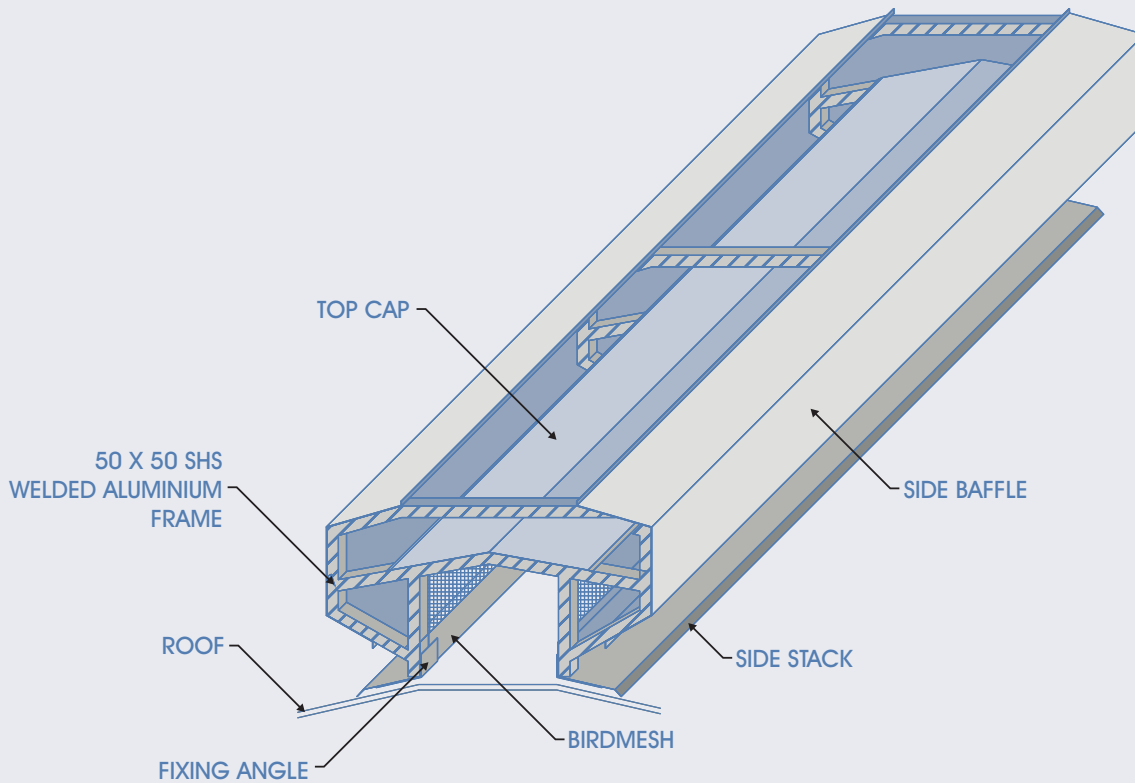




AERO (HP) Series High Performance Ridge and Slope Ventilators

34 Wingfield Road
Wingfield SA 5013
sales@ecsystems.com.au
phone 08 8243 0011
fax 08 8243 0711

www.ecsystems.com.au



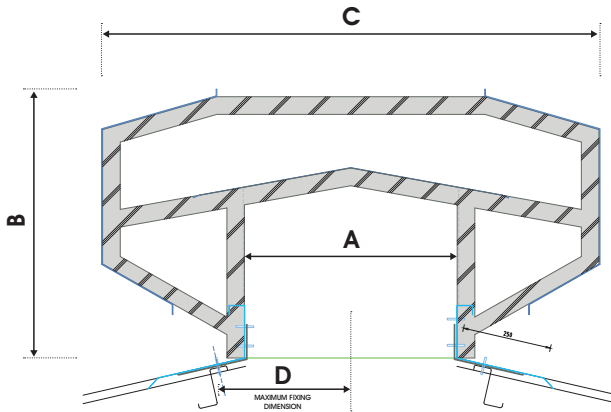
APPLICATION

The Uniquely designed high performance /high capacity series of Ridge and Slope ventilator products provide the most efficient and cost effective means of day to day natural passive weatherproof ventilation all year round.

The Aero Ventilator is suitable of all types of general ventilation purposes to meet OHS and environmental regulations. It is particularly important for industries when it is a requirement for continuous extraction due to excessive internal heat emissions or where high external solar heat loads are experienced .The only requirement is the buildings will require adequately sized inlets for the replacement air.

Aero Ridge Ventilator : (ARV) is a High Performance / High Capacity heavy duty ventilator suitable for high wind and rain conditions. The units throat widths are 300mm, 600mm, 900mm and 1200mm Available in Zinalume, Aluminium, Colorbond.

