AIRIUS®
saving you energy

SAVE ENERGY, CUT COSTS, IMPROVE COMFORT, REDUCE CARBON

Save an average of 35%
on heating & cooling costs

Airius - The world leaders in Destratification technology

www.airius.co.uk

Destratification is recommended by The Carbon Trust*

Cover reference - *www.airius.co.uk/wp-content/uploads/2022/06/Carbon-Trust-Recommends-Destratification.pdf

TRUST IN AIRIUS

Formed in 2004, we have revolutionised the energy reduction industry from our **44 offices world-wide**.

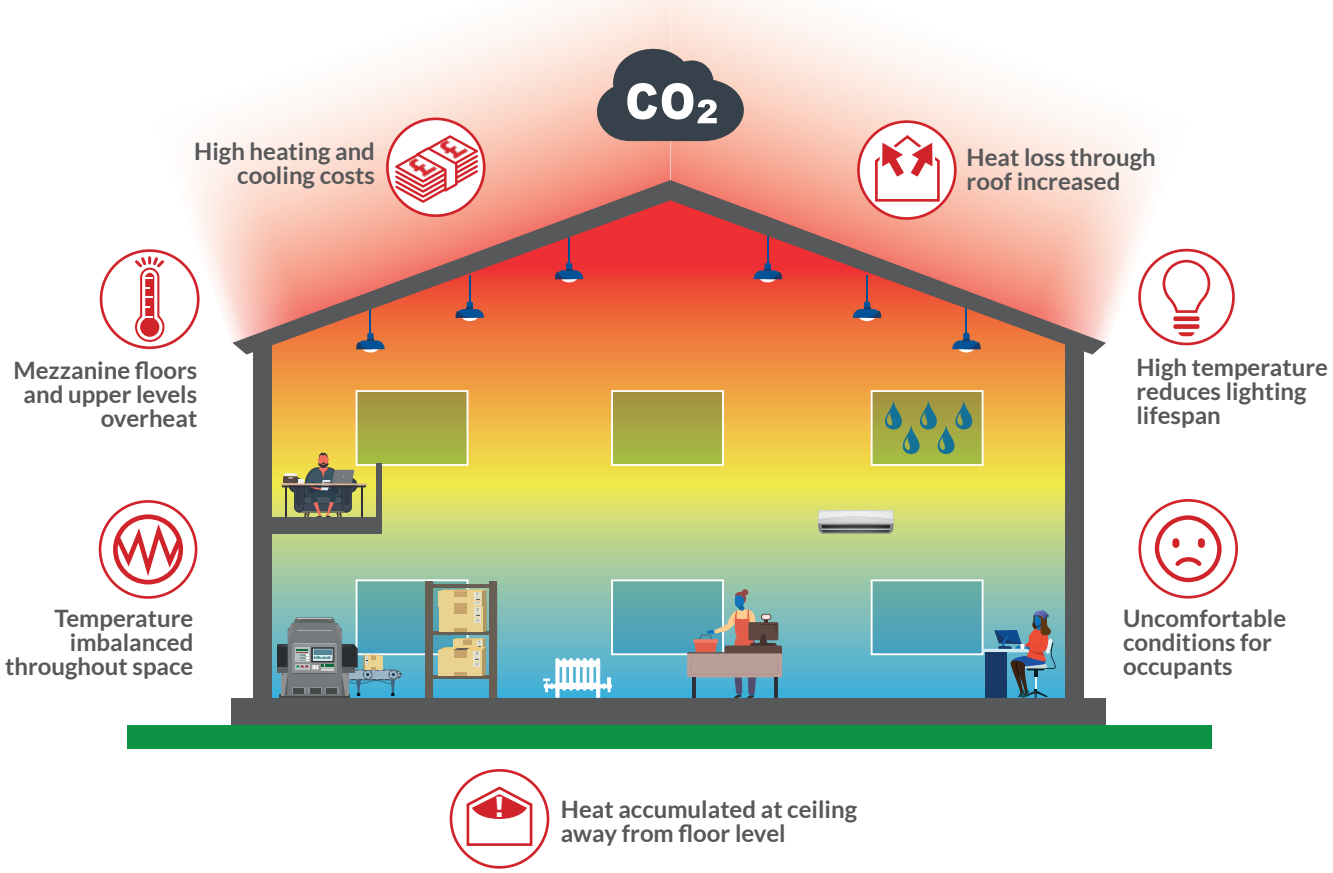
Airius has helped thousands of businesses, from SMEs to major blue chip companies make real reductions in their energy usage and carbon emissions.

Table of Contents

Stratification

Thermal stratification affects all buildings and has been labelled as *"the single biggest waste of energy in buildings today."* *- DTE Energy.*

Hot, lighter air rises towards the ceiling. Cool air falls to the floor. The result is a dramatic temperature difference between the floor and ceiling.



The major negative consequence of thermal stratification is HVAC systems have to over-deliver on both heating and/or cooling to resist the effects of thermal stratification.

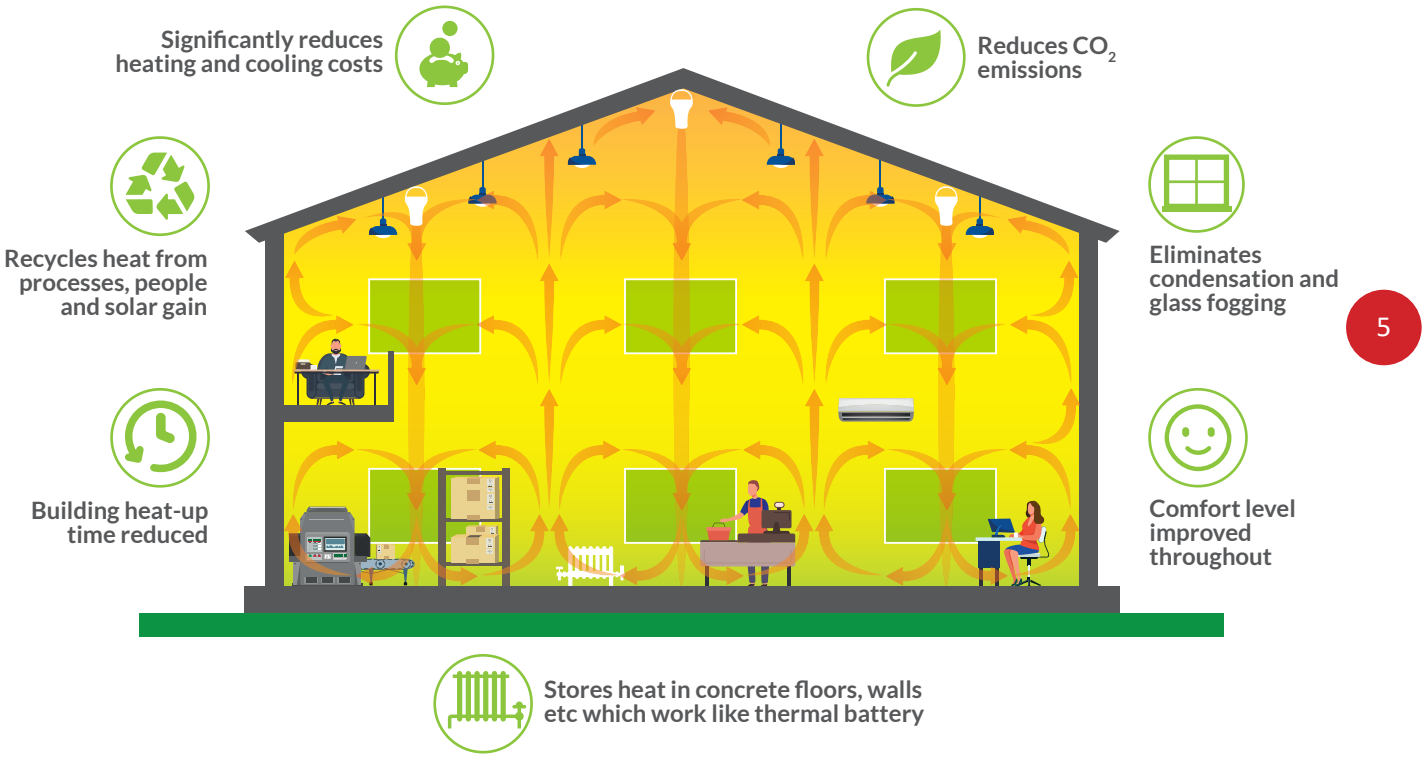
Consequently, energy bills are much higher and internal environments rarely meet expectations. The higher the ceiling the more likely a building will suffer from extreme temperature differences.

Wasted heat will inevitably rise to the ceiling or roof space serving no purpose and vastly increasing heat loss through the roof structure. Conversely, heavier cooled air which is more difficult to distribute is wasted by sinking to low points and becoming trapped in difficult to circulate areas.

