



WIND TURBINE VENTILATORS



VENTÜER
Engineered Ventilation Products & Systems



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OUR MISSION

To supply engineered ventilation products and systems that enable our clients to create healthy, comfortable and code-compliant buildings.

Ventilation of indoor spaces has never been more important, with an increasing percentage of the world's population spending more time living, working and playing indoors.

Recognising the need for ventilation is easy. Delivering products and systems that create a healthy and comfortable indoor environment, comply with building code requirements, and work with the other building elements is not.

Ventüer works with architects, builders and installation contractors. Since 2009 we have been designing, manufacturing and guaranteeing ventilation products and systems for a wide range of commercial, industrial and residential construction projects.

When partnering with Ventüer, you can have confidence that the ventilation products and systems provided to your construction project are well designed, fit for purpose and code-compliant. We eliminate the risks associated with incorrect product selection or poor installation methodology, leaving you with high performing buildings that deliver health, comfort and safety to their occupants.

We take the responsibility, the risk and the care.

You take the credit for the successful end result.

HOW DO TURBINE VENTILATORS WORK?

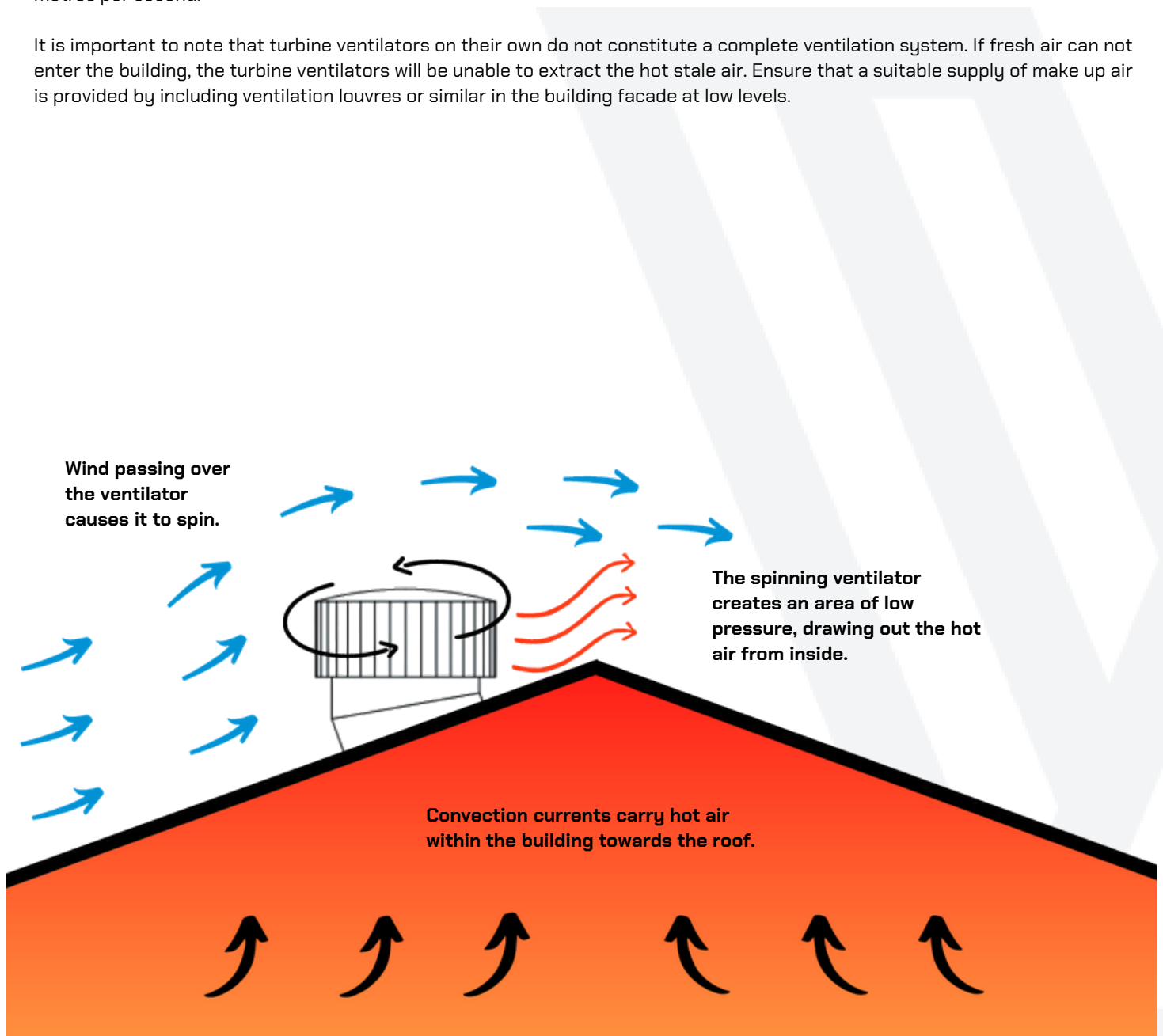
Turbine ventilators provide ventilation to the buildings they are fitted to by capitalising on two natural forces - convection currents inside the building and wind outside the building.

