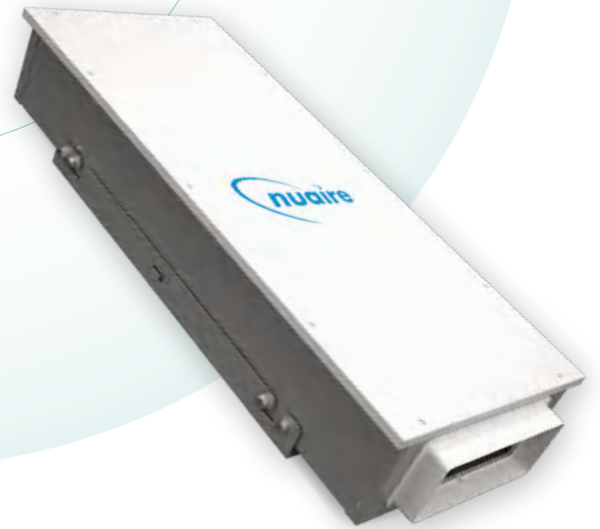




THE  
**Q-AIRE**  
RANGE



# Improving Air Quality

Nuaire is a market leader in the design and manufacture of fans and ventilation systems. We put our energy into efficient ventilation so you don't waste yours.

With concerns over rising air pollution, Indoor Air Quality (IAQ) has quickly become a serious subject for the building industry. As such, an Air Quality report must now be produced at planning stage, making this issue one that cannot be ignored.

Nuaire are committed to overcome the issues associated with air pollution by continuing to develop innovative products to keep air pollution out of the home and protect those in polluted areas to safeguard not only their homes, but their health.

With an increasing focus on Indoor Air Quality, particularly in urban areas where high levels of NO<sub>2</sub> are being measured, higher levels of filtration are required to meet the World Health Organisation (WHO) guidelines.



## Technical Advice

Compliance on SAP PCDB. Stay ahead of the latest building regulations and make the best product and fabric choices.



## The Full Service

Help with product selection, detailed parts lists and fast delivery ensure you meet your deadline and budget.



## Bespoke Design

Services providing a simple, quick selection or offering advice on compliance with the very latest building regulations and environmental issues.

## Our people

*are at the heart of Nuaire; we have more than*

**400 experienced staff based at our headquarters,**

*65 technical sales engineers throughout the UK and Ireland.*

Nuaire is a British company that designs and manufactures innovative ventilation products for the residential and commercial sectors. We are proud to be recognised for our expertise, commitment to innovation and the outstanding quality of our products and customer service.



**Proud to Build British**

# IAQ VALVE

IAQ-VALVE is a unique solution to tackle pollution inside the home. A supply-valve and a carbon filter in-one, this new technology is small yet powerful. The activated carbon media inside the cartridge is microporous; capable of removing up to 91% of NO<sub>2</sub> and other harmful pollutants, as verified by the BRE.

IAQ-VALVE works as part of a complete system with Nuaire's MVHR Eco range.

The carbon pellets offer a low pressure drop of 15Pa at 13l/s, maintaining system pressure.

With options to duct vertically or horizontally via a fixed plenum, installation is flexible. Maintenance is simple with no access hatch required and tool-free replacement of the cartridge can be carried out by the homeowner.

The simple way to lock out air pollutants.



## Consultant Specification

### UNIT SPECIFICATION

The carbon filtration for the removal of Nitrogen Oxide/Dioxide to the dwelling shall be achieved by use of the Q-Aire carbon filter supply air valve IAQ-V125. This air valve is to be positioned in each and connected to Nuaire IAQ-Plenum and within the ceiling void and jointed to the ductwork system. Each air valve shall be adjustable for commissioning, with a lockable feature to ensure the commissioned airflow is always achieved.

The activated carbon shall be contained within a single cartridge that sits in the supply air valve with minimal resistance to the airflow.

The activated carbon filter cartridge shall be up to 91% efficient in the removal of Nitrogen Dioxide (NO<sub>2</sub>) ensuring exceptional indoor air quality for the occupant. The filter cartridge shall be easily removable by a simple bayonet connection on the air valve assembly, ensuring a quick release and change of the filter when required. Following the replacement of the filter cartridge the air valve will not require any additional adjustment to maintain the previous designed and commissioned air flow rates.

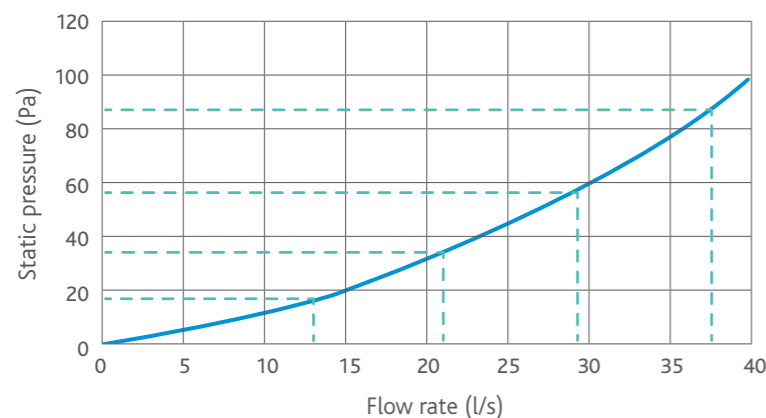
The IAQ-V125 efficiency shall be confirmed and independently verified by a BRE (Building Research Establishment) test method and the information shall be provided by the filter manufacturer for approval.

- The unit shall be installed within a vacuum formed plenum box, suitable for 204 x 60mm ducting.
- The IAQ-V125 shall be installed in conjunction with the manufacturer's installation and maintenance guidelines.
- The unit shall be offered with a 5 year warranty; 1 year parts and labour, remaining years parts only.

#### The activated carbon shall have the following minimum qualities:

Bulk density	kg/m <sup>3</sup>	480 (+/-5%)
Nominal diameter of cylindrical pellets	mm	4.0
Nominal length of cylindrical pellets	mm	8.0
Moisture content (approx.)	%	3
Crush strength (minimum)	kg	2
Removal capacity for Cl2 of own weight	%	10
Minimum design efficiency	%	99.5
Typical air velocity	m/s	0.3 - 2.5
Suitable for relative air humidities	%	10 - 95
Temperature range	°C	-20 - +51

### AIR RESISTANCE TEST IAQ-V125



Note: Based on a typical range

#### Part F Flow Rates and Resistance

Flow	8 l/s	13 l/s	21 l/s	29 l/s	37 l/s
Resistance	7.1 Pa	14.9 Pa	32.5 Pa	54.7 Pa	84.8 Pa

### Results of NO<sub>2</sub> reduction

Air flow rate (l s <sup>-1</sup> )	Nitrogen dioxide concentration (ppb)		Approx. NO <sub>2</sub> concentration reduction (%)
	Pre-filter	Post-filter	
5	23	2.5	89
5	66	5.9	91
5	106	9.2	91
10	25	5.5	78
10	49	10.5	79
10	104	21	80
15	27	6.8	75
15	66	15	77
15	105	24	77
20	24	6.0	75
20	63	16	75

ppb = parts per billion

Annual mean NO<sub>2</sub> levels near busy roads can frequently exceed 100 micrograms per cubic metre of air.

Outdoor air quality has a direct impact on the air inside the home.

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