Destratification

Airius destratification fans are installed at ceiling height, sending air down to the floor in a tight, slow-moving column.

When this air reaches the floor, it radiates 360° outwards until it hits a vertical surface and/or air coming from neighbouring Airius fans, then it rises back up towards the ceiling.



As this air rises, it entrains back into the descending column, creating millions of tiny vortices that move all the air at the same speed throughout the whole interior space, creating a balance of temperature.

This process is achieved using minimal air movement, near silent operation and nominal power requirements. Saves an average of 35% on HVAC costs, although higher levels have been recorded **(See Lush Cosmetics Case Study, page 29)**.

Benefits: 35% energy savings on average | 0°C - 2°C temperature variance
Low energy consumption (12W+) | Silent operation
Lightweight, small & unobtrusive | Avoids draught disturbance
Simple installation | BSRIA tested | Full destratification achieved.

How will I benefit?

Thermal stratification is a natural phenomenon affecting all buildings and results in a dramatic imbalance of temperatures from floor to ceiling.

This difference occurs when hot air rises towards the ceiling or roof because it is lighter than the surrounding cool air.

In contrast, cool air falls to the floor as it is heavier and denser.

The main negative consequence of thermal stratification is Heating, Ventilation and Air Conditioning (HVAC) systems over-deliver to continually replace the heat which has risen to the ceiling (0.5°C - 2°C per metre on average) in order to maintain set temperatures at floor level.

Conversely, heavier cooled air which is more difficult to distribute is wasted by sinking to low points in a building or by becoming trapped in difficult to circulate areas.

Airius work alongside all types of heating and cooling equipment and are an extremely efficient replacement for duct work.

Listed building installs

Airius fans can be installed into almost any type of building and we have worked alongside organisations such as English Heritage and Church of England Diocesans, The National Trust etc. where our fans have been installed in Grade I, II* and II listed buildings.

Patented Stator Technology

Airius internationally patented multi-vane stator technology transfers rotational energy to create a slow moving column of air (columnar laminar flow) which increases the throw distance. This is a standard feature on all fans and is totally unique to Airius.

By producing these slow moving air columns which descend to floor level and move air at the same speed throughout the whole interior of a building will balance temperatures to within 0°C - 2°C.

RECOMMENDED BY THE ***CARBON TRUST***

Main benefits

- Reduces heating costs by an average of 35%
- Reduces cooling costs by an average of 35%
- Reduces CO_2 emissions by an average of 35%
- Rapid ROI - usually between 8 - 18 months
- Dramatically improves internal environments
- 3 year warranty
- Eligible for carbon reducing grants / loans
- Increases lighting lifespan
- Minimal maintenance required
- Minimal running costs (from £24/pa)
- Recycles heat from machinery, lighting, solar gain etc
- Reduces condensation
- Reduces wear on existing HVAC equipment
- Simple to install with no ducting required
- Simple, inexpensive and efficient ESOS / SECR / EU ETS solution
- Small, versatile, unobtrusive units
- Stand alone or BMS integrated
- Works alongside all types of HVAC systems

Invest With Confidence

We at Airius are so confident with the performance of our products and installations, we offer our customers a full 120-day Money Back Guarantee - no questions asked.

This is an offer un-matched by any other destratification fan manufacturer and provides our customers with the all-important reassurance needed to make important decisions regarding investment.

Terms & Conditions apply.

For further details email info@airius.co.uk or call on +44 (0)1202 554200.

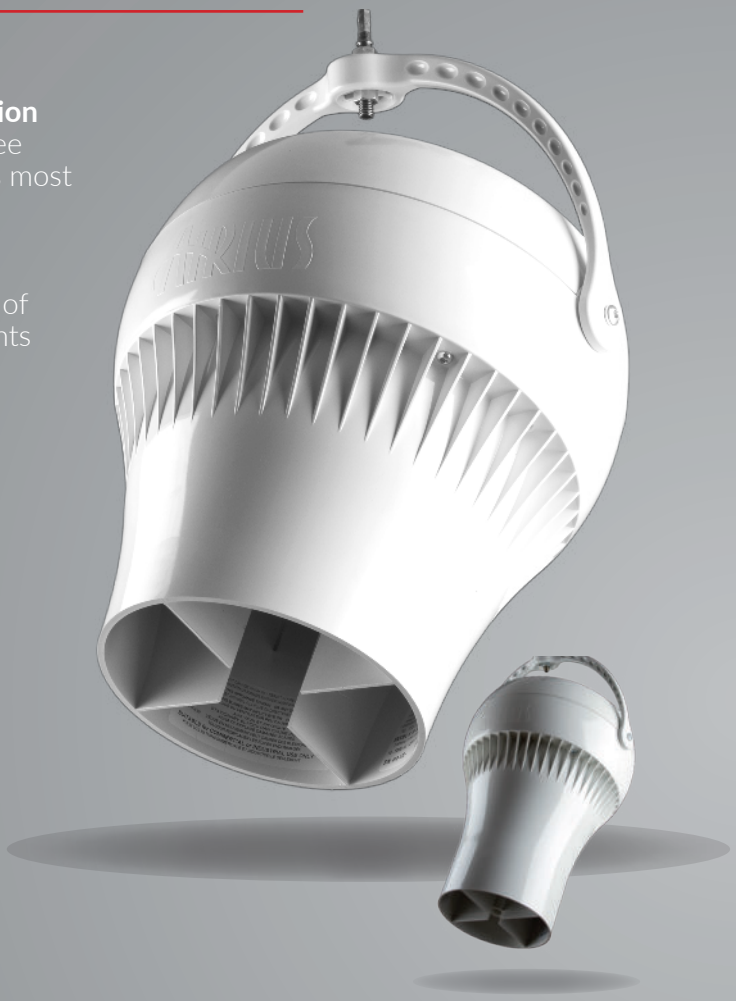
Standard Series

Setting the global standard for destratification since 2004, the Airius Standard Series of free hanging destratification fans are the world's most popular destratification fan range, selling over 330,000 units worldwide.

The Airius Standard Series is available in a range of models for any type of building with ceiling heights from 2.5m to 32m; offices to aircraft hangars!

Airius work alongside all types of heating and cooling equipment and are an extremely efficient replacement for duct work.

All Standard Series are supplied in an off-white colour, we can custom paint your destratification fans to match any RAL colour code.

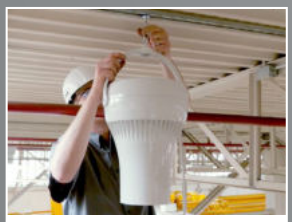


Call Airius today to receive a fully **tailored quotation** for your building.

+44 (0)1202 554 200

Or email: info@airius.co.uk

All-inclusive features



Easy Installation

Adaptable Mount

Safety Anchor

1.5m Cord Length

STANDARD series

Onyx Series

The Airius Onyx Series is the next evolution of our already world leading airflow technology.

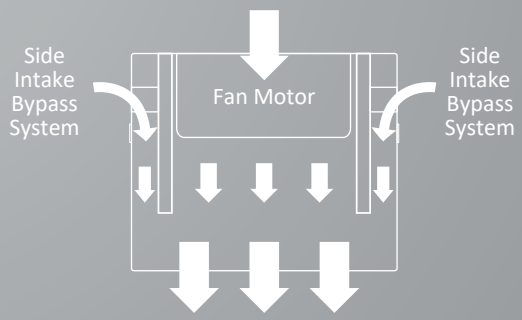
Incorporating advanced fan engineering paired with our patented airflow technology, the Onyx Series applies the same airflow optimisation system as the latest generation of Rolls Royce jet engines.

The unique design of the fan housing incorporates a side intake vent system. This allows the fan to draw in more air, bypassing the fan motor, increasing output and air flow performance. We call this unique and exciting design 'Bypass Technology™'.

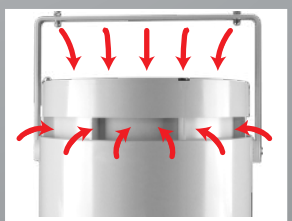
This combination of advanced technology and design enables the Onyx Series to provide highly effective destratification maximising savings on heating costs, as well as powerful airflow cooling at a fraction of the cost of Air Conditioning. Both result in significant HVAC cost savings and carbon emissions reductions.

Designed for spaces up to 15 metres high, the Onyx Series is also quieter than any other fan of its size, causing minimal noise disturbance.

