

NOXMASTER

The Noxmaster is a whole-house ventilation system which combines the principles of Positive Input Ventilation (PIV) with a powerful carbon filter technology to prevent highly reactive gases such as Nitrogen Oxides (NOX) and Particulate Matter (PM10 and PM2.5) entering the home. These gases and particles can enter the home through any natural leakage points, i.e. soffits and letter boxes.

Noxmaster removes up to 99.5% of Nitrogen Dioxide and other harmful pollutants generated by traffic emissions. The system delivers clean, filtered air into urban homes, improving air quality to within safe levels recommended by the World Health Organisation (WHO).

Removes up to **99.5%** of harmful NO₂ and up to 75% of Particulate Matter (PM2.5)

Patent Pending



What is NOX?

NOX is used as a term for Nitrogen Oxide gases NO and NO₂ that are most relevant for air pollution.

Nitrogen Oxides are released into the atmosphere when fossil fuels are burned (for example, petrol or diesel in a car engine).



What is Particulate Matter?

PM10 & PM2.5 filtration	PM10	PM2.5
<ul style="list-style-type: none"> Particulate Matter size classes are used as evaluation parameters by the WHO (World Health Organisation) and other authorities. These evaluation parameters are incorporated in Air Quality Management reports to ensure the correct filtration is selected based on the requirement within the reports. 	<ul style="list-style-type: none"> PM10 is the name for coarse dust particles that are 2.5 to 10 micrometres in diameter. The main source is road transport, namely vehicle breaks and tyre wear, and also during combustion of fuel, gas and coal. Tiny particles are inhaled causing major health problems. 	<ul style="list-style-type: none"> PM2.5, known as fine Particulate Matter, is a mixture of solid and liquid particles that are suspended in the air. They are 2.5 micrometers in diameter or smaller, and can only be seen with an electron microscope. Sources include power plants, motor vehicles and wood burning.

How it works

Noxmaster is the first time a retrofitable whole-house ventilation system has addressed air quality with carbon filtration.

The Noxmaster operates all year round by continuously drawing air through the filters in the unit and inputting it, at ceiling level, into the property. Noxmaster removes up to 99.5% of Nitrogen Dioxide (NO₂) through two powerful carbon filters. The activated carbon is microporous and has a much larger surface area than its external dimensions suggest. A spoonful of activated carbon equates to the surface of a football field. Through a process known as 'adsorption', the pollutants are attracted and held on the surface of the carbon,

trapping them before they enter the home. The carbon filters have a lifespan of five years and are recyclable. The Noxmaster is fitted with a carbon cartridge and a PM10 filter as standard with the option of PM2.5 filtration in areas with high levels of Particulate Matter.

The unit has the optional extra to be thermostatically controlled to create comfort in the home based on outside air temperature. It has the ability to intelligently utilise the solar gain from the loft space during colder months and draw fresh, cooler air directly from outside during the warmer months.

Features and benefits

- ▶ Unique technology combining PIV and carbon filtration
- ▶ High filtration – removes up to 99.5% of harmful Nitrogen Dioxide (NO₂) and up to 75% of Particulate Matter (PM2.5)
- ▶ Significantly improves indoor air quality in homes for the occupants
- ▶ Allows occupants to keep windows closed for security and to discourage pollutants entering the home
- ▶ Thermostat is fully adjustable providing comfort for the occupants
- ▶ Aesthetically pleasing modern ceiling diffuser
- ▶ Low maintenance
- ▶ PIV principle prevents condensation and its associated issues
- ▶ Evidence by the BRE demonstrates the principle of PIV is a remedial measure in controlling Radon gas
- ▶ Commissioning can be carried out via the controls cited within the ceiling diffuser
- ▶ Time clock – optimises filtration when levels of pollution are evident
- ▶ Energy-efficient and cost-effective solution
- ▶ Delivered in 2 pods to increase movability and aid easier installation in confined spaces

For retro-fit applications

Noxmaster Performance Graph

