

ventilation **solutions**



for apartments
and communal residences

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Helping to create a relaxing,



ventilation **solutions**

comfortable environment



Nuaire is the market leader in the design and manufacture of energy efficient domestic, commercial and renewable ventilation solutions.

The Nuaire Group is a British manufacturer, formed in 1964 with a turnover of circa £50m. Nuaire has become one of the largest and most successful ventilation manufacturers in the World, and its products are available in over 40 countries.

Modern ventilation is about people and providing a good level of indoor air quality whilst ensuring an effective building performance. Critical factors such as air quality, energy efficiency and noise pollution are always considered to ensure suitable product selection.

Nuaire deliver quality and innovation through value for money ventilation solutions. First class technical support, and the innovative design of bespoke systems ensures we offer the very best solution for your project.

Application & product selection guide

To help you select the appropriate ventilation solution for your application - simply refer to one of the following application options:

For further technical details please visit www.nuairegroup.com

Page Number

Apartments & flats



- Bedrooms**
- Bathrooms**
- Kitchens/Commercial**
- Living Area**
- WC & Cloakrooms**
- Utility Rooms**
- Leisure**
- Underground Car Park**
- Pressurisation**
- Studio1/Bedroom**
- Penthouse**

Nursing homes



- Individual Bedrooms**
- Bathrooms**
- Communal Toilets**
- Kitchens**
- WC & Cloakrooms**
- Utility Rooms**
- Smoke Extract**
- Pressurisation**
- Offices**

Student accommodation



- Individual Bedrooms**
- Bathrooms**
- Communal Toilets**
- Kitchens**
- WC & Cloakrooms**
- Utility Rooms**
- Smoke Extract**
- Individual Housing**

Hotels



- Bathrooms**
- Communal Toilets**
- Communal Kitchens**
- WC & Cloakrooms**
- Service & Maintenance Areas**
- Smoke Extract**
- Leisure Areas**
- Underground Car Park**
- Pressurisation**
- Offices**



Product	Green	Pink	Orange	Blue
AirepodXbox				
Airmiser				
Airmover (Ecosmart)				
AXT High Temperature				
Axus High Temperature Smoke				
Boxer (Ecosmart)				
Constant Pressure (Ecosmart)				
CVD100 Volume Control Damper				
Ducting & Ancillaries				
Sunwarm Air				
Ezplate				
CookerXbox				
Impulse Car Park				
MEV (Ecosmart)				
MEV-SVS				
MEV/S				
Mark Ten				
Heat Recovery Range				
Opus Range				
Opusdc (Ecosmart)				
Opusdc				
OpusXbox				
Quietscroll Twinfan (Ecosmart)				
Squif				
SqurboXbox				
Sunwarm Range				
Terminator				
XS - Wall/Window/Ceiling/Roof				
Xtractor				

Application & product selection guide

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Energy efficiency

ADF 2006 – New Part F

Ventilation has gained an importance unseen before in Building Regulations and the construction industry. The introduction of a performance led whole house approach has been drafted as a result of the need to improve indoor air quality for occupants of both new and existing dwellings in the UK.

Ongoing research into indoor pollutants that exist in today's dwellings has contributed to the changes and the types of pollutant and acceptable level criterias are now referenced in ADF 2006:

- Nitrogen Dioxide (NO₂)
 - Carbon Monoxide (CO₂)
 - Total volatile compounds (TVOC)
 - Bio-effluents (body odours)
- Ventilation requirements for new build properties will now take into account the whole dwelling based on an analysis of floor area, number of bedrooms and occupants. Mechanical and passive ventilation requirements are also balanced and integrated to achieve a building and ventilation performance.

The main changes:

- Performance Based Ventilation
- Integrated Mechanical and Passive Ventilation
- Document assumes a higher level of air tightness
- Reference to Standard 4 Ventilation Methodologies
- All products must now be tested to a new European standard
- Introduction of 'work on existing buildings' section

Noise

Noise is an increasing issue in buildings today. The introduction of government targets including the redevelopment of existing sites and planning restrictions has meant that **70% of new dwellings are now built on brown field sites** and the average density of developments has increased **from up to 25 dwellings in 1997 to 40 now**. These dwellings are often constructed close to industrial sites, busy roads and airports. Additional developments in home entertainment and growth in transport has increased general noise levels, all of which is now having impact on the domestic environment.

The 1996 English Housing Survey suggested that 1 in 4 homes in England is affected by Noise Pollution. BS8233: 1999 Sound Insulation and Noise Reduction for Buildings

- Code of practice, defines a reasonable standard of internal noise levels up to 35 dB(A) for bedrooms and 40 dB(A) for living rooms.

Main design issues are as follows

- Domestic activities are capable of generating some of the most annoying forms of noise that may have an impact on sleep, increase stress levels or result in the inability to concentrate.
- **Section 79 of the Environmental Protection Act** (England and Wales) and the Control of Pollution Act (Scotland) covers statutory nuisances including noise emitted from premises that may impact on health or be a nuisance.
- **Does noise need to be considered when designing ventilation systems?**
Following the English Housing Survey results and the increasing emphasis from the European Commission to reduce noise levels, Part E of the Building Regulations has been revised and additional planning and construction guidance notes have been introduced to ensure noise is considered at the design stages of development for both internal and external noise transfer.

PPG24 (PAN56 Scotland) aims to provide guidance and advice to minimise the adverse impact of noise without placing unreasonable restrictions on developments. The guidance introduces the concept of **Noise Exposure Categories (NEC's)** ranging from A–D that will aid planning authorities in their consideration for applications for residential developments. For guidance **PPG24** suggests the use of ventilators that help achieve the noise levels suggested in **BS 8233**. Noise insulation materials can reduce noise transfer however in some instances may affect airflow paths in domestic dwellings. If building elements are installed to provide sound insulation following noise assessments, they may no longer be used as a source of ventilation where required e.g. windows. In this instance, it may be essential to provide acoustic ventilation solutions that provide the necessary airflow or replacement air into the dwelling and reduce noise intrusion. If the planning category falls within B, C or D ratings, acoustic ventilation should be considered during the design and planning stage as ventilation solutions are often part of the building process.