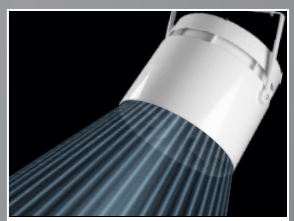
Bypass Technology™



All-inclusive features


Side Intake Entrainment


Benefits Heating & Cooling


Advanced Airflow Technology


PSC & EC Motor Options

ONYX series

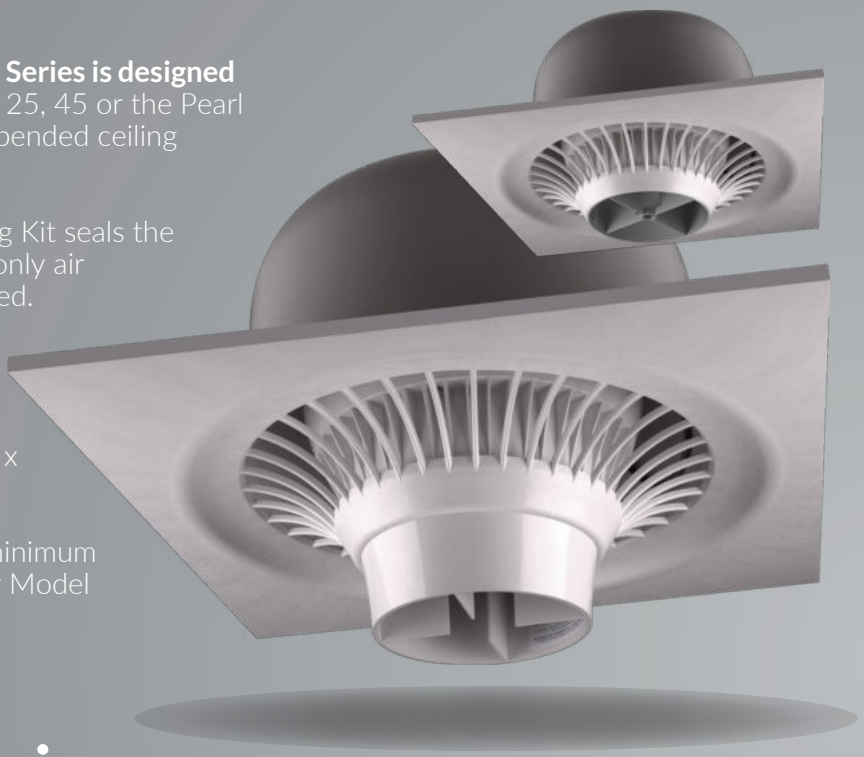
Suspended Series

The Airius Suspended Ceiling Series is designed for Airius fan models 10, 15, 25, 45 or the Pearl Series and is suitable for suspended ceiling heights from 2.5m to 11m.

The Airius Suspended Series Ceiling Kit seals the fan from the ceiling void ensuring only air from beneath the ceiling is circulated.

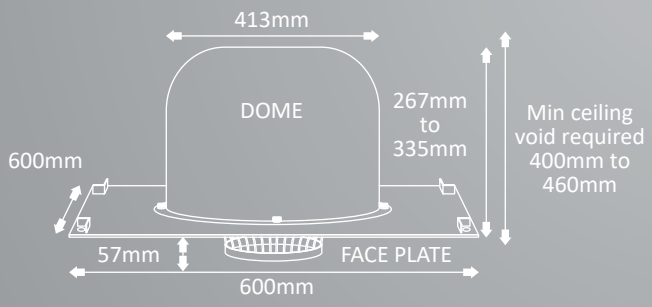
Easy to install, light and very adaptable to changing floor plans, the ceiling kits can be used in all configurations of the 600mm x 600mm grid plan.

The Suspended Series requires a minimum ceiling void of 400mm (460mm for Model 45 Suspended Series).

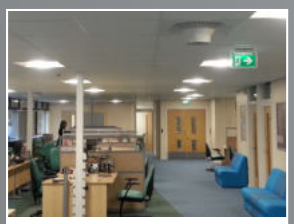


Weight & dimensions

Unit	Nozzle Length	Weight	
		Mount	Fan
Model 10 (Short)	120mm	3.6kg	3.2kg
Model 10, 15 & 25	222mm	3.6kg	4.1kg
Model 45	219mm	4.0kg	6.3kg
Model S1, S2, S3 & EC	57mm	3.6kg	3.0kg

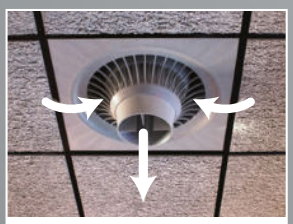


All-inclusive features



Seamless Integration

Sealed From Ceiling Void



Recirculates Air Below Ceiling

Simple To Reposition

SUSPENDED
series

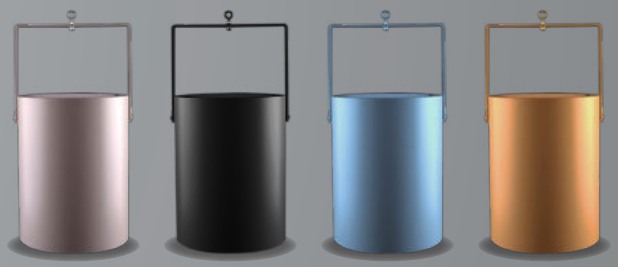
Designer Series

The Airius Designer Series shares many similarities to our Standard Series and provides all of the same features and benefits, whilst specifically designed to suit architecturally sensitive installations.

Robust and durable, its powder coated aluminium housing also offers protection against everyday knocks, bumps and corrosion.

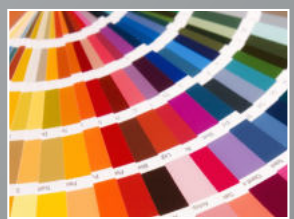
We can customise the Designer Series with motor and control options to suit your requirements as well as custom paint the units to match any RAL colour code.

The Designer Series is suitable for installation in applications with ceiling heights ranging from 2.5 metres right up to 35 metres high.



All-inclusive features

Elegant Design



Customisable Colours

Durable

Venturi Nozzle

DESIGNER series

Retail Series

Maintaining comfortable environments in retail stores is crucial for sales and efficiency, which leads to increased customer browse times and employee productivity.

The benefits of destratification are well recognised within the retail sector. Titans such as Morrisons, Tesco, Marks & Spencer, Halfords, New Look and Pets at Home, to name but a few, have benefited from installing Airius.

Some of the most uncomfortable retail environments are supermarket chiller and freezer aisles. Airius has an excellent track record with many major supermarket brands for improving temperatures in these areas.

Benefits include

- Vastly improved comfort levels throughout the store
- Increases customer browse time and spend
- Recycles heat from equipment, solar gain, lighting etc.
- Condensation reduced or eliminated
- Eliminates cabinet glass fogging
- Dries spills quickly
- Increases lighting lifespan
- Optimises ALL types of HVAC systems
- Significantly reduced HVAC maintenance costs

All-inclusive features

For Aisles & Open Spaces

Dries Wet Floors Quickly

Before Airius

After Airius

RETAIL series

Q Series

The Airius Q Series takes noise management to a new level. Redesigned applying acoustic research and development to our patented airflow technology, the Q Series has developed a new standard in acoustic management.

Working in conjunction, each Q Series fan delivers gentle, efficient air circulation to balance air temperature from floor to ceiling, wall to wall.

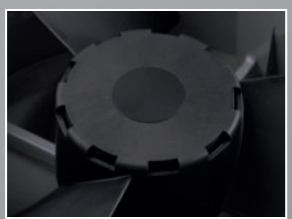
Its unique fan design suspends the motor at the intake without using a fan grille. This maximises airflow, while reducing turbulence induced into the blades, keeping the fan quiet.

Ideal for theatres, schools, shopping centres, offices and entertainment centres, the Q Series solves comfort issues, increases productivity, saves on HVAC energy costs and reduces your carbon footprint in near silence.

Available in two motor types to suit ceiling height requirements up to 18 metres.

Airius fans incorporate motors from EBM Papst who have been building fan motors since 1963 and are **the world's leading fan motor manufacturer.**

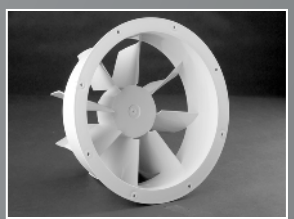
All-inclusive features



Ultra Quiet Motor

Unique Motor Mounting

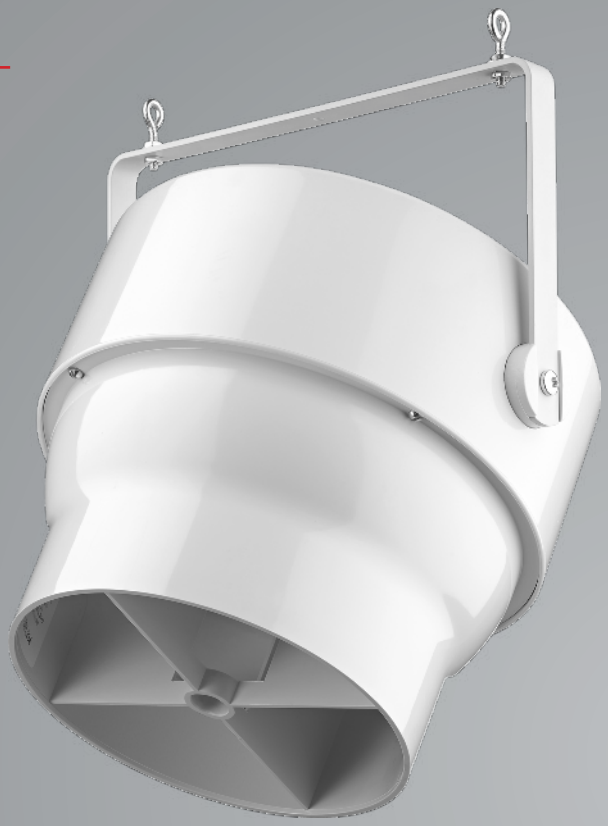
5VA Flame Resistance



Multi-Vane Stator

QUIET series

Pearl Series



The Pearl Series has been developed as our most compact destratification and airflow circulation cooling fan, aimed at small to medium sized commercial spaces.

