VENTILATORS AND LOUVRES

Safintra offers a range of locally manufactured architectural and industrial louvres as well as air vents for a variety of air intake or exhaust applications. All vents and louvres are manufactured from Aluminium-Zinc coated steel or Aluminium, to match the roofing material used, providing maximum corrosion resistance and aesthetic appeal. All our products are custom made to your specific requirements.

THE IMPORTANCE OF VENTILATION

Ventilation is important as it regulates the exchange of air to the outside as well as circulation of air within the building. Ventilators evacuate stale air from within a building, replacing it with cool fresh air from fixed louvres and other openings at low level. Good building ventilation will also assist in maintaining indoor air quality in buildings by limiting the concentration of carbon dioxide and airborne pollutants such as dust, smoke and volatile organic compounds (VOCs).

Natural ventilation refers to the process of supplying and removing air to and from indoor spaces by deliberate natural ventilation strategies, as opposed to mechanical ventilation.

The South African National Standards (SANS 10400 O & T) requires buildings to have openings in suitable positions:

- Natural ventilation through the exterior wall in the form of openable doors and windows (including louvres and ventilators) of which the aggregate area is at least 5% of the floor area.
- Natural ventilation through the roof, such as ventilators, of which the aggregate area is at least 2% of the floor area.
- Mechanical smoke ventilation or roof ventilators of which the aggregate area is between 3% and 5% of the floor area.

Safintra Ventilators and Louvres

Safintra manufactures bespoke ventilators and louvres for natural ventilation. They are not mechanical, and require no power.

Features and Benefits

- Available in a variety of colours to complement architectural features.
- Wide range of fixed louvre shapes available.
- Various dimensions of ridge and slope mounted ventilators.
- Manufactured from Aluminium-Zinc coated steel or Aluminium, to match the roofing material used and ensure aesthetic appeal.
- No operating costs

TECHNICAL SERVICES AND SUPPORT

Safintra offers full technical support and advice from project design to installation. It is strongly recommended that an approved installation company is appointed to install any roofing system or component thereof. This includes sheeting, louvres and ventilators.

ACCESSORIES

Accessories such as flashings and bird/vermin proofing available on request.

FASTENERS AND ACCESSORIES

All fasteners should have rubber sealing washers which should be free of Carbon fillers. Fasteners should be as durable as the roof sheeting. We recommend the use of Fixtite™ fasteners or Safintra approved fasteners for the appropriate metal sheeting.

COLOUR AVAILABILITY

Colours available as per the standard colour options provided by Safintra South Africa. Bespoke colours available on request.

Note 1: Louvres can be made in customised sizes as required. It must further be noted that the aggregate throat area may be affected.

SAFINTRA FIXED LOUVRES (SFL)

The Safintra range of fixed louvre systems are designed to complement any metal cladding profile and are ideal for use in commercial applications both for practicality as well as architectural aesthetics.

SAMPLE SPECIFICATION

Safintra branded SFL4 fixed louvres in AZ 150/200 in square/rectangular/round/triangular [in height x width (mm)], in Zincal®/Colorplus® (specify colour), mounted in a metal surround frame into cladding/masonry, flashed according to manufacturer's recommendations.