For further information please visit www.nuairegroup.com

Air quality

Indoor air

Mould and condensation have long been issues in housing for a number of years and the need to safeguard against them has increased. They have potentially been made worse by better performing heating and insulation and new types of airborne particles being introduced into dwellings as a result of furnishings and cleaning products. Changes to modern construction methods and Building Regulation amendments have also impacted on the indoor environment as the concerns regarding CO emissions are leading to a greater demand for more energy efficient housing.

The majority of dwellings included an open fire and chimney that created airflow throughout the dwelling providing an effective level of ventilation for occupants. Indoor Air Quality and Noise were not major issues as less chemicals and man-made or treated furnishings were used and there was generally less noise from traffic, aircraft and industry. Since the 1930's the effectiveness of natural ventilation has been significantly reduced as the drive towards energy efficient housing has meant that dwellings are now fully insulated, double glazed and include central heating, all inhibiting natural airflow and reducing area for moisture to escape.

Indoor air quality and noise are now major concerns for residents. Indoor air quality has been significantly affected by the increase in the use of chemicals and cleaning products in domestic dwellings which has contributed to the rise in allergies. Brownfield sites and density planning restrictions have also meant that new dwellings may be situated close to noise sensitive areas.

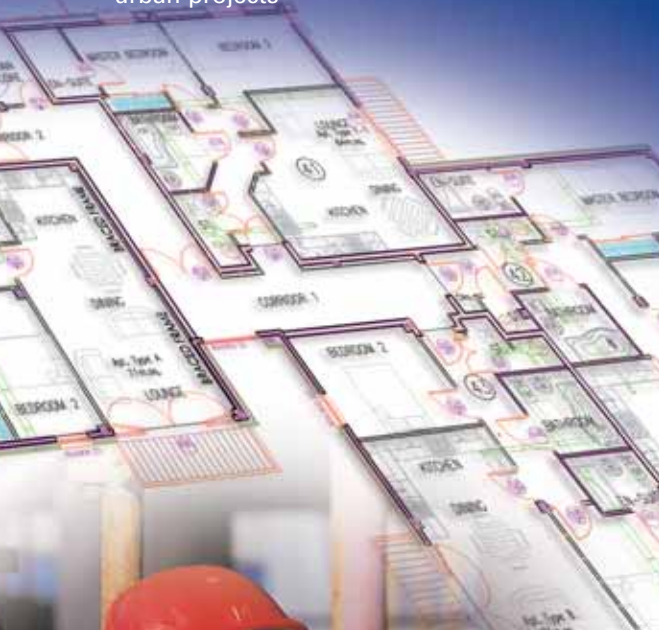


Designing with you

– our guarantee

Nuaire have a team of experienced technical estimators and system designers who can assist you with advice on all types of ventilation systems, ensuring the best possible solution for your project. Please forward your drawings for consideration/review to drawings@nuaire.co.uk or alternatively please call the Residential Applications Team on 02920 858 200.

- **15 years experience** ensuring the best solution for your project
- **Compliance** to the very latest building regulations
- **Full scheme** CAD drawings
- **Expert advice** on environmental issues such as carbon emissions and urban projects



Project: The Edge, Manchester
Ventilation: MEV range

Project: Gunwharf Quay Portsmouth
Ventilation: MEV range

ventilation solutions

Working with you

– our guarantee

Nuaire is able to offer a complete supply, installation and commissioning service for its apartment product range across the UK. Our fully co-ordinated installation service includes pre-contract discussions on design and health & safety as well as on-going contract management through to project completion.

Nuaire installs thousands of domestic ventilation systems every year across the UK utilising highly experienced regional installation teams. Nuaire is registered with Construction Line, CHAS and all electrical work is carried out by NICEIC registered contractors.

Nuaire offer:

- **Expert advice** either working from customers own drawings or by providing marked up ventilation drawings complete with duct runs
- **Competitive tender** submissions to enable you to meet budgetary requirements
- **A complete installation service** including ventilation unit, ductwork and ancillaries (subject to package)
- **1st & 2nd fix** providing as little or as much input as the customer requires at either stage
- **Contract management** from pre contract through to hand over
- **Experienced and reliable** installation teams across the UK
- **Commissioning** including air volumes can be provided upon request
- **Peace of mind** through a full manufacturers parts & labour warranty
- **Optional extras** via Fans Direct including a wide range of ducting, grilles, diffusers and fire dampers

For further details either call Nuaire Residential Applications Department on 02920 858 200 or email drawings@nuaire.co.uk



rs,	<p>Project: Salford Quays, Manchester</p> <p>Ventilation: MEV range</p>	<p>Project: No.1 Deansgate, Manchester</p> <p>Ventilation: MEV range</p>	<p>Project: Altolusso, Cardiff</p> <p>Ventilation: MEV range</p>
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Apartment ventilation

It is estimated we spend over 90% of our time indoors yet when purchasing a home we give little consideration to ventilation systems. With ever increasing air and noise pollutants the need for healthier indoor environments must be a priority

MEV & MVHR - Mechanical extract

The Nuair MEV systems are the ideal solution for apartment 'living'. MEV provides a central extract system with a network of ducting capable of extracting stale air from up to 5 rooms. MEV extracts from wet area's and kitchens whilst maintaining a continuously healthy atmosphere.

MVHR heat recovery systems supply warm tempered air into buildings whilst extracting moisture from wet area's. These systems are ideal for individual or a series of flats and apartments, creating warm, well ventilated environments.

Sunwarm - renewable energy

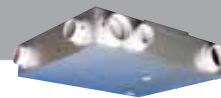
The Government's Energy White Paper proposes reducing the amount of carbon dioxide (CO2) to 60% of the 1990 level by 2050, encouraging the use of renewable sources and energy efficiency.