Incorporating discrete design with a powerful and highly efficient motor, the Pearl Series is able to circulate air effortlessly and quietly for either destratification or cooling applications from 2.5 up to 7.5 metres high.

Its compact size and adaptability allows the Pearl Series to be installed in buildings where installations are limited by the structure within the ceiling space, as well as provide an option for facilities where aesthetics may restrict the number of fans desired.

Ideal for a wide range of applications, the Pearl Series is the perfect solution for improving comfort and optimising HVAC costs in small to medium sized facilities.

The Airius Pearl Series is our

smallest form factor fan ever,

providing comfort improvements & energy reductions to

even the smallest of facilities.

All-inclusive features

Entry Level Unit

Fits Tight Spaces

Suspended Series Compatible

Adapts To New Floor Plans

PEARL series

Sapphire Series

The Airius Sapphire Series has been specifically developed to benefit cooling applications, delivering high velocity airflow to provide unmatched circulation and evaporative cooling in large spaces.

At a cost of 90% less than air conditioning and around 20% less than large bladed fans, the Sapphire Series provides effective air movement cooling, but with significantly lower upfront costs and far fewer limitations when compared to large bladed HVLS fans and Air Conditioning systems.

Widely used within a range of applications, such as Sports Halls, Basketball Courts, Climbing Gyms, Warehouses and Manufacturing Facilities, the robust and lightweight Sapphire Series is suitable for spaces between 7 and 23 metres high.

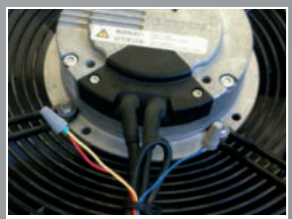
Airius provides up to a

7°C cooling effect

without any cooled or conditioned air, even on days where temperatures **reach or exceed 35°C.**

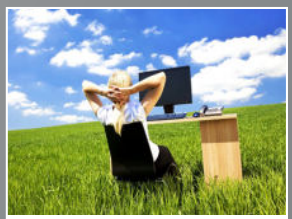
All-inclusive features

Compact Design



Single Phase

Impact Tested



Cost Efficient Cooling

SAPPHIRE series

Diamond Series

To meet the demands of high performance cooling in the largest of commercial spaces, Airius supply the innovative Diamond Series.

Incorporating the same airflow optimisation 'Bypass Technology™' found in our Onyx Series (**See page 9**) and the latest generation of Rolls Royce jet engines, the Diamond Series maximises air bypassing the fan motor, exponentially increasing air flow performance.

Ideal for cooling spaces up to 20 metres high and destratifying up to 25 metres high, the Diamond Series is ideally suited to Sports Halls, Warehouses, Manufacturing Plants, Entertainment Centres, Aircraft Hangars, Stadiums, Atriums, Lobbies and Shopping Centres.

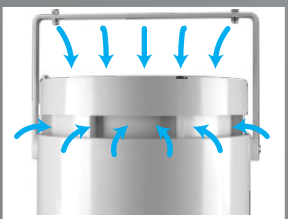
Airius systems are up to

90% cheaper in capital costs

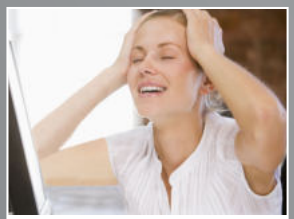
when installed as an alternative to air-con. They can also be used with air-con

saving up to 40% on cooling costs.

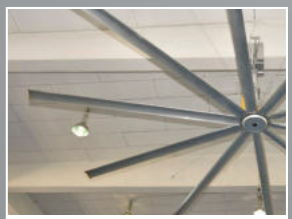
All-inclusive features



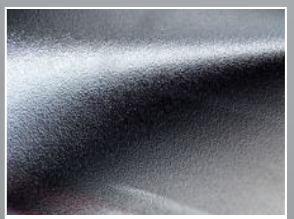
Side Intake Entrainment



High Performance Cooling



Out Performs HVLS Fans



Aluminium Housing

DIAMOND series

Titan Series

For those environments that can be tough on standard equipment, such as industrial facilities or applications where some corrosive substances are used, Airius supply the Titan Series range of destratification and airflow circulation cooling fans.

Manufactured with an ABS resin housing and internal stator blades, along with stainless steel fixings, the Titan Series is ideal for physically demanding applications and any setting where equipment may be exposed to physical abuse or contaminants.

Available as an optional upgrade across the full range of Airius fan products, the Titan Series is highly durable and designed to withstand knocks, shocks and corrosion, meaning you can benefit from enhanced resilience in the ideal form factor and power rating for your environment.

Winches

Ceiling mounted equipment can often present challenges when access is required for maintenance, cleaning and replacement.

In order to overcome this Airius supply a range of winch systems allowing units to be raised and lowered on demand remotely at the touch of a button.

Suitable for ceiling heights up to 33 metres and capable of supporting up to 100kgs, Airius winches include pre-wired terminals, disconnecting power during operation and reconnecting when raised back into place, as well as a safety locking mechanism providing additional security when at rest, even in the event of a power failure.

Speed Controls

All Airius systems are designed to function on a 24/7 basis for maximum efficiency and optimum energy savings. However, there are benefits from operating units at varying output depending upon the season and activity in the space.

For example, during summer months increased airflow circulation improves cooling for occupants, whereas during winter a more gentle airflow benefits destratification without causing draught disturbance.

To cater for this Airius supply a range of speed controllers, including Smart Controllers compatible with BMS (Building Management Systems) providing complete hands-free control.

Airius speed controllers can be installed to operate multiple fan units, outlined below:

1 Amp Controller
The 1 Amp Controller suitable for:

- 14 x Airius Model 10's
- 11 x Airius Model 15's
- 7 x Airius Model 25's
- 4 x Airius Model 45/PS-4's
- 2 x Airius Model 50/PS-4's
- 1 x Airius Model 60/PS-4's
- 2 x Airius Model Onyx PS-4
- 14 x Airius Model S3's
- 11 x Airius Model S2's
- 7 x Airius Model S1's
- 1 x Airius Model Sapphire PS-4

5 Amp Controller
The 5 Amp Controller suitable for:

- 74 x Airius Model 10's
- 57 x Airius Model 15's
- 35 x Airius Model 25's
- 21 x Airius Model 45/PS-4's
- 14 x Airius Model 50/PS-4's
- 7 x Airius Model 60/PS-4's
- 14 x Airius Model Onyx PS-4
- 74 x Airius Model S3's
- 57 x Airius Model S2's
- 35 x Airius Model S1's
- 5 x Airius Model Sapphire PS-4's

Smart Controller
The Smart Controller suitable for:

- 74 x Airius Model 10's
- 57 x Airius Model 15's
- 35 x Airius Model 25's
- 21 x Airius Model 45/PS-4's
- 14 x Airius Model 50/PS-4's
- 7 x Airius Model 60/PS-4's
- 14 x Airius Model Onyx PS-4
- 74 x Airius Model S3's
- 57 x Airius Model S2's
- 35 x Airius Model S1's
- 5 x Airius Model Sapphire PS-4's

EC Controller
The EC 0 – 10v controller is suitable for Airius EC models only.
1 x EC Controller required per circuit.

SEE UNIT DATA SHEETS FOR FULL PRODUCT INFORMATION.

Installation

*OUR FULL **TURN-KEY SERVICE** ENSURES CUSTOMERS GET THE **BEST RESULTS, HIGHEST LEVEL OF SERVICE AND AFTERCARE** AT **A COMPETITIVE PRICE**.*

From design to installation with our full turn-key service. Our experienced team of designers, engineers and NICEIC qualified installers are happy to help from concept to completion.

Our Installations team have over 20 years' experience in commercial, industrial & residential installations. Airius Electrical has its own range of high-level access equipment including MEPS and scaffold towers, as well as a team of skilled technicians experienced at working at rope access heights, giving our customers peace of mind, whilst saving time and money.

