nuaire

Ventilation Solutions

for the Decent Homes Standard

THE QUEEN'S AWARDS FOR ENTERPRISE: INNOVATION 2004

Nuaire Focus

Quality • Reliability • Innovation

As one of Europe's largest manufacturers of ventilation equipment, we pride ourselves in being able to eliminate the risk and high cost of ventilation by designing and manufacturing innovative products for homes and buildings which optimise air quality and energy efficiency for your application.

Working with you

Nuaire has a proven track record of providing ventilation solutions to Decent Homes projects across the country. We understand the needs of Social Landlords to protect housing stock and provide a healthy living environment for tenants and the risk of ill health from inadequate ventilation; to tackle fuel poverty by delivering energy efficient solutions and the requirements of current building regulations to 'Build Tight - Ventilate Right'.

THE QUEEN'S AWARDS FOR ENTERPRISE: INNOVATION 2004

Nuaire has developed a range of low energy ventilation solutions specifically designed and produced in the UK to assist housing providers bring their housing stock up to a decent standard which are energy efficient, enable a healthy environment within the home and comply with Building Regulations.

committed to delivering

social housing solutions

Decent Homes

Solutions

Service

Decent **homes**

What are decent homes?

The definition of a decent home is one that meets:

- **the current statutory minimum standard for housing**
- **is in a reasonable state of repair**
- **has reasonably modern facilities and services**
- **provides a reasonable degree of thermal comfort**

In short, a decent home should be warm, weatherproof and have reasonably modern facilities.

Housing standard

Housing Health & Safety Rating System (HHSRS) is the risk assessment procedure for residential properties, replacing the Housing Fitness Standard from the 6th April 2006 in England. HHSRS also replaces the fitness standards as an element of the Decent Homes Standard.

The HHSRS states that dwellings should be free from category 1 hazards (hazard group A – physiological requirements, damp & mould). These hazards are described in the document as threats to health associated with **'increased prevalence of house dust mites and mould or fungal growths, resulting from dampness and/or high humidity. It includes threats to mental health and social well being which may be caused by living in the presence of damp, damp staining and/or mould growth.'**

Some of the category 1 hazards listed in the HHSRS scoring sheet are:

- **cold**
- **damp and mould**
- **heat**
- **noise**

...thriving sustainable communities

Decent Homes are important for the health and well being of those living in them and are a key element of any thriving sustainable community. Poor housing contributes to an area getting a bad reputation and could lead to the breakdown of communities.

The Government made a commitment in 2000 to bring all public sector homes up to a decent standard by setting a 10 year target to ensure that all social housing meets the standard of decency by 2010.

Building **regulations**

At a glance

The purpose of the regulation is to ensure that **'adequate means of ventilation is provided for people in the building'**, improving building performance and indoor air quality for occupants of both new and existing dwellings in the UK.

Ventilation within a home assists in the dilution and removal of pollutants as well as reduction in humidity/condensation, which combined create a more pleasant environment and relief for asthma and allergy sufferers.

At the same time, the changes reflect the most recent research, linking air pollutants and condensation to effects on health (particularly asthma) and damage to the building fabric (mould), with guidance on ventilation systems and required flow rates taking this into account.

Approved Document F (ADF) provides guidance on ventilation system options. These are:

The Ventilation Options referred to in ADF

1. **1. Background ventilators and intermittent extract fans**
   2. **Passive Stack Ventilation**
   3. **Continuous Mechanical Extract (MEV)**
   4. **Continuous Mechanical Supply and Extract with Heat Recovery**
   5. **Accreditation via BBA**
2. **0.15 Other ventilation systems and devices, perhaps following a different strategy (e.g. positive input ventilation) may provide acceptable solutions provided it can be demonstrated by way of a BBA certificate that they meet the requirement F1.**

remember

"Build tight
ventilate right"

Health **and homes**

Condensation Damp & Mould

There is now considerable evidence to support the view that mouldy housing has a detrimental effect on the physical and mental health of its occupants. The HHSRS identifies damp and mould growth as one of the 24 hazards which could cause **'risk or harm to the health or safety of an actual or potential occupier'.**

The category of Damp and Mould within the HHSRS covers threats to health associated with increased house dust mite populations and mould growths resulting from dampness. These include threats to mental health (psychological) and social well-being which may be caused by living with the presence of damp, damp staining and/or mould growth.

