AMPELAIR ROUND VANE VENTILATOR PRODUCT TECHNICAL STATEMENT

PRODUCT DESCRIPTION

Ampelair RV Industrial Ventilators are engineered and constructed to require very little maintenance even after years of service. With their low profile design and aluminium construction, Ampelair ventilators are designed to give optimum efficiency through the angle of the vane and the enlarged surface area. Even in cross winds the vane shape will retain its rotational strength. Ampelite RV ventilators are an effective, reliable, maintenance free ventilation solution. Using only the power of the wind they extract stale air and allow fresh air to circulate within the building.

FEATURES

Ampelair Round Vane Industrial Ventilators

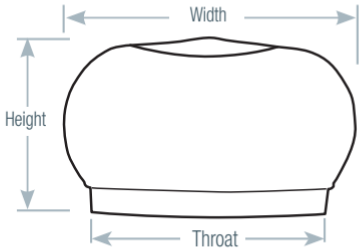
- Designed for farm & light commercial buildings.
- Variable pitch base on all models for quick and easy installation.
- Strong lightweight alloy construction with dual bearing system.
- Wind driven which means no running costs.
- Available painted to match most standard metal roofing colours.
- Dampers, manual or electronically controlled, available as required.
- 10 year warranty.

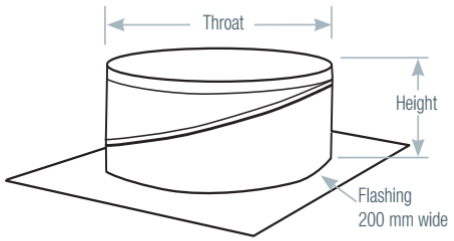
INSTALLATION

Ampelair Round Vane Industrial Ventilators variable pitch bases are adjustable to suit roof pitches up to 22.5 degrees

Dimensions

All models and bases





Aluminium	Throat	Width	Height	Width	Height
		VENTILATOR HEAD		VARIABLE PITCH BASE	
RV500	500mm	640mm	320mm	750mm	190mm
RV600	600mm	730mm	390mm	800mm	210mm

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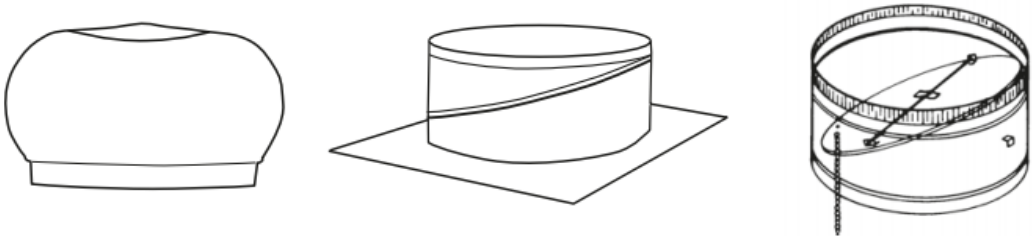
COMPONENTS

VENTILATOR HEAD | VARIABLE PITCH BASE | DAMPER (OPTIONAL)



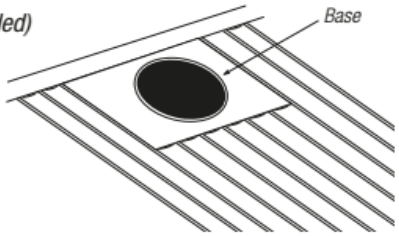
INSTALLATION

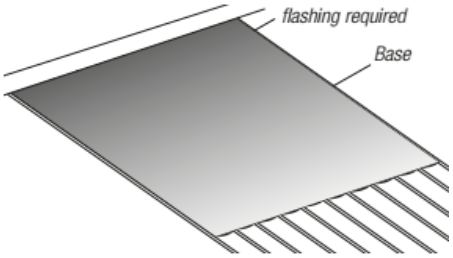
(A) UNDER RIDGE FLASHING | **(B)** AWAY FROM RIDGE FLASHING

STEP 1

Position on roof under ridge flashing (A) *(recommended)*
Away from the ridge flashing (B)

Ideally, the vent should be as close as possible to the ridge line. Place the base on the roof with the top edge slipped under the ridge capping. Alternatetively a flashing is required as depicted in the diagram **(B)** for installations away from the ridge flashing.





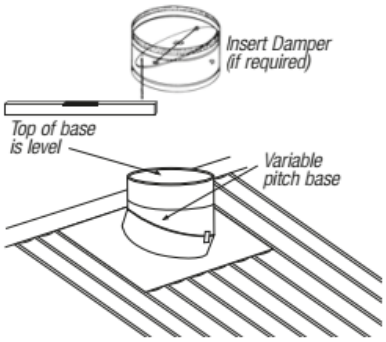
STEP 2

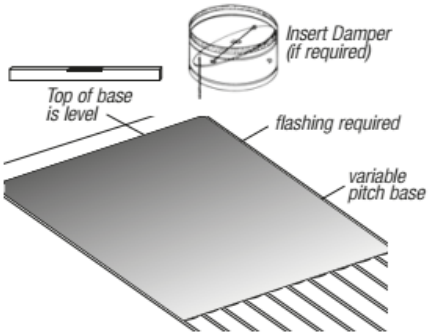
Cutting the hole

Mark the proposed hole using the base as a template. Once marked, cut the hole using appropriate metal roofing cutting tools.

Securing and dressing the flashing

Turn up the corrugations of the metal roof within the cut hole. Secure the flashing to the sheeting with self tapping screws or rivets (not included - a minimum of 10 are recommended).