We are dedicated to working to the highest possible standards and all installations are carried out in accordance to BS 7671 (18th Edition 2018).

Using our in-house team, ensures that your Destratification projects work to their full potential.

Airius Electrical Contractors

In addition to installing destratification fans, we are also fully qualified General Electrical Contractors. Managed through our team at Airius Electrical, we are fully NICEIC accredited under the Approved Contractor scheme and have worked with some of the most exclusive brands across the UK.

NHS

Rolls-Royce

John Innes Centre
Unlocking Nature's Diversity

Glen Dimplex


SUSPENDED
series


STANDARD
series


QUIET
series


SAPPHIRE
series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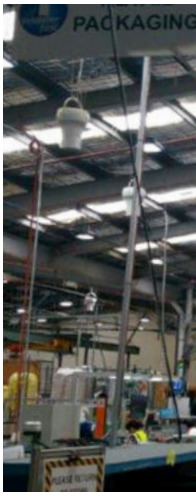
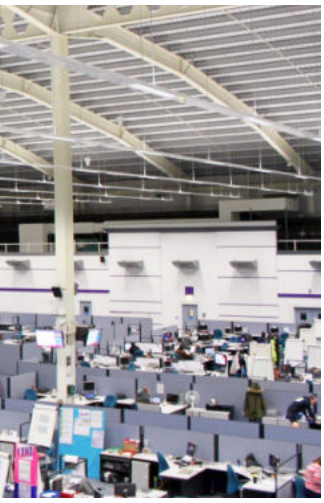
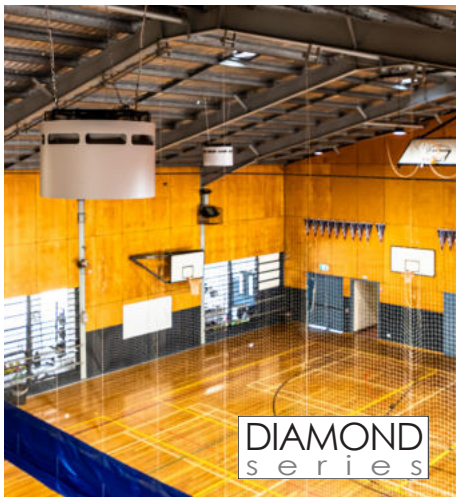

PACKAGING




DIAMOND
series


THE TRAVELLER
STANDARD
series


PEARL
series


PUREAIR
series


DESIGNER
series


RETAIL
series


STANDARD
series


SAPPHIRE
series


STANDARD
series


ONYX
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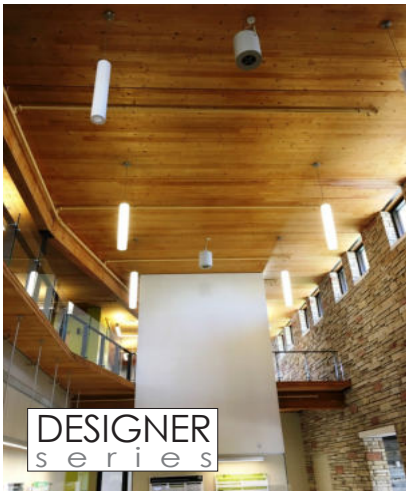
DESIGNER
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RETAIL
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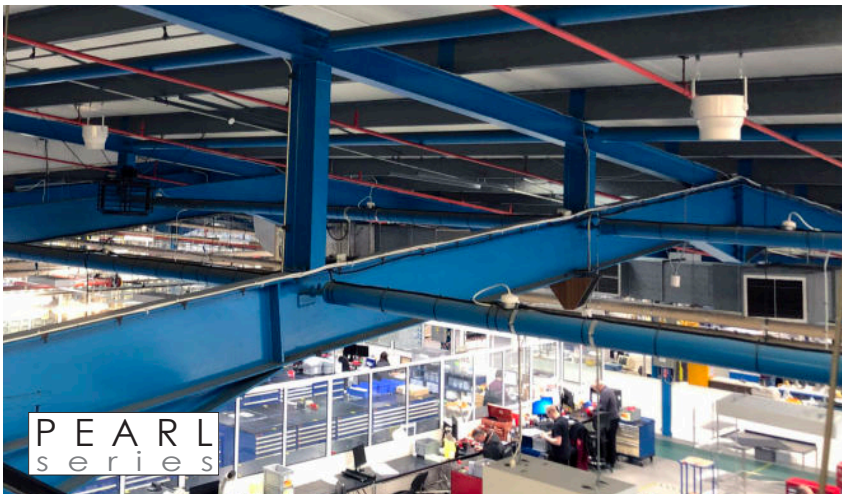
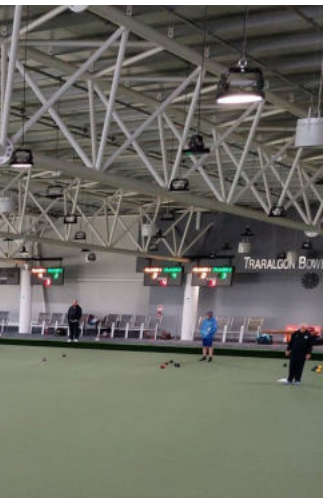
SUSPENDED
series


PEARL
series


STANDARD
series


DIAMOND
series


PUREAIR
series




DESIGNER
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Half price
Half price
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PUREAIR
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PEARL
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DIAMOND
series


ONYX
series

Assured quality

Airius destratification fans have been installed into many commercial, private, public and government buildings. Discover who we work with and what they have to say.

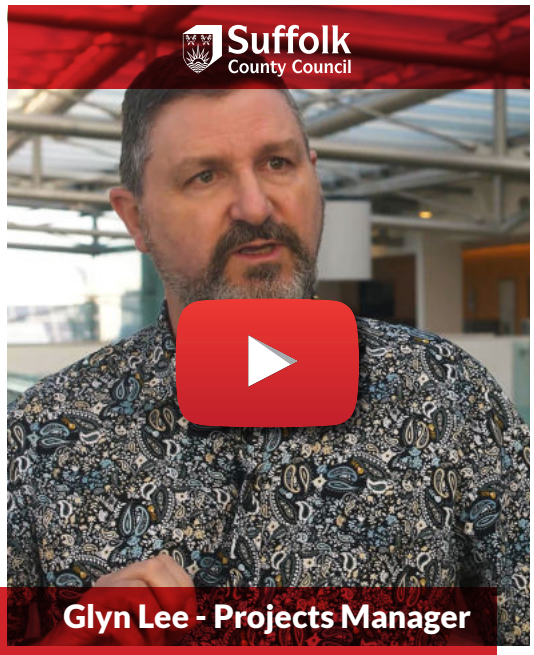
Customer testimonials

"First winter savings of £62,251 Measured against a total system spend of £21,268!

Paul Mattin - Engineering Manager - Impress Manufacturing Ltd

"We installed 34 Airius units into the assembly plant at our manufacturing site and I am very pleased with the results. The heating system now comes on far less and employees who work in this building are much warmer. Overall savings equalled 45.07%.

The full cost of the Airius units is recouped within a matter of months - ***first winter savings of £62,251 measured against a total system spend of £21,268!*** I will be looking at other buildings on our site and recommending Airius to companies within the group who operate from many buildings throughout Europe."



"The Airius units have allowed us to increase our thermostats from 19°C to 23.5°C, resulting in a saving of over 70% on our cooling costs.

Ben Carne – Energy Manager - Bowlplex Plc Ltd

"We are very impressed with the results Airius fans have achieved in our ten pin bowling centre at Nantgarw in South Wales. The atmosphere inside has been greatly improved reducing staff & customer comfort complaints by 90%. ***They have also allowed us to increase our thermostats from 19°C to 23.5°C resulting in a saving of over 70% on our cooling costs.*** The Airius system has far exceeded our expectations & will be standard equipment for all our 18 bowling centres in the UK."

.....

"The Airius Destratification Fans play a key role in recycling warmer air at high level in the building back down to lower levels.

Andrew Suter - Director - All Souls Bolton

"All Souls Bolton is a fabulous restoration of an 18th century gothic revival, grade II* listed church in Bolton. As with any old building keeping heating and maintenance costs low is critically important to our long term sustainability. ***The Airius Destratification Fans play a key role in recycling warmer air at high level in the building back down to lower levels, keeping people warmer and at the same time keeping our heating costs down."***

"The Airius fans made an immediate ... improvement even before the heating/cooling system upgrades had been completed.

Joe Forgie – Project Manager – Gratte Brothers Group

"Following severe temperature problems in a British Airways maintenance hangar at Heathrow, we (Gratte Brothers) were awarded the contract to upgrade the heating and ventilation system.