Renewables; Balancing sustainability and affordability

Building on the EcoHomes System, The Code for Sustainable homes is intended as a national standard for the design and construction of sustainable dwellings as a means of driving continuous improvement, greater innovation and exemplary achievement in sustainable home building.

In response, Nuair 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. Using the sun as a renewable energy source the system has potential energy savings of up to 3000KWh/pa resulting in the most affordable solution both in terms of cost to the client and to the resident.

For help and advice on using energy efficient ventilation, solar thermal renewable systems and providing healthy living environments that will contribute to achieving your desired star rating, please email sustainablehomes@nuairgroup.com

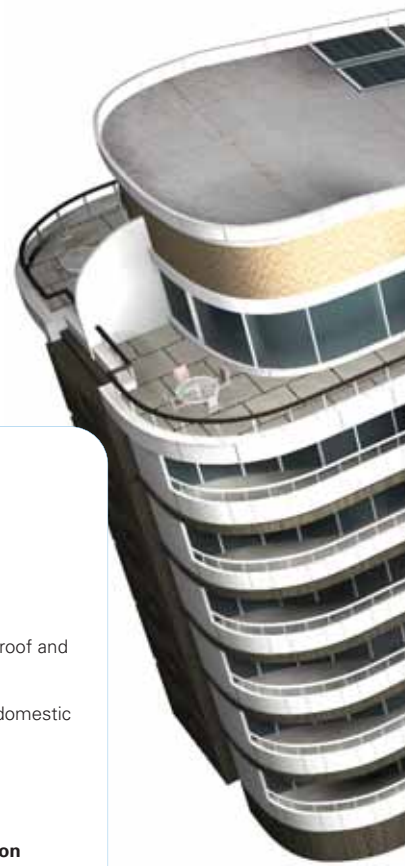


NEW squrboXbox – Energy efficient, high performance extract with heat recovery (up to 2.5m³/s)

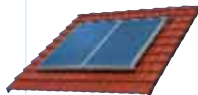
- Easy to install & commission with inbuilt Ecosmart 'plug and go' controls
- Low profile is ideal for ceiling void installation (external option available)
- Easy maintenance with side access panels
- Wide range of vertical, horizontal or twin fan options to suit most applications

opusXbox – Energy efficient, low profile extract with heat recovery (up to 80l/s)

- Easy to install with 'one fix' bracket
- Simple to commission with inbuilt Ecosmart 'plug and go' controls
- Ideal for restricted space due to low profile (185mm)
- Lift off top panels make for easy maintenance



Solar hot water, heat & ventilation



NEW Sunwarm Hot Water Solar hot water system

- Flexible solution with in roof, on roof and flat roof options
- Tested to BS EN 12975
- Modular in-roof option, ideal for domestic or commercial applications



Sunwarm Air Solar heating, cooling & ventilation

- Produces healthier environment by eliminating condensation and providing clean air
- Efficient and cost effective system resulting in low running costs



Sunwarm Solar heating, cooling & ventilation with Ecosmart energy efficient controls

- Energy efficient, easy to use control
- Hot water available via a cylinder
- Efficient and cost effective system resulting in low running costs



Sunwarm Heat Recovery Solar heating, cooling & ventilation

- Produces healthier environment by curing condensation and providing clean air
- Can ventilate up to 7 rooms in one apartment
- Efficient and cost effective system resulting in low running costs



NEW mrXbox90

High efficiency extract with heat recovery (up to 300m²/hr)

- Market's most efficient unit with 90% efficiency
- Simple to commission with choice of controls
- 'Wireless' option for the 'ultimate' control
- Ideal for cupboard or wall mounting
- Lift off front panel makes for easy maintenance



mrXbox70

Multipoint extract with heat recovery (up to 671/s)

- Ideal for cupboard or wall mounting is only 340mm deep
- Automatic controls suitable for all applications
- Easy to commission with integral balancing dampers



NEW cookerXbox

Wholehome extract with heat recovery (up to 481/s)

- Ideal for wall or cupboard mounting
- Automatic control response for operation & heat recovery
- Cost effective system to install & maintain



NEW airepodXbox – Supply & extract heat recovery plus warm air heating

- Extremely efficient system helps lower utility costs
- Warm air and fresh environment all year round
- Flexible mounting configuration ideally suited for above POD or ceiling
- Available September 07

Mechanical extract with heat recovery



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NEW Ecosmart MEV

Energy efficient multipoint continuous extract (up to 110l/s)

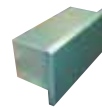
- Very quick to install with energy efficient 'plug & go' Ecosmart controls
- Shallow depth makes it ideal for restricted spaces
- Ultra quiet with typical dBA of 30
- Simple commissioning with 'dial a duty'
- Complies with New building regulations (refer to page 17)
- Available Sept 07



NEW MEV-SVS

Multipoint continuous extract for 'noise sensitive environments' (up to 110l/s)

- Features as Ecosmart MEV
- Designed specifically for noise sensitive or poor quality air applications, such as city centres or brown field sites (contact Nuair for details)
- Acoustic airbricks available
- Available Sept 07



NEW Acoustically treated Vent
Fitted to external walls overlooking roads or noise sensitive areas. Used in conjunction with recommended apartment ventilation system such as MEV-SVS

- Manual operation for total flexibility
- Airflow 30l/s @ 100Pa when fully open
- Prevents ingress of wind, rain etc with externally fitted baffle
- Aluzinc finish can be painted to allow blending into any environment
- Telescopic design allows for differing wall thicknesses
- Class 0 rated flame retardant acoustic material
- SRL test report available



NEW MEV/S

Multipoint continuous extract (up to 94l/s)

- Shallow depth makes it ideal for restricted spaces
- Quiet with low dBA
- Low cost system for multi room extract
- Complies with New building regulations (refer to page 17)
- Available Sept 07

MEV - Low Profile Mechanical Extract

Nursing home ventilation

In healthcare environments maintaining a continuous balanced ventilation system is a necessity. Within the healthcare sectors, employers have an additional duty of care towards their staff with regards to passive smoking, satisfactory air quality and thermal comfort.