STEP 3

Fitting the variable pitch throat

Fit the variable pitch throat to suit the pitch of the roof. Use a spirit level to ensure the final position is level.

Fixing the variable pitch throat

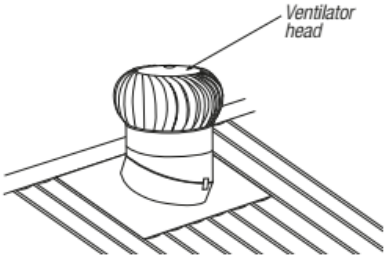
Fix the (4) clamping clips supplied across the Varipitch throat seam with either rivets or screws (not supplied), at approximately 90° to each other.

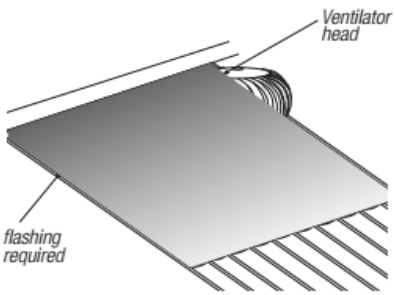
ADD DAMPER AT THIS POINT - IF USING.

STEP 4

Sealing and locking the variable pitch throat

To ensure a water tight system, silicone seal all seams and joints from the inside of the variable pitch throat.





STEP 5

Fitting the turbine

Position the turbine head lining up the pre-drilled holes in the brackets with those of the variable pitch throat. Fasten with screws provided. Finally silicone seal the outside seam of the Varipitch and base.

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The following are guidelines and tables used to calculate number of ventilators required by Building Type . Contact your nearest Ampelite Branch for more detailed assistance.

Calculations
to decide size and number of Ventilators.

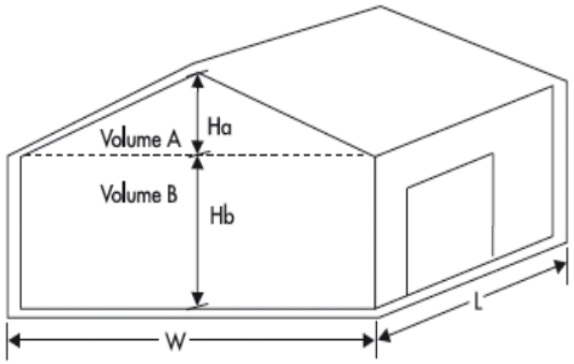
1. Determine the volume of the building

Volume of section A = 0.5 x L x W x Ha
Volume of section B = L x W x Hb

Total building volume = volume of section A + volume of section B.

Note: For factories, the combined volume A + B should be used.

Where Volume B is air-conditioned, only Volume A is used to calculate the number of ventilators required. No air should be drawn from the air-conditioned space below ceiling level.



2. Select the number of ventilators required

METRIC = V x Ac/Hr
EX/c x 3.6
Where:

V = Volume of building or roof space

Ac/Hr = Air changes per hour

EX/c = Exhaust capacity of ventilator

Building Type	Recommended Air Changes per Hour
Warehouses	4 to 8
Factories & Workshops	5 to 10
Gyms, Tennis & Squash Courts	7 to 10
Assembly Halls, Garages	10 to 15
Toilets	12 to 15
Laundries	20 to 40
Stables, Piggeries & Poultry	20 to 50
Bakeries, Boiler Houses	30 to 40

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Capacity Table

Extraction volume expressed in cubic metres per second. 1 cubic metre = 1000 litres

Stack Height Metres	Wind Speed Km/hr.	Temp Diff. °C	Model RV Industrial Ventilators 500	600
3.0	6	6	0.350	0.609
		12	0.362	0.630
		18	0.382	0.664
	8	6	0.419	0.727
		12	0.428	0.738
		18	0.452	0.785
	12	6	0.625	1.088
		12	0.635	1.105
		18	0.641	1.116
	16	6	0.772	1.343
		12	0.791	1.377
		18	0.808	1.408
6.0	6	6	0.362	0.630
		12	0.420	0.732
		18	0.431	0.751
	8	6	0.424	0.738
		12	0.439	0.763
		18	0.458	0.797
	12	6	0.635	1.105
		12	0.655	1.141
		18	0.713	1.239
	16	6	0.791	1.377
		12	0.813	1.414
		18	0.844	1.467
9.0	6	6	0.381	0.664
		12	0.431	0.751
		18	0.483	0.839
	8	6	0.452	0.785
		12	0.458	0.797
		18	0.530	0.922
	12	6	0.642	1.116
		12	0.712	1.239
		18	0.737	1.283
	16	6	0.808	1.408
		12	0.843	1.467
		18	0.855	1.486

The formula and capacity tables are useful guides in determining the model size and number of ventilators required. Building usage and other factors, finally determine the exact requirements for maximum efficiency and the comfort levels required. Ampelite can assist at design or specification stages in this regard.

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TESTING & SUPPORTING EVIDENCE

The product has been Rainproof tested and can make available the following evidence to support the above statements:

Top Rise Skylight & Ventilation Solutions Report 2014-07-18 — Rainproof testing to wind speeds of 4m/s (14.4 kmh)

STANDARDS

Ampelite NZ Limited is an AS/NZS ISO 9001: 2002 SAI Global Certification accredited company providing Quality Assurance in Manufacturing, Supply and Servicing. License number QEC 4787 was certified and issued to the company on the 20 June 1995.

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