As the space within a building increases in temperature, the hot air rises towards the roof. Turbine ventilators set near the ridgeline of the roof allow this heated air to exit, being replaced with cooler air which enters through openings such as doors or louvres set in the walls of the building near the ground.

Wind passing over the roof acts on the vanes of turbine ventilators causing them to spin. This spinning motion creates an area of low pressure air both within the ventilator and to the side opposite the direction that the wind is coming from. These low pressure areas create a suction force which assists with drawing the air from within the building.

Ventüer turbine ventilators are constructed from high grade corrosion resistant aluminium alloy, and are fitted with sealed and self-lubricating NSK axial bearings. Their super light weight construction ensures high spin sensitivity, starting at only 0.12 metres per second.

It is important to note that turbine ventilators on their own do not constitute a complete ventilation system. If fresh air can not enter the building, the turbine ventilators will be unable to extract the hot stale air. Ensure that a suitable supply of make up air is provided by including ventilation louvres or similar in the building facade at low levels.



DESIGNING WITH TURBINE VENTILATORS

Ventüer turbine ventilators provide an excellent method of exhausting hot and stale air from within a building. The tables and formulas below are designed to assist with selecting the correct size and quantity of turbine ventilators for your situation.

1. Calculate the volume of the internal space being ventilated, expressed as M³ (length x width x height)
2. Selecting from Table 1, determine the number of air changes required for the building type.
3. To calculate the venting capacity (M³/H, Table 2), you will need to know:
 - Typical area wind speed (1m/s to 5m/s).
 - Temperature difference between indoors & outdoors.
 - Roof height.
4. Insert the above information into the following formula to calculate total number of ventilators required.

$$\frac{\text{M}^3 \times \text{Air Changes (Table 1)}}{\text{Venting Capacity (Table 2)}} = \text{Number of Turbine Ventilators required}$$

Table 1 - Recommended Air Change Levels

RECOMMENDED* ACH LEVEL (AIR CHANGES PER HOUR)			
Building Type	ACH Level	Building Type	ACH Level
Warehouses	3 - 5	Laundries	7 - 15
Factories / Workshops	3 - 8	Welding Workshops	12 - 21
Gyms / Sport Halls	3 - 8	Animal Housing	10 - 50
Assembly Halls	6 - 12	Garages	6 - 12
Toilets	12 - 15	Bakeries / Cooking Factories	6 - 12

*Air change rates noted above are recommendations only. Check with your local building consent authority for specific code requirements.

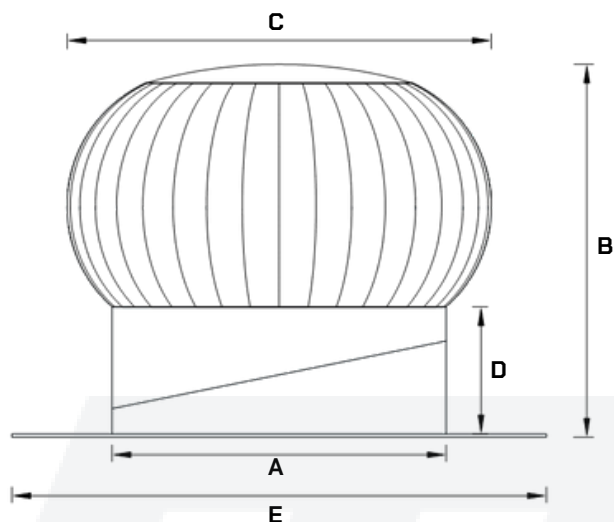
Table 2 - Turbine Ventilator Exhaust Capacity