The temperature problems were severe with staff threatening to walk out. After exhaustive research it was decided to install 12 x Airius Model 100 units and 15 x Airius Model 60 units to improve internal air circulation and reduce the extremely high heating and cooling costs. ***The Airius fans made an immediate and significant improvement even before the heating/cooling system upgrades had been completed.***

All complaints from staff ceased immediately and they were now comfortable enough to work in their t-shirts. The team at Airius were really helpful and a pleasure to work with. We will be tendering for further British Airways projects of this type and fully expect to purchase more Airius units."

.....

"We were happy to find the environment comfortable without the AC running.

Iain Calder – Property Director – Tiso Ltd

"Our Edinburgh Outdoor Experience store has a single floor store layout opening out into high roofed area with a ground floor café and gallery sales area. We originally controlled the temperature with large AC units but the result was never satisfactory at either level.

The Airius system was installed during the summer whilst the AC system was closed down for servicing and we were happy to find the environment comfortable without the AC running. This has now led to the entire AC system being decommissioned with a considerable reduction in electricity consumption."

"The Airius units have reduced our heating costs by an impressive 25% in our sports hall.

James Dunn – Facilities Manager - Sixmile Leisure Centre

"We installed the Airius system into 2 sports halls and the swimming pool area at Sixmile Leisure Centre, Newtownabbey. These have made a vast improvement to the internal atmosphere within the buildings and the public who use the facilities find the air quality greatly improved for sporting activities.

We have found the Airius units have reduced our heating costs by an impressive 25% in our sports halls and swimming pool area; the thermostat in the swimming pool building has also been turned down 2°C! The heating systems come on much less often and the complaints from swimmers about the warmth in the swimming pool area has reduced by 90%."

Discover more

See our full list of 65+ customer testimonials on our website at **www.airius.co.uk/testimonials**

Impress

Factory Facility, Norfolk

Impress installed 34 Airius fan units into their factory to save on heating costs and their investment was repaid 3 times over in the first winter they were installed.

Oil prices dropped by an average of 9.5% in the year the Airius fans were installed compared to the previous winter period.

The mean winter temperature for East Anglia prior to installation was 5.7°C. The mean winter temperature post installation was much cooler at 3.4°C.

The heating system thermostats are set to 16°C, resulting in an increase in the requirement for heating in East Anglia of 22%.

This analysis excludes the purchase and installation costs of £21,268 in the first year.

Key points:

- ***45.07% - overall savings***
- £62,351 - first winter savings
- £21,268 - full system & installation cost
- 3,000m² - floor area
- 5.7°C - mean temp. pre fans
- 3.4°C - mean temp. post fans
- £793 - Airius running costs per winter season
- Installed into can assembly area
- System - 34 units
- Part of the Ardagh Group

*"THE **FULL COST** OF THE AIRIUS UNITS IS **RECOUPED** WITHIN A MATTER OF MONTHS - FIRST WINTER **SAVINGS OF £62,351** MEASURED AGAINST A **TOTAL SYSTEM SPEND** OF **£21,268.**"*

Paul Matten (Plant Engineer)

Winter Saving Calculations

Winter pre-fans total oil usage	**£138,337**
Winter post-fans total oil usage	**£83,837**
Winter post fans oil use reduction & savings	**£54,500**
Restated winter savings, inc lower oil price	**£49,322**
Restated winter oil use & savings (inc lower temp)	**£63,144**
Airius System running costs	**£793.00**
First Winter Savings	**£62,351**

Ramada Inn

Hotel Cooling, Port Douglas

Global Hotel and Resort chain Ramada needed to address over-heating problems in the Reception area of their Port Douglas Hotel in North Queensland, Australia. Customers and staff were suffering, especially during the high tropical temperatures experienced throughout summer months.

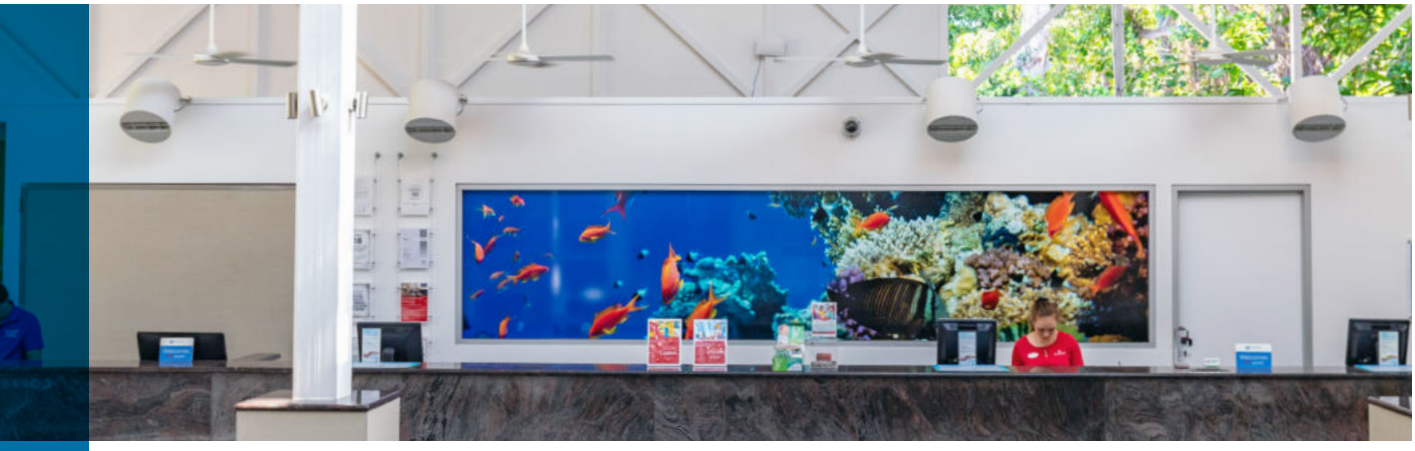
They resolved the issue using Airius Narrow Aisle fan units, which provide spot cooling at counters and improves the overall airflow circulation throughout the space.

Key Points:

- ***Cooling effects felt immediately***
- Comfort levels increased dramatically
- Simple, quick & cheap installation
- 0-100% Speed Controllable
- 35°C+ Tropical Temperatures
- 80% Max Relative Humidity
- Initially installed Ceiling Fans but they did not resolve the issue
- Airius solution = 5 x Narrow Aisle Units

The units were installed within only a few hours, positioned above each work station along the counter. Each unit was angled to supply airflow and cooling direct to both staff and customer when at the Reception Counter, providing the much needed and long awaited relief the Hotel has been looking for.

The overall circulation of the space was also improved as a result of Airius' patented airflow design, which entrains and draws surrounding air into its current to ensure all the air in the space is circulated. This results in a gentle cooling breeze felt throughout the entirety of the space.



The end result is a fresher, more comfortable environment with adaptable cooling focused to where it's needed most, at a fraction of the cost of traditional air conditioning systems.

Gama Aviation

Aircraft Hangar, Farnborough

Gama Aviation Ltd have two large heating units in their main engineering hangar at Farnborough Airport, which would run continuously throughout the day and never reach the thermostat set point of 14°C. Following installation of the Airius system their HVAC system would achieve the thermostat set point with only one of the two heating units running.

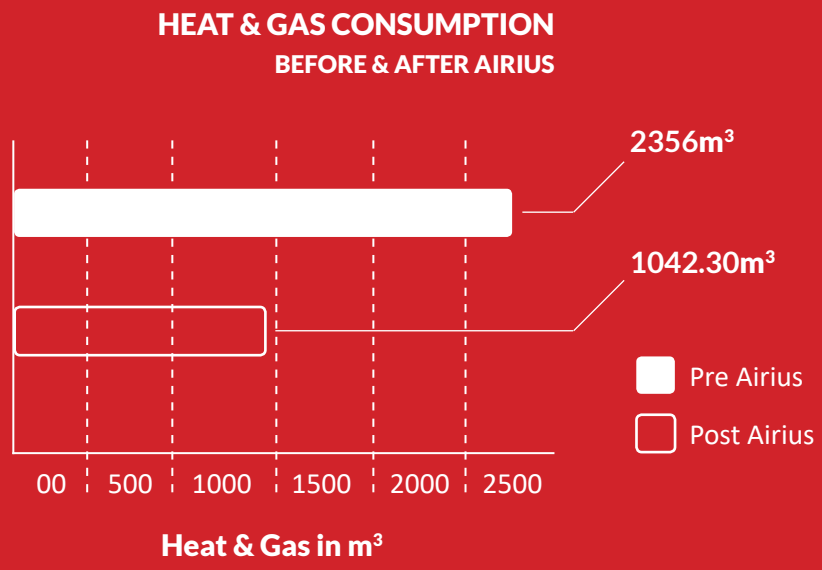
Once at the temperature set point, the Airius system would then continue to maintain the desired conditions with only the one remaining heating unit running intermittently.