Building security and eliminating cold spots and drafts may mean windows will need to be kept closed. Nuaire can provide systems to suit all of these particular requirements.

Extract for bedroom & personal living areas –

Nuaire is renowned for its wall, duct, ceiling, window and wall fans. From individual room to multi-room ducted ventilation – Genie, Opus or XS can meet most applications.

Single & twin fans for toilet extract –

A wide range of extract fans are available for applications such as toilet extract.

From small and compact moulded single and twin fans that are located above the ceiling to large roof mounted external twin fans.

Ventilation control for added safety –

Airemiser is a temperature and/or current sensing control device that activates an extract fan when either a cooker, bath or shower is being used – this is particularly useful in student accommodation and nursing homes. Airemiser as part of a balanced ventilation system will help prevent against condensation problems and can assist in the reduction of false fire alarms (a requirement of BS 5839-1:2002 section 3).

High performance supply & extract for kitchen areas -

Nuaire produce a range of high performance supply & extract fans suitable for larger commercial kitchens.

Incorporating some of the following features:

- Optional out of air stream motors
- High temperature operation ideal for kitchen canopy applications
- Day to day and smoke extract



Installation features: Opus duct mounted

Extract for bedroom & personal living area's



Opus Surface, semi-recessed, window & duct mounted fans (up to 25l/s)

- Very quiet fans deal for noise sensitive accommodation
- Easy to operate range of controls
- Extra safe with flame retardant construction
- Simple to install reduces time on site
- Low maintenance filters are quick to change



NEW Airemiser Safety control device for kitchens & bathrooms

- Auto control no need for switches
- Energy savings by boosting fan only when required
- Helps maintain healthy environment
- Easy to install with either current or temperature sensors for added safety



Installation features: Squif and Ecosmart Boxer

Single & twin fan toilet extraction



ES-Opusdc

Energy efficient single or twin duct fans (up to 115l/s)

- Exceptionally quiet fans ideal for above ceiling applications
- Ecosmart 'plug & go' controls are quick to commission
- Simple to install with self locating bracket
- Added safety of auto changeover and duty share on twin models
- Hard wearing and robust, flame retardant casing
- Choice of on board or remote controls



opusdc

Single or twin duct fans (up to 115l/s)

- Quiet fans ideal for above ceiling applications
- Simple to install with self locating bracket
- Added safety of auto changeover and duty share on twin models
- Hard wearing and robust, flame retardant casing
- Choice of on board or remote controls



Ecosmart Quietscroll twin fan

High performance internal or external twin fans (up to 5.8m³/s)

- Simple to install & commission
- Ecosmart 'plug & go' controls help reduce time on site
- Integral silencer make fans very quiet and ideal for 'noise sensitive' areas
- Roof mounted option makes for easy installation



Xtractor

High efficiency centrifugal fan (up to 6.2m³/s)

- Flexible solution, wide range of 27 fans to suit most applications
- Quiet fan ideal for 'noise sensitive' areas
- Powerful extract fan for multi-room system
- For simple installation and commissioning include the Ecosmart energy efficient 'plug & go' controls
- Requires very low maintenance



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High performance kitchen supply & extract



Squif

Inline with motor 'out of air stream' (up to 6.5m³/s)

- Safety first with smoke extract as standard (400°C for 2 hours)
- Ideal for commercial kitchens as units have high temperature as standard (90°C)
- Cost effective system with low maintenance requirement
- Flexible solution with over 13 models to choose from
- Easy to install & commission reduces time on site
- Suitable for external mounting



Ecosmart Boxer

High performance, packaged supply AHU (up to 4.5m³/s)

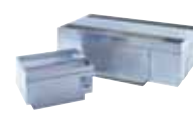
- Easy to install & commission with Ecosmart energy efficient 'plug & go' controls
- High performance but very quiet for 'noise sensitive' areas
- Reduce time on site with packaged solution
- Electric heater or LPHW options
- External version available



Ecosmart Airmover

High performance backward curved centrif (up to 10.6m³/s)

- Easy to install & commission with Ecosmart energy efficient 'plug & go' controls
- Exceptionally quiet with double skinned panels
- Low maintenance requirements help reduce costs
- Flexible solution with over 12 models to choose from
- Suitable for external mounting



Mark Ten

Vertical discharge roof extract fan (up to 8.2m³/s)

- For simple installation & commissioning include Ecosmart energy efficient 'plug & go' controls
- Discreet design with low profile
- Low maintenance requirements help reduce costs
- Flexible solution with over 22 models to choose from
- Suitable for external mounting

Student accommodation ventilation

With the increase in student numbers, comes the need for student accommodation covering all types of properties from specifically designed student blocks through to individual refurbished housing.

Student accommodation can feature central heating, double glazing, communal lounges and kitchens, individual bedroom/studying areas with en-suite shower rooms.

Constant Pressure for multi-room ventilation –

Why ventilate empty rooms? Constant pressure is ideal for student accommodation.

A central extract system provides the necessary extraction, linked to all 'wet' areas such as bathrooms via a central fan, which is normally positioned on a roof and a series of ducts.

Mechanical extract with heat recovery for 'living' and communal areas –

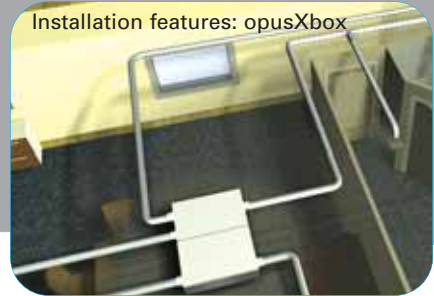
Heat recovery systems offer efficiency and control over the air quality and volume within the accommodation. Providing tempered air into 'living' areas whilst extracting moisture laden air from 'wet' areas. Heat recovery is ideal for student and other multi-storey accommodation.