AERO RIDGE VENT

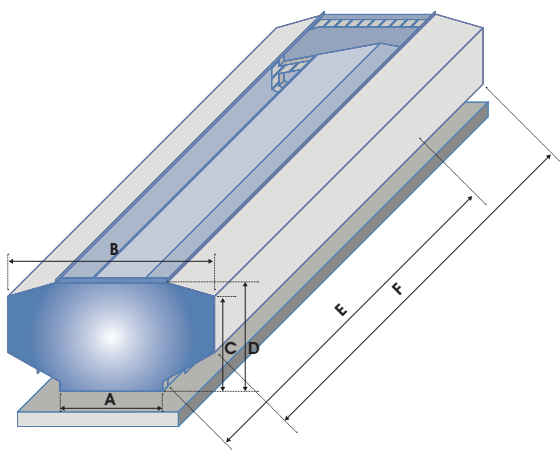


Model Number	A Throat	B Height	C Width	D Purlin Fixings	Approx Weight (Kg/Metre)	
					Colorbond	Alum
ARV300	300	391	708	250	37	34
ARV600	600	763	1415	400	66	62
ARV900	900	1095	2123	650	94	89
ARV1200	1200	1505	2830	800	129	122

Construction details

Due to the unique design, the ridge ventilator can be supplied in sections up to 6m in length with supplied pre assemble welded heavy duty frames and cleats fabricated to suit roof pitch and ease of installation. Mesh is also provided to preclude birds or other vermin from gaining access into the building.

AERO SLOPE VENTILATOR ASV



Performance

The Aero Ridge and slope ventilators boast over 80% effective outlet to inlet ratio which is far superior and in most cases at least double the ventilation area that the more common type of ventilators provide. In fact the extraction rate is even increased further with external wind influences but doesn't rely only on this for performance.

Aero Slope Ventilator

The Aero Slope Ventilator (ASV) is available in 2 models and are suitable For slope Mounting. They are available in throat widths 300mm and 600mm x 2600mm long.

Available in zinalume, aluminium, colorbond.

DIMENSIONS / PERFORMANCE / WEIGHTS

Model	Dimensions (mm)						Geometric Area m ²	Effective Area m ²	Approx Weight / kg / Per Unit	
	A Internal Dim	B	C	D	E Internal Dim	F			Zincalume Colorbond	Aluminium
ARV300	300	708	325	391	2500	2600	0.75	0.64	87	76
ARV600	600	1415	650	762	2500	2600	1.5	1.29	180	150

NOTE: STANDARD MODULES

Installation

The Aero Ventilators can be incorporated on any type or style of roof whether it be parallel to the ridge or slope mounted mid span to provide flexible positioning over exhaust openings. For information on design or dimensional fixing detail please contact your local Element Control Systems representative.

Principle of operation

The two forces affecting the extraction efficiency and therefore the design of a natural ventilation system are the thermal currents within the building, and the wind. Of these two, the thermal currents, which are created by the heat from plant or personnel, or by solar heat transferred through the structure, are the predictable factor.

The force provided by the wind is less predictable, with the possibility of no wind at all on some of the hottest days, when ventilation requirements are greatest. Consequently, Element Control Systems Ventilation design has placed emphasis on the use of thermal currents. This is achieved by providing the largest possible exhaust opening in relation to the overall size of the ventilator.

Siting of exhaust openings in both the top and sides of the ventilator can additionally ensure that resistance to upward air flow is reduced to a minimum.

Although the ventilator is in no way dependant on wind power, wind will further increase the extraction rate of a engineered design.

Buoyancy

Buoyancy ventilation may be temperature induced (stack ventilation) this relies on the increased buoyancy of the humid air as it warms to exhaust air from the space through a stack. The cool air supply to the space is pressurized by weight of the column of cool air above it. Buoyancy results from the difference in air density. The density of air depends on temperature and humidity. Cool air is heavier than warm air at the same humidity and dry air is heavier than humid air at the same temperature. Within a factory or commercial building heat and humidity is given off by occupants and other internal sources. These are some of the factors which tend to make air rise. The stale, heated air escapes from openings in the ceiling or roof and permits fresh air to enter lower openings to replace it. Stack effect ventilation is an especially effective strategy in the summer months, when indoor/outdoor temperature difference is at a maximum.

Benefits

At a time when power costs are escalating and CO2 emissions need to be controlled why would we not consider the nature's way of ventilation with no cost whilst helping to preserve our environment.

Smart building design will also boost your employment productivity and save you money.

Human Productivity research by N.S Billington proved that productivity drops about 10% and the accident rate rises about 25% within every 5 degrees Celsius above 25 degrees Celsius.

It is easy to calculate what a few days over 30 degree days and poor ventilation will do to your production.

Element Control Systems offer unique and engineered design solutions with series of operable and fixed ventilation products for roof and wall applications.

For further details including free design service please contact Element Control Systems