Each home should have 'sufficient and appropriate' means of ventilation to deal with the moisture generated by normal domestic activities without the need to open windows.

It is recommend within the HHSRS that all dwellings should be warm, dry and well-ventilated with indoor relative humidity levels between 40% and 60% as this is the optimum environment to limit the growth of house dust mite populations and mould growth.

Dust mites

Dust mites breed in a humid environment found in homes which are poorly ventilated.

Clinical evidence suggests that exposure to high concentrations of allergens associated with the house dust mites over a prolonged period can trigger allergic symptoms such as rhinitis, conjunctivitis and eczema. Repeated exposure to these allergens can lead to asthma. The severity of the asthma intensifies when humidity, house dust mite and mould levels are increased. Dust mites are too small for us to see but they can be present in huge quantities in soft furnishings, mattresses and carpets. It is the inhalation of this allergen that can trigger an asthma attack.

It is estimated that approximately 80% of all asthmatic children are allergic to the droppings of the house dust mite and about a third of all children, whether asthmatic or not, display some evidence of allergy to them.

Clinical research has proven that whole home ventilation can play a significant part in controlling dust mite allergens.

NB. Nuaire do not claim that the use of their products will cure asthma nor eliminate asthma attacks.

Radon

Radon is a naturally occurring radioactive gas which is both colourless and odourless which can enter buildings from the ground and can expose occupants to doses of radiation. high concentrations of radon particles, once ingested, increase the possibility of damage to tissues and in extreme cases the risk of lung cancer. It is estimated that 100,000 homes have higher than average concentrations of Radon above the safe levels of 200 Becquerel per m2.

Positive inout ventilation is a recognised method of Radon control; increasing the internal air pressure will reduce Radon entry into a dwelling and increase dilution of indoor Radon (because if increased ventilation).

For more information on how to reduce radon levels in dwellings log on to:

www.bre.co.uk/radon/reduce
www.defra.gov.uk/environment/radioactivity/background

Nuaire are members of the Radon Council

Positive Input **ventilation**

Key Features

- **Ventilates every room**
- **5-year maintenance free**
- **Low life cycle costs**
- **Loft fitted unit – out of sight out of mind**
- **Low noise levels**
- **6 speed settings to suit individual properties**
- **Completely automatic**
- **Saves up to 500-600 kWh a year**
- **10 year warranty options available***

BBA BRITISH BOARD OF AGRÉMENT
CERTIFICATE No 00/3727

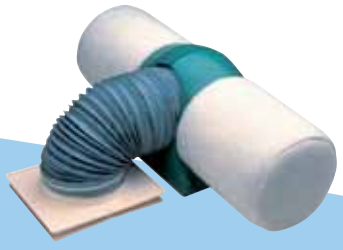
What is Positive Input Ventilation?

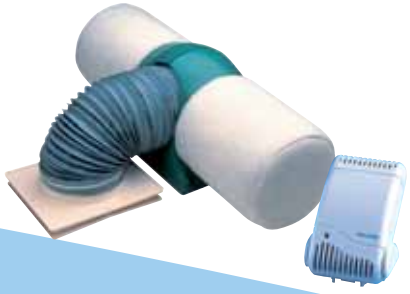
Nuaire's Postive Input ventilation systems provide a continuous supply of fresh filtered dry air into a dwelling by way of positive pressurisation. A gradual pressure is built up forcing moisture and indoor air pollutants out through natural leakage points found in every home and creating an atmosphere in which condensation and mould growth cannot exist. One of the most popular methods of whole house ventilation, it is also the most cost effective way of ventilating an existing home.