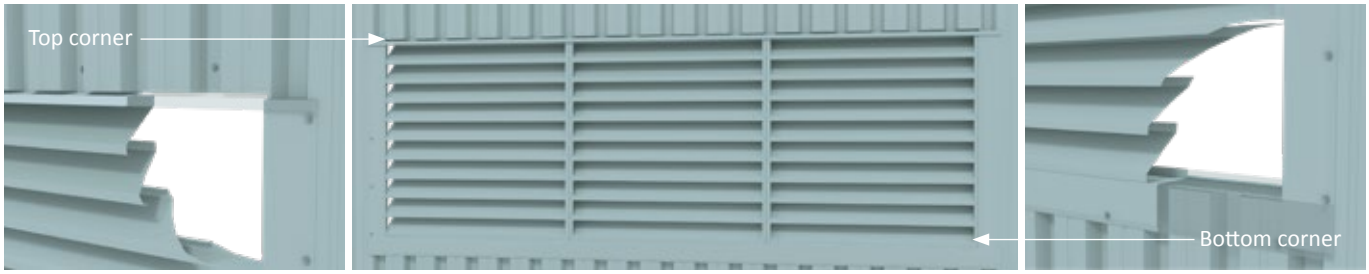
FIXED LOUVRE MODEL STANDARD DIMENSIONS

	SFL3	SFL4	SFL5	SFL6	SFL7	SFL8	SFL9	SFL10
Overall height A (mm)	300	400	500	600	700	800	900	1000
Overall width std B (mm/m)	1000	1000	1000	1000	1000	1000	1000	1000
Overall depth std (mm)	100	100	100	100	100	100	100	100
Free measured throat area (m^2/m)	0.156	0.234	0.312	0.390	0.468	0.546	0.624	0.702
Zincal®/Colorplus® steel mass (kg/m)	4.03	4.97	5.91	6.85	7.79	8.73	9.67	10.61
No. of blades	3	4	5	6	7	8	9	10

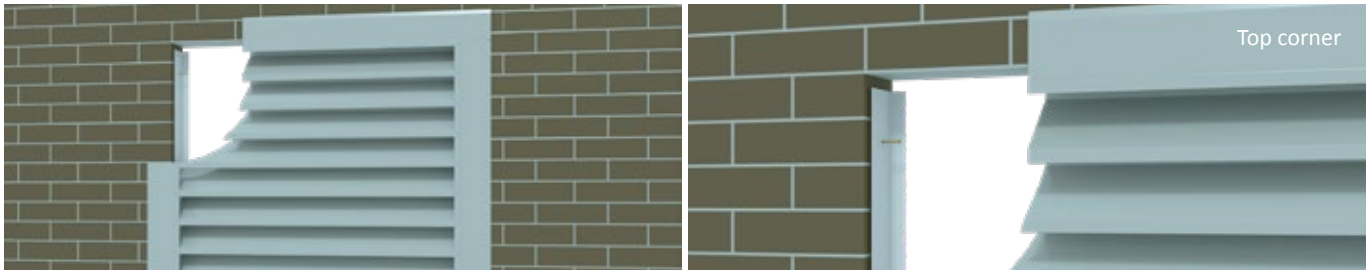
$$\text{Louvre type required} = \frac{\text{Ventilation required } (m^2)}{\text{Free measured throat area } (m^2)}$$

Note 2: Louvre installation details are for illustrative purposes only. Every installation should be treated as project specific and flashed accordingly.

LOUVRE INSTALLATION INTO SIDE CLADDING



LOUVRE INSTALLATION INTO MASONRY



VENTILATORS AND LOUVRES

SAFINTRA VENTILATORS

The ventilator range comes in ridge or slope mounted options. Finished in high-quality Aluminium-Zinc coated steel or Aluminium, the Safintra ventilator range will exhaust stale air within a building, replacing it with cool fresh air from fixed louvres and other openings at a lower level. Slope and ridge-mounted ventilators are manufactured to suit any roof profile and roof aesthetics.

