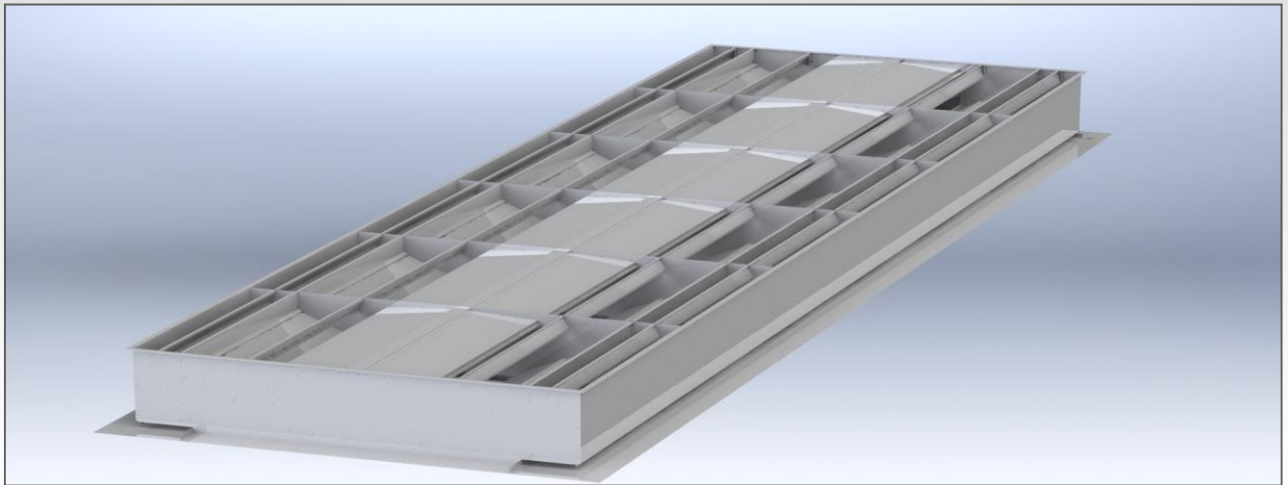


VORTEX MK4

INDUSTRIAL THERMO-VENTILATOR



SLOPE MOUNTED CONTINUOUS

The Vortex MK4 Thermo Ventilator, designed and manufactured by Ventrte International, is a highly specialised natural ventilator, specially designed to offer thermal relief for the high heat loads produced by heavy industrial process plants. The Vortex MK4 combines a high heat exhaust capacity with an aesthetically appealing neat profile and low silhouette.

The Vortex MK4 utilizes a unique and fully patented multi-tiered structure that enhances air flow from the inlets at the unit base, to the outlets above, via three levels of profiled steel deflector plates.

These deflector plates serve both to increase air velocity as it moves through the unit, as well as incorporating an integral and self-regulating drainage system. This results in the Vortex MK4 being *fully weather-proof* and resistant to rain ingress, in both cold-start and positive flow conditions. This is a vital consideration where water ingress could result in damage or loss.

The Vortex MK4 is extremely versatile in the manner and configuration in which it can be installed. Independent units can be situated where needed, or continuous lengths can be installed on either the ridge or the slopes of the roof. The units are supplied in a fully knocked-down component format for ease of transportation and installation.

The discharge co-efficiency has been independently tested using state-of-the-art CFD (Computational Fluid Dynamics) flow simulation software. The Vortex MK4 is specifically designed to offer maximum exhaust effectiveness under high heat load, in addition to releasing large quantities of buoyant gases to the atmosphere. A full report on the CFD testing procedure and results is available on request.

The Vortex MK4 Industrial Thermo-Ventilator is an innovative and unique product that is set to revolutionise the industrial ventilation industry by offering a viable alternative to other oversized, unsightly and cumbersome products that are presently on offer in the industry.

The Vortex MK4 has recently been appraised and approved of by a major multi-national industrial engineering company and is set to become their specification for the ventilation of a number of key high heat output industrial process plants presently under construction in South Africa and other African countries.

SUGGESTED APPLICATIONS

- Foundries
- Boiler Houses
- Furnaces
- Smelter Plants
- Engine Rooms

COEFFICIENT OF DISCHARGE (Cd)

$$Cd = \frac{V \sqrt{\rho}}{2\Delta P}$$

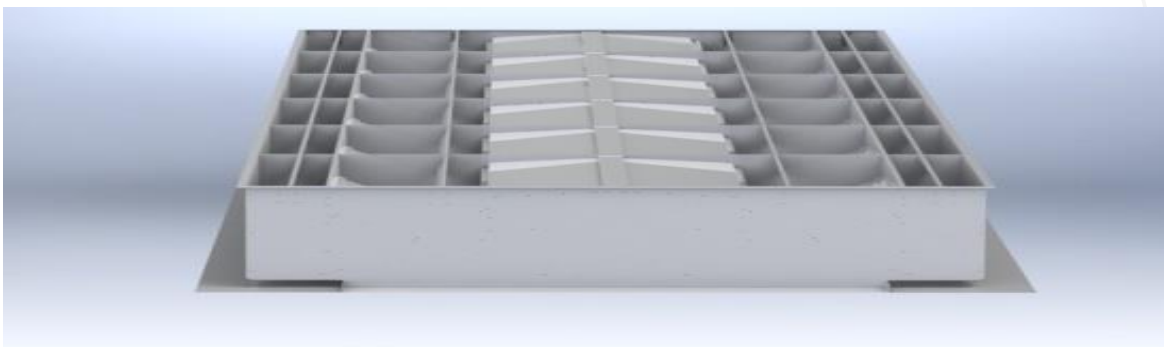
The Discharge Coefficient across the throat of the Vortex MK4 unit was determined, by means of CFD flow simulation, to be 0.45. This is a remarkably high result for a low profile type ventilator and is yet to be matched by any similar type of ventilator manufactured elsewhere.

DESIGN FEATURES

- Vortex MK4 is designed to meet with the most stringent of aesthetic demands.
- All components are precision manufactured on in-house CNC machinery.
- Supplied in knocked-down format which greatly streamlines both transportation, offloading, hoisting into position and installation.
- Guaranteed product lifespan to suit that of roof sheeting material.
- Minimal to no maintenance requirements.

PRODUCT FINISHES

- Galvanised 0.8mm to 1.2mm steel sheet material
- Chromadek 0.8mm steel sheet material
- Stainless steel sheet material



SPECIFICATIONS FOR SLOPE MOUNTING PURPOSES

Measured Throat Area (Av) in (m ²)	9.0m ²
Aerodynamic Free Area (AvCv) in (m ²)	4.23m ²
Throat Length (mm)	2950mm
Throat Width (mm)	2200mm
Total Height (mm)	810mm
Total Length (mm)	3000mm
Total Width (mm)	3000mm
Mass in Kg per m ² (Mild Steel)	40 kg



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