Positive Input ventilation systems will

- **Continuously creates creating a healthier indoor environment**
- **Protect the fabric of a dwelling from damage caused by mould and condensation**
- **Reduce the maintenance costs of the property**
- **Prevent external pollutants from entering a dwelling and suppress unwanted infiltration (draughts)**
- **Minimise the loss of heat in a loft space by recirculating the air, providing a significant net energy gain**

"...the most energy efficient, cost effective way of ventilating an existing home..."





Drimaster

Whole home ventilation system with fixed heat recovery

- Very low running costs
- Easy installation
- 5 year maintenance free
- Solar gain benefits
- System stand by mode in summer months
- Can be used for Radon control
- Complies with the Building Regulations on the basis of BBA certificate 00/3727 and its provisions
- New Build "good practice" rating in GPG268
- SAP 2005 listing

Drimaster 2000

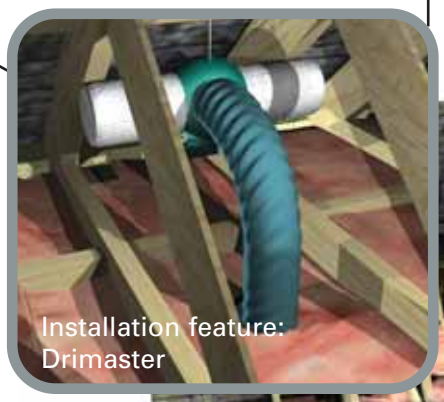
Whole home ventilation system with intelligent heat recovery

- Very low running costs
- Easy installation
- 5 year maintenance free
- Solar gain benefits
- Intelligent heat recovery via twin sensors optimises energy efficiency
- Temperature sensor providing optional unit/filter status indication
- System stand by mode in summer months
- Can be used for Radon control
- Complies with the Building Regulations on the basis of BBA certificate 00/3727 and its provisions
- New Build "good practice" rating in GPG268
- SAP 2005 listing

Drimaster 365

All year round whole home ventilation with intelligent heat recovery

- Very low running costs
- Easy installation
- 5 year maintenance free
- Will draw air in directly from outside to help cool a home
- Integral sensors and automatic control adjusts fan speed and operation to maximise heat recovery
- Remote user control panel
- Can be used for Radon control
- Complies with the Building Regulations on the basis of BBA certificate 00/3727 and its provisions
- New Build "good practice" rating in GPG268
- SAP 2005 listing



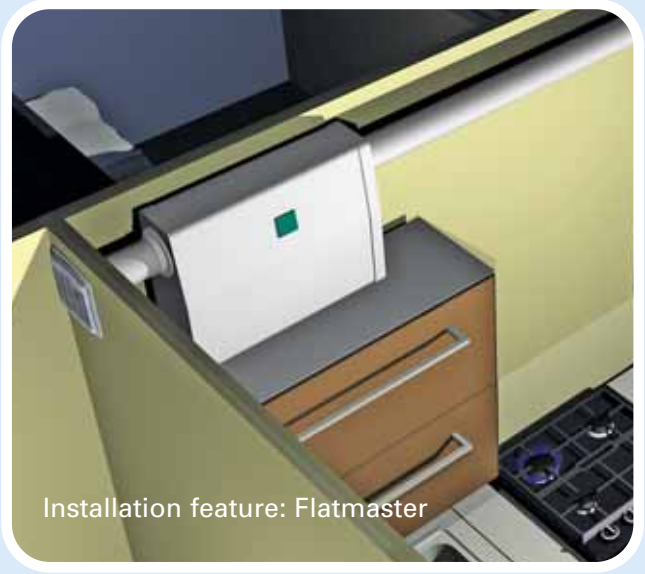
Installation feature: Drimaster

Installation feature: Drimaster 365

Positive Input ventilation **for homes without a loft**

Key Features

- **5 year warranty**
- **Low life cycle costs**
- **Low noise levels**
- **Completely automatic**
- **Only one electrical connection**
- **Only one external wall penetration**



Installation feature: Flatmaster

What is Positive Input Ventilation?