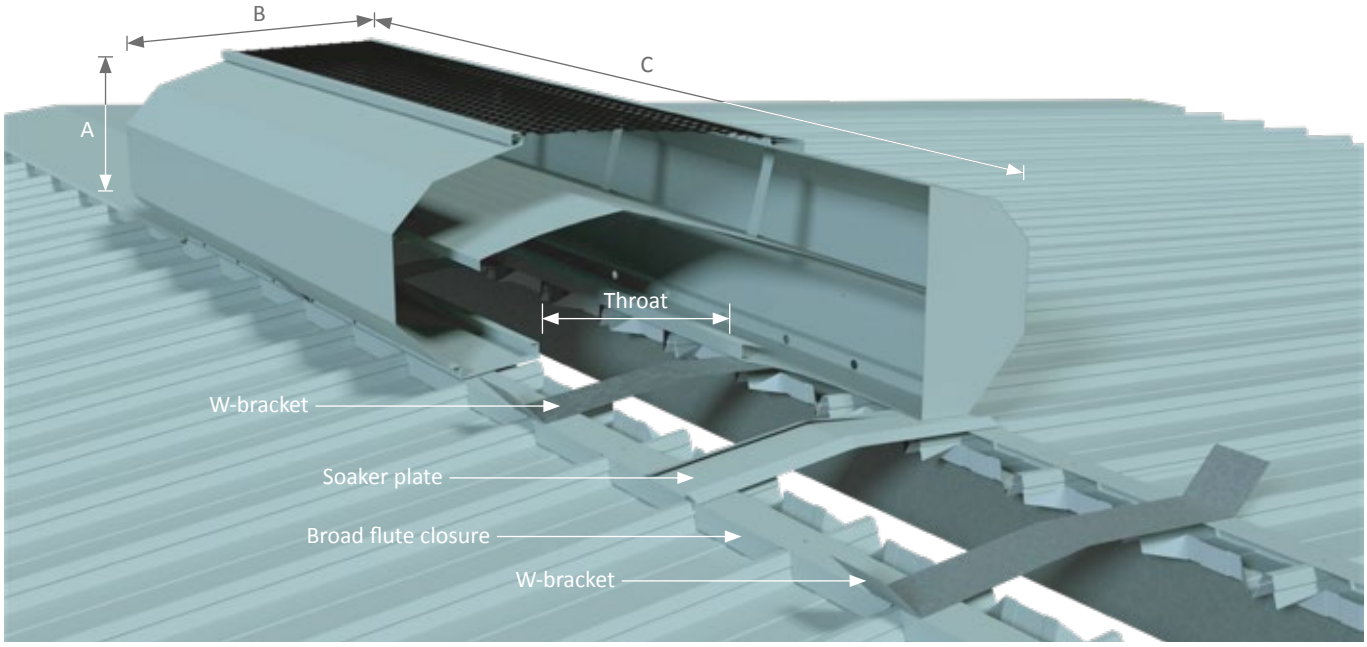
Note 3: Safintra ventilators are to be installed using W-brackets produced from metal with a minimum thickness of 1mm / 1.2mm.

SAMPLE SPECIFICATION

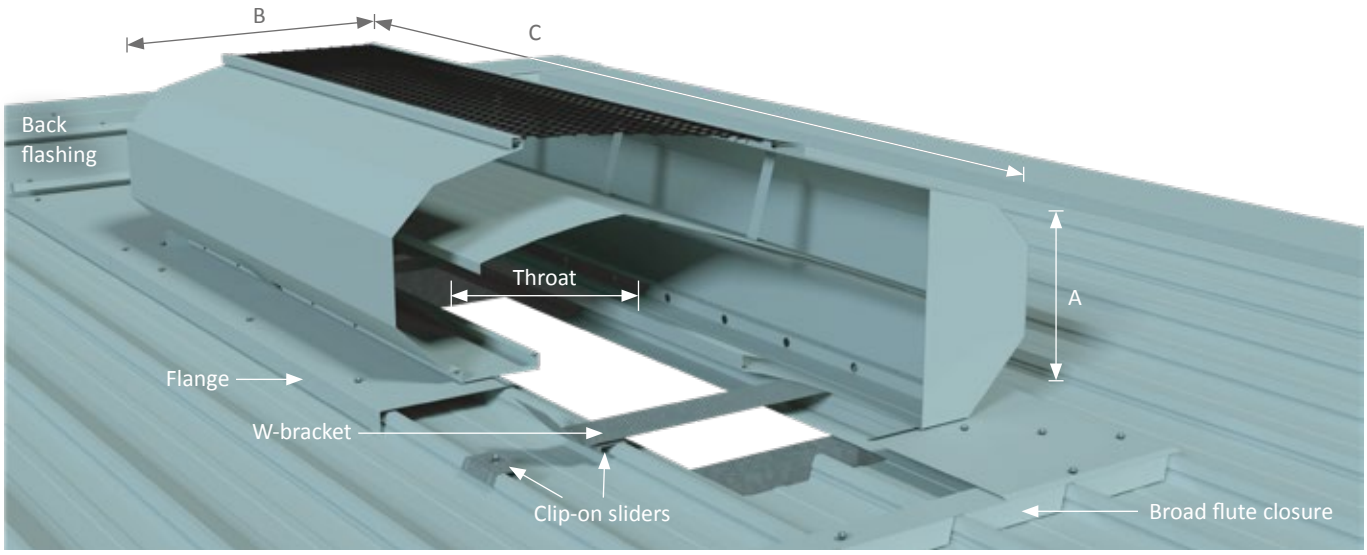
Supply Safintra branded ridge/slope ventilators in AZ 150/200 with a 300mm throat in Zincal®/Colorplus® (specify colour), mounted to support brackets onto the purlin, with a #14 x 22mm metal-fix Fixtite™ stitching fastener, and flashed according to the manufacturer's recommendations.