		TEMPERATURE DIFFERENCE BETWEEN INDOORS AND OUTDOORS											
		3°C				5°C				10°C			
VENT SIZE	WIND SPEED	Roof Height				Roof Height				Roof Height			
		6m	10m	15m	20m	6m	10m	15m	20m	6m	10m	15m	20m
200mm	1m/s	180	230	320	380	300	340	410	460	350	580	700	810
	2m/s	260	370	500	590	550	680	760	830	590	750	920	930
	3m/s	470	720	770	880	730	830	930	1030	800	870	1060	1000
	4m/s	720	900	1060	1150	1000	1130	1250	1320	1060	1250	1280	1300
	5m/s	1080	1120	1230	1400	1100	1230	1320	1360	1180	1300	1390	1430
300mm	1m/s	270	340	420	490	360	430	500	550	510	720	940	1050
	2m/s	320	510	610	760	610	740	840	936	720	870	1110	1220
	3m/s	580	930	960	1080	870	990	1100	1200	1000	1090	1280	1340
	4m/s	860	1240	1290	1350	1200	1300	1480	1530	1310	1490	1580	1680
	5m/s	1310	1480	1580	1840	1450	1490	1630	1680	1520	1670	1810	1910
500mm	1m/s	910	1090	1090	1410	1000	1230	1450	1750	1250	1570	1990	2040
	2m/s	1390	1540	1570	1710	1430	1570	1820	2010	1630	1640	2270	2530
	3m/s	1640	2246	2080	2210	1840	2010	2250	2420	2100	2250	2710	2860
	4m/s	2570	2610	2610	2800	2450	2650	2730	2910	2620	2750	3200	3300
	5m/s	3110	3120	3130	3220	3120	3130	3370	3440	3150	3380	3410	3770
600mm	1m/s	1210	1450	1820	2050	1390	1820	2210	2600	1840	2340	2850	3380
	2m/s	1900	2050	2300	2600	2090	2310	2680	3059	2360	2780	3230	3690
	3m/s	2640	2880	3050	3140	2830	2990	3250	3510	3050	3380	3920	4160
	4m/s	3600	3600	3720	4120	3620	3770	3930	4160	3830	4090	4420	4740
	5m/s	4320	4450	4530	4880	4450	4580	4710	4870	4600	4860	5130	5395
900mm	1m/s	2848	3389	3897	4385	3321	3952	4624	5318	3873	4609	5393	6202
	2m/s	4410	4983	5581	6162	4884	5519	6181	6824	5408	6111	6845	7556
	3m/s	7825	8764	9728	10652	8589	9619	10677	11692	9427	10558	11720	12833
	4m/s	9344	10278	11306	12324	10073	11080	12188	13285	10859	11944	13139	14321
	5m/s	11259	12047	12890	13535	11806	12633	13517	14193	12380	13247	14174	14883

Values above denote exhaust capacity measured in M³/H



RANGE OVERVIEW

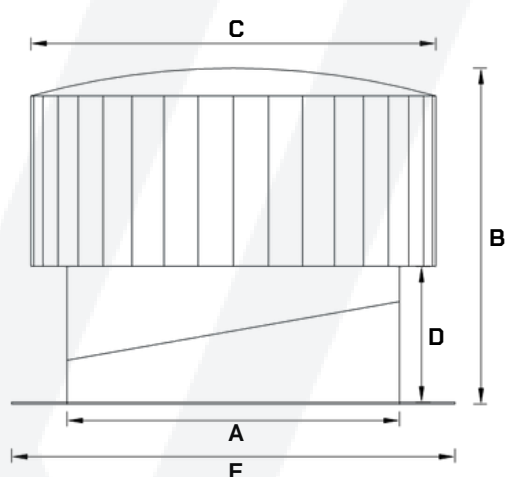


CVV-Series Curved Vane Turbine Ventilators

The Ventüer CVV-series curved vane turbine ventilators come in multiple sizes and can be used for residential and commercial applications.

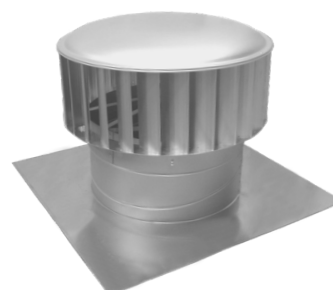


Model	Dimensions					Weight
	A	B	C	D	E	
CVV-200	200mm	370mm	320mm	160mm	[no base flashing]	1.1kg
CVV-300	300mm	450mm	430mm	190mm	400mm	2kg
CVV-500	500mm	525mm	635mm	190mm	750mm	4.1kg
CVV-600	600mm	625mm	750mm	215mm	800mm	6.5kg



SVV-Series Straight Vane Turbine Ventilators

The Ventüer SVV-series straight vane turbine ventilators provide maximum extraction and are ideal for industrial and warehouse situations.



Model	Dimensions					Weight
	A	B	C	D	E	
SVV-600	600mm	658mm	785mm	300mm	1000mm	14kg
SVV-700	700mm	780mm	870mm	340mm	1000mm	15kg
SVV-900	900mm	926mm	1096mm	390mm	1200mm	23kg



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