Flatmaster systems introduce air into the home at a continuous low rate much like the Drimaster range of products; however Flatmaster systems are designed for properties without lofts. The unit is usually situated in a convenient location (i.e. kitchen ,airing cupboard or hallway) and ducted to a central location. The interchangeable, multi-positional inlet/outlet spigots allow for quicker and more aesthetically pleasing installation with only one external wall penetration.

Flatmaster

Postive Input ventilation system

- Very low running costs
- 5 year warranty
- Extremely low power consumption - as little as 5 watts
- Multi-positionable spigots for quicker installations
- Can be used for Radon control
- Hour run monitor available

Flatmaster 2000

Whole home ventilation system

- Very low running costs
- 5 year warranty
- Extremely low power consumption - as little as 8 watts
- Fitted with thermostatically controlled heater
- Multi-positionable spigots for quicker installations
- Can be used for Radon control
- Hour run monitor available

Individual room **extraction**

Key Features

- **Universal extract**
- **Suitable for kitchen and bathroom applications**
- **Low life cycle costs**
- **5 year warranty**
- **Extremely low running costs**
- **Low noise levels**
- **Various control options available**
- **10 year warranty options available***

Installation feature: Genie-X

What are individual room extract fans?

Extract fans are designed to operate in conjunction with 'rapid ventilation' such as openable windows and work by removing moisture from individual wet areas within a dwelling, such as kitchens and bathrooms.

Genie-X

Surface, semi-recessed, window & duct mounted Universal extract fan

- Continuous background ventilation
- Very low running costs
- Exceptionally quiet – typically 30 dBA
- Available in 12V or 230V models
- Flame retardant construction
- Clip-in, push fit components make easy installation & maintenance
- Complies with Building Regulations
- New Build "good practice" rating in GPG268

Details our full range of extract fans are available on our Nuaire Group website.

* For more information and expert advice please contact: 02920 858200 f: 02920 858300 www.nuairegroup.com

Renewables

Sustainability at the Heart of Planning –

The government has set its own targets of a 20% decrease in CO2 emissions by 2010 and a 60% decrease by 2050. Policies for delivering sustainable developments such as Part L of the Building Regulations; PPS22 Renewable Energy; The EcoHomes Standard and The Code for Sustainable Homes are reinforced by the planning system.

The Code for Sustainable Homes rates the sustainability of housing on a scale of one to six, based on the BRE's Ecohomes rating system and is an integral part of the Governments zero-carbon strategy, which aims to prepare the housing and construction products industries for the challenges posed in delivering low and zero-carbon homes. Intended as a national standard for homes within the open and social market, a home can achieve a sustainability rating from one star (entry level) to six stars the highest level.

With a major source of CO2 emissions coming from the energy we use to heat, light and run our homes, it's vital that homes are built in a way that minimises the use of energy.

The code sets out minimum performance levels in 6 key areas including energy efficiency/CO2, water efficiency and use of materials.

Registered social landlords are required to build to level three

Meeting the Challenge…

The Governments policies offer a tool for home builders and RSL's to demonstrate the sustainability performance of their homes, and to differentiate themselves from their competitors. In response, Nuaire has developed Sunwarm, the World's first family of standalone and integrated systems to provide solar heated air and water, whole house ventilation and air-cooling.