Note 4: Safintra can assist in sourcing mechanical / fire ventilators and turbo ventilators.

RIDGE VENTILATOR FIXED TO PIERCED/CONCEALED FIX ROOF SHEETING



SLOPE VENTILATOR FIXED TO CONCEALED FIX ROOF SHEETING



SAFINTRA VENTILATOR MODELS STANDARD DIMENSIONS

	SV230	SV300	SV450	SV600
Throat size (mm)	230	300	450	600
Free measured throat area (m^2/m)	0.270	0.336	0.502	0.560
Overall height (A) (mm)	341	413	590	783
Overall width (B) (mm)	685	860	1276	1712
Standard length (C) (mm)	2450	2450	2450	2450
Zincal®/Colorplus® steel mass (kg/m)	12.00	14.83	21.70	23.40

$$\text{Louvre type required} = \frac{\text{Ventilation required } (m^2)}{\text{Free measured throat area } (m^2)}$$

AIR FLOW PER SECOND THROUGH ONE METRE OF VENTILATOR ($M^3/_S$)

Definition of stack height	Height of the ventilator throat above ground level, minus 1.5m			
Temperature difference	The difference between the outside and inside air temperature			
Throat size	Stack height	Low wind speed airflow (2m/s) or (7.2k/h)		
		Temperature difference (°C)		
		0	2	4	6
230mm	0m	0.110	0.110	0.110	0.110
	3m	0.110	0.126	0.140	0.153
	6m	0.116	0.145	0.168	0.189
	9m	0.126	0.165	0.196	0.223
	12m	0.132	0.180	0.218	0.250
	15m	0.137	0.193	0.237	0.274
	18m	0.140	0.205	0.254	0.295
300mm	0m	0.137	0.137	0.137	0.137
	3m	0.137	0.157	0.174	0.190
	6m	0.144	0.180	0.210	0.236
	9m	0.157	0.205	0.244	0.277
	12m	0.164	0.224	0.271	0.311
	15m	0.170	0.241	0.295	0.340
	18m	0.175	0.256	0.316	0.367
450mm	0m	0.205	0.205	0.205	0.205
	3m	0.205	0.235	0.261	0.284
	6m	0.215	0.269	0.313	0.352
	9m	0.234	0.306	0.364	0.414
	12m	0.246	0.335	0.405	0.464
	15m	0.254	0.360	0.441	0.509
	18m	0.261	0.382	0.473	0.549
600mm	0m	0.229	0.229	0.229	0.229
	3m	0.229	0.262	0.291	0.317
	6m	0.240	0.300	0.349	0.393
	9m	0.261	0.341	0.406	0.462
	12m	0.274	0.373	0.452	0.518
	15m	0.284	0.401	0.491	0.567
	18m	0.291	0.426	0.527	0.612

Ventilation table disclaimer: *The figures in this table are theoretical and may vary depending on the following factors: building shape and size, air filtration through the building envelope, temperature and air pressure differences between interior and exterior, prevailing wind direction and speed relative to the ventilator, external pressure coefficient depending on the roof pitch and position of the ventilator and actual ventilator discharge coefficient after the bird/vermin proofing has been installed. Consult your engineer for project specific calculation requirements.*