Mechanical Extract for Bathrooms, Toilets & Kitchens –

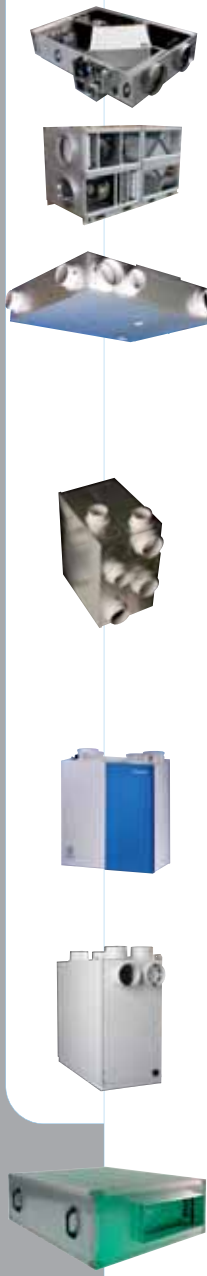
Nuair have a wide range of extract fans for wall, window and ceiling applications. Fans can be located in wet rooms, kitchens and utility areas, extracting from wet areas and kitchens whilst providing continuous fresh air.

Ventilation control for added safety

Airemiser is temperature and/or current sensing control device that activates an extract fan when either a cooker, bath or shower is being used – this is particularly useful in student accommodation and nursing homes. Airemiser as part of a balanced ventilation system will help prevent against condensation problems and can assist in the reduction of false fire alarms (a requirement of BS 5839-1:2002 section 3).



Mechanical Extract with heat recovery



NEW **squrboXbox** – Energy efficient, high performance extract with heat recovery (up to 2.5m³/s)

- Easy to install & commission with inbuilt Ecosmart 'plug and go' controls
- Low profile is ideal for ceiling void installation (external option available)
- Easy maintenance with side access panels
- Wide range of vertical, horizontal or twin fan options to suit most applications

opusXbox – Energy efficient, low profile extract with heat recovery (up to 80l/s)

- Easy to install with 'one fix' bracket
- Simple to commission with inbuilt Ecosmart 'plug and go' controls
- Ideal for space restricted spaces due to low profile (185mm)
- Lift off top panels make for easy maintenance

mrXbox70 NEW multipoint extract with heat recovery (up to 67l/s)

- Ideal for cupboard or wall mounting as only 340mm deep
- Wide choice of automatic controls to suit most applications
- Easy to commission with integral balancing dampers
- Economical system with low energy components

NEW **mrXbox90** High efficiency extract with heat recovery (up to 300m³/hr)

- Market's most efficient unit with 90% efficiency
- Simple to commission with choice of controls
- 'Wireless' option for the 'ultimate' control
- Ideal for cupboard or wall mounting
- Lift off front panel makes for easy maintenance
- Choice of units to suit most applications

NEW **cookerXbox** Wholehome extract with heat recovery (up to 48l/s)

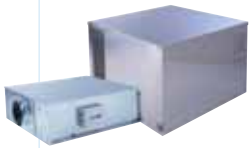
- White finish is ideal for wall or cupboard mounting in modern kitchens
- Automatic control response for operation & heat recovery
- Cost effective system to install & maintain

NEW **airepodXbox** – Supply & extract heat recovery plus warm air heating

- Extremely efficient system helps lower utility costs
- Warm air and fresh environment all year round
- Flexible mounting configuration ideally suited for above POD or ceiling



Multi-room ventilation



Constant Pressure Quiet Scroll Twin Fan – Energy efficient, high performance central extract (up to 2.65m³/s)

- Easy to install & commission
- Ecosmart 'plug and go' controls reduces overall installation costs
- Saves costs by only ventilating when required, but trickle mode keeps environment continually fresh
- Extremely quiet for use in multi occupied areas
- System reduces energy costs by up to 70%
- Ease of control with inbuilt auto change over and speed control

NEW Constant Pressure Volume Control Damper Energy efficient, variable volume damper for use with twin fan

- Maintain correct ventilation levels with energy efficient dampers
- Flexible design solution with optional trickle & boost settings
- Easily adjustable controls make commissioning simple
- Quick to install & maintain helps reduce overall system costs



Installation features:
Constant Pressure Quiet Scroll twin fan



Installation features: XS range

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Extract for bathroom, toilets & kitchens



ES-opusdc Energy efficient single or twin duct fans (up to 115l/s)

- Exceptionally quiet fans ideal for above ceiling applications
- Ecosmart 'plug & go' controls are quick to commission
- Simple to install with self locating bracket
- Added safety of auto changeover and duty share on twin models
- Hard wearing and robust, flame retardant casing
- Choice of on board or remote controls

opusdc Single or twin duct fans (up to 115l/s)

- Quiet fans ideal for above ceiling applications
- Simple to install with self locating bracket
- Added safety of auto changeover and duty share on twin models
- Hard wearing and robust, flame retardant casing
- Choice of on board or remote controls



XS range Wall, ceiling, window & roof extract fans (up to 530l/s)

- Ideal for noise sensitive area's provides high performance and low noise
- Flexible solutions in 6, 9 & 12" models fully reversible for extract or supply
- Save costs and control up to 5 fans with one speed control
- Inbuilt sensors help reduce wiring costs



NEW Airemiser Safety control device for kitchens & bathrooms

- Auto control no need for switches
- Energy savings by boosting fan only when required
- Helps maintain healthy environment
- Easy to install with either a current or temperature sensor for added safety

Hotel ventilation

Hotels, like any other multi-storey accommodation have their own unique requirements for ventilation. With the new government guidelines on energy efficiency it is more difficult to maintain a comfortable, healthy environment whilst providing an energy efficient solution.

