

Ventilation Plays Critical Role in Reducing Covid-19 Transmission

Submitted by: MacLean Communications

Friday, 1 May 2020

Vent-Axia (<https://www.vent-axia.com/healthyhomes>) has welcomed the Government's Covid-19 press briefing on 29 April 2020 which cited ventilation as being critical in the fight against the virus. At the briefing Professor Jonathan Van-Tam, Deputy Chief Medical Officer, said "There is a definite truism across all of the science literature, that ventilation is a most critical part of reducing transmission from respiratory viruses." Vent-Axia is committed to improving indoor air quality (IAQ) and public health and, as the leading British ventilation manufacturer, has been delighted to help in the national response against Covid-19. The company has already supplied ventilation to a wide-range of essential projects including the NHS Nightingale Hospital in London, Kent & Canterbury NHS Trust's Covid-19 wards; and field hospitals at Bangor University and Deeside Leisure Centre.

The Government's briefing has added further weight to a raft of global scientific evidence which indicates aerosol transmission of Covid-19, thus making it more risky to be inside than outside a building. The reason for this increased risk is a lack of airflow. It's therefore vital to dilute the virus in the air inside through effective ventilation and increased airflow both in homes and buildings.

Recent guidance from REHVA is very valuable in plotting a way forward on how to operate and use building services to prevent the spread of the disease. REHVA explains that Covid-19 is an airborne virus and by diluting the pathogen inside a building reduces risks. It is therefore essential to help ensure good indoor air quality and ventilation rates. Similarly, global guidance from ASHRAE confirms the vital role ventilation plays in reducing Covid-19 risks. ASHRAE's updated position document on airborne infectious diseases has a number of important recommendations including: high priority being given to well-designed installed, commissioned and maintained HVAC systems; and additional or more effective ventilation in the breathing zone. At this time healthcare facilities are a particularly high priority.

"As a novel virus there is still much to learn, however, there is now a raft of global scientific evidence confirming aerosol transmission. As such, being inside a building is a higher risk than being outside. This risk will also increase in the winter months when we spend increasing time indoors. To lower the risk of Covid-19 transmission inside a home or building it is vital to increase airflow and ventilate effectively. Now is the time to check ventilation in homes and buildings to ensure there is enough airflow to dilute the virus in the air and improve indoor air quality. Ventilating for longer and opting for ventilation with higher airflow volumes will help reduce the risk," said Jenny Smith, Head of Marketing at Vent-Axia.

With health at the front of mind at the moment poor indoor air quality not only potentially increases the risk of Covid-19 but is also linked to other respiratory problems. A report by the Royal College of Paediatrics and Child Health (RCPCH) and the Royal College of Physicians on the health impact of indoor air quality on children and young people. The report, 'The inside story: Health effects of indoor air quality on children and young people', explains that there is growing evidence that respiratory problems among children may be exacerbated by indoor air pollution in homes, schools and nurseries.

This comprehensive landmark report, involving a systematic review of 221 studies, shows evidence linking

indoor air pollution to a number of childhood health problems, including: asthma, wheezing, conjunctivitis, dermatitis, and eczema. Within the report sources of indoor air pollution are cited as including smoking, damp, the burning of fossil fuels and wood, dust, chemicals from building materials, furnishings, aerosol sprays, and cleaning products. The document also warns that IAQ tends to be worse in low quality housing where properties are poorly ventilated.

A key recommendation from the report was that local authorities should follow the National Institute of Health and Care Excellence (NICE) guidance 'Indoor Air Quality at Home'. The document provided detailed information and advice on how to reduce exposure to indoor pollutants and so help protect health. The publication of this guidance set in stone the importance of good IAQ, highlighting the significant part effective ventilation plays in helping combat indoor air pollution in the home.

Since 1936 Vent-Axia has been working hard to provide ventilation solutions to improve IAQ and the company offers a number of solutions to improve indoor air quality and help dilute the Covid-19 virus inside homes and buildings. For new build homes, Vent-Axia's Sentinel Kinetic mechanical ventilation with heat recovery (MVHR) system provides effective ventilation, plus an impressive 94% heat recovery. Meanwhile, Vent-Axia's Lo-Carbon Sentinel Kinetic Cooker Hood combines a cooker hood with MVHR unit in one. A vital part of an MVHR system is its filters. Inside an MVHR unit, fresh incoming air passes through a filter to remove pollen, debris and products of pollution. Filters up to ISO ePM2.5 70% (F7 grade) ensure even homes in heavily urbanised areas can filter out most impurities, up to and including PM2.5 particles, for example diesel particulates. To ensure MVHR systems run efficiently and effectively Vent-Axia also offers ventilation servicing to maintain the systems and check and replace filters as needed.

For private refurbishments, one solution is the Vent-Axia PureAir Sense which is the UK's only bathroom fan with an odour sensor and has been designed to help offer peace of mind to households. Equipped with a pioneering odour sensor that increases airflow when the air is poor, the Vent-Axia PureAir Sense helps ensure a comfortable living environment.

For social housing refurbishments, Positive input Ventilation, such as Vent-Axia's Lo-Carbon Pozidry Pro PIV and Lo-Carbon Pozidry Compact Pro offer filtration up to ISO ePM2.5 70% (F7 grade).

Finally, for commercial buildings demand ventilation, such as the Sentinel Totus² Demand Energy Recovery Ventilation system (D-ERV), offers an effective solution to both ensure good ventilation and so improved IAQ, plus it offers a range of sensors, such as CO₂, PIR occupancy detection, humidity or temperature are employed to determine the room's air quality, adjusting the ventilation requirements automatically and managing the system's ventilation rates accordingly.

For further information on all products and services offered by Vent-Axia telephone 0844 856 0590 or visit www.vent-axia.com.

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Notes for Editors

1. REHVA is the Federation of European Heating, Ventilation and Air Conditioning Associations. The organisation published updated Covid-19 guidance on 3 April 2020 and is continuing to publish updates. https://www.rehva.eu/fileadmin/user_upload/REHVA_COVID-19_guidance_document_ver2_20200403_1.pdf
2. ASHRAE is The American Society of Heating, Refrigerating and Air-Conditioning Engineers. It updated its Position Document on Airborne Infectious Diseases in February 2020. <https://bit.ly/2VwC5fG>
3. The Inside Story: Health effects of indoor air quality on children and young people is jointly published by the Royal College of Paediatrics and Child Health (RCPCH) and the Royal College of Physicians (RCP). It is funded by Allergy UK, Airtopia, Asthma UK, BEAMA, British Electrotechnical and Allied Manufacturers' Association (BEAMA), British Heart Foundation, British Society for Allergy and Clinical Immunology, Dyson, and the Greater London Authority. National Institute for Health and Welfare. (2013) Efficient reduction of indoor exposures. Health benefits from optimizing ventilation, filtration and indoor source controls.
4. Boasting over 80 years' experience, Sussex-based Vent-Axia is the ventilation sector's clear leader, chief innovator and forerunner in developing energy efficient products that help provide good indoor air quality. Committed to improving indoor air quality and comfort in both homes and buildings, Vent-Axia provides the sector's most comprehensive choice from any single manufacturer. Vent-Axia's range covers not just air movement and ventilation technologies but heat recovery, electric heating, hand dryers, cooling and clean-air systems for residential, commercial, public sector and industrial applications.

Media Contact:

Sara MacLean

MacLean Communications

Tel: 07976 782817

Email: macleancomms@gmail.com

For a high resolution jpeg please contact Sara MacLean at MacLean Communications.