For help and advice on using energy efficient ventilation, solar thermal renewable systems and providing healthy living environments please contact sustainablehomes@nuairegroup.com

Key Features

- **Key features**
- **5-year warranty**
- **Highly energy efficient**
- **Reduced fuel bills**

Sunwarm Tile

All year round temperature controlled whole home ventilation

- Whisper quiet
- Easy installation
- 5 year maintenance free
- Can help heat or cool a home all year round
- Uses a standard roof as a solar collector
- Integral sensors and automatic control adjusts fan speed and operation to maximise heat recovery
- New Build "good practice" rating in GPG268
- Annual potential energy savings of 1025 – 1350KWh*

Sunwarm Air

Ecosmart Solar Air Heating System

All the benefits of the Sunwarm Tile system but with the added benefits of

- Roof mounted solar collectors to pre-heat incoming air
- Easy to use control panel
- Annual potential energy savings of 1400 – 1800KWh*

Sunwarm

Solar assisted ventilation and hot water system

As Sunwarm Air but with the added benefits of

- Roof mounted solar collectors to pre-heat incoming air
- Easy to use control panel
- Will provide solar hot water
- Warm or cool filtered air on demand
- Annual potential energy savings of 2500 – 2850 KWh *

Sunwarm Heat Recovery

Solar assisted ventilation system with heat recovery

As Sunwarm but with the added benefits of

- Heat recovery unit for added energy efficiency
- Up to 7 rooms supplied with air ventilation
- Warm or cool filtered air provided on demand
- Extracts from wet areas

Sunwarm Hot Water

Solar assisted hot water system for all applications

- Fully flexible system can be installed on the roof, in the roof and as a stand alone on a flat roof
- Uses direct and indirect solar radiation to work efficiently all year round
- Can provide 50-60% of annual domestic hot water requirements

* For electrically heated dwelling with efficiency factor of 0.43 Kg/KWh. Estimates based on a number of factors that relate to method of construction, materials used, air tightness of the house, orientation and many other such parameters.

Mechanical extract ventilation

Key Features

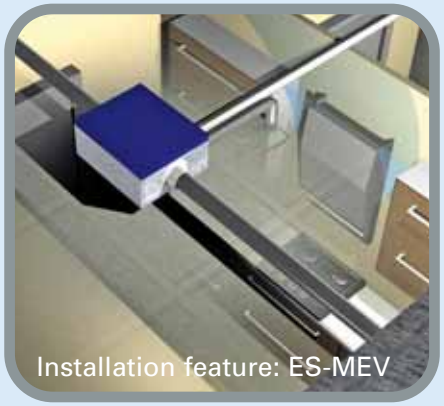
- **Low maintenance**
- **Low life cycle costs**
- **Very low running costs**
- **Lowest noise levels**

What is MEV?

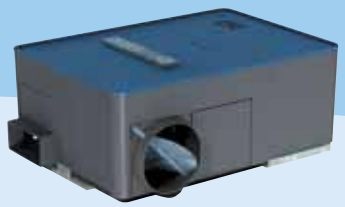
Nuaire's Mechanical Extraction Ventilation systems are ideal solution for apartments where there is possibly only one external wall. An MEV central extract system requires a single external aperture with a network of ducting capable of extracting stale air from up to 5 rooms - minimising noise breakout and allowing for quicker installation turnaround.

Mechanical extract ventilation systems will

- **Extract all moisture from wet areas bathrooms and kitchens**
- **Provide continuous extraction and will only increase to a higher rate when increased levels are required e.g. cooking or bathing**



Installation feature: ES-MEV



ES-MEV

Ecosmart energy efficient continuous extract system

- Very low running costs
- 5 year warranty
- Low depth of 185mm for installation into the smallest of spaces
- 'Dial a Duty' simple precision commissioning
- Complies with ADF (table 1.2c – system type 3)
- SAP 2005 and appendix Q listing – reduced specific fan power
- New build 'best practice' rating in GPG268

MEV-SVS

Extract unit with supply and demand

- Very low running costs
- 5 year warranty
- Low depth of 185mm
- 'Dial a Duty' simple precision commissioning
- Low energy components
- Complies with ADF (table 1.2c – system type 3)
- SAP 2005 and appendix Q listing – reduced specific fan power
- New build 'best practice' rating in GPG268