Constant Pressure for multi-room ventilation –

A central extract system provides a continuous trickle of air to ensure the room is kept fresh. When the room becomes occupied the system will increase the ventilation to the desired design duty.

Mechanical extract for offices & communal areas

Extract fans are the most simplest form of ventilation for office and communal environment. Whether duct, wall, window or ceiling mounted these fans will extract moisture from wet rooms and offices to provide continuous fresh air.

Stairwell pressurisation & smoke extract for multi-floor requirements

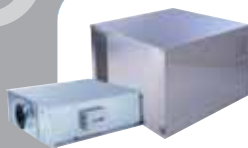
Nuair have manufactured smoke and car park ventilation for over 30 years and a design service is available to complement the complete range of smoke pressurisation and extract fans (duct or roof mounted) for 300/400°C for 1 & 2 hours, certified to EN12101-3 2002.

Car Park Extract –

The comprehensive range of AXUS smoke fans together with the Impulse car park extract fan meets the ever increasing need to provide smoke extract for car parks.

Systems designed for life.

Multi-room ventilation



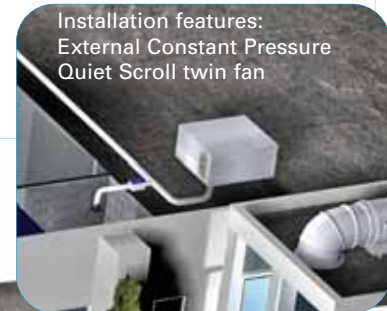
Constant Pressure Quiet Scroll Twin Fan – Energy efficient, high performance central extract (up to 2.65m³/s)

- Easy to install & commission Ecosmart 'plug and go' controls reduces overall installation costs
- Saves costs by only ventilating when required, but trickle mode keeps environment continually fresh
- Extremely quiet for use in multi occupied areas such as bedroom or living areas
- System reduces energy costs by up to 70%
- Ease of control with inbuilt auto change over and speed control

NEW Constant Pressure Volume Control Damper Energy efficient, volume damper for use with twin fan

- Maintain correct ventilation levels with energy efficient dampers
- Flexible design solution with optional trickle & boost settings
- Easily adjustable controls make commissioning simple
- Quick to install & maintain helps reduce overall system costs

Installation features:
External Constant Pressure Quiet Scroll twin fan



Car park extract options



Impulse – High temperature Car park extract system

- Powerful yet quiet with inbuilt silencers
- Unobtrusive low depth design (320 or 400mm)
- No ductwork reduces costs by up to 30%
- Reduce running costs by 40% with this energy efficient system
- For added security unit fixing brackets are '2 stage'
- Flexible system is fully reversible
- For added safety Impulse is certified to EN12101-3 (300°C for 2 hours)



AXUS Smoke – High temperature axial extract fans (up to 85m³/s)

- Flexible solution can be used for a wide range of smoke applications
- Choice of matched ancillaries
- For added safety AXUS smoke fans are certified EN12101-3 (400°C for 2 hours & 300°C for 2 hours)
- Flexible options for either smoke or non smoke reservoir applications



AXUS – Duct mounted axial extract fans (up to 95m³/s)

- Flexible solution can be used for a wide range of applications
- For ease of application a 'stock range' is available contact Nuair
- Choice of matched ancillaries



Ezplate – Wall mounted axial plate fans (up to 9.3m³/s)

- Adaptable solution can be fixed in any altitude on-site
- For safety motors are fitted with 'heat seeker' thermal overload protection
- Flexible range controllers and ancillaries available
- Fans are rated IP44 and IP54





Installation features: AXT fan



**Stairwell
pressurisation -
for escape route
protection**

**AXT
High temperature 'run & standby'
axial fan (up to 73m³/s)**

- Ideal system for stairwell pressurisation
- Added strength & stability as units are welded and manufactured from heavy gauge galvanised steel
- Optional access doors make observation, & maintenance very quick & easy
- Systems designed for life
- Certified to EN12101-3



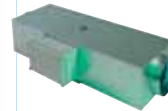
Installation features: ES-opus twin fan

**Mechanical extract
for offices &
communal area's**



**Es-Opusdc
Energy efficient single or twin duct fans
(up to 115l/s)**

- Exceptionally quiet fans ideal for above ceiling applications (typical dBA of 29)
- Ecosmart 'plug & go' controls are quick to commission
- Simple to install with self locating bracket
- Added safety of auto changeover and duty share on twin models
- Hard wearing and robust, flame retardant casing
- Choice of on board or remote controls



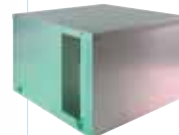
**Ecosmart Sqrbo
Energy efficient make up air supply &
extract units (up to 0.5m³/s)**

- Exceptionally quiet fans ideal for above ceiling applications
- Ecosmart 'plug & go' controls are quick to install and commission
- Quick & easy to commission with easily adjustable fan and heater duty
- Wide range of complimentary sensors and controls suitable for most applications
- Reduce installation time with 'one box' containing filter, fan, heater & controls



**Opus Plus
Compact single & twin duct mounted fans
(up to 150l/s)**

- Very quiet fans ideal for accommodation applications (typical dBA of 37)
- Easily adjustable to provides continuous background ventilation (0-50%)
- Flexible with a choice of 'on board' or remote control
- Guaranteed ventilation 24/7 as twin fans are fitted with duty share and auto change over



**Xtractor
High efficiency centrifugal fan (up to
6.2m³/s)**

- Quiet fan ideal for 'noise sensitive' areas
- Powerful extract fan for multi-room system
- For quick & easy installation and commissioning include the Ecosmart energy efficient 'plug & go' controls
- Requires very low maintenance
- Flexible solution, with a wide range of 27 fans to suit most applications



**Terminator
Horizontal discharge roof extract fan**

- Flexible solution with choice of axial, centrifugal or mixed flow impellers
- On site flexibility allows unit to be mounted vertically or horizontally
- Low profile weather cowl provides unobtrusive roof top option
- Reduce energy costs by selecting Ecosmart efficient controls



Installation features:
Impulse and Axus high
temperature fan

Product How does this product comply with the Relevant Building Regulations?

