



## Vent-Axia's Sentinel Apex installed in carbon negative workplace

Leading British ventilation manufacturer Vent-Axia, has supplied its CIBSE award winning Sentinel Apex to provide ventilation for ECO MEP's highly-efficient commercial office environment in Ashford, Kent. ECO MEP are a commercial contractor that focus on delivering sustainable solutions to their customers, making this next generation of commercial heat recovery ventilation, the ideal ventilation solution for its own offices. Committed to creating a carbon negative operational workplace for its staff and visitors, ECO MEP modelled their new building's usage requirements before specifying the Sentinel Apex to deliver energy efficient ventilation with heat recovery, while providing excellent indoor air quality (IAQ), ultra-low sound levels and good thermal comfort.

"Energy efficiency is at the heart of everything we do for our customers, so for our own new workplace, we wanted to demonstrate the capability of today's products in delivering carbon neutral buildings in operation, and hopefully inspire others".

Paul Hooker, owner and managing director of ECO MEP

The new ECO MEP headquarters are located in a two-storey new-build industrial unit. Their Cat B fit-out objectives were to specify only the most efficient products in all areas. On the ground floor of the unit there are a variety of rooms including a meeting room, break out area, storage space, a kitchen, toilets and a shower. Due to the diverse nature of rooms, including wet rooms, a controlled mechanical ventilation solution was needed to meet ventilation requirements. ECO MEP, as experts in their industry, were aware of the product's features, leading them to specify the Sentinel Apex, these include the unit's efficiency rating of up to 93% heat



Sentinel Apex

recovery, since by harnessing wasted heat, the unit ensures that energy is reused. Other factors that were important to the company included the Apex's integral air quality sensors, dynamically controlled CO<sub>2</sub> levels, and automatic summer bypass - which provides free cooling during the warmer months. "We understand the challenges that come with designing low-carbon buildings and so are thrilled to have supplied our Sentinel Apex to ECO MEP's carbon negative offices. When we developed the Apex, every aspect was considered to maximise its energy efficiency and performance, whilst also providing excellent IAQ, ultra-low sound levels and good thermal comfort, which made it an ideal addition to this project. We also designed the Apex to have a low embodied carbon footprint and have used CIBSE TM65 data collection methodology to provide accurate and detailed carbon information", said Alexis Roberts, C&I Channel Marketing Manager at Vent-Axia.

The Sentinel Apex was developed as the next generation of commercial heat recovery ventilation products to help specifiers create low carbon buildings as we head towards the UK's 2050 Net-Zero target. Designed to be highly energy efficient with industry-leading low specific fan powers (SFP) the Sentinel Apex has a low embodied carbon too. Occupant comfort has also been a priority in its development with the Apex operating quietly as it efficiently improves IAQ. Meanwhile, to make specification simpler for consultants the Sentinel Apex features many components and controls as standard.

The Sentinel Apex achieves the holy grail by delivering the highest level of IAQ and thermal comfort with the lowest energy and noise levels. Offering up to 93% heat recovery efficiency (EN308 test method), the Sentinel Apex boasts ultra-low sound levels, which are independently tested and verified by the industry renowned SRL Technical Services Limited (also known as the Sound Research Laboratory) for further customer assurance. In addition, an extremely low SFP results in a significant performance

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For further information on the new Sentinel Apex contact the Vent-Axia Commercial & Industrial sales team: [projectorders@vent-axia.com](mailto:projectorders@vent-axia.com)  
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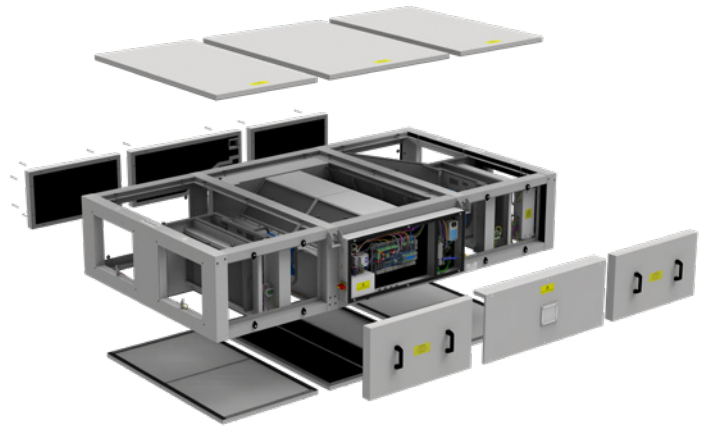
**Vent-Axia**<sup>®</sup>

improvement compared to previous commercial heat recovery units. Meanwhile, the Sentinel Apex's intuitive controls are compatible with Vent-Axia's range of Sentinel-X Sensors, allowing easily configurable set points ensuring optimised IAQ, in line with Part F of the Building Regulations, while also minimising ventilation energy consumption.

To help ensure the highest levels of IAQ, Apex features ePM10 50% extract and ePM1 55% supply filters (M5/F7 equivalent) as standard. By carefully selecting the filter media and utilising the latest motors and impellers with better than IE5 efficiency the Sentinel Apex maintains extremely low SFP with low sound levels whilst maintaining excellent IAQ. As well as IAQ and energy efficiency, thermal comfort is vital in commercial buildings. As buildings become increasingly airtight the risk of buildings overheating is growing. The Sentinel Apex is the ideal solution since it features an integral automatic summer bypass designed to provide free cooling when available, but it is sized to eliminate performance loss.

Developed for a wide range of applications, specifiers can choose from five sizes, delivering airflows up to 4000m<sup>3</sup>/hr. Designed to operate on the principles of demand ventilation the Sentinel Apex is ideal for applications where the rooms are used at different times of the day by a variable number of people. The Sentinel Apex system, with the matched range of Sentinel-X Sensors, can monitor occupancy and air quality and respond by adjusting the ventilation accordingly to maintain the IAQ and thermal comfort within predefined limits whilst recovering up to 93% of the extracted thermal energy.

The Apex's new advanced integrated control system has 3 levels of interface, all as standard: simple purpose designed onboard user interface controller incorporating an alphanumerical, 2-line display with 4-button keypad for fan status and basic commissioning setup mounted within the control panel. In addition, a remote HMI that gives a greater level of commissioning and control detail via a graphical display. This also provides wireless communication capability and connectivity to Vent-Axia's App-based control system providing the greatest level of commissioning and monitoring whilst also enabling the use of a full range of wired and wireless communication sensors, with either local mains or battery powered options.



Offering 'simply more as standard' the Sentinel Apex boasts a range of features, components and controls that come as standard with the unit. This means consultants do not need to specify multiple different components or precisely specify the level of control required when selecting a commercial heat recovery unit. This makes specification simpler and saves time.

Designed to have a low embodied carbon footprint, Vent-Axia has used the CIBSE TM65 data collection methodology to collect accurate, detailed embodied carbon information for the Apex, working from a component level upwards. This methodology ensures data is comprehensive, accurate, reliable and up-to-date, making it easier for specifiers to focus on designing low carbon sustainable buildings.

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Alexis Roberts, C&I Channel Marketing Manager at Vent-Axia

## Sentinel-Apex has won multiple prestigious Awards:



HVR Awards 2023  
'Commercial/Industrial  
Ventilation Product  
of the Year'



ECN Awards 2023  
'HVAC Product of  
the Year'



CIBSE Building  
Performance Awards 2024  
'Product or Innovation of  
the Year - Air Quality'

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