MEV

Continuous extraction system

- Very low running costs
- 5 year warranty
- Low depth of 185mm for installation into the smallest of spaces
- Complies with ADF (table 1.2c – system type 3)
- New build 'best practice' rating in GPG268

MEV-B

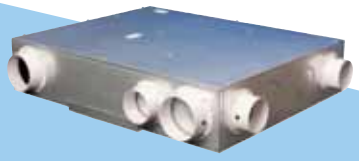
Surface mounted, continuous mechanical extract ventilation units

- 3 year warranty
- Ceiling or wall mounted for ease of installation
- Circular or rectangular spigots can be interchanged to suit individual dwellings

Mechanical ventilation with **heat recovery systems**

Key Features

- **Low maintenance**
- **Low life cycle costs**
- **Very low running costs**
- **Low noise levels**
- **Adjustable flow rates to suit individual properties**
- **5 year warranty**



What is MVHR?

Mechanical Ventilation with Heat Recovery systems continuously supply tempered air into habitable rooms at a background/trickle rate whilst extracting moisture from 'wet' areas such as bathrooms and kitchens, creating comfortable, well ventilated environments. Although an ideal solutions for flats and apartments due to their low profile meaning that they can be easily recessed into ceiling and floor voids, they can also be installed into houses and apartments.

Mechanical heat recovery systems will

- **Provide a constant supply of fresh, tempered and filtered air into a dwelling whilst removing indoor air pollutants**
- **Minimise the loss of unused heat, creating energy efficient dwellings and helping to cut some household energy bills**
- **Allow for continuous and controllable ventilation**

cookerXbox

Heat recovery unit for location over cooker for flats/apartments whole home ventilation with heat recovery which is 66% efficient

- Very low running costs
- 5 year warranty
- Complete with supply diffuser, extract grilles, combined air intake/extract grille and automatic controls.
- Ideal for installation above cookers and wall or cupboard mounting
- Automatic operation
- Complies with Building Regulations
- New Build "good practice" rating in GPG268

opusXbox

Whole home ventilation with heat recovery which is 70% efficient

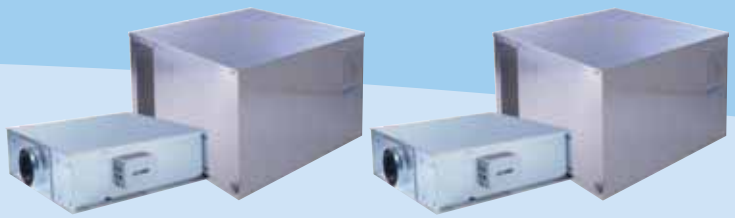
- Very low running costs
- 5 year warranty
- Low depth of 185mm - ideal for space restricted ceilings
- Single point fixing bracket
- Easy to commission and install
- Complies with Building Regulations
- New Build "good practice" rating in GPG268
- Energy efficient DC motors - AC motors available on request

Installation feature: OpusXbox

Apartment block extraction **using a centralised system**

Key Features

- **1 - 2 year maintenance free**
- **Low life cycle costs**
- **Low noise levels**
- **Ecosmart controls**