The purpose of the regulation is to ensure "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.

Approved Document F (ADF) - Ventilation

Approved Document L1 A&B (Conservation of Fuel and Power)

Additional Qualifiers

nb :- Compliance with ADL1 A&B (Dwellings) is verified using the SAP (Standard Assessment Procedure). The procedure applies to the whole dwelling, but there are specific minimum performance standards that apply to several elements of the construction (including some ventilation products). It should be understood that the use of these default values for all such elements, would generally result in a compliance failure.

Ventilation for Apartments and Communal residences

MEV 	Complies with ADF on the basis of table 1.2c - System type 3 - Continuous Mechanical Ventilation	SAP 2005 Calculation Procedure and Conventions para 2.6 Mechanical Extract Ventilation. The system is modelled using the default air flow rates and Specific Fan Power.	New Build "best practice" rating in GPG268.
ES-MEV 	Complies with ADF on the basis of table 1.2c - System type 3 - Continuous Mechanical Ventilation	SAP 2005 Calculation Procedure and Conventions para 2.6 Mechanical Extract Ventilation. The system is modelled using the Appendix Q procedure.	Appendix Q listing - reduced Specific Fan Power. New Build "best practice" rating in GPG268.
MEV-SVS 	This ventilation system complies with ADF on the basis of table 1.2c - System type 3 - Continuous Mechanical Ventilation - with the additional enhancement of an auxiliary supply ventilation fan.	SAP 2005 Calculation Procedure and Conventions para 2.6 Mechanical Extract Ventilation. The system is modelled using the Appendix Q procedure.	Appendix Q listing - reduced Specific Fan Power. New Build "best practice" rating in GPG268.
IpXboxac 	Complies with ADF on the basis of table 1.2d - System type 4 - Continuous Mechanical Supply and Extract Ventilation with Heat Recovery	SAP 2005 Calculation Procedure and Conventions para 2.6 Balanced Whole House Mechanical Ventilation. The system includes a heat recovery element and is modelled using the default air flow rates, Specific Fan Power.limit of 2 W/l/s and default Heat Recovery efficiency of 66%.	New Build "best practice" rating in GPG268.
IpXboxdc 	Complies with ADF on the basis of table 1.2d - System type 4 - Continuous Mechanical Supply and Extract Ventilation with Heat Recovery	SAP 2005 Calculation Procedure and Conventions para 2.6 Balanced Whole House Mechanical Ventilation. The system includes a heat recovery element and is modelled using the Appendix Q procedure (pending).	Appendix Q listing - reduced Specific Fan Power (pending). New Build "best practice" rating in GPG268.
mrXbox70 	Complies with ADF on the basis of table 1.2d - System type 4 - Continuous Mechanical Supply and Extract Ventilation with Heat Recovery	SAP 2005 Calculation Procedure and Conventions para 2.6 Balanced Whole House Mechanical Ventilation. The system includes a heat recovery element and is modelled using the Appendix Q procedure.	Appendix Q listing - reduced Specific Fan Power and enhanced Heat recovery efficiency. New Build "best practice" rating in GPG268.
mrXbox90 	Complies with ADF on the basis of table 1.2d - System type 4 - Continuous Mechanical Supply and Extract Ventilation with Heat Recovery	SAP 2005 Calculation Procedure and Conventions para 2.6 Balanced Whole House Mechanical Ventilation. The system includes a heat recovery element and is modelled using the Appendix Q procedure (pending).	Appendix Q listing - reduced Specific Fan Power and greatly enhanced Heat recovery efficiency(pending). New Build "best practice" rating in GPG268.
cookerXbox 	Complies with ADF on the basis of table 1.2d - System type 4 - Continuous Mechanical Supply and Extract Ventilation with Heat Recovery - (applies where the supply air is ducted to all habitable rooms)	SAP 2005 Calculation Procedure and Conventions para 2.6 Balanced Whole House Mechanical Ventilation. The system includes a heat recovery element and is modelled using the default air flow rates, Specific Fan Power.limit of 2 W/l/s and default Heat Recovery efficiency of 66%.	New Build "best practice" rating in GPG268.

Ventilation for Residential applications

System 1*	System 1 Complies with ADF on the basis of table 1.2d - System type 4 - Continuous Mechanical Supply and Extract Ventilation with Heat Recovery	SAP 2005 Calculation Procedure and Conventions para 2.6 Balanced Whole House Mechanical Ventilation. The system includes a heat recovery element and is modelled using the default air flow rates, Specific Fan Power.limit of 2 W/l/s and default Heat Recovery efficiency of 66%.	New Build "best practice" rating in GPG268.
System 2*	System 2 Complies with ADF on the basis of table 1.2d - System type 4 - Continuous Mechanical Supply and Extract Ventilation with Heat Recovery	SAP 2005 Calculation Procedure and Conventions para 2.6 Balanced Whole House Mechanical Ventilation. The system includes a heat recovery element and is modelled using the default air flow rates, Specific Fan Power.limit of 2 W/l/s and default Heat Recovery efficiency of 66%. Currently, no benefit is given in SAP for the solar energy contribution.	New Build "best practice" rating in GPG268.
System 3*	System 3 Complies with ADF on the basis of table 1.2d - System type 4 - Continuous Mechanical Supply and Extract Ventilation with Heat Recovery	SAP 2005 Calculation Procedure and Conventions para 2.6 Balanced Whole House Mechanical Ventilation. The system includes a heat recovery element and is modelled using the default air flow rates, Specific Fan Power.limit of 2 W/l/s and default Heat Recovery efficiency of 66%. Currently, no benefit is given in SAP for the solar energy contribution.	New Build "best practice" rating in GPG268.
System 4*	System 4 Complies with ADF on the basis of table 1.2d - System type 4 - Continuous Mechanical Supply and Extract Ventilation with Heat Recovery	SAP 2005 Calculation Procedure and Conventions para 2.6 Balanced Whole House Mechanical Ventilation. The system includes a heat recovery element and is modelled using the default air flow rates, Specific Fan Power.limit of 2 W/l/s and default Heat Recovery efficiency of 66%. Currently, no benefit is given in SAP for the solar energy contribution.	New Build "best practice" rating in GPG268.

