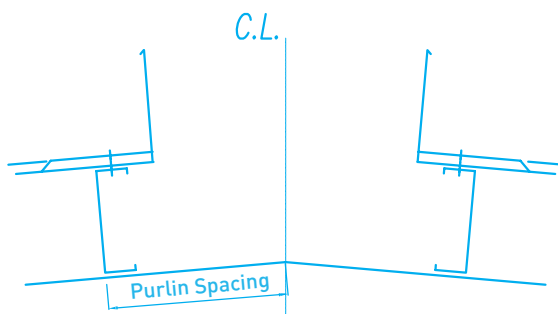
U = Flange Up

D = Flange Down

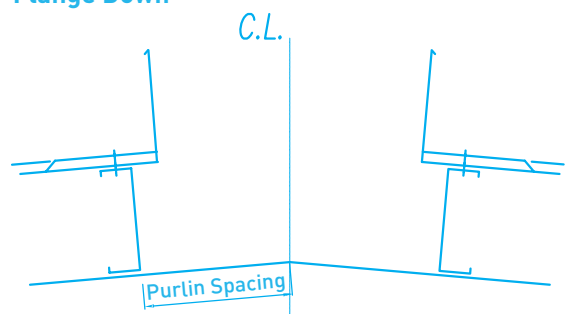
Purlin Spacings

C SECTION

Flange Up

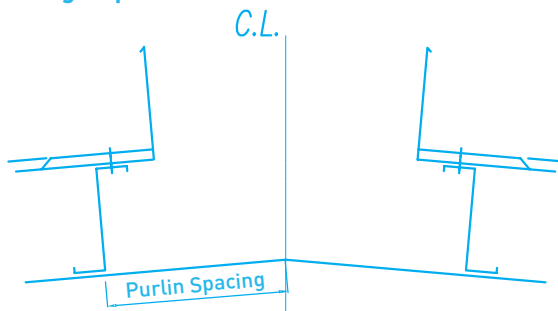


Flange Down

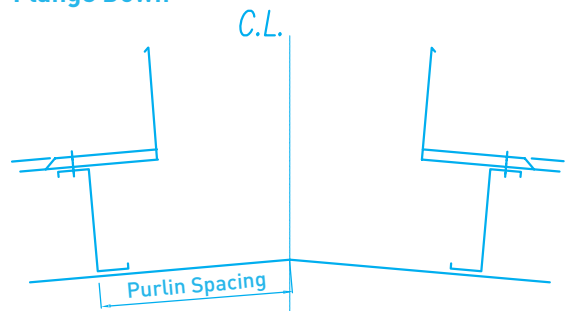


Z SECTION

Flange Up



Flange Down



Please note:

The main fixing screw must penetrate the apron flashing, roofing and into the top flange of the purlin at 600mm maximum centres. Any variance to this method must be approved by Airocle.

Materials & Finishing

We have ability to suit every application including corrosive environments by fabricating the **1 Series** in:

- Colorbond
- Colorbond Ultra
- Zinalume
- Galvanised steel
- Aluminium
- Stainless steel
- Copper
- Fibre Reinforced Plastic (FRP)

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

Shipping

The **1 Series** is available in 3050mm (3025mm effective) standard lengths with shorter lengths being available upon request. Ridge mounted ventilators are supplied in complete knocked-down form (CKD) with all stop ends and necessary fixings. Slope mounted ventilators are available to be supplied fully assembled for lengths under 6000mm.

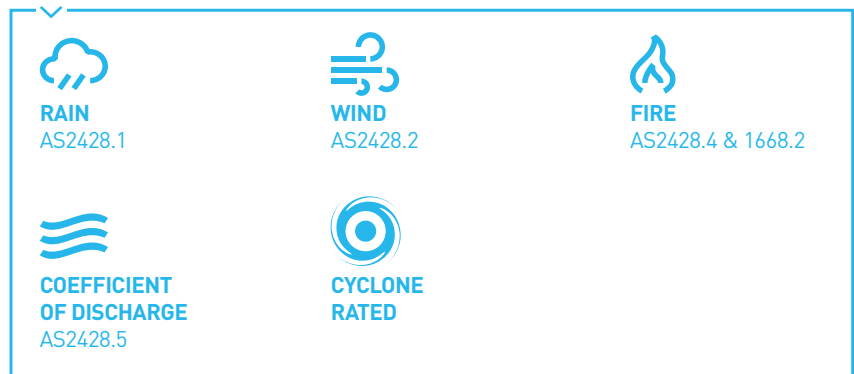
How to Specify

Description

Ventilator(s) shall be a natural or passive updraft design including applicable dampers, fixings, trims, flashings and other specified fittings. Install to manufacturers recommendations.

Performance

Roof ventilator is to be tested to:



Roof ventilator shall have a Coefficient of Discharge of ≥ 0.36 to ensure engineered ventilation design requirements for the space are met.

Size

Ventilator(s) to be _____ mm long with a throat diameter of _____ mm based on performance requirements as above.

Proprietary Item

1 Series Model _____ as manufactured by Airocle (airocle.com.au)

NATSPEC Worksection Title

0746p Natural Ventilation and Air Grilles.

Fabrication and Finish

Ventilator to be constructed in Zinalume®/Colorbond®/Aluminium/ Stainless Steel/Copper with Colour to match adjacent roof sheeting unless specified. Refer to External Finishes Schedule.

Features

Ventilator shall incorporate:

- Bird Mesh with $\leq 11.2\text{mm}$ aperture and $\geq 77\%$ FOA
- Insect Mesh with $\leq 6.8\text{mm}$ aperture and $\geq 67\%$ FOA
- Bushfire Mesh with $\leq 2\text{mm}$ aperture and $\geq 61\%$ FOA
- Manual Operable Guidevane Dampers
- Electric Operable Guidevane Dampers with spring return open/close 240v/24v actuator
- Pneumatic Operable Guidevane Dampers with spring return open/close actuator
- Ridgelite® with $\geq __\%$ Light Transmission, $\leq __\%$ Heat Transmission and Airocle Transmission of ≤ 0.1
- Acoustic Treatment to ensure a minimum Sound Transmission Class (STC) Rating of 13
- Weather sensors and control to enable manual/automatic operations as per system design
- Airflow sensors and control to enable manual/automatic operations as per system design

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.



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)



AUSTRALIAN
OWNED + MADE

IVR GROUP TRADING AS AIROCLE