Ecosmart Quietscroll Twinfan

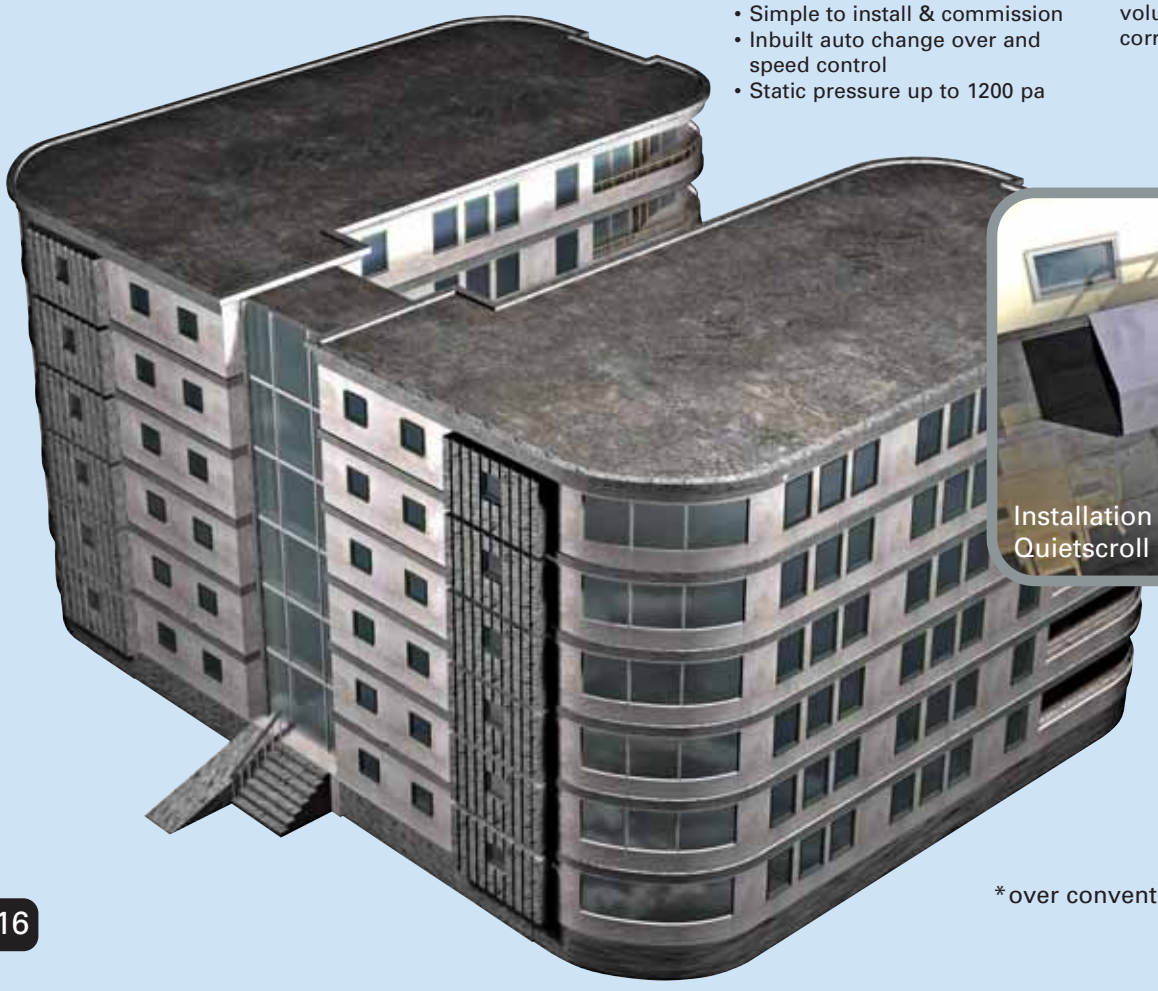
Centralised system ducted to individual rooms for internal or external roof mounted use

- Quiet - Imperceptible noise levels
- Integral silencers
- Full Ecosmart 'plug & go' controls
- Simple to install & commission
- Inbuilt auto change over and speed control
- Static pressure up to 1200 pa

Constant Pressure

Energy saving central extract using constant pressure for high demand ventilation

- Imperceptible noise levels
- Up to 70% energy savings*
- Pre-wired, all components pre-assembled
- Surface and duct mounted version of damper available
- Energy efficient constant volume dampers help maintain correct ventilation levels



Installation feature: Quietscroll

*over conventional central systems

nuaire

Ventilation Solutions for Decent Homes

Designed to provide energy efficient ventilation solutions for all social housing providers

- ☑ Condensation, damp free homes
- ☑ Healthy, low allergen homes
- ☑ Tackle fuel poverty with energy efficient solutions
- ☑ Comply with new ventilation building regulations
- ☑ HHSRS compliant

...Will you be ready?