* for further details on systems 1 - 4 please contact Nuair on 029 20 858200

Product How does this product comply with the Relevant Building Regulations?

Approved Document F (ADF) - Ventilation

Approved Document L1 A&B (Conservation of Fuel and Power)

Additional Qualifiers

Ventilation for renewable applications

Drimaster Ecosmart



Para 0.15 "The ventilation systems and devices mentioned in the preceding paragraph are examples of those commonly in use at the time of writing. Other ventilation systems and devices, perhaps following a different strategy (eg positive input ventilation) may provide acceptable solutions provided it can be demonstrated that the building control body (eg by a BBA certificate) that they meet requirement F1"

SAP 2005 Calculation Procedure and Conventions para 2.6 Positive Input Ventilation (from Loft). The system is modelled as a passive ventilator - the small amount of energy used by the fan being offset by the loft "air tempering" effect. When in summer (ie fresh air) mode the system performance model should include the Specific Fan Power. This system and its considerable net energy benefit, cannot currently be adequately represented by the current SAP procedure.

No restrictions re Part J (Heat producing appliances flue arrangements). Suitable for Radon mitigation schemes. Pressurisation effect and filtration enhances indoor air quality. Low maintenance requirement.

Sunwarm Air



Para 0.15 "The ventilation systems and devices mentioned in the preceding paragraph are examples of those commonly in use at the time of writing. Other ventilation systems and devices, perhaps following a different strategy (eg positive input ventilation) may provide acceptable solutions provided it can be demonstrated that the building control body (eg by a BBA certificate) that they meet requirement F1"

SAP 2005 Calculation Procedure and Conventions para 2.6 Positive Input Ventilation (from Loft). The system is modelled as a passive ventilator - the small amount of energy used by the fan being offset by the loft "air tempering" effect. When in summer (ie fresh air) mode the system performance model should include the Specific Fan Power. This system and its considerable net energy benefit, cannot currently be adequately represented by the current SAP procedure.

No restrictions re Part J (Heat producing appliances flue arrangements). Suitable for Radon mitigation schemes. Pressurisation effect and filtration enhances indoor air quality.

Sunwarm



Para 0.15 - complies with the Building Regulation on the basis that the product is an enhancement of the Drimaster 2000

This system and its considerable net energy benefit, cannot currently be adequately represented by the current SAP procedure.

No restrictions re Part J (Heat producing appliances flue arrangements). Suitable for Radon mitigation schemes. Pressurisation effect and filtration enhances indoor air quality.

Sunwarm Heat Recovery



Para 0.15 - complies with the Building Regulation on the basis that the product is an enhancement of the Drimaster 2000

This system and its considerable net energy benefit, cannot currently be adequately represented by the current SAP procedure.

Ventilation for residential applications

Drimaster 365



Para 0.15 "The ventilation systems and devices mentioned in the preceding paragraph are examples of those commonly in use at the time of writing. Other ventilation systems and devices, perhaps following a different strategy (eg positive input ventilation) may provide acceptable solutions provided it can be demonstrated that the building control body (eg by a BBA certificate) that they meet requirement F1"

SAP 2005 Calculation Procedure and Conventions para 2.6 Positive Input Ventilation (from Loft). The system is modelled as a passive ventilator - the small amount of energy used by the fan being offset by the loft "air tempering" effect. When in summer (ie fresh air) mode the system performance model should include the Specific Fan Power.

No restrictions re Part J (Heat producing appliances flue arrangements). Suitable for Radon mitigation schemes. Pressurisation effect and filtration enhances indoor air quality. Low maintenance requirement.

Drimaster



Para 0.15 - complies with the Building Regulation on the basis of BBA certificate 00/3727 and its provisions

SAP 2005 Calculation Procedure and Conventions para 2.6 Positive Input Ventilation (from Loft). The system is modelled as a passive ventilator - the small amount of energy used by the fan being offset by the loft "air tempering" effect.

No restrictions re Part J (Heat producing appliances flue arrangements). Suitable for Radon mitigation schemes. Pressurisation effect and filtration enhances indoor air quality. Low maintenance requirement and simple installation. New Build "good practice" rating in GPG268.

Drimaster 2000



Para 0.15 - complies with the Building Regulation on the basis of BBA certificate 00/3727 and its provisions

SAP 2005 Calculation Procedure and Conventions para 2.6 Positive Input Ventilation (from Loft). The system is modelled as a passive ventilator - the small amount of energy used by the fan being offset by the loft "air tempering" effect.

No restrictions re Part J (Heat producing appliances flue arrangements). Suitable for Radon mitigation schemes. Pressurisation effect and filtration enhances indoor air quality. Low maintenance requirement and simple installation. New Build "good practice" rating in GPG268.

Flatmaster, Flatmaster 2000



Although there is no specific reference to this unit format in ADF, the design has been particularly successful in refurbishment work on older apartment buildings. This type of property typically has a relatively poor degree of air-tightness, and the filtered, positively pressurised air supply regime provided by this product, uses this to best advantage by regulating the ventilation rate in all conditions.

SAP 2005 Calculation Procedure and Conventions para 2.6 Positive Input Ventilation. The system is modelled as a in the same way as a continuously operating extract fan - with an air throughput of 0.5ach + infiltration, and a SFP of 0.8

No restrictions re Part J (Heat producing appliances flue arrangements). Suitable for Radon mitigation schemes. Pressurisation effect and filtration enhances indoor air quality. Low maintenance requirement.



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