In September and October prior to installation of Airius fans the heating gas consumption was 2,356m³. In the September and October after installation the heating gas consumption was 1,042.3m³.

Key Points:

- ***48.22% saving on heating costs***
- 1,136m³ natural gas reduction
- Savings account for worst case scenario and weather inconsistencies
- Now only one of the two heating units required to achieve desired conditions

In the year before installation of Airius fans the temperature was lower by 0.5°C in September and 2.6°C in October. A temperature change of 1°C can affect a buildings heating requirement by between 6-11%, depending upon the efficiency of the building. In a worst case scenario with heating gas consumption increased by 5.5% for September and 28.6% for October, this takes heating gas consumption in the following year from 1,042m³ up to 1,220m³. Final consumption data with degree variance taken into account is 2,356m³ of heating gas in September/October pre Airius installation and 1,220m³ in September/October post installation of Airius fans.



Lush Cosmetics

Manufacturing Facility, Dorset

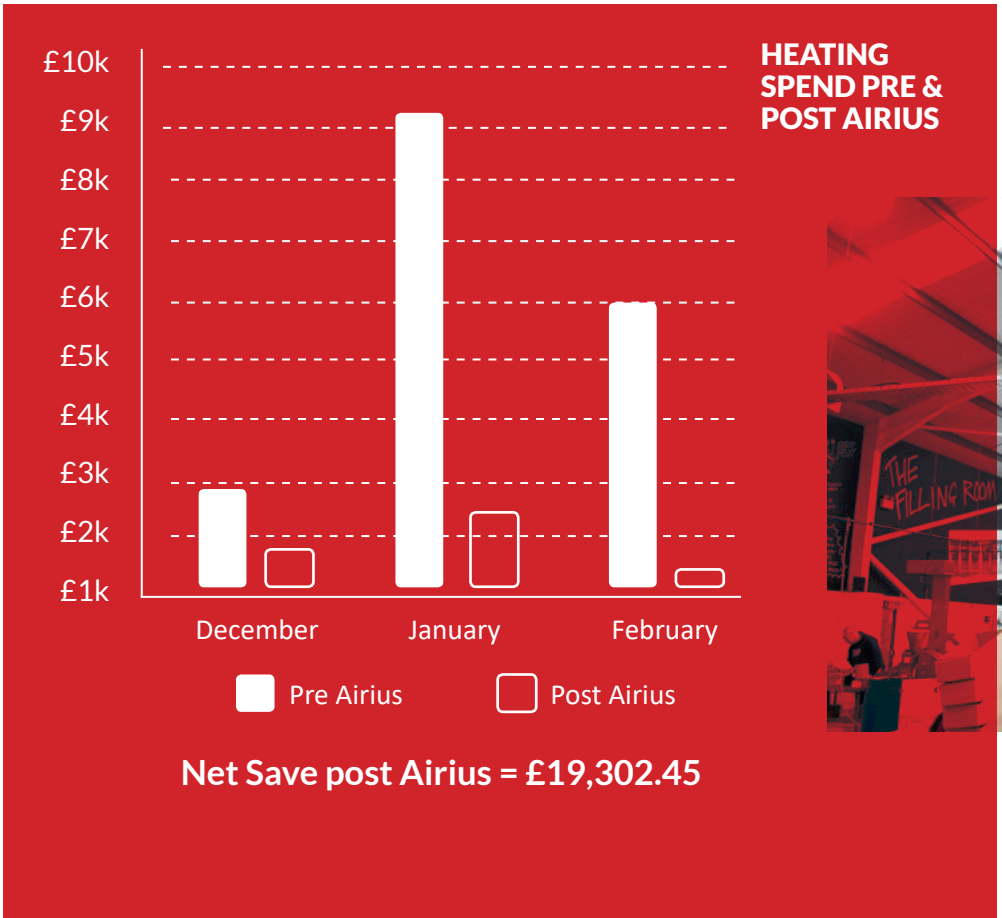
Lush Retail Ltd needed to improve internal conditions at their Hatch Pond Road manufacturing facility in Poole, Dorset. Temperatures at floor level were uncomfortably cold as their heating system was unable to reach acceptable conditions. This also incurred high energy costs as the heating system was running constantly in an attempt to reach set parameters.

Lush Retail Ltd contacted Airius to address the uncomfortably low temperatures and expensive costs for heating at each of their manufacturing facilities.

The Hatch Pond Road manufacturing facility was chosen as a trial site due to its high heating costs and major comfort issues. Originally it was estimated that this site would benefit from a minimum energy saving of 35%. However a far greater saving was achieved of over 60% following installation of the Airius system.

Key points:

- ***ROI = 26 DAYS!!***
- 61% saving on heating cost
- Heating spend pre Airius = £26,638.83
- Heating spend post Airius = £7,333.38
- Occupant comfort levels immediately improved
- Recirculates process heat for free heating
- Also provides cooling benefits during summer months
- Key technology responsible for meeting energy and CO_2 targets
- Now rolled out across their network of facilities



CASE STUDY

COOLING

Smithfield School

Sports Facility, Smithfield

Smithfield State High School is located in tropical Cairns, Queensland. The school had a significant overheating problem in their basketball and sports space all year round.

The hall was approx. 1,000m² in size and the floor to ceiling height was 6.5 to 7 metres.

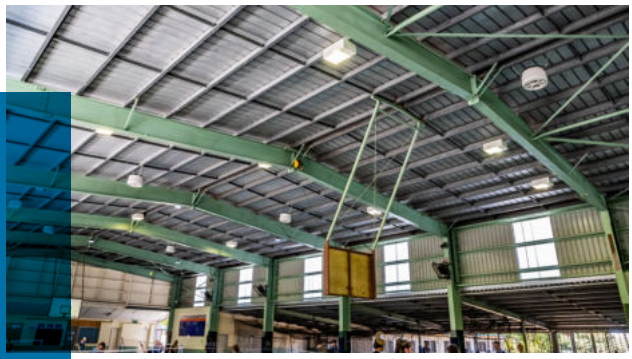
The school had considered the use of large blade HVLS fans, but they were expensive and presented numerous problems with their positioning. The lighting system would also need to be reorganised to allow for the installation.

Airius recommended five fully speed controllable Sapphire Series high air volume, hidden blade fans, to solve the cooling problem in their hall.

Installation was simple, only requiring 2 evenings to complete and the cooling effects were felt immediately, satisfying the school's goals and objectives on all counts.

Key Points:

- ***Cooling Effects Felt Immediately***
- Badminton Sports Unaffected
- Simple, Quick & Cheap Install
- 0-100% Speed Controllable
- Airius Solution = 5 x Sapphire Series Fans
- 35°C+ Tropical Temperatures
- 80% Max Relative Humidity
- HVLS Fans Unsuitable & Expensive
- Sports Hall:
  - Area = 1,000m²
  - Ceiling Height = 6.5m - 7m



"THE AIRIUS FANS WORK VERY WELL. THE TEACHERS AND STUDENTS ARE VERY HAPPY WITH THE OUTCOME AND ADVISED THEY MOVE A LOT OF AIR AROUND!"

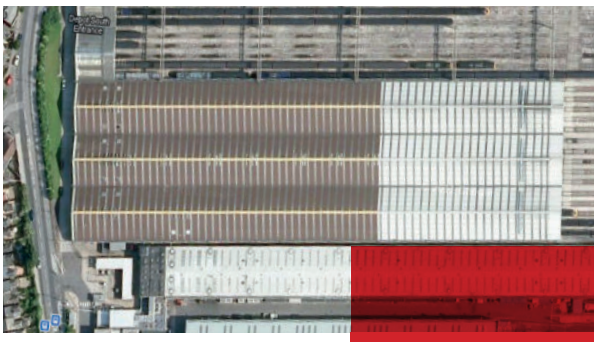
Contract Electrician & Installer

CASE STUDY **SIEMENS**

HEATING

Siemens

Engineering Facility, Acton



Siemens installed 26 Airius model 45 fan units into their Acton rail maintenance shed facility to improve comfort and save on energy costs resulting in an ROI of less than 18 months.