Design, supply and installation service available to meet your programme of works deadline.

For more information expert advice please contact
t: 029 2085 8200 f: 029 2085 8300

For information on our Decent Homes CPD seminar please email
e: decenthomes@nuaire.co.uk

Designed and Manufactured in the UK

www.nuairegroup.com

THE QUEEN'S AWARDS FOR ENTERPRISE: INNOVATION 2004

Service

More than a manufacturer

Advice

Expert advice is on hand for environmental issues such as carbon emissions and urban projects and assist clients to meet planning policy such as PPG24, PPS22 and The Code for Sustainable Homes. All schemes will be deigned to comply with the very latest building regulations.

CPD Seminars

Nuaire are dedicated to knowledge through planned continuing personal and professional development (CPD). We are able to offer cpd seminars on topics ranging from Building Regulations, Decent Homes and advice on meeting The Code for Sustainable Homes. For details on how to register for a seminar please visit www.nuairegroup.com/seminars

Devoted to design

Designing the right ventilation system for every application is paramount for the health and well being of the building and its occupants. With over 15 years experience in design, Nuaire are able to support all technical submissions with bespoke, full scheme CAD drawings – giving you our assurance of the best solution for your building. Nuaire's design teams work to the highest standards to make sure that your project is right first time.

Customer Service

Nuaire recognise the importance of customer service and every touch point with our customers is measured and monitored. As members of the Institute of Customer Service we have access to the latest developments on all aspects of customer services. We believe that this dedication sets us apart from our competitors.

Product Availability

All Nuaire products are manufactured and dispatched directly to customers via its distribution arm, Fans Direct. Bespoke arrangements can also be arranged for bonded stock on all Decent Homes orders to ensure continuity of product for the duration of the project.

Warranty and Technical Services

As a manufacturer with more than 40 years experience Nuaire will provide products backed by our extensive parts and labour warranties. The customer service team is on hand to assist in the diagnosis of all product related issues and a technical advisor will guide you through a systematic process from which there can only be two outcomes:

1. Satisfactory resolution over the telephone, following corrective advice.
2. The arrangement of a site visit to replace the faulty part or unit.

Nuaire will endeavour to get to site within 24 hours

Installation

Nuaire is able to offer a complete supply, installation and commissioning service for its domestic range of products across the UK by NICEIC accredited installers. Our fully co-ordinated installation service includes pre-contract discussions on design and health and safety as well as on going contract management until project completion.

- Nuaire installers will test every unit on completion and issue NICEIC Minor Works Certificate if required.
- Nuaire installers will explain the operation and benefits of the unit/s to the tenant.
- Nuaire Ltd will provide regular updates on work in progress.

Survey – Install

By working closely with housing providers around the UK we have been made aware of the increasing need to deliver higher levels of tenant satisfaction and best value to key stakeholders.

To help achieve this, Nuaire offer a combined survey and installation service which involves an approved operative calling at a property, assessing the condensation dampness problem and where possible, installing equipment to resolve the problem without the need to come away from the property.*

Mould Cleaning - A complete service

Nuaire are able to offer a complete solution for condensation and mould growth problems within a property by way of a two step process combining the survey/installation with a mould treatment. By installing the most appropriate system* to combat the problem initially the installer will steralise the area (and up to 1m beyond) and apply an inhibitor. For more information please contact Nuaire directly.

*Nuaire will only install where it is an absolute requirement and working to an agreed schedule of rates to ensure cost control

For more information and expert advice please contact:
02920 858200 f: 02920 858300 www.nuairegroup.com

Industry memberships **and accreditations**

Nuaire is actively involved with various trade associations and technical working groups and has an active role in consultation regarding legislative, technical and regulatory changes.

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