



**RENSAIR**  
Clean Air. Certified.

# Clean Indoor Air in the Animal Care Sector

## THE IMPORTANCE OF CLEAN INDOOR AIR

On average, people spend 90% of their time indoors, where air quality can be 2 to 5 times worse than outdoor air quality. Indoor air pollution is ranked as one of the top 5 environmental risks to public health and 50% of illnesses are caused by aggravated indoor air pollution. Poor air quality impacts human health both in the short and long term.

Inhaling airborne pathogens (viruses and bacteria) causes illnesses and transmits diseases to people, whilst the inhalation of Particulate Matter damages lungs, impacting their ability to properly oxygenate blood, which hinders the performance of vital organs in the human body.

Examples of Particulate Matter, which can range from 0.1 to 10 microns in size (1 micron is one thousandth of a millimeter), include pathogens, smoke, pollen, dust, mould, pollen and petrol/diesel particulates, which are invisible to the naked eye but are airborne in indoor spaces.

A clean indoor air quality (IAQ) environment is vitally important for human health and wellbeing, most recently borne out by Covid-19. As a result of the pandemic, and better understanding of the importance of clean air, governments across the world are moving towards improving and regulating IAQ Standards. This follows the recent WHO decision to recommend much higher IAQ standards (which are now 5 times better than current US, EU and UK standards).

## CLEAN INDOOR AIR IN THE ANIMAL CARE SECTOR

The healthcare sector has traditionally required high Indoor Air Quality (IAQ) standards to both prevent airborne infectious disease transmission and because of the presence of people with weak immunity systems. The need to protect staff is tantamount to ensure full operating capacity.

Animals bring a further IAQ necessity for 2 different reasons. Pet dander, consisting of microscopic flecks of skin shed by animals with fur or feathers, can remain suspended in the air for long periods of time in poorly ventilated spaces and trigger allergic reactions in humans.

Furthermore, many animal diseases are transmitted by air and animal caregivers have a duty of care to prevent customers' pets from contracting diseases while boarding, grooming or receiving medical treatment.

Seven of the top ten most common dog diseases are either known or believed to be transmitted by air. These include Canine Influenza, Canine Distemper Virus, Canine Parvovirus, Canine Coronavirus, Infectious Canine Hepatitis, Rabies Virus, Bordetella, and Canine Parainfluenza Virus. Diseases that can be transferred between cats include Feline Calicivirus, Coronavirus, Infectious Peritonitis, Herpesvirus, Reovirus, Mycoplasma and Cryptococcus.

Clean air is critical in any animal care environment to safeguard all pets that enter the facility, whether for boarding, grooming, routine care, treatment or surgery.

## HOW TO CLEAN AIR AND ITS COSTS

There are two ways to provide a clean indoor air environment that meets health authority standards - either mechanically ventilate a room, or clean the air in a room by continuously filtering it through an air purifier.

Simply put, mechanical ventilation introduces outside air into a room and extracts existing air to the outside, thus removing airborne pollutants. Although mechanical ventilation has a high capital outlay cost, it is very efficient in providing a good IAQ environment. It does, however, require good quality outside air to be brought in (or have it filtered on the way in) and utilises a large amount of energy as the outside air has to be conditioned to the right indoor air temperature – mechanical ventilation can consume up to 50% of a building's energy use.

A good air purifier will cause air circulation in a room, sucking air into the unit and passing it through very high quality filters that remove almost all Particulate Matter. Operating a machine continuously will ensure that there is no buildup of airborne particles, ensuring that the air is clean of Particulate Matter. The capital cost is a fraction of the price of mechanical ventilation and the energy consumption is up to 9 times less. Furthermore, a solution can be calculated and installed within days and the maintenance is very simple. With a life over many years, the annual operating and maintenance cost of air purification is very low.

## THE BENEFITS OF CLEAN AIR

A well thought out indoor air quality solution will have health benefits for both staff and patients. It will also help reduce absenteeism, and just as importantly, keep fallow times between appointments low – hospitals have reduced these to 5 minutes where Rensair air purification is used as independent tests have demonstrated that Log2 particle clearance in a room occurs in under 2 minutes. The direct impact is that the capacity use of any indoor space can be maximised.

Clean air is critical in a veterinary environment to safeguard all animals that enter the practice, whether for consultation, treatment or surgery.

## RENSAIR

Rensair supports all of its clients by providing a custom-made long-term solution using its air purifiers. All proposals take into account room sizes, occupation, existing ventilation facilities and room use. Calculations are carried out to ensure that current and likely future government and healthcare IAQ standards are fully met.

Rensair units were designed and developed with hospitals over twenty years ago to meet their stringent indoor air quality standards. They are fully certified through independent testing carried out by leading scientific labs, including Eurofins and the Danish Technological Institute.

Rensair's clients include numerous hospitals in various countries (e.g. multiple NHS Trusts in the UK) as well as doctor and dental practices and many care homes. With the onset of the pandemic, Rensair has delivered IAQ solutions to many different non-healthcare verticals, including government departments, manufacturing, offices, educational establishments and hospitality companies.



## – CONTACT

Call to discuss Indoor Air Quality and understand the important aspects of having a clean indoor space and how solutions are calculated and installed, as well as the costs to implement and maintain solutions over the long term.

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