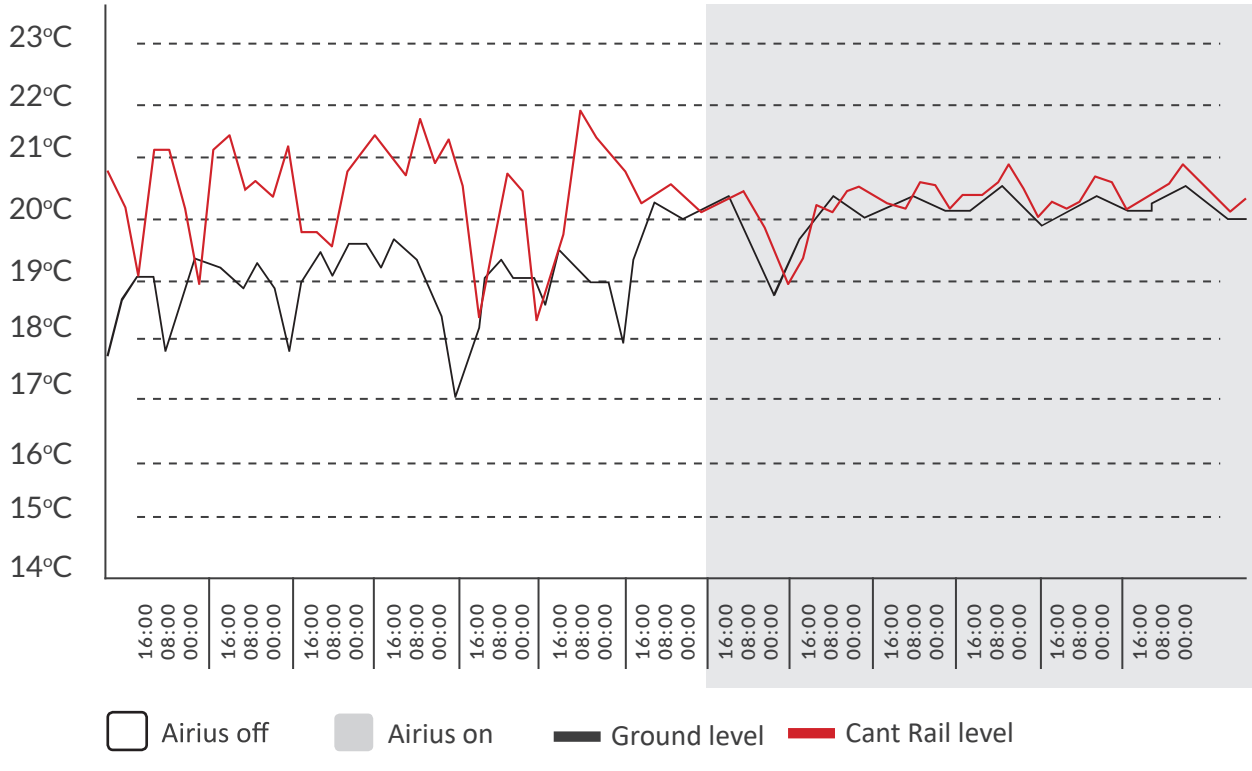
The graph below shows the temperature differentials in the Acton rail maintenance shed at Ground Level and Cant Rail Level before and after installation of Airius fans.

It can be seen that prior to Airius, temperature differentials were measured up to 4°C; however, following installation of Airius fans they we reduced to only 0.5°C.

Key points:

- ***ROI = Under 18 months***
- £12,106 - first year saving
- £19,799 – full system and installation cost
- 1,141, 113 – kWh usage before Airius
- 709,956 – kWh usage after Airius
- Installed into Acton rail maintenance shed
- System – 26 Airius Model 45 units
- 75 tonnes – Approx. annual CO_2 reduction

TEMPERATURE READINGS
JAN - FEB



FAQs

Discover the true potential and value of destratification, as we answer some of the key and frequently asked questions set by our clients.

What is the typical rate of stratification from the floor to the ceiling?

Stratification typically occurs at a rate of 0.5 - 2°C per metre and temperature differentials of up to 10°C are common over a height of 10 metres. In extreme cases, temperature differentials of 10°C have been found over a height of 3 metres.

The degree of stratification depends on a number of factors such as the building materials, level of insulation, activity in the building, heating/cooling set points and the outside temperature.

It is wrong to assume that if the level of stratification is at the lower end of the scale there is not much to be gained. This can be down to a number of reasons, such as:

- Insulation levels are so low, heat escapes before it can build up. Our best case studies have been from buildings like this
- Outside temperature is at or above room temperature
- The heating is off

When do you start saving?

Immediately! The moment the units are switched on, the efficiency of the building and HVAC system will start to improve, reaching their full potential once equalisation is achieved (within 48 hours depending on the size of the building).

How much can I expect to save on heating?

Savings range hugely from building to building, with average savings of 35%. With over 330,000 units sold, we have had reported savings ranging from 20% to 76%. This is down to a number of factors, such as:

- Ceiling Height
- Insulation
- Achieving Temperature
- Levels of Process / Ambient heat

How does the Airius system work with cooling?

The way Airius units work to reduce cooling costs is slightly different to heating. Typically in cooled spaces, people near the cooling outlet are too cold and those no more than a few metres away are too hot. People by windows can also get too hot due to solar gain and so on.

The Airius units help by equalising the temperature making sure that everyone benefits from the cooling as quickly as possible. It also helps the cool air reach thermostat set points quicker.

The Airius system also ensures that every cubic metre of air in the building is moving very slowly. This gentle air movement across the skin creates a lower perceived temperature (evaporative cooling), allowing you to turn your thermostat up by between 2°C and 4°C, yet maintain the same conditions or better for occupants.

> > > > >

FREE SITE SURVEY OFFER

After discussing your relevant project information and reviewing plans, Airius will happily carry out a full site survey free of charge based upon this information

Call: **+44 (0)1202 554 200**
Email: **info@airius.co.uk**

This along with the equalised temperature has proven to reduce cooling costs from 20% up to 100%. This is due to the low cooling requirement in the UK. You only need to reduce the cooling load slightly to make huge savings.

*"WE ARE **VERY IMPRESSED** WITH THE AIRIUS FANS IN OUR BOWLING CENTRE AT NANTGARW. WE'VE NOW **INCREASED OUR THERMOSTATS** FROM 19°C TO 23.5°C RESULTING IN A **SAVING OF OVER 70%** ON OUR COOLING COSTS!*

Bowlplex PLC

How much do Airius units cost to run?

Airius units are extremely efficient and draw a tiny electrical load, using less than 5% of the power of some of the competing box type destratification fans. The figures opposite are examples of annual running costs, based on the units running 24 hours a day, 365 days a year, at an electrical cost of 22 pence per kWh.

MODEL NUMBER	POWER CONSUMPTION	ANNUAL RUNNING COST
Model 10	13.5 Watts	£26.04
Model 15	17.4 Watts	£33.56
Model 20/EC	30 Watts	£57.86
Model 25	28 Watts	£54.00
Model 25/EC	30 Watts	£57.86
Model 45/PS-4	45.7 Watts	£88.13
Model 45/EC	175 Watts	£337.49
Model 50/PS-4	65.4 Watts	£126.13
Model 50/EC	98 Watts	£188.99
Model 60/PS-4	126.2 Watts	£243.38
Model 60/EC	170 Watts	£327.85
Model 100/EC	390 Watts	£752.12
Model 125/EC	364 Watts	£701.98
Model Pearl S3	13.5 Watts	£26.04
Model Pearl S2	17.4 Watts	£33.56
Model Pearl S1	28.4 Watts	£54.77
Model Pearl EC	30 Watts	£57.86
Model Onyx PS-4	65.6 Watts	£126.51
Model Onyx EC	98 Watts	£188.99
Model G400/PS-4	192 Watts	£370.28
Model G400/EC	400 Watts	£771.41
Model G560	328 Watts	£632.55

WHO ARE AIRIUS?

Airius are the world's leading provider of destratification and airflow circulation systems. Since 2004 Airius have balanced internal temperatures in Commercial, Public and Private buildings all around the globe.

Manufactured using only the highest quality materials and components, Airius offer market leading extended warranties, unmatched by any competing providers and have built up an extensive and prestigious client base including well-known brands like Boots, British Airways, Mercedes, Morrisons and many more.

CONTACT US

Get in touch!

Call, email or contact us through our website to arrange your free Site Survey and Energy Reduction Estimate

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Sheffield International Venues
QANTAS
mitie
pets at home
hollywood bowl
THE CHURCH OF ENGLAND
NSC
National Star College
ABP
ASSOCIATED BRITISH PORTS HOLDINGS PLC
ALDI
LFB
LONDON FIRE BRIGADE
PINNACLE
climbing centre
PORSCHE
BAE SYSTEMS
Marwell Zoo
ROYAL AIR FORCE
halfords
INTEGRAL
CenterParcs
hobbycraft
Sutton and East Surrey Water
THE CHURCHES CONSERVATION TRUST
QUEEN ELIZABETH OLYMPIC PARK
NG Bailey
KIA
NARVIK
Fitness First
Farnborough Airport
tyco
RENAULT
COBHAM
Nisa
making a difference locally
HOMEBASE
Waterstones
HONDA
COFELY
GDF SUEZ
DublinAirport
THE SSE ARENA WEMBLEY
CATERPILLAR
the beacon museum
THE ORIGINAL BOWLING CO.
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SAMSUNG
DRAPER Tools
Pizza Hut
PRIFYSGOL ABERYSTWYTH UNIVERSITY
senior Aerospace
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ANTILLION
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rotork
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