

THE PASSIVE AIR VENTILATION EXHAUST LOUVER (PAVEL) IS A DISRUPTIVE TECHNOLOGY THAT REDUCES THE TOTAL ENERGY CONSUMPTION OF AN AIR EXTRACTION SYSTEM.

Using only the power of the wind, it can provide natural air extraction for warehouses, factories and other commercial, industrial and agricultural buildings. As a result, it significantly lowers HVAC systems' energy consumption. The PAVEL is easy to install and has application in a wide range of commercial buildings.

passive air ventilation exhaust louver



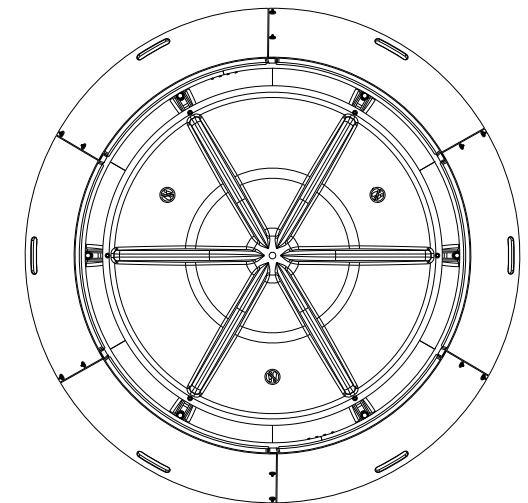
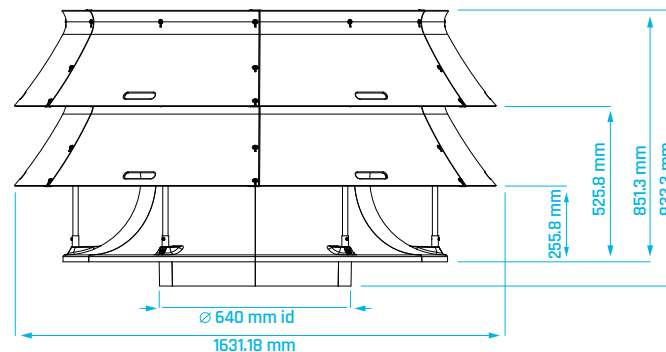
TECHNICAL SPECIFICATIONS

KEY BENEFITS

- Can reduce the energy consumption of a fan by up to 50%
- Dramatic reduction in noise emissions
- Additional savings with free cooling
- Fan-less ventilation in windy conditions
- No moving parts / no maintenance
- Extends fan lifetime
- Improved aesthetic appeal

FEATURES

- Quality stainless steel and injection moulded parts
- Suitable for fan/duct size from 300mm to 630mm
- Proven rain rejection abilities based on EN-13030
- Operates as a natural skylight
- Warranties and extended warranties available



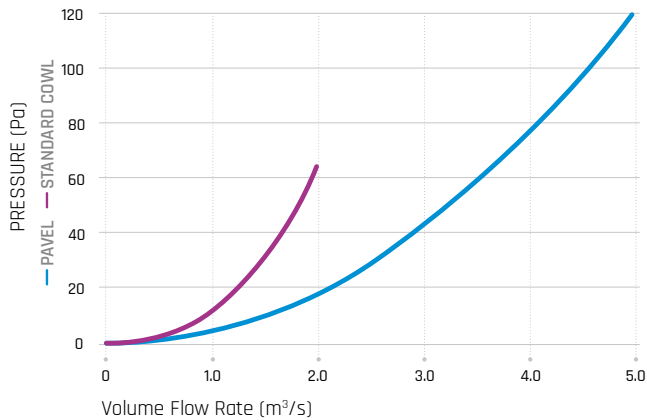
Through the **PAVEL**'s patented design, optimum airflow efficiency is achieved by the smooth and gradual deceleration of air within the PAVEL and its gentle diffusion into the surrounding air at low velocity.

In addition, to the system's enhanced performance, when wind is blowing, the movement of air across the PAVEL causes a secondary extraction effect thus enhancing the existing performance even further. This is achieved by the PAVEL's ability to generate vortices. These vortices in conjunction with the Coanda effect generate a negative pressure at the neck of the PAVEL, thus drawing air from any connected duct or space.

VOLUME FLOW RATE AGAINST PRESSURE

This chart shows how the PAVEL unit compares to a standard cowl in relation to pressure. The graph plots Volume Flow Rate (m³/s) against Pressure (Pa). As shown, the PAVEL reduces the pressure within the duct by approximately 40% in comparison to a standard cowl.

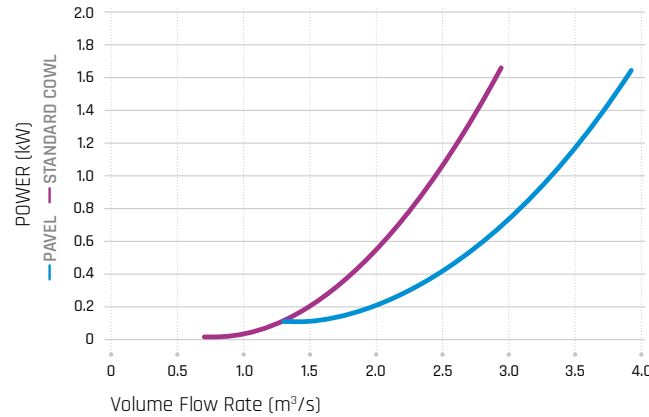
NOTE: the values vary with volume flow.



VOLUME FLOW RATE AGAINST POWER

This chart shows how the PAVEL compares to a fan with a standard cowl. The graph plots Volume Flow Rate (m³/s) against Power (kW). As shown the PAVEL unit has approximately 55% power savings in comparison to a standard cowl.

NOTE: the values vary with volume flow.



Independent validation provided by Moore Environmental as per CIBSE Commissioning Code A: 1996 (2006)

WIND ENHANCEMENT EFFECT

For a duct system fitted with PAVEL, this chart helps determine the fan size to be fitted in order to achieve the volume rate for a given site.

Two examples are shown on chart:

⊕	Site wind speed m/s	Volume Flow Required m ³ /s	PAVEL Pressure Drop Pa	Fan Required	Fan Pressure Pa
A	6	2	12	YES	12
B	8	1